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

AGENDA for Thursday, December 10, 2015
6:00 P.M. to 10:00 P.M.

CALL TO ORDER–ROLL CALL–PLEDGE OF ALLEGIANCE – APPROVAL OF MINUTES – 11/12/2015

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.

OLD BUSINESS

ITEM 1 – Yankee Commons Mobile Home Park Expansion – Final Subdivision Plan Review
Action: Approve or deny plan. Owner/applicant Stephen A. Hynes Real Property Trust Agreement requests consideration of plans for a 78-lot expansion of the Yankee Commons Mobile Home Park for the property located at US Route 1, Tax Map 66, Lot 24 in the Mixed Use (MU) and Residential – Rural (R-RL) Zones. Agent is Thomas Harmon, Civil Consultants.

NEW BUSINESS

ITEM 2 – 34 Goose Point Rd – Shoreland Development Plan Review
Action: Accept or deny plan application; Approve or deny plan. Owner/applicants Kevin Fickensher and Suzanne Olbricht request consideration of their plan to construct a screened porch and separate patio to an existing single family dwelling. The 1.82 acre lot is located at 34 goose Point Road (Tax Map 34 Lot 2B) in the Residential Rural (R-RL) and Shoreland Overlay (OZ-SL-250') zones. Agent is Mick Sheffield, Labrie Associates, Inc.

ITEM 3 – 20 Whippoorwill Ln – Shoreland Development Plan Review
Action: Accept or deny plan application; Approve or deny plan. Owner/applicant Christopher Moran requests consideration of their plan to expand an existing single family dwelling located at 20 Whippoorwill Ln (Tax Map 33 Lot 3) in the Residential Rural (R-RL) and Shoreland Overlay (OZ-SL-250') zones. Agent is Anderson Livingston Engineers, Inc.

ITEM 4 – Board Member Items / Discussion
A. Election of officers and Board appointments
B. Foreside Neighborhood Committee
C. Bylaw Revision

ITEM 5 – Town Planner Items:
A. FEMA revised Zone A Flood Hazard Areas
B. Code Amendment – Title 16.8.11 – Cluster Residential and Cluster Mixed-Use Development

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 CONTACT STAFF AT (207) 475-1323.

Chairperson Ann Grinnell called the meeting to order at 6:05 p.m.
Board members present: Chair Ann Grinnell, Vice Chair Karen Kalmar, Robert Harris, David Lincoln, Secretary Debbie Driscoll-Davis and Mark Alesse.
Members Absent: Deborah Lynch.
Staff present: Chris DiMatteo, Town Planner.

Pledge of Allegiance
Ms. Grinnell led those present in the Pledge of Allegiance.

Minutes: Foreside Site Walk of October 22, 2015
MS. DRISCOLL-DAVIS MOVED TO ACCEPT THE MINUTES OF OCTOBER 22, 2015 AS AMENDED, MR. ALESSE SECONDED. MOTION CARRIED 6/0/0.

Minutes: October 22, 2015
Ms. Grinnell will hold the minutes until the next meeting of November 19 in order to give Ms. Davis time to review the tape of the October 22nd meeting for suggested corrections.

Public Comment: None.

OLD BUSINESS

ITEM 1 – Kolod Seawall Replacement–Shoreland Development Plan Review
Action: Approve or deny Plan. Owner/Applicant Jeffrey and Deborah Kolod requests consideration of plans for replacement of an existing seawall and associated wetland alteration. The 0.45-acre lot is located at 92 Whipple Road (Tax Map 10, Lot 19) in the Residential-Urban (R-U) and Shoreland Overlay (OZ-SL-250') Zones. Agent is Barney Baker, Baker Design Consultants.

Mr. Barney Baker of Baker Design Consultants and Mr. Jeffrey Kolod approached the podium to answer questions of the Committee.

Ms. Kalmar asked if changes to the new Plan concerned the pad under the hot tub and the step into the garage as additions to the de-vegetative calculations, and also a reduction in the size of the pool.

Ms. Grinnell asked if the shed would be moved and then moved back. She asked what would be done to protect the shed. Applicant explained that great care would be taken as it is a non-conforming use and they don't want to jeopardize the right to that use.

Ms. Davis asked if the dimensions of the shed should be documented, and Ms. Kalmar asked if there was a more complete set of plans. Ms. Kalmar asked if there was another plan showing the dimension of all the buildings. Mr. Barney said that the buildings were carefully surveyed and that they could be added to the Plan. Ms. Kalmar would like the Plan to show the dimensions of all the features including the pool. The pool dimension was reserved for the Plan but not included on the Plan as they were not sure if the pool would be added at the time the Plan was done in 2013. Mr. Barney noted that the shape of the pool could possibly be changed.

Mr. DiMatteo suggested that what the Committee is looking for is to demarcate the devegetative area as in the 2013.

Ms. Earldean Wells, Chair of the conservation Commission expressed concern that the Plan does not indicate the impervious areas.

Mr. Alesse asked if the six questions that Staff had asked have been complied with. It is indicated that two have been and it is unsure if the remaining four have been

Mr. Barney addressed the four additional questions. He showed where the 2013 approved plan book and page is indicated on the Plan. He pointed to the area table which addresses the request for a plan note table reflecting the three primary requirements of the shoreland overlay zone existing and proposed areas and percent increase allowed and proposed for. He also noted that the 100 foot setback has been added to the Plan. He indicated that the 45 square foot wetland fill area will be clarified on the Plan. The devegetative coverage calculations indicating the deduct items for 2013 and the 2015 changes are shown in the two columns of the table.

MS. KALMAR MOVED TO APPROVE WITH CONDITIONS THE SHORELAND DEVELOPMENT PLAN REVISION DATED OCTOBER 26, 2015 AND WETLAND ALTERATION APPLICATION FOR 92 WHIPPLE ROAD (TAX MAP 10, LOT 19) IN THE RESIDENTIAL-URBAN AND SHORELAND OVERLAY ZONES FOR OWNER/APPLICANT JEFFREY AND DEBORAH KOLOD, LINCOLN SECONDED.

Ms. Davis asked if an amendment to add the dimension of all structures should be added to the motion. Mr. DiMatteo offered to draft a condition regarding the temporary movement of the shed. He also noted that the question of dimensions are in the minutes and also in Condition five which states that revisions by Staff, Planning Board and peer review will be incorporated. He also suggested a new item two stating that in the event that the existing shed planned to be temporarily relocated on site is damaged and greater than 50% of its market value of the structure is removed, the Planning Board must approve the shed's final location.

FINDINGS OF FACT
For 92 Whipple Road, Sea Wall Reconstruction
Shoreland Development Plan Review

WHEREAS: Owners and applicants Jeffrey and Deborah Kolod requests consideration of plans for replacement of an existing seawall. The 0.45-acre lot is located at 92 Whipple Road (Tax Map 10, Lot 19) in the Residential-Urban (R-U) and Shoreland Overlay (OZ-SL-250') Zones. Agent is Barney Baker, Baker Design Consultants.

hereinafter the "Development;" and

And pursuant to the Plan Review meetings conducted by the Planning Board as noted ;*{in the Plan Review Notes prepared for 11/12/2015}*

Shoreland Plan Appl. Completeness Review	August 20, 2015
Site Walk	September 3, 2015
Public Hearing	September 9, 2015
Approval	TBD

And pursuant to the application, plans and other documents considered to be a part of the approval by the Planning Board in this finding consist of the following ;*{as noted in the Plan Review Notes prepared for 11/12/2015}* (hereinafter the "Plan"):

1. Shoreland Overlay Zone Project Plan Review Application, August 25, 2015.

2. Supplemental information, October 28, 2015
3. Shoreland Development Plan; Baker Design Consultants, REV. October 26, 2015.
4. Plan Set including Site Details; Baker Design Consultants, entitled *Kolod Seawall Replacement*, REV. October 26, 2015.

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

FINDINGS OF FACT

Chapter 16.3 LAND USE ZONE REGULATIONS

16.3.2.17. D Shoreland Overlay Zone

1.d The total footprint of areas devegetated for structures, parking lots and other impervious surfaces, must not exceed twenty (20) percent of the lot area, including existing development, except in the following zones…

Findings: The lot size is effectively larger than in 2013 by 45 square feet due to the intertidal fill associated with the new seawall as depicted on Sheet S-1. In addition, as shown in the table on Sheet C-1 regarding the devegetated area calculations, impervious features identified in 2013 are being removed and re-vegetated. The results are the proposed improvements do not increase the lot's devegetated area greater than the allowed 22.8% (reduced from 33.6% in 2013).

Conclusion: this standard appears to have been met.

Vote: _6_ in favor _0_ against _0_ abstaining

Chapter 16.7 GENERAL DEVELOPMENT REQUIREMENTS
Article III Nonconformance

16.7.3.1 Prohibitions and Allowances

A. Except as otherwise provided in this Article, a nonconforming condition must not be permitted to become more nonconforming.

Finding: The proposed development does not increase nonconformity.

Conclusion: The requirement appears to be met.

Vote: _6_ in favor _0_ against _0_ abstaining

16.7.3.5 Types of Nonconformance
16.7.3.5.5 Nonconforming Structure Repair and/or Expansion
A. A nonconforming structure may be repaired or maintained and may be expanded in conformity with the dimensional requirements, such as setback, height, etc., as contained in this Code. If the proposed expansion of a nonconforming structure cannot meet the dimensional requirements of this Code, the Board of Appeals or the Planning Board (in cases where the structure is located in a Shoreland Overlay or Resources Protection Overlay Zone) will review such expansion application and may approve proposed changes provided the changes are no more nonconforming than the existing condition and the Board of Appeals or the Planning Board (in cases where the structure is located in a Shoreland Overlay or Resources Protection Overlay Zone) makes its decision per section 16.6.6.2.
See 16.6.6.1 and its reference to 16.6.6.2 below.

Finding: There are no proposed changes to nonconforming structures
Conclusion: The standard is not applicable

Vote: _6_ in favor _0_ against _0_ abstaining

16.7.3.6 Nonconforming Structures in Shoreland and Resource Protection Zones
16.7.3.6.1 Nonconforming Structure Expansion
A nonconforming structure may be added to, or expanded, after obtaining Planning Board approval and a permit from the Code Enforcement Officer. Such addition or expansion must not increase the non-conformity of the structure and must be in accordance with the subparagraphs [A through C] *below.*
A. After January 1, 1989, if any portion of a structure is less than the required setback from the normal high-water line of a water body or tributary stream or the upland edge of a wetland, that portion of the structure will not be permitted to expand, as measured in floor area or volume, by thirty percent (30%) or more during the lifetime of the structure.
B. If a replacement structure conforms to the requirements of Section 16.7.3.6.1.A and is less than the required setback from a water body, tributary stream or wetland, the replacement structure will not be permitted to expand if the original structure existing on January 1, 1989, has been expanded by 30% in floor area and volume since that date.
C. Whenever a new, enlarged or replacement foundation is constructed under a nonconforming structure, the structure and new foundation must be placed such that the setback requirement is met to the greatest practical extent as determined by the Planning Board, basing its decision on the criteria specified in Section 16.7.3.5.2 – Relocation, below. If the completed foundation does not extend beyond the exterior dimensions of the structure, except for expansion in conformity with Section 16.7.3.5.3, above, and the foundation does not cause the structure to be elevated by more than three (3) additional feet, as measured from the uphill side of the structure (from original ground level to the bottom of the first floor sill), it will not be considered to be an expansion of the structure.

Finding: There are no proposed changes to nonconforming structures
Conclusion: The standard is not applicable

Vote: _6_ in favor _0_ against _0_ abstaining

Chapter 10 DEVELOPMENT PLAN APPLICATION AND REVIEW
Article 10 Shoreland Development Review

16.10.10.2 Procedure for Administering Permits
D. *An Application will be approved or approved with conditions if the reviewing authority makes a positive finding based on the information presented. It must be demonstrated the proposed use will:*

1. Maintain safe and healthful conditions;
Finding: The proposed development does not appear to have an adverse impact.
Conclusion: This requirement appears to be met.

Vote: _6_ in favor _0_ against _0_ abstaining

2. Not result in water pollution, erosion or sedimentation to surface waters;
Finding: Maine DEP Best Management practices will be followed for erosion and sedimentation control during site preparation and building construction. (see conditions #2 and #3) to avoid impact on adjacent surface waters.
Conclusion: The proposed development does not appear to have an adverse impact. With the suggested conditions #2, and #3,this requirement appears to be met.

Vote: _6_ in favor _0_ against _0_ abstaining

3. Adequately provide for the disposal of all wastewater;
Finding: The development is connected to town sewer.
Conclusion: This requirement appears to be met.

Vote: _6_ in favor _0_ against _0_ abstaining

4. Not have an adverse impact on spawning grounds, fish, aquatic life, bird or other wildlife habitat;
Finding: Maine DEP Best Management practices will be followed for erosion and sedimentation control during site preparation and building construction. (see conditions #2 and #3) to avoid impact on adjacent surface waters. These conditions should be added to the Plan.
Conclusion: The proposed development does not appear to have an adverse impact. With the suggested conditions #2 and #3, this standard appears to be met.

Vote: _6_ in favor _0_ against _0_ abstaining

5. Conserve shore cover and visual, as well as actual, points of access to inland and coastal waters;
Finding: Shore cover is conserved in accordance with this Code. There are no points of access.
Conclusion: With the proposed conditions #7 and #8, this requirement appears to be met.

Vote: _6_ in favor _0_ against _0_ abstaining

6. Protect archaeological and historic resources;
Finding: There does not appear to be any resources impacted.
Conclusion: The proposed development does not appear to have an adverse impact. This requirement appears to be met.

Vote: _6_ in favor _0_ against _0_ abstaining

7. Not adversely affect existing commercial fishing or maritime activities in a commercial fisheries/ maritime activities district;
Finding: The proposed development does not appear to have an adverse impact.
Conclusion: This requirement appears to be met.

Vote: _6_ in favor _0_ against _0_ abstaining

8. Avoid problems associated with floodplain development and use;
Finding: The proposed development is not within the floodplain.
Conclusion: This requirement appears to be met.

Vote: _6_ in favor _0_ against _0_ abstaining

9. Is in conformance with the provisions of this Code;
Finding: The proposed development appears to be in conformance with the provisions of this Code, including Title 16.3.2.17 Shoreland Overlay Zone and 16.9.3 Conservation of Wetlands Including Vernal Pools.
Conclusion: This requirement appears to be met.

Vote: _6_ in favor _0_ against _0_ abstaining

10. Be recorded with the York County Registry of Deeds.
Conclusion: As stated in the Notices to Applicant contained herein, Shoreland Development plans must be recorded with the York County Registry of Deeds prior to the issuance of a building permit.

Vote: _6_ in favor _0_ against _0_ abstaining

16.9.3.7 Wetlands Alteration Approval Criteria (A through F)

A. In making the final determination as to whether a wetland application should be approved, the Planning Board will consider existing wetland destruction and the cumulative effect of reasonably anticipated future uses similar to the one proposed. *Preference will be given to activities that meet wetland setbacks, have a reasonable stormwater management plan (subject to Planning Board review and approval), and that dedicate easements for the purposes of maintaining the wetland and the associated drainage system. Approval to alter a wetland will not be granted for dredging or ditching solely for the purpose of draining wetlands and creating dry buildable land areas. An application for a wetlands alteration will not be approved for the purpose of creating a sedimentation or retention basin in the wetland. Increased peak runoff rates resulting from an increase in impermeable surfaces from development activities are not allowed.*

B. It is the responsibility and burden of the applicant to show that the proposed use meets the purposes of this Code and the specific standards listed below to gain Planning Board approval to alter a wetland. *The Planning Board will not approve a wetlands alteration unless the applicant provides clear and convincing evidence of compliance with the Code.*

C. In evaluating the proposed activity, the Planning Board may need to acquire expert advisory opinions. *The applicant must be notified in writing, by the Town Planner at the Planning Board's request, that the applicant will bear the expenses incurred for the expert persons or agencies. The Planning Board will consider the advisory opinion, including any recommendations and conditions, provided by the Conservation Commission.*

D. *When the Planning Board finds the demonstrated public benefits of the project as proposed, or modified, clearly outweigh the detrimental environmental impacts, the Planning Board may approve such development, but not prior to granting approval of a reasonable and* ***practicable mitigation plan****, (see Section 16.9.3.9) and not prior to the completion of all performance guaranties for the project, (see Section 16.10.8.2.2).*

E. The applicant must submit applicable documentation that demonstrates there is no practicable alternative to the proposed alteration of the wetland. *In determining if no practicable alternative exists, the Board will consider the following:*

The proposed use: *1. Uses, manages or expands one or more other areas of the site that will avoid or reduce the wetland impact;* *2. Reduces the size, scope, configuration or density of the project as proposed, thereby avoiding or reducing the wetland impact;* *3. Provides alternative project designs, such as cluster development, roof gardens, bridges, etc., that avoid or lessen the wetland impact; and* *4. Demonstrates that the proposed development meets or exceeds best management practices for stormwater management in the wetland areas.*
F. In determining if the proposed development plan affects no more wetland than is necessary the Planning Board will consider if the alternatives discussed above in subsection A of this section accomplish the following project objectives: *The proposed use will not:* *1. Unreasonably impair or diminish the wetland's existing capacity to absorb, store, and slowly release stormwater and surface water runoff;* *2. Unreasonably increase the flow of surface waters through the wetland;* *3. Result in a measurable increase in the discharge of surface waters from the wetland;* *4. Unreasonably impair or diminish the wetland's capacity for retention and absorption of silt, organic matter, and nutrients;* *5. Result in an unreasonable loss of important feeding, nesting, breeding or wintering habitat for wildlife or aquatic life; all crossings must be designed to provide a moist soil bed in culvert inverts and to not significantly impede the natural migration of wildlife across the filled area;* *6. Result in a measurable increase of the existing seasonal temperature of surface waters in the wetland or surface waters discharged from the wetlands.* *7. Result in a measurable alteration or destruction of a vernal pool.*
Finding: A wetland fill of 45 square feet is proposed along the new seawall. This activity has received approvals by the applicable state and federal agencies. An area in excess of the fill area located along the impacted costal wetland is proposed as a vegetated no-disturb buffer. This mitigation meets the intention of 16.9.3.9.B.1 for preservation of upland adjacent to the impacted wetland. Conclusion: Considering the approval criteria including the overall benefit of the new seawall and mitigation proposed as a vegetated buffer, the proposed wetland impact is approved.
Vote: _6_ in favor _0_ against _0_ abstaining

Based on the foregoing Findings, the Planning Board finds the applicant has satisfied each of the review standards for approval and, therefore, the Planning Board approves the Shoreland Development Plan Application and Wetland Alteration Application of Jeffrey and Deborah Kolod for the replacement of an existing seawall, located at 92 Whipple Road (Tax Map 10, Lot 19) in the Residential-Urban (R-U) and Shoreland Overlay (OZ-SL-250') Zones and subject to any conditions or waivers, as follows:

Waivers: None

Conditions of Approval (to be included on final Plan to be recorded and as noted in the Plan Review Notes prepared for 11/12/2015}:

1. No changes, erasures, modifications or revisions may be made to any Planning Board approved final Plan. (Title 16.10.9.1.2)

2. In the event that the existing shed planned to be temporarily relocated is damaged by more than 50% of the market value and more than 50% of its market value is removed from the structure the Planning Board must approve its final location.

3. Applicant/contractor will follow Maine DEP *Best Management Practices* for all work associated with site and building construction to ensure adequate erosion control and slope stabilization.

4. 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.

5. All Notices to Applicant contained herein (Findings of Fact dated 11/12/15).

Conditions of Approval (not to be included on final Plan):

6. Incorporate any plan revisions on the final Plan as recommended by Staff, Planning Board, or Peer Review Engineer, and submit for Staff review prior to presentation on final Mylar.

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

Vote: _6_ in favor _0_ against _0_ abstaining

Approved by the Kittery Planning Board on November 12, 2015

Notices to Applicant:

1. Incorporate any plan revisions on the final Plan as recommended by Staff, Planning Board or Peer Review Engineer, and submit for Staff review prior to presentation of final mylar.

2. 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.

3. One (1) mylar copy of the final Plan and any and all related state/federal permits or legal documents that may be required, must be submitted to the Town Planning Department for signing. Date of Planning Board approval shall be included on the final Plan in the Signature Block. After the signed Plan is recorded with the York County Registry of Deeds, a mylar copy of the signed original must be submitted to the Town Planning Department.

4. This approval by the Town Planning Board constitutes an agreement between the Town and the Developer, incorporating as elements the Development Plan and supporting documentation, the Findings of Fact, and any Conditions of Approval.

Per Title 16.6.2.A - 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.

ITEM 2 – Morgan Court Road Multi-Family Subdivision – Major Modification to an Approved Cluster Subdivision Plan

Action: approve or deny modification to approved Plan. Owner and Applicant Peter J. Paul, Trustee of AMP Realty Holdings, LLC, requests consideration of a plan modification to change the building coverage for the lots of a cluster subdivision located on Tax Map 28, Lot 14 with frontage along Fernald Road in the Residential – Suburban (R-S) Zone with portions in the Commercial – 2 (C-2) and Resource Protection Overlay (OZ-RP) Zones. Agent is Tom Harmon, Civil Consultants.

Mr. Tom Harmon approached the podium. Mr. Lincoln asked Mr. Harman why he wants to make the change. Mr. Harman noted that the absolute limits of the buildings were put on the lots from 20% coverage for a 40,000 square foot lot to 21.5% for a 10,000 square foot lot and more room is needed on the lots. Setbacks and pavement won't change and there will be the same number of buildings

MS. KALMAR MADE A MOTION TO ACCEPT THE CLUSTER SUBDIVISION PLAN APPLICATION DATED OCTOBER 26, 2015 FROM OWNER AND APPLICANT PETER J. PAUL, TRUSTEE OF AMP REALTY HOLDING, LLC, FOR THE PROPERTY LOCATED ON FERNALD ROAD (TAX MAP 28, LOT 14) IN THE RESIDENTIAL – SUBURBAN (R-S) ZONE WITH PORTIONS IN THE COMMERCIAL – 2 (C-2) AND CONSERVATION ZONES, AND MOVE TO APPROVE THE PLAN MODIFICATION PRESENTED IN THE CLUSTER SUBDIVISON PLAN APPLICATION DATED OCTOBER 26, 2015 AND AMEND THE PREVIOUSLY APPROVED FINDINGS OF FACT DATED AUGUST 20, 2015 AS PRESENTED IN THE 11/12/2015 PLAN REVIEW NOTES. OWNER AND APPLICANT PETER J. PAUL, TRUSTEE OF AMP REALTHY HOLDINGS, LLC, FOR THE PROPERTY LOCATED ON FERNALD ROAD ROAD (TAX MAP 28, LOT 14) IN THE RESIDENTIAL – SUBURBAN (R-S) ZONE WITH PORTIONS IN THE COMMERCIAL – 2 (C-2) AND CONSERVATION ZONES. THE MOTION WAS SECONDED BY MR. LINCOLN.

FINDINGS OF FACT
For
"Morgan Court" Cluster Residential Subdivision Review

{As presented in the plan review notes dated 8/20/2015 and 11/12/2015 and amended by the Board}

Note: This approval by the Planning Board constitutes an agreement between the Town and the Developer incorporating the Development plan and supporting documentation, the Findings of Fact, and all waivers and/or conditions approved and required by the Planning Board.

WHEREAS: AMP Realty Holdings, LLC, owner and applicant requested approval for a cluster residential subdivision consisting of four lots with three duplexes and one triplex at Fernald Road and Route 236 on 17.97 acres (Tax Map 28, Lot 14) in the Residential – Surburban (R-S), Commercial -2 (C-2), and Resource Protection Overlay (OZ-RP) Zones,

Hereinafter the "Development,"

And pursuant to the Plan Review meetings conducted by the Planning Board as noted ;*{in the Plan Review Notes prepared for 8/20/2015 and 11/12/2015}*

Sketch Plan Review	Approved	8/8/2013

Site Visit	Held	8/8/2013
Preliminary Plan Review	Held, Accepted	10/10/2013
Public Hearing	Held	11/14/2013
Preliminary Plan Review	Held, Continued…	11/14/2013

Note: The original plan application was continued not to exceed 90 days from 11/14/2013. More than 90 days passed without further submissions or review; The plan was resubmitted and accepted by the Board and preliminary review began again in 2015.

Preliminary Plan Review	Held, Accepted	4/9/2015
Site Walk	Held	5/6/2015
Public Hearing	Held	5/14/2015
Preliminary Plan Review	Held, approved with conditions	5/14/2015
Final Plan Review	Held, approved with conditions	8/20/2015
Plan Modification Review		11/12/2015

And pursuant to the application, plans and other documents considered to be a part of the approval by the Planning Board in this finding consist of the following ;*{ as noted in the Plan Review Notes prepared for 8/20/2015 and 11/12/2015}* (hereinafter the "Plan"):

1. Cluster Development Plan Review Application, March 26, 2015
2. Stormwater Management Plan, June 2015
3. B1 – Boundary and Existing Conditions, April 8, 2013
4. S1 – Final Subdivision Plan Clustered Multifamily Development, September 12, 2013 rev 10/23/15
5. C1 – Existing Conditions Plan, September 12, 2013 rev 6/22/15
6. C2 – Overall Multifamily Site Plan, September 12, 2013 rev 6/22/15
7. C3 – Layout & Landscape Plan, September 12, 2013 rev 7/24/15
8. C4 – Erosion Control Plan, September 12, 2013 rev 6/22/15
9. C5 – Utility Plan, September 12, 2013 rev 6/22/15
10. C6 – Grading & Drainage Plan, September 12, 2013 rev 6/22/15
11. C7 – Sections, September 12, 2013 rev 6/22/15
12. R1 – Roadway Plan and Profile, September 12, 2013 rev 6/22/15
13. R2 – Construction Details, September 12, 2013 rev 6/22/15
14. R3 – Maintenance Notes, September 12, 2013 rev 6/22/15

NOW THEREFORE, based on the entire record before the Planning Board, including previously approved Findings of Fact dated 8/20/2015, and pursuant to the applicable standards in the Land Use and Development Code, the Planning Board makes the following factual findings as required by section **16.10.8.3.4** and as recorded below:

FINDINGS OF FACT
Action by the Planning Board must be based upon findings of fact which certify or waive compliance with all the required standards of this Code, and which certify the development meets 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.
Findings: The site consists of 17.97 acres, predominantly in the Residential – Suburban Zone with a small portion in the Commercial – 2 Zone. A cluster residential development is a permitted use in the Suburban Zone. The proposal is three duplexes and one triplex on four lots. These four lots total 35,210 square feet, with a building coverage limit of 35% per lot. A total of 709, 299 square feet (including both common reserved open space) is proposed. The state's minimum lot size law (12 MRSA § 4807) requires a minimum 20,000 s.f. lot size per 300 gallons per day with a portion of the lot area allowed to be reserved in open space. A total of 90.6% of the parcel is reserved in open space which accommodates lot size requirements. Conclusions: The proposed development conforms to local ordinances.
(At the 8/20/2015 Meeting) **Vote of _5_ in favor _0_ against _0_ abstaining** *(At the 11/12/2015 Meeting)* **Vote of _5_ in favor _0_ against _0_ abstaining**
B. Freshwater Wetlands Identified.
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.
Findings: Wetlands have been identified and shown all applicable plans. Conclusions: The requirement appears to be met
(At the 8/20/2015 Meeting) **Vote of _5_ in favor _0_ against _0_ abstaining**
C. River, Stream or Brook Identified.
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.
Findings: A stream has been identified and shown all applicable plans. Conclusions: The requirement appears to be met
(At the 8/20/2015 Meeting) **Vote of _5_ in favor _0_ against _0_ abstaining**
D. Water Supply Sufficient.
The proposed development has sufficient water available for the reasonably foreseeable needs of the development.
(At the 8/20/2015 Meeting) **Vote of _5_ in favor _0_ against _0_ abstaining**
E. Municipal Water Supply Available.
The proposed development will not cause an unreasonable burden on an existing water supply, if one is to be used.
Findings: The site will be serviced by public water via an easement across abutting commercial lots on Route 236. . Kittery Water District has found there is sufficient capacity for the proposed development.

Conclusions: The requirement appears to be met
(At the 8/20/2015 Meeting) **Vote of _5_ in favor _0_ against _0_ abstaining**
F. Sewage Disposal Adequate.
The proposed development will provide for adequate sewage waste disposal and will not cause an unreasonable burden on municipal services if they are utilized.
Findings: The proposal is three duplexes and one triplex on four lots. These four lots total 35,210 square feet. A total of 709, 299 square feet (including both common reserved open space) is proposed. The state's minimum lot size law (12 MRSA § 4807) requires a minimum 20,000 s.f. lot size per 300 gallons per day (gpd) with a portion of the lot area allowed to be reserved in open space. Multifamily units are calculated with 120 gpd per bedroom. 22 bedrooms proposed in submitted HHE-200 application requires 176,000 s.f. in lot size, and in this instance 140,790 s.f. must be reserved in open space. Conclusions: A total 709,299 s.f. is reserved in open space which accommodates the lot size requirement whereby the requirement appears to be met.
(At the 8/20/2015 Meeting) **Vote of _5_ in favor _0_ against _0_ abstaining**
G. Municipal Solid Waste Disposal Available.
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.
Findings: Applicant states the Homeowners Association will contract for solid waste pick-up. Conclusions: With the inclusion of condition #7, the requirement appears to be met.
(At the 8/20/2015 Meeting) **Vote of _5_ in favor _0_ against _0_ abstaining**
H. Water Body Quality and Shoreline Protected.
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.
Findings: The proposed development is outside required setbacks and does not adversely affect the adjacent wetlands and stream Conclusions: The requirement appears to be met
(At the 8/20/2015 Meeting) **Vote of _5_ in favor _0_ against _0_ abstaining**
I. Groundwater Protected.
The proposed development will not, alone or in conjunction with existing activities, adversely affect the quality or quantity of groundwater.
Findings: The proposed development adheres to the state plumbing code and MDEP BMPs for erosion control that pertain to sewage disposal and stormwater management. Conclusions: The requirement appears to be met

(At the 8/20/2015 Meeting) **Vote of _5_ in favor _0_ against _0_ abstaining**
J. Flood Areas Identified and Development Conditioned.
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.
Findings: A portion of the site is located within the 100 year flood plain, however, the proposed development is located at a considerable distance from the flood boundary and the basement floor elevations for the proposed buildings are 10 feet plus above the approximate flood elevation. Conclusions: The requirement appears to be met
(At the 8/20/2015 Meeting) **Vote of _5_ in favor _0_ against _0_ abstaining**
K. Stormwater Managed.
The proposed development will provide for adequate stormwater management.
Findings: The applicant has provided a stormwater management plan resulting in adequate stormwater management. This consists of combining a closed drainage system comprised of catch basins and closed piping with roadside swales and level spreader outlets to restore sheet flow. The applicant is also submitting a Permit By Rule to Maine Department of Environmental Services. Conclusions: The requirement appears to be met.
(At the 8/20/2015 Meeting) **Vote of _5_ in favor _0_ against _0_ abstaining**
L. Erosion Controlled.
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.
Findings: The site is stabilized both during and after construction using MDEP best management practices. Conclusions: The requirement appears to be met.
(At the 8/20/2015 Meeting) **Vote of _5_ in favor _0_ against _0_ abstaining**
M. Traffic Managed.
The proposed development will: *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* *2. Provide adequate traffic circulation, both on-site and off-site.*
Findings: It is not anticipated the proposed development's increase in vehicle trips to Fernald Road/Rt. 236 will have an adverse impact and the site design allows for safe and adequate circulation

with consideration of condition #7. Conclusions: The requirement appears to be met
(At the 8/20/2015 Meeting) **Vote of _5_ in favor _0_ against _0_ abstaining**
N. Water and Air Pollution Minimized.
The proposed development will not result in undue water or air pollution. In making this determination, the following must be considered: *1. Elevation of the land above sea level and its relation to the floodplains;* *2. Nature of soils and sub-soils and their ability to adequately support waste disposal;* *3. Slope of the land and its effect on effluents;* *4. Availability of streams for disposal of effluents;* *5. Applicable state and local health and water resource rules and regulations; and* *6. Safe transportation, disposal and storage of hazardous materials.*
Findings: The proposed development adheres to the state plumbing code and MDEP BMPs for erosion control that pertain to sewage disposal and stormwater management. Hazardous materials do not pertain to the proposed development. Conclusions: The requirement appears to be met
(At the 8/20/2015 Meeting) **Vote of _5_ in favor _0_ against _0_ abstaining**
O. Aesthetic, Cultural and Natural Values Protected.
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.
Findings: Maine Historic Preservation Commission and the Maine Department of Inland Fish and Wildlife has no objection the proposed development nor is the site designated as a scenic resource. Potential impacts to the adjacent Remick Preserve are minimized and mitigated through, proposed signage, a no-cut/no-disturb buffer and on-street parking in condition #5 Conclusions: The requirement appears to be met
(At the 8/20/2015 Meeting) **Vote of _5_ in favor _0_ against _0_ abstaining**
P. Developer Financially and Technically Capable.
Developer is financially and technically capable to meet the standards of this section.
Findings: Per 16.8.11.8 Pre-Development Requirements and 16.10.8.2.2 Performance Guaranty Conditions, the applicant is required to file with the Town a performance guaranty and inspection escrow for improvements that will be utilized in common use or by the general public. Conclusions: The requirement appears to be met
(At the 8/20/2015 Meeting) **Vote of 5 in favor 0 against 0 abstaining**

NOW THEREFORE the Kittery Planning Board adopts each of the foregoing Findings of Fact and, based on these Findings, determines that 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:

1. 16.10.5.2.B.2 Plan Scale (s)
2. 16.10.5.2.C.6 Erosion and Sedimentation Control Plan Reviewed by York County Soil and Water Conservation District or Town's Engineering Consultant

Conditions of Approval (to be included on the final plan):

1. No changes, erasures, modifications, or revisions may be made to any Planning Board-approved final plan (Title 16.10.9.1.2).
2. Applicant/contractor will follow Maine DEP Best Management Practices for all work associated with site and building construction to ensure adequate erosion control and slope stabilization.
3. 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.
4. Per Title 16.8.8.2 Post Construction Stormwater Management and the MDEP General Permit for Small MS-4 the applicant and/or the Homeowners Association is responsible for the establishment and execution of: a) Maintenance Agreement for Stormwater Management Facilities; and b) Annual Stormwater Management Facilities Certification.
5. The construction of three paved on-street parking spaces with associated drainage measures in the vicinity of the Kittery Land Trust's easement on Fernald Road to the satisfaction of Staff and Commissioner of Public Works.
6. There is to be no access from the development to the abutting land trust property located to the southerly boundary of subdivision except along Fernald Road where an easement exists.
7. All Notices to Applicant contained in the Findings of Fact (dated: August 20, 2015 and November 12, 2015).

Conditions of Approval (NOT to be included on the final plan):

8. Revise draft Homeowners Association by-laws and declarations as recommended by Staff and the Town Attorney and as presented at the 8/20/15 meeting.
9. Prepare draft proposed easements and submit to staff prior to the issuance of a building permit. Revise final plan to show an easement for the shared driveway proposed for lots 1 and 2.
10. Add a plan note on Sheet C-5 that reads: All proposed lighting must conform to 16.8.24 and conformance demonstrated with the submittal of lighting specifications prior to the issuance of a building permit.

11. Incorporate any plan revisions on the final plan as recommended by Planning Board, and outlined in item 8 in the 8/20/15 Plan Review Notes, and submit for Staff review prior to presentation on final Mylar.

(At the 8/20/2015 Meeting) **Vote of _5_ in favor _0_ against _0_ abstaining**
(At the 11/12/2015 Meeting) **Vote of _5_ in favor _0_ against _0_ abstaining**

APPROVED BY THE KITTERY PLANNING BOARD ON August 20, 2015 & November 12, 2015.

Notices to Applicant (NOT to be included on the final plan):

1. Prior to the release of the signed plans, the applicant must pay all outstanding fees associated with review, including, but not limited to, Town Attorney fees, peer review, newspaper advertisements and abutter notification.
2. State law requires all subdivision and shoreland development 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 one (1) paper copy of the final plan (recorded plan if applicable) and any and all related state/federal permits or legal documents that may be required, must be submitted to the Town Planning Department. Date of Planning Board approval shall be included on the final plan in the Signature Block.
4. The owner and/or developer, in an amount and form acceptable to the Town Manager, must file with the municipal treasurer an instrument to cover the cost of all infrastructure and right-of-way improvements and site erosion and stormwater stabilization, including inspection fees for same.
5. This approval by the Town Planning Board constitutes an agreement between the Town and the Developer, incorporating the Plan and supporting documentation, the Findings of Fact, and any Conditions of Approval.
6. Where required the applicant must provide to the Town a performance guaranty and an inspection escrow to cover the construction of all improvements that will be utilized in common use or by the general public.

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

Per Title 16.6.2.A – 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.

NEW BUSINESS

ITEM 3 - 13 Lawrence Ln –Shoreland Development Plan

Action: Approve or deny Plan. Owner/Applicant Rose Marie Howells requests consideration of plans to adjust a property line and expand an existing driveway located at 13 Lawrence Ln (Tax Map 18, Lot 32A)

in the Residential – Kittery Point Village (R-KPV), Shoreland Overlay (OZ-SL-250'), Zones. Agent is Robbi Woodburn, Woodburn & Company Landscape Architects.

Robbi Woodburn approached the podium and explained the Plan. This is an application for a minor adjustment for a driveway in a lot that is non-conforming and in the shoreland zone. The plan is to widen the driveway to allow passage and access by emergency vehicles. Currently the driveway pitches towards the house and Ms. Woodburn explained how the Plan will address drainage and improve the filtration situation. Ms. Woodburn explained how the plan will widen the driveway and add a 15 x 12 foot turnaround.

Ms. Woodburn provide a letter from Ryan McCarthy of Tidewater Engineering and Surveying who visited the site during a rainstorm stating that there are no drainage or erosion issues and that the plan will make the site even better. A Permit By Rule will be applied for pending approval of the Committee.

Earldean Wells of the Conservation Commission stated that rock walls are protected in Maine and asked if the stones are to be removed, how they will be used. Ms. Woodburn said that they could be used in the retaining wall at the end of the driveway.

Mr. Lincoln asked whether the court area pavers will be pervious or impervious. Ms. Woodburn said that Engineer McCarthy felt impervious pavers with a drain would be best. Mr. Lincoln asked where the drainage will go. Woodburn said that the tree well will act as a tree box filter at the bottom of the drive. The existing impervious pavers will be replaced with new impervious pavers.

MR. ALESSE MOVED TO GRANT CONDITIONAL APPROVAL FOR THE SHORELAND DEVELOPMENT PLAN APPLICATION DATED OCTOBER 5, 2015, FROM OWNER/APPLICANT ROSE MARIE HOWELLS FOR 13 LAWRENCE LANE (TAX MAP 18, LOT 32A) IN THE RESIDENTIAL KITTERY POINT VILLAGE IN SHORELAND OVERLAY ZONE AND MOVE TO ACCEPT SHORELAND DEVELOPMENT PLAN APPLICATION DATED OCTOBER 5, 2015 FROM OWNER/APPLICANT ROSE MARIE HOWELLS FOR 13 LAWRENCE LANE (TAX MAP 18, LOT 32A) IN THE RESIDENTIAL KITTERY POINT VILLAGE IN SHORELAND OVERLAY ZONE. SECONDED BY MS. DAVIS.

Discussion as to whether the plan needs a public hearing. Committee agreed that no public hearing is necessary. Grinnell asked if the neighbors are aware. Woodburn indicated on the plan which neighbors have been notified. Staff recommendations were provided to Ms. Woodburn. Mr. DiMatteo commented that the majority of the recommendations were plan revisions to make the Plan suitable for recording. Mr. DiMatteo clarified some of the conditions for Ms. Woodburn.

Findings of Fact
For 13 Lawrence Ln
Shoreland Development Plan Review

WHEREAS: Rose Marie Howells requests approval of her Shoreland Development Plan to adjust a property line and expand an existing driveway located further than 100 feet from the HAT at 13 Lawrence Lane (Tax Map 18, Lot 32-A) in the Residential-Kittery Point Village and Shoreland Overlay Zones, hereinafter the "Development" and

Pursuant to the Plan Review meetings conducted by the Town Planning Board as noted;

Shoreland Development Plan Review	11/12/2015

And pursuant to the application and plan and other documents considered to be a part of a plan review decision by the Town Planning Board in this Finding of Fact consisting of the following (hereinafter the "Plan"):

1. Shoreland Development Plan Application, received October 5, 2015.
2. Site Plan, Easterly Surveying, Inc., August 20, 2015; Woodburn & Company, October 3, 2015.

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

FINDINGS OF FACT

Chapter 16.3 LAND USE ZONE REGULATIONS

16.3.2.17.D Shoreland Overlay Zone
1.d The total footprints of the areas devegetated for structures, parking lots and other impervious surfaces, must not exceed twenty (20) percent of the lot area, including existing development, except in the following zones… Findings: The lot's current de-vegetated area is 6287 sq. ft., 31.33% of the total property area. The proposed driveway expansion will increase the lot's de-vegetated area by 600 square feet, increasing the total de-vegetated area to 34.32%. To avoid becoming more non-conforming, the applicant proposes an adjustment to the property line that will increase the total lot size from 20,070 to 22,070 square feet. With the adjusted boundary line, the driveway expansion would decrease the total de-vegetated area to 31.21% and does not increase non-conformity. Conclusion: The requirement appears to be met.
Vote: _5_ in favor _0_ against _0_ abstaining

Chapter 16.7 GENERAL DEVELOPMENT REQUIREMENTS
Article III Nonconformance

16.7.3.1 Prohibitions and Allowances
A. Except as otherwise provided in this Article, a nonconforming conditions must not be permitted to become more nonconforming Finding: With the adjusted property line the devegetated area is being decreased from 31.33% to 31.22% Conclusion: The requirement appears to be met.
Vote: _5_ in favor _0_ against _0_ abstaining
16.7.3.5 Types of Nonconformance **16.7.3.5.5 Nonconforming Structure Repair and/or Expansion**

A. A nonconforming structure may be repaired or maintained and may be expanded in conformity with the dimensional requirements, such as setback, height, etc., as contained in this Code. If the proposed expansion of a nonconforming structure cannot meet the dimensional requirements of this Code, the Board of Appeals or the Planning Board (in cases where the structure is located in a Shoreland Overlay or Resources Protection Overlay Zone) will review such expansion application and may approve proposed changes provided the changes are no more conforming than the existing condition and the Board of Appeals or the Planning Board (in cases where the structure is located in a Shoreland overlay or Resources Protection Overlay Zone) makes its decision per section 16.6.6.2.

See 16.6.6.1 and its reference to 16.6.6.2 below.

16.6.6 Basis for Decision

16.6.6.1.B In hearing appeals/requests under this Section, the Board of Appeals [note: Planning Board is also subject to this section per 16.7.3.5.5 above] **must use the following criteria as the basis of a decision:**

1. Proposed use will not prevent the orderly and reasonable use of adjacent properties or of properties in adjacent use zones;
2. Use will not prevent the orderly and reasonable use of permitted or legally established uses in the zone wherein the proposed use is to be located, or of permitted or legally established uses in adjacent use zones;
3. Safety, the health, and the welfare of the Town will not be adversely affected by the proposed use or its location; and
4. Use will be in harmony with and promote the general purposes and intent of this Code.

The Board must also give consideration to the factors listed in 16.6.6.2.

Finding: The proposed development does not include repair or expansion of nonconforming structures.

Conclusion: The requirement is not applicable.

Vote: _5_ in favor _0_ against _0_ abstaining

16.7.3.6 Nonconforming Structures in Shoreland and Resource Protection Zones

16.7.3.6.1 Nonconforming Structure Expansion

A nonconforming structure may be added to, or expanded, after obtaining Planning Board approval and a permit from the Code Enforcement Officer. Such addition or expansion must not increase the non- conformity of the structure and must be in accordance with the subparagraphs [A through C] *below.*

A. After January 1, 1989, if any portion of a structure is less than the required setback from the normal high-water line of a water body or tributary stream or the upland edge of a wetland, that portion of the structure will not be permitted to expand, as measured in floor area or volume, by thirty percent (30%) or more during the lifetime of the structure.

B. If a replacement structure conforms to the requirements of Section 16.7.3.6.1.A and is less than the required setback from a water body, tributary stream or wetland, the replacement structure will not be permitted to expand if the original structure existing on January 1, 1989, has been expanded by 30% in floor area and volume since that date.

C. Whenever a new, enlarged or replacement foundation is constructed under a nonconforming structure, the structure and new foundation must be placed such that the setback requirement is met to the greatest practical extent as determined by the Planning Board, basing its decision on the criteria specified in Section 16.7.3.5.2 – Relocation, below. If the completed foundation does not extend beyond the exterior dimensions of the structure, except for expansion in conformity with Section 16.7.3.5.3, above, and the foundation does not cause the structure to be elevated by more than three (3) additional feet, as measured from the uphill side of the structure (from original ground level to the bottom of the first floor sill), it will not be considered to be an expansion of the structure.

Finding: The existing nonconforming structure is not expanding within the 100-foot setback from the HAT. The proposal does not increase nonconformity.

Conclusion: Standards A-C are not applicable.

Vote: _5_ in favor _0_ against _0_ abstaining

Chapter 10 DEVELOPMENT PLAN APPLICATION AND REVIEW
Article 10 Shoreland Development Review

16.10.10.2 Procedure for Administering Permits

D. An application will be approved or approved with conditions if the reviewing authority makes a positive finding based on the information presented. It must be demonstrated the proposed use will:

1. Maintain safe and healthful conditions;

Finding: The proposed development does not appear to have an adverse impact.

Conclusion: This requirement appears to be met

Vote: _5_ in favor _0_ against _0_ abstaining

2. Not result in water pollution, erosion or sedimentation to surface waters;

Finding: Maine DEP Best Management practices will be followed for erosion and sedimentation control during site preparation and building construction (see conditions #2 and #3) to avoid impact on adjacent surface waters.

Conclusion: This requirement appears to be met

Vote: _5_ in favor _0_ against _0_ abstaining

3. Adequately provide for the disposal of all wastewater;

Finding: The proposed development doesn't connect to two sewer.

Conclusion: This requirement is not applicable.

Vote: _5_ in favor _0_ against _0_ abstaining

4. Not have an adverse impact on spawning grounds, fish, aquatic life, bird or other wildlife habitat;

Finding: Maine DEP Best Management practices will be followed for erosion and sedimentation control during site preparation and building construction (see conditions #2 and #3) to avoid impact on adjacent surface waters. These conditions should be added to the plan.

Conclusion: The proposed development does not appear to have an adverse impact. With the suggested conditions #2 and #3, this standard appears to be met.
Vote: _5_ in favor _0_ against _0_ abstaining
5. Conserve shore cover and visual, as well as actual points of access to inland and coastal waters; Finding: Shore cover is not adversely impacted Conclusion: This requirement appears to be met.
Vote: _5_ in favor _0_ against _0_ abstaining
6. Protect archaeological and historic resources; Finding: There does not appears to be any resources impacted. Conclusion: This requirement appears to be met.
Vote: _5_ in favor _0_ against _0_ abstaining
7. Not adversely affect existing commercial fishing or maritime activities in a commercial fisheries/maritime activities district; Finding: The proposed development is not located in a CFMU Zone. Conclusion: This requirement is not applicable.
Vote: _5_ in favor _0_ against _0_ abstaining
8. Avoid problems associated with floodplain development and use; Finding: the proposed development is not within the floodplain Conclusion: This requirement appears to be met.
Vote: _5_ in favor _0_ against _0_ abstaining
9. Is in conformance with the provisions of this code; Finding: The proposed development appears to be in conformance with the provisions of this code. Conclusion: This requirement appears to be met.
Vote: _5_ in favor _0_ against _0_ abstaining
10. Be recorded with the York county Registry of Deeds. Finding: A plan suitable for recording has been prepared. Conclusion: As stated in the Notices to Applicant contained herein, shoreland Development plans must be recorded with the York County Registry of Deeds prior to the issuance of a building permit.
Vote: _5_ in favor _0_ against _0_ abstaining

Based on the foregoing Findings, the Planning Board finds the applicant has satisfied each of the review standards for approval and, therefore, the Planning Board approves the Shoreland Development Plan Application of owner/applicant Rose Marie Howells requests consideration of her plan to expand an existing driveway located on, and adjust the property line for the referenced property and subject to any conditions or waivers, as follows:

Waivers: None

Conditions of Approval (to be depicted on final plan to be recorded):

1. No changes, erasures, modifications or revisions may be made to any Planning Board approved final plan. (Title 16.10.9.1.2)
2. Applicant/contractor will follow Maine DEP *Best Management Practices* for all work associated with site and building construction to ensure adequate erosion control and slope stabilization. In additions, applicant/contractor must submit a copy of a MDEP permit by rule to staff for town records.
3. 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.
4. No trees are to be removed without prior approval by the Code Enforcement Officer or the Shoreland Resource Officer.
5. All Notices to Applicant contained herein (Findings of Fact dated 11/12/15).

Conditions of Approval (not to be depicted on final plan):

6. Incorporate any plan revisions on the final plan as recommended by Staff, Planning Board or Peer Review Engineer, and submit for Staff review prior to presentation on final Mylar.

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

Vote: 5 in favor 0 against 0 abstaining

APPROVED BY THE KITTERY PLANNING BOARD ON _____November 12, 2015

Notices to Applicant:

1. Incorporate any plan revisions on the final plan as recommended by Staff, Planning Board or Peer Review Engineer, and submit for Staff review prior to presentation of final mylar.

2. 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.

3. One (1) mylar copy of the final plan and any and all related state/federal permits or legal documents that may be required, must be submitted to the Town Planning Department for signing. Date of Planning Board approval shall be included on the final plan in the Signature Block. After the signed plan is recorded with the York County Registry of Deeds, a mylar copy of the signed original must be submitted to the Town Planning Department.

4. This approval by the Town Planning Board constitutes an agreement between the Town and the Developer, incorporating as elements the Development Plan and supporting documentation, the Findings of Fact, and any Conditions of Approval.

Per Title 16.6.2.A - 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.

ITEM 4 - Wentworth Dennett Artist Studios – Subdivision Completeness Reveiw
Action: Accept or deny preliminary site plan application; Schedule a public hearing. Owner/Applicant Jeff Apsey requests consideration of plans to add 4 1-bedroom apartments to the top floor of an existing principal building located at 78 Government St. (Tax Map 3, Lot 144) in the Business Local 1 (BL-1) zone.

Mr. Apsey approached the podium. Ms. Grinnell commented that Mr. Apsey is a friend and neighbor but she can be fair. Mr. Lincoln also added that he is a tenant of Mr. Apsey but will be able to be fair as well.

Mr. Dimatteo said that this is a completeness review and a public hearing will need to be scheduled. He added that Staff finds the application to be complete. There was a time lapse and therefore Mr. Apsey needs to get another approval. Ms. Davis asked if there have been any changes in Code that will affect this plan. Mr. DiMatteo added that Mr. Apsey has spoken with Code Enforcement and has been told that there have been no changes to the plan but will check with Code Enforcement for compliance. The plan has been changed to be more ADA compliant.

MR. ALESSE MOVED TO ACCEPT THE SUBDIVISION APPLICATION DATED SEPTEMBER 29 , 2015, FROM JEFF APSEY FOR 78 GOVERNMENT STREET (TAX MAP 3 , LOT 144) IN THE BUSINESS LOCAL 1 (BL-1) ZONE. SECONDED BY MS. DAVIS.

Mr. Lincoln asked how many apartments will be in the plan. Mr. Apsey responded that there will be one on the first floor and four on the second floor for a total of five. Mr. Lincoln noted that he and John Emerson have discussed a condition called “adaptive reuse” and this is the first example of this type of rehab of an old building that he has seen. Ms. Davis advised Mr. Apsey that another plan in town has been challenged due to a flat roof. Mr. Lincoln noted that this is not a flat roof but is a mansard roof according to the plan.

MR. ALESSE AMENDED MOTION TO CALL FOR A PUBLIC HEARING ON DECEMBER 10TH. ACCEPTED BY MS. DAVIS. SECONDED BY MS. DAVIS. A VOICE VOTE WAS TAKEN AND MOTION APPROVED 6/0/0.

ITEM 5 - Betty Welch Road Cluster Subdivision - Sketch Plan Review
Action: Accept or deny plan: Owner Landmark Properties, LTD., and applicant Chinburg Builders, Inc., requests consideration of plans to develop a 20-lot single family cluster subdivision on 86.5 +/- acres. The site is identified as Tax Map 66 Lots 2A & 8 in the Residential Rural (R-R) and Shoreland Overlay (OZ-SL-250’) zones. Agent is Jeff Clifford, P.E., Altus Engineering.

Mr. Clifford approached the Podium. Mr. Harris recused himself because he is an abutter. Ms. Grinnell would like to discuss the modifications of dimensional requirements necessitated by the proposal sketch

plan and what modifications he will be looking for when the project is presented to the Committee. He noted that the proposal was for 24 lots and it has been reconfigured such that the road will not need a secondary means of access. He is asking the board to relax some of the setback requirements to allow for a smaller footprint and a shorter narrower road requirement. Jim Gove of Gove Environmental has observed and addressed the vernal pools for 2 years and the Army Corps will be involved and will make an assessment. That assessment will be part of the preliminary application. The development will have an advanced wastewater treatment system. Maine DEP will look at flooding, erosion control, historic sites and wildlife habitat (cotton tail habitat). The Plan will get the highest level of review from State and Federal Agencies. Ms. Grinnell as how the pipe from the wastewater treatment will cross the wetlands. Applicant explained how these two wetland crossings will work. It will be a Tier 1 permit through DEP.

Earldean Wells of the Conservation Commission provided a letter from the Commission to Mr. Clifford that expresses their concerns and read the letter aloud to the Committee.

Ms. Kalmar noted that this is a Sketch Plan Application. DiMatteo noted that Applicant might want to indicate that they are not near any thresholds. Ms. Kalmar mentioned that there may need to be another site walk. Mr. Lincoln noted that the Water District has a main line running under the development and asked if they have been contacted. Mr. Lincoln noted that there is a main line running under the construction site and inquired if the Water District has been contacted. Mr. Clifford noted that they have been contacted and the Water District said that the project could tie in to their line. So these lots will be served my municipal water. They may require the project to put plates down to protect their pipe.

MS. KALMAR MADE MOTION TO ACCEPT SKETCH PLAN APPROVAL FOR THE PROPOSED SKETCH PLAN REVIEW APPLICATION SUBMITTED BY OWNER LANDMARK PROPERTIES, LTD., AND APPLICANT CHINBURG BUILDERS, INC., FOR A 20-LOT SINGLE FAMILY CLUSTER SUBDIVISION ON 86.5 +/- ACRES. THE SITE IS IDENTIFIED AS TAX MAP 66 LOTS 2A & 8 IN THE RESIDENTIAL RURAL (R-R) AND SHORELAND OVERLAY (OZ-SL-250') ZONES. MR. ALESSE SECONDED. VOICE VOTE 5/0/0 MOTION PASSES.

ITEM 6 – Board Member Items / Discussion

A. Election of Officers and Board Appointments

The Board will elect officers and appoint members to different committees in town. Mr. DiMatteo will provide a list of committees that the Board should have representation on.

According to the Planning Board Bylaws newly appointed members must attend a Planning Board training session with the MMA. It also includes appointed members every three years. Mr. Lincoln asked what kind of training would be required. DiMatteo answered that it has been intentionally generic but relates to municipal board activities.

Mr. Lincoln asked what the Town Council's role is in adopting Planning Board rules. Ms. Grinnell noted that the Council is not involved in the Bylaws for the Planning Board. How many things are we allowed to ask new members to do before checking with the Council. This will be discussed at the next meeting because it needs to be discussed twice. Mr. Lincoln distributed a letter that addresses new candidates.

Driscoll asked if the Foreside Design Review Committee is still active. DiMatteo recalls that a specific committee needs to be reinstated by the Council. The committee is formally defunct because it has run out of time and according to the ordinance must be reinstated by the Council. People

interested in rejuvenating the Committee can speak to the Council, the Planning Board or the Town Manager. Mr. Lincoln suggested that residents put their comments and suggestions in writing.

The Committee decided to add the minutes and their findings from the Foreside Site Walk to the agenda for the meeting on November 19th. Mr. Lincoln suggested that since the Police and Fire Departments attended the Site Walk it would be beneficial to get their comments in writing for the Committee for discussion. Ms. Driscoll suggested that a connection should be made with the Foreside Forum to perhaps invite them to a workshop with Police Department, Fire Department and Public Works to discuss the information that was found in the site walk.

Mr. Lincoln mentioned that in the ordinance there is a section that addresses parking in the Town owned lot beside the library. He has spoken with the Police Chief who isn't sure that it's a Town owned lot any longer. The library receives $3,000. in revenue for it. Mr. Lincoln suggested that the Town remunerate the library $3000. and have public parking there. Mr. Lincoln added that the owners of Best Auto at the corner of Whipple and Rogers Roads have offered space.

Mr. Lincoln asked if there can be discussion about the Hampton Inn appeal. Mr. DiMatteo suggested that discussion be delayed as it would be not be productive at this point. He said that once the Attorney has worked it out then it can be addressed.

MR. ALESSE MOVED TO ADJOURN, SECONDED BY MS. DAVIS. A VOICE VOTE WAS TAKEN AND MOTION APPROVED 6/0/0. MEETING ADOURNED AT 8:03 PM.

Town of Kittery
Town Planning Board Meeting
December 10, 2015

Yankee Commons Mobile Home Park Expansion – Final Subdivision Plan Review
Action: Approve or deny plan. Owner/applicant Stephen A. Hynes Real Property Trust Agreement requests consideration of plans for a 78-lot expansion of the Yankee Commons Mobile Home Park for the property located at US Route 1, Tax Map 66, Lot 24 in the Mixed Use (MU) and Residential – Rural (R-RL) Zones. Agent is Thomas Harmon, Civil Consultants.
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PROJECT TRACKING

REQ'D	ACTION	COMMENTS	STATUS
YES`	Sketch Plan	**2/23/12**	**Accepted**
YES	Site Visit	**9/4/12; 6/2/2015 (2nd visit)**	**Held**
YES	Completeness/Acceptance	**8/23/12**	**Granted**
YES	Public Hearing	**9/13/12; 6/11/2015 (2nd hearing scheduled)**	**Held**
YES	Preliminary Plan Review and Approval	**9/13/12** mtg continued for addt'l info re: mineral extraction (90 days max) **12/13/12 &3/14/13** granted 90-day continuance **5/9/13** tabled requested by Applicant **6/13/13** Reconsideration of 9/13/12 decision failed **7/11/13** Board continued for addt'l info re: preparation of findings with Town Attorney **8/8/13** Board continued for CEO's recommendation on a special permit for Mineral/Earth Extraction **9/12/13** Board continued to 9/26/13 meeting due to time constraints and denied preliminary plan approval. **3/11/2015** Superior Court grants Rule 80B appeal to applicant **6/11/2015** Board continued not to exceed 90 days **9/10/2015** Board conditionally approved preliminary plan	**Granted**
YES	Final Plan Review/Approval		**TBD**
TBD	Wetland Alteration		**TBD**

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.**

Staff's Comments

BACKGROUND

The Applicant and Agent have provided a good summary of the project related to circumstances before and after the Board's denial for preliminary subdivision approval in 9/26/2013. The Superior Court, on 3/11/2015 granted the applicant a Rule 80B appeal and vacated the Board's 2013 decision and remanded back to the Board for further proceedings consistent with its decision.

The Board has held a second public hearing where they heard from the Town Attorney on the background of the 80B appeal, minutes are attached. The Applicant has responded to comments made at the 6/11

meeting in the 7/24/15 submission booklet. The applicant has now submitted a final plan and associated documents that address the preliminary plan conditions of approval and final plan requirements.

STAFF REVIEW

Staff has met with pertinent Department Heads, with comments mostly concerning the intensity of the site preparation and recommend obtaining more details on the plan for the earth and rock extraction. As documented in the applicant's submittal book (Section 5, enclosure 1) the fire and police chiefs met with the applicant to review the revised one-way traffic design for the proposed development. Staff spoke with the Public Works Commissioner and he requests that construction traffic is limited to the northerly end of Idlewood Lane and vehicles accessing the site would do so only via the intersection at Route One. This would require construction vehicles leaving the site to make a left and not a right onto Idlewood Lane. In addition, a plan note needs to be added that identifies this portion of Idlewood to be reconstructed to the satisfaction of the Public Works Commissioner.

Staff was unable to complete a review of the robust and comprehensive final plan submittal, nor did CMA, the town peer-review engineer complete their review. However, the following are comments to date, starting with the preliminary plan conditions of approval.

<u>1) The Preliminary Plan conditions of approval are addressed in the applicant's submittal book, Section 5.</u>

1. Modification to the road layout to accommodate sidewalk

The revised one-way traffic road layout does provide for the additional width the Board was requesting to accommodate a safe and designated area for pedestrians, and would appear to conform to Title 16.8.12.3.M that requires walkways that connect the units to all service and recreational facilities. Though it is clear from the Detail Sheet (R6) that there is a 3-foot wide area designated on the typical one-way road section, the extent of the walk way is not clear since it does not seem to be located on any plans. The typical two-way road section does not include the sane accommodation for pedestrians as does the one-way section. The applicant should address this. In addition, the proposed on-street parking should reflect the one-way nature of the road design and be constructed at an angle rather than perpendicular.

2. Development of a comprehensive plan for earth rock removal that complies with applicable provisions of the State of Maine

The applicant has provided a draft operations plan that addresses the questions raised as to how the construction operation would be accountable to the various performance standards required for a safe and healthy construction site. The draft plan is very helpful in understanding the complexity and scale of the proposed construction.

Staff spoke to MDEP, Bureau of Land and Water Quality, with regard to blasting. It appears that the state a number of years back revised the law to include the specific blasting performance standards for commercial rock quarries (490-Z in Title 38) since they found there were excessive blasting used at large-scale development projects. So the proposed earth removal for the project as it relates to blasting will receive the same scrutiny has a commercial application, however, there may be nuances that should be reviewed that should be modified to relate the uniqueness of the mobile home park site. Blasting monitoring for example, is required to include stations established at the closest structures outside the control of the developer. It would seem prudent to ensure that the structures on the existing mobile home park be included in the monitoring.

Staff recommends that the final operations plan, especially the blasting plan, receive review and approval in some manner by the Town. Perhaps at a minimum the Town's peer-review engineer with input by pertinent department heads.

3. Address limits to the daily trucking rate for rock removal

The applicant has provided insight as to what the likely quantity of truckloads during construction and their position with regard to constraining this aspect of the proposed construction. In summary, Title 16 does not specifically address construction traffic and if MDOT rules and standards are not triggered by their review any constraints would be not supported by local and state regulation and would be arbitrary.

In the absence of comments from CMA, staff has the following comments.
1) It appears that the number of estimated truckloads per day have increased from the prior submittal information from 68 to 120. This would yield 240 roundtrips or 24 per hour (based on a 10 hour 7:00 am to 5:00 pm) day). With this in mind it is not clear why on line 83 does the applicant state that it would be "not feasible" to create the 25 truck round trips in an hour, needed to require a permit. 24 truckloads is very close to 25.
2) As stated under condition 2 above with review and approval of the final operations plan, staff recommends that the final details on hauling the extracted and excavated material should be reviewed and approved in some manner by the Town.
3) Staff interprets Title 16.10.8.2.1 providing authority to the Planning Board to condition a final plan with restrictions that ultimately furthers the overall purpose of the town's land use code; "…to promote the health, safety and general welfare of its residents."

4. Development of a mitigation plan for Idlewood Lane damage, including financial assurance and concurrence with Kittery Commissioner of Public Works

It appears the Applicant is in agreement with the notion for repairing Idlewood Lane where it is evident that the proposed development's construction is the cause. As mentioned earlier, staff recommends along with a condition of approval that identifies the constraint on traveling south on Idlewood with construction vehicles and the street repair by the developer when construction is completed, the plan is revised to show the likely extent of the street that will be impacted and expected to be repaired or reconstructed if need be to the satisfaction of the Public Works Commissioner.

5. Amendment to traffic report to address traffic questions in the CMA's September 1st letter

CMA plans to address this in time for the next meeting.

6. Provide an estimate of the level of diesel emissions at the site with respect to particulates, nitrous oxides, carbon monoxide, volatile organic compounds and ozone

As with construction traffic the applicant finds that Title 16 does not specifically address air quality with much specificity. That being the case, local regulations are met since there are state and federal regulations applicable to the proposed development and required by the project's MDEP Site Law Development permit. Staff tends to concur with this and the applicant has demonstrated they are actively considering the manner in which they will comply with the air quality related regulations in

their plans to engage AMEC Foster Wheeler (enclosure 9 in Section 5 of the submittal book). It is presumed the study will be available to the Board at the next meeting. Staff suggests that perhaps the consultant can identify the manner in which air quality may be monitored over the course of the construction period so that it is evident that compliance with the regulations is feasible over the duration.

7. Supply input from the Open Space Committee

Staff has provided the latest copy of the Report to Council (RTC 11/27) regarding the conservation easement the applicant is seeking with the town. Along with the earlier version (enclosure 10 in Section 5 of the submittal book) the applicant included a memo from the Kittery Open Space Advisory Committee (KOSAC) that supports the proposal with some "caveats". In addition to this staff has included an email that Steve Hall, a KOSAC member, provided in hope to clarify that the entire committee was not in attendance and also not in agreement with the final outcome and wanted the Planning Board to know.

Some initial observations staff has at this point in time:
1) It appears that the required open space (10% of the total area of the lots) is not included in the proposed conservation easement (though there is a slight difference in totals between Sheet S1 and the exhibit OSP that is attached to the RTC). This may be important with regard to how the Board might consider the proposed conservation easement to the town.

2) It is not clear how having the Town hold the easement would enhance or be required for the preservation of the proposed conservation area. It seems that a deed restriction and a resource management/conservation plan for the park management to execute along with a public access easement for the trail would achieve the same goal. In this way the property owner has total control of the property. It is not clear to what extent the proposed conservation area is required by MDEP's stormwater permitting.

3) If the town is to except the open space conservation easement this would be the first of its kind for the Town. A through analysis should be made and the forthcoming management plan vetted so that expectations are clear for all parties involved.

8. Respond to the concerns from the Conservation Commission in writing

The applicant has responded to the questions raised by the KCC and CMA, peer-review engineer plans to provide comment in time for the next meeting.

9. Address traffic concerns about removal of material

As stated previously, staff recommends that hauling routes as part of the operations plan should be reviewed and approved by the Town in some manner. In addition, staff is discussing with the MDOT what opportunities there may be for the truck haulers to use the turnpike rest area as a way to limit the amount of construction traffic in the southerly portion of Route One.

2) **Findings of Fact 16.10.8.3.4**. Staff stated at preliminary plan review "*In the same manner that the applicant has made an effort to methodically address application requirements and the mobile home standards, it would be very helpful to have the same done with the standards the Board will ultimately*

have to make a positive finding on. These standards are based from the State's subdivision law, 30-A MRSA § 4404, which is applicable in this instance."

The applicant has submitted a very thorough response and the applicant's positon on how the proposed development meets the standards that the Board is required to make positive findings on. Though the information is very helpful it was not staff's intention for the applicant to draft the actual Findings of Fact. The Board can expect a draft Findings of Fact that may include some information the applicant has provided but likely not all of it. The Board should refer to it as applicant information and not as a draft of the eventual Findings of Fact the Board will act on.

3) Draft Rules and regulations. Staff recommends that along with the open space restrictions that is noted as forthcoming, a section on the requirements of the state's MDEP Site Location and Development Permit should be added to provide an understanding of the restrictions and the context for the copy of the actual permit presumably each tenant must receive.

4) There are some various comments for minor plan revisions that staff plans to discuss with the applicant's agent prior to the next meeting. The completed application form (Section 1 in the Submittal Book) includes the waiver requests that the Board should take the opportunity to consider. It does not appear the second and third requests (16.10.5.2.C.6 and 16.8.12.3.S) require a waiver since the both have the option for the peer-review engineer to review and find compliant rather than the York County Soil and Water Conservation District.

Waiver request for 16.10.5.2.A.2 is for plan scale and seems reasonable. The last request, 16.8.12.3.I.4 regarding the minimum 50-foot radius reduced to 30 feet, appears to not create any apparent safety issues, however, staff would like to confirm with the Fire Chief.

STAFF RECOMMENDATION

The final plan application appears to be complete, including addressing the preliminary plan conditions of approval. As mentioned earlier, staff and CMA were not able to complete the review prior to this meeting. Considering this staff recommends accepting the final plan application and continue the final plan review to the January meeting or another future date.

BOARD ACTION

Move to accept the final subdivision plan application for a 78-lot expansion of the Yankee Commons Mobile Home Park located at US Route 1, for owner/applicant Real Property Trust Agreement, Tax Map 66, Lot 24.

And

Move to continue the final subdivision plan for a 78-lot expansion of the Yankee Commons Mobile Home Park located at US Route 1, for owner/applicant Real Property Trust Agreement, Tax Map 66, Lot 24 to January 14, 2016 or a subsequent meeting not to exceed 90 days.

CIVIL CONSULTANTS

Engineers
Planners
Surveyors
P.O. Box 100
South Berwick
Maine
03908
207-384-2550

November 19, 2015

Mr. Christopher DiMatteo, Town Planner
Town of Kittery
200 Rogers Road
Kittery ME 03904

Re: **Yankee Commons Mobile Home Park Expansion (Tax Map 66, Lots 24 & 25)**
Idlewood Lane, Kittery, Maine

Dear Mr. DiMatteo:

Enclosed is a final application package for the Planning Board's consideration of the subject project.

It is our opinion that the materials in the booklet address all of the requirements for Final Approval as outlined in the Land Use Code as well as the conditions noted in the Preliminary Subdivision Approval granted 10 September 2015.

We look forward to meeting with the Planning Board to continuing the review process. Should you have any questions or need further information, please call.

Very truly yours,
CIVIL CONSULTANTS

Thomas W. Harmon

Thomas W. Harmon, PE
Principal

Enclosures

cc: Gary Beers, Brian Rayback, gray binder, file

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Yankee Commons Mobile Home Park Expansion (2015)

Final Subdivision Review Application
Town of Kittery

for

Stephen A. Hynes, Trustee, c/o Gary Beers
3 Idlewood Lane, Kittery, Maine

19 November 2015

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CIVIL
CONSULTANTS

P.O. Box 100 South Berwick, Maine 03908 207-384-2550

The materials contained herein are provided in support of the Final Subdivision Approval review of the Yankee Mobile Home Park Expansion (2015) presently before the Kittery Planning Board.

This package includes:

Section 1 - Updated Application Form
(Based on 2013 Application Document)

Section 2 - Discussion of Chapter 16.10.7.2
Final Submission Requirements

Section 3 - Updated Discussion of Chapter 16.10.5.2
Preliminary Submission Requirements

Section 4 - An Updated Discussion of Chapter 16.8.12.3
Mobile Home Park Requirements

Section 5 - Responses to Conditions of Preliminary Approval
(Includes Earth/Rock Removal Plan)

Section 6 - Draft Findings of Fact for Final Approval
(Requested by Planning Staff 11 June 2015)

Section 7 - State Subdivision Requirements vs. Town of Kittery Subdivision Requirements (comparison)

Section 8 - Updated Plan Set
(25 Plan Sheets including Cover Sheet)

CIVIL
CONSULTANTS

P.O. Box 100 South Berwick, Maine 03908 207-384-2550

Section 1

Updated Application Form
(Based on 2013 Application Document)

TOWN OF KITTERY
PLANNING OFFICE

200 Rogers Road, Kittery, Maine 03904
PHONE: (207) 475-1323
Fax: (207) 439-6806

APPLICATION: SUBDIVISION REVIEW

FEE FOR PLAN REVIEW:	☐ **$500. 00 PLUS**	☐ **$50.00/LOT OR DWELLING UNIT**	☐ **Minor Subdivision: not more than 4 lots** ☒ **Major Subdivision: 5 or more lots**	**Fee Paid:** $_____ **Date:** _____ **Escrow Fee Paid** $_____ **Date:** _____

PROPERTY DESCRIPTION	**Parcel ID**	**Map**	66	**Lot**	24 (amended)	**Zoning District**	**MU & R-RL**	**Total Land Area**	50.1 acres (after lot line adjustment)
	Physical Address	Idlewood Lane/U.S. Route 1							

PROPERTY OWNER/ APPLICANTS INFORMATION	**Name**	STEPHEN A HYNES, TRUSTEE REAL PROPERTY TRUST AGREEMENT	**Mailing Address**	1571 Belleview Ave Ste 210 West Vancouver BC V7V1A6
	Phone/Fax			
	Email			
PROPERTY OWNER'S AGENT INFORMATION	**Name**	GARY BEERS	**Name of Business**	Yankee Commons Mobile Home Park
	Phone	207-451-0747	**Mailing Address**	3 Idlewood Lane Kittery, ME 03904
	Email	gb-pksvc@hotmail.com		
APPLICANT'S AGENT INFORMATION	**Name**	THOMAS W. HARMON, PE	**Name of Firm**	CIVIL CONSULTANTS
	Phone/Fax	207-384-2550/207-384-2112	**Mailing Address**	293 Main Street PO Box 100 South Berwick, ME 03908
	Email	tharmon@civcon.com		

PROJECT DESCRIPTION

Existing Use: Woodland

Number of Proposed Lots	77 mobile home sites	**Subdivision Name**	Yankee Commons Mobile Home Park Expansion

Proposed Subdivision:

Design: (check)	____ Conventional	Responsibilities: (check)	_X___ Total Development	____ Landscaping
	____ Cluster Development		____ Other	____ Road
Ownership: (check)	_X___ Fee Simple		____ Post Construction Storm Water Runoff System Maintenance	
	____ Condominium			
Homeowner's Association	____ YES _X___ NO			

This application includes the following supporting documents:

1) Representation letter; 2) Plan w/portion of Kittery assessors map; 3) Abutter listing; 4) Flood Map

The entire Final Subdivision Review Application Package submission is a single booklet with the following Sections: 1 - Updated Application Form; 2 - Chapter 16.10.7.2 discussion; 3 - Updated Chapter 16.10.5.2 discussion; 4 - Updated Chapter 16.8.12.3 discussion; 5 - Preliminary Approval Conditions discussion; 6 - Draft Final Approval FoF; 7 - Comparison State vs. Kittery Requirements; & 8 - Final Plan Set (25 sheets)

WAIVER REQUEST (Submittal Information or Development Standard)		
	Ordinance Section	**Describe why this request is being made.**
	****EXAMPLE**** 16.32.560 (B)- OFFSTREET PARKING.	****EXAMPLE**** Requesting a waiver of this ordinance since the proposed professional offices have a written agreement with the abutting Church owned property to share parking.
DESCRIPTION	16.10.5.2.A.2. Scale of drawings.	Waiver for scale on overall site plan page (all other sheets conform to scale requirements) Larger scale allows the entire site to be viewed on one sheet.
DESCRIPTION	16.10.5.2.C.6. Prevention of Erosion Subsection C.	Since this ordinance was put in place much emphasis has been put on erosion control and prevention. Personnel in Civil Consultants office are Certified Professionals in Erosion and Sedimentation Control (CPESC) and are responsible for preparation of erosion control plans.
DESCRIPTION	16.8.12.3.S Review of storm drainage by YCSWC.	A storm drainage plan has been prepared and reviewed by the town peer reviewer.
	16.8.12.3.I.4 Minimum turn around radius	Waiver request to reduce cul-de-sac turn around radius from 50' to 30'. The turn around only services 2 sites and a 30' radius is more than adequate.

Related Kittery Land Use Code:

16.10.8.2.5 Conditions or Waivers.
Conditions required by the Planning Board at the final plan review phase must have been met before the final plan may be given final approval unless so specified in the condition or specifically waived, upon written request by the applicant, by formal Planning Board action wherein the character and extent of such waivers which may have been requested are such that they may be waived without jeopardy to the public health, safety and general welfare.

16.7.4.1 Objectives Met. In granting modifications or waivers, the Planning Board must require such conditions as will, in its judgment, substantially meet the objectives of the requirements so waived or modified.

ABUTTER NOTIFICATION

16.10.5.1.1. Preliminary Plan Application Filing and Completeness Review. The application must be accompanied by a Plan and the required fee together with a certification the applicant has notified abutters by mail of the filing of the Plan application for approval.

Submitted Application must include a list showing the names and addresses of the abutters notified and date mailed.

The Abutter Notice must include a copy of page one and where applicable page 2 of a signed Application.

I certify, to the best of my knowledge, the information provided in this Application is true and correct, abutters to the project have been notified, and I will not deviate from the Plan submitted without notifying the Kittery Planning Department of any changes.			
Applicant's Signature:	Original signed (by owner's representative)	Owner's Signature:	Original signed (by owner's representative)
Date:	19 November 2015	Date:	19 November 2015

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Minimal Plan Requirements

☐ **15 COPIES OF THE SUBDIVISION PLAN APPLICATION AND PLAN – 5 COPIES MUST BE 24" X 36"**
☑ **1 PDF OF THE SUBDIVISION PLAN SHOWING GPS COORDINATES**

PRIOR TO COMMENCEMENT OF THE REVIEW PROCESS, THE PLANNING BOARD WILL DECIDE WHETHER SUFFICIENT INFORMATION HAS BEEN PROVIDED AND WILL VOTE TO DETERMINE *COMPLETENESS / ACCEPTANCE*.

NOTE: THE APPLICANT IS RESPONSIBLE TO PRESENT A CLEAR UNDERSTANDING OF THE PROJECT.

A) Paper size:
☒ No less than 11" X 17" (reduced) or greater than 24" X 36" (full)

B) Scale size:
☐ Under 10 acres: no greater than 1" = 30'
☒ 10 + acres: 1" = 50'

C) Title block:
☒ Applicant's name and address
☒ Name of preparer of plans with professional information and professional seal
☒ Parcel's tax map identification (map – lot)
☒ Date of plan preparation

D) Boundary survey performed and sealed by licensed surveyor:
☒ Identify all existing boundary markers
☒ Show all proposed boundary monuments (per ordinance)

E) Provide orientation:
☒ Arrow showing true north and magnetic declination
☒ Graphic scale ☒ Parcel Owners and map and lot
☒ Deed docket and page numbers ☐ Draft Deed of Covenants **NA**
☒ Signature block for planning board

F) Show location and description of:
☐ Elevations of dwelling units. If applicable **NA**
☒ All structures and accesses within 100 feet

G) Show parcel data:
☒ Zoning District(s) ☒ Lots ☒ Lot Widths ☒ Lot Depths
☒ Street frontage ☒ Building setback lines ☒ Lot Areas
☒ Rights-of-way ☒ ROW area ☒ Exist. & new street names
☒ Wetlands ☒ Wetland area ☒ Wetland setbacks
☒ Common tracts ☒ Easements ☒ parcel areas
☒ Shoreland Zoning setbacks ☒ undisturbed areas
☒ Note on the subdivision plan regarding areas to be taped off and protected until project construction is completed.

H) ☒ Show names and addresses of all owners of record on abutting parcels and the assessor's map and lot numbers.
Owners list is separate attachment

I) ☒ Label all zoning districts abutting the property boundaries.

J) ☒ Show locations of natural physical features such as water bodies, watercourses, forest cover, and ledge outcroppings.

K) Show the location of existing and proposed Utilities and identify which utilities are to be privately owned/ municipally owned:
☐ Overhead Electric ☒ underground electric
☒ Water mains ☐ Wells ☐ Gas mains ☒ Cable TV
☒ Sewer mains ☒ Test pits ☐ Septic tanks ☐ Leach fields
☒ Storm drain lines ☒ Catch basins ☒ Culverts ☐ Gutters
☒ Stormwater storage basins ☒ Rain gardens
☒ Nearest fire hydrant

L) Indicate required landscaping including:
☒ Type of plant material ☒ Plant/Tree sizes
☒ Placement ☐ Irrigation systems

M) Show natural and historical topography:
☒ Rock walls ☐ Railroad beds
☒ The location of all natural features or site elements to be preserved.

N) Provide a vicinity map at a scale not more than **400 feet to the inch** showing the relation to other properties and geographic features and show:
☒ All the area within five hundred (500) feet of the boundary line of the proposed development including roads, geographic features, natural resources (wetlands etc), historic sites, applicable comprehensive plan features such as proposed park locations, land uses, Zones and other features;
☐ Any smaller area between the tract and all existing streets, provided any part of such a street used as part of the perimeter for the locus map is at least five hundred (500) feet from any boundary of the proposed development.

O) Show the locations of any:
☐ Parks **NA** ☒ Preserved Open space ☒ Conservation easements
☐ Note on the subdivision plan regarding areas to be dedicated for public use and conditions of such dedication. **NA**

P) Identify and locate each:
☒ Easements ☒ Rights-of-way ☒ Street alignments
☒ All intersecting property lines within 50 feet of the parcel.

Q) Include plans, profiles and typical sections of all roads and other paved ways, including all relevant street data.
☒ Intersections or ☒ Distance to nearest intersection
☐ Driveways onsite ☐ Distance to nearest driveway
☒ Sight visibility lines

R) Show all existing and proposed lighting
☒ Map of all street lighting, attached lighting, and area lighting
☐ Location of lighted signs **NA** ☒ Photo-metrics map

S) Indicate the location of any permanently installed machinery likely to cause appreciable noise at the lot lines. ☐ **None**

T) Provide description of these materials stored on the property: **NA**
☐ Hazardous ☐ Toxic ☐ Raw Waste

U) ☒ Show existing contours and finished grade elevations onsite and sufficiently offsite to demonstrate how the project is situated in the surrounding environment.

V) Indicate the location and dimensions of:
☒ Sidewalks ☒ Curbs ☐ Driveways
☒ Fences ☒ Retaining walls ☐ Other artificial features

W) Copies of State and Local permit applications: **TO BE OBTAINED**
☐ Notice of Intent ☒ NRPA ☒ Permit by Rule
☒ All other applicable permits **SITE LOCATION & STORMWATER**

X) ☒ Copy of FIRM Map showing the proposed subdivision boundary to scale.

NOTE TO APPLICANT: PRIOR TO THE SITE WALK, TEMPORARY MARKERS MUST BE ADEQUATELY PLACED THAT ENABLE THE PLANNING BOARD TO READILY LOCATE AND APPRAISE THE LAYOUT OF DEVELOPMENT.

SUBMITTALS THAT THE PLANNER DEEMS SUFFICIENTLY LACKING IN CONTENT WILL NOT BE SCHEDULED FOR PLANNING BOARD REVIEW.

Stephen A. Hynes, B.A., LL.B.

Phone (604) 922-4161
Telecopier (604) 922-4168
Email: hynes1126@shaw.ca

Suite 210 - 1571 Bellevue Avenue
West Vancouver, British Columbia
V7V 1A6

July 26, 2012

Town of Kittery

Re: Yankee Commons expansion project

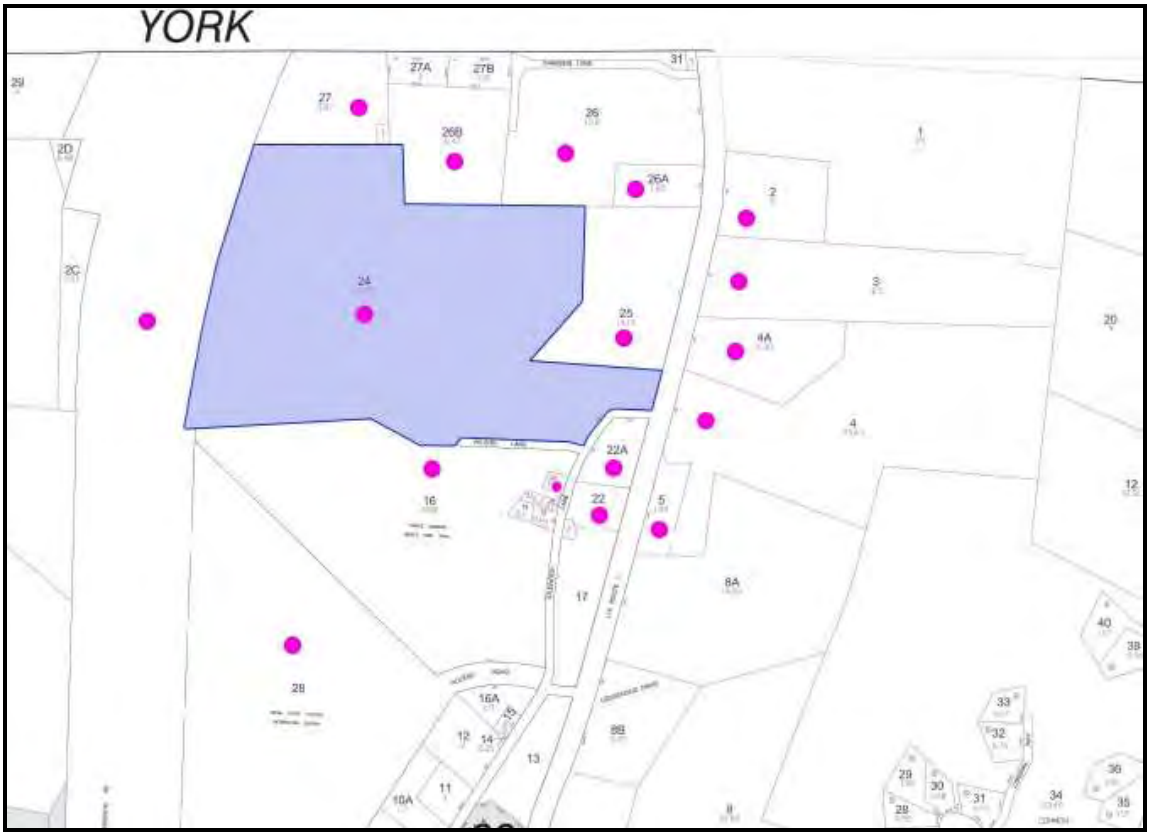
Dear Sir or Madame,

Please be advised that Gary Beers is hereby authorized to sign application documents and to represent me before state and local regulatory agencies in matters related to application for development in the Town of Kittery, Map 66, Lots 24 and 25.

Please further note that Tom Harmon, Civil Consultants, is the civil engineering agent for this development and, as such, is authorized to represent me as technical agent for the application.

Yours truly,

Stephen A. Hynes



Portions of Tax Maps 66 & 67

(Site is shown as Lot 24 & Part of Lot 25 on Map 66)

(Maroon dots ● indicate properties abutting or within 150' of the Project Site)

LIST OF ABUTTERS

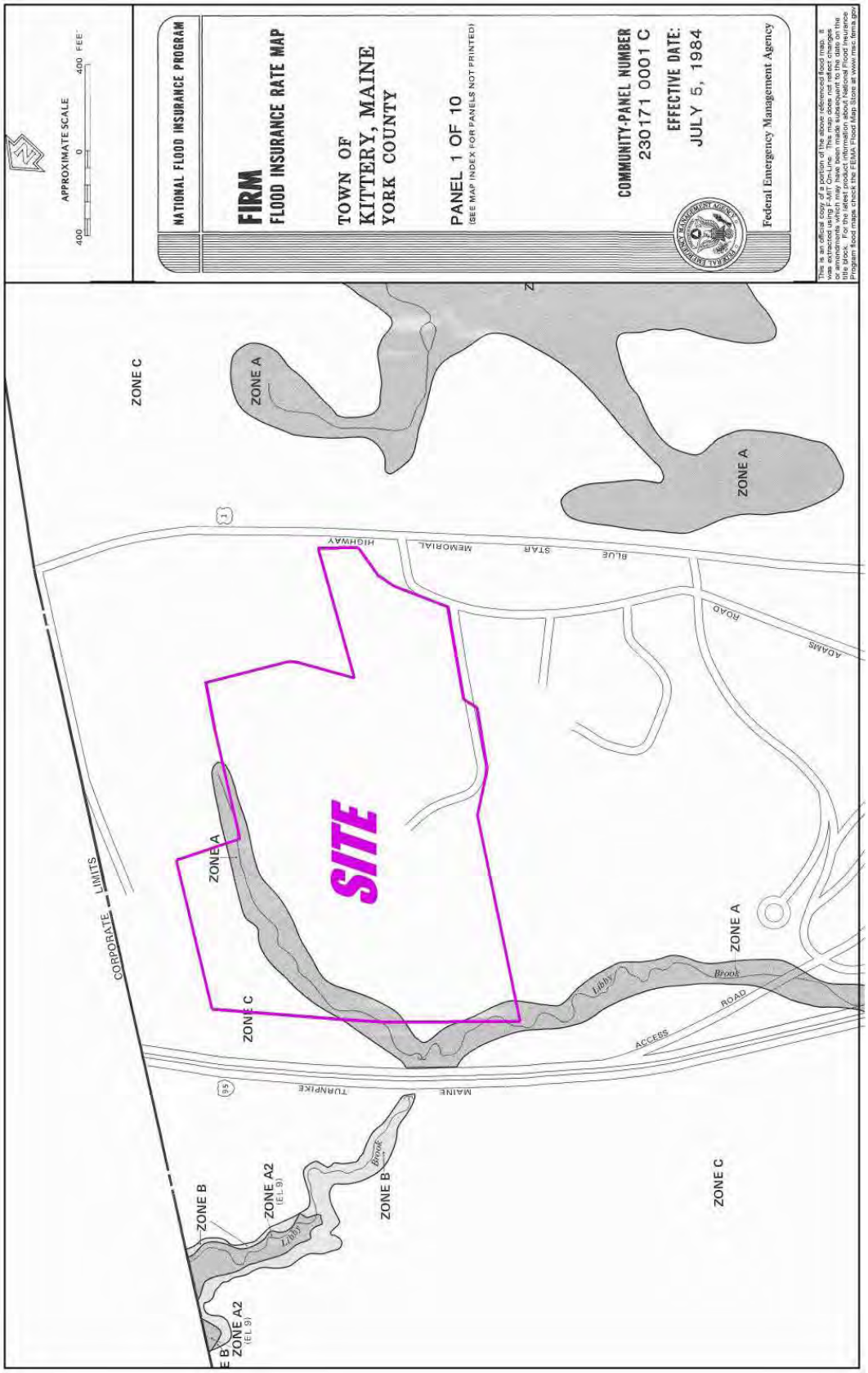
Yankee Commons
Map 66, Lot 24
PROJECT #06-684.02

NOVEMBER 03, 2015
(VISION APPRAISAL ON-LINE RECORDS)

MAP	*LOT*	*NAME & MAILING ADDRESS*
66	**28**	State of Maine Department of Transportation Visitor Information Center 16 State House Station Augusta, ME 04333-0016
66	**30**	State of Maine Department of Transportation 16 State House Station Augusta, ME 04333-0016
66	**16**	Hynes Trustee, Stephen A. Real Property Trust Agreement 1571 Bellevue Ave; Suite 210 West Vancouver BC V7V1A6
66	**22**	Yanco, Trs. Philip J. & Christine C. PJY & CCY Revocable Trust 11/15/06 27 Labine Street Nashua, NH 03060
66	**23**	Donnell, Steven C Donnell, Life Estate, Caroline A. 27 Idlewood Lane Kittery, ME 03904-5515
66	**22A**	Disalvo, Salvatore J Dysart, Shivon, M Po Box 479 Kittery, ME 03904-0479
66	**24** (Locus)	Hynes Trustee, Stephen A. Real Property Trust Agreement 1571 Bellevue Ave; Suite 210 West Vancouver BC V7V1A6
66	**25** (Locus)	Hynes Trustee, Stephen A. Real Property Trust Agreement 1571 Bellevue Ave; Suite 210 West Vancouver BC V7V1A6
66	**26**	Ferguson Trustee, Robert Daniel Lynch Trust PO Box 97 Springvale ME 04083
66	**26a**	Wilson Five Services Co., Inc. PO Box 810 Kittery ME 03904

MAP	*LOT*	*NAME & MAILING ADDRESS*
66	**26b**	Kevin, Inc. PO Box 904 Kittery ME 03904
66	**27**	Farr, Conrad 9 Tara Lane South Berwick, ME 03908
66	**27-1**	AT&T 5405 Windward Parkway Alpharetta, GA 30004-3894
66	**27-2**	SPRINT SPECTRUM LP PO Box 8430 Kansas City, MO 64114-8430
66	**27-3**	U S CELLULAR PO Box 31369 Chicago, IL 60631
66	**27-4**	Saco River Cellular Telephone Co Rcc Atlantic Inc Dba Unicel Att Tax Dept 3905 Dakota St Sw PO Box 2000 Alexandria, MN 56308
66	**27-5**	Verizon Wireless Attn Network Real Estate 180 Washington Valley Road Bedminster, NJ 07921
67	**2**	Landmark Properties LTD PO Box 186 York ME 03909
67	**3**	Crawford TR, William Crawford TR, Betty Crawford Rev. Trust 2004 510 US Route 1 Kittery ME 03904
67	**4**	M&T Realty LLC P.O. Box 125 York, ME 03909-0125
67	**4a**	Pintail Invest. Group, LLC 808 Russell STA RD Francestown NH 03043
67	**5**	State of Maine Department of Transportation 16 State House Station Augusta, ME 04333-0016
		Town of Kittery PO Box 808 Kittery ME 03904

J:\aaa\2006\0668402\planningBoard\finalSubmittal\20151030materials\20151103-TownSubdivisionApp


APPROXIMATE SCALE
400 0 400 FEET
NATIONAL FLOOD INSURANCE PROGRAM
FIRM
FLOOD INSURANCE RATE MAP
TOWN OF
KITTERY, MAINE
YORK COUNTY
PANEL 1 OF 10
(SEE MAP INDEX FOR PANELS NOT PRINTED)
COMMUNITY-PANEL NUMBER
230171 0001 C
EFFECTIVE DATE:
JULY 5, 1984
Federal Emergency Management Agency
This is an official copy of a portion of the above referenced flood map. It was produced on 7/5/2015. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov
ZONE C
ZONE A
ZONE A
ZONE A
ZONE A
ZONE C
ZONE C
ZONE B
ZONE A2
(EL 9)
ZONE A2
(EL 9)
ZONE B
SITE
CORPORATE LIMITS
BLUE STAR MEMORIAL HIGHWAY
ADAMS ROAD
MAINE TURNPIKE
ACCESS ROAD
Libby Brook

Section 2

Discussion of Chapter 16.10.7.2
Final Submission Requirements

with Exhibits:

A - Floor Plan and Elevations of Community Center

B - Stormwater Management Plan

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P.O. Box 100 South Berwick, Maine 03908 207-384-2550

MEMORANDUM TO KITTERY PLANNING BOARD
FROM: Thomas W. Harmon, P.E.
DATE: 19 November 2015
RE: Yankee Commons Mobile Home Park Expansion (2015)
Final Plan Application Review Checklist

Article VII Final Plan Review and Decision.
16.10.7.1 Final Plan Application.

Submittal Requirement	*Applicant Response*
16.10.7.2 Final Plan Application Submittal Content	
A. A complete final plan application must fulfill all the requirements of a preliminary plan as indicated in Section 16.10.5.2 of this section and must show the following items, unless the Planning Board, by formal action, upon the applicant's written request, waives or defers any requirement(s) for submission. If no changes occurred to the preliminary plan it also may be considered to be the final plan.	*An updated Section 16.10.5.2 checklist is found in Section 3 of the Final Subdivision Review Application Package.*
B. Preliminary plan information including vicinity map and any amendments thereto suggested or required by the Planning Board, or other required reviewing agency;	*The Final Plans include all of the information that was included on the Preliminary Plans- updated to address comments raised during the preliminary plan review process and/or addressing Preliminary Plan Approval conditions.*
C. Street names and lines, pedestrian ways, lots, easements, and areas to be reserved for or dedicated to public use;	*Shown on the plans. No areas are reserved for or dedicated to public use.*
D. Street length of all straight lines, the deflection angles, radii, lengths of curves and central angles of all curves, tangent distances and tangent bearings;	*Shown on the plans.*
E. Lots and blocks within a subdivision numbered in accordance with local practice;	*N/A (Home sites are numbered to facilitate management of the Park & E911 requirements).*
F. Markers/permanent reference monuments: Their location, source references, and where required, constructed in accordance with specifications herein;	*Park property perimeter monuments (existing and/or proposed) are shown on the plans. Interior markers are used only as needed for management of the park.*
G. Structures; their location and description including signs, to be placed on the site, floor plans and elevations of principal structures as well as, detail of **all** structures showing building materials and colors, and accesses located within one hundred (100) feet of the property line;	*Individual unit plans will be provided as part of the building permit process when lots are developed. Plans for the Community Center are attached as Exhibit A.*

16.10.7.2 *continued*	
Submittal Requirement	***Applicant Response***
H. Outdoor' lighting and signage plan; if the	
1. Lighting plan, if the application involves the construction of more than five thousand (5,000) square feet of nonresidential floor area, or the creation of more than twenty thousand (20,000) square feet of impervious area, or the creation of three or more dwelling units in a building; prepared by a qualified lighting professional, showing at least the following at the same scale as the site' plan:	*Site lighting information is shown on Plan Sheets ES & EP*
a. All buildings, parking areas, driveways, service areas, pedestrian areas, landscaping, and proposed exterior lighting fixtures;	
b. All proposed lighting fixture specifications and illustrations including photometric data, designation as "cut-off' fixtures, color rendering] index (CRI) of all lamps (bulbs), and other descriptive information on the fixtures;	
c. Mounting height of all exterior lighting fixtures;	
d. Lighting analyses and luminance level diagrams or photometric point by point diagrams on a twenty (20) foot grid showing that the proposed installation conforms to the lighting level standards of the ordinance codified in this Section together with statistical summaries documenting the average luminance, maximum luminance, minimum luminance, average to minimum uniformity ratio, and maximum to minimum uniformity ratio for each parking area, drive, canopy, and sales or storage area;	
e. Drawings of all relevant building elevations showing the fixtures, the portions of the walls to be illuminated, the luminance levels of the walls, and the aiming points for any remote light fixtures and;	
f. A narrative that describes the hierarchy of site lighting hierarchy and how the lighting will be used to, provides safety, security, and aesthetic effects;	
I. Machinery permanently installed locations likely to cause appreciable noise at the lot lines;	*No permanently installed machinery unrelated to the individual units or community center is proposed.*
J. Materials (raw, finished or waste) storage areas, their types and location; and any stored toxic or hazardous materials, their types. and locations;	*Park Rules prohibit these activities.*
K. Fences, retaining walls and other artificial features locations and dimensions proposed;	*These items are shown on the plans as appropriate and/or applicable.*
L. Landscaping plan including location, size, and type of plant material;	*Proposed landscaping is shown on Plan Sheets L1 & L2.*

16.10.7.2 *continued*	
Submittal Requirement	***Applicant Response***
M. Municipal impact analysis of the relationship of the revenues to the Town from the development and the costs of additional publicly funded resources including;	*There is a net positive fiscal impact to the town. Significant Public Safety Impact Fees will be paid. In addition, with the owner taking care of on-site roads, water, sewer, street lighting, waste disposal; and few, if any, school students, the project will have very limited financial cost to the Town. The estimated added valuation, when completed, would contribute more than $231,900 annually in new taxes, along with the sewer and water department added revenues.*
1. Review for impacts. A list of the construction items that will be completed by the developer prior to the sale of lots.	*N/A - No lots being sold.*
2. Municipal construction and maintenance items. A list of construction and maintenance items that must be borne by the municipality, which must include, but not be limited to:	*No construction costs being borne by the Town. No recurring maintenance fees. The Park maintains all improvements.*
a. Schools, including busing;	*None*
b. Road maintenance and snow removal;	*None*
c. Police and fire protection;	*None*
d. Solid waste disposal;	*None*
e. Recreation facilities;	*None*
f. Runoff water disposal drainage ways and/or storm sewer enlargement with sediment traps;	*None*

3. Municipal costs and revenues. Cost estimates to the Town for the above services and the expected tax revenue of the development.	*There are no direct costs to the Town.* **Property Taxes (Fully Built)** $ 11,550,000 Sites/Homes $ 500,000 Central Facility $ 2,749,000 Land $ 14,799,000 Total $ 15.67 FY16 Mil Rate **$ 231,900 Total Annual Tax Revenue** **Recurring Fees** **$ 29,737 Sewer & Water Annual Fees** **One-Time Fees** $ 148,350 Building Permits $ 21,250 Public Safety Impact Fee $ 157,170 Sewer Connection Fees **$ 326,770 Total One-Time**
N. Open Space land Cession Offers. Written offers of cession to the municipality of all public open space shown on the plan, and copies of agreements, or other documents showing the manner in which space(s), Code to which is reserved by the subdivider, are to be maintained.	*Preliminary Plan Response Conditions of Approval #7 (part of Section 5 of the Final Subdivision Review Application Package) and Enclosure #9 to same are the written offer to be presented to the Town Council on Nov 23rd, 2015*
O. Open Space Land Cession Offers Acknowledgement by Town. Written evidence that the municipal officers are satisfied with the legal sufficiency of the documents referred to in Section 16.10.7.20. Such written evidence does not constitute an acceptance by the municipality of any public open space referred to in Section 16.10.7.2O.	*Council action on the offer is anticipated on Nov 23rd and the results will be provided as soon as made available.*

16.10.7.2 *continued*	
Submittal Requirement	***Applicant Response***
P. Performance Guaranty and Town Acceptance to secure completion of all improvements required by the Planning Board and written evidence the Town manager is satisfied with the sufficiency of such guaranty.	*See response to 16.10.7.2(P)(2), below.*
1. Where improvements for the common use of lessees or the general public have been approved, the Planning Board must require a performance guaranty of amount sufficient to pay for said improvements as a part of the agreement.	*See response to 16.10.7.2(P)(2), below.*
2. Process. Prior to the issue of a building permit, the applicant must, in an amount and form acceptable to the Town manager, file with the municipal treasurer an instrument to cover the full cost of the required improvements. A period of one year (or such other period as the Planning Board may determine appropriate, not to exceed three years) is the guaranty time within which required improvements must be completed. The performance guaranty must include an amount required for recreation land or improvements as specified.	*After final plan approval and prior to issuance of a building permit, and after discussion with the Town manager, a performance guarantee will be filed in an amount and form acceptable to the municipal treasurer to cover the costs of improvements required by the Planning Board.*
Q. Maintenance Plan and Agreement defining maintenance responsibilities, responsible parties, shared costs, and schedule. When applicable, a Maintenance Agreement must be included in the Document of Covenants, Homeowners Documents and or as riders to the individual deed.	*All maintenance activities not addressed in the Park Rules is the responsibility of Yankee Mobile Home Park management.*
R. Stormwater management plan for stormwater and other surface water drainage prepared by a registered professional engineer including the location of stormwater and other surface water drainage areas, a Maintenance Plan and Agreement that defines maintenance responsibilities, responsible parties, shared costs, and schedule. Where applicable, a Maintenance Agreement must be included in the Document of Covenants, Homeowners Documents and/or as riders to the individual deed and recorded with the York County Registry of Deeds.	*A copy of the Stormwater Management Plan prepared for the site is included as Exhibit B.*

16.10.7.2 *continued*	
Submittal Requirement	***Applicant Response***
S. Phasing Plan. Where, upon applicant's request, the Planning Board may permit phasing of the plans where it can be demonstrated to the Planning Board's satisfaction that such phasing would result in a safe and orderly development of the plan.	*N/A No phasing proposed.*
1. The applicant may file a section of the approved plan with the municipal officials and the York County registry of deeds if said section constitutes at least twenty-five percent (25%) of the total number of lots, or for plans including buildings, twenty-five percent (25%) of the gross area, contained in the approved plan. In all circumstances, plan approval of the remaining sections of the plan will remain in effect for three years unless the applicant requests and the Planning Board grants extensions of time equivalent to the requirements for approved plans in Section 16.10.9.1.5.	
2. Phasing is subject to any conditions deemed necessary to assure a reasonable mixture of uses is completed within each separate phase of the plan.	
3. Where projects are to be constructed in phases, phasing of stormwater management, water mains and streets are part of the review process.	
4. Portions of both the developed and undeveloped site, impacted by interim infrastructure conditions such as un-looped water systems, stormwater runoff from unfinished areas onto finished areas and vice versa" dead end streets, etc., must be clearly defined and shown on the plans.	
5. The Planning Board may permit construction of phases "out of order" only when the storm drainage plan and the water plan" etc. have been reviewed and it has been demonstrated that the impact on both the developed and undeveloped sections is negligible.	
T. Right-of-Way Plan	*N/A No Public ROW plan proposed.*
1. A completed application for a Planning Board approved right-of-way must include the requirements of Section 16.10.5.2 with the following modifications:	
a. The following submission requirements are not necessary for Right-of-Way review: Section 16.10 5.28 10, parts e, I through k, n and p; and Section 16.10.5.2C5 through 12.	
b. Section 16.10. 7,2G modified so floor plans and elevations of principal structures are not required;	
c. Include the size of the parcel minus the area in the ROW, and the street frontage excluding the ROW;	
d. Only need to show and locate on the plan the names and addresses of all owners of record of contiguous property, including those across a street;	
e. Include required front yards from the R.O.W. on the plan.	

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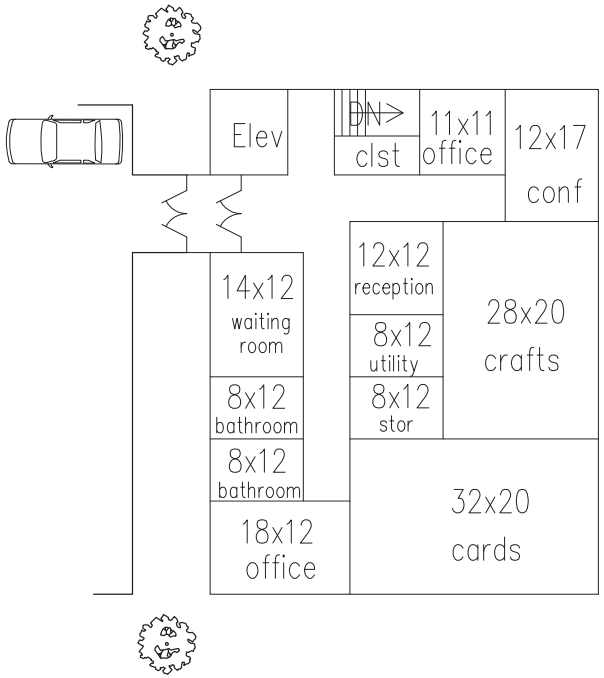
Planners

Surveyors

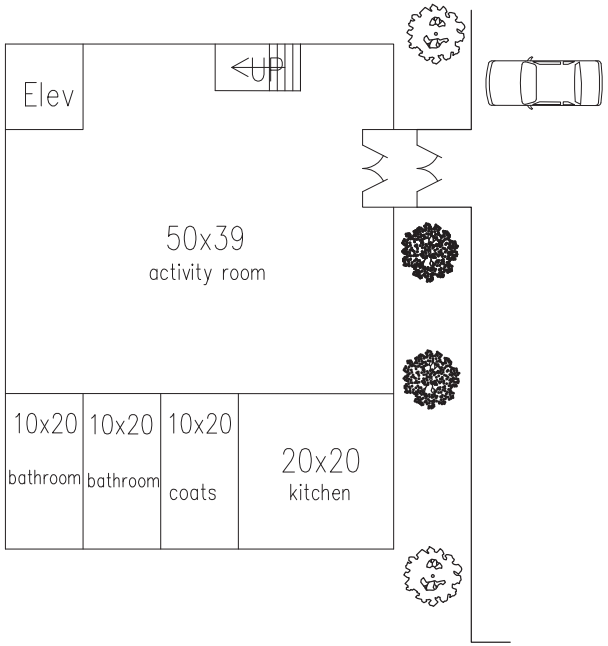
Section 2

Exhibit A

Floor Plan and Elevations of Community Center



UPPER LEVEL



LOWER LEVEL

HONEY LOCUST (4'–5')

RED MAPLE (2"–2.5")

0' 8' 16' 24'

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CIVIL CONSULTANTS
Engineers
Planners
Surveyors
P.O. Box 100
South Berwick
Maine
03908
207-384-2550
civcon@civcon.com

NO.	REVISIONS	INT.	DATE
1			

COMMUNITY CENTER / OFFICE
MOBILE HOME PARK EXPANSION (2015)
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS: 1571 BELLEAVE AVE., SUITE 210 WEST VANCOUVER, B.C. V7V1A6

CIVIL CONSULTANTS

DRAWN JES/AES CALC.
DATE 19 NOVEMBER 2015
CHECKED
APPROVED
SCALE 1"=8'

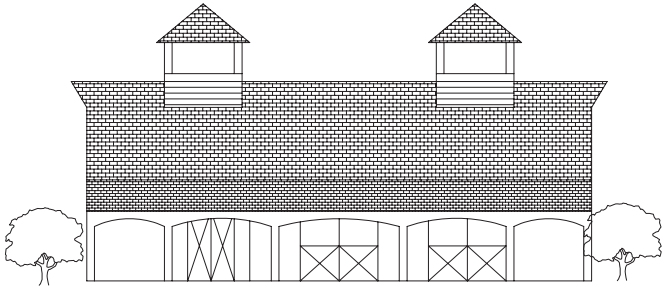
SHEET TITLE:
• CONCEPTUAL FLOOR PLAN

SHEET NUMBER:
A1

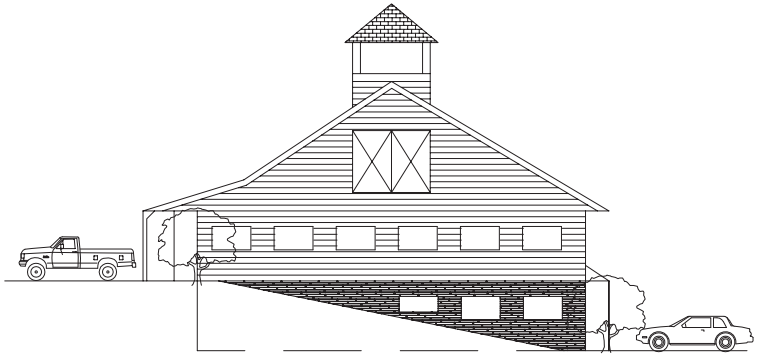
SHEET 1 of 2

PROJECT # 06–684.02

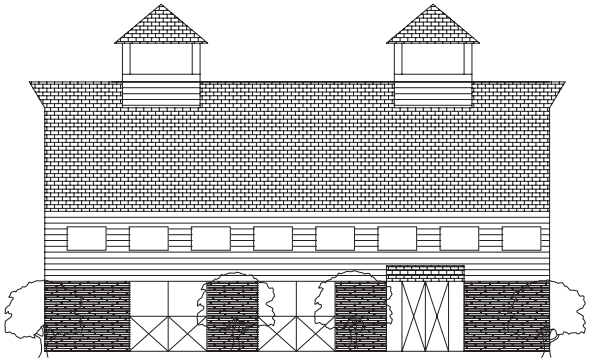
DIRECTORY: \0668402\CARLSON\ENGINEERING\DRAWING DWG NAME: 0668402E–EX–2C DATE: 11/19/2015



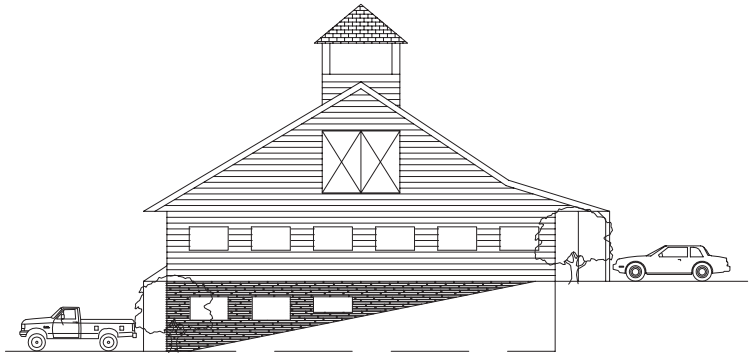
FRONT VIEW



RIGHT SIDE VIEW



REAR VIEW



LEFT SIDE VIEW

0' 8' 16' 24'

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CIVIL CONSULTANTS
Engineers
Planners
Surveyors
P.O. Box 100
South Berwick
Maine
03908
207-384-2550
civcon@civcon.com

NO.	REVISIONS	INT.	DATE
1			

COMMUNITY CENTER / OFFICE
MOBILE HOME PARK EXPANSION (2015)
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS: 1571 BELLEVUE AVE., SUITE 210 WEST VANCOUVER, B.C. V7V1A6

CIVIL CONSULTANTS

DRAWN JES/JES CALC.
DATE 19 NOVEMBER 2015
CHECKED
APPROVED
SCALE 1"=8'

SHEET TITLE:
• CONCEPTUAL ELEVATIONS VIEWS

SHEET NUMBER:
A2

SHEET 2 of 2

PROJECT # 06-684.02

DIRECTORY: \0668402\CARLSON\ENGINEERING\DRAWING DWG NAME: 0668402E-EX-2C DATE: 11/19/2015

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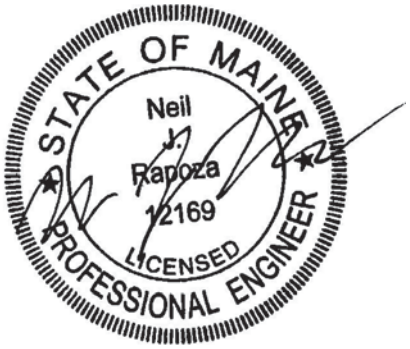
Section 2

Exhibit B

Stormwater Management Plan



The seal affixed above applies to this report, Appendices A through F, and Pre- & Post-Development Drainage Plans D1-D3.

Maine Department of Environmental Protection
Site Location Application
Stormwater Management Plan

"YANKEE COMMONS"
ROUTE 1, KITTERY, ME

Prepared for

Gary Beers
3 Idlewood Lane
Kittery, Maine 03904

November 2012 (Revised March 2013)

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Planners

Surveyors

Stormwater Management Narrative

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STORMWATER MANAGEMENT PLAN

"Yankee Commons"
Idlewood Lane / Route 1
Kittery, Maine

Prepared for:

Gary Beers
3 Idlewood Lane
Kittery, ME 03904

November 2012
Revised March 2013

INTRODUCTION:

The proposed residential development is located on a portion of Map 6, Lots 24 & 25, which is situated on Route 1 in Kittery, ME. The development will be an expansion of an existing mobile home park and will consist of 77 new units along with a community center, and associated roadways, utilities, and drainage facilities.

Of the site's 50.1 acres, approximately 18.5 acres will be altered by the proposed development. An additional 2.0 acres has been accounted for with regard to stormwater treatment to include an area of improvement to an existing roadway for access to the site. This includes areas of roadway, buildings and drainage facilities, along with associated utilities and site grading.

Of the disturbed area, approximately 7.0 acres will be impervious (roadway, parking, drives, and roofs). This includes 2.7 acres of roadway paving and 4.3 acres of driveways and roofs. Of the proposed impervious area, 0.56 acres will be located on an adjacent lot, resulting in a total new impervious area on site of 6.44 acres. The full 7.0 acres of impervious has been considered for the purposes of stormwater management and treatment.

Much of the new development will consist of clearing vegetation and re-grading the locations of the proposed roadway and buildings. Additional disturbance will be necessary for the installation of stormwater BMPs and other conveyance systems, as well as various utilities.

Treatment for impervious areas will be achieved through the use of 13 grassed filter basins and 1 bioretention basin. The sizes of the filters range from 1,000 sf to 3,200 sf.

All buildings receiving treatment will be treated by roof dripline filters.

The outlet control structures, culverts and grassed filters used to treat developed areas have been designed to the standards presented in "Stormwater Management for Maine – Vol III BMPs Technical Design Manual, July 2006" Rev June 2009. BMP designs are verified in the attached calculations.

DESIGN REQUIREMENTS:

The development will require Site Location permitting. Since a Site Location permit is required, the project will need to meet the Basic, General, and Flooding Standards as set forth in DEP Chapter 500 Section 4.

A minimum of 80% of all proposed developed area and 90% of non-linear impervious area is required to be treated by accepted BMP's. The imperious area treatment requirement has been reduced through over-sizing

the proposed BMP's. For this development, the roadway has been considered non-linear impervious area, and will be treated as such.

Refer to the tables in Appendix C as well as Sheet D3 for all BMP sizing and locations.

EXISTING DRAINAGE CONDITIONS:

The site is an abandoned farm with a land cover that is a mixture of woodlands, forested wetlands, and fields. The property is bounded on the West by the Maine Turnpike (Rt 95) and on the East by US Route 1.

The wetland areas on site cover a total 6.6 acres, including 0.8 acres designated as emergent wetlands. All wetland areas are to remain undisturbed except for the installation of necessary drainage facilities and roadway improvement at the existing Wilson Lane. The total expected wetland disturbance will be 1,500 sf +/-. A separate NRPA permit will be obtained as required.

A large knoll at the center of the site constitutes the majority of buildable area, and will be the location of the residential units.

The slopes on the site vary between 1% in the wetlands and as much as 30% adjacent to the wetlands. Slopes average approximately 7% over the remainder of the site.

The project drains west to a tributary of Libby Brook as well as to the brook itself, which ultimately outlets to the York River.

As noted above, the runoff from the site feeds the York River, which is not listed as an Urban Impaired Stream nor does it flow to any bodies of water listed as Lakes Most at Risk from New Development. (See Appendix A for a copy of the applicable USGS map).

Soils in the watershed are primarily hydrologic types C and D, with some A and B soils present in upland locations. High Intensity Soils Mapping for the site was performed by Kenneth Gardner of JRK Soil Search, Inc. of Limington, ME (license CSS#61).

A designated one hundred (100) year flood area is located on site with an undetermined flood elevation. No development or disturbance is planed within this area (See Appendix E for a copy of the applicable FEMA map).

PROPOSED DRAINAGE:

This project will require a Site Location Permit and therefore is required to meet the basic, general, and flooding standards per DEP Chapter 500.

The roadway and associated driveways will be treated by grassed filters located down slope of the proposed development. Underdrained roof dripline filters will be used to treat all building runoff.

Detailed drainage system and BMP sizing calculations are attached herewith in Appendix C and Sheet D3.

METHODOLOGY:

All runoff calculations were performed using methods based on USDA–SCS Technical Release No. 20 (also known as TR-20). The two-, ten-, and twenty-five-year, twenty-four-hour storm events

(Type III rainfall distribution) were used for the site-specific analysis to determine pre- and post-development peak discharge rates and required stormwater conveyance systems.

Runoff curve numbers (CN) and times of concentration (Tc) were determined by the methods outlined in USDA-SCS Technical Release No. 55 (better known as TR-55). On site watershed areas were determined using two-foot contour data provided by field survey crews and previously compiled topography plans. The applicable USGS Quadrangles were used to determine the extent of off-site drainage areas.

The detailed analysis for this project was performed by computer utilizing "HYDROCAD." The computer printouts are attached.

As previously noted, a High Intensity Soils survey (HISS) was used to obtain the hydrologic characteristics of on-site soils. The York County Soil Survey was used to determine the hydraulic designation for areas that contribute to the site where a HISS was unavailable. The general distribution of soils is shown on the attached drainage plans.

The attached Pre- and Post Development plans (D1 & D2) show subcatchment boundaries, hydraulic flow lines, existing and proposed roads, and drainage features and facilities. Land cover type boundaries used in the model for on-site areas are also shown on the plan (i.e. tree lines, wetlands, etc).

The BMP layout and the areas treated are shown on the Treatment Plan (D3).

ANALYSIS:

The overall perimeter of the watershed remained roughly the same for both Pre- and Post Development. There were ten subcatchments identified for the Pre Development analysis and twenty-four subcatchments identified for Post Development analysis. The additional areas were used to evaluate stormwater management facilities and modifications to the site.

The project runoff drains to two discharge points (identified as OUT 1 and OUT 2 in the calculations). OUT 1 includes all runoff from the northern portion of the site that drains to a stream that crosses the lot and flows to Libby Brook. OUT 2 includes flows that drain to wetlands to the south that feed Libby Brook. The pre- and post-development have been modeled to outlet to the same discharge points. The area draining to OUT 2 has slightly increased in the post-development analysis while the area draining to OUT 1 has decreased. This is due to changes in the routing of flows in the new stormwater management system. The overall area contributing to flow off of the site has not changed.

For further details regarding subcatchment determination, treatment, and BMP design, refer to sheets C7, C8, D1, D2 & D3 included in the appendix of this report.

RESULTS:

In order to meet the flooding standard, we have attempted to hold Post-Development flows at or below Pre-Development levels. The following tables summarize the results of the analyses for the 2-, 10-, and 25-year events:

TWO-YEAR EVENT -

Discharge Point Designation Pre/Post	Peak Runoff(in cfs) Pre	Post	Change (cfs)
OUT 1	18.63	***13.80***	***-4.83***
OUT 2	7.79	5.88	-1.91

TEN-YEAR EVENT -

Discharge Point Designation Pre/Post	Peak Runoff(in cfs) Pre	Post	Change (cfs)
OUT 1	50.77	***47.96***	***-2.81***
OUT 2	16.88	***15.96***	***-0.88***

TWENTY-FIVE YEAR EVENT -

Discharge Point Designation Pre/Post	Peak Runoff(in cfs) Pre	Post	Change (cfs)
OUT 1	69.26	***68.65***	***-0.21***
OUT 2	21.73	***21.55***	***-0.18***

As shown in the tables, peak flows are reduced for all storm events. The reduction in peak flow is the result of extending the detention time throughout the site with the implementation of grassed filters and their outlet structures to briefly detain flows.

CONCLUSIONS:

The proposed development will utilize new grassed filters and roofline drip edge filters to remove sediment and other pollutants caused by the changes in land cover on the site. These will also generally reduce Post-Development peak runoff rates to Pre-Development rates.

DEP general standards have been met through the use of over-sized BMP's to treat 90% of all impervious area on site (90% required). The entire developed area will be treated at a rate of 84% (80% required).

DEP Flooding Standards have also been met using the BMPs in conjunction with multi-outlet control devices.

See sheets D3, C7, and C8, as well as Appendix C, for detailed sizing and treatment calculations.

It is expected that the development will result in post-development flows lower than the pre-development condition, and all runoff treatment will meet or exceed the standards set by Maine DEP. For these reasons, it is our opinion that there will be no adverse downstream impacts as a result of this project.

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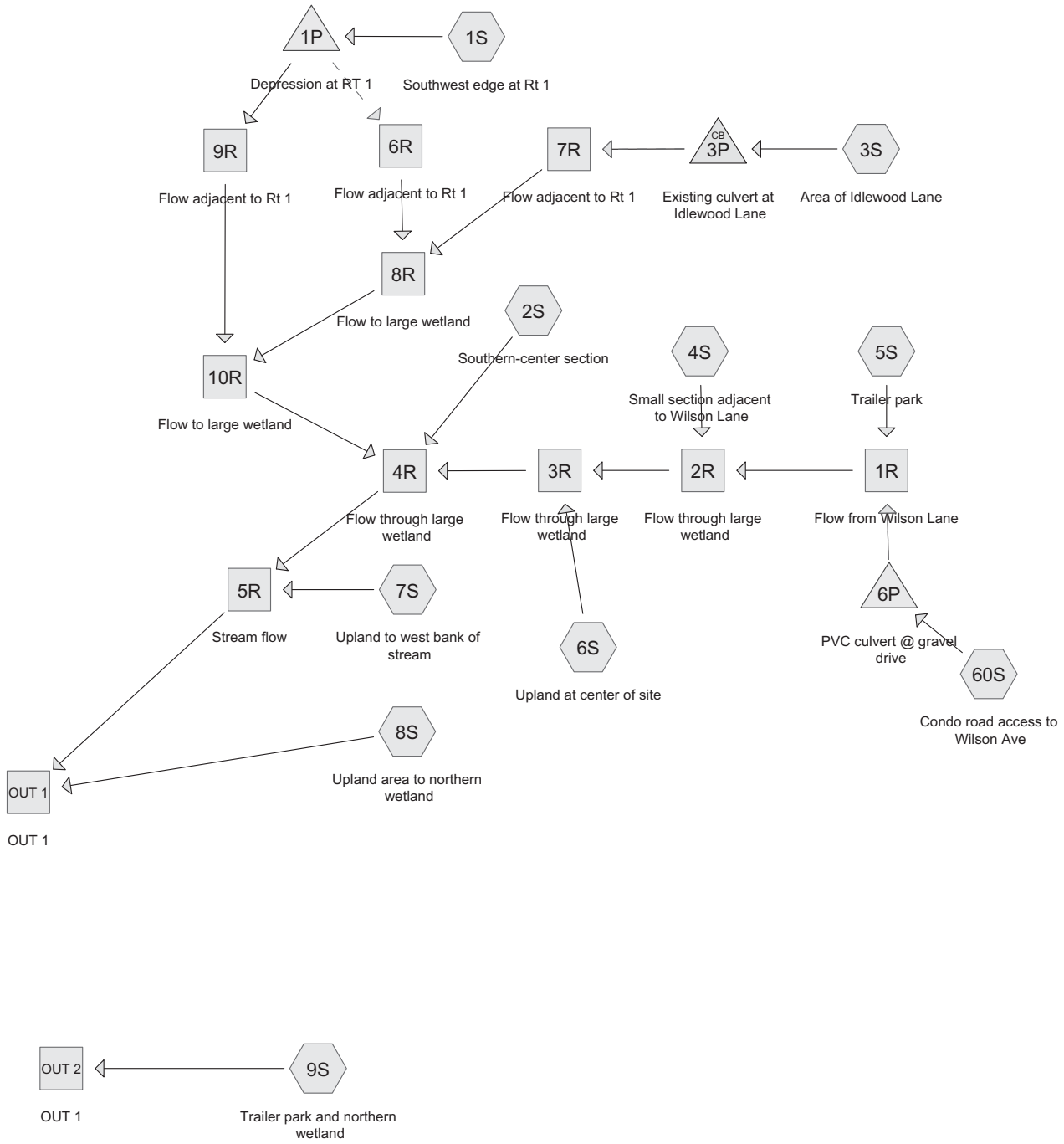
CIVIL
CONSULTANTS

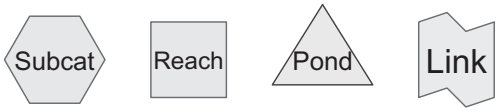
Engineers

Planners

Surveyors

Pre-Development Calculations





Routing Diagram for Yankee Settlement Pre_20120711
Prepared by Civil Consultants, Printed 11/8/2012
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.101	43	Woods/grass comb., Fair, HSG A (2S)
0.870	49	50-75% Grass cover, Fair, HSG A (3S)
1.653	60	Woods, Fair, HSG B (6S, 7S, 8S, 9S)
24.344	73	Woods, Fair, HSG C (1S, 2S, 4S, 5S, 6S, 7S, 8S, 9S, 60S)
4.010	79	50-75% Grass cover, Fair, HSG C (1S, 2S, 3S, 5S, 7S, 8S, 9S, 60S)
25.712	79	Woods, Fair, HSG D (1S, 2S, 4S, 6S, 7S, 8S, 9S)
1.385	84	50-75% Grass cover, Fair, HSG D (2S, 5S, 7S, 8S, 9S, 60S)
0.103	87	Dirt roads, HSG C (6S)
2.173	98	Paved parking & roofs (1S, 2S, 3S, 4S, 9S, 60S)
0.099	98	Road (5S)
0.152	98	Roofs (5S)
60.602	**76**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.971	HSG A	2S, 3S
1.653	HSG B	6S, 7S, 8S, 9S
28.457	HSG C	1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S, 60S
27.097	HSG D	1S, 2S, 4S, 5S, 6S, 7S, 8S, 9S, 60S
2.424	Other	1S, 2S, 3S, 4S, 5S, 9S, 60S
60.602		**TOTAL AREA**

Time span=0.00-70.00 hrs, dt=0.01 hrs, 7001 points x 4
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Southwest edge at Rt 1 Runoff Area=3.932 ac 18.62% Impervious Runoff Depth=1.19"
Flow Length=336' Tc=19.6 min CN=79 Runoff=3.62 cfs 0.389 af

Subcatchment 2S: Southern-center section Runoff Area=12.441 ac 5.86% Impervious Runoff Depth=1.02"
Flow Length=490' Tc=36.7 min CN=76 Runoff=7.25 cfs 1.052 af

Subcatchment 3S: Area of Idlewood Lane Runoff Area=2.270 ac 18.19% Impervious Runoff Depth=0.76"
Flow Length=543' Tc=14.6 min CN=71 Runoff=1.36 cfs 0.144 af

Subcatchment 4S: Small section adjacent to Runoff Area=1.476 ac 4.34% Impervious Runoff Depth=1.02"
Flow Length=430' Tc=10.0 min CN=76 Runoff=1.46 cfs 0.125 af

Subcatchment 5S: Trailer park Runoff Area=5.130 ac 4.89% Impervious Runoff Depth=0.96"
Flow Length=448' Tc=17.3 min CN=75 Runoff=3.87 cfs 0.411 af

Subcatchment 6S: Upland at center of site Runoff Area=10.025 ac 0.00% Impervious Runoff Depth=1.07"
Flow Length=443' Tc=31.7 min CN=77 Runoff=6.67 cfs 0.895 af

Subcatchment 7S: Upland to west bank of Runoff Area=3.990 ac 0.00% Impervious Runoff Depth=0.96"
Flow Length=549' Tc=23.3 min CN=75 Runoff=2.67 cfs 0.319 af

Subcatchment 8S: Upland area to northern Runoff Area=10.227 ac 0.00% Impervious Runoff Depth=1.02"
Flow Length=800' Tc=30.2 min CN=76 Runoff=6.54 cfs 0.865 af

Subcatchment 9S: Trailer park and northern Runoff Area=9.560 ac 0.67% Impervious Runoff Depth=1.13"
Flow Length=689' Tc=23.0 min CN=78 Runoff=7.79 cfs 0.899 af

Subcatchment 60S: Condo road access to Runoff Area=1.551 ac 11.03% Impervious Runoff Depth=1.13"
Flow Length=264' Tc=7.8 min CN=78 Runoff=1.87 cfs 0.146 af

Reach 1R: Flow from Wilson Lane Avg. Flow Depth=0.27' Max Vel=0.48 fps Inflow=5.26 cfs 0.557 af
n=0.040 L=118.0' S=0.0017 '/' Capacity=296.55 cfs Outflow=5.08 cfs 0.557 af

Reach 2R: Flow through large wetland Avg. Flow Depth=0.26' Max Vel=0.43 fps Inflow=6.07 cfs 0.681 af
n=0.040 L=180.0' S=0.0014 '/' Capacity=357.97 cfs Outflow=5.63 cfs 0.681 af

Reach 3R: Flow through large wetland Avg. Flow Depth=0.41' Max Vel=0.42 fps Inflow=12.10 cfs 1.576 af
n=0.040 L=418.0' S=0.0007 '/' Capacity=225.15 cfs Outflow=9.86 cfs 1.576 af

Reach 4R: Flow through large wetland Avg. Flow Depth=0.43' Max Vel=0.56 fps Inflow=19.74 cfs 3.162 af
n=0.040 L=660.0' S=0.0012 '/' Capacity=334.41 cfs Outflow=15.99 cfs 3.162 af

Reach 5R: Stream flow Avg. Flow Depth=0.41' Max Vel=1.73 fps Inflow=17.06 cfs 3.481 af
n=0.040 L=1,350.0' S=0.0119 '/' Capacity=536.45 cfs Outflow=15.82 cfs 3.481 af

Reach 6R: Flow adjacent to Rt 1 Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.035 L=203.0' S=0.0887 '/' Capacity=45.57 cfs Outflow=0.00 cfs 0.000 af

Reach 7R: Flow adjacent to Rt 1 Avg. Flow Depth=0.07' Max Vel=0.77 fps Inflow=1.36 cfs 0.144 af
n=0.035 L=362.0' S=0.0110 '/' Capacity=31.61 cfs Outflow=1.19 cfs 0.144 af

Reach 8R: Flow to large wetland Avg. Flow Depth=0.08' Max Vel=0.89 fps Inflow=1.19 cfs 0.144 af
n=0.040 L=238.0' S=0.0189 '/' Capacity=68.85 cfs Outflow=1.14 cfs 0.144 af

Reach 9R: Flow adjacent to Rt 1 Avg. Flow Depth=0.06' Max Vel=1.71 fps Inflow=1.95 cfs 0.389 af
n=0.035 L=285.0' S=0.0789 '/' Capacity=294.94 cfs Outflow=1.95 cfs 0.389 af

Reach 10R: Flow to large wetland Avg. Flow Depth=0.19' Max Vel=0.78 fps Inflow=2.86 cfs 0.533 af
n=0.040 L=342.0' S=0.0050 '/' Capacity=35.30 cfs Outflow=2.77 cfs 0.533 af

Reach OUT 1: OUT 1 Inflow=18.63 cfs 4.346 af
Outflow=18.63 cfs 4.346 af

Reach OUT 2: OUT 1 Inflow=7.79 cfs 0.899 af
Outflow=7.79 cfs 0.899 af

Pond 1P: Depression at RT 1 Peak Elev=62.60' Storage=54,908 cf Inflow=3.62 cfs 0.389 af
Primary=1.95 cfs 0.389 af Secondary=0.00 cfs 0.000 af Outflow=1.95 cfs 0.389 af

Pond 3P: Existing culvert at Idlewood Lane Peak Elev=49.84' Inflow=1.36 cfs 0.144 af
Primary=1.36 cfs 0.144 af Secondary=0.00 cfs 0.000 af Outflow=1.36 cfs 0.144 af

Pond 6P: PVC culvert @ gravel drive Peak Elev=40.48' Storage=444 cf Inflow=1.87 cfs 0.146 af
Primary=1.42 cfs 0.146 af Secondary=0.00 cfs 0.000 af Outflow=1.42 cfs 0.146 af

Total Runoff Area = 60.602 ac Runoff Volume = 5.246 af Average Runoff Depth = 1.04"
96.00% Pervious = 58.178 ac 4.00% Impervious = 2.424 ac

Time span=0.00-70.00 hrs, dt=0.01 hrs, 7001 points x 4
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Southwest edge at Rt 1 Runoff Area=3.932 ac 18.62% Impervious Runoff Depth=2.46"
Flow Length=336' Tc=19.6 min CN=79 Runoff=7.70 cfs 0.806 af

Subcatchment 2S: Southern-center section Runoff Area=12.441 ac 5.86% Impervious Runoff Depth=2.21"
Flow Length=490' Tc=36.7 min CN=76 Runoff=16.51 cfs 2.291 af

Subcatchment 3S: Area of Idlewood Lane Runoff Area=2.270 ac 18.19% Impervious Runoff Depth=1.82"
Flow Length=543' Tc=14.6 min CN=71 Runoff=3.60 cfs 0.344 af

Subcatchment 4S: Small section adjacent to Runoff Area=1.476 ac 4.34% Impervious Runoff Depth=2.21"
Flow Length=430' Tc=10.0 min CN=76 Runoff=3.32 cfs 0.272 af

Subcatchment 5S: Trailer park Runoff Area=5.130 ac 4.89% Impervious Runoff Depth=2.13"
Flow Length=448' Tc=17.3 min CN=75 Runoff=9.08 cfs 0.910 af

Subcatchment 6S: Upland at center of site Runoff Area=10.025 ac 0.00% Impervious Runoff Depth=2.29"
Flow Length=443' Tc=31.7 min CN=77 Runoff=14.81 cfs 1.915 af

Subcatchment 7S: Upland to west bank of Runoff Area=3.990 ac 0.00% Impervious Runoff Depth=2.13"
Flow Length=549' Tc=23.3 min CN=75 Runoff=6.23 cfs 0.708 af

Subcatchment 8S: Upland area to northern Runoff Area=10.227 ac 0.00% Impervious Runoff Depth=2.21"
Flow Length=800' Tc=30.2 min CN=76 Runoff=14.83 cfs 1.883 af

Subcatchment 9S: Trailer park and northern Runoff Area=9.560 ac 0.67% Impervious Runoff Depth=2.38"
Flow Length=689' Tc=23.0 min CN=78 Runoff=16.88 cfs 1.893 af

Subcatchment 60S: Condo road access to Runoff Area=1.551 ac 11.03% Impervious Runoff Depth=2.38"
Flow Length=264' Tc=7.8 min CN=78 Runoff=4.06 cfs 0.307 af

Reach 1R: Flow from Wilson Lane Avg. Flow Depth=0.39' Max Vel=0.62 fps Inflow=11.86 cfs 1.217 af
n=0.040 L=118.0' S=0.0017 '/' Capacity=296.55 cfs Outflow=11.50 cfs 1.217 af

Reach 2R: Flow through large wetland Avg. Flow Depth=0.38' Max Vel=0.55 fps Inflow=13.97 cfs 1.489 af
n=0.040 L=180.0' S=0.0014 '/' Capacity=357.97 cfs Outflow=13.12 cfs 1.489 af

Reach 3R: Flow through large wetland Avg. Flow Depth=0.62' Max Vel=0.55 fps Inflow=26.94 cfs 3.404 af
n=0.040 L=418.0' S=0.0007 '/' Capacity=225.15 cfs Outflow=23.70 cfs 3.404 af

Reach 4R: Flow through large wetland Avg. Flow Depth=0.67' Max Vel=0.75 fps Inflow=47.32 cfs 6.845 af
n=0.040 L=660.0' S=0.0012 '/' Capacity=334.41 cfs Outflow=41.44 cfs 6.845 af

Reach 5R: Stream flow Avg. Flow Depth=0.66' Max Vel=2.25 fps Inflow=44.62 cfs 7.553 af
n=0.040 L=1,350.0' S=0.0119 '/' Capacity=536.45 cfs Outflow=42.12 cfs 7.553 af

Reach 6R: Flow adjacent to Rt 1 Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.035 L=203.0' S=0.0887 '/' Capacity=45.57 cfs Outflow=0.00 cfs 0.000 af

Reach 7R: Flow adjacent to Rt 1 Avg. Flow Depth=0.14' Max Vel=1.13 fps Inflow=3.60 cfs 0.344 af
n=0.035 L=362.0' S=0.0110 '/' Capacity=31.61 cfs Outflow=3.35 cfs 0.344 af

Reach 8R: Flow to large wetland Avg. Flow Depth=0.14' Max Vel=1.29 fps Inflow=3.35 cfs 0.344 af
n=0.040 L=238.0' S=0.0189 '/' Capacity=68.85 cfs Outflow=3.27 cfs 0.344 af

Reach 9R: Flow adjacent to Rt 1 Avg. Flow Depth=0.10' Max Vel=2.42 fps Inflow=4.83 cfs 0.806 af
n=0.035 L=285.0' S=0.0789 '/' Capacity=294.94 cfs Outflow=4.83 cfs 0.806 af

Reach 10R: Flow to large wetland Avg. Flow Depth=0.33' Max Vel=1.06 fps Inflow=7.33 cfs 1.150 af
n=0.040 L=342.0' S=0.0050 '/' Capacity=35.30 cfs Outflow=7.18 cfs 1.150 af

Reach OUT 1: OUT 1 Inflow=50.77 cfs 9.437 af
Outflow=50.77 cfs 9.437 af

Reach OUT 2: OUT 1 Inflow=16.88 cfs 1.893 af
Outflow=16.88 cfs 1.893 af

Pond 1P: Depression at RT 1 Peak Elev=62.68' Storage=58,703 cf Inflow=7.70 cfs 0.806 af
Primary=4.83 cfs 0.806 af Secondary=0.00 cfs 0.000 af Outflow=4.83 cfs 0.806 af

Pond 3P: Existing culvert at Idlewood Lane Peak Elev=52.02' Inflow=3.60 cfs 0.344 af
Primary=3.60 cfs 0.344 af Secondary=0.00 cfs 0.000 af Outflow=3.60 cfs 0.344 af

Pond 6P: PVC culvert @ gravel drive Peak Elev=42.09' Storage=1,259 cf Inflow=4.06 cfs 0.307 af
Primary=2.20 cfs 0.299 af Secondary=1.32 cfs 0.008 af Outflow=3.53 cfs 0.307 af

Total Runoff Area = 60.602 ac Runoff Volume = 11.329 af Average Runoff Depth = 2.24"
96.00% Pervious = 58.178 ac 4.00% Impervious = 2.424 ac

Time span=0.00-70.00 hrs, dt=0.01 hrs, 7001 points x 4
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Southwest edge at Rt 1 Runoff Area=3.932 ac 18.62% Impervious Runoff Depth=3.15"
Flow Length=336' Tc=19.6 min CN=79 Runoff=9.88 cfs 1.032 af

Subcatchment 2S: Southern-center section Runoff Area=12.441 ac 5.86% Impervious Runoff Depth=2.87"
Flow Length=490' Tc=36.7 min CN=76 Runoff=21.54 cfs 2.974 af

Subcatchment 3S: Area of Idlewood Lane Runoff Area=2.270 ac 18.19% Impervious Runoff Depth=2.42"
Flow Length=543' Tc=14.6 min CN=71 Runoff=4.87 cfs 0.458 af

Subcatchment 4S: Small section adjacent to Runoff Area=1.476 ac 4.34% Impervious Runoff Depth=2.87"
Flow Length=430' Tc=10.0 min CN=76 Runoff=4.33 cfs 0.353 af

Subcatchment 5S: Trailer park Runoff Area=5.130 ac 4.89% Impervious Runoff Depth=2.78"
Flow Length=448' Tc=17.3 min CN=75 Runoff=11.93 cfs 1.187 af

Subcatchment 6S: Upland at center of site Runoff Area=10.025 ac 0.00% Impervious Runoff Depth=2.96"
Flow Length=443' Tc=31.7 min CN=77 Runoff=19.21 cfs 2.474 af

Subcatchment 7S: Upland to west bank of Runoff Area=3.990 ac 0.00% Impervious Runoff Depth=2.78"
Flow Length=549' Tc=23.3 min CN=75 Runoff=8.19 cfs 0.923 af

Subcatchment 8S: Upland area to northern Runoff Area=10.227 ac 0.00% Impervious Runoff Depth=2.87"
Flow Length=800' Tc=30.2 min CN=76 Runoff=19.34 cfs 2.445 af

Subcatchment 9S: Trailer park and northern Runoff Area=9.560 ac 0.67% Impervious Runoff Depth=3.05"
Flow Length=689' Tc=23.0 min CN=78 Runoff=21.75 cfs 2.433 af

Subcatchment 60S: Condo road access to Runoff Area=1.551 ac 11.03% Impervious Runoff Depth=3.05"
Flow Length=264' Tc=7.8 min CN=78 Runoff=5.22 cfs 0.395 af

Reach 1R: Flow from Wilson Lane Avg. Flow Depth=0.44' Max Vel=0.68 fps Inflow=15.49 cfs 1.582 af
n=0.040 L=118.0' S=0.0017 '/' Capacity=296.55 cfs Outflow=15.19 cfs 1.582 af

Reach 2R: Flow through large wetland Avg. Flow Depth=0.44' Max Vel=0.61 fps Inflow=18.62 cfs 1.935 af
n=0.040 L=180.0' S=0.0014 '/' Capacity=357.97 cfs Outflow=17.59 cfs 1.935 af

Reach 3R: Flow through large wetland Avg. Flow Depth=0.70' Max Vel=0.60 fps Inflow=35.06 cfs 4.409 af
n=0.040 L=418.0' S=0.0007 '/' Capacity=225.15 cfs Outflow=31.22 cfs 4.409 af

Reach 4R: Flow through large wetland Avg. Flow Depth=0.76' Max Vel=0.83 fps Inflow=62.41 cfs 8.873 af
n=0.040 L=660.0' S=0.0012 '/' Capacity=334.41 cfs Outflow=55.61 cfs 8.873 af

Reach 5R: Stream flow Avg. Flow Depth=0.76' Max Vel=2.44 fps Inflow=60.10 cfs 9.796 af
n=0.040 L=1,350.0' S=0.0119 '/' Capacity=536.45 cfs Outflow=57.03 cfs 9.796 af

Reach 6R: Flow adjacent to Rt 1 Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.035 L=203.0' S=0.0887 '/' Capacity=45.57 cfs Outflow=0.00 cfs 0.000 af

Reach 7R: Flow adjacent to Rt 1 Avg. Flow Depth=0.16' Max Vel=1.27 fps Inflow=4.87 cfs 0.458 af
n=0.035 L=362.0' S=0.0110 '/' Capacity=31.61 cfs Outflow=4.58 cfs 0.458 af

Reach 8R: Flow to large wetland Avg. Flow Depth=0.17' Max Vel=1.43 fps Inflow=4.58 cfs 0.458 af
n=0.040 L=238.0' S=0.0189 '/' Capacity=68.85 cfs Outflow=4.49 cfs 0.458 af

Reach 9R: Flow adjacent to Rt 1 Avg. Flow Depth=0.11' Max Vel=2.69 fps Inflow=6.44 cfs 1.032 af
n=0.035 L=285.0' S=0.0789 '/' Capacity=294.94 cfs Outflow=6.43 cfs 1.032 af

Reach 10R: Flow to large wetland Avg. Flow Depth=0.39' Max Vel=1.16 fps Inflow=9.87 cfs 1.490 af
n=0.040 L=342.0' S=0.0050 '/' Capacity=35.30 cfs Outflow=9.69 cfs 1.490 af

Reach OUT 1: OUT 1 Inflow=69.26 cfs 12.241 af
Outflow=69.26 cfs 12.241 af

Reach OUT 2: OUT 1 Inflow=21.75 cfs 2.433 af
Outflow=21.75 cfs 2.433 af

Pond 1P: Depression at RT 1 Peak Elev=62.72' Storage=60,509 cf Inflow=9.88 cfs 1.032 af
Primary=6.44 cfs 1.032 af Secondary=0.00 cfs 0.000 af Outflow=6.44 cfs 1.032 af

Pond 3P: Existing culvert at Idlewood Lane Peak Elev=54.10' Inflow=4.87 cfs 0.458 af
Primary=4.87 cfs 0.458 af Secondary=0.00 cfs 0.000 af Outflow=4.87 cfs 0.458 af

Pond 6P: PVC culvert @ gravel drive Peak Elev=42.15' Storage=1,308 cf Inflow=5.22 cfs 0.395 af
Primary=2.23 cfs 0.362 af Secondary=2.96 cfs 0.033 af Outflow=5.19 cfs 0.395 af

Total Runoff Area = 60.602 ac Runoff Volume = 14.675 af Average Runoff Depth = 2.91"
96.00% Pervious = 58.178 ac 4.00% Impervious = 2.424 ac

Summary for Subcatchment 1S: Southwest edge at Rt 1

Runoff = 9.88 cfs @ 12.26 hrs, Volume= 1.032 af, Depth= 3.15"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
2.164	73	Woods, Fair, HSG C
0.732	98	Paved parking & roofs
0.289	79	50-75% Grass cover, Fair, HSG C
0.747	79	Woods, Fair, HSG D
3.932	79	Weighted Average
3.200		81.38% Pervious Area
0.732		18.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	50	0.0600	0.10		**Sheet Flow, 1.1** Woods: Light underbrush n= 0.400 P2= 3.00"
0.2	26	0.1600	2.00		**Shallow Concentrated Flow, 1.2** Woodland Kv= 5.0 fps
11.2	260	0.0060	0.39		**Shallow Concentrated Flow, 1.3** Woodland Kv= 5.0 fps
19.6	336	Total			

Summary for Subcatchment 2S: Southern-center section

Runoff = 21.54 cfs @ 12.52 hrs, Volume= 2.974 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
7.484	73	Woods, Fair, HSG C
2.915	79	Woods, Fair, HSG D
0.822	79	50-75% Grass cover, Fair, HSG C
0.390	84	50-75% Grass cover, Fair, HSG D
0.729	98	Paved parking & roofs
0.101	43	Woods/grass comb., Fair, HSG A
12.441	76	Weighted Average
11.712		94.14% Pervious Area
0.729		5.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.3	100	0.0100	0.06		**Sheet Flow, 2.1** Woods: Light underbrush n= 0.400 P2= 3.00"
3.7	100	0.0080	0.45		**Shallow Concentrated Flow, 2.2** Woodland Kv= 5.0 fps
1.3	160	0.1750	2.09		**Shallow Concentrated Flow, 2.3** Woodland Kv= 5.0 fps
2.4	130	0.0050	0.91	7.86	**Trap/Vee/Rect Channel Flow, 2.4** Bot.W=50.00' D=0.15' Z= 50.0 '/' Top.W=65.00' n= 0.030 Short grass
36.7	490	Total			

Summary for Subcatchment 3S: Area of Idlewood Lane

Runoff = 4.87 cfs @ 12.21 hrs, Volume= 0.458 af, Depth= 2.42"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.987	79	50-75% Grass cover, Fair, HSG C
0.870	49	50-75% Grass cover, Fair, HSG A
0.413	98	Paved parking & roofs
2.270	71	Weighted Average
1.857		81.81% Pervious Area
0.413		18.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	50	0.0800	0.11		**Sheet Flow, 3.1** Woods: Light underbrush n= 0.400 P2= 3.00"
5.8	405	0.0540	1.16		**Shallow Concentrated Flow, 3.2** Woodland Kv= 5.0 fps
1.5	88	0.0200	0.99		**Shallow Concentrated Flow, 3.3** Short Grass Pasture Kv= 7.0 fps
14.6	543	Total			

Summary for Subcatchment 4S: Small section adjacent to Wilson Lane

Runoff = 4.33 cfs @ 12.14 hrs, Volume= 0.353 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.868	73	Woods, Fair, HSG C
0.544	79	Woods, Fair, HSG D
0.064	98	Paved parking & roofs
1.476	76	Weighted Average
1.412		95.66% Pervious Area
0.064		4.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8	33	0.0300	0.07		**Sheet Flow, 4.1** Woods: Light underbrush n= 0.400 P2= 3.00"
0.6	55	0.1100	1.66		**Shallow Concentrated Flow, 4.2** Woodland Kv= 5.0 fps
0.2	265	0.1200	23.39	155.96	**Parabolic Channel, 4.3** W=5.00' D=2.00' Area=6.7 sf Perim=6.7' n= 0.022 Earth, clean & straight
1.4	77	0.0050	0.94	7.67	**Trap/Vee/Rect Channel Flow, 4.4** Bot.W=50.00' D=0.15' Z= 30.0 '/' Top.W=59.00' n= 0.030 Short grass
10.0	430	Total			

Summary for Subcatchment 5S: Trailer park

Runoff = 11.93 cfs @ 12.24 hrs, Volume= 1.187 af, Depth= 2.78"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.152	98	Roofs
0.099	98	Road
0.207	84	50-75% Grass cover, Fair, HSG D
0.597	79	50-75% Grass cover, Fair, HSG C
4.075	73	Woods, Fair, HSG C
5.130	75	Weighted Average
4.879		95.11% Pervious Area
0.251		4.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	50	0.0225	0.07		**Sheet Flow, 5.1** Woods: Light underbrush n= 0.400 P2= 3.00"
1.1	60	0.0340	0.92		**Shallow Concentrated Flow, 5.2** Woodland Kv= 5.0 fps
2.1	200	0.1000	1.58		**Shallow Concentrated Flow, 5.3** Woodland Kv= 5.0 fps
1.9	138	0.0290	1.19		**Shallow Concentrated Flow, 5.4** Short Grass Pasture Kv= 7.0 fps
17.3	448	Total			

Summary for Subcatchment 6S: Upland at center of site

Runoff = 19.21 cfs @ 12.44 hrs, Volume= 2.474 af, Depth= 2.96"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.103	87	Dirt roads, HSG C
6.028	79	Woods, Fair, HSG D
3.755	73	Woods, Fair, HSG C
0.139	60	Woods, Fair, HSG B
10.025	77	Weighted Average
10.025		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.1	100	0.0133	0.06		**Sheet Flow, 6.1** Woods: Light underbrush n= 0.400 P2= 3.00"
1.4	50	0.0133	0.58		**Shallow Concentrated Flow, 6.2** Woodland Kv= 5.0 fps
2.1	176	0.0800	1.41		**Shallow Concentrated Flow, 6.3** Woodland Kv= 5.0 fps
2.1	117	0.0050	0.94	7.67	**Trap/Vee/Rect Channel Flow, 6.4** Bot.W=50.00' D=0.15' Z= 30.0 '/' Top.W=59.00' n= 0.030 Short grass
31.7	443	Total			

Summary for Subcatchment 7S: Upland to west bank of stream

Runoff = 8.19 cfs @ 12.33 hrs, Volume= 0.923 af, Depth= 2.78"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.184	79	50-75% Grass cover, Fair, HSG C
0.230	84	50-75% Grass cover, Fair, HSG D
1.709	73	Woods, Fair, HSG C
1.537	79	Woods, Fair, HSG D
0.330	60	Woods, Fair, HSG B
3.990	75	Weighted Average
3.990		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	50	0.0200	0.07		**Sheet Flow, 7.1** Woods: Light underbrush n= 0.400 P2= 3.00"
1.2	50	0.0200	0.71		**Shallow Concentrated Flow, 7.2** Woodland Kv= 5.0 fps
3.4	216	0.0460	1.07		**Shallow Concentrated Flow, 7.3** Woodland Kv= 5.0 fps
6.0	233	0.0170	0.65		**Shallow Concentrated Flow, 7.4** Woodland Kv= 5.0 fps
23.3	549	Total			

Summary for Subcatchment 8S: Upland area to northern wetland

Runoff = 19.34 cfs @ 12.42 hrs, Volume= 2.445 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.020	79	50-75% Grass cover, Fair, HSG C
0.009	84	50-75% Grass cover, Fair, HSG D
1.839	73	Woods, Fair, HSG C
7.198	79	Woods, Fair, HSG D
1.161	60	Woods, Fair, HSG B
10.227	76	Weighted Average
10.227		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.9	75	0.0167	0.07		**Sheet Flow, 8.1** Woods: Light underbrush n= 0.400 P2= 3.00"
1.6	110	0.0272	1.15		**Shallow Concentrated Flow, 8.2** Short Grass Pasture Kv= 7.0 fps
1.4	160	0.1375	1.85		**Shallow Concentrated Flow, 8.3** Woodland Kv= 5.0 fps
8.3	455	0.0330	0.91		**Shallow Concentrated Flow, 8.4** Woodland Kv= 5.0 fps
30.2	800	Total			

Summary for Subcatchment 9S: Trailer park and northern wetland

Runoff = 21.75 cfs @ 12.32 hrs, Volume= 2.433 af, Depth= 3.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.516	79	50-75% Grass cover, Fair, HSG C
0.505	84	50-75% Grass cover, Fair, HSG D
6.743	79	Woods, Fair, HSG D
1.709	73	Woods, Fair, HSG C
0.023	60	Woods, Fair, HSG B
0.064	98	Paved parking & roofs
9.560	78	Weighted Average
9.496		99.33% Pervious Area
0.064		0.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.9	75	0.0530	0.10		**Sheet Flow, 9.1** Woods: Light underbrush n= 0.400 P2= 3.00"
0.8	112	0.1250	2.47		**Shallow Concentrated Flow, 9.2** Short Grass Pasture Kv= 7.0 fps
1.8	122	0.0492	1.11		**Shallow Concentrated Flow, 9.3** Woodland Kv= 5.0 fps
8.5	380	0.0223	0.75		**Shallow Concentrated Flow, 9.4** Woodland Kv= 5.0 fps
23.0	689	Total			

Summary for Subcatchment 60S: Condo road access to Wilson Ave

Runoff = 5.22 cfs @ 12.11 hrs, Volume= 0.395 af, Depth= 3.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.741	73	Woods, Fair, HSG C
0.171	98	Paved parking & roofs
0.044	84	50-75% Grass cover, Fair, HSG D
0.595	79	50-75% Grass cover, Fair, HSG C
1.551	78	Weighted Average
1.380		88.97% Pervious Area
0.171		11.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.8	50	0.1400	0.14		**Sheet Flow, 60.1** Woods: Light underbrush n= 0.400 P2= 3.00"
1.0	99	0.1100	1.66		**Shallow Concentrated Flow, 60.2** Woodland Kv= 5.0 fps
1.0	115	0.0700	1.85		**Shallow Concentrated Flow, 60.3** Short Grass Pasture Kv= 7.0 fps
7.8	264	Total			

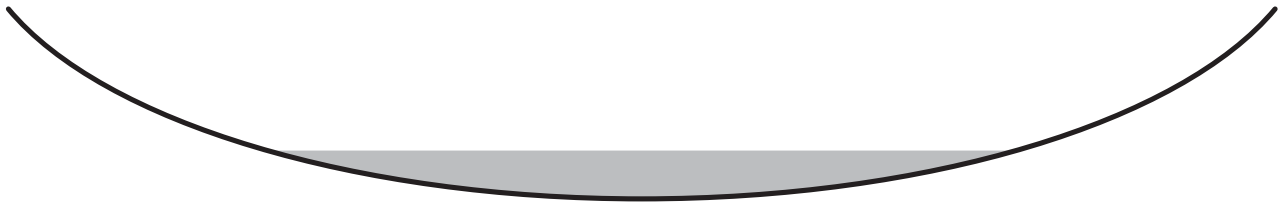
Summary for Reach 1R: Flow from Wilson Lane

Inflow Area = 6.681 ac, 6.32% Impervious, Inflow Depth = 2.84" for 25 yr event
Inflow = 15.49 cfs @ 12.20 hrs, Volume= 1.582 af
Outflow = 15.19 cfs @ 12.24 hrs, Volume= 1.582 af, Atten= 2%, Lag= 2.4 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 0.68 fps, Min. Travel Time= 2.9 min
Avg. Velocity = 0.18 fps, Avg. Travel Time= 10.7 min

Peak Storage= 2,639 cf @ 12.24 hrs
Average Depth at Peak Storage= 0.44'
Bank-Full Depth= 1.75' Flow Area= 175.0 sf, Capacity= 296.55 cfs

150.00' x 1.75' deep Parabolic Channel, n= 0.040 Winding stream, pools & shoals
Length= 118.0' Slope= 0.0017 '/'
Inlet Invert= 38.00', Outlet Invert= 37.80'



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Summary for Reach 2R: Flow through large wetland

[61] Hint: Exceeded Reach 1R outlet invert by 0.14' @ 12.29 hrs

Inflow Area = 8.157 ac, 5.96% Impervious, Inflow Depth = 2.85" for 25 yr event
Inflow = 18.62 cfs @ 12.21 hrs, Volume= 1.935 af
Outflow = 17.59 cfs @ 12.29 hrs, Volume= 1.935 af, Atten= 5%, Lag= 4.5 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 0.61 fps, Min. Travel Time= 4.9 min
Avg. Velocity = 0.16 fps, Avg. Travel Time= 18.3 min

Peak Storage= 5,215 cf @ 12.29 hrs
Average Depth at Peak Storage= 0.44'
Bank-Full Depth= 1.75' Flow Area= 233.3 sf, Capacity= 357.97 cfs

200.00' x 1.75' deep Parabolic Channel, n= 0.040 Winding stream, pools & shoals
Length= 180.0' Slope= 0.0014 '/'
Inlet Invert= 37.50', Outlet Invert= 37.25'

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Summary for Reach 3R: Flow through large wetland

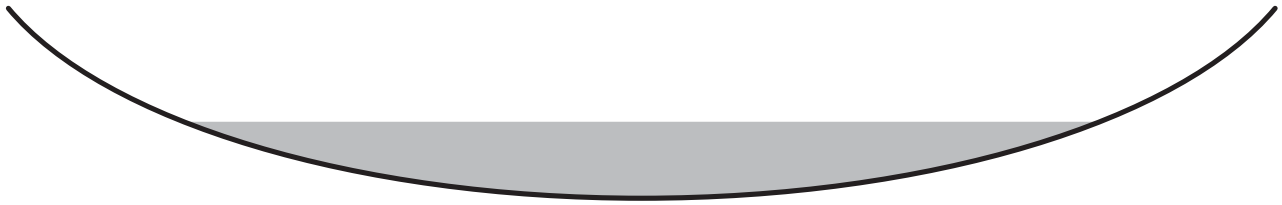
[62] Hint: Exceeded Reach 2R OUTLET depth by 0.20' @ 12.67 hrs

Inflow Area = 18.182 ac, 2.67% Impervious, Inflow Depth = 2.91" for 25 yr event
Inflow = 35.06 cfs @ 12.36 hrs, Volume= 4.409 af
Outflow = 31.22 cfs @ 12.52 hrs, Volume= 4.409 af, Atten= 11%, Lag= 9.4 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 0.60 fps, Min. Travel Time= 11.6 min
Avg. Velocity = 0.14 fps, Avg. Travel Time= 50.6 min

Peak Storage= 21,733 cf @ 12.52 hrs
Average Depth at Peak Storage= 0.70'
Bank-Full Depth= 1.75' Flow Area= 204.2 sf, Capacity= 225.15 cfs

175.00' x 1.75' deep Parabolic Channel, n= 0.040 Winding stream, pools & shoals
Length= 418.0' Slope= 0.0007 '/'
Inlet Invert= 37.10', Outlet Invert= 36.80'



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Summary for Reach 4R: Flow through large wetland

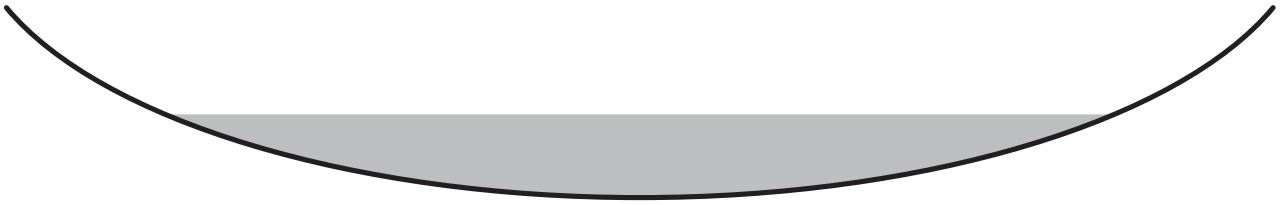
[61] Hint: Exceeded Reach 3R outlet invert by 0.06' @ 12.68 hrs
[61] Hint: Exceeded Reach 10R outlet invert by 0.06' @ 12.68 hrs

Inflow Area = 36.825 ac, 6.41% Impervious, Inflow Depth = 2.89" for 25 yr event
Inflow = 62.41 cfs @ 12.52 hrs, Volume= 8.873 af
Outflow = 55.61 cfs @ 12.68 hrs, Volume= 8.873 af, Atten= 11%, Lag= 9.8 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 0.83 fps, Min. Travel Time= 13.3 min
Avg. Velocity = 0.15 fps, Avg. Travel Time= 73.4 min

Peak Storage= 44,471 cf @ 12.68 hrs
Average Depth at Peak Storage= 0.76'
Bank-Full Depth= 1.75' Flow Area= 233.3 sf, Capacity= 334.41 cfs

200.00' x 1.75' deep Parabolic Channel, n= 0.040 Winding stream, pools & shoals
Length= 660.0' Slope= 0.0012 '/'
Inlet Invert= 36.10', Outlet Invert= 35.30'



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Summary for Reach 5R: Stream flow

[61] Hint: Exceeded Reach 4R outlet invert by 0.46' @ 12.78 hrs

Inflow Area = 40.815 ac, 5.78% Impervious, Inflow Depth = 2.88" for 25 yr event
Inflow = 60.10 cfs @ 12.65 hrs, Volume= 9.796 af
Outflow = 57.03 cfs @ 12.78 hrs, Volume= 9.796 af, Atten= 5%, Lag= 7.4 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 2.44 fps, Min. Travel Time= 9.2 min
Avg. Velocity = 0.53 fps, Avg. Travel Time= 42.2 min

Peak Storage= 31,540 cf @ 12.78 hrs
Average Depth at Peak Storage= 0.76'
Bank-Full Depth= 2.00' Flow Area= 124.0 sf, Capacity= 536.45 cfs

12.00' x 2.00' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 20.0 30.0 '/' Top Width= 112.00'
Length= 1,350.0' Slope= 0.0119 '/'
Inlet Invert= 35.00', Outlet Invert= 19.00'

‡

Summary for Reach 6R: Flow adjacent to Rt 1

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 0.35' Flow Area= 8.4 sf, Capacity= 45.57 cfs

18.00' x 0.35' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 20.0 15.0 '/' Top Width= 30.25'
Length= 203.0' Slope= 0.0887 '/'
Inlet Invert= 62.00', Outlet Invert= 44.00'

‡

Summary for Reach 7R: Flow adjacent to Rt 1

Inflow Area = 2.270 ac, 18.19% Impervious, Inflow Depth = 2.42" for 25 yr event
Inflow = 4.87 cfs @ 12.21 hrs, Volume= 0.458 af
Outflow = 4.58 cfs @ 12.26 hrs, Volume= 0.458 af, Atten= 6%, Lag= 3.2 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 1.27 fps, Min. Travel Time= 4.8 min
Avg. Velocity = 0.33 fps, Avg. Travel Time= 18.3 min

Peak Storage= 1,307 cf @ 12.26 hrs
Average Depth at Peak Storage= 0.16'
Bank-Full Depth= 0.50' Flow Area= 12.9 sf, Capacity= 31.61 cfs

20.00' x 0.50' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 8.0 15.0 '/' Top Width= 31.50'
Length= 362.0' Slope= 0.0110 '/'
Inlet Invert= 48.00', Outlet Invert= 44.00'

‡

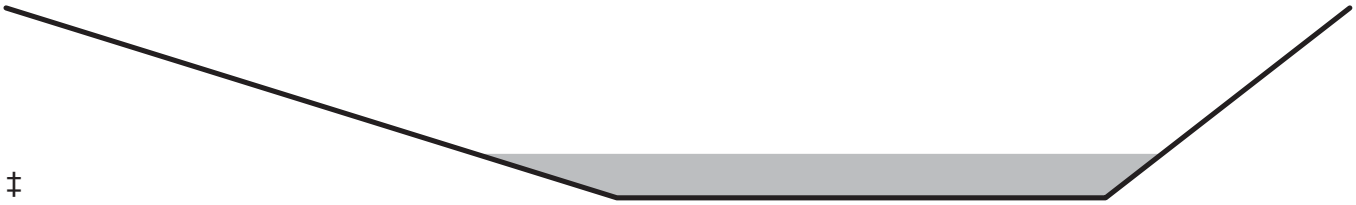
Summary for Reach 8R: Flow to large wetland

Inflow Area = 2.270 ac, 18.19% Impervious, Inflow Depth = 2.42" for 25 yr event
Inflow = 4.58 cfs @ 12.26 hrs, Volume= 0.458 af
Outflow = 4.49 cfs @ 12.29 hrs, Volume= 0.458 af, Atten= 2%, Lag= 2.1 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 1.43 fps, Min. Travel Time= 2.8 min
Avg. Velocity = 0.41 fps, Avg. Travel Time= 9.8 min

Peak Storage= 746 cf @ 12.29 hrs
Average Depth at Peak Storage= 0.17'
Bank-Full Depth= 0.75' Flow Area= 21.1 sf, Capacity= 68.85 cfs

15.00' x 0.75' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 25.0 10.0 '/' Top Width= 41.25'
Length= 238.0' Slope= 0.0189 '/'
Inlet Invert= 43.50', Outlet Invert= 39.00'



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Summary for Reach 9R: Flow adjacent to Rt 1

Inflow Area = 3.932 ac, 18.62% Impervious, Inflow Depth = 3.15" for 25 yr event
Inflow = 6.44 cfs @ 12.51 hrs, Volume= 1.032 af
Outflow = 6.43 cfs @ 12.53 hrs, Volume= 1.032 af, Atten= 0%, Lag= 1.1 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 2.69 fps, Min. Travel Time= 1.8 min
Avg. Velocity = 0.69 fps, Avg. Travel Time= 6.9 min

Peak Storage= 681 cf @ 12.53 hrs
Average Depth at Peak Storage= 0.11'
Bank-Full Depth= 1.00' Flow Area= 30.0 sf, Capacity= 294.94 cfs

20.00' x 1.00' deep channel, n= 0.035 High grass
Side Slope Z-value= 10.0 '/' Top Width= 40.00'
Length= 285.0' Slope= 0.0789 '/'
Inlet Invert= 62.00', Outlet Invert= 39.50'

‡

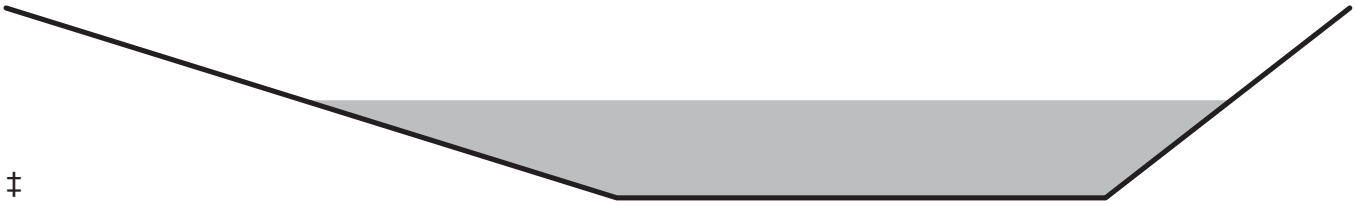
Summary for Reach 10R: Flow to large wetland

Inflow Area = 6.202 ac, 18.46% Impervious, Inflow Depth = 2.88" for 25 yr event
Inflow = 9.87 cfs @ 12.41 hrs, Volume= 1.490 af
Outflow = 9.69 cfs @ 12.49 hrs, Volume= 1.490 af, Atten= 2%, Lag= 4.4 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 1.16 fps, Min. Travel Time= 4.9 min
Avg. Velocity = 0.20 fps, Avg. Travel Time= 28.4 min

Peak Storage= 2,863 cf @ 12.49 hrs
Average Depth at Peak Storage= 0.39'
Bank-Full Depth= 0.75' Flow Area= 21.1 sf, Capacity= 35.30 cfs

15.00' x 0.75' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 25.0 10.0 '/' Top Width= 41.25'
Length= 342.0' Slope= 0.0050 '/'
Inlet Invert= 38.50', Outlet Invert= 36.80'



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Summary for Reach OUT 1: OUT 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 51.042 ac, 4.62% Impervious, Inflow Depth = 2.88" for 25 yr event
Inflow = 69.26 cfs @ 12.71 hrs, Volume= 12.241 af
Outflow = 69.26 cfs @ 12.71 hrs, Volume= 12.241 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs / 4

Summary for Reach OUT 2: OUT 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 9.560 ac, 0.67% Impervious, Inflow Depth = 3.05" for 25 yr event
Inflow = 21.75 cfs @ 12.32 hrs, Volume= 2.433 af
Outflow = 21.75 cfs @ 12.32 hrs, Volume= 2.433 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs / 4

Summary for Pond 1P: Depression at RT 1

Inflow Area = 3.932 ac, 18.62% Impervious, Inflow Depth = 3.15" for 25 yr event
Inflow = 9.88 cfs @ 12.26 hrs, Volume= 1.032 af
Outflow = 6.44 cfs @ 12.51 hrs, Volume= 1.032 af, Atten= 35%, Lag= 14.7 min
Primary = 6.44 cfs @ 12.51 hrs, Volume= 1.032 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs / 4
Starting Elev= 62.50' Surf.Area= 44,466 sf Storage= 50,493 cf
Peak Elev= 62.72' @ 12.51 hrs Surf.Area= 48,464 sf Storage= 60,509 cf (10,016 cf above start)

Plug-Flow detention time= (not calculated: initial storage excedes outflow)
Center-of-Mass det. time= 45.4 min (879.1 - 833.7)

Volume	Invert	Avail.Storage	Storage Description
#1	60.00'	75,071 cf	**Custom Stage Data (Conic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
60.00	1,795	0	0	1,795
62.00	35,858	30,451	30,451	35,868
63.00	54,000	44,621	75,071	54,025

Device	Routing	Invert	Outlet Devices
#1	Primary	62.50'	**24.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Secondary	63.00'	**35.0' long x 25.0' breadth Broad-Crested Rectangular Weir (near Rt 1)** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=6.44 cfs @ 12.51 hrs HW=62.72' TW=62.11' (Dynamic Tailwater)
└─**1=Broad-Crested Rectangular Weir** (Weir Controls 6.44 cfs @ 1.25 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=62.50' TW=62.00' (Dynamic Tailwater)
└─**2=Broad-Crested Rectangular Weir (near Rt 1)**(Controls 0.00 cfs)

Summary for Pond 3P: Existing culvert at Idlewood Lane

Inflow Area = 2.270 ac, 18.19% Impervious, Inflow Depth = 2.42" for 25 yr event
Inflow = 4.87 cfs @ 12.21 hrs, Volume= 0.458 af
Outflow = 4.87 cfs @ 12.21 hrs, Volume= 0.458 af, Atten= 0%, Lag= 0.0 min
Primary = 4.87 cfs @ 12.21 hrs, Volume= 0.458 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 54.10' @ 12.21 hrs
Flood Elev= 55.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	49.00'	**12.0" Round Culvert** L= 50.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 49.00' / 48.50' S= 0.0100 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf
#2	Secondary	55.00'	**22.0' long x 30.0' breadth Flow over Idlewood** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=4.87 cfs @ 12.21 hrs HW=54.10' TW=48.16' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 4.87 cfs @ 6.20 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=49.00' TW=48.00' (Dynamic Tailwater)
└─**2=Flow over Idlewood** (Controls 0.00 cfs)

Summary for Pond 6P: PVC culvert @ gravel drive

Inflow Area = 1.551 ac, 11.03% Impervious, Inflow Depth = 3.05" for 25 yr event
Inflow = 5.22 cfs @ 12.11 hrs, Volume= 0.395 af
Outflow = 5.19 cfs @ 12.12 hrs, Volume= 0.395 af, Atten= 1%, Lag= 0.7 min
Primary = 2.23 cfs @ 12.12 hrs, Volume= 0.362 af
Secondary = 2.96 cfs @ 12.12 hrs, Volume= 0.033 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-70.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 42.15' @ 12.12 hrs Surf.Area= 813 sf Storage= 1,308 cf

Plug-Flow detention time= 5.8 min calculated for 0.395 af (100% of inflow)
Center-of-Mass det. time= 5.8 min (831.2 - 825.4)

Volume	Invert	Avail.Storage	Storage Description
#1	39.00'	2,500 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
39.00	200	0	0
42.00	600	1,200	1,200
43.00	2,000	1,300	2,500

Device	Routing	Invert	Outlet Devices
#1	Primary	39.00'	**8.0" Round Culvert** L= 31.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 39.00' / 38.00' S= 0.0323 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#2	Secondary	42.00'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=2.23 cfs @ 12.12 hrs HW=42.15' TW=38.38' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 2.23 cfs @ 6.38 fps)

Secondary OutFlow Max=2.94 cfs @ 12.12 hrs HW=42.15' TW=38.38' (Dynamic Tailwater)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 2.94 cfs @ 0.97 fps)

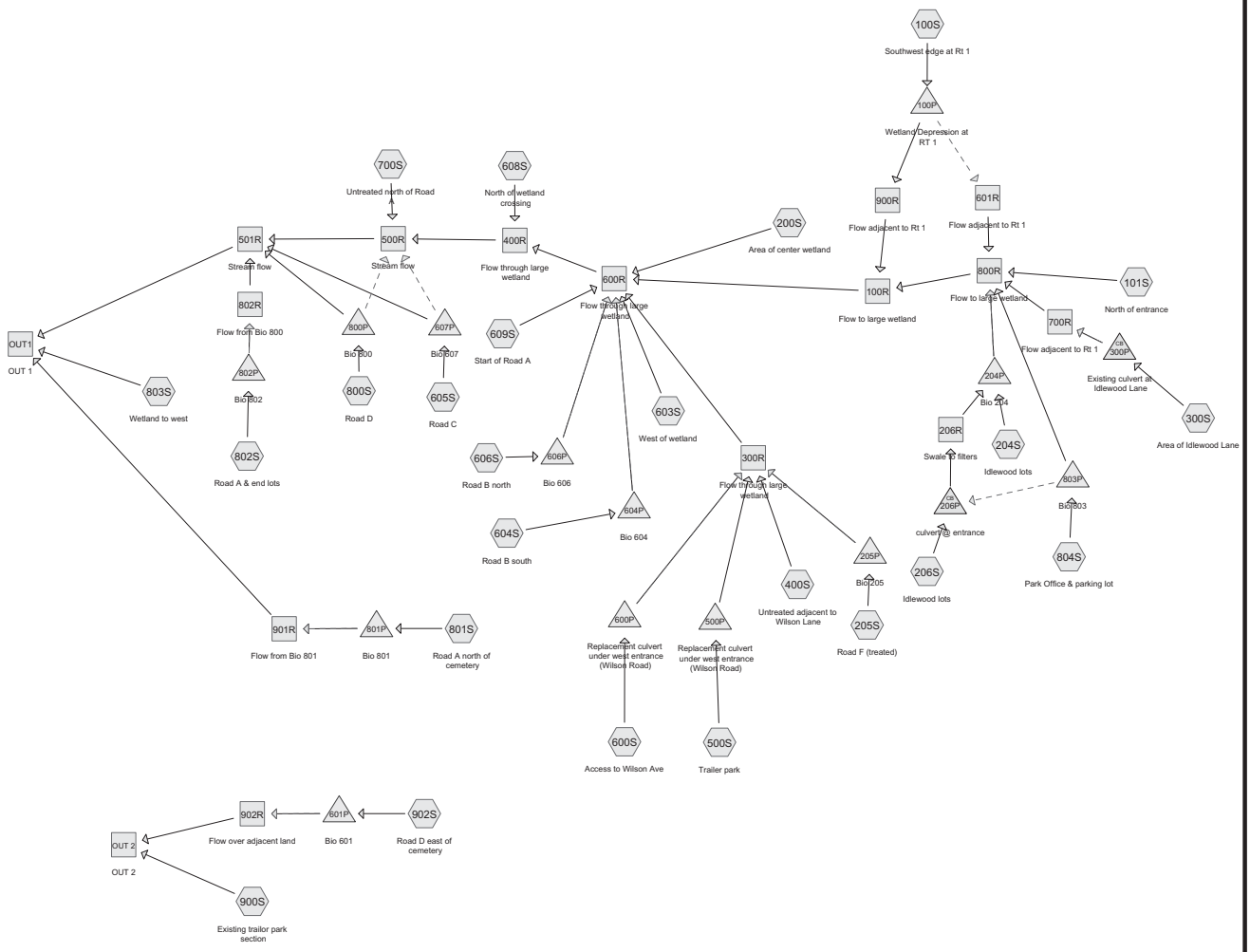
CIVIL
CONSULTANTS

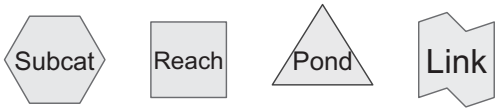
Engineers

Planners

Surveyors

Post-Development Calculations





Routing Diagram for Yankee Settlement Post_20130103
Prepared by Civil Consultants, Printed 3/14/2013
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.033	49	50-75% Grass cover, Fair, HSG A (206S, 300S)
1.043	61	>75% Grass cover, Good, HSG B (800S, 801S, 802S, 902S)
4.904	70	Woods, Good, HSG C (101S, 200S, 400S, 700S)
6.200	73	Woods, Fair, HSG C (100S, 500S, 600S, 803S)
9.016	74	>75% Grass cover, Good, HSG C (101S, 204S, 205S, 206S, 400S, 603S, 604S, 605S, 606S, 800S, 801S, 802S, 804S, 902S)
8.872	77	Woods, Good, HSG D (101S, 200S, 400S, 603S, 608S, 700S)
3.559	79	50-75% Grass cover, Fair, HSG C (100S, 200S, 300S, 500S, 600S)
12.471	79	Woods, Fair, HSG D (100S, 803S, 900S)
4.028	80	>75% Grass cover, Good, HSG D (101S, 400S, 604S, 605S, 606S, 609S, 700S, 801S, 802S, 902S)
0.482	84	50-75% Grass cover, Fair, HSG D (500S, 900S)
1.338	98	Paved parking & roofs (100S, 300S, 600S)
0.253	98	Paved parking, HSG B (800S, 801S)
3.418	98	Paved parking, HSG C (101S, 200S, 204S, 205S, 206S, 400S, 603S, 605S, 800S, 801S, 802S, 804S, 902S)
0.687	98	Paved parking, HSG D (101S, 604S, 606S, 609S, 700S)
0.110	98	Road (500S)
0.087	98	Roofs (500S)
0.064	98	Roofs, HSG D (900S)
0.334	98	Unconnected pavement, HSG D (606S)
0.325	98	Unconnected roofs, HSG B (800S, 801S)
1.782	98	Unconnected roofs, HSG C (604S, 605S, 800S, 801S, 802S, 804S, 902S)
0.479	98	Unconnected roofs, HSG D (604S, 609S, 801S, 802S)
0.039	98	Water Surface, HSG C (608S)
0.028	98	Water Surface, HSG C (drives) (205S)
60.552	**79**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
1.033	HSG A	206S, 300S
1.621	HSG B	800S, 801S, 802S, 902S
28.946	HSG C	100S, 101S, 200S, 204S, 205S, 206S, 300S, 400S, 500S, 600S, 603S, 604S, 605S, 606S, 608S, 700S, 800S, 801S, 802S, 803S, 804S, 902S
27.417	HSG D	100S, 101S, 200S, 400S, 500S, 603S, 604S, 605S, 606S, 608S, 609S, 700S, 801S, 802S, 803S, 900S, 902S
1.535	Other	100S, 300S, 500S, 600S
60.552		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
1.033	0.000	3.559	0.482	0.000	5.074	50-75% Grass cover, Fair	100S, 200S, 206S, 300S, 500S, 600S, 900S
0.000	1.043	9.016	4.028	0.000	14.087	>75% Grass cover, Good	101S, 204S, 205S, 206S, 400S, 603S, 604S, 605S, 606S, 609S, 700S, 800S, 801S, 802S, 804S, 902S
0.000	0.000	0.000	0.000	1.338	1.338	Paved parking & roofs	100S, 300S, 600S
0.000	0.253	3.418	0.687	0.000	4.358	Paved parking	101S, 200S, 204S, 205S, 206S, 400S, 603S, 604S, 605S, 606S, 609S, 700S, 800S, 801S, 802S, 804S, 902S

Ground Covers (all nodes) (continued)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.064	0.000	0.064	Roofs	900S
0.000	0.325	1.286	0.372	0.000	1.983	Unconnected roofs	609S, 800S, 801S, 802S, 804S, 902S
0.000	0.000	0.028	11.724	0.000	11.752	Woods, Fair	803S, 900S
0.000	0.000	0.540	2.934	0.000	3.474	Woods, Good	608S, 700S
0.000	0.000	0.067	0.000	0.000	0.067	Water Surface	205S, 608S
0.000	0.000	0.000	0.000	0.087	0.087	Roofs	500S
0.000	0.000	0.000	0.000	0.110	0.110	Road	500S
0.000	0.000	0.000	0.334	0.000	0.334	Unconnected pavement	606S
0.000	0.000	0.496	0.107	0.000	0.604	Unconnected roofs	604S, 605S
0.000	0.000	6.172	0.747	0.000	6.919	Woods, Fair	100S, 500S, 600S
0.000	0.000	4.364	5.938	0.000	10.302	Woods, Good	101S, 200S, 400S, 603S
1.033	**1.621**	**28.946**	**27.417**	**1.535**	**60.552**	**TOTAL AREA**	

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 4
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 100S: Southwest edge at Rt Runoff Area=3.932 ac 18.62% Impervious Runoff Depth=1.19"
Flow Length=336' Tc=19.6 min CN=79 Runoff=3.62 cfs 0.389 af

Subcatchment 101S: North of entrance Runoff Area=2.569 ac 28.61% Impervious Runoff Depth=1.31"
Flow Length=495' Tc=9.7 min CN=81 Runoff=3.44 cfs 0.281 af

Subcatchment 200S: Area of center wetland Runoff Area=6.623 ac 1.39% Impervious Runoff Depth=0.91"
Flow Length=711' Tc=22.4 min CN=74 Runoff=4.20 cfs 0.501 af

Subcatchment 204S: Idlewood lots Runoff Area=1.320 ac 20.83% Impervious Runoff Depth=1.19"
Flow Length=340' Tc=11.2 min CN=79 Runoff=1.51 cfs 0.131 af

Subcatchment 205S: Road F (treated) Runoff Area=1.040 ac 28.08% Impervious Runoff Depth=1.31"
Flow Length=195' Tc=5.4 min CN=81 Runoff=1.62 cfs 0.114 af

Subcatchment 206S: Idlewood lots Runoff Area=1.446 ac 30.01% Impervious Runoff Depth=1.25"
Flow Length=211' Tc=3.4 min CN=80 Runoff=2.30 cfs 0.151 af

Subcatchment 300S: Area of Idlewood Lane Runoff Area=2.399 ac 15.30% Impervious Runoff Depth=0.71"
Flow Length=543' Tc=14.6 min CN=70 Runoff=1.32 cfs 0.143 af

Subcatchment 400S: Untreated adjacent to Runoff Area=1.333 ac 7.50% Impervious Runoff Depth=1.02"
Flow Length=216' Tc=6.1 min CN=76 Runoff=1.51 cfs 0.113 af

Subcatchment 500S: Trailer park Runoff Area=4.266 ac 4.62% Impervious Runoff Depth=0.96"
Flow Length=448' Tc=17.3 min CN=75 Runoff=3.22 cfs 0.342 af

Subcatchment 600S: Access to Wilson Ave Runoff Area=1.572 ac 15.20% Impervious Runoff Depth=1.25"
Flow Length=269' Tc=7.9 min CN=80 Runoff=2.12 cfs 0.164 af

Subcatchment 603S: West of wetland Runoff Area=3.055 ac 8.71% Impervious Runoff Depth=1.19"
Flow Length=100' Tc=9.0 min CN=79 Runoff=3.75 cfs 0.303 af

Subcatchment 604S: Road B south Runoff Area=31,932 sf 34.58% Impervious Runoff Depth=1.66"
Tc=6.0 min CN=86 Runoff=1.43 cfs 0.102 af

Subcatchment 605S: Road C Runoff Area=1.580 ac 43.92% Impervious Runoff Depth=1.59"
Flow Length=180' Tc=6.9 min CN=85 Runoff=2.85 cfs 0.209 af

Subcatchment 606S: Road B north Runoff Area=1.462 ac 32.35% Impervious Runoff Depth=1.59"
Flow Length=105' Tc=9.0 min CN=85 Runoff=2.46 cfs 0.193 af

Subcatchment 608S: North of wetland Runoff Area=1.239 ac 3.15% Impervious Runoff Depth=1.13"
Flow Length=170' Tc=11.4 min CN=78 Runoff=1.33 cfs 0.117 af

Subcatchment 609S: Start of Road A Runoff Area=0.773 ac 42.95% Impervious Runoff Depth=1.82"
Flow Length=197' Slope=0.0400 '/' Tc=7.3 min CN=88 Runoff=1.57 cfs 0.117 af

Subcatchment 700S: Untreated north of Runoff Area=2.354 ac 0.98% Impervious Runoff Depth=1.02"
Flow Length=188' Slope=0.0650 '/' Tc=9.7 min CN=76 Runoff=2.35 cfs 0.199 af

Subcatchment 800S: Road D Runoff Area=0.421 ac 32.30% Impervious Runoff Depth=1.25"
Flow Length=40' Slope=0.0400 '/' Tc=5.4 min CN=80 Runoff=0.62 cfs 0.044 af

Subcatchment 801S: Road A north of Runoff Area=2.678 ac 38.87% Impervious Runoff Depth=1.25"
Flow Length=700' Tc=9.8 min CN=80 Runoff=3.39 cfs 0.279 af

Subcatchment 802S: Road A & end lots Runoff Area=2.916 ac 28.74% Impervious Runoff Depth=1.25"
Flow Length=262' Tc=7.9 min UI Adjusted CN=80 Runoff=3.94 cfs 0.304 af

Subcatchment 803S: Wetland to west Runoff Area=5.466 ac 0.00% Impervious Runoff Depth=1.19"
Flow Length=170' Slope=0.0150 '/' Tc=17.6 min CN=79 Runoff=5.27 cfs 0.541 af

Subcatchment 804S: Park Office & parking Runoff Area=0.320 ac 50.62% Impervious Runoff Depth=1.66"
Flow Length=70' Slope=0.0800 '/' Tc=6.4 min CN=86 Runoff=0.62 cfs 0.044 af

Subcatchment 900S: Existing trailor park Runoff Area=6.786 ac 0.94% Impervious Runoff Depth=1.25"
Flow Length=789' Tc=26.0 min CN=80 Runoff=5.88 cfs 0.707 af

Subcatchment 902S: Road D east of Runoff Area=4.269 ac 27.17% Impervious Runoff Depth=1.19"
Flow Length=562' Tc=12.0 min UI Adjusted CN=79 Runoff=4.77 cfs 0.423 af

Reach 100R: Flow to large wetland Avg. Flow Depth=0.27' Max Vel=0.94 fps Inflow=5.06 cfs 1.139 af
n=0.040 L=342.0' S=0.0050 '/' Capacity=35.30 cfs Outflow=4.97 cfs 1.139 af

Reach 206R: Swale to filters Avg. Flow Depth=0.26' Max Vel=1.76 fps Inflow=2.30 cfs 0.151 af
n=0.022 L=195.0' S=0.0051 '/' Capacity=7.03 cfs Outflow=2.20 cfs 0.151 af

Reach 300R: Flow through large wetland Avg. Flow Depth=0.20' Max Vel=0.37 fps Inflow=4.72 cfs 0.731 af
n=0.040 L=818.0' S=0.0015 '/' Capacity=321.89 cfs Outflow=2.95 cfs 0.731 af

Reach 400R: Flow through large Avg. Flow Depth=0.38' Max Vel=0.52 fps Inflow=15.02 cfs 3.129 af
n=0.040 L=660.0' S=0.0012 '/' Capacity=334.41 cfs Outflow=12.10 cfs 3.129 af

Reach 500R: Stream flow Avg. Flow Depth=0.36' Max Vel=1.64 fps Inflow=12.55 cfs 3.328 af
n=0.040 L=772.0' S=0.0124 '/' Capacity=549.49 cfs Outflow=12.27 cfs 3.328 af

Reach 501R: Stream flow Avg. Flow Depth=0.37' Max Vel=1.61 fps Inflow=12.69 cfs 3.732 af
n=0.040 L=560.0' S=0.0116 '/' Capacity=530.88 cfs Outflow=12.55 cfs 3.731 af

Reach 600R: Flow through large Avg. Flow Depth=0.41' Max Vel=0.55 fps Inflow=14.94 cfs 3.013 af
n=0.040 L=240.0' S=0.0012 '/' Capacity=339.60 cfs Outflow=14.40 cfs 3.013 af

Reach 601R: Flow adjacent to Rt 1 Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.035 L=203.0' S=0.0887 '/' Capacity=45.57 cfs Outflow=0.00 cfs 0.000 af

Reach 700R: Flow adjacent to Rt 1 Avg. Flow Depth=0.07' Max Vel=0.76 fps Inflow=1.32 cfs 0.143 af
n=0.035 L=362.0' S=0.0110 '/' Capacity=31.61 cfs Outflow=1.15 cfs 0.143 af

Reach 800R: Flow to large wetland Avg. Flow Depth=0.17' Max Vel=1.40 fps Inflow=4.28 cfs 0.750 af
n=0.040 L=238.0' S=0.0189 '/' Capacity=68.85 cfs Outflow=4.17 cfs 0.750 af

Reach 802R: Flow from Bio 800 Avg. Flow Depth=0.02' Max Vel=0.31 fps Inflow=0.34 cfs 0.221 af
n=0.050 L=121.0' S=0.0190 '/' Capacity=79.90 cfs Outflow=0.34 cfs 0.221 af

Reach 900R: Flow adjacent to Rt 1 Avg. Flow Depth=0.06' Max Vel=1.75 fps Inflow=2.07 cfs 0.389 af
n=0.035 L=285.0' S=0.0789 '/' Capacity=294.94 cfs Outflow=2.06 cfs 0.389 af

Reach 901R: Flow from Bio 801 Avg. Flow Depth=0.01' Max Vel=0.26 fps Inflow=0.25 cfs 0.201 af
n=0.050 L=300.0' S=0.0400 '/' Capacity=61.84 cfs Outflow=0.24 cfs 0.201 af

Reach 902R: Flow over adjacent land Avg. Flow Depth=0.03' Max Vel=0.48 fps Inflow=0.55 cfs 0.303 af
n=0.050 L=730.0' S=0.0299 '/' Capacity=133.42 cfs Outflow=0.50 cfs 0.302 af

Reach OUT 2: OUT 2 Inflow=5.88 cfs 1.009 af
Outflow=5.88 cfs 1.009 af

Reach OUT1: OUT 1 Inflow=13.80 cfs 4.474 af
Outflow=13.80 cfs 4.474 af

Pond 100P: Wetland Depression at RT 1 Peak Elev=62.60' Storage=53,773 cf Inflow=3.62 cfs 0.389 af
Primary=2.07 cfs 0.389 af Secondary=0.00 cfs 0.000 af Outflow=2.07 cfs 0.389 af

Pond 204P: Bio 204 Peak Elev=50.76' Storage=11,061 cf Inflow=3.37 cfs 0.281 af
Primary=0.29 cfs 0.281 af Secondary=0.00 cfs 0.000 af Outflow=0.29 cfs 0.281 af

Pond 205P: Bio 205 Peak Elev=44.82' Storage=3,973 cf Inflow=1.62 cfs 0.114 af
Primary=0.26 cfs 0.113 af Secondary=0.00 cfs 0.000 af Outflow=0.26 cfs 0.113 af

Pond 206P: culvert @ entrance Peak Elev=57.30' Inflow=2.30 cfs 0.151 af
18.0" Round Culvert n=0.013 L=100.0' S=0.0450 '/' Outflow=2.30 cfs 0.151 af

Pond 300P: Existing culvert at Idlewood Lane Peak Elev=49.83' Inflow=1.32 cfs 0.143 af
Primary=1.32 cfs 0.143 af Secondary=0.00 cfs 0.000 af Outflow=1.32 cfs 0.143 af

Pond 500P: Replacement culvert under west Peak Elev=41.81' Storage=1,423 cf Inflow=3.22 cfs 0.342 af
24.0" Round Culvert n=0.013 L=68.0' S=0.0074 '/' Outflow=2.86 cfs 0.341 af

Pond 600P: Replacement culvert under west Peak Elev=41.99' Storage=77 cf Inflow=2.12 cfs 0.164 af
Primary=2.10 cfs 0.164 af Secondary=0.00 cfs 0.000 af Outflow=2.10 cfs 0.164 af

Pond 601P: Bio 601 Peak Elev=37.33' Storage=10,039 cf Inflow=4.77 cfs 0.423 af
Primary=0.55 cfs 0.303 af Secondary=0.00 cfs 0.000 af Outflow=0.55 cfs 0.303 af

Pond 604P: Bio 604 Peak Elev=41.11' Storage=2,113 cf Inflow=1.43 cfs 0.102 af
Primary=0.39 cfs 0.075 af Secondary=0.00 cfs 0.000 af Outflow=0.39 cfs 0.075 af

Pond 606P: Bio 606 Peak Elev=39.88' Storage=3,748 cf Inflow=2.46 cfs 0.193 af
Primary=0.84 cfs 0.147 af Secondary=0.00 cfs 0.000 af Outflow=0.84 cfs 0.147 af

Pond 607P: Bio 607 Peak Elev=43.85' Storage=4,872 cf Inflow=2.85 cfs 0.209 af
Primary=0.37 cfs 0.164 af Secondary=0.00 cfs 0.000 af Outflow=0.37 cfs 0.164 af

Pond 800P: Bio 800 Peak Elev=43.20' Storage=1,540 cf Inflow=0.62 cfs 0.044 af
Primary=0.01 cfs 0.019 af Secondary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.019 af

Pond 801P: Bio 801 Peak Elev=30.71' Storage=7,688 cf Inflow=3.39 cfs 0.279 af
Primary=0.25 cfs 0.201 af Secondary=0.00 cfs 0.000 af Outflow=0.25 cfs 0.201 af

Pond 802P: Bio 802 Peak Elev=27.57' Storage=7,636 cf Inflow=3.94 cfs 0.304 af
Primary=0.34 cfs 0.221 af Secondary=0.00 cfs 0.000 af Outflow=0.34 cfs 0.221 af

Pond 803P: Bio 803 Peak Elev=62.59' Storage=1,437 cf Inflow=0.62 cfs 0.044 af
Primary=0.30 cfs 0.044 af Secondary=0.00 cfs 0.000 af Outflow=0.30 cfs 0.044 af

Total Runoff Area = 60.552 ac Runoff Volume = 5.909 af Average Runoff Depth = 1.17"
85.23% Pervious = 51.608 ac 14.77% Impervious = 8.944 ac

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 4
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 100S: Southwest edge at Rt Runoff Area=3.932 ac 18.62% Impervious Runoff Depth=2.46"
Flow Length=336' Tc=19.6 min CN=79 Runoff=7.70 cfs 0.806 af

Subcatchment 101S: North of entrance Runoff Area=2.569 ac 28.61% Impervious Runoff Depth=2.63"
Flow Length=495' Tc=9.7 min CN=81 Runoff=7.00 cfs 0.564 af

Subcatchment 200S: Area of center wetland Runoff Area=6.623 ac 1.39% Impervious Runoff Depth=2.05"
Flow Length=711' Tc=22.4 min CN=74 Runoff=10.12 cfs 1.131 af

Subcatchment 204S: Idlewood lots Runoff Area=1.320 ac 20.83% Impervious Runoff Depth=2.46"
Flow Length=340' Tc=11.2 min CN=79 Runoff=3.21 cfs 0.271 af

Subcatchment 205S: Road F (treated) Runoff Area=1.040 ac 28.08% Impervious Runoff Depth=2.63"
Flow Length=195' Tc=5.4 min CN=81 Runoff=3.28 cfs 0.228 af

Subcatchment 206S: Idlewood lots Runoff Area=1.446 ac 30.01% Impervious Runoff Depth=2.55"
Flow Length=211' Tc=3.4 min CN=80 Runoff=4.75 cfs 0.307 af

Subcatchment 300S: Area of Idlewood Lane Runoff Area=2.399 ac 15.30% Impervious Runoff Depth=1.74"
Flow Length=543' Tc=14.6 min CN=70 Runoff=3.63 cfs 0.349 af

Subcatchment 400S: Untreated adjacent to Runoff Area=1.333 ac 7.50% Impervious Runoff Depth=2.21"
Flow Length=216' Tc=6.1 min CN=76 Runoff=3.43 cfs 0.245 af

Subcatchment 500S: Trailer park Runoff Area=4.266 ac 4.62% Impervious Runoff Depth=2.13"
Flow Length=448' Tc=17.3 min CN=75 Runoff=7.55 cfs 0.757 af

Subcatchment 600S: Access to Wilson Ave Runoff Area=1.572 ac 15.20% Impervious Runoff Depth=2.55"
Flow Length=269' Tc=7.9 min CN=80 Runoff=4.40 cfs 0.334 af

Subcatchment 603S: West of wetland Runoff Area=3.055 ac 8.71% Impervious Runoff Depth=2.46"
Flow Length=100' Tc=9.0 min CN=79 Runoff=7.95 cfs 0.626 af

Subcatchment 604S: Road B south Runoff Area=31,932 sf 34.58% Impervious Runoff Depth=3.10"
Tc=6.0 min CN=86 Runoff=2.63 cfs 0.189 af

Subcatchment 605S: Road C Runoff Area=1.580 ac 43.92% Impervious Runoff Depth=3.00"
Flow Length=180' Tc=6.9 min CN=85 Runoff=5.35 cfs 0.395 af

Subcatchment 606S: Road B north Runoff Area=1.462 ac 32.35% Impervious Runoff Depth=3.00"
Flow Length=105' Tc=9.0 min CN=85 Runoff=4.61 cfs 0.366 af

Subcatchment 608S: North of wetland Runoff Area=1.239 ac 3.15% Impervious Runoff Depth=2.38"
Flow Length=170' Tc=11.4 min CN=78 Runoff=2.88 cfs 0.245 af

Subcatchment 609S: Start of Road A Runoff Area=0.773 ac 42.95% Impervious Runoff Depth=3.29"
Flow Length=197' Slope=0.0400 '/' Tc=7.3 min CN=88 Runoff=2.80 cfs 0.212 af

Subcatchment 700S: Untreated north of Runoff Area=2.354 ac 0.98% Impervious Runoff Depth=2.21"
Flow Length=188' Slope=0.0650 '/' Tc=9.7 min CN=76 Runoff=5.35 cfs 0.434 af

Subcatchment 800S: Road D Runoff Area=0.421 ac 32.30% Impervious Runoff Depth=2.55"
Flow Length=40' Slope=0.0400 '/' Tc=5.4 min CN=80 Runoff=1.29 cfs 0.089 af

Subcatchment 801S: Road A north of Runoff Area=2.678 ac 38.87% Impervious Runoff Depth=2.55"
Flow Length=700' Tc=9.8 min CN=80 Runoff=7.04 cfs 0.568 af

Subcatchment 802S: Road A & end lots Runoff Area=2.916 ac 28.74% Impervious Runoff Depth=2.55"
Flow Length=262' Tc=7.9 min UI Adjusted CN=80 Runoff=8.15 cfs 0.619 af

Subcatchment 803S: Wetland to west Runoff Area=5.466 ac 0.00% Impervious Runoff Depth=2.46"
Flow Length=170' Slope=0.0150 '/' Tc=17.6 min CN=79 Runoff=11.18 cfs 1.121 af

Subcatchment 804S: Park Office & parking Runoff Area=0.320 ac 50.62% Impervious Runoff Depth=3.10"
Flow Length=70' Slope=0.0800 '/' Tc=6.4 min CN=86 Runoff=1.13 cfs 0.083 af

Subcatchment 900S: Existing trailor park Runoff Area=6.786 ac 0.94% Impervious Runoff Depth=2.55"
Flow Length=789' Tc=26.0 min CN=80 Runoff=12.20 cfs 1.440 af

Subcatchment 902S: Road D east of Runoff Area=4.269 ac 27.17% Impervious Runoff Depth=2.46"
Flow Length=562' Tc=12.0 min UI Adjusted CN=79 Runoff=10.12 cfs 0.875 af

Reach 100R: Flow to large wetland Avg. Flow Depth=0.47' Max Vel=1.29 fps Inflow=14.20 cfs 2.379 af
n=0.040 L=342.0' S=0.0050 '/' Capacity=35.30 cfs Outflow=14.03 cfs 2.379 af

Reach 206R: Swale to filters Avg. Flow Depth=0.40' Max Vel=2.24 fps Inflow=4.75 cfs 0.307 af
n=0.022 L=195.0' S=0.0051 '/' Capacity=7.03 cfs Outflow=4.60 cfs 0.307 af

Reach 300R: Flow through large Avg. Flow Depth=0.34' Max Vel=0.52 fps Inflow=13.52 cfs 1.564 af
n=0.040 L=818.0' S=0.0015 '/' Capacity=321.89 cfs Outflow=9.01 cfs 1.563 af

Reach 400R: Flow through large Avg. Flow Depth=0.63' Max Vel=0.72 fps Inflow=41.91 cfs 6.639 af
n=0.040 L=660.0' S=0.0012 '/' Capacity=334.41 cfs Outflow=36.38 cfs 6.638 af

Reach 500R: Stream flow Avg. Flow Depth=0.61' Max Vel=2.22 fps Inflow=37.77 cfs 7.071 af
n=0.040 L=772.0' S=0.0124 '/' Capacity=549.49 cfs Outflow=37.00 cfs 7.071 af

Reach 501R: Stream flow Avg. Flow Depth=0.65' Max Vel=2.22 fps Inflow=41.20 cfs 8.022 af
n=0.040 L=560.0' S=0.0116 '/' Capacity=530.88 cfs Outflow=40.82 cfs 8.021 af

Reach 600R: Flow through large Avg. Flow Depth=0.65' Max Vel=0.76 fps Inflow=41.14 cfs 6.394 af
n=0.040 L=240.0' S=0.0012 '/' Capacity=339.60 cfs Outflow=40.38 cfs 6.393 af

Reach 601R: Flow adjacent to Rt 1 Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.035 L=203.0' S=0.0887 '/' Capacity=45.57 cfs Outflow=0.00 cfs 0.000 af

Reach 700R: Flow adjacent to Rt 1 Avg. Flow Depth=0.14' Max Vel=1.14 fps Inflow=3.63 cfs 0.349 af
n=0.035 L=362.0' S=0.0110 '/' Capacity=31.61 cfs Outflow=3.37 cfs 0.349 af

Reach 800R: Flow to large wetland Avg. Flow Depth=0.28' Max Vel=1.89 fps Inflow=10.69 cfs 1.573 af
n=0.040 L=238.0' S=0.0189 '/' Capacity=68.85 cfs Outflow=10.64 cfs 1.573 af

Reach 802R: Flow from Bio 800 Avg. Flow Depth=0.07' Max Vel=0.68 fps Inflow=2.65 cfs 0.536 af
n=0.050 L=121.0' S=0.0190 '/' Capacity=79.90 cfs Outflow=2.64 cfs 0.536 af

Reach 900R: Flow adjacent to Rt 1 Avg. Flow Depth=0.10' Max Vel=2.46 fps Inflow=5.08 cfs 0.806 af
n=0.035 L=285.0' S=0.0789 '/' Capacity=294.94 cfs Outflow=5.07 cfs 0.806 af

Reach 901R: Flow from Bio 801 Avg. Flow Depth=0.04' Max Vel=0.73 fps Inflow=3.75 cfs 0.491 af
n=0.050 L=300.0' S=0.0400 '/' Capacity=61.84 cfs Outflow=3.33 cfs 0.490 af

Reach 902R: Flow over adjacent land Avg. Flow Depth=0.11' Max Vel=1.17 fps Inflow=5.54 cfs 0.755 af
n=0.050 L=730.0' S=0.0299 '/' Capacity=133.42 cfs Outflow=4.99 cfs 0.754 af

Reach OUT 2: OUT 2 Inflow=15.96 cfs 2.194 af
Outflow=15.96 cfs 2.194 af

Reach OUT1: OUT 1 Inflow=47.96 cfs 9.632 af
Outflow=47.96 cfs 9.632 af

Pond 100P: Wetland Depression at RT 1 Peak Elev=62.68' Storage=57,274 cf Inflow=7.70 cfs 0.806 af
Primary=5.08 cfs 0.806 af Secondary=0.00 cfs 0.000 af Outflow=5.08 cfs 0.806 af

Pond 204P: Bio 204 Peak Elev=51.18' Storage=14,925 cf Inflow=7.07 cfs 0.578 af
Primary=2.74 cfs 0.578 af Secondary=0.00 cfs 0.000 af Outflow=2.74 cfs 0.578 af

Pond 205P: Bio 205 Peak Elev=45.08' Storage=4,779 cf Inflow=3.28 cfs 0.228 af
Primary=2.01 cfs 0.228 af Secondary=0.00 cfs 0.000 af Outflow=2.01 cfs 0.228 af

Pond 206P: culvert @ entrance Peak Elev=57.75' Inflow=4.75 cfs 0.307 af
18.0" Round Culvert n=0.013 L=100.0' S=0.0450 '/' Outflow=4.75 cfs 0.307 af

Pond 300P: Existing culvert at Idlewood Lane Peak Elev=52.06' Inflow=3.63 cfs 0.349 af
Primary=3.63 cfs 0.349 af Secondary=0.00 cfs 0.000 af Outflow=3.63 cfs 0.349 af

Pond 500P: Replacement culvert under west Peak Elev=42.34' Storage=2,543 cf Inflow=7.55 cfs 0.757 af
24.0" Round Culvert n=0.013 L=68.0' S=0.0074 '/' Outflow=6.99 cfs 0.757 af

Pond 600P: Replacement culvert under west Peak Elev=43.34' Storage=354 cf Inflow=4.40 cfs 0.334 af
Primary=3.94 cfs 0.334 af Secondary=0.00 cfs 0.000 af Outflow=3.94 cfs 0.334 af

Pond 601P: Bio 601 Peak Elev=37.77' Storage=13,120 cf Inflow=10.12 cfs 0.875 af
Primary=5.54 cfs 0.755 af Secondary=0.00 cfs 0.000 af Outflow=5.54 cfs 0.755 af

Pond 604P: Bio 604 Peak Elev=41.33' Storage=2,632 cf Inflow=2.63 cfs 0.189 af
Primary=2.02 cfs 0.162 af Secondary=0.00 cfs 0.000 af Outflow=2.02 cfs 0.162 af

Pond 606P: Bio 606 Peak Elev=40.25' Storage=5,057 cf Inflow=4.61 cfs 0.366 af
Primary=2.87 cfs 0.319 af Secondary=0.00 cfs 0.000 af Outflow=2.87 cfs 0.319 af

Pond 607P: Bio 607 Peak Elev=44.26' Storage=6,372 cf Inflow=5.35 cfs 0.395 af
Primary=2.79 cfs 0.350 af Secondary=0.01 cfs 0.000 af Outflow=2.80 cfs 0.350 af

Pond 800P: Bio 800 Peak Elev=43.34' Storage=1,899 cf Inflow=1.29 cfs 0.089 af
Primary=0.32 cfs 0.065 af Secondary=0.00 cfs 0.000 af Outflow=0.32 cfs 0.065 af

Pond 801P: Bio 801 Peak Elev=30.99' Storage=9,305 cf Inflow=7.04 cfs 0.568 af
Primary=3.75 cfs 0.491 af Secondary=0.00 cfs 0.000 af Outflow=3.75 cfs 0.491 af

Pond 802P: Bio 802 Peak Elev=28.05' Storage=11,002 cf Inflow=8.15 cfs 0.619 af
Primary=2.65 cfs 0.536 af Secondary=0.00 cfs 0.000 af Outflow=2.65 cfs 0.536 af

Pond 803P: Bio 803 Peak Elev=62.71' Storage=1,588 cf Inflow=1.13 cfs 0.083 af
Primary=0.99 cfs 0.082 af Secondary=0.00 cfs 0.000 af Outflow=0.99 cfs 0.082 af

Total Runoff Area = 60.552 ac Runoff Volume = 12.255 af Average Runoff Depth = 2.43"
85.23% Pervious = 51.608 ac 14.77% Impervious = 8.944 ac

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 4
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 100S: Southwest edge at Rt Runoff Area=3.932 ac 18.62% Impervious Runoff Depth=3.15"
Flow Length=336' Tc=19.6 min CN=79 Runoff=9.88 cfs 1.032 af

Subcatchment 101S: North of entrance Runoff Area=2.569 ac 28.61% Impervious Runoff Depth=3.34"
Flow Length=495' Tc=9.7 min CN=81 Runoff=8.86 cfs 0.715 af

Subcatchment 200S: Area of center wetland Runoff Area=6.623 ac 1.39% Impervious Runoff Depth=2.69"
Flow Length=711' Tc=22.4 min CN=74 Runoff=13.38 cfs 1.483 af

Subcatchment 204S: Idlewood lots Runoff Area=1.320 ac 20.83% Impervious Runoff Depth=3.15"
Flow Length=340' Tc=11.2 min CN=79 Runoff=4.10 cfs 0.346 af

Subcatchment 205S: Road F (treated) Runoff Area=1.040 ac 28.08% Impervious Runoff Depth=3.34"
Flow Length=195' Tc=5.4 min CN=81 Runoff=4.15 cfs 0.290 af

Subcatchment 206S: Idlewood lots Runoff Area=1.446 ac 30.01% Impervious Runoff Depth=3.24"
Flow Length=211' Tc=3.4 min CN=80 Runoff=6.04 cfs 0.391 af

Subcatchment 300S: Area of Idlewood Lane Runoff Area=2.399 ac 15.30% Impervious Runoff Depth=2.34"
Flow Length=543' Tc=14.6 min CN=70 Runoff=4.95 cfs 0.467 af

Subcatchment 400S: Untreated adjacent to Runoff Area=1.333 ac 7.50% Impervious Runoff Depth=2.87"
Flow Length=216' Tc=6.1 min CN=76 Runoff=4.47 cfs 0.319 af

Subcatchment 500S: Trailer park Runoff Area=4.266 ac 4.62% Impervious Runoff Depth=2.78"
Flow Length=448' Tc=17.3 min CN=75 Runoff=9.92 cfs 0.987 af

Subcatchment 600S: Access to Wilson Ave Runoff Area=1.572 ac 15.20% Impervious Runoff Depth=3.24"
Flow Length=269' Tc=7.9 min CN=80 Runoff=5.59 cfs 0.425 af

Subcatchment 603S: West of wetland Runoff Area=3.055 ac 8.71% Impervious Runoff Depth=3.15"
Flow Length=100' Tc=9.0 min CN=79 Runoff=10.18 cfs 0.802 af

Subcatchment 604S: Road B south Runoff Area=31,932 sf 34.58% Impervious Runoff Depth=3.84"
Tc=6.0 min CN=86 Runoff=3.24 cfs 0.235 af

Subcatchment 605S: Road C Runoff Area=1.580 ac 43.92% Impervious Runoff Depth=3.74"
Flow Length=180' Tc=6.9 min CN=85 Runoff=6.62 cfs 0.492 af

Subcatchment 606S: Road B north Runoff Area=1.462 ac 32.35% Impervious Runoff Depth=3.74"
Flow Length=105' Tc=9.0 min CN=85 Runoff=5.71 cfs 0.456 af

Subcatchment 608S: North of wetland Runoff Area=1.239 ac 3.15% Impervious Runoff Depth=3.05"
Flow Length=170' Tc=11.4 min CN=78 Runoff=3.71 cfs 0.315 af

Subcatchment 609S: Start of Road A Runoff Area=0.773 ac 42.95% Impervious Runoff Depth=4.05"
Flow Length=197' Slope=0.0400 '/' Tc=7.3 min CN=88 Runoff=3.41 cfs 0.261 af

Subcatchment 700S: Untreated north of Runoff Area=2.354 ac 0.98% Impervious Runoff Depth=2.87"
Flow Length=188' Slope=0.0650 '/' Tc=9.7 min CN=76 Runoff=6.98 cfs 0.563 af

Subcatchment 800S: Road D Runoff Area=0.421 ac 32.30% Impervious Runoff Depth=3.24"
Flow Length=40' Slope=0.0400 '/' Tc=5.4 min CN=80 Runoff=1.63 cfs 0.114 af

Subcatchment 801S: Road A north of Runoff Area=2.678 ac 38.87% Impervious Runoff Depth=3.24"
Flow Length=700' Tc=9.8 min CN=80 Runoff=8.95 cfs 0.724 af

Subcatchment 802S: Road A & end lots Runoff Area=2.916 ac 28.74% Impervious Runoff Depth=3.24"
Flow Length=262' Tc=7.9 min UI Adjusted CN=80 Runoff=10.37 cfs 0.788 af

Subcatchment 803S: Wetland to west Runoff Area=5.466 ac 0.00% Impervious Runoff Depth=3.15"
Flow Length=170' Slope=0.0150 '/' Tc=17.6 min CN=79 Runoff=14.33 cfs 1.434 af

Subcatchment 804S: Park Office & parking Runoff Area=0.320 ac 50.62% Impervious Runoff Depth=3.84"
Flow Length=70' Slope=0.0800 '/' Tc=6.4 min CN=86 Runoff=1.40 cfs 0.102 af

Subcatchment 900S: Existing trailor park Runoff Area=6.786 ac 0.94% Impervious Runoff Depth=3.24"
Flow Length=789' Tc=26.0 min CN=80 Runoff=15.54 cfs 1.835 af

Subcatchment 902S: Road D east of Runoff Area=4.269 ac 27.17% Impervious Runoff Depth=3.15"
Flow Length=562' Tc=12.0 min UI Adjusted CN=79 Runoff=12.95 cfs 1.120 af

Reach 100R: Flow to large wetland Avg. Flow Depth=0.57' Max Vel=1.44 fps Inflow=20.65 cfs 3.054 af
n=0.040 L=342.0' S=0.0050 '/' Capacity=35.30 cfs Outflow=20.33 cfs 3.054 af

Reach 206R: Swale to filters Avg. Flow Depth=0.45' Max Vel=2.42 fps Inflow=6.04 cfs 0.391 af
n=0.022 L=195.0' S=0.0051 '/' Capacity=7.03 cfs Outflow=5.87 cfs 0.391 af

Reach 300R: Flow through large Avg. Flow Depth=0.39' Max Vel=0.58 fps Inflow=17.85 cfs 2.020 af
n=0.040 L=818.0' S=0.0015 '/' Capacity=321.89 cfs Outflow=12.60 cfs 2.020 af

Reach 400R: Flow through large Avg. Flow Depth=0.73' Max Vel=0.80 fps Inflow=58.04 cfs 8.552 af
n=0.040 L=660.0' S=0.0012 '/' Capacity=334.41 cfs Outflow=50.91 cfs 8.551 af

Reach 500R: Stream flow Avg. Flow Depth=0.72' Max Vel=2.43 fps Inflow=53.00 cfs 9.132 af
n=0.040 L=772.0' S=0.0124 '/' Capacity=549.49 cfs Outflow=52.01 cfs 9.132 af

Reach 501R: Stream flow Avg. Flow Depth=0.76' Max Vel=2.43 fps Inflow=58.32 cfs 10.355 af
n=0.040 L=560.0' S=0.0116 '/' Capacity=530.88 cfs Outflow=57.73 cfs 10.355 af

Reach 600R: Flow through large Avg. Flow Depth=0.76' Max Vel=0.84 fps Inflow=57.06 cfs 8.237 af
n=0.040 L=240.0' S=0.0012 '/' Capacity=339.60 cfs Outflow=55.96 cfs 8.236 af

Reach 601R: Flow adjacent to Rt 1 Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.035 L=203.0' S=0.0887 '/' Capacity=45.57 cfs Outflow=0.00 cfs 0.000 af

Reach 700R: Flow adjacent to Rt 1 Avg. Flow Depth=0.17' Max Vel=1.28 fps Inflow=4.95 cfs 0.467 af
n=0.035 L=362.0' S=0.0110 '/' Capacity=31.61 cfs Outflow=4.66 cfs 0.467 af

Reach 800R: Flow to large wetland Avg. Flow Depth=0.36' Max Vel=2.17 fps Inflow=16.74 cfs 2.022 af
n=0.040 L=238.0' S=0.0189 '/' Capacity=68.85 cfs Outflow=16.58 cfs 2.022 af

Reach 802R: Flow from Bio 800 Avg. Flow Depth=0.10' Max Vel=0.81 fps Inflow=4.26 cfs 0.705 af
n=0.050 L=121.0' S=0.0190 '/' Capacity=79.90 cfs Outflow=4.23 cfs 0.705 af

Reach 900R: Flow adjacent to Rt 1 Avg. Flow Depth=0.12' Max Vel=2.74 fps Inflow=6.76 cfs 1.032 af
n=0.035 L=285.0' S=0.0789 '/' Capacity=294.94 cfs Outflow=6.75 cfs 1.032 af

Reach 901R: Flow from Bio 801 Avg. Flow Depth=0.06' Max Vel=0.88 fps Inflow=5.52 cfs 0.646 af
n=0.050 L=300.0' S=0.0400 '/' Capacity=61.84 cfs Outflow=5.28 cfs 0.646 af

Reach 902R: Flow over adjacent land Avg. Flow Depth=0.14' Max Vel=1.31 fps Inflow=7.23 cfs 1.000 af
n=0.050 L=730.0' S=0.0299 '/' Capacity=133.42 cfs Outflow=6.83 cfs 0.999 af

Reach OUT 2: OUT 2 Inflow=21.55 cfs 2.834 af
Outflow=21.55 cfs 2.834 af

Reach OUT1: OUT 1 Inflow=68.65 cfs 12.435 af
Outflow=68.65 cfs 12.435 af

Pond 100P: Wetland Depression at RT 1 Peak Elev=62.72' Storage=58,925 cf Inflow=9.88 cfs 1.032 af
Primary=6.76 cfs 1.032 af Secondary=0.00 cfs 0.000 af Outflow=6.76 cfs 1.032 af

Pond 204P: Bio 204 Peak Elev=51.30' Storage=16,077 cf Inflow=9.03 cfs 0.737 af
Primary=4.74 cfs 0.737 af Secondary=0.00 cfs 0.000 af Outflow=4.74 cfs 0.737 af

Pond 205P: Bio 205 Peak Elev=45.21' Storage=5,219 cf Inflow=4.15 cfs 0.290 af
Primary=2.66 cfs 0.289 af Secondary=0.00 cfs 0.000 af Outflow=2.66 cfs 0.289 af

Pond 206P: culvert @ entrance Peak Elev=58.06' Inflow=6.04 cfs 0.391 af
18.0" Round Culvert n=0.013 L=100.0' S=0.0450 '/' Outflow=6.04 cfs 0.391 af

Pond 300P: Existing culvert at Idlewood Lane Peak Elev=54.25' Inflow=4.95 cfs 0.467 af
Primary=4.95 cfs 0.467 af Secondary=0.00 cfs 0.000 af Outflow=4.95 cfs 0.467 af

Pond 500P: Replacement culvert under west Peak Elev=42.61' Storage=3,105 cf Inflow=9.92 cfs 0.987 af
24.0" Round Culvert n=0.013 L=68.0' S=0.0074 '/' Outflow=9.20 cfs 0.987 af

Pond 600P: Replacement culvert under west Peak Elev=44.00' Storage=670 cf Inflow=5.59 cfs 0.425 af
Primary=4.59 cfs 0.425 af Secondary=0.00 cfs 0.000 af Outflow=4.59 cfs 0.425 af

Pond 601P: Bio 601 Peak Elev=38.14' Storage=15,780 cf Inflow=12.95 cfs 1.120 af
Primary=7.23 cfs 1.000 af Secondary=0.00 cfs 0.000 af Outflow=7.23 cfs 1.000 af

Pond 604P: Bio 604 Peak Elev=41.42' Storage=2,834 cf Inflow=3.24 cfs 0.235 af
Primary=2.49 cfs 0.208 af Secondary=0.00 cfs 0.000 af Outflow=2.49 cfs 0.208 af

Pond 606P: Bio 606 Peak Elev=40.42' Storage=5,702 cf Inflow=5.71 cfs 0.456 af
Primary=3.28 cfs 0.402 af Secondary=0.55 cfs 0.008 af Outflow=3.84 cfs 0.409 af

Pond 607P: Bio 607 Peak Elev=44.45' Storage=7,128 cf Inflow=6.62 cfs 0.492 af
Primary=3.28 cfs 0.429 af Secondary=1.09 cfs 0.018 af Outflow=4.37 cfs 0.447 af

Pond 800P: Bio 800 Peak Elev=43.41' Storage=2,034 cf Inflow=1.63 cfs 0.114 af
Primary=0.70 cfs 0.089 af Secondary=0.00 cfs 0.000 af Outflow=0.70 cfs 0.089 af

Pond 801P: Bio 801 Peak Elev=31.17' Storage=10,458 cf Inflow=8.95 cfs 0.724 af
Primary=5.52 cfs 0.646 af Secondary=0.00 cfs 0.000 af Outflow=5.52 cfs 0.646 af

Pond 802P: Bio 802 Peak Elev=28.36' Storage=13,338 cf Inflow=10.37 cfs 0.788 af
Primary=3.31 cfs 0.686 af Secondary=0.95 cfs 0.019 af Outflow=4.26 cfs 0.705 af

Pond 803P: Bio 803 Peak Elev=62.74' Storage=1,634 cf Inflow=1.40 cfs 0.102 af
Primary=1.25 cfs 0.102 af Secondary=0.00 cfs 0.000 af Outflow=1.25 cfs 0.102 af

Total Runoff Area = 60.552 ac Runoff Volume = 15.697 af Average Runoff Depth = 3.11"
85.23% Pervious = 51.608 ac 14.77% Impervious = 8.944 ac

Summary for Subcatchment 100S: Southwest edge at Rt 1

Runoff = 9.88 cfs @ 12.26 hrs, Volume= 1.032 af, Depth= 3.15"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
2.164	73	Woods, Fair, HSG C
0.732	98	Paved parking & roofs
0.289	79	50-75% Grass cover, Fair, HSG C
0.747	79	Woods, Fair, HSG D
3.932	79	Weighted Average
3.200		81.38% Pervious Area
0.732		18.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	50	0.0600	0.10		**Sheet Flow, 100.1** Woods: Light underbrush n= 0.400 P2= 3.00"
0.2	26	0.1600	2.00		**Shallow Concentrated Flow, 100.2** Woodland Kv= 5.0 fps
11.2	260	0.0060	0.39		**Shallow Concentrated Flow, 100.3** Woodland Kv= 5.0 fps
19.6	336	Total			

Summary for Subcatchment 101S: North of entrance

Runoff = 8.86 cfs @ 12.13 hrs, Volume= 0.715 af, Depth= 3.34"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.932	70	Woods, Good, HSG C
0.482	98	Paved parking, HSG C
0.283	74	>75% Grass cover, Good, HSG C
0.253	98	Paved parking, HSG D
0.402	80	>75% Grass cover, Good, HSG D
0.217	77	Woods, Good, HSG D
2.569	81	Weighted Average
1.834		71.39% Pervious Area
0.735		28.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	50	0.0800	0.11		**Sheet Flow, 101.1** Woods: Light underbrush n= 0.400 P2= 3.00"
0.6	50	0.0800	1.41		**Shallow Concentrated Flow, 101.2** Woodland Kv= 5.0 fps
1.8	395	0.0253	3.60	12.15	**Trap/Vee/Rect Channel Flow, 101.3** Bot.W=5.00' D=0.50' Z= 5.0 & 2.0 '/' Top.W=8.50' n= 0.035 Earth, dense weeds
9.7	495	Total			

Summary for Subcatchment 200S: Area of center wetland

Runoff = 13.38 cfs @ 12.32 hrs, Volume= 1.483 af, Depth= 2.69"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.829	79	50-75% Grass cover, Fair, HSG C
2.927	70	Woods, Good, HSG C
2.775	77	Woods, Good, HSG D
0.092	98	Paved parking, HSG C
6.623	74	Weighted Average
6.531		98.61% Pervious Area
0.092		1.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	70	0.0600	0.11		**Sheet Flow, 200.1** Woods: Light underbrush n= 0.400 P2= 3.00"
2.9	281	0.1060	1.63		**Shallow Concentrated Flow, 200.2** Woodland Kv= 5.0 fps
8.8	360	0.0080	0.68	1.47	**Trap/Vee/Rect Channel Flow, 200.3** Bot.W=20.00' D=0.10' Z= 15.0 '/' Top.W=23.00' n= 0.040 Winding stream, pools & shoals
22.4	711	Total			

Summary for Subcatchment 204S: Idlewood lots

Runoff = 4.10 cfs @ 12.16 hrs, Volume= 0.346 af, Depth= 3.15"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.275	98	Paved parking, HSG C
1.045	74	>75% Grass cover, Good, HSG C
1.320	79	Weighted Average
1.045		79.17% Pervious Area
0.275		20.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	50	0.0200	0.10		**Sheet Flow, 204.1** Grass: Dense n= 0.240 P2= 3.00"
2.1	125	0.0200	0.99		**Shallow Concentrated Flow, 204.2** Short Grass Pasture Kv= 7.0 fps
0.2	40	0.2500	3.50		**Shallow Concentrated Flow, 204.3** Short Grass Pasture Kv= 7.0 fps
0.4	125	0.0250	5.64	15.52	**Trap/Vee/Rect Channel Flow, 204.4** Bot.W=4.00' D=0.50' Z= 3.0 '/' Top.W=7.00' n= 0.022 Earth, clean & straight
11.2	340	Total			

Summary for Subcatchment 205S: Road F (treated)

Runoff = 4.15 cfs @ 12.08 hrs, Volume= 0.290 af, Depth= 3.34"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

	Area (ac)	CN	Description
	0.055	98	Paved parking, HSG C
*	0.028	98	Water Surface, HSG C (drives)
	0.209	98	Paved parking, HSG C
	0.748	74	>75% Grass cover, Good, HSG C
	1.040	81	Weighted Average
	0.748		71.92% Pervious Area
	0.292		28.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	50	0.0400	0.19		**Sheet Flow, 205.1** Grass: Short n= 0.150 P2= 3.00"
0.6	105	0.1900	3.05		**Shallow Concentrated Flow, 205.2** Short Grass Pasture Kv= 7.0 fps
0.4	40	0.0200	1.62	2.61	**Trap/Vee/Rect Channel Flow, 205.3** Bot.W=10.00' D=0.15' Z= 5.0 '/' Top.W=11.50' n= 0.035 Earth, dense weeds
5.4	195	Total			

Summary for Subcatchment 206S: Idlewood lots

Runoff = 6.04 cfs @ 12.05 hrs, Volume= 0.391 af, Depth= 3.24"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.434	98	Paved parking, HSG C
0.094	49	50-75% Grass cover, Fair, HSG A
0.918	74	>75% Grass cover, Good, HSG C
1.446	80	Weighted Average
1.012		69.99% Pervious Area
0.434		30.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.6	26	0.1000	0.16		**Sheet Flow, 206.1** Grass: Dense n= 0.240 P2= 3.00"
0.2	45	0.0250	3.21		**Shallow Concentrated Flow, 206.2** Paved Kv= 20.3 fps
0.6	140	0.0100	3.85	7.22	**Trap/Vee/Rect Channel Flow, 206.3** Bot.W=1.00' D=0.75' Z= 2.0 '/' Top.W=4.00' n= 0.022 Earth, clean & straight
3.4	211	Total			

Summary for Subcatchment 300S: Area of Idlewood Lane

Runoff = 4.95 cfs @ 12.21 hrs, Volume= 0.467 af, Depth= 2.34"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
1.093	79	50-75% Grass cover, Fair, HSG C
0.939	49	50-75% Grass cover, Fair, HSG A
0.367	98	Paved parking & roofs
2.399	70	Weighted Average
2.032		84.70% Pervious Area
0.367		15.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	50	0.0800	0.11		**Sheet Flow, 300.1** Woods: Light underbrush n= 0.400 P2= 3.00"
5.8	405	0.0540	1.16		**Shallow Concentrated Flow, 300.2** Woodland Kv= 5.0 fps
1.5	88	0.0200	0.99		**Shallow Concentrated Flow, 300.3** Short Grass Pasture Kv= 7.0 fps
14.6	543	Total			

Summary for Subcatchment 400S: Untreated adjacent to Wilson Lane

Runoff = 4.47 cfs @ 12.09 hrs, Volume= 0.319 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.061	98	Paved parking, HSG C
0.039	98	Paved parking, HSG C
0.505	70	Woods, Good, HSG C
0.457	77	Woods, Good, HSG D
0.172	74	>75% Grass cover, Good, HSG C
0.099	80	>75% Grass cover, Good, HSG D
1.333	76	Weighted Average
1.233		92.50% Pervious Area
0.100		7.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	50	0.1200	0.20		**Sheet Flow, 400.1** Grass: Dense n= 0.240 P2= 3.00"
0.5	64	0.2200	2.35		**Shallow Concentrated Flow, 400.2** Woodland Kv= 5.0 fps
1.5	102	0.0500	1.12		**Shallow Concentrated Flow, 400.3** Woodland Kv= 5.0 fps
6.1	216	Total			

Summary for Subcatchment 500S: Trailer park

Runoff = 9.92 cfs @ 12.24 hrs, Volume= 0.987 af, Depth= 2.78"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.087	98	Roofs
0.110	98	Road
0.046	84	50-75% Grass cover, Fair, HSG D
0.428	79	50-75% Grass cover, Fair, HSG C
3.595	73	Woods, Fair, HSG C
4.266	75	Weighted Average
4.069		95.38% Pervious Area
0.197		4.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	50	0.0225	0.07		**Sheet Flow, 500.1** Woods: Light underbrush n= 0.400 P2= 3.00"
1.1	60	0.0340	0.92		**Shallow Concentrated Flow, 500.2** Woodland Kv= 5.0 fps
2.1	200	0.1000	1.58		**Shallow Concentrated Flow, 500.3** Woodland Kv= 5.0 fps
1.9	138	0.0290	1.19		**Shallow Concentrated Flow, 500.4** Short Grass Pasture Kv= 7.0 fps
17.3	448	Total			

Summary for Subcatchment 600S: Access to Wilson Ave

Runoff = 5.59 cfs @ 12.11 hrs, Volume= 0.425 af, Depth= 3.24"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.413	73	Woods, Fair, HSG C
0.239	98	Paved parking & roofs
0.920	79	50-75% Grass cover, Fair, HSG C
1.572	80	Weighted Average
1.333		84.80% Pervious Area
0.239		15.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.8	50	0.1400	0.14		**Sheet Flow, 600.1** Woods: Light underbrush n= 0.400 P2= 3.00"
1.0	99	0.1100	1.66		**Shallow Concentrated Flow, 600.2** Woodland Kv= 5.0 fps
1.1	120	0.0700	1.85		**Shallow Concentrated Flow, 600.3** Short Grass Pasture Kv= 7.0 fps
7.9	269	Total			

Summary for Subcatchment 603S: West of wetland

Runoff = 10.18 cfs @ 12.13 hrs, Volume= 0.802 af, Depth= 3.15"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
2.489	77	Woods, Good, HSG D
0.183	98	Paved parking, HSG C
0.083	98	Paved parking, HSG C
0.300	74	>75% Grass cover, Good, HSG C
3.055	79	Weighted Average
2.789		91.29% Pervious Area
0.266		8.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	50	0.0600	0.10		**Sheet Flow, 603.1** Woods: Light underbrush n= 0.400 P2= 3.00"
0.8	50	0.0400	1.00		**Shallow Concentrated Flow, 603.2** Woodland Kv= 5.0 fps
9.0	100	Total			

Summary for Subcatchment 604S: Road B south

Runoff = 3.24 cfs @ 12.09 hrs, Volume= 0.235 af, Depth= 3.84"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (sf)	CN	Description
4,567	98	Paved parking, HSG D
17,191	80	>75% Grass cover, Good, HSG D
1,800	98	Unconnected roofs, HSG C
3,700	74	>75% Grass cover, Good, HSG C
4,674	98	Unconnected roofs, HSG D
31,932	86	Weighted Average
20,891		65.42% Pervious Area
11,041		34.58% Impervious Area
6,474		58.64% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, 604.1 - MIN Tc**

Summary for Subcatchment 605S: Road C

Runoff = 6.62 cfs @ 12.10 hrs, Volume= 0.492 af, Depth= 3.74"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.455	98	Unconnected roofs, HSG C
0.239	98	Paved parking, HSG C
0.076	80	>75% Grass cover, Good, HSG D
0.810	74	>75% Grass cover, Good, HSG C
1.580	85	Weighted Average
0.886		56.08% Pervious Area
0.694		43.92% Impervious Area
0.455		65.56% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.9	45	0.0400	0.13		**Sheet Flow, 605.5** Grass: Dense n= 0.240 P2= 3.00"
1.0	135	0.0217	2.21		**Shallow Concentrated Flow, 605.2** Grassed Waterway Kv= 15.0 fps
6.9	180	Total			

Summary for Subcatchment 606S: Road B north

Runoff = 5.71 cfs @ 12.13 hrs, Volume= 0.456 af, Depth= 3.74"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.139	98	Paved parking, HSG D
0.334	98	Unconnected pavement, HSG D
0.079	74	>75% Grass cover, Good, HSG C
0.910	80	>75% Grass cover, Good, HSG D
1.462	85	Weighted Average
0.989		67.65% Pervious Area
0.473		32.35% Impervious Area
0.334		70.61% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	50	0.0200	0.10		**Sheet Flow, 606.1** Grass: Dense n= 0.240 P2= 3.00"
0.5	55	0.0150	1.84		**Shallow Concentrated Flow, 606.2** Grassed Waterway Kv= 15.0 fps
9.0	105	Total			

Summary for Subcatchment 608S: North of wetland crossing

Runoff = 3.71 cfs @ 12.16 hrs, Volume= 0.315 af, Depth= 3.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.039	98	Water Surface, HSG C
1.200	77	Woods, Good, HSG D
1.239	78	Weighted Average
1.200		96.85% Pervious Area
0.039		3.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.7	50	0.0400	0.09		**Sheet Flow, 608.1** Woods: Light underbrush n= 0.400 P2= 3.00"
1.7	120	0.0583	1.21		**Shallow Concentrated Flow, 608.2** Woodland Kv= 5.0 fps
11.4	170	Total			

Summary for Subcatchment 609S: Start of Road A

Runoff = 3.41 cfs @ 12.10 hrs, Volume= 0.261 af, Depth= 4.05"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.165	98	Unconnected roofs, HSG D
0.167	98	Paved parking, HSG D
0.441	80	>75% Grass cover, Good, HSG D
0.773	88	Weighted Average
0.441		57.05% Pervious Area
0.332		42.95% Impervious Area
0.165		49.70% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.4	40	0.0400	0.12		**Sheet Flow, 609.1** Grass: Dense n= 0.240 P2= 3.00"
1.9	157	0.0400	1.40		**Shallow Concentrated Flow, 609.2** Short Grass Pasture Kv= 7.0 fps
7.3	197	Total			

Summary for Subcatchment 700S: Untreated north of Road A

Runoff = 6.98 cfs @ 12.14 hrs, Volume= 0.563 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
1.734	77	Woods, Good, HSG D
0.023	98	Paved parking, HSG D
0.540	70	Woods, Good, HSG C
0.057	80	>75% Grass cover, Good, HSG D
2.354	76	Weighted Average
2.331		99.02% Pervious Area
0.023		0.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.9	50	0.0650	0.10		**Sheet Flow, 700.1** Woods: Light underbrush n= 0.400 P2= 3.00"
1.8	138	0.0650	1.27		**Shallow Concentrated Flow, 700.2** Woodland Kv= 5.0 fps
9.7	188	Total			

Summary for Subcatchment 800S: Road D

Runoff = 1.63 cfs @ 12.08 hrs, Volume= 0.114 af, Depth= 3.24"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.062	98	Paved parking, HSG B
0.010	98	Paved parking, HSG C
0.022	98	Unconnected roofs, HSG B
0.042	98	Unconnected roofs, HSG C
0.234	74	>75% Grass cover, Good, HSG C
0.051	61	>75% Grass cover, Good, HSG B
0.421	80	Weighted Average
0.285		67.70% Pervious Area
0.136		32.30% Impervious Area
0.064		47.06% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.4	40	0.0400	0.12		**Sheet Flow, 800.1** Grass: Dense n= 0.240 P2= 3.00"

Summary for Subcatchment 801S: Road A north of cemetery

Runoff = 8.95 cfs @ 12.14 hrs, Volume= 0.724 af, Depth= 3.24"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.204	98	Unconnected roofs, HSG C
0.083	98	Unconnected roofs, HSG D
0.303	98	Unconnected roofs, HSG B
0.191	98	Paved parking, HSG B
0.260	98	Paved parking, HSG C
0.600	74	>75% Grass cover, Good, HSG C
0.310	80	>75% Grass cover, Good, HSG D
0.727	61	>75% Grass cover, Good, HSG B
2.678	80	Weighted Average
1.637		61.13% Pervious Area
1.041		38.87% Impervious Area
0.590		56.68% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.9	50	0.0500	0.14		**Sheet Flow, 801.1** Grass: Dense n= 0.240 P2= 3.00"
2.7	350	0.0200	2.12		**Shallow Concentrated Flow, 801.2** Grassed Waterway Kv= 15.0 fps
1.2	300	0.0080	4.06	3.19	**Pipe Channel, 801.3** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
9.8	700	Total			

Summary for Subcatchment 802S: Road A & end lots

Runoff = 10.37 cfs @ 12.11 hrs, Volume= 0.788 af, Depth= 3.24"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.369	98	Paved parking, HSG C
0.345	98	Unconnected roofs, HSG C
0.124	98	Unconnected roofs, HSG D
0.227	61	>75% Grass cover, Good, HSG B
0.943	80	>75% Grass cover, Good, HSG D
0.908	74	>75% Grass cover, Good, HSG C
2.916	82	Weighted Average, UI Adjusted CN = 80
2.078		71.26% Pervious Area
0.838		28.74% Impervious Area
0.469		55.97% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.2	50	0.0300	0.12		**Sheet Flow, 802.1** Grass: Dense n= 0.240 P2= 3.00"
0.6	100	0.0400	3.00		**Shallow Concentrated Flow, 802.2** Grassed Waterway Kv= 15.0 fps
0.1	112	0.0800	12.83	10.08	**Pipe Channel, 802.3** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
7.9	262	Total			

Summary for Subcatchment 803S: Wetland to west

Runoff = 14.33 cfs @ 12.24 hrs, Volume= 1.434 af, Depth= 3.15"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.028	73	Woods, Fair, HSG C
5.438	79	Woods, Fair, HSG D
5.466	79	Weighted Average
5.466		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	50	0.0150	0.06		**Sheet Flow, 803.1** Woods: Light underbrush n= 0.400 P2= 3.00"
3.3	120	0.0150	0.61		**Shallow Concentrated Flow, 803.2** Woodland Kv= 5.0 fps
17.6	170	Total			

Summary for Subcatchment 804S: Park Office & parking lot

Runoff = 1.40 cfs @ 12.09 hrs, Volume= 0.102 af, Depth= 3.84"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.087	98	Paved parking, HSG C
0.075	98	Unconnected roofs, HSG C
0.158	74	>75% Grass cover, Good, HSG C
0.320	86	Weighted Average
0.158		49.38% Pervious Area
0.162		50.62% Impervious Area
0.075		46.30% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.4	70	0.0800	0.18		**Sheet Flow, 804.1** Grass: Dense n= 0.240 P2= 3.00"

Summary for Subcatchment 900S: Existing trailor park section

Runoff = 15.54 cfs @ 12.36 hrs, Volume= 1.835 af, Depth= 3.24"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.064	98	Roofs, HSG D
0.436	84	50-75% Grass cover, Fair, HSG D
6.286	79	Woods, Fair, HSG D
6.786	80	Weighted Average
6.722		99.06% Pervious Area
0.064		0.94% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.4	75	0.0400	0.09		**Sheet Flow, 900.1** Woods: Light underbrush n= 0.400 P2= 3.00"
11.0	550	0.0278	0.83		**Shallow Concentrated Flow, 900.2** Woodland Kv= 5.0 fps
0.4	54	0.1850	2.15		**Shallow Concentrated Flow, 900.3** Woodland Kv= 5.0 fps
1.2	110	0.0100	1.54	6.16	**Trap/Vee/Rect Channel Flow, 900.4** Bot.W=2.00' D=1.00' Z= 2.0 '/' Top.W=6.00' n= 0.070 Medium-dense brush, winter
26.0	789	Total			

Summary for Subcatchment 902S: Road D east of cemetery

Runoff = 12.95 cfs @ 12.17 hrs, Volume= 1.120 af, Depth= 3.15"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 yr Rainfall=5.40"

Area (ac)	CN	Description
0.540	98	Paved parking, HSG C
0.620	98	Unconnected roofs, HSG C
0.038	61	>75% Grass cover, Good, HSG B
0.395	80	>75% Grass cover, Good, HSG D
2.676	74	>75% Grass cover, Good, HSG C
4.269	81	Weighted Average, UI Adjusted CN = 79
3.109		72.83% Pervious Area
1.160		27.17% Impervious Area
0.620		53.45% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	60	0.0300	0.12		**Sheet Flow, 902.1** Grass: Dense n= 0.240 P2= 3.00"
2.4	180	0.0310	1.23		**Shallow Concentrated Flow, 902.2** Short Grass Pasture Kv= 7.0 fps
1.3	322	0.0080	4.06	3.19	**Pipe Channel, 902.3** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
12.0	562	Total			

Summary for Reach 100R: Flow to large wetland

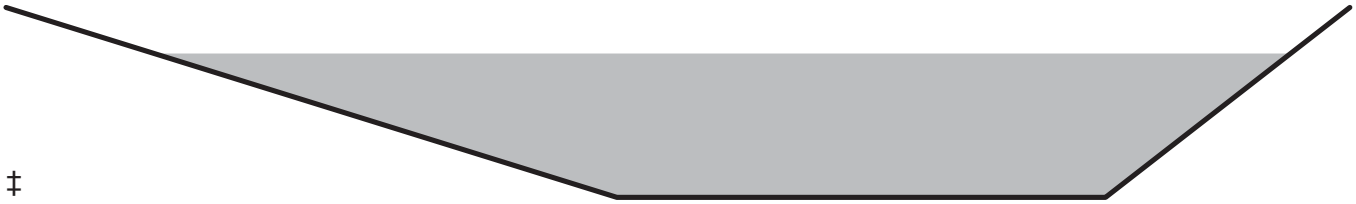
[61] Hint: Exceeded Reach 800R outlet invert by 0.07' @ 12.35 hrs

Inflow Area = 11.986 ac, 22.57% Impervious, Inflow Depth = 3.06" for 25 yr event
Inflow = 20.65 cfs @ 12.29 hrs, Volume= 3.054 af
Outflow = 20.33 cfs @ 12.35 hrs, Volume= 3.054 af, Atten= 2%, Lag= 3.7 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 1.44 fps, Min. Travel Time= 4.0 min
Avg. Velocity = 0.25 fps, Avg. Travel Time= 22.5 min

Peak Storage= 4,844 cf @ 12.35 hrs
Average Depth at Peak Storage= 0.57'
Bank-Full Depth= 0.75' Flow Area= 21.1 sf, Capacity= 35.30 cfs

15.00' x 0.75' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 25.0 10.0 '/' Top Width= 41.25'
Length= 342.0' Slope= 0.0050 '/'
Inlet Invert= 38.50', Outlet Invert= 36.80'



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Summary for Reach 206R: Swale to filters

Inflow Area = 1.446 ac, 30.01% Impervious, Inflow Depth = 3.24" for 25 yr event
Inflow = 6.04 cfs @ 12.05 hrs, Volume= 0.391 af
Outflow = 5.87 cfs @ 12.07 hrs, Volume= 0.391 af, Atten= 3%, Lag= 1.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 2.42 fps, Min. Travel Time= 1.3 min
Avg. Velocity = 0.62 fps, Avg. Travel Time= 5.2 min

Peak Storage= 473 cf @ 12.07 hrs
Average Depth at Peak Storage= 0.45'
Bank-Full Depth= 0.50' Flow Area= 2.8 sf, Capacity= 7.03 cfs

4.00' x 0.50' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 7.00'
Length= 195.0' Slope= 0.0051 '/'
Inlet Invert= 52.00', Outlet Invert= 51.00'

‡

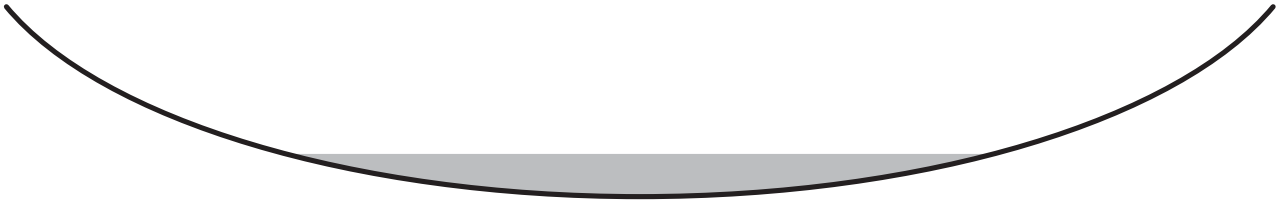
Summary for Reach 300R: Flow through large wetland

Inflow Area = 8.211 ac, 10.08% Impervious, Inflow Depth = 2.95" for 25 yr event
Inflow = 17.85 cfs @ 12.25 hrs, Volume= 2.020 af
Outflow = 12.60 cfs @ 12.45 hrs, Volume= 2.020 af, Atten= 29%, Lag= 12.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 0.58 fps, Min. Travel Time= 23.4 min
Avg. Velocity = 0.13 fps, Avg. Travel Time= 109.0 min

Peak Storage= 17,710 cf @ 12.45 hrs
Average Depth at Peak Storage= 0.39'
Bank-Full Depth= 1.75' Flow Area= 204.2 sf, Capacity= 321.89 cfs

175.00' x 1.75' deep Parabolic Channel, n= 0.040 Winding stream, pools & shoals
Length= 818.0' Slope= 0.0015 '/'
Inlet Invert= 38.00', Outlet Invert= 36.80'



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Summary for Reach 400R: Flow through large wetland

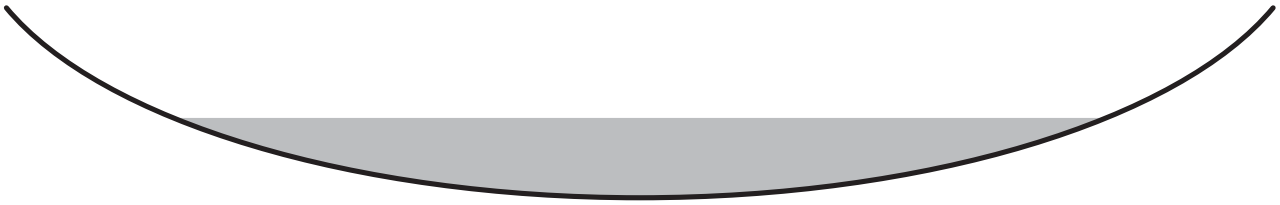
[61] Hint: Exceeded Reach 600R outlet invert by 0.63' @ 12.54 hrs

Inflow Area = 34.082 ac, 14.64% Impervious, Inflow Depth = 3.01" for 25 yr event
Inflow = 58.04 cfs @ 12.37 hrs, Volume= 8.552 af
Outflow = 50.91 cfs @ 12.54 hrs, Volume= 8.551 af, Atten= 12%, Lag= 10.7 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 0.80 fps, Min. Travel Time= 13.7 min
Avg. Velocity = 0.16 fps, Avg. Travel Time= 69.9 min

Peak Storage= 41,834 cf @ 12.54 hrs
Average Depth at Peak Storage= 0.73'
Bank-Full Depth= 1.75' Flow Area= 233.3 sf, Capacity= 334.41 cfs

200.00' x 1.75' deep Parabolic Channel, n= 0.040 Winding stream, pools & shoals
Length= 660.0' Slope= 0.0012 '/'
Inlet Invert= 36.10', Outlet Invert= 35.30'



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Summary for Reach 500R: Stream flow

Inflow Area = 36.436 ac, 13.75% Impervious, Inflow Depth = 3.01" for 25 yr event
Inflow = 53.00 cfs @ 12.53 hrs, Volume= 9.132 af
Outflow = 52.01 cfs @ 12.60 hrs, Volume= 9.132 af, Atten= 2%, Lag= 4.2 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 2.43 fps, Min. Travel Time= 5.3 min
Avg. Velocity = 0.54 fps, Avg. Travel Time= 24.0 min

Peak Storage= 16,554 cf @ 12.60 hrs
Average Depth at Peak Storage= 0.72'
Bank-Full Depth= 2.00' Flow Area= 124.0 sf, Capacity= 549.49 cfs

12.00' x 2.00' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 20.0 30.0 '/' Top Width= 112.00'
Length= 772.0' Slope= 0.0124 '/'
Inlet Invert= 31.75', Outlet Invert= 22.15'

‡

Summary for Reach 501R: Stream flow

[61] Hint: Exceeded Reach 500R outlet invert by 0.61' @ 12.62 hrs
[62] Hint: Exceeded Reach 802R OUTLET depth by 0.73' @ 12.64 hrs

Inflow Area = 41.353 ac, 16.15% Impervious, Inflow Depth > 3.00" for 25 yr event
Inflow = 58.32 cfs @ 12.57 hrs, Volume= 10.355 af
Outflow = 57.73 cfs @ 12.62 hrs, Volume= 10.355 af, Atten= 1%, Lag= 2.7 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 2.43 fps, Min. Travel Time= 3.8 min
Avg. Velocity = 0.55 fps, Avg. Travel Time= 17.0 min

Peak Storage= 13,305 cf @ 12.62 hrs
Average Depth at Peak Storage= 0.76'
Bank-Full Depth= 2.00' Flow Area= 124.0 sf, Capacity= 530.88 cfs

12.00' x 2.00' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 20.0 30.0 '/' Top Width= 112.00'
Length= 560.0' Slope= 0.0116 '/'
Inlet Invert= 22.00', Outlet Invert= 15.50'

‡

Summary for Reach 600R: Flow through large wetland

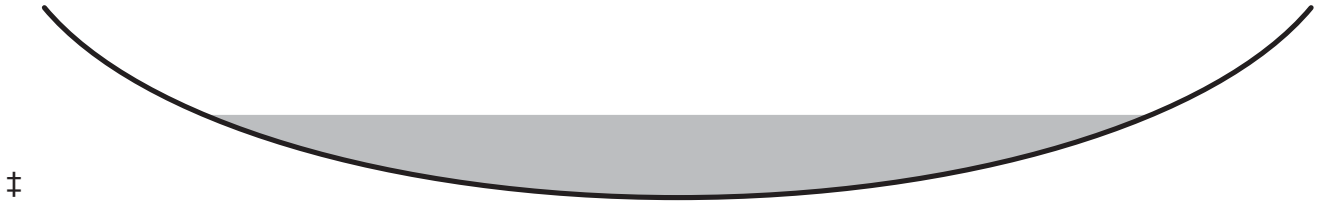
[61] Hint: Exceeded Reach 100R outlet invert by 0.46' @ 12.38 hrs
[62] Hint: Exceeded Reach 300R OUTLET depth by 0.08' @ 12.29 hrs

Inflow Area = 32.843 ac, 15.07% Impervious, Inflow Depth = 3.01" for 25 yr event
Inflow = 57.06 cfs @ 12.32 hrs, Volume= 8.237 af
Outflow = 55.96 cfs @ 12.38 hrs, Volume= 8.236 af, Atten= 2%, Lag= 3.5 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 0.84 fps, Min. Travel Time= 4.8 min
Avg. Velocity = 0.16 fps, Avg. Travel Time= 25.6 min

Peak Storage= 16,070 cf @ 12.38 hrs
Average Depth at Peak Storage= 0.76'
Bank-Full Depth= 1.75' Flow Area= 233.3 sf, Capacity= 339.60 cfs

200.00' x 1.75' deep Parabolic Channel, n= 0.040 Winding stream, pools & shoals
Length= 240.0' Slope= 0.0012 '/'
Inlet Invert= 36.50', Outlet Invert= 36.20'



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Summary for Reach 601R: Flow adjacent to Rt 1

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 0.35' Flow Area= 8.4 sf, Capacity= 45.57 cfs

18.00' x 0.35' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 20.0 15.0 '/' Top Width= 30.25'
Length= 203.0' Slope= 0.0887 '/'
Inlet Invert= 62.00', Outlet Invert= 44.00'

‡

Summary for Reach 700R: Flow adjacent to Rt 1

Inflow Area = 2.399 ac, 15.30% Impervious, Inflow Depth = 2.34" for 25 yr event
Inflow = 4.95 cfs @ 12.21 hrs, Volume= 0.467 af
Outflow = 4.66 cfs @ 12.26 hrs, Volume= 0.467 af, Atten= 6%, Lag= 3.2 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 1.28 fps, Min. Travel Time= 4.7 min
Avg. Velocity = 0.33 fps, Avg. Travel Time= 18.1 min

Peak Storage= 1,321 cf @ 12.26 hrs
Average Depth at Peak Storage= 0.17'
Bank-Full Depth= 0.50' Flow Area= 12.9 sf, Capacity= 31.61 cfs

20.00' x 0.50' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 8.0 15.0 '/' Top Width= 31.50'
Length= 362.0' Slope= 0.0110 '/'
Inlet Invert= 48.00', Outlet Invert= 44.00'

‡

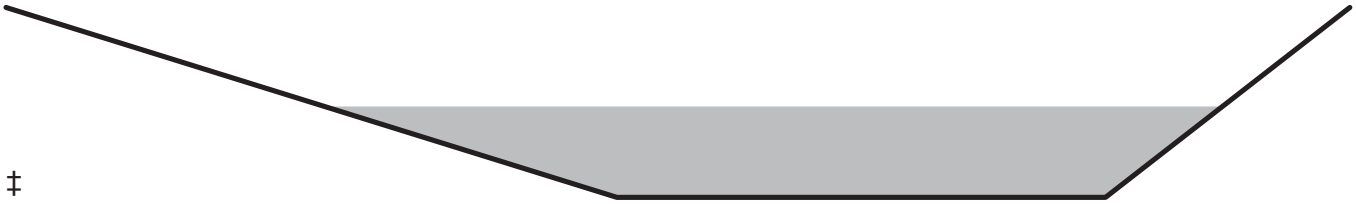
Summary for Reach 800R: Flow to large wetland

Inflow Area = 8.054 ac, 24.50% Impervious, Inflow Depth = 3.01" for 25 yr event
Inflow = 16.74 cfs @ 12.19 hrs, Volume= 2.022 af
Outflow = 16.58 cfs @ 12.22 hrs, Volume= 2.022 af, Atten= 1%, Lag= 1.6 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 2.17 fps, Min. Travel Time= 1.8 min
Avg. Velocity = 0.37 fps, Avg. Travel Time= 10.6 min

Peak Storage= 1,818 cf @ 12.22 hrs
Average Depth at Peak Storage= 0.36'
Bank-Full Depth= 0.75' Flow Area= 21.1 sf, Capacity= 68.85 cfs

15.00' x 0.75' deep channel, n= 0.040 Winding stream, pools & shoals
Side Slope Z-value= 25.0 10.0 '/' Top Width= 41.25'
Length= 238.0' Slope= 0.0189 '/'
Inlet Invert= 43.50', Outlet Invert= 39.00'



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Summary for Reach 802R: Flow from Bio 800

Inflow Area = 2.916 ac, 28.74% Impervious, Inflow Depth > 2.90" for 25 yr event
Inflow = 4.26 cfs @ 12.38 hrs, Volume= 0.705 af
Outflow = 4.23 cfs @ 12.41 hrs, Volume= 0.705 af, Atten= 1%, Lag= 1.8 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 0.81 fps, Min. Travel Time= 2.5 min
Avg. Velocity = 0.17 fps, Avg. Travel Time= 11.9 min

Peak Storage= 632 cf @ 12.41 hrs
Average Depth at Peak Storage= 0.10'
Bank-Full Depth= 0.50' Flow Area= 37.5 sf, Capacity= 79.90 cfs

50.00' x 0.50' deep channel, n= 0.050 Scattered brush, heavy weeds
Side Slope Z-value= 50.0 '/' Top Width= 100.00'
Length= 121.0' Slope= 0.0190 '/'
Inlet Invert= 24.25', Outlet Invert= 21.95'

‡

Summary for Reach 900R: Flow adjacent to Rt 1

Inflow Area = 3.932 ac, 18.62% Impervious, Inflow Depth = 3.15" for 25 yr event
Inflow = 6.76 cfs @ 12.49 hrs, Volume= 1.032 af
Outflow = 6.75 cfs @ 12.51 hrs, Volume= 1.032 af, Atten= 0%, Lag= 1.1 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 2.74 fps, Min. Travel Time= 1.7 min
Avg. Velocity = 0.70 fps, Avg. Travel Time= 6.8 min

Peak Storage= 701 cf @ 12.51 hrs
Average Depth at Peak Storage= 0.12'
Bank-Full Depth= 1.00' Flow Area= 30.0 sf, Capacity= 294.94 cfs

20.00' x 1.00' deep channel, n= 0.035 High grass
Side Slope Z-value= 10.0 '/' Top Width= 40.00'
Length= 285.0' Slope= 0.0789 '/'
Inlet Invert= 62.00', Outlet Invert= 39.50'

‡

Summary for Reach 901R: Flow from Bio 801

Inflow Area = 2.678 ac, 38.87% Impervious, Inflow Depth > 2.90" for 25 yr event
Inflow = 5.52 cfs @ 12.29 hrs, Volume= 0.646 af
Outflow = 5.28 cfs @ 12.39 hrs, Volume= 0.646 af, Atten= 4%, Lag= 6.3 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 0.88 fps, Min. Travel Time= 5.7 min
Avg. Velocity = 0.16 fps, Avg. Travel Time= 31.6 min

Peak Storage= 1,804 cf @ 12.39 hrs
Average Depth at Peak Storage= 0.06'
Bank-Full Depth= 0.25' Flow Area= 28.1 sf, Capacity= 61.84 cfs

100.00' x 0.25' deep channel, n= 0.050 Scattered brush, heavy weeds
Side Slope Z-value= 50.0 '/' Top Width= 125.00'
Length= 300.0' Slope= 0.0400 '/'
Inlet Invert= 26.00', Outlet Invert= 14.00'

‡

Summary for Reach 902R: Flow over adjacent land

Inflow Area = 4.269 ac, 27.17% Impervious, Inflow Depth > 2.81" for 25 yr event
Inflow = 7.23 cfs @ 12.39 hrs, Volume= 1.000 af
Outflow = 6.83 cfs @ 12.54 hrs, Volume= 0.999 af, Atten= 5%, Lag= 9.3 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Max. Velocity= 1.31 fps, Min. Travel Time= 9.3 min
Avg. Velocity = 0.26 fps, Avg. Travel Time= 46.3 min

Peak Storage= 3,809 cf @ 12.54 hrs
Average Depth at Peak Storage= 0.14'
Bank-Full Depth= 0.75' Flow Area= 37.5 sf, Capacity= 133.42 cfs

35.00' x 0.75' deep channel, n= 0.050 Scattered brush, heavy weeds
Side Slope Z-value= 20.0 '/' Top Width= 65.00'
Length= 730.0' Slope= 0.0299 '/'
Inlet Invert= 33.00', Outlet Invert= 11.20'

‡

Summary for Reach OUT 2: OUT 2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 11.055 ac, 11.07% Impervious, Inflow Depth > 3.08" for 25 yr event
Inflow = 21.55 cfs @ 12.40 hrs, Volume= 2.834 af
Outflow = 21.55 cfs @ 12.40 hrs, Volume= 2.834 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4

Summary for Reach OUT1: OUT 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 49.497 ac, 15.60% Impervious, Inflow Depth > 3.01" for 25 yr event
Inflow = 68.65 cfs @ 12.55 hrs, Volume= 12.435 af
Outflow = 68.65 cfs @ 12.55 hrs, Volume= 12.435 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4

Summary for Pond 100P: Wetland Depression at RT 1

Inflow Area = 3.932 ac, 18.62% Impervious, Inflow Depth = 3.15" for 25 yr event
Inflow = 9.88 cfs @ 12.26 hrs, Volume= 1.032 af
Outflow = 6.76 cfs @ 12.49 hrs, Volume= 1.032 af, Atten= 32%, Lag= 13.5 min
Primary = 6.76 cfs @ 12.49 hrs, Volume= 1.032 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Starting Elev= 62.50' Surf.Area= 40,771 sf Storage= 49,595 cf
Peak Elev= 62.72' @ 12.49 hrs Surf.Area= 43,061 sf Storage= 58,925 cf (9,331 cf above start)

Plug-Flow detention time= (not calculated: initial storage excedes outflow)
Center-of-Mass det. time= 41.1 min (874.9 - 833.7)

Volume	Invert	Avail.Storage	Storage Description
#1	60.00'	71,274 cf	**Custom Stage Data (Conic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
60.00	1,795	0	0	1,795
62.00	35,858	30,451	30,451	35,868
63.00	46,000	40,824	71,274	46,035

Device	Routing	Invert	Outlet Devices
#1	Primary	62.50'	**24.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#2	Secondary	62.75'	**35.0' long x 25.0' breadth Broad-Crested Rectangular Weir (near Rt 1)** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=6.76 cfs @ 12.49 hrs HW=62.72' TW=62.12' (Dynamic Tailwater)
└**1=Broad-Crested Rectangular Weir** (Weir Controls 6.76 cfs @ 1.27 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=62.50' TW=62.00' (Dynamic Tailwater)
└**2=Broad-Crested Rectangular Weir (near Rt 1)** (Controls 0.00 cfs)

Summary for Pond 204P: Bio 204

[62] Hint: Exceeded Reach 206R OUTLET depth by 0.07' @ 12.54 hrs

Inflow Area = 2.766 ac, 25.63% Impervious, Inflow Depth = 3.20" for 25 yr event
Inflow = 9.03 cfs @ 12.09 hrs, Volume= 0.737 af
Outflow = 4.74 cfs @ 12.32 hrs, Volume= 0.737 af, Atten= 47%, Lag= 13.8 min
Primary = 4.74 cfs @ 12.32 hrs, Volume= 0.737 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Starting Elev= 50.00' Surf.Area= 21,489 sf Storage= 4,892 cf
Peak Elev= 51.30' @ 12.32 hrs Surf.Area= 24,322 sf Storage= 16,077 cf (11,185 cf above start)
Flood Elev= 52.00' Surf.Area= 26,181 sf Storage= 23,698 cf (18,806 cf above start)

Plug-Flow detention time= 349.3 min calculated for 0.625 af (85% of inflow)
Center-of-Mass det. time= 225.7 min (1,048.1 - 822.4)

Volume	Invert	Avail.Storage	Storage Description
#1	48.25'	4,382 cf	**43.00'W x 82.00'L x 1.83'H Prismatoid - FILTER Z=0.3**x 2 13,158 cf Overall x 33.3% Voids
#2	47.25'	705 cf	**43.00'W x 82.00'L x 1.00'H Prismatoid - GRAVEL**x 2 7,052 cf Overall x 10.0% Voids
#3	50.00'	18,611 cf	**Ponding over bioretention (Conic)**Listed below (Recalc) x 2
		23,698 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
50.00	3,560	0	0	3,560
51.00	4,600	4,069	4,069	4,624
52.00	5,900	5,237	9,305	5,949

Device	Routing	Invert	Outlet Devices
#1	Primary	46.70'	**12.0" Round Culvert** L= 115.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 46.70' / 46.00' S= 0.0061 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 3	50.00'	**4.000 in/hr Exfiltration X 2.00 over Surface area above 50.00'** Excluded Surface area = 21,489 sf
#3	Device 1	46.90'	**8.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 46.90' / 46.75' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#4	Secondary	51.50'	**15.0' long x 10.0' breadth Broad-Crested Rectangular Weir X 2.00** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#5	Device 1	50.95'	**12.0" Horiz. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=4.74 cfs @ 12.32 hrs HW=51.30' TW=43.84' (Dynamic Tailwater)
└─**1=Culvert** (Passes 4.74 cfs of 5.57 cfs potential flow)
  ├─**3=Culvert** (Passes 0.52 cfs of 2.68 cfs potential flow)
  │ └─**2=Exfiltration** (Exfiltration Controls 0.52 cfs)
  └─**5=Orifice/Grate** (Weir Controls 4.22 cfs @ 1.93 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=50.00' TW=43.50' (Dynamic Tailwater)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 205P: Bio 205

Inflow Area =	1.040 ac, 28.08% Impervious, Inflow Depth = 3.34" for 25 yr event				
Inflow =	4.15 cfs @	12.08 hrs,	Volume=	0.290 af	
Outflow =	2.66 cfs @	12.17 hrs,	Volume=	0.289 af,	Atten= 36%, Lag= 5.4 min
Primary =	2.66 cfs @	12.17 hrs,	Volume=	0.289 af	
Secondary =	0.00 cfs @	0.00 hrs,	Volume=	0.000 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Starting Elev= 44.00' Surf.Area= 7,306 sf Storage= 1,669 cf
Peak Elev= 45.21' @ 12.17 hrs Surf.Area= 8,273 sf Storage= 5,219 cf (3,550 cf above start)
Flood Elev= 46.00' Surf.Area= 8,911 sf Storage= 8,119 cf (6,450 cf above start)

Plug-Flow detention time= 344.6 min calculated for 0.251 af (87% of inflow)
Center-of-Mass det. time= 234.1 min (1,049.4 - 815.3)

Volume	Invert	Avail.Storage	Storage Description
#1	42.25'	1,496 cf	**40.00'W x 60.00'L x 1.83'H Prismatoid - FILTER Z=0.3** 4,493 cf Overall x 33.3% Voids
#2	41.25'	240 cf	**40.00'W x 60.00'L x 1.00'H Prismatoid - GRAVEL** 2,400 cf Overall x 10.0% Voids
#3	44.00'	6,383 cf	**Ponding over bioretention (Conic)** Listed below (Recalc)
		8,119 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
44.00	2,400	0	0	2,400
45.00	3,200	2,790	2,790	3,222
46.00	4,000	3,593	6,383	4,049

Device	Routing	Invert	Outlet Devices
#1	Primary	40.90'	**12.0" Round Culvert** L= 45.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 40.90' / 38.00' S= 0.0644 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 3	44.00'	**4.000 in/hr Exfiltration over Surface area above 44.00'** Excluded Surface area = 7,306 sf
#3	Device 1	41.50'	**8.0" Round Culvert** L= 76.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 41.50' / 41.00' S= 0.0066 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf

#4	Secondary	45.25'	**15.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#5	Device 1	44.75'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=2.66 cfs @ 12.17 hrs HW=45.21' TW=38.30' (Dynamic Tailwater)
└─**1=Culvert** (Passes 2.66 cfs of 5.83 cfs potential flow)
  ├─**3=Culvert** (Passes 0.09 cfs of 2.44 cfs potential flow)
  │ └─**2=Exfiltration** (Exfiltration Controls 0.09 cfs)
  └─**5=Orifice/Grate** (Orifice Controls 2.57 cfs @ 3.27 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=44.00' TW=38.00' (Dynamic Tailwater)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 206P: culvert @ entrance

Inflow Area = 1.446 ac, 30.01% Impervious, Inflow Depth = 3.24" for 25 yr event
Inflow = 6.04 cfs @ 12.05 hrs, Volume= 0.391 af
Outflow = 6.04 cfs @ 12.05 hrs, Volume= 0.391 af, Atten= 0%, Lag= 0.0 min
Primary = 6.04 cfs @ 12.05 hrs, Volume= 0.391 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 58.06' @ 12.05 hrs
Flood Elev= 62.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	56.50'	**18.0" Round Culvert** L= 100.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 56.50' / 52.00' S= 0.0450 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=6.03 cfs @ 12.05 hrs HW=58.06' TW=52.45' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 6.03 cfs @ 3.41 fps)

Summary for Pond 300P: Existing culvert at Idlewood Lane

Inflow Area = 2.399 ac, 15.30% Impervious, Inflow Depth = 2.34" for 25 yr event
Inflow = 4.95 cfs @ 12.21 hrs, Volume= 0.467 af
Outflow = 4.95 cfs @ 12.21 hrs, Volume= 0.467 af, Atten= 0%, Lag= 0.0 min
Primary = 4.95 cfs @ 12.21 hrs, Volume= 0.467 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 54.25' @ 12.21 hrs
Flood Elev= 55.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	49.00'	**12.0" Round Culvert** L= 50.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 49.00' / 48.50' S= 0.0100 '/' Cc= 0.900

			n= 0.025 Corrugated metal, Flow Area= 0.79 sf
#2	Secondary	55.00'	**22.0' long x 30.0' breadth Flow over Idlewood**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=4.95 cfs @ 12.21 hrs HW=54.25' TW=48.16' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 4.95 cfs @ 6.30 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=49.00' TW=48.00' (Dynamic Tailwater)
└─**2=Flow over Idlewood** (Controls 0.00 cfs)

Summary for Pond 500P: Replacement culvert under west entrance (Wilson Road)

Inflow Area = 4.266 ac, 4.62% Impervious, Inflow Depth = 2.78" for 25 yr event
Inflow = 9.92 cfs @ 12.24 hrs, Volume= 0.987 af
Outflow = 9.20 cfs @ 12.31 hrs, Volume= 0.987 af, Atten= 7%, Lag= 4.1 min
Primary = 9.20 cfs @ 12.31 hrs, Volume= 0.987 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 42.61' @ 12.31 hrs Surf.Area= 2,163 sf Storage= 3,105 cf
Flood Elev= 43.50' Surf.Area= 2,300 sf Storage= 5,102 cf

Plug-Flow detention time= 11.7 min calculated for 0.987 af (100% of inflow)
Center-of-Mass det. time= 11.8 min (853.5 - 841.7)

Volume	Invert	Avail.Storage	Storage Description
#1	41.00'	7,501 cf	**Custom Stage Data (Conic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
41.00	1,250	0	0	1,250
41.50	2,000	805	805	2,003
43.50	2,300	4,297	5,102	2,448
44.50	2,500	2,399	7,501	2,713

Device	Routing	Invert	Outlet Devices
#1	Primary	41.00'	**24.0" Round Culvert**
			L= 68.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 41.00' / 40.50' S= 0.0074 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=9.20 cfs @ 12.31 hrs HW=42.61' TW=38.37' (Dynamic Tailwater)
└─**1=Culvert** (Inlet Controls 9.20 cfs @ 3.41 fps)

Summary for Pond 600P: Replacement culvert under west entrance (Wilson Road)

Inflow Area = 1.572 ac, 15.20% Impervious, Inflow Depth = 3.24" for 25 yr event
Inflow = 5.59 cfs @ 12.11 hrs, Volume= 0.425 af
Outflow = 4.59 cfs @ 12.18 hrs, Volume= 0.425 af, Atten= 18%, Lag= 3.8 min
Primary = 4.59 cfs @ 12.18 hrs, Volume= 0.425 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 44.00' @ 12.18 hrs Surf.Area= 600 sf Storage= 670 cf

Plug-Flow detention time= 1.2 min calculated for 0.425 af (100% of inflow)
Center-of-Mass det. time= 1.2 min (821.5 - 820.3)

Volume	Invert	Avail.Storage	Storage Description
#1	41.00'	3,307 cf	**Custom Stage Data (Conic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
41.00	50	0	0	50
42.50	150	143	143	162
44.50	814	876	1,019	842
45.50	4,200	2,288	3,307	4,232

Device	Routing	Invert	Outlet Devices
#1	Primary	41.00'	**12.0" Round Culvert** L= 90.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 41.00' / 40.50' S= 0.0056 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Secondary	44.75'	**20.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=4.59 cfs @ 12.18 hrs HW=44.00' TW=38.31' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 4.59 cfs @ 5.84 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=41.00' TW=38.00' (Dynamic Tailwater)
└─**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 601P: Bio 601

Inflow Area = 4.269 ac, 27.17% Impervious, Inflow Depth = 3.15" for 25 yr event
Inflow = 12.95 cfs @ 12.17 hrs, Volume= 1.120 af
Outflow = 7.23 cfs @ 12.39 hrs, Volume= 1.000 af, Atten= 44%, Lag= 13.1 min
Primary = 7.23 cfs @ 12.39 hrs, Volume= 1.000 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 38.14' @ 12.39 hrs Surf.Area= 20,049 sf Storage= 15,780 cf
Flood Elev= 39.00' Surf.Area= 22,531 sf Storage= 22,754 cf

Plug-Flow detention time= 267.9 min calculated for 1.000 af (89% of inflow)
Center-of-Mass det. time= 216.6 min (1,043.3 - 826.7)

Volume	Invert	Avail.Storage	Storage Description
#1	35.00'	3,879 cf	**48.00'W x 65.00'L x 1.83'H Prismatoid - FILTER Z=0.3**x 2 11,648 cf Overall x 33.3% Voids
#2	34.00'	624 cf	**65.00'W x 48.00'L x 1.00'H Prismatoid - GRAVEL**x 2 6,240 cf Overall x 10.0% Voids
#3	36.50'	18,251 cf	**Ponding over bioretention (Conic)**Listed below (Recalc)
		22,754 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
36.50	6,386	0	0	6,386
37.50	7,000	6,691	6,691	7,065
38.50	7,500	7,249	13,939	7,649
39.00	9,800	4,312	18,251	9,955

Device	Routing	Invert	Outlet Devices
#1	Primary	33.00'	**12.0" Round Culvert X 2.00** L= 46.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 33.00' / 32.00' S= 0.0217 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 3	36.50'	**4.000 in/hr Exfiltration over Surface area above 36.50'** Excluded Surface area = 19,071 sf
#3	Device 1	34.00'	**8.0" Round Culvert X 2.00** L= 90.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 34.00' / 33.00' S= 0.0111 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#4	Secondary	38.25'	**5.0' long x 10.0' breadth Broad-Crested Rectangular Weir X 2.00** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#5	Device 1	37.25'	**12.0" Horiz. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=7.23 cfs @ 12.39 hrs HW=38.14' TW=33.13' (Dynamic Tailwater)
- **1=Culvert** (Passes 7.23 cfs of 12.86 cfs potential flow)
  - **3=Culvert** (Passes 0.09 cfs of 5.18 cfs potential flow)
    - **2=Exfiltration** (Exfiltration Controls 0.09 cfs)
  - **5=Orifice/Grate** (Orifice Controls 7.14 cfs @ 4.54 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=34.00' TW=33.00' (Dynamic Tailwater)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 604P: Bio 604

Inflow Area =	0.733 ac, 34.58% Impervious, Inflow Depth = 3.84" for 25 yr event			
Inflow =	3.24 cfs @ 12.09 hrs, Volume=	0.235 af		
Outflow =	2.49 cfs @ 12.15 hrs, Volume=	0.208 af, Atten= 23%, Lag= 3.9 min		
Primary =	2.49 cfs @ 12.15 hrs, Volume=	0.208 af		
Secondary =	0.00 cfs @ 0.00 hrs, Volume=	0.000 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4

Peak Elev= 41.42' @ 12.15 hrs Surf.Area= 6,390 sf Storage= 2,834 cf
Flood Elev= 42.00' Surf.Area= 6,908 sf Storage= 4,441 cf

Plug-Flow detention time= 185.9 min calculated for 0.208 af (89% of inflow)
Center-of-Mass det. time= 132.6 min (934.2 - 801.5)

Volume	Invert	Avail.Storage	Storage Description
#1	39.25'	1,192 cf	**25.00'W x 76.00'L x 1.83'H Prismatoid - FILTER Z=0.3** 3,579 cf Overall x 33.3% Voids
#2	38.25'	190 cf	**25.00'W x 76.00'L x 1.00'H Prismatoid - GRAVEL** 1,900 cf Overall x 10.0% Voids
#3	40.75'	5,539 cf	**Ponding over bioretention (Conic)** Listed below (Recalc)
		6,921 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
40.75	1,900	0	0	1,900
41.75	2,798	2,335	2,335	2,814
42.75	3,629	3,205	5,539	3,669

Device	Routing	Invert	Outlet Devices
#1	Primary	38.00'	**12.0" Round Culvert** L= 45.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 38.00' / 37.75' S= 0.0056 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 3	40.75'	**4.000 in/hr Exfiltration over Surface area above 40.75'** Excluded Surface area = 5,792 sf
#3	Device 1	38.25'	**8.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 38.25' / 38.00' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#4	Secondary	41.50'	**5.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#5	Device 1	41.00'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=2.49 cfs @ 12.15 hrs HW=41.42' TW=37.13' (Dynamic Tailwater)
- **1=Culvert** (Passes 2.49 cfs of 5.10 cfs potential flow)
  - **3=Culvert** (Passes 0.06 cfs of 2.23 cfs potential flow)
    - **2=Exfiltration** (Exfiltration Controls 0.06 cfs)
  - **5=Orifice/Grate** (Orifice Controls 2.44 cfs @ 3.10 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=38.25' TW=36.50' (Dynamic Tailwater)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 606P: Bio 606

Inflow Area = 1.462 ac, 32.35% Impervious, Inflow Depth = 3.74" for 25 yr event
Inflow = 5.71 cfs @ 12.13 hrs, Volume= 0.456 af
Outflow = 3.84 cfs @ 12.24 hrs, Volume= 0.409 af, Atten= 33%, Lag= 6.8 min
Primary = 3.28 cfs @ 12.24 hrs, Volume= 0.402 af
Secondary = 0.55 cfs @ 12.24 hrs, Volume= 0.008 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 40.42' @ 12.24 hrs Surf.Area= 10,488 sf Storage= 5,702 cf
Flood Elev= 40.70' Surf.Area= 10,660 sf Storage= 6,814 cf

Plug-Flow detention time= 180.0 min calculated for 0.409 af (90% of inflow)
Center-of-Mass det. time= 131.3 min (938.6 - 807.4)

Volume	Invert	Avail.Storage	Storage Description
#1	37.95'	2,015 cf	**40.00'W x 81.00'L x 1.83'H Prismatoid - FILTER Z=0.3** 6,052 cf Overall x 33.3% Voids
#2	36.95'	324 cf	**40.00'W x 81.00'L x 1.00'H Prismatoid - GRAVEL** 3,240 cf Overall x 10.0% Voids
#3	39.45'	7,678 cf	**Ponding over bioretention (Conic)** Listed below (Recalc)
		10,018 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
39.45	3,080	0	0	3,080
40.45	3,900	3,482	3,482	3,926
41.45	4,500	4,196	7,678	4,569

Device	Routing	Invert	Outlet Devices
#1	Primary	36.45'	**12.0" Round Culvert** L= 80.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 36.45' / 36.20' S= 0.0031 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 3	39.45'	**4.000 in/hr Exfiltration over Surface area above 39.45'** Excluded Surface area = 9,670 sf
#3	Device 1	36.70'	**8.0" Round Culvert** L= 92.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 36.70' / 36.45' S= 0.0027 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#4	Secondary	40.30'	**5.0' long x 20.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#5	Device 1	39.70'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.28 cfs @ 12.24 hrs HW=40.42' TW=37.22' (Dynamic Tailwater)
└─**1=Culvert** (Passes 3.28 cfs of 5.34 cfs potential flow)
  ├─**3=Culvert** (Passes 0.08 cfs of 2.28 cfs potential flow)
  │ └─**2=Exfiltration** (Exfiltration Controls 0.08 cfs)
  └─**5=Orifice/Grate** (Orifice Controls 3.21 cfs @ 4.08 fps)

Secondary OutFlow Max=0.55 cfs @ 12.24 hrs HW=40.42' TW=37.22' (Dynamic Tailwater)
└─**4=Broad-Crested Rectangular Weir** (Weir Controls 0.55 cfs @ 0.93 fps)

Summary for Pond 607P: Bio 607

Inflow Area =	1.580 ac, 43.92% Impervious, Inflow Depth = 3.74" for 25 yr event				
Inflow =	6.62 cfs @	12.10 hrs,	Volume=	0.492 af	
Outflow =	4.37 cfs @	12.20 hrs,	Volume=	0.447 af,	Atten= 34%, Lag= 5.8 min
Primary =	3.28 cfs @	12.20 hrs,	Volume=	0.429 af	
Secondary =	1.09 cfs @	12.20 hrs,	Volume=	0.018 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 44.45' @ 12.20 hrs Surf.Area= 10,337 sf Storage= 7,128 cf
Flood Elev= 44.75' Surf.Area= 10,649 sf Storage= 8,396 cf

Plug-Flow detention time= 275.5 min calculated for 0.447 af (91% of inflow)
Center-of-Mass det. time= 230.4 min (1,035.9 - 805.4)

Volume	Invert	Avail.Storage	Storage Description
#1	41.50'	1,918 cf	**35.00'W x 88.00'L x 1.83'H Prismatoid - FILTER Z=0.3** 5,761 cf Overall x 33.3% Voids
#2	40.50'	308 cf	**35.00'W x 88.00'L x 1.00'H Prismatoid - GRAVEL** 3,080 cf Overall x 10.0% Voids
#3	43.00'	7,291 cf	**Ponding over bioretention (Conic)** Listed below (Recalc)
		9,517 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
43.00	2,800	0	0	2,800
44.00	3,600	3,192	3,192	3,625
45.00	4,620	4,099	7,291	4,670

Device	Routing	Invert	Outlet Devices
#1	Primary	39.80'	**12.0" Round Culvert** L= 63.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 39.80' / 39.25' S= 0.0087 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 3	43.00'	**4.000 in/hr Exfiltration over Surface area above 43.00'** Excluded Surface area = 9,072 sf
#3	Device 1	40.00'	**8.0" Round Culvert** L= 20.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 40.00' / 39.90' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#4	Secondary	44.25'	**5.0' long x 10.0' breadth Broad-Crested Rectangular Weir**

			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#5	Device 1	43.75'	**12.0" Horiz. Orifice/Grate** C= 0.600
			Limited to weir flow at low heads

Primary OutFlow Max=3.28 cfs @ 12.20 hrs HW=44.45' TW=22.48' (Dynamic Tailwater)
- **1=Culvert** (Passes 3.28 cfs of 6.08 cfs potential flow)
  - **3=Culvert** (Passes 0.12 cfs of 2.69 cfs potential flow)
    - **2=Exfiltration** (Exfiltration Controls 0.12 cfs)
  - **5=Orifice/Grate** (Orifice Controls 3.16 cfs @ 4.02 fps)

Secondary OutFlow Max=1.09 cfs @ 12.20 hrs HW=44.45' TW=32.23' (Dynamic Tailwater)
- **4=Broad-Crested Rectangular Weir** (Weir Controls 1.09 cfs @ 1.11 fps)

Summary for Pond 800P: Bio 800

Inflow Area =	0.421 ac, 32.30% Impervious, Inflow Depth = 3.24" for 25 yr event			
Inflow =	1.63 cfs @ 12.08 hrs, Volume=	0.114 af		
Outflow =	0.70 cfs @ 12.28 hrs, Volume=	0.089 af, Atten= 57%, Lag= 12.0 min		
Primary =	0.70 cfs @ 12.28 hrs, Volume=	0.089 af		
Secondary =	0.00 cfs @ 0.00 hrs, Volume=	0.000 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 43.41' @ 12.28 hrs Surf.Area= 5,564 sf Storage= 2,034 cf
Flood Elev= 44.25' Surf.Area= 6,097 sf Storage= 3,902 cf

Plug-Flow detention time= 343.1 min calculated for 0.089 af (78% of inflow)
Center-of-Mass det. time= 262.4 min (1,080.3 - 817.9)

Volume	Invert	Avail.Storage	Storage Description
#1	41.50'	1,095 cf	**35.00'W x 50.00'L x 1.83'H Prismatoid - FILTER Z=0.3**
			3,289 cf Overall x 33.3% Voids
#2	40.50'	175 cf	**35.00'W x 50.00'L x 1.00'H Prismatoid - GRAVEL**
			1,750 cf Overall x 10.0% Voids
#3	43.00'	4,698 cf	**Ponding over bioretention (Conic)** Listed below (Recalc)
		5,968 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
43.00	1,726	0	0	1,726
44.00	2,342	2,026	2,026	2,362
45.00	3,015	2,671	4,698	3,060

Device	Routing	Invert	Outlet Devices
#1	Primary	39.50'	**12.0" Round Culvert**
			L= 110.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 39.50' / 38.50' S= 0.0091 '/' Cc= 0.900
			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 3	43.00'	**4.000 in/hr Exfiltration over Surface area above 43.00'**
			Excluded Surface area = 5,303 sf
#3	Device 1	39.90'	**8.0" Round Culvert**

			L= 40.0' CPP, projecting, no headwall, Ke= 0.900
			Inlet / Outlet Invert= 39.90' / 39.80' S= 0.0025 '/' Cc= 0.900
			n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#4	Secondary	43.75'	**5.0' long x 10.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#5	Device 1	43.25'	**12.0" Horiz. Orifice/Grate** C= 0.600
			Limited to weir flow at low heads

Primary OutFlow Max=0.70 cfs @ 12.28 hrs HW=43.41' TW=22.58' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.70 cfs of 5.39 cfs potential flow)
  - **3=Culvert** (Passes 0.02 cfs of 2.37 cfs potential flow)
    - **2=Exfiltration** (Exfiltration Controls 0.02 cfs)
  - **5=Orifice/Grate** (Weir Controls 0.68 cfs @ 1.32 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=40.50' TW=31.75' (Dynamic Tailwater)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 801P: Bio 801

Inflow Area =	2.678 ac, 38.87% Impervious, Inflow Depth = 3.24" for 25 yr event				
Inflow =	8.95 cfs @	12.14 hrs,	Volume=	0.724 af	
Outflow =	5.52 cfs @	12.29 hrs,	Volume=	0.646 af,	Atten= 38%, Lag= 9.0 min
Primary =	5.52 cfs @	12.29 hrs,	Volume=	0.646 af	
Secondary =	0.00 cfs @	0.00 hrs,	Volume=	0.000 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 31.17' @ 12.29 hrs Surf.Area= 16,913 sf Storage= 10,458 cf
Flood Elev= 32.00' Surf.Area= 17,744 sf Storage= 15,887 cf

Plug-Flow detention time= 304.3 min calculated for 0.646 af (89% of inflow)
Center-of-Mass det. time= 253.4 min (1,075.4 - 822.0)

Volume	Invert	Avail.Storage	Storage Description
#1	28.50'	3,273 cf	**35.00'W x 75.00'L x 1.83'H Prismatoid - FILTER Z=0.3**x 2
			9,830 cf Overall x 33.3% Voids
#2	27.50'	525 cf	**35.00'W x 75.00'L x 1.00'H Prismatoid - GRAVEL**x 2
			5,250 cf Overall x 10.0% Voids
#3	30.00'	12,089 cf	**Ponding over bioretention (Conic)**Listed below (Recalc)
		15,887 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
30.00	5,200	0	0	5,200
31.00	6,000	5,595	5,595	6,043
32.00	7,000	6,494	12,089	7,083

Device	Routing	Invert	Outlet Devices
#1	Primary	27.40'	**12.0" Round Culvert X 2.00** L= 90.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 27.40' / 27.00' S= 0.0044 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 3	30.00'	**6.000 in/hr Exfiltration over Surface area above 30.00'** Excluded Surface area = 15,900 sf
#3	Device 1	27.50'	**8.0" Round Culvert X 2.00** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 27.50' / 27.35' S= 0.0037 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#4	Secondary	31.50'	**5.0' long x 10.0' breadth Broad-Crested Rectangular Weir X 2.00** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#5	Device 1	30.67'	**12.0" Horiz. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=5.51 cfs @ 12.29 hrs HW=31.17' TW=26.05' (Dynamic Tailwater)
└─**1=Culvert** (Passes 5.51 cfs of 10.33 cfs potential flow)
  └─**3=Culvert** (Passes 0.14 cfs of 4.85 cfs potential flow)
    └─**2=Exfiltration** (Exfiltration Controls 0.14 cfs)
  └─**5=Orifice/Grate** (Orifice Controls 5.37 cfs @ 3.42 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=27.50' TW=26.00' (Dynamic Tailwater)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 802P: Bio 802

Inflow Area =	2.916 ac, 28.74% Impervious, Inflow Depth = 3.24" for 25 yr event			
Inflow =	10.37 cfs @	12.11 hrs, Volume=	0.788 af	
Outflow =	4.26 cfs @	12.38 hrs, Volume=	0.705 af, Atten= 59%, Lag= 15.9 min	
Primary =	3.31 cfs @	12.38 hrs, Volume=	0.686 af	
Secondary =	0.95 cfs @	12.38 hrs, Volume=	0.019 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Peak Elev= 28.36' @ 12.38 hrs Surf.Area= 19,206 sf Storage= 13,338 cf
Flood Elev= 28.50' Surf.Area= 19,417 sf Storage= 14,420 cf

Plug-Flow detention time= 271.6 min calculated for 0.705 af (89% of inflow)
Center-of-Mass det. time= 221.5 min (1,041.7 - 820.3)

Volume	Invert	Avail.Storage	Storage Description
#1	25.50'	3,550 cf	**38.00'W x 75.00'L x 1.83'H Prismatoid - FILTER Z=0.3**x 2 10,660 cf Overall x 33.3% Voids
#2	24.50'	546 cf	**35.00'W x 78.00'L x 1.00'H Prismatoid - GRAVEL**x 2 5,460 cf Overall x 10.0% Voids
#3	27.00'	14,524 cf	**Ponding over bioretention (Conic)**Listed below (Recalc)
		18,620 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
27.00	5,800	0	0	5,800
28.00	7,250	6,512	6,512	7,278
29.00	8,800	8,012	14,524	8,860

Device	Routing	Invert	Outlet Devices
#1	Primary	24.40'	**12.0" Round Culvert X 2.00** L= 66.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 24.40' / 24.00' S= 0.0061 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 3	27.00'	**4.000 in/hr Exfiltration over Surface area above 27.00'** Excluded Surface area = 17,165 sf
#3	Device 1	24.50'	**8.0" Round Culvert X 2.00** L= 47.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 24.50' / 24.25' S= 0.0053 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#4	Secondary	28.25'	**5.0' long x 10.0' breadth Broad-Crested Rectangular Weir X 2.00** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#5	Device 1	27.50'	**8.0" Horiz. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.31 cfs @ 12.38 hrs HW=28.36' TW=24.34' (Dynamic Tailwater)
- **1=Culvert** (Passes 3.31 cfs of 11.11 cfs potential flow)
  - **3=Culvert** (Passes 0.19 cfs of 4.99 cfs potential flow)
    - **2=Exfiltration** (Exfiltration Controls 0.19 cfs)
  - **5=Orifice/Grate** (Orifice Controls 3.12 cfs @ 4.47 fps)

Secondary OutFlow Max=0.95 cfs @ 12.38 hrs HW=28.36' TW=24.34' (Dynamic Tailwater)
- **4=Broad-Crested Rectangular Weir** (Weir Controls 0.95 cfs @ 0.84 fps)

Summary for Pond 803P: Bio 803

Inflow Area =	0.320 ac, 50.62% Impervious, Inflow Depth = 3.84" for 25 yr event			
Inflow =	1.40 cfs @	12.09 hrs, Volume=	0.102 af	
Outflow =	1.25 cfs @	12.13 hrs, Volume=	0.102 af, Atten= 11%, Lag= 2.5 min	
Primary =	1.25 cfs @	12.13 hrs, Volume=	0.102 af	
Secondary =	0.00 cfs @	0.00 hrs, Volume=	0.000 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 4
Starting Elev= 62.00' Surf.Area= 3,182 sf Storage= 732 cf
Peak Elev= 62.74' @ 12.13 hrs Surf.Area= 3,494 sf Storage= 1,634 cf (901 cf above start)
Flood Elev= 64.00' Surf.Area= 3,960 sf Storage= 3,616 cf (2,884 cf above start)

Plug-Flow detention time= 302.4 min calculated for 0.086 af (84% of inflow)
Center-of-Mass det. time= 180.2 min (982.2 - 801.9)

Volume	Invert	Avail.Storage	Storage Description
#1	60.25'	658 cf	**20.00'W x 52.00'L x 1.83'H Prismatoid - FILTER Z=0.3** 1,976 cf Overall x 33.3% Voids
#2	59.25'	104 cf	**20.00'W x 52.00'L x 1.00'H Prismatoid - GRAVEL** 1,040 cf Overall x 10.0% Voids
#3	62.00'	2,854 cf	**Ponding over bioretention (Conic)** Listed below (Recalc)
		3,616 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
62.00	1,025	0	0	1,025
63.00	1,451	1,232	1,232	1,469
64.00	1,800	1,622	2,854	1,846

Device	Routing	Invert	Outlet Devices
#1	Primary	58.90'	**12.0" Round Culvert** L= 45.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 58.90' / 56.00' S= 0.0644 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 3	62.00'	**4.000 in/hr Exfiltration over Surface area above 62.00'** Excluded Surface area = 3,182 sf
#3	Device 1	59.25'	**8.0" Round Culvert** L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.25' / 59.00' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#4	Secondary	63.25'	**15.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#5	Device 1	62.50'	**12.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.24 cfs @ 12.13 hrs HW=62.74' TW=43.82' (Dynamic Tailwater)
- **1=Culvert** (Passes 1.24 cfs of 5.46 cfs potential flow)
  - **3=Culvert** (Passes 0.03 cfs of 2.36 cfs potential flow)
    - **2=Exfiltration** (Exfiltration Controls 0.03 cfs)
  - **5=Orifice/Grate** (Weir Controls 1.22 cfs @ 1.61 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=62.00' TW=56.50' (Dynamic Tailwater)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

CIVIL
CONSULTANTS

Engineers

Planners

Surveyors

APPENDICIES

A – Location & Topographic Plan

B – SCS Soils Map

C – Supplemental Calculations

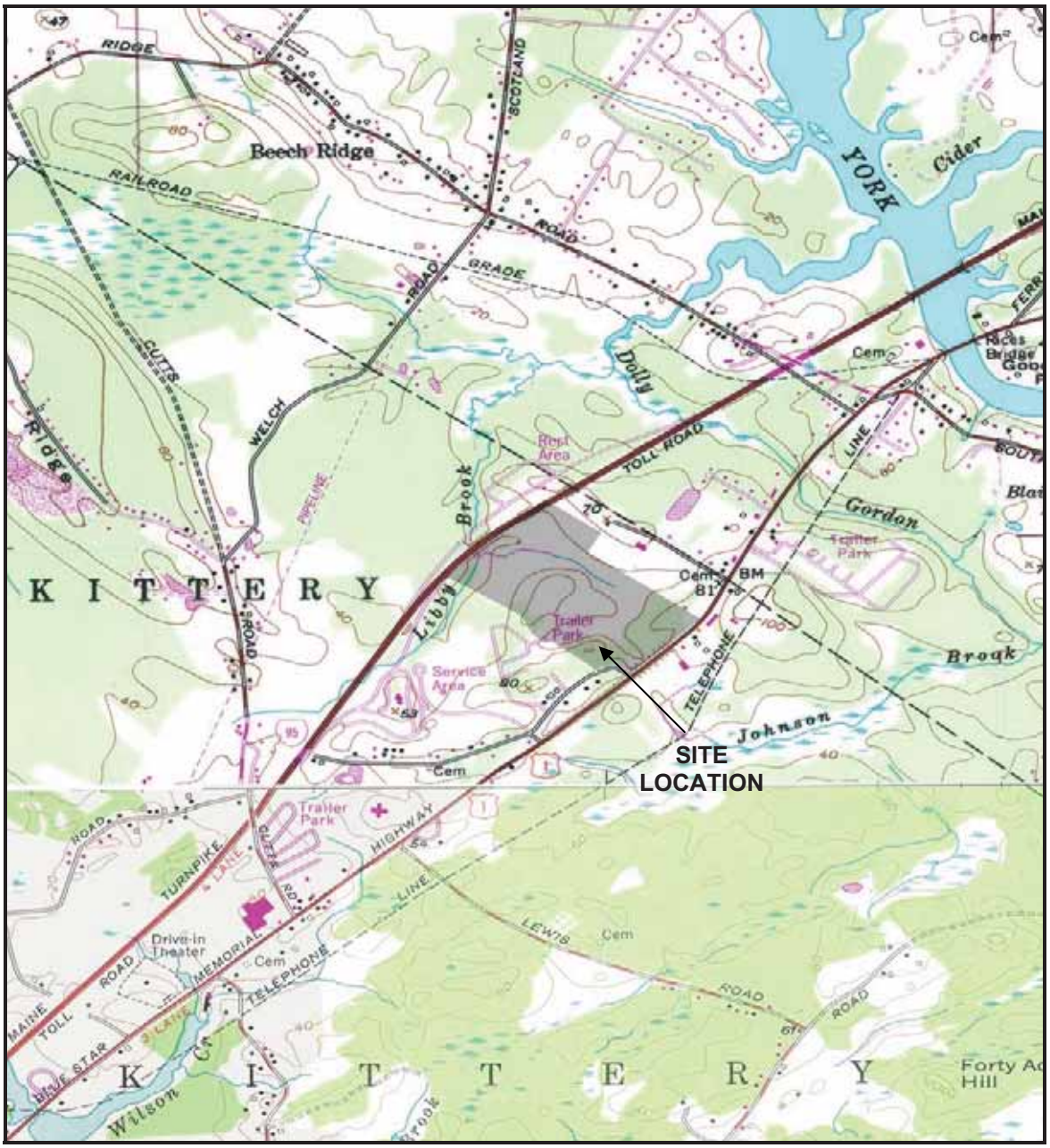
D – Stormwater Maintenance Plan and Inspection Log

E – FIRM Flood Mapping

F – Drainage & Site Plans

APPENDIX A

LOCATION AND TOPOGRAPHIC PLAN



Portion of

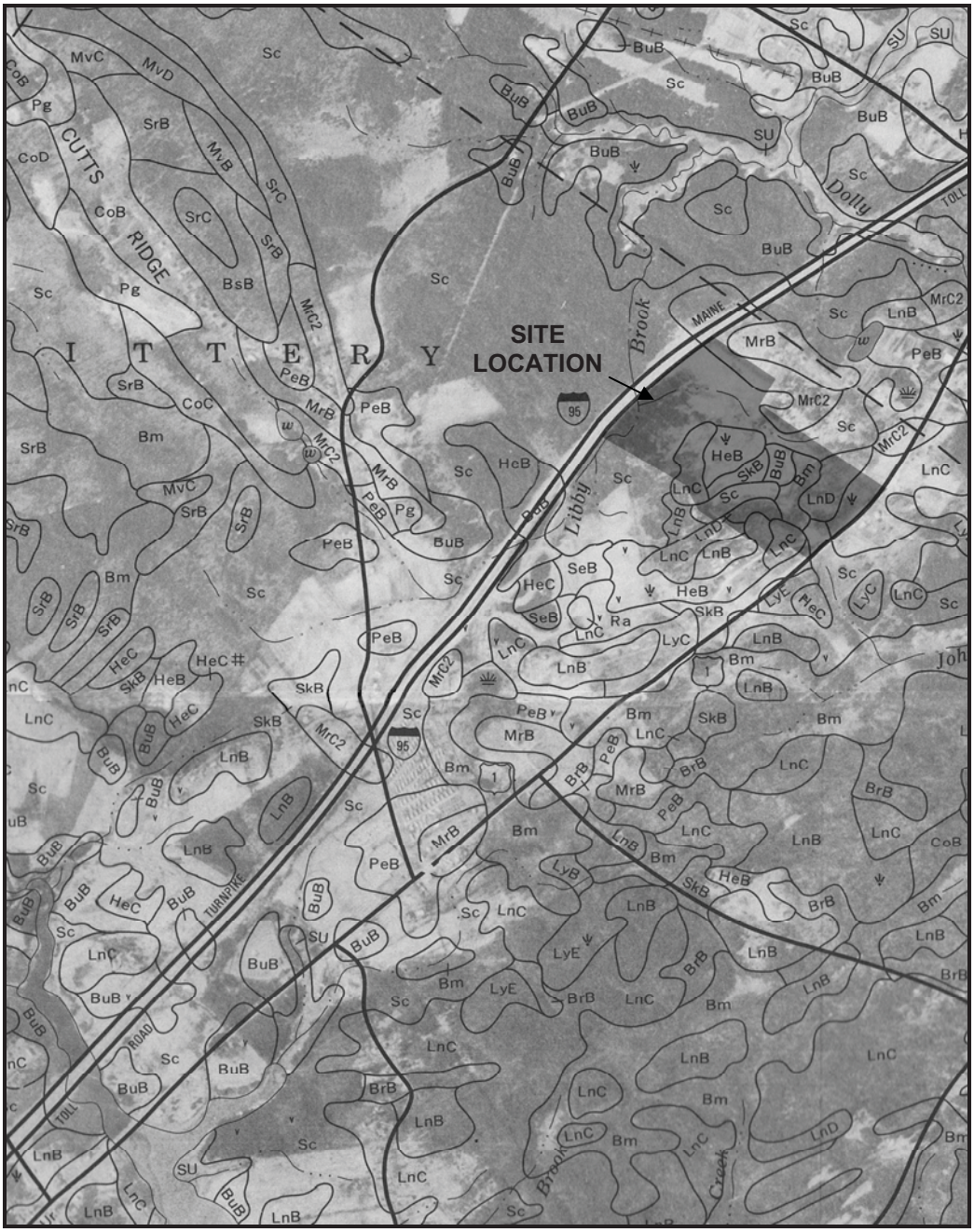
U.S.G.S. Maps for Kittery and York Harbor

MAINE

Scale: Not To Scale

APPENDIX B

Medium Intensity Soil Survey Plan



Portions of

USDA Soil Conservation Service – SOIL SURVEY
YORK COUNTY, MAINE

APPENDIX C

Supplemental Stormwater Calculations

Conveyance Systems. Calculations for sizing on-site conveyance structures, including culverts are included in the HydroCad print outs included in this report. Stabilization calculations are included here. Ditch stabilization is per MDOT Highway design manual. Riprap sizing and erosion control measures are shown and noted on the Site Plans. These plans also show scaled drawings and cross sections of these conveyance systems and associated practices.

Grassed Filter and Bioretention Areas. There are 14 filtration areas proposed to treat the site to DEP standards. Sizing determinations are given on the following page in Stormwater Treatment Spreadsheet, with anticipated flows modeled as shown in the preceding Post Development Calculation report. Sizing has been increased by 25% to allow for 90% overall stormwater treatment of proposed impervious areas.

Roof Dripline Filters. There are roof dripline filters at the majority of the proposed units to treat them to DEP standards. Sizing determinations were made based on the provisions of Section 7.6 of the BMPs. The filters as detailed on the plans are adequate to treat a structure with an overall width of 30 ft. Sizing has been increased by 25% to allow for 90% overall stormwater treatment of proposed impervious areas.

Riprap Outlet Calculations.

Based upon guidelines set forth in the 1991 Maine Erosion Control BMPs, the following geometry presented in the table on the following page will be used for the control structure discharge pipe outlets:

d_{50} Gradation range for d_{50} of 6"
100% of weight to be stones smaller than 9"
50% of weight to be stones smaller than 6"

PROJECT: 06-684.02
ENGINEER: NJR
DATE: 3/11/13

STORMWATER TREATMENT SPREADSHEET

	Area (See D3)	BMP Type	Developed area	Drives	Roadway Impv.	Buildings	Lawn	Min BMP size	BMP provided	Untreated developed	Untreated road impv	Untreated impervious	
D	Parking east & road	Filter	47,747	3,600	9,076	0	35,071	2782 sf filter	Filter 607 - 2790 sf	0	0	0	9 houses
E	Road A & cul-de sac	Filter	52,144	3,800	10,242	0	38,102	3050 sf filter	Filter 606 - 3061 sf	0	0	0	9 houses
F	Untreated @ corner	Untreated	28,464	600	7,117	0	20,747	Untreated area	Untreated Area	28464	7117	7717	2 houses (untreated)
G	Untreated @ Wilson	Untreated	17,177	0	7,459	0	9,718	Untreated area	Untreated Area	17177	7459	7459	
H	Road D @ Road B	Filter	13,739	800	2,300	0	10,639	766 sf filter	Filter 800 - 1720 sf	0	0	0	2 houses
I	Road B West	Filter	25,463	1,400	3,167	0	20,896	1346 sf filter	Filter 604 - 1953 sf	0	0	0	3.5 houses
J	Filter @ Cemetery	Filter	119,782	5,600	16,600	0	97,582	6378 sf filter	Filter 601 - 6380 sf	0	0	0	14 houses
K	Filter @ Road A	Filter	98,200	5,400	14,100	0	78,700	5310 sf filter	Filter 801 - 5310 sf	0	0	0	13.5 houses
L	End lots	Filter	98,977	4,400	11,520	0	83,057	5119 sf filter	Filter 802 - 5694 sf	0	0	0	11 houses
M	Idlewood Lane	Untreated	18,787	0	9,571	0	9,216	Untreated area	Untreated Area	18787	9571	9571	
N	Road F & Bio	Filter	104,329	11,607	11,300	0	81,422	5779 sf filter	Filter 204 - 5795 sf	0	0	0	7.5 houses + Comm. Center
N.a	Office/Comm Center	Bioretention	13,942	3,800	0	3,250	6,892	1022 sf cell	Filter 803 - 1027 sf	0	0	0	
O	Untreated @ Road F	Untreated	16,625	0	0	0	16,625	Untreated area	Untreated Area	16625	0	0	2 houses
Q	Treated Houses	Pervious Area	138,600	0	0	138,600	0	See attached	Dripedge filters	0	0	0	77 houses treated with dripedge
S	Small cul-de-sac	Untreated	26,358	800	5,676	0	19,882	Untreated area	Untreated Area	26358	5676	6476	1 house (untreated)
P	Improved road	Filter	44,035	1,200	9,100	2,400	31,335	2629 sf filter	Filter 205 - 2637 sf	0	0	0	
T	Untreated open space	Untreated	35,760	0	0	0	35,760	Untreated area	Untreated Area	35760	0	0	
TOTAL			900,129	43,007	117,228	144,250	595,644			143171	29823	31223	

TOTAL IMPERVIOUS AREA	304,485	sf	*6.99*	*acres*
TOTAL DEVELOPED AREA	900,129	sf	*20.66*	*acres*

(Areas include land on adjacent lot to be treated with new BMPs.)

PERCENT IMPERVIOUS AREA TREATED	**90** %	=	90% MINIMUM REQUIRED TREATMENT
PERCENT DEVELOPED AREA TREATED	**84** %	>	80% MINIMUM REQUIRED TREATMENT

***Note: All treamtment BMP's have been oversized by 25% to allow for a reduction in treated impervious from 95% to 90%.**

Sizing Formulas

Level Spreader (length, ft) = **1.25** * (1.25 * (Drives + Roadway Impv + Buildings)/43560 + (Lawn/43560 * 35))

Bioretention (sf) = Greater of following two:
1.25 * ((Drives + Roadway Impv + Buildings) * 0.08 + (Lawn * 0.03))
1.25 * ((Drives + Roadway Impv + Buildings) / 12 + (Lawn * 0.4) / 12)

Grassed Filter (sf) = Greater of follwing two:
1.25 * ((Drives + Roadway Impv + Buildings) * 0.05 + (Lawn * 0.02))
1.25 * ((Drives + Roadway Impv + Buildings) / 12 + (Lawn * 0.4) / 12)

Drip Edge Filter Sizing Formula

Min req. volume = **1.25** * (15ft * 12 in/ft * 1 in * 12 in)
= 2700 cu in

Volume provided = 32 in * 18 in * 12 in * 0.4 (void ratio)
= 2765 cu in

RIPRAP APRON OUTLET PROTECTION SCHEDULE

Pipe/BMP		Velocity (fps)	Tailwater (feet)	Diameter (inches)	Flow (cfs)	Apron Length (L feet)	Width outlet (W1 feet)	Width end (W2 feet)	Min d50 (inches)	d50 spec (inches)
P43	BIO #204 – 12”	1.87	0.33	12	4.65	Not needed			N/A	6
P4,P5,P6	BIO #205 – 12”	3.23	0.33	12	2.67	12	3.00	13	3	6
P33 & P34	BIO #601 – 12”	4.53	0.33	12	3.63	14	3.00	15	4	6
P41	BIO #604 – 12”	3.09	0.33	12	2.51	12	3.00	13	2	6
P9	BIO #606 – 12”	4.07	0.33	12	3.31	13	3.00	14	4	6
P14	BIO #607 – 12”	4.00	0.33	12	3.32	13	3.00	14	4	6
P15	BIO #800 – 12”	1.32	0.33	12	0.70	Not needed			N/A	6
P27 & P28	BIO #801 – 12”	3.42	0.33	12	2.75	12	3.00	13	3	6
P18 & P22	BIO #802 – 12”	4.45	0.33	12	1.20	9	3.00	11	1	6
P36	BIO #803 - 12"	1.60	0.33	12	1.24	Not needed			N/A	6
P4,P5,P6	Pond #500 – 12"	3.41	0.33	12	9.20	24	3.00	25	14	16
P4,P5,P6	Pond #600 - 12”	5.84	0.33	12	4.59	15	3.00	17	6	6

Where multiple outlets, flow assumed to split evenly. Worst case culvert to govern sizing.

Assumed tailwaters at outlet, greater than water depth in wider receiving channels.

* Where velocity indicates that no outfall protection is necessary, install apron per detail controled by culvert diameter.

* Calculated using guidelines from Maine Erosion and Sediment Control BMPs (1991) and NH DES Erosion and Sediment Control Handbook (1992) Flows are result of 25 year storm event.

Stormwater Maintenance & Inspection Plan

During the construction of the Yankee Commons Development, maintenance of all erosion, sedimentation, and stormwater flow control structures and devices will be the responsibility of the contractor on site. Upon stabilization of the completed Development, the developer will assume all responsibilities. The developer will be responsible for the required maintenance of the stormwater treatment system.

The developer will be responsible for the maintenance of all erosion, sedimentation, and stormwater flow control structures and devices within the limits of the development (limits as defined in the association documents) and will retain that responsibility until such time as another individual and/or agency (acceptable to the DEP) accepts the responsibility.

During and after construction all erosion control devices and structures shall be checked monthly and after each "significant rainfall"**. Necessary repairs will be made to correct undermining or deterioration of the devices and/or structures. Sediment in the stormwater detention ponds will be removed annually or as needed to maintain functionality of the structure.

The developer shall maintain inspection logs as shown below (or similar) of all stormwater and erosion control measures. The log shall reflect the dates of the inspections and describe actions taken (if any) and be kept on file for a minimum of 5 years. This logbook will be made available to the DEP upon request. A completed and signed copy of this document will also be submitted to the Kittery Code Enforcement Officer yearly by July 1st.

Where a major storm event is noted in the plan, this is classified as a rainfall exceeding 3.0 inches (2yr) storm event.

** significant rainfall is ½" in 24 hr

Sweeping

Paved surfaces shall be swept or vacuumed at least annually in the Spring to remove all Winter sand, and periodically during the year on an as-needed basis to minimize transportation of sediment during rainfall events.

Roadways and Parking Surfaces				
	Spring	Fall or Yearly	After a Major Storm	Every 2– 5 Years
Clear accumulated winter sand in parking lots and along roadways	X			
Sweep pavement to remove sediment	X			
Grade road shoulders and remove excess sand either manually or by a front-end loader	X			
Grade gravel roads and gravel shoulders	X			
Clean-out the sediment within water bars or open top culverts	X			
Ensure that stormwater is not impeded by accumulations of material or false ditches in the shoulder	X			

Catch Basins

All catch basins, and any other field inlets throughout the collection system, need to be inspected on a monthly basis to assure that the inlet entry point is clear of debris and will allow the intended water entry. These will be cleared, if necessary on a yearly basis or when sediment reaches two thirds of total volume. Catch basins need to be vacuumed and cleaned of all accumulated sediment. This work must be done by a vacuum truck. The removed material must be disposed of in accordance with the Maine Solid Waste Disposal Rules.

Catch Basins Systems				
	Spring	Fall or Yearly	After a Major Storm	Every 2– 5 Years
Remove and legally dispose of accumulated sediments and debris from the bottom of the basin, inlet grates, inflow channels to the basin, and pipes between basins.	X	X		
Remove floating debris and floating oils (using oil absorptive pads) from any trap designed for such	X	X		

Culverts				
	Spring	Fall or Yearly	After a Major Storm	Every 2– 5 Years
Remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit	X	X	X	
Repair any erosion damage at the culvert's inlet and outlet	X	X	X	

Vegetated Swales

Erosion: It is important to install erosion and sediment control measures to stabilize this area as soon as possible and to retain any organic matter in the bottom of the trench.

Routine Maintenance and Inspection: The area should be inspected for failures following heavy rainfall and repaired as necessary for newly formed channels or gullies, reseeding or sodding of bare spots, removal of trash, leaves and/or accumulated sediments, the control of woody or other undesirable vegetation, and to check the condition and integrity of any stone dams.

Mowing: Grass should not be trimmed extremely short, as this will reduce the filtering effect of the swale. The cut vegetation should be removed to prevent the decaying organic litter from adding pollutants to the discharge from the swale. The mowed height of the grass should be 2-4 inches taller than the maximum flow depth of the design water quality storm. A minimum mow height of 6 inches is generally recommended.

Fertilization: Routine fertilization and/or use of pesticides is strongly discouraged. If complete reseeding is necessary, half the original recommended rate of fertilizer should be applied with a full rate of reseeding.

Sediment Removal: The level of sediment deposition in the channel should be monitored regularly, and removed from grassed channels before permanent damage is done to the grassed vegetation, or if infiltration times are longer than 12 hours. Sediment should be removed from riprap channels when it reduces the capacity of the channel.

Aeration: The buffer strip may require periodic mechanical aeration to restore infiltration capacity. This aeration must be done during a time when the area can be reseeded and mulched prior to any significant rainfall.

	Spring	Fall or Yearly	After a Major Storm	Every 2– 5 Years
Vegetated Swales				
Grass should not be trimmed extremely short, as this will reduce the filtering effect of the swale (MPCA, 1989). The cut vegetation should be removed to prevent the decaying organic litter from adding pollutants to the discharge from the swale. The mowed height of the grass should be 2-4 inches taller than the maximum flow depth of the design water quality storm. A minimum mow height of 6 inches is generally recommended		**X**		
The area should be inspected for failures following heavy rainfall and repaired as necessary for newly formed channels or gullies, sodding of bare spots, removal of trash, leaves and/or accumulated sediments, the control of woody or other undesirable vegetation, and to check the condition and integrity of the check dams			**X**	
The buffer strip may require periodic mechanical aeration to restore infiltration capacity. This aeration must be done during a time when the area can be reseedinged and mulched prior to any significant rainfall				**X**
The level of sediment deposition in the channel should be monitored regularly, and removed from grassed channels before permanent damage is done to the grassed vegetation, or if infiltration times are longer than 12 hours. Sediment should be removed from riprap channels when it reduces the capacity of the channel				**X**

Vegetated Areas

All areas of maintained lawn are to be inspected regularly for signs of erosions and channelization. Areas where erosion is occurring or areas of sparse growth shall be replanted and stabilized. Channelized flows from the eroded land shall be diverted to buffers or other areas able to withstand the high sediment load in the erosive runoff.

	Spring	Fall or Yearly	After a Major Storm	Every 2– 5 Years
Vegetated Areas				
Inspect all slopes and embankments	**X**		**X**	
Replant bare areas or areas with sparse growth	**X**		**X**	
Armor areas with fill erosions with an appropriate lining or divert the erosive flows to on-site areas able to withstand concentrated flows. Any materials used to armor/stabilize the affected areas shall be submitted to the Town and Engineer for review and approval prior to installation.	**X**		**X**	

Filtration Facilities (Grassed Filters, Bioretention Cells & Roof Dripline Filters)

Soil Filter Inspection: The soil filter should be inspected after every major storm in the first few months to ensure proper function. Thereafter, the filter should be inspected at least once every six months to ensure that it is draining between 24 and 48 hours.

Inspecting Embankments for Instability and Erosion: Embankments should be inspected annually for erosion, destabilization of side slopes, embankment settling, and other signs of structural failure. Corrective action should be taken immediately upon identification of problems.

Clearing Outlet Structures: The outlet structures should be checked periodically to ensure that they are not blocked by debris. Inspections should be conducted monthly during wet weather conditions from March to November.

Soil Filter Replacement: The top several inches of the filter shall be replaced with fresh material when water ponds on the surface of the bed for more than 72 hours. The removed sediments should be disposed in an acceptable manner.

Sediment Removal: Sediment and plant debris should be removed from the pre-treatment structure at least annually. In the case of Roof Dripline Filters, the stone reservoir course shall be free of debris at all times.

Mowing: Filters with grass cover should be mowed no more than 2 times per growing season to maintain grass heights less than 12 inches but not less than 6".

Fertilization: Fertilization of the underdrained filter area should be avoided unless absolutely necessary to establish vegetation.

Harvesting and Weeding: Harvesting and pruning of excessive growth will need to be done occasionally. Weeding to control unwanted or invasive plants may also be necessary.

Filtration Facilities				
	Spring	Fall or Yearly	After a Major Storm	Every 2– 5 Years
Inspect the embankments for destabilization, slope erosion, internal piping, and downstream swamping. A professional engineer must review these immediately.		**X**	**X**	
Mow the embankment to control woody vegetation		**X**		
Inspect the outlet control structure for broken seals, obstructed orifices, and plugged trash racks	**X**	**X**	**X**	
Remove and dispose of sediments and debris within the control structure		**X**		**X**
Repair any damage to trash racks or debris guards		**X**		
The soil filter should be inspected after every major storm in the first few months to ensure proper function. Thereafter, the filter should be inspected at least once every six months to ensure that it is draining between 24 and 48 hours	**X**	**X**	**X**	
The top several inches of the filter shall be replaced with fresh material when water ponds on the surface of the bed for more than 72 hours. The removed sediments should be disposed in an acceptable manner				**X**
Sediment and plant debris should be removed from the pre-treatment structure at least annually	**X**			
Filters with grass cover should be mowed no more than 2 times per growing season to maintain grass heights less than 12 inches				
Fertilization of the underdrained filter area should be avoided unless absolutely necessary to establish vegetation				
Harvesting and pruning of excessive growth will need to be done occasionally. Weeding to control unwanted or invasive plants may also be necessary		**X**		

Roadway Ditches, Swales and Culverts

Open swales and ditches need to be inspected on a monthly basis or after a major rainfall event to assure that debris or sediments do not reduce the effectiveness of the system. Debris needs to be removed at that time. Any sign of erosion or blockage shall be immediately repaired to assure a vigorous growth of vegetation for the stability of the structure and proper functioning.

Vegetated ditches should be mowed at least monthly during the growing season. Larger brush or trees must not be allowed to become established in the channel. Any areas where the vegetation fails will be subject to erosion and should be repaired and revegetated.

If sediment in culverts or piped drainage systems exceeds 20% of the diameter of the pipe, it should be removed. This may be accomplished by hydraulic flushing or any mechanical means; however, care should be taken to not flush the sediments into the retention/detention pond as it will reduce the pond's capacity and hasten the time when it must be cleaned. All pipes should be inspected on an annual basis.

Stormwater Channels				
	Spring	Fall or Yearly	After a Major Storm	Every 2– 5 Years
Inspect ditches, swales and other open stormwater channels	**X**	**X**	**X**	
Remove any obstructions and accumulated sediments or debris	**X**	**X**		
Control vegetated growth and woody vegetation		**X**		
Repair any erosion of the ditch lining		**X**		
Mow vegetated ditches		**X**		
Remove woody vegetation growing through riprap		**X**		
Repair any slumping side slopes	**X**	**X**		
Replace riprap where underlying filter fabric or underdrain gravel is showing or where stones have dislodge	**X**			**X**

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Stormwater Maintenance
Yankee Commons
Maintenance Log

This log is intended to accompany the Stormwater Management Facilities Maintenance Plan for the Yankee Commons Development. The following items shall be checked, cleaned and maintained on regular basis as specified in the Maintenance Plan and as described in the table below. This log shall be kept on file for a minimum of five years and shall be available for review by MDEP. Qualified personnel familiar with drainage systems and soils shall perform all inspections. A completed copy of this Maintenance Log shall be provided to the Kittery Code Enforcement Officer on a yearly basis by July 1st.

_____.
_____.
(to be signed by qualified Post-Construction Stormwater Inspector for Town submission)

Item	Maintenance Required & Frequency					Date Completed	Maintenance Personnel	Comments
		Spring	Fall or Yearly	After a Major Storm	Every 2– 5 Years			
Sweeping of Roads	Clear accumulated winter sand in parking lots and along roadways	X						
	Sweep pavement to remove sediment	X						
	Grade road shoulders and remove excess sand either manually or by a front-end loader	X						
	Grade gravel roads and gravel shoulders	X						
	Clean-out the sediment within water bars or open top culverts	X						
	Ensure that stormwater is not impeded by accumulations of material or false ditches in the shoulder	X						

Item	Maintenance Required & Frequency					Date Completed	Maintenance Personnel	Comments
		Spring	Fall or Yearly	After a Major Storm	Every 2– 5 Years			
Vegetated Swales	Grass should not be trimmed extremely short, as this will reduce the filtering effect of the swale (MPCA, 1989). The cut vegetation should be removed to prevent the decaying organic litter from adding pollutants to the discharge from the swale. The mowed height of the grass should be 2-4 inches taller than the maximum flow depth of the design water quality storm. A minimum mow height of 6 inches is generally recommended		X					
	The area should be inspected for failures following heavy rainfall and repaired as necessary for newly formed channels or gullies, sodding of bare spots, removal of trash, leaves and/or accumulated sediments, the control of woody or other undesirable vegetation, and to check the condition and integrity of the check dams			X				
	The buffer strip may require periodic mechanical aeration to restore infiltration capacity. This aeration must be done during a time when the area can be reseedinged and mulched prior to any significant rainfall				X			
	The level of sediment deposition in the channel should be monitored regularly, and removed from grassed channels before permanent damage is done to the grassed vegetation, or if infiltration times are longer than 12 hours. Sediment should be removed from riprap channels when it reduces the capacity of the channel				X			

Item	Maintenance Required & Frequency					Date Completed	Maintenance Personnel	Comments
Catch Basins and Culverts		Spring	Fall or Yearly	After a Major Storm	Every 2– 5 Years			
	Remove and legally dispose of accumulated sediments and debris from the bottom of the basin, inlet grates, inflow channels to the basin, and pipes between basins.	X	X					
	Remove floating debris and floating oils (using oil absorptive pads) from any trap designed for such	X	X					
	Remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit	X	X	X				
	Repair any erosion damage at the culvert's inlet and outlet	X	X	X				
Roadway Ditches, Swales and Culverts	Inspect ditches, swales and other open stormwater channels	X	X	X				
	Remove any obstructions and accumulated sediments or debris	X	X					
	Control vegetated growth and woody vegetation		X					
	Repair any erosion of the ditch lining		X					
	Mow vegetated ditches		X					
	Remove woody vegetation growing through riprap		X					
	Repair any slumping side slopes	X	X					
	Replace riprap where underlying filter fabric or underdrain gravel is showing or where stones have dislodge	X			X			

Item	Maintenance Required & Frequency					Date Completed	Maintenance Personnel	Comments
		Spring	Fall or Yearly	After a Major Storm	Every 2– 5 Years			
Filtration Basins	Inspect the embankments for destabilization, slope erosion, internal piping, and downstream swamping. A PE must review these immediately.		X	X				
	Mow the embankment to control woody vegetation		X					
	Inspect the outlet control structure for broken seals, obstructed orifices, and plugged trash racks	X	X	X				
	Remove and dispose of sediments and debris within the control structure		X		X			
	Repair any damage to trash racks or debris guards		X					
	The soil filter should be inspected after every major storm in the first few months to ensure proper function. Thereafter, the filter should be inspected at least once every six months to ensure that it is draining between 24 and 48 hours	X	X	X				
	The top several inches of the filter shall be replaced with fresh material when water ponds on the surface of the bed for more than 72 hours. The removed sediments should be disposed in an acceptable manner				X			
	Sediment and plant debris should be removed from the pre-treatment structure at least annually	X						
	Filters with grass cover should be mowed no more than 2 times per growing season to maintain grass heights > 6 inches, < 12 inches							
	Harvesting and pruning of excessive growth will need to be done occasionally. Weeding to control unwanted or invasive plants may also be necessary		X					

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Stormwater Management System

Yankee Commons

Inspection & Maintenance Checklist

BMP/System Component	Date Inspected	Inspector	Cleaning/Repair Needed (*List Items/Comments*)	Date of Cleaning/Repair	Performed By

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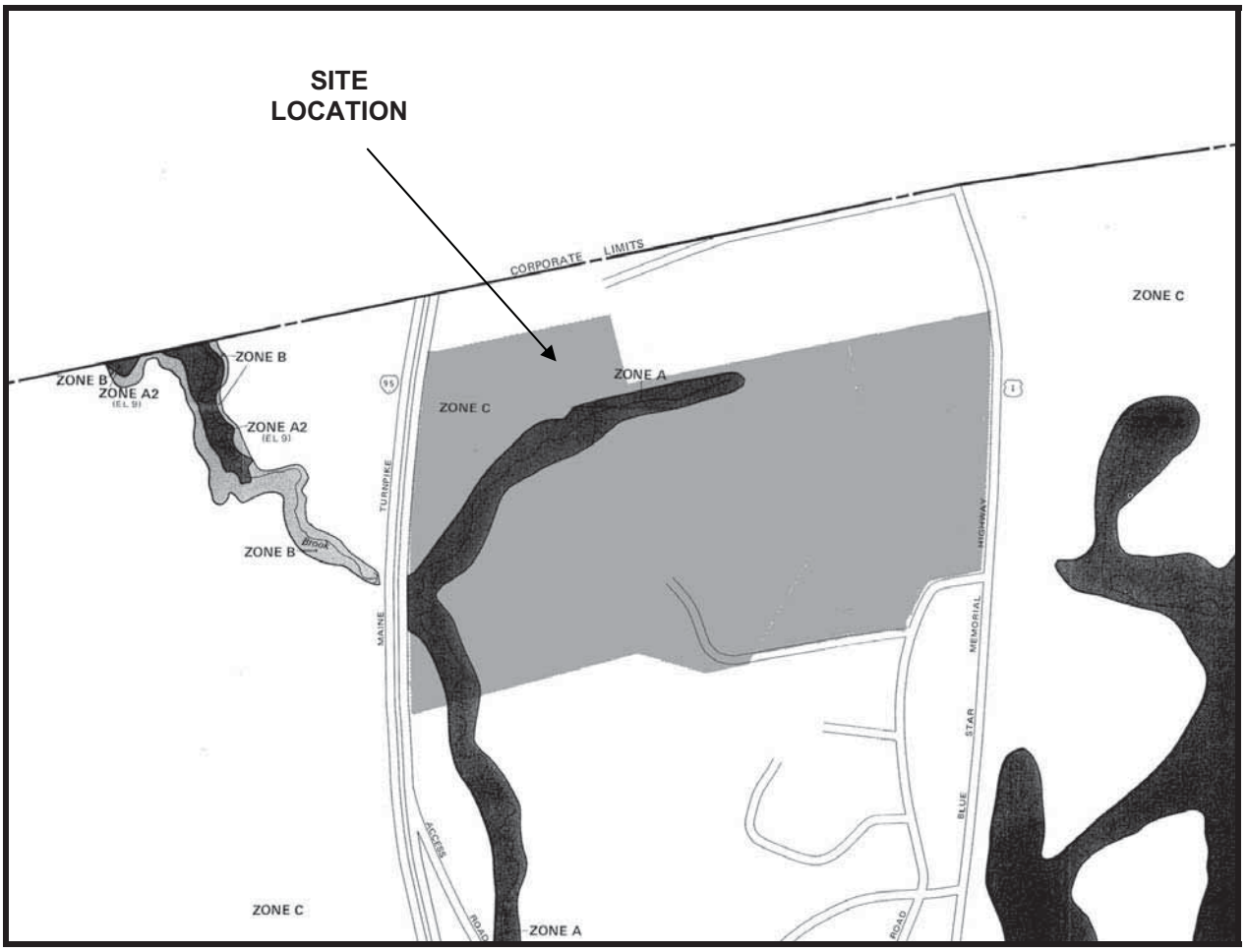
APPENDIX E

NATIONAL FLOOD INSURANCE RATE MAP- FIRM



Reduced Scale Sketch Reproduced from Portion of

Town of Kittery, ME
Panel 1C
(Effective dates: July 5 1984)

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APPENDIX F

*** C5 – Utility & Underdrain Plan**

*** C6 – Utility & Underdrain Plan**

*** C7 – Grassed Filter Basin Details**

*** C8 – Grassed Filter Basin Details & Schedules**

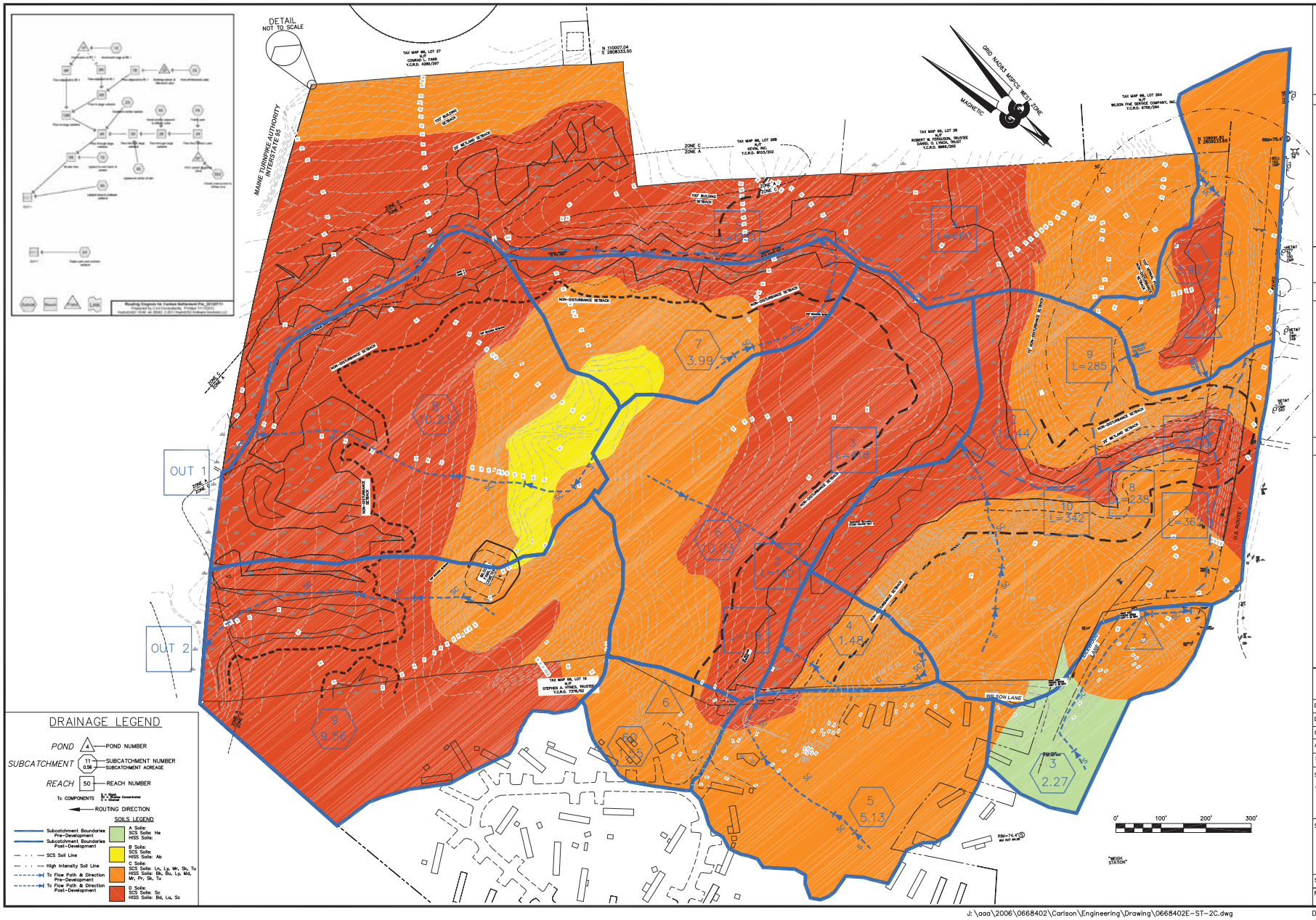
*** R6 – Construction Details**

D1 – Pre-Development Stormwater Plan

D2 – Post-Development Stormwater Plan

D3 – Stormwater Treatment Plan

* These sheets are included in the plan set in Section 8 of the Final Subdivision Review Application Package



STATE OF MAINE
Neil Rodgers
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PROFESSIONAL ENGINEER

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1	REVISED PER TOWN REVIEW	NJR	11/09/12

YANKEE COMMONS
MOBILE HOME PARK EXPANSION
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE
PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS: 1571 BELLEVUE AVE., SUITE 210 WEST VANCOUVER, B.C. V7V1A6

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SCALE 1"=100'	

SHEET TITLE:
PRE-DEVELOPMENT STORMWATER MANAGEMENT PLAN

SHEET NUMBER:
D1

SHEET D1 of D3

PROJECT # 06-684.02

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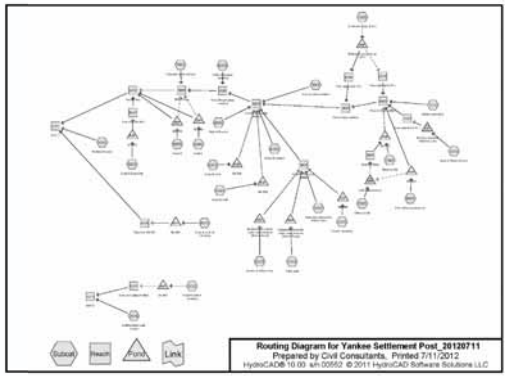
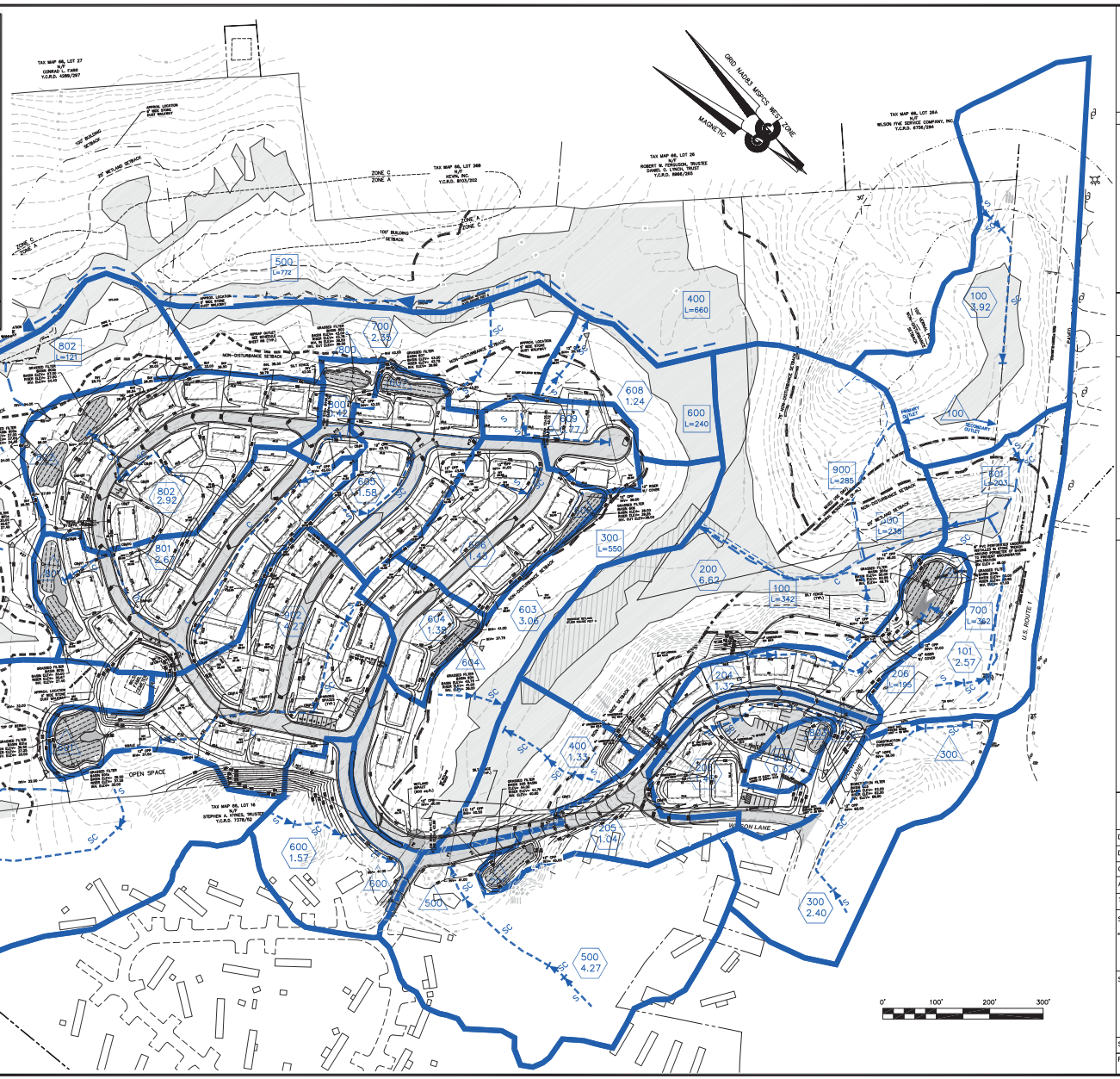
DATE: 3/11/2013





DRAINAGE LEGEND

POND — 4 — POND NUMBER

SUBCATCHMENT — 11 / 0.56 — SUBCATCHMENT NUMBER / SUBCATCHMENT ACREAGE

REACH — 50 — REACH NUMBER

Tc COMPONENTS — S = Sheet, C = Shallow Concentrated, P = Pipe/Channel

Subcatchment Boundaries Pre-Development

Subcatchment Boundaries Post-Development

SCS Soil Line

High Intensity Soil Line

Tc Flow Path & Direction Pre-Development

Tc Flow Path & Direction Post-Development

WETLAND

EMERGENT WETLAND

SOILS LEGEND

(HATCHING NOT SHOWN IN POST-DEVELOPMENT ANALYSIS FOR CLARITY)

A Soils: SCS Soils: He; HSS Soils:

B Soils: SCS Soils: Ab; HSS Soils:

C Soils: SCS Soils: Ln, Ly, Mr, Sk, Tu; HSS Soils: Bk, Bu, Ly, Md, Mr, Pr, Sk, Tu

D Soils: SCS Soils: Sc; HSS Soils: Bd, La, Sc

STATE OF MAINE — Neil J. Rodgers — 12169 — LICENSED — PROFESSIONAL ENGINEER

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SHEET TITLE:
POST-DEVELOPMENT STORMWATER MANAGEMENT PLAN

SHEET NUMBER:
D2

SHEET D2 of D3

PROJECT # 06-684.02

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DATE: 3/11/2013

TREATMENT LEGEND

UNTREATED DEVELOPED AREA
148,751 sf (36,623 sf IMPERVIOUS)

TREATED DEVELOPED AREA
751,378 sf (267,8621 sf IMPERVIOUS)

Treatment Boundaries

6 Treatment Area Designations

NOTE:
–SEE SHEETS C5 & C6 FOR DRIPEDGE FILTER DRAIN LOCATION AND INVERTS

–SEE SHEETS C7 & C8 FOR FILTRATION BMP DESIGN INFORMATION

STORMWATER TREATMENT SPREADSHEET

	Area (See D3)	BMP Type	Developed area	Drives	Roadway Impv.	Buildings	Lawn	Min BMP size	BMP provided	Untreated developed	Untreated roadimpv	Untreated Impervious	
D	Parking east & road	Filter	47,747	3,600	9,076	0	35,071	2782 sf filter	Filter 607 - 2790 sf	0	0	0	9 houses
E	Road A & cul-de-sac	Filter	52,144	3,800	10,242	0	38,102	3050 sf filter	Filter 606 - 3061sf	0	0	0	9 houses
F	Untreated @ corner	Untreated	28,464	600	7,117	0	20,747	Untreated area	Untreated Area	28464	7117	7717	2 houses (untreated)
G	Untreated @ Wilson	Untreated	17,177	0	7,459	0	9,718	Untreated area	Untreated Area	17177	7459	7459	
H	Road D @ Road B	Filter	15,739	800	2,300	0	10,659	766 sf filter	Filter 600 - 7720 sf	0	0	0	2 houses
I	Road B West	Filter	25,463	1400	3,167	0	20,896	1646 sf filter	Filter 604 - 1653 sf	0	0	0	3.5 houses
J	Filter @ Cemetery	Filter	119,782	5,600	16,600	0	97,582	6378 sf filter	Filter 601- 6380 sf	0	0	0	14 houses
K	Filter @ Road A	Filter	98,200	5,400	14,100	0	78,700	5310 sf filter	Filter 801- 5310 sf	0	0	0	13.5 houses
L	End lots	Filter	98,977	4,400	11520	0	83,057	5119 sf filter	Filter 802 - 5694 sf	0	0	0	11 houses
M	Idlewood Lane	Untreated	18,787	0	9,571	0	9,216	Untreated area	Untreated Area	18787	9571	9571	
N	Road F & Bio	Filter	104,329	11607	11300	0	81422	5779 sf filter	Filter 204 - 5795 sf	0	0	0	7.5 houses + Comm. Center
N.a	Office/Comm Center	Bioretention	13,942	3,800	0	3,250	6,892	1022 sf cell	Filter 803 - 1027 sf	0	0	0	
O	Untreated @ Road F	Untreated	19,625	0	0	0	19,625	Untreated area	Untreated Area	19625	0	0	2 houses
Q	Treated Houses	Pervious Area	138,600	0	0	138,600	0	See attached	Dripedge filters	0	0	0	77 houses treated with dripedge
S	Small cul-de-sac	Untreated	26,358	800	5,676	0	19,882	Untreated area	Untreated Area	26358	5676	6476	1 house (untreated)
P	Improved road	Filter	44,035	1200	9,100	2,400	31,335	2629 sf filter	Filter 205 - 2637 sf	0	0	0	
T	Untreated open space	Untreated	35,760	0	0	0	35,760	Untreated area	Untreated Area	35760	0	0	
	TOTAL		900,129	43,007	117,228	144,250	595,644			143171	29823	31223	

TOTAL IMPERVIOUS AREA	304,485	sf	6.99 acres	
TOTAL DEVELOPED AREA	900,129	sf	20.66 acres	(Areas include land on adjacent lot to be treated with new BMPs.)
PERCENT IMPERVIOUS AREA TREATED	90 %	=	90% MINIMUM REQUIRED TREATMENT	
PERCENT DEVELOPED AREA TREATED	84 %	>	80% MINIMUM REQUIRED TREATMENT	

***Note: All treatment BMP's have been oversized by 25% to allow for a reduction in treated impervious from 95% to 90%**

Sizing Formulas

Level Spreader (length, ft) = **1.25** * (1.25 * (Drives + Roadway Impv + Buildings)/43560 + (Lawn/43560 * 35))

Bioretention (sf) = Greater of following two:
1.25 * ((Drives + Roadway Impv + Buildings) * 0.08 + (Lawn * 0.03))
1.25 * ((Drives + Roadway Impv + Buildings) / 12 + (Lawn * 0.4) / 12)

Grassed Filter (sf) = Greater of following two:
1.25 * ((Drives + Roadway Impv + Buildings) * 0.05 + (Lawn * 0.02))
1.25 * ((Drives + Roadway Impv + Buildings) / 12 + (Lawn * 0.4) / 12)

Drip Edge Filter Sizing Formula

Min req. volume = **1.25** * (15ft * 12 in/ft * 1 in * 12 in)
= 2700 cu in

Volume provided = 32 in * 18 in * 12 in * 0.4 (void ratio)
= 2765 cu in

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DATE: 3/11/2013

STATE OF MAINE
Neil Rhodes
12160
LICENSED
PROFESSIONAL ENGINEER

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"POST-DEVELOPMENT" STORMWATER TREATMENT PLAN

SHEET NUMBER:
D3

SHEET D3 of D3

PROJECT # 06-684.02

Section 3

Updated Discussion of Chapter 16.10.5.2
Preliminary Submission Requirements

with Attachments:

A - USGS Location Plan

B - Property Deeds

C - Water Department Capacity Letter

D - Soils Information

E - Sewer Department Capacity Letter

MEMORANDUM TO	**KITTERY PLANNING BOARD**
FROM:	**Thomas W. Harmon, P.E.**
DATE:	**August 1, 2012 rev August 30, 2012 Rev 19 Nov 2015**
RE:	**Yankee Commons Mobile Home Expansion Preliminary Plan Application Review Checklist**

16.10. DEVELOPMENT PLAN APPLICATION AND REVIEW
Article V. Preliminary Plan Application Review and Approval Process Phase
16.10.5.2 Planner Review and Confirmation of Submittal Content - Preliminary Plan.

Narrative:

This project proposes to construct roadways and infrastructure to accommodate 77 mobile home units and a two story community building with a 3,800 sq. ft. footprint housing offices and meeting space. The existing parcel being utilized is approximately 50 acres. Infrastructure development will include: sewer, storm drain facilities, water pipe, and roadway construction. The existing site is wooded and pasture land which has recently been re-cleared.

The limits of development are defined by setbacks from various classes of wetland and streams. The attached plans show existing and proposed 2 foot contours. The developer proposes to construct approximately: 975 lineal feet of 24' (paved width) two-way roadway; 250 lineal feet of boulevard (2 20' (paved width) one-way lanes separated by an island); and 3,747 lineal feet of 16' (paved width) one-way roadways. There will be approximately 20.6 acres of developed area including 6.8 acres of impervious area.

Construction will involve the following: Erosion control measures constructed and installed as needed, clearing and grubbing, excavation to subgrade, the installation of surface drainage structures, and construction of infrastructure including sewer, water, storm drain, and roadways. The individual lots will be graded with service utilities added and pads for the mobile homes.

The development is being proposed under the guidelines of the State of Maine Legislation Title 30-A §4358, Regulation of manufactured housing, in conjunction with the environmental guidelines of the Town of Kittery. Exceptions to Kittery Mobile Home regulations under Title 16 include:

1. Kittery Title 16 requires 6,000sf lots, the state requires 6,500 or whatever the lowest dwelling unit lot size is in the Town. Kittery has a 5,000 single family dwelling standard which we have followed.
2. Kittery Title 16 requires a dumpster no further than 150 from each dwelling. That would entail more than twenty 80sf pads and dumpsters. The park offers weekly curbside pickup, recycling separation, and by appointment, recovery facility material disposal, in lieu of separate dumpsters.
3. Kittery Title 16 calls for walkways. Paved roadway widths provided are sufficient to accommodate walking space without the need for a separate walkway. The traveled ways within the lot sites will have a 10mph speed limit by MHB rule.

MEMORANDUM TO	**KITTERY PLANNING BOARD**
FROM:	**Thomas W. Harmon, P.E.**
DATE:	**August 1, 2012 rev August 30, 2012 Rev 19 Nov 2015**
RE:	**Yankee Commons Mobile Home Expansion** **Preliminary Plan Application Review Checklist**

Submittal Requirement	***Applicant Response***	***Planner***
16.10.5.2		
16.10.5.2 Planner Review and Confirmation of Submittal Content - Preliminary Plan. A completed application must include on the plan or attached thereto, the following items, unless upon the applicant's written request, the Planning Board, by formal action, waives or defers any requirement(s) for submission.		
A. A minimum of fifteen (15) paper copies of the application form, plan and all attachments thereto plus if applicable, five (5) paper copies of the 24 x 36 inches size plan sheets.	*Provided.*	
B. Plan must include:		
1. Plan sheets drawn on a reproducible medium and must measure no less than eleven (11) inches by seventeen (17) inches and no larger than twenty-four (24) inches by thirty-six (36) inches; with a:	*Provided - 22”x34”.*	
2. Scale of the drawings no greater than one inch equals thirty (30) feet for developments less than ten (10) acres, and one inch equals fifty (50) feet for all others;	*Waiver requested for overall site plan to be 1” = 100’ to show entire site on one page.*	
3. Code block in the lower right-hand corner. The block must contain:	*Along right side of plan sheets.*	
a. Name(s) and address(es) of the applicant and owner,	*Shown on Plan Sheet S1.*	
b. Name of the project.	*Shown on the plans.*	
c. Name and address of the preparer of the plan, with professional seal, if applicable,	*Shown on Plan Sheet S1.*	
d. Date of plan preparation/revision, and a unique ID number for the plan and any revisions;	*Shown on the plans.*	
4. Standard boundary survey conducted by a surveyor licensed in the state of Maine, in the manner recommended by the State Board of Registration for Land Surveyors;	*Boundary information (with certification) on Plan Sheets S1 & S2.*	
5. An arrow showing true north and the magnetic declination, a graphic scale, and signature blocks for the owner(s) and members of the Planning Board;	*Shown on the plans.*	

16.10.5.2 *continued*		
6. Locus map showing the property in relation to surrounding roads, within two thousand (2,000) feet of any property line of the development,	*Shown on the Cover Sheet and Plan Sheets S1 & C1. Also on USGS Plan - Attachment A*	
7. Surveyed acreage of the total parcel, of rights-of-way, wetlands, and area to be disturbed and amount of street frontage;	*Shown on various plan sheets.*	
8. Names and addresses of all owners of record of property abutting the development, including those across a street;	*Provided as separate attachment to Updated Application in Section 1 of the Final Application Subdivision Review Application Package.*	
9. Locations of essential physical features such as watercourses, forest cover, and outcroppings	*Shown on various plans.*	
10. Proposed development area conditions including, but not limited to:		
a. Structures; their location and description including signs, to be placed on the site, floor plan of exterior walls and accesses located within one hundred (100) feet of the property line;	*Not applicable for individual sites. Location & size of Community Center included on Plan Sheets S1, S2, C2, C3,C5,R1 & L1.*	
b. Utilities proposed including power, water, sewer, holding tanks, bridges, culverts and drainage ways;	*Shown on various plan sheets.*	
c. Sewage facilities type and placement. Test pit locations, at least two of which must meet the State of Maine Plumbing Code requirements, must be shown;	*Shown on the plans. Test pits not applicable. Test pit locations for soils mapping is provided on Plan Sheet C1.*	
d. Domestic water source;	*Public Water.*	
e. Parks, open space, or conservation easement locations;	*Open space & Conservation Easement Location is shown Plan Sheets S1 & S2.*	
f. Lot lines, interior and exterior, right-of-way, and street alignments;	*Shown on various plans.*	
g. Road and other paved ways plans, profiles and typical sections including all relevant data;	*Shown on various plans.*	
h. Setbacks Existing and proposed;	*Shown on various plans.*	
i. Machinery permanently installed locations likely to cause appreciable noise at the lot lines;	*No outside machinery proposed.*	

16.10.5.2 *continued*		
j. Raw, finished or waste materials to be stored outside the buildings, and any stored material of a toxic or hazardous nature;	*No such materials to be stored.*	
k. Topographic contours of existing contours and finished grade elevations within the development;	*Shown on various plans.*	
l. Pedestrian ways/sidewalks, curbs, driveways, fences, retaining walls and other artificial features locations and dimensions proposed;	*Shown on various plans.*	
m. Temporary markers locations adequate to enable the Planning Board to readily locate and appraise the layout of the development;	*Temporary markings were provided for all site walks.*	
n. Land proposed to be dedicated to public use and the conditions of such dedication;	*None proposed.*	
o. Natural features or site elements to be preserved.	*As shown on the plans.*	
C. Supporting documentation must include:		
1. Vicinity map and aerial photograph showing the property in relation to surrounding properties, roads, geographic, natural resource (wetland, etc.), historic sites, applicable comprehensive plan features such as proposed park locations, land uses, zones, and other features within five hundred (500) feet from any boundary of the proposed development;	*Included on Plan Set Cover Sheet.*	
2. Existing Development Area Conditions including but not limited to:		
a. Location and description of all structures, including signs, existing on the site, together with accesses located within one hundred (100) feet of the property line;	*Shown on Plan Sheet C1.*	
b. Essential physical features such as watercourses, wetlands, flood plains, wildlife habitat areas, forest cover, and outcroppings;	*Shown on Plan Sheet C1.*	
c. Utilities existing, including power, water, sewer, holding tanks, bridges, culverts and drainage ways;	*Shown on Plan Sheet C1.*	

16.10.5.2 *continued*		
3. Legal interest documents showing legal interest of the applicant in the property to be developed. Such documents must contain the description upon which the survey was based;	*Deed for Lot 24 found in Attachment B. Attachment B also includes draft Lot Line Adjustment document between Lots 24 & 25 that will be executed within 60 days of project approval.*	
4. Property encumbrances currently affecting the property, as well as any proposed encumbrances;	*None known except regarding Wilson Family Cemetery.*	
5. Water District approval letter, if public water is used, indicating there is adequate supply and pressure to be provided to the development;	*Letter from Water District attached - Attachment C.*	
6. Erosion and sedimentation control plan endorsed by the York County soil and water conservation district or the Town's engineering Consultant;	*Waiver requested.*	
7. Stormwater management preliminary plan for stormwater and other surface water drainage prepared by a registered professional engineer including the general location of stormwater and other surface water drainage areas.	*A stormwater management plan has been prepared for the site and is included in Section 2 of the Final Application Subdivision Review Application.*	
8. Soil survey for York County covering the development. Where the soil survey shows soils with severe restrictions for development, a high intensity Class "A" soil survey must be provided;	*Soils Report prepared by a Soil Scientist is attached - Attachment D.*	
9. Vehicular traffic report estimating the amount and type of vehicular traffic that will be generated by the development on a daily basis and for peak hours.	*77 units* *Wkday 4.99 trips/unit/day = 385 trips* *Sat 5.00 trips/unit/day = 385* *Sun 4.36 trips/unit/day = 336 trips* **Institute of Transportation Engineers, 8th Edition*	
10. Traffic impact analysis in accordance with Section 16.10.5.2D.1 for developments involving forty (40) or more parking spaces or which are projected to generate more than four hundred (400) vehicle trips per day;	*Not applicable – (less than 400 trips per day and less than 40 parking spaces for community center).*	
11. Test pit(s) analysis prepared by a licensed site evaluator when sewage disposal is to be accomplished by subsurface disposal, pits, prepared by a licensed site evaluator;	*Not applicable - Connecting to municipal sewer.*	

16.10.5.2 *continued*		
12. Town Sewage Department or community system authority letter, when sewage disposal is to be through a public or community system, approving the connection and its location;	*Letter from Sewer District attached - Attachment E.*	
a. Additional submissions as may be required by other sections of this Code such as for clustered development, mobile home parks, or junkyards must be provided.	*See c. below.*	
b. Letters of evaluation of the development by the Chief of Police, Fire Chief, Commissioner of Public Works, and, for residential applications, the superintendent of schools, must be collected and provided by the Town Planner.	*Town Planner to address.*	
c. Additional Requirements. In its consideration of an application/plan, the Planning Board may at any point in the review, require the applicant to submit additional materials, studies, analyses, and agreement proposals as it may deem necessary for complete understanding of the application.	*Additional submissions requested by the Planning Board as Conditions of Preliminary Approval are included in Section 5 of the Final Subdivision Review Application Package.*	

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CIVIL
CONSULTANTS

Engineers

Planners

Surveyors

Section 3

Attachment A

USGS Location Plan

Portion of USGS Maps for Kittery & York Harbor	*PREPARED FOR:*	*Residential Development Gary Beers, Yankee Commons Mobile Home Park Expansion*	
JOB NO: 06-684.02	*SCALE: approx 1"=2000'*		

J:\aaa\2006\0668402\USGSMap.doc

CIVIL CONSULTANTS

P.O. Box 100 South Berwick, Maine 03908 207-384-2550

CIVIL
CONSULTANTS

Engineers

Planners

Surveyors

Section 3

Attachment B

Property Deeds

BK7378 PG062

WARRANTY DEED 011905

CONRAD L. FARR, of Kittery, County of York, State of Maine, for consideration paid, grant to STEPHEN A. HYNES, Trustee Under Real Property Trust Agreement Dated March 29, 1995, with a mailing address of Suite 210, 1571B Bellevue Avenue, West Vancouver B.C., Canada, V7V1A6

with **Warranty Covenants**

the land in Kittery, York County, State of Maine.

SEE SCHEDULE A ATTACHED HERETO AND MADE A PART HEREOF

MAINE REAL ESTATE TRANSFER TAX PAID

Witness my hand this 30th day of March, 1995.

Conrad L. Farr

The State of Maine York, ss. March 30, 1995

Then personally appeared the above-named Conrad L. Farr, and acknowledged the foregoing instrument to be his free act and deed,

Before me,

Attorney at Law - Notary Public
Print Name: Danny W. Thornhill
My Commission Expires: 7/25/98

Un\FARR.WD2

MAP 66 LOT 24
BACK LOT

SCHEDULE A

A certain lot or parcel of land shown on a plan entitled, "Standard Boundary Survey of Yankee Commons Mobile Home Park, Idlewood Lane, Kittery, Maine," dated March 1995, by Anderson Livingston Engineers, Inc., to be recorded in the York County Registry of Deeds, more particularly described as follows:

A certain parcel of land located northerly of, but not abutting, Route One in the Town of Kittery, York County and State of Maine, bounded and described as follows:

Beginning at an iron pipe at other land of Conrad L. Farr, being 602 feet, more or less, from Idlewood Lane along Wilson's Lane;

THENCE North 86 degrees 51 minutes 06 seconds West along said Farr land a distance of 38.06 feet to the Southeast corner of herein described parcel;

THENCE North 32 degrees 12 minutes 21 seconds West a distance of 136.48 feet;

THENCE North 05 degrees 55 minutes 38 seconds West a distance of 68.45 feet to a drill hole;

THENCE North 02 degrees 37 minutes 41 seconds West a distance of 183.20 feet to a drill hole in the stone wall;

THENCE North 38 degrees 18 minutes 38 seconds West along said stone wall a distance of 99.50 feet;

THENCE North 37 degrees 00 minutes 14 seconds West along the stone wall a distance of 85.13 feet to a drill hole;

THENCE North 40 degrees 22 minutes 17 seconds West along said stone wall a distance of 75.35 feet to a drill hole;

THENCE North 34 degrees 46 minutes 55 seconds West along said stone wall a distance of 115.91 feet to a drill hole;

THENCE North 37 degrees 47 minutes 20 seconds West a distance of 355.44 feet to a fence post;

THENCE North 36 degrees 34 minutes 41 seconds West a distance of 123.59 feet;

THENCE North 29 degrees 42 minutes 18 seconds West a distance of 48.42 feet to a concrete highway bound;

THENCE North 17 degrees 53 minutes 09 seconds West a distance of 12.23 feet to a concrete highway bound;

THENCE along a curve to the right having a radius of 5,479.58 feet, an arc length of 1,390.03 feet, and a chord which bears North 69 degrees 56 minutes 09 seconds East having a chord distance of 1,386.30 feet to a stone wall;

THENCE South 35 degrees 02 minutes 13 seconds East along other land of Conrad L. Farr a distance of 258.86 feet along said stone wall;

THENCE South 34 degrees 25 minutes 01 seconds East along said stone wall a distance of 208.39 feet;

THENCE South 34 degrees 58 minutes 39 seconds East a distance of 92.83 feet to a drill hole at an intersecting stone wall;

THENCE South 31 degrees 51 minutes 31 seconds East along a stone wall at the Parsons Family Cemetery a distance of 61.93 feet to a drill hole in the stone wall;

THENCE South 35 degrees 36 minutes 44 seconds East along land now or formerly of Robert & Kathleen Prewitt a distance of 70.96 feet to a drill hole;

THENCE South 58 degrees 16 minutes 52 seconds West along a stone wall and said Prewitt land a distance of 21.30 feet to a drill hole;

THENCE South 52 degrees 43 minutes 59 seconds West along the stone wall a distance of 257.03 feet to a drill hole;

THENCE South 35 degrees 03 minutes 19 seconds East along a stone wall a distance of 176.69 feet to a drill hole;

THENCE South 32 degrees 42 minutes 05 seconds East along the stone wall a distance of 92.02 feet to a drill hole;

THENCE South 33 degrees 36 minutes 16 seconds East along the stone wall and land of said Prewitt a distance of 182.49 feet to an iron pipe in the wall at land now or formerly of the Daniel O. Lynch Trust;

THENCE South 23 degrees 38 minutes 09 seconds East along the stone wall and land of said Lynch Trust a distance of 50.54 feet to a drill hole;

THENCE South 37 degrees 40 minutes 10 seconds East along said Lynch Trust land a distance of 76.82 feet to a drill hole in a stone wall;

THENCE South 33 degrees 38 minutes 07 seconds East along the stone wall and said Lynch Trust land a distance of 220.35 feet to a drill hole at a bend in the stone wall at other land of said Farr;

THENCE South 55 degrees 15 minutes 07 seconds West along the stone wall and land of said Farr a distance of 40.00 feet;

THENCE South 58 degrees 36 minutes 16 seconds West along the stone wall a distance of 74.01 feet;

THENCE South 58 degrees 07 minutes 02 seconds West along the stone wall a distance of 90.86 feet to an iron pipe;

THENCE South 57 degrees 15 minutes 45 seconds West a distance of 190.23 feet to an iron pipe;

THENCE South 67 degrees 08 minutes 32 seconds West a distance of 55.71 feet to an iron pipe;

THENCE South 80 degrees 30 minutes 31 seconds West a distance of 26.00 feet to an iron pipe;

THENCE North 85 degrees 46 minutes 29 seconds West a distance of 168.76 feet to an iron pipe;

THENCE North 85 degrees 36 minutes 57 seconds West a distance of 205.88 feet to an iron pipe;

THENCE North 84 degrees 28 minutes 48 seconds West a distance of 229.23 feet to an iron pipe;

THENCE North 86 degrees 47 minutes 48 seconds West a distance of 229.75 feet to the POINT OF BEGINNING, and containing 43.9533 acres of land, more or less.

Subject to access rights to the Wilson Family Cemetery.

SUBJECT to the terms, conditions, easements, restrictions and exceptions as shown on said Plan and as contained in the Notes on said Plan.

BEING the same parcel of land conveyed to Conrad L. Farr by deed of Joseph Kozlowski Jr. et al., dated May 20, 1981 and recorded May 26, 1981 in the York County Registry of Deeds in Book 2790, Page 207. See also deed of Wilson Davison et al. to Conrad L. Farr dated December 13, 1982, recorded May 31, 1983, in Book 3093, Page 203, of the York County Registry of Deeds. See also deed of Kathleen Kozlowski et al. to Conrad L. Farr dated November 17, 1983 and recorded November 18, 1983 in Book 3200, Page 56, of the York County Registry of Deeds. See also deed of William W. Davison to Conrad L. Farr dated January 3, 1983 and recorded May 31, 1983 in Book 3093, Page 201, of the York County Registry of Deeds.

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95 APR -5 AM 8:52

ATTEST: Lois M. Mace

REGISTER OF DEEDS

CONRAD L. FARR 049062

of 16 Norton Road, #5, Kittery, Maine 03904

(XXXX XXXXXXX), for consideration paid,
grant to STEPHEN A. HYNES, Trustee Under Real Property Trust Agreement Dated March 29, 1995

of Suite 210, 1571B Vellevue Avenue, W. Vancouver, B.C. Canada V7V1A6
with **Warranty Covenants**
the land in Kittery, York County, State of Maine.

SEE SCHEDULE A ATTACHED HERETO AND MADE A PART HEREOF.

XXXXXXXXXXXXX

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX.

Witness my hand and seal this 30th day of November 1995

[signature] [signature]
Conrad L. Farr

The State of Maine YORK ss. November 30 1995

Then personally appeared the above named Conrad L. Farr

and acknowledged the foregoing instrument to be his free act and deed,

Before me, [signature]
Justice of the Peace - ~~Attorney at Law~~ - Notary Public

NICHOLAS S. STRATER
MY COMMISSION EXPIRES
SEPT. 4, 2001

1201 WARRANTY DEED

MAP 66
LOT 25
FRONT LOT

SCHEDULE A

A certain parcel of land situated northerly of Idlewood Lane and Route One in the Town of Kittery, York County and State of Maine, bounded and described as follows:

Beginning at the intersection of Idlewood Lane and Wilson Lane,

thence, North 29° - 25'-43" West along Wilson Lane for a distance of 17.35 feet to a drill hole;
thence, North 31° - 18'-24" West along Wilson Lane for a distance of 153.88 feet to a drill hole;
thence, North 31° - 48'-40" West along Wilson Lane for a distance of 97.55 feet to a drill hole;
thence, North 36° - 15'-47" West along Wilson Lane for a distance of 34.23 feet to a drill hole;
thence, North 33° - 21'-57" West along Wilson Lane for a distance of 44.64 feet to a drill hole;
thence, North 31° - 52'-53" West along Wilson Lane for a distance of 151.29 feet to a drill hole;
thence, North 33° - 50'-27" West along Wilson Lane for a distance of 103.24 feet to an iron pipe;
thence, South 86° - 47'-48" East for a distance of 229.75 feet to an iron pipe;
thence, South 84° - 28'-48" East for a distance of 229.23 feet to an iron pipe;
thence, South 85° - 36'-57" East for a distance of 205.88 feet to an iron pipe;
thence, South 85° - 46'-29" East for a distance of 168.76 feet to an iron pipe;
thence, North 80° - 30'-31" East for a distance of 26.00 feet to an iron pipe;
thence, North 67° - 08'-32" East for a distance of 55.71 feet to an iron pie;
thence, North 57° - 15'-45" East for a distance of 190.23 feet to an iron pipe;
thence, North 58° - 07'-02" East for a distance of 90.86 feet along a stone wall;
thence, North 58° - 36'-16" East for a distance of 74.01 feet along a stone wall,
thence, North 55° - 15'-07" East for a distance of 40.00 feet along a stone wall to a drill hole in another stone wall;
thence, South 34° - 01'-41" East along land now or formerly of the Daniel O. Lynch Trust for a distance of 195.50 feet to an iron pipe;
thence, South 33° - 17'-40" East along land now or formerly of the Wilson Five Service Co., Inc. for a distance of 152.62 feet;
thence, South 36° - 57'-01" East for a distance of 46.10 feet;
thence, South 33° - 47'-10" East still along land now or formerly of said Wilson Five Service Co., Inc. for a distance of 121.10 feet to land of the State of Maine at the sideline of Route One;
thence, South 63° - 55'-00" West along the sideline of Route One for a distance of 343.99 feet to a concrete highway bound,
thence, along a curve to the right with a radius of 3,709.72 feet, an arc length of 443.29 feet and a central angle of 6° - 50'-47" to a concrete highway bound;
thence, North 72° - 51'-26" West for a distance of 177.68 feet to a point on a stonewall;
thence, North 59° - 44'-48" West along the stonewall for a distance of 23.49 feet;
thence, North 78° - 18'-45" West along the stonewall for a distance of 87.36 feet;
thence, North 70° - 55'-11" West along Idlewood Lane for a distance of 44.63 feet;
thence, South 89° - 41'-15" West along a stonewall and Idlewood Lane for a distance of 44.66 feet;

thence, South 80° - 31'-56" West along said stonewall for a distance of 46.77 feet;
thence, South 74° - 01'-06" West along Idlewood Lane for a distance of 84.33 feet to the easterly side of Wilson Lane and the point of beginning.

Containing 14.152 acres, as shown on a plan entitled "Standard Boundary Survey of Yankee Commons Mobile Home Park" by Anderson-Livingston Engineers, Inc., dated March, 1995.

BEING the same premises conveyed to Conrad L. Farr by Deed of Lester A. Avery and Dorothy M. Avery dated December 23, 1986 and recorded in the York County Registry of Deeds in Book 4124, Page 25.

95 NOV 30 PM 1:20

ATTEST: [illegible]
REGISTER OF DEEDS

[illegible]

3 pgs

6.21 ACRE PORTION OF TAX MAP 66, LOT 25 (ALONG IDLEWOOD LANE) TO BE COMBINED WITH TAX MAP 66, LOT 24

The hereinafter-described parcel of land, located in the Town of Kittery, York County, State of Maine, situated on the northwesterly side of U.S. Route One and Idlewood Lane, being a portion of lands of Stephen A. Hynes, Trustee, described in a deed from Conrad L. Farr, dated November 30, 1995, and recorded in volume 7641, page 238 of the York County Registry of Deeds and being more particularly described as follows:

[Bearings in the following descriptions are based on Grid North, Maine State Plane Coordinate System, West Zone (NAD83 Epoch 2002.0)].

Beginning at the northwesterly corner of the herein described tract, located on the northerly side of Wilson Lane, approximately 600 feet northwesterly of the northwesterly sideline of Idlewood Lane, at a point in the northeasterly line of land now or formerly of Stephen A. Hynes, Trustee, described in a deed recorded in volume 7378, page 52 of the York County Registry of Deeds, being also a point in the southeasterly line of land now or formerly of Stephen A. Hynes, Trustee, described in a deed recorded in volume 7378, page 62 of the York County Registry of Deeds, said point of beginning being marked by an existing iron pipe at the northwesterly end of a stone wall;

thence N 73°35’05” E, by said land of Stephen A. Hynes, Trustee, 229.69 feet, to an existing iron pipe;

thence N 75°54’00” E, by said land of Stephen A. Hynes, Trustee, 229.23 feet, to an existing iron pipe;

thence N 74°45’51” E, by said land of Stephen A. Hynes, Trustee, 35.12 feet, to a 5/8” diameter rebar with plastic identification cap marked “CIVIL CONSULT PLS 2362” to be set;

thence S 62°52’56” E, severing the land of the grantor, 666.41 feet, to a 5/8” diameter rebar with plastic identification cap marked “CIVIL CONSULT PLS 2362” to be set in the northwesterly sideline of U.S. Route One;

thence southwesterly by the northwesterly sideline of U.S. Route One, along a curve concave to the northwest, 146.63 feet, to an existing granite highway bound at the intersection of the northwesterly sideline of U.S. Route One and the northwesterly sideline of Idlewood Lane (Old U.S. Route One), said curve having a chord bearing of S 50°00’35” W, a chord length of 146.62 feet, a radius of 3,709.72 feet and an included angle of 2°15’53”;

thence S 87°31’18” W, by said northwesterly sideline of Idlewood Lane and/or Old Route One, 103.39 feet, to a point;

thence S 87°31’18” W, by said northwesterly sideline of Idlewood Lane and/or Old Route One, along a stone wall, 74.29 feet, to a point;

thence N 79°22’04” W, by said northwesterly sideline of Idlewood Lane and/or Old Route One, along a stone wall, 23.49 feet, to a point;

thence S 82°03’59” W, by said northwesterly sideline of Idlewood Lane and/or Old Route One, along a stone wall, 87.36 feet, to a point;

thence S 89°27’33” W, by said northwesterly sideline of Idlewood Lane and/or Old Route One, along a stone wall, 44.63 feet, to a point;

thence S 70°03’59” W, by said northwesterly sideline of Idlewood Lane and/or Old Route One, along a stone wall, 44.66 feet, to a point

thence S 60°54’40” W, by said northwesterly sideline of Idlewood Lane and/or Old Route One, along a stone wall, 46.77 feet, to a point;

thence S 54°23’50” W, by said northwesterly sideline of Idlewood Lane and/or Old Route One, 84.33 feet, to an existing painted rock at land now or formerly of Stephen A. Hynes, Trustee, described in a deed recorded in volume 7378, page 52 of the York County Registry of Deeds;

thence N 49°02’59” W, by said land of Stephen A. Hynes, Trustee, along a stone wall, 17.35 feet, to an existing drill hole;

thence N 50°55’40” W, by said land of Stephen A. Hynes, Trustee, along a stone wall, 153.88 feet, to an existing drill hole;

thence N 51°25’56” W, by said land of Stephen A. Hynes, Trustee, along a stone wall, 97.55 feet, to an existing drill hole;

thence N 55°53’03” W, by said land of Stephen A. Hynes, Trustee, along a stone wall, 34.23 feet, to an existing drill hole;

thence N 52°59’13” W, by said land of Stephen A. Hynes, Trustee, along a stone wall, 44.64 feet, to an existing drill hole;

thence N 51°30’09” W, by said land of Stephen A. Hynes, Trustee, along a stone wall, 151.29 feet, to an existing drill hole;

thence N 53°27’43” W, by said land of Stephen A. Hynes, Trustee, along a stone wall, 103.24 feet, to the POINT OF BEGINNING, containing approximately 6.21 acres.

The parcel described herein is depicted on a plan entitled “REVISED COMPILED BOUNDARY AND EXISTING CONDITIONS PLAN OF LAND OF STEPHEN A. HYNES, TRUSTEE, IDLEWOOD LANE / U.S. ROUTE ONE, TOWN OF KITTERY, YORK COUNTY, MAINE”, dated May 22, 2012, to be recorded.

The perimeter boundary of the parent tract is based on a plan entitled “STANDARD BOUNDARY SURVEY OF YANKEE COMMONS MOBILE HOME PARK, IDLEWOOD LANE, KITTERY, MAINE”, dated March, 1995, prepared by Anderson Livingston Engineers, Inc. (ALE) Monuments in the hereinabove described legal description are based on the ALE plan. CIVIL CONSULTANTS has not independently verified the position of every monument depicted on the ALE plan. Deed research has been limited to the time period between 1995 (date of ALE plan) and May 21, 2012. CIVIL CONSULTANTS has not performed an independent boundary retracement survey.

Prepared by Michael P. Peverett, Maine PLS #2362 Date: May 22, 2012

j:\aaa\2006\0668402\LEGAL-DESC\PORTION-LOT25.DOC

CIVIL
CONSULTANTS

Engineers

Planners

Surveyors

Section 3

Attachment C

Water Department Capacity Letter

06-684.02

ROGER C. RAYMOND, JR., President
ROBERT P. WYMAN, Treasurer

JAMES E. GOLTER, Secretary
MICHAEL S. ROGERS, Superintendent

OFFICE OF

KITTERY WATER DISTRICT

17 State Road
Kittery, Maine 03904-1565
TEL: 207-439-1128
FAX: 207-439-8549
Email: kitterywater@comcast.net

RECEIVED
MAY 07 2012
CIVIL CONSULTANTS

Kittery Planning Board
200 Rogers Road
Kittery, ME 03904

May 3, 2012

Re: Proposed Expansion of the Yankee Commons Mobile Home Park Off Idlewood Lane, Kittery

Dear Planning Board Members,

Please accept this letter as verification that the Kittery Water District does have the capacity to supply the proposed expansion of the Yankee Common Mobile Home Park with municipal water service including fire protection service.

Sincerely,

Michael S. Rogers

Michael S. Rogers
Superintendent

cc: George D. Chobanian, P.E., Civil Consultants

CIVIL
CONSULTANTS

Engineers

Planners

Surveyors

Section 3

Attachment D

Soils Information

RECEIVED
JAN 17 2008
CIVIL CONSULTANTS

KENNETH GARDNER
Soil Consultant – SS #61
JRK SOIL SEARCH, INC.
PO BOX 291
LIMINGTON, ME 04049
(207) 637-2260

December 28, 2007

Tom Harmon
Civil Consultants
PO Box 100
So. Berwick, ME 03908

Re: Soil Narrative, Route 1 Kittery, ME

Dear Mr. Harmon;

The enclosed Soils Map is a Class B Soil Survey. The test pits were located by G.P.S. and the wetland boundary was also located by G.P.S.

The site is generally wooded with pine, hemlock, birch, aspen, oak and maple. There is a wetland area on the site with alders, birch and cattails.

The soils on the site are generally shallow to moderately deep to bedrock loamy glacial till. These areas are at the highest areas of the site. The lower areas consist of poorly drained to very poorly drained marine sediments.

There is a small stream which runs through the northern portion of the property.

If you have any questions, please contact me.

Sincerely,

Kenneth Gardner
C. SS #61

FORM E 2/02

SOIL CONDITIONS SUMMARY TABLE

SUMMARY LOG OF SUBSURFACE EXPLORATIONS AT PROJECT SITES

Project Name: Yankee Commons

Applicant Name: c/o Civil Consultants

Project Location (municipality): Kittery

Lot No.	Exploration Symbol (TP 1, B 2, etc.)	✓ or ✗ if at SSWD Field	Description of subsurface materials by: ● Soil profile/condition (if by S.E.), ● Soil series name (if by C.S.S.), or by ● Geologic unit (if by C.G.)	Depths to (check one): ☐ inches ☐ cm — Mottling (seasonal watertable)	Bedrock	Firm or Restrictive Layer	Limit of Exploration	Ground Surface Slope (%)
	TP1		Peru F.S.L.	22"	None in 36"	24	33"	3-8
	TP2		Tunbridge F.S.L.	None	30"	None	30"	5-8
	TP3		Lyman F.S.L.	None	16"	None	16"	3-8
	TP4		40" Filled Land over Lyman F.S.L.	None	60"	None	60"	3-8
	TP5		36" Filled Land (gravelly sandy loam)	None	36"	None	36"	3-8
	TP6		Tunbridge F.S.L.	None	31"	None	31"	3-8
	TP7		Abrams F.S.L.	None	6"	None	6"	3-8
	TP8		Abrams F.S.L.	None	10	None	10	8-15
	TP9		Peru F.S.L.	18"	None	20	40	8-15
	TP10		Lamoine Si L.	15"	None	18	41	3-8
	TP11		Peru F.S.L.	22"	None	23	43	8-15
	TP12		Lamoine Si L.	10"	None	13	28	3-8
	TP13		Tunbridge F.S.L.	None	22	None	22	8-15
	TP14		Scantic Si L.	4	None	8	20	3-8
	TP15		Abrams F.S.L.	None	6	None	6	3-8
	TP16		Tunbridge F.S.L.	None	26	None	26	3-8
	TP17		Scantic Si L.	4	None	9	24	3-8
	TP18		Scantic Si L.	4	None	8	23	3-8
	TP19		Peru F.S.L.	16	None	18	32	8-15
	TP20		Becket F.S.L.	None	None	30	49	3-8
	TP21		Skerry F.S.L.	30	None	33	49	3-8
	TP22		Marlow F.S.L.	None	None	28	46	8-15
	TP23		Skerry F.S.L.	18	None	22	49	3-8
	TP24		Lyman F.S.L.	None	18	None	18	3-8
	TP25		Tunbridge F.S.L.	None	30	None	30	15-25%
	TP26+27		Filled Land silt loam material	Firm	and Mottled Throughout			0-3
	TP28		Lyman F.S.L.	None	18	None	18	15-25%
	TP29		Peru F.S.L.	24	None	28	46	3-8
	TP30		Lyman F.S.L.	None	14	None	14	3-8
	TP31		Tunbridge F.S.L.	None	34	None	34	3-8

INVESTIGATOR INFORMATION AND SIGNATURE

Signature: Kenneth Gardner

Date: 1-15-08

Name Printed/typed: Kenneth Gardner

Cert/Lic/Reg. # 61

Title: ☐ Licensed Site Evaluator ☐ Certified Geologist ☑ Certified Soil Scientist ☐ Other:

STATE OF MAINE KENNETH ROBERT GARDNER #61 CERTIFIED SOIL SCIENTIST

after professional seal

FORM E 2/02

SOIL CONDITIONS SUMMARY TABLE

SUMMARY LOG OF SUBSURFACE EXPLORATIONS AT PROJECT SITES

Project Name:	Applicant Name:	Project Location (municipality):
Yankee Commons	C/o Civil Consultants	Kittery

Lot No.	Exploration Symbol (TP 1, B 2, etc.)	✓ or ✗ if at SSWD Field	Description of subsurface materials by: ● Soil profile/condition (if by S.E.), ● Soil series name (if by C.S.S.), or by ● Geologic unit (if by C.G.)	Depths to (check one): ☐ inches ☐ cm — Mottling (seasonal watertable)	Bedrock	Firm or Restrictive Layer	Limit of Exploration	Ground Surface Slope (%)
	TP32		Tunbridge f.S.L.	None	24	None	24	3-8
	TP33		Tunbridge f.S.L.	None	36	None	36	3-8
	TP34		Scantic S.L.	6	None	12	29	3-8

INVESTIGATOR INFORMATION AND SIGNATURE

Signature: Kenneth R. Gardner	Date: 1-15-08
Name Printed/typed: Kenneth Gardner	Cert/Lic/Reg. # 61
Title: ☐ Licensed Site Evaluator ☐ Certified Geologist	☒ Certified Soil Scientist ☐ Other:

STATE OF MAINE KENNETH ROBERT GARDNER #61 CERTIFIED SOIL SCIENTIST

affix professional seal

KENNETH GARDNER
Soil Consultant – SS #61
JRK SOIL SEARCH, INC.
PO Box 291
Limington, ME 04049
(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Scantic Silt Loam 0 – 8%
Typic Haplaquepts

Parent Material: Glacio marine

Landform: nearly level, to bottom of gullies

Position in Landscape: lower area on the site

Slope Gradient Ranges: 0 – 8% gently rolling

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Poorly drained

Typical Profile
Description: **Surface Layer: 0 – 6" dark grayish brown friable silt loam**
Subsurface Layer: 6 – 12" olive gray friable silt loam mottled
Subsoil Layer: 12 – 18" olive gray firm silt loam mottled
Substratum: 18 –48" gray firm silty clay loam mottled

Hydrologic Group : D

Surface Run Off: Slow

Permeability: Moderate in Solum, very slow in Subsoil

Depth to Bedrock: greater than 60"

Hazard to Flooding: Seasonal flooding in flat areas

INCLUSIONS (Within Mapping Unit)

Similar: Swanton 5%

Contrasting: Lamoine 10%

USE AND MANAGEMENT

These areas have a very high seasonal water table which must be considered in the road and building construction.

KENNETH GARDNER
Soil Consultant – SS #61
JRK SOIL SEARCH, INC.
PO Box 291
Limington, ME 04049
(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Madeland – 1, 0 – 8% and 8 – 15%

Parent Material: 36 – 40" sandy loam to gravelly sandy loam(fill) over bedrock

Landform: glaciated uplands

Position in Landscape: higher elevations of the site

Slope Gradient Ranges: 0 – 8% and 8 – 15%

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Well drained

Typical Profile
Description: **Surface Layer:**
Subsurface Layer: 0 – 36" olive brown to brown friable sandy loam to gravelly sandy loam (fill) over bedrock
Subsoil Layer:
Substratum:

Hydrologic Group : Like "C"

Surface Run Off: Medium

Permeability: Moderate

Depth to Bedrock: 36 – 62"

Hazard to Flooding: None

INCLUSIONS (Within Mapping Unit)

Similar: Lyman & Abrams 10%

Contrasting: None

USE AND MANAGEMENT

These are small areas of the site which have been filled in the last 20 – 40 years (approx.). These areas are suited for building and road construction.

KENNETH GARDNER
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JRK SOIL SEARCH, INC.
PO Box 291
Limington, ME 04049
(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Madeland – 2, 0 – 8% and > 25%

Parent Material: 60 "+ silty clay loam (fill)

Landform: Marine plain

Position in Landscape: Lower area of site which was filled approx. 1950

Slope Gradient Ranges: 0 – 8% and greater than 25%

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Poorly drained

Typical Profile
Description: **Surface Layer: 1 – 0 leaf litter**
Subsurface Layer: 0 – 60" firm gray silty clay loam (fill)
Subsoil Layer:
Substratum:

Hydrologic Group : Like "D"

Surface Run Off: slow

Permeability: very slow

Depth to Bedrock: Greater than 60"

Hazard to Flooding: None

INCLUSIONS (Within Mapping Unit)

Similar: None

Contrasting: None

USE AND MANAGEMENT

This area was filled approx. 1950's. The stability of this area may be suspect for building and road construction.

KENNETH GARDNER
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PO Box 291
Limington, ME 04049
(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Lamoine Si. L. 0 –8%
Aeric Haplaquepts

Parent Material: Glacio marine

Landform: Marine plain

Position in Landscape: Lower elevations of the site but not the lowest

Slope Gradient Ranges: 0 – 8%

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Somewhat poorly drained

Typical Profile
Description: **Surface Layer: 1 – 0 leaf litter**
Subsurface Layer: 0 – 8" dark brown friable silt loam
Subsoil Layer: 8 – 15" olive yellow brown friable silt loam
Substratum: 15 – 40" firm olive silt loam to silt/clay loam

Hydrologic Group : D

Surface Run Off: Medium

Permeability: Moderately to slow

Depth to Bedrock: Greater than 40"

Hazard to Flooding: None, seasonal puddles in small concave spots

INCLUSIONS (Within Mapping Unit)

Similar: Buxton Soil 10%

Contrasting: Scantic 15%

USE AND MANAGEMENT

These areas are suited for building and road construction.

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(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Buxton Si. L. 8 – 15%
Aquic Dystric Eutrochrepts

Parent Material: Glacio marine sediments

Landform: Marine plain

Position in Landscape: Intermediate elevations of the site

Slope Gradient Ranges: 8 – 15%

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Moderately well-drained

Typical Profile
Description: **Surface Layer: 1 – 0 leaf litter**
Subsurface Layer: 0 – 9" dark brown friable silt loam
Subsoil Layer: 9 – 18" yellow brown to olive yellow brown friable Silt loam
Substratum: 18 – 40" olive gray firm silty clay loam

Hydrologic Group : D

Surface Run Off: Medium to rapid on D – slope

Permeability: Moderately slow to slow

Depth to Bedrock: Greater than 40"

Hazard to Flooding: None

INCLUSIONS (Within Mapping Unit)

Similar: Peru Soil 10%

Contrasting: Lamoine 10%

USE AND MANAGEMENT

These areas are suited for building and road construction.

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JRK SOIL SEARCH, INC.
PO Box 291
Limington, ME 04049
(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Buxton Si. L. 15 –25%
Aquic Dystric Eutrochrepts

Parent Material: Glacio marine sediments

Landform: Marine plain

Position in Landscape: Intermediate elevations of the site

Slope Gradient Ranges: 15 – 25%

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Moderately well-drained

Typical Profile
Description: **Surface Layer: 1 – 0 leaf litter**
Subsurface Layer: 0 – 9" dark brown friable silt loam
Subsoil Layer: 9 – 18" yellow brown to olive yellow brown friable Silt loam
Substratum: 18 – 40" olive gray firm silty clay loam

Hydrologic Group : D

Surface Run Off: Medium to rapid on D – slope

Permeability: Moderately slow to slow

Depth to Bedrock: Greater than 40"

Hazard to Flooding: None

INCLUSIONS (Within Mapping Unit)

Similar: Peru Soil 10%

Contrasting: Lamoine 10%

USE AND MANAGEMENT

These areas are suited for building and road construction.

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PO Box 291
Limington, ME 04049
(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Buxton Si. L. 0 – 8%
Aquic Dystric Eutrochrepts

Parent Material: Glacio marine sediments

Landform: Marine plain

Position in Landscape: Intermediate elevations of the site

Slope Gradient Ranges: 0 – 8%

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Moderately well-drained

Typical Profile
Description: **Surface Layer: 1 – 0 leaf litter**
Subsurface Layer: 0 – 9" dark brown friable silt loam
Subsoil Layer: 9 – 18" yellow brown to olive yellow brown friable Silt loam
Substratum: 18 – 40" olive gray firm silty clay loam

Hydrologic Group : D

Surface Run Off: Medium to rapid on D – slope

Permeability: Moderately slow to slow

Depth to Bedrock: Greater than 40"

Hazard to Flooding: None

INCLUSIONS (Within Mapping Unit)

Similar: Peru Soil 10%

Contrasting: Lamoine 10%

USE AND MANAGEMENT

These areas are suited for building and road construction.

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JRK SOIL SEARCH, INC.
PO Box 291
Limington, ME 04049
(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Biddeford Mucky Peat 0 – 3%
Histic Humaquepts

Parent Material: Organics over glacio marine sediments

Landform: Marine plain

Position in Landscape: Concave, lowest areas of site

Slope Gradient Ranges: 0 – 3%

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Very poorly drained

Typical Profile
Description: **Surface Layer: 1 -0 leaf litter, 0 – 10"very dark brown mucky peat**
Subsurface Layer: 10 – 18" gray friable silt loam
Subsoil Layer: 18 – 24" olive gray friable silty clay
Substratum: 24 – 36" gray firm silty clay

Hydrologic Group : D

Surface Run Off: Slight

Permeability: Moderately slow to very slow

Depth to Bedrock: greater than 40"

Hazard to Flooding: Seasonal pond - wetland

INCLUSIONS (Within Mapping Unit)

Similar: Soil with a thicker organic horizon

Contrasting: Scantic

USE AND MANAGEMENT

These areas should be avoided for any construction or development. These areas are very wet.

KENNETH GARDNER
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JRK SOIL SEARCH, INC.
PO Box 291
Limington, ME 04049
(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Abrams FSL 0 – 8%
Lithic Udorthents

Parent Material: Glacial till

Landform: Glaciated upland

Position in Landscape: higher elevations on the site

Slope Gradient Ranges: 0 – 8%

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Excessively drained

Typical Profile
Description: **Surface Layer: 0 – 8" dark brown friable fine sandy loam**
Bedrock at 8"
Subsurface Layer:
Subsoil Layer:
Substratum:

Hydrologic Group : C/.D

Surface Run Off: Slow to moderate

Permeability: Moderate to moderately rapid

Depth to Bedrock: 0 – 8"

Hazard to Flooding: None

INCLUSIONS (Within Mapping Unit)

Similar: Lyman – soil which is deeper to Bedrock 10 – 15%

Contrasting: Rock outcrops 5%

USE AND MANAGEMENT

These areas are very shallow to bedrock which must be considered in the road and building construction. Blasting will be required.

KENNETH GARDNER
Soil Consultant – SS #61
JRK SOIL SEARCH, INC.
PO Box 291
Limington, ME 04049
(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Abrams FSL 15 – 25%
Lithic Udorthents

Parent Material: Glacial till

Landform: Glaciated upland

Position in Landscape: higher elevations on the site

Slope Gradient Ranges: 15 – 25%

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Excessively drained

Typical Profile
Description: **Surface Layer: 0 – 8" dark brown friable fine sandy loam**
Bedrock at 8"
Subsurface Layer:
Subsoil Layer:
Substratum:

Hydrologic Group : C/.D

Surface Run Off: Slow to moderate

Permeability: Moderate to moderately rapid

Depth to Bedrock: 0 – 8"

Hazard to Flooding: None

INCLUSIONS (Within Mapping Unit)

Similar: Lyman – soil which is deeper to Bedrock 10 – 15%

Contrasting: Rock outcrops 5%

USE AND MANAGEMENT

These areas are very shallow to bedrock which must be considered in the road and building construction. Blasting will be required.

KENNETH GARDNER
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PO Box 291
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(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Skerry FSL 0 – 8%

Parent Material: Glacial till

Landform: Glaciated upland

Position in Landscape: Intermediate elevations on the site

Slope Gradient Ranges: 0 – 8%

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Moderaterly well-drained

Typical Profile
Description: **Surface Layer: 0 – 7" dark friable fine sandy loam**
Subsurface Layer: 6 – 24" yellow brown friable fine sandy loam to sandy loam
Subsoil Layer: 24 – 30" olive brown friable sandy loam to loamy sand
Substratum: 30 – 50" olive brown firm loamy sand (stoney)

Hydrologic Group : C

Surface Run Off: Slow

Permeability: Moderate in the Solum, slow in the dense Substratum

Depth to Bedrock: greater than 40"

Hazard to Flooding: None

INCLUSIONS (Within Mapping Unit)

Similar: Peru 10%

Contrasting: Tunbridge 10%

USE AND MANAGEMENT

These areas are suitable for building and road construction.

KENNETH GARDNER
Soil Consultant – SS #61
JRK SOIL SEARCH, INC.
PO Box 291
Limington, ME 04049
(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Lyman FSL 0 – 8%
Lithic Haplorthods

Parent Material: Glacial till

Landform: Glaciated upland

Position in Landscape: higher elevations on the site

Slope Gradient Ranges: 0 – 8%

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Somewhat excessively drained

Typical Profile
Description: **Surface Layer: 0 – 8" dark brown friable fine sandy loam**
Subsurface Layer: 8 – 16" yellow brown friable sandy loam
Subsoil Layer: 16 – 20" olive brown friable sandy loam
Substratum: Bedrock

Hydrologic Group : C/.D

Surface Run Off: Slow to moderate

Permeability: Moderate to moderately rapid

Depth to Bedrock: 10 – 20"

Hazard to Flooding: None

INCLUSIONS (Within Mapping Unit)

Similar: Tunbridge 10%

Contrasting: Abrams 10%

USE AND MANAGEMENT

These areas are shallow to bedrock which may require blasting for road construction and dwelling construction.

KENNETH GARDNER
Soil Consultant – SS #61
JRK SOIL SEARCH, INC.
PO Box 291
Limington, ME 04049
(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Lyman FSL 15 – 25%
Lithic Haplorthods

Parent Material: Glacial till

Landform: Glaciated upland

Position in Landscape: higher elevations on the site

Slope Gradient Ranges: 15 – 25%

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Somewhat excessively drained

Typical Profile
Description: **Surface Layer: 0 – 8" dark brown friable fine sandy loam**
Subsurface Layer: 8 – 16" yellow brown friable sandy loam
Subsoil Layer: 16 – 20" olive brown friable sandy loam
Substratum: Bedrock

Hydrologic Group : C/D

Surface Run Off: Slow to moderate

Permeability: Moderate to moderately rapid

Depth to Bedrock: 10 – 20"

Hazard to Flooding: None

INCLUSIONS (Within Mapping Unit)

Similar: Tunbridge 10%

Contrasting: Abrams 10%

USE AND MANAGEMENT

These areas are shallow to bedrock which may require blasting for road construction and dwelling construction.

KENNETH GARDNER
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(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Lyman FSL 8 – 15%
Lithic Haplorthods

Parent Material: Glacial till

Landform: Glaciated upland

Position in Landscape: higher elevations on the site

Slope Gradient Ranges: 8 – 15%

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Somewhat excessively drained

Typical Profile
Description: **Surface Layer: 0 – 8" dark brown friable fine sandy loam**
Subsurface Layer: 8 – 16" yellow brown friable sandy loam
Subsoil Layer: 16 – 20" olive brown friable sandy loam
Substratum: Bedrock

Hydrologic Group : C/D

Surface Run Off: Slow to moderate

Permeability: Moderate to moderately rapid

Depth to Bedrock: 10 – 20"

Hazard to Flooding: None

INCLUSIONS (Within Mapping Unit)

Similar: Tunbridge 10%

Contrasting: Abrams 10%

USE AND MANAGEMENT

These areas are shallow to bedrock which may require blasting for road construction and dwelling construction.

KENNETH GARDNER
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JRK SOIL SEARCH, INC.
PO Box 291
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(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Becket FSL 0 – 8%
Typic Haplorthods

Parent Material: Compact glacial till

Landform: Glacial upland

Position in Landscape: Higher elevations on the site

Slope Gradient Ranges: Generally 3 – 8%, and short steep slopes

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Well-drained

Typical Profile Description:
Surface Layer: 1 – 0" leaf litter
Subsurface Layer: 0 – 8" dark brown friable fine sandy loam
Subsoil Layer: 8 – 24" yellow brown friable sandy loam
Substratum: 24 – 48" olive brown firm gravelly loamy sand

Hydrologic Group : C

Surface Run Off: Slow to moderate

Permeability: Moderate in Solum, slow in Substratum

Depth to Bedrock: greater than 48"

Hazard to Flooding: None

INCLUSIONS (Within Mapping Unit)

Similar: Marlow 10%

Contrasting: Skerry 10%

USE AND MANAGEMENT

This is a well-drained glacial till which is well suited for the placement of dwellings, roads, sewer and water lines.

KENNETH GARDNER
Soil Consultant – SS #61
JRK SOIL SEARCH, INC.
PO Box 291
Limington, ME 04049
(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Marlow FSL 8 –15%
Typic Haplorthods

Parent Material: Compact glacial till

Landform: Glaciated upland

Position in Landscape: Higher elevations on the site

Slope Gradient Ranges: 8 – 15%

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Well-drained

Typical Profile
Description: **Surface Layer: 0 – 4" dark brown friable fine sandy loam**
Subsurface Layer: 4 – 10" reddish brown friable fine sandy loam
Subsoil Layer: 10 – 20" yellow brown friable fine sandy loam
Substratum: 20 – 40" olive brown firm gravelly sandy loam

Hydrologic Group : C

Surface Run Off: Moderate

Permeability: Moderate in Solum, slow in Substratum

Depth to Bedrock: greater than 40"

Hazard to Flooding: None

INCLUSIONS (Within Mapping Unit)

Similar: Tunbridge 15%

Contrasting: Lyman 10%

USE AND MANAGEMENT

These areas are suited for building and road construction.

KENNETH GARDNER
Soil Consultant – SS #61
JRK SOIL SEARCH, INC.
PO Box 291
Limington, ME 04049
(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Peru FSL 0 –8%
Aquic Haplorthods

Parent Material: Glacial till

Landform: Glaciated upland

Position in Landscape: Areas around the bedrock outcrops on the site

Slope Gradient Ranges: 0 – 8%

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Moderately well-drained

Typical Profile
Description: **Surface Layer: 0 – 6" dark friable fine sandy loam**
Subsurface Layer: 6 – 12" yellow brown friable fine sandy loam
Subsoil Layer: 12 – 20" yellow brown friable sandy loam
Substratum: 20 – 48" olive gray firm stoney sandy loam

Hydrologic Group : C

Surface Run Off: Slow

Permeability: Moderate in Solum, slow in Substratum

Depth to Bedrock: Generally greater than 40", with inclusions of moderately deep to bedrock

Hazard to Flooding: None

INCLUSIONS (Within Mapping Unit)

Similar: Marlow & Skerry 10%

Contrasting: Lamoine & Tunbridge 5%

USE AND MANAGEMENT

These areas are suited for building and road construction.

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JRK SOIL SEARCH, INC.
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(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Peru FSL 8 – 15%
Aquic Haplorthods

Parent Material: Glacial till

Landform: Glaciated upland

Position in Landscape: Areas around the bedrock outcrops on the site

Slope Gradient Ranges: 8 – 15%

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Moderately well-drained

Typical Profile
Description: **Surface Layer: 0 – 6" dark friable fine sandy loam**
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Surface Run Off: Slow

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Depth to Bedrock: Generally greater than 40", with inclusions of moderately deep to bedrock

Hazard to Flooding: None

INCLUSIONS (Within Mapping Unit)

Similar: Marlow & Skerry 10%

Contrasting: Lamoine & Tunbridge 5%

USE AND MANAGEMENT

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JRK SOIL SEARCH, INC.
PO Box 291
Limington, ME 04049
(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Peru FSL 15 – 25%
Aquic Haplorthods

Parent Material: Glacial till

Landform: Glaciated upland

Position in Landscape: Areas around the bedrock outcrops on the site

Slope Gradient Ranges: 15– 25%

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Moderately well-drained

Typical Profile
Description: **Surface Layer: 0 – 6" dark friable fine sandy loam**
Subsurface Layer: 6 – 12" yellow brown friable fine sandy loam
Subsoil Layer: 12 – 20" yellow brown friable sandy loam
Substratum: 20 – 48" olive gray firm stoney sandy loam

Hydrologic Group : C

Surface Run Off: Slow

Permeability: Moderate in Solum, slow in Substratum

Depth to Bedrock: Generally greater than 40", with inclusions of moderately deep to bedrock

Hazard to Flooding: None

INCLUSIONS (Within Mapping Unit)

Similar: Marlow & Skerry 10%

Contrasting: Lamoine & Tunbridge 5%

USE AND MANAGEMENT

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Soil Consultant – SS #61
JRK SOIL SEARCH, INC.
PO Box 291
Limington, ME 04049
(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Tunbridge SL 0 – 8%
Typic Haplorthods

Parent Material: Glacial till

Landform: Glaciated upland

Position in Landscape: Higher elevations of the site

Slope Gradient Ranges: 0 – 8%

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Well-drained

Typical Profile
Description: **Surface Layer: 0 – 8" dark brown to brown friable sandy loam**
Subsurface Layer: 8 – 16" dark yellow brown friable sandy loam
Subsoil Layer: 16 – 20" light olive brown friable sandy loam
Substratum: 20 – 30"light olive brown friable to firm gravelly sandy loam

Hydrologic Group : C

Surface Run Off: Moderate

Permeability: Moderate to moderately rapid

Depth to Bedrock: 20 – 40" with inclusions of shallower and deeper soil

Hazard to Flooding: None

INCLUSIONS (Within Mapping Unit)

Similar: Marlow moderately deep – soil which as a firm substratum 10%

Contrasting: Peru 10%

USE AND MANAGEMENT

These areas are suited for building and road construction.

KENNETH GARDNER
Soil Consultant – SS #61
JRK SOIL SEARCH, INC.
PO Box 291
Limington, ME 04049
(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Tunbridge SL 8 – 15%
Typic Haplorthods

Parent Material: Glacial till

Landform: Glaciated upland

Position in Landscape: Higher elevations of the site

Slope Gradient Ranges: 8 – 15%

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Well-drained

Typical Profile
Description: **Surface Layer: 0 – 8" dark brown to brown friable sandy loam**
Subsurface Layer: 8 – 16" dark yellow brown friable sandy loam
Subsoil Layer: 16 – 20" light olive brown friable sandy loam
Substratum: 20 – 30"light olive brown friable to firm gravelly sandy loam

Hydrologic Group : C

Surface Run Off: Moderate

Permeability: Moderate to moderately rapid

Depth to Bedrock: 20 – 40" with inclusions of shallower and deeper soil

Hazard to Flooding: None

INCLUSIONS (Within Mapping Unit)

Similar: Marlow 10%

Contrasting: Lyman & Abram 10%

USE AND MANAGEMENT

These areas are suited for building and road construction.

KENNETH GARDNER
Soil Consultant – SS #61
JRK SOIL SEARCH, INC.
PO Box 291
Limington, ME 04049
(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Tunbridge SL 15 – 25%
Typic Haplorthods

Parent Material: Glacial till

Landform: Glaciated upland

Position in Landscape: Higher elevations of the site

Slope Gradient Ranges: 15 – 25%

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Well-drained

Typical Profile
Description: **Surface Layer: 0 – 8" dark brown to brown friable sandy loam**
Subsurface Layer: 8 – 16" dark yellow brown friable sandy loam
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Substratum: 20 – 30"light olive brown friable to firm gravelly sandy loam

Hydrologic Group : C

Surface Run Off: Moderate

Permeability: Moderate to moderately rapid

Depth to Bedrock: 20 – 40" with inclusions of shallower and deeper soil

Hazard to Flooding: None

INCLUSIONS (Within Mapping Unit)

Similar: Soil which as a firm substratum 5%

Contrasting: Lyman & Abram 10%

USE AND MANAGEMENT

These areas are suited for building and road construction.

KENNETH GARDNER
Soil Consultant – SS #61
JRK SOIL SEARCH, INC.
PO Box 291
Limington, ME 04049
(207) 637-2260

Applicant: Civil Consultants
Town: Kittery
Road: Route 1

SOIL SERIES: Tunbridge SL greater than 25%
Typic Haplorthods

Parent Material: Glacial till

Landform: Glaciated upland

Position in Landscape: Higher elevations of the site

Slope Gradient Ranges: Greater than 25%

COMPOSITION AND SOIL CHARACTERISTICS

Drainage Class: Well-drained

Typical Profile
Description: **Surface Layer: 0 – 8" dark brown to brown friable sandy loam**
Subsurface Layer: 8 – 16" dark yellow brown friable sandy loam
Subsoil Layer: 16 – 20" light olive brown friable sandy loam
Substratum: 20 – 30"light olive brown friable to firm gravelly sandy loam

Hydrologic Group : C

Surface Run Off: Moderate

Permeability: Moderate to moderately rapid

Depth to Bedrock: 20 – 40" with inclusions of shallower and deeper soil

Hazard to Flooding: None

INCLUSIONS (Within Mapping Unit)

Similar: Soil which as a firm snhstratum 5%

Contrasting: Lyman & Ahram 10%

USE AND MANAGEMENT

These areas are suited for building and road construction. The excessive slope must be considered.

CIVIL
CONSULTANTS

Engineers

Planners

Surveyors

Section 3

Attachment E

Sewer Department Capacity Letter

TOWN OF KITTERY

Sewer Department
200 Rogers Road
Kittery, ME 03904
Telephone: (207) 439-4646 Fax: (207) 439-2799
E-mail: gkathios@kitteryme.org

September 2, 2012

George Chobanian
293 Main st
PO Box 100
South Berwick ME 03908

REF: Yankee Commons Mobil Home Expansion

Dear George,

This letter is to confirm that there is sanitary sewer service available for the Proposed Yankee Commons Mobil Home Expansion. The sewer system (piping and pumping stations) and the treatment plant will have the capacity and ability to handle the discharge flow estimates of 78 units at 180 Gals per unit per day equating 14,040 Gallons per day of wastewater requiring treatment and disposal. During Engineering and construction plans may change and if they do, consideration for acceptance may change. All fees are expected to be paid in full per phase of the project. Please notify me if changes are made.

If you have further questions or concerns please contact me.

Sincerely,

George Kathios
Town of Kittery
Superintendant of Wastewater Services
1-207-439-4646

Cc/ Gerry Mylroie, Town Planner
Heather Ross, CEO
Jonathan Carter, Town Manager

Section 4

Updated Discussion of Chapter 16.8.12.3
Mobile Home Park Requirements

MEMORANDUM TO	**KITTERY PLANNING BOARD**
FROM:	**Thomas W. Harmon, P.E.**
DATE:	**August 1, 2012, rev August 30, 2012, Rev 19 Nov 2015**
RE:	**Yankee Mobile Home Park Expansion** **16.8.12.3 Mobile Home Park Checklist**

Chapter 16.8 DESIGN AND PERFORMANCE STANDARDS – BUILT ENVIRONMENT
16.8.12.3 Mobile Home Park Checklist
Article XII. Mobile Home Parks, Seasonal Trailer Parks and Campgrounds

Submittal Requirement	***Applicant Response***
16.8.12.3 Mobile Home Parks.	
A. Mobile home parks, by special exception, may be located as indicated in Chapter 16.3.	*Not applicable. Expansion of existing mobile home park.*
B. Lots within a shoreland zoning district must meet the lot area, setback and shore frontage requirements for that district.	*Not applicable.*
C. Lots in a mobile home park must meet the following lot size, width and density requirements:	*State Manufactured Housing Regulations/Manufactured Housing Board Standards (MHR/MHBS) apply.*
1. Lots by public sewer:	
Minimum lot area 6,000 square feet	*5,000 sq. ft. per MHR/MHBS.*
Minimum lots width 50 feet	*Provided.*
2. Lots served by individual on-site subsurface wastewater disposal system:	*Not applicable.*
Minimum lot area 20,000 square feet	*Not applicable.*
Minimum lot width 100 feet	*Not applicable.*
3. Lots served by a central on-site subsurface wastewater disposal system*:	*Not applicable.*
Minimum lot area 12,000 square feet	*Not applicable.*
Minimum lot width 75 feet	*Not applicable.*
*The overall density of a mobile home park served by a central on-site subsurface wastewater disposal system may be no greater than one unit per twenty thousand (20,000) square feet of total park area.	*Not applicable.*
4. The overall density of the mobile home park is the combined area of its mobile home lots plus:	*Indicated on plan.*
a. The area required for road rights-of-way;	
b. The area required for buffer strips, if any;	
c. For areas served by public sewer, an open space area for storage and recreation equal to ten (10) percent of the combined area of the individual lots; and	
d. The area within the municipality‘s shoreland setback.	
5. All buildings on the lot, including accessory buildings and structures, but excluding open decks and parking spaces, may not cover more than fifty (50) percent of the lot area.	*Land for each unit is identified. Layout within each site shall be verified by individual permits by site.*

D. The following setback rules apply to all mobile homes and accessory buildings:	
1. Front and side setbacks are to be twenty (20) feet; rear setbacks, ten (10) feet. If these requirements conflict with the requirements of the Code 38 M.R.S. §435-449, Shoreland Protection, or subsequent amendments or revisions thereto, the stricter standards apply.	*Title 16 Standards will be met.*
2. If a lot is on a public road, the setback must conform with the residential setback requirements applicable to other residential dwelling units in the zone.	*Provided at Idlewood Lane.*
3. So as to avoid monotony and sameness, the Code Enforcement Officer may allow:	
a. the front setback on a private road within a mobile home park to be varied provided no mobile home may be closer than ten (10) feet from the right-of-way and the average distance is at least twenty (20) feet for all units.	*Not applicable.*
b. the replacement and/or relocation of a mobile home to be located no closer to the front yard setback than the existing mobile home or pad.	*Not applicable.*
4. Carports of noncombustible materials are not subject to setback requirements.	*Code Enforcement issue.*
5. The CEO may allow side yard setbacks to be reduced to five feet provided a distance of twenty (20) feet is maintained between mobile homes for the purpose of providing more usable yard space on one side of the home.	*Code Enforcement issue.*
6. A minimum twenty (20) foot separation must be maintained between all mobile homes in all directions.	*Available space is provided.*
E. All buildings on the lot, including accessory buildings and structures, but excluding open decks and parking spaces, may cover not more than fifty (50) percent of the lot area.	*Code Enforcement issue. (See item C.5 above).*
F. Where a developer elects to create a mobile home park where all land is under unified ownership, the park plan must demonstrate that the development standards described herein are met.	*Provided. Meets MHR/MHBS.*
G. Privately-owned roads within the mobile home park must be designed by a professional engineer, registered in the state of Maine, and built according to accepted engineering standards and in accordance with 30-A, M.R.S.	*Provided.*
1. The layout and general development plan for major and minor access streets within the mobile home park, together with the location and dimensions of access junctions with existing public streets and rights-of-way must be approved by the Planning Board.	*Planning Board Action.*

2. For mobile home parks expected to generate two hundred (200) trips per day or more, there must be at least two entrances from public streets or roads.	*Proposed via split entrance.*
H. Mobile home park streets which intersect with public roads must meet the following standards:	
1. Angle of Intersection. The desired angle of intersection is to be ninety (90) degrees. The minimum angle of intersection is to be seventy-five (75) degrees.	*Provided.*
2. Grade. The maximum permissible grade within seventy-five (75) feet of the intersection is two percent.	*Provided.*
3. Minimum Sight Distance. The minimum sight distance must be ten (10) times the posted speed limit on the existing road. Sight distances is measured from the driver‘s seat of a vehicle that is ten (10) feet behind the curb or edge of shoulder line with the height of the eye three and one-half feet above the pavement and the height of object four and one-fourth feet.	*Provided.*
4. Distance from Other Intersections. The centerline of any street within a park intersecting an existing public street must be at least one hundred twenty-five (125) feet from the centerline of any other street intersecting that public street.	*Provided.*
I. Right-of-way and pavement width are to be as follows:	
1. Two-way park roads must have a minimum right-of-way of twenty-three (23) feet and a minimum paved surface of twenty (20) feet. On-street parking is prohibited.	*Providing; 28’ right of way and 24’ pavement width for two-way road section. Some guest parking provided on parking lane adjacent to roadway.*
2. One-way streets must have a minimum right-of-way of eighteen (18) feet and a minimum paved surface of fourteen (14) feet. On-street parking is prohibited.	*One-way roadway that is part of split entrance used for item G.2 above has a right of way width of 52’ and pavement width of 20’ per each one-way lane. Remaining one-way roads have a 24’ right of way and pavement width of 16’. No on street parking along one-way roadways.*
3. Parking lanes are to be a minimum of eight feet in width, if provided.	*Provided.*
4. Cul-de-sac turnarounds are to have minimum radii of fifty (50) feet at the outer edge of the pavement, exclusive of any parking areas.	*Waiver request.*
5. Curvilinear streets must be utilized wherever possible. No street within the park may be more than two hundred (200) feet without a curve or bend.	*A combination of horizontal and vertical curves satisfy.*

6. If the developer intends to dedicate park streets to the public, such streets must meet municipal standards as contained in Article V of Chapter 16.8.	*Not applicable.*
J. No mobile home lot may have vehicular access directly onto a state highway.	*Provided.*
K. A traffic impact analysis is required if the park will generate more than five hundred (500) trips/day.	*Not required as project will generate less than 500 trips per day, however, in response to Planning Board questions regarding construction traffic the applicant did provide a traffic study for the site prepared by Gorrill Palmer (copy included as Enclosure 8 to Section 5 of the Final Subdivision Review Application Package).*
L. Parking requirements for mobile home parks areas follows:	
1. For each mobile home lot there must be provided and maintained at least two off-street parking spaces. This requirement may be waived if an equivalent number of spaces are provided by a parking lane. Each space is design dependent as indicated in Figure 2 for Chapter 16.8, set out at the end of this chapter. This requirement may be waived if an equivalent number of spaces are provided by a parking lane.	*Will be verified by code enforcement as individual lots are developed.*
2. In addition to occupant parking, off-street guest and service parking must be provided within the boundaries of the park at a ratio of one space for each four mobile home lots. Such parking must be reserved for that sole use. This requirement may be waived if a parking lane provides an equivalent number of spaces.	*Provided.*
3. On-street parking is prohibited unless an eight-foot parking lane is provided, in which case on-street parking may be permitted on the side of the road where the parking lane is located.	*Provided. See I.3 above.*
M. The mobile home park must contain pedestrian walkways that link all units and all service and recreational facilities. Such walkways are to be adequately surfaced and lit. A portion of the road surface may be reserved for walkways provided the roadway width is increased accordingly. Walkways should be a minimum of width of three feet.	*Two-way roadways are 24' wide with 2 foot gravel shoulders. One-way roadways are 16' wide with 2' gravel shoulders on each side. Based upon observations of pedestrian traffic within the adjacent park, it is our opinion that the walkway is effectively co-located within these spaces .*
N. Outdoor lighting is to be provided to adequately illuminate internal streets and pedestrian walkways. Lights are to be sized and directed to avoid adverse impacts on adjacent properties and vehicular traffic.	*Provided. See Plan sheets ES & EP.*

O. Open space calculations are as follows:	
1. For mobile home parks served by a public sewer, an area amounting to ten (10) percent of the total area devoted to individual lots must be set aside for open space and/or recreation. Such space is to be accessible and usable by all residents of the park. Parking space, driveways and streets and buffer areas are not considered usable open space but community recreation buildings, pools and courts are considered as open space.	*Total lot area as designed = 506,169 Requires 50,617 sq. ft. open space Over1,500,000 sq. ft of open space is provided (of which over 280,000 sq.ft. is usable adjacent to center of development area).*
2. At least fifty (50) percent of the required open space must consist of land that is suitable for active recreation.	*Over 27,260 sq. ft. active recreation space is made up of graded loam and seeded areas dispersed around the site & at Wilson Cemetery.*
3. All developed open space is to be designed and landscaped for the use and enjoyment of the park residents and maintained for their long-term use. Plans for these areas must be submitted by the developer.	*Provided.*
4. To the maximum extent possible, undeveloped open space must be left in its natural state. Improvements to make trails for walking and jogging or to make picnic areas are permitted.	*Provided.*
5. The developer must submit, as part of the application, a copy of that portion of the proposed park rules and a plan which specify how the open space is to be used and maintained and what conditions apply to its use. The plan must specify the area to be dedicated open space or recreation.	*A copy of the Park Rules is included in Section 5 of the Final Subdivision Review Application Package. A plan of the trail system is included on Plan Sheets S1, C2, C4 & C6.*
6. Open space must be maintained and used for its approved purposes.	*Concur.*
P. All mobile home parks must provide permanent electrical, water and sewage disposal connections to each mobile home in accordance with applicable state and local rules and regulations. If other than public water is to be utilized, the water system(s) must be capable of delivering two hundred fifty (250) gallons per day per lot of water certified to be of primary drinking water standards.	*Provided.*
Q. Signs and advertising devices are prohibited in a mobile home park except:	
1. One identifying sign at each entrance of the mobile home park sized in compliance with Article XII of Chapter 16.8 may be installed.	*Code Enforcement.*
2. Directional and informational signs for the convenience of tenants and the public relative to parking, office, traffic movement, et cetera are permitted.	*Code Enforcement.*

3. Mobile/manufactured home —For Sale signs, provided that such signs that face a public road may be no more than ten (10) square feet and limited to two signs per mobile home park.	*Code Enforcement.*
4. Mobile/manufactured homes address signs are permitted when in compliance with Article XII of Chapter 16.8.	*Code Enforcement.*
5. The styles and location of the identifying sign must not interfere with vehicle sight distance and be constructed in accordance with Article XII of Chapter 16.8.	*Code Enforcement.*
R. At least three hundred (300) cubic feet of enclosed tenant storage facilities must be conveniently provided on or near each mobile home lot for the storage of materials and equipment.	*Either individual sheds or garages will be provided.*
S. A storm drainage plan must be prepared by a professional engineer, registered in the state of Maine, in accordance with Section 16.8.8.1, Stormwater Drainage**.** Such plan must be approved by the York County Soil and Water Conservation District prior to Planning Board approval of the final plan.	*Provided. Waiver requested.*
T. Groundwater requirements for mobile home parks are as contained in Section 16.9.1.5, which must be complied with for all mobile home park applications.	*All sanitary discharges are into the municipal sewer system.*
U. Each mobile home lot must be provided with an area for refuse storage. Within a maximum one hundred fifty (150) feet from each mobile home lot, there must be a flytight, watertight and rodent-proof container capable of storing the amount of refuse that the mobile home park for which it was designed could generate within one week as well as any separation containers as required by the Kittery recycling program. The park management is responsible for disposal of refuse from such containers at least once a week.	*In lieu of multiple outside refuse containers, the park management will be providing weekly individual lot trash pick-up (i.e. similar to existing park services).* *The planning board has indicated that this plan meets or exceeds the intent of the requirement.*
V. Buffering requirements are as follows:	
1. A fifty (50) foot wide buffer strip must be provided along all property boundary lines that:	
a. Abut residential land which has a gross density of less than half that proposed in the park; or	*Not applicable.*
b. Abut residential land that is zoned at a density of less than half that proposed in the park.	*Not applicable.*
2. Further, no structures, streets or utilities may be placed in the buffer strip, except that they may cross a buffer strip to provide services to the park.	*Not applicable.*

3. Within twenty-five (25) feet of any property line and within the buffer strip, visual screening and/or landscaping must be provided. The visual screening may consist of fences, berms, landscaping (such as shrubs or trees) and/or natural existing vegetation. This screening is to effectively screen at least eighty (80) percent of the homes from view from the adjacent property and be maintained throughout the life of the project.	*Provided.*
W. The owner or operator of a mobile home park is responsible for ensuring the maintenance of all park-owned structures, open space areas, roads and sidewalks. Park management must comply with state laws. Compliance with this Code does not exempt the park owner, developer, or manager from complying with other applicable local, state and federal codes and regulations	*Code Enforcement.*
X. No development or subdivision which is approved under this Section as a mobile home park may be convened to another use without the approval of the Planning Board, and meeting the appropriate lot size, lot width, setback and other requirements contained in this Code. The approved final plan is to be recorded at the York County registry of deeds and filed with the Town and have noted the following restrictions as well as any other notes or conditions of approval:	*Plan Sheets S1 & S2 to be recorded.*
1. The land within this park must remain in a unified ownership and the fee to lots or portions of lots not be transferred.	*Concur.*
2. No dwelling unit other than a mobile home unit may be located within the park.	*Concur.*

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Section 5

Responses to Conditions of Approval
(Includes Earth/Rock Removal Plan)

with Enclosures:

1 - Fire & Police Chief Letters of Approval of One-Way Roadways

2 - Earth/Rock Removal Operations Plan

3 - MDEP 06-096 Chapter 375.1 (Air Quality) & 375.10 (Control of Noise)

4 - 38 MRS 480 et seq, NRPA Standard Conditions

5 - 38 MRS §490-D Performance Standards for Excavations

6 - 38 MRS §490-Z Performance Standards for Blasting

7 - 2013-06-10 SLoD and NRPA Order - L-19638-A-C-N (W509512x7AC2E

8 - Gorrill-Palmer Report, 07-22-2015: Construction & Post-Development Traffic Impact

9 - AMEC Ambient Air Quality Analysis for YCE Proposed Excavation Operation

10 - Conservation Easement Offer and Draft Agreement

11 - SW Cole 15-0640 G - Hydro Review Responses to Comments

12 - USACE Letter 11-12-15, Vernal Pool and NE Long-Eared Bat

13 - Yankee Commons Expansion Draft Tenant Rules

YANKEE COMMONS EXPANSION – PRELIMINARY PLAN APPROVAL CONDITION RESPONSES

CONDITION 1. "MODIFICATION OF THE ROAD LAYOUT TO ACCOMMODATE SIDEWALK"

The Fire Chief and Chief of Police approved a one-way configuration with a 16-foot paved travel way (3-foot walkway and 13-foot vehicle way) and 2-foot shoulders (enclosure 1).

CONDITION 2. "DEVELOPMENT OF A COMPREHENSIVE PLAN FOR EARTH/ROCK REMOVAL TO COMPLY WITH APPLICABLE PROVISIONS OF THE STATE OF MAINE"

Noting that the plan, titled "Earth/Rock Removal Operations Plan (enclosure 2), may require adjustments driven by actual field conditions found, it encompasses all the standard features for projects of this nature.

While noise in excess of Title 16 standards is evident 24/7/year from I95, it is clear that noise from construction activity from 7:00am to 9:00pm is exempted from the requirements of Town Code Title 16, Section 9.1.9.E.3, Noise abatement, however, pursuant to state statute, blasting shall not occur between sundown and sunrise or from 7:00pm to 7:00am, whichever is greater. 38 MRS §490-Z(14)(G) and MDEP 06-096 Chapter 375.10, Control of Noise (enclosure 3), more stringently limit standards than in Title 16. Expected contractor work hours are from 7:00am – 5:00pm, excluding weekends and holidays.

The Maine Superior Court decision in March clearly concluded that the removal activity is incidental to construction and Town Code Title 16 Section 9.1.2, Earth/Mineral Extraction, does not apply. Nonetheless, excavation activities at the site will be highly regulated, meeting or exceeding the performance standards in the Kittery Code.

Federal and State regulatory requirements will be levied in the contract requirements for construction contractor compliance, including:

a. U.S. Department of Interior Rules, 30 CFR §§816.61-68 and 817.610-68, and Blasting Guidance Manual, Office of Surface Mining, Reclamation and Enforcement, U.S. Department of Interior.

b. Maine Natural Resource Protection Act, 38 MRS §§480-A et. seq, Standard Conditions (enclosure 4).

c. 38 MRS §490-D, Performance standards: Performance Standards for Excavations for Borrow, Clay, Topsoil or Silt, et seq. (enclosure 5).

d. 38 MRS §490-Z. Performance standards, Blasting (enclosure 6).

Also, as noted in our Maine Department of Environmental Protection Site Location of Development Act Approval Findings of Fact, dated June 2013 (enclosure 7):

> *"As a condition of the permit, the MDEP requires the permit applicant to retain the services of a third-party inspector to monitor compliance with MDEP permit conditions during construction.*

Please note that upon completion of active extraction operations, the land must be left so natural storm drainage and watercourses leave the location at the original natural drainage points and in a manner such that the amount of drainage at any point is not significantly increased as required by the MDEP approved Stormwater & Erosion-Sedimentation plan."

The only Town Code provision somewhat related is Title 16, Section 9.1.6, Air pollution, addressing "odor, dust, or smoke" (see Approval Condition #6, below). No other performance standards for excavation activity incidental to construction are found in Title 16.

Be that as it may, we propose the following routine best industry practices for excavation operations as prudent conditions of approval for assurance that no harm befalls public health or safety:

- Topsoil and subsoil suitable for purposes of revegetation will be stockpiled for use in restoring the location after extraction operations have ceased.
- Loaded vehicles must be suitably covered.
- Trucking routes and methods are subject to approval by the Chief of Police**.**
- Access roads from extraction site to public ways treated with stone, calcium or other suitable materials for a distance of at least one hundred (100) feet from public ways to reduce dust and mud on such public ways.
- No equipment, debris, junk or other material at site except those directly relating to active extraction operations.
- Temporary shelters or buildings erected for operations and equipment used must be removed within thirty (30) days following completion of excavation operations.
- Following the completion of excavation operations ground levels and grades must be established in accordance with approved plans.
- Debris, stumps, boulders and similar materials removed and disposed of in an approved location or, in the case of inorganic material, buried and covered with a minimum of two feet of soil.
- Revegetated and properly restored to a stable condition adequate to meet the provisions of the "Maine Erosion & Sediment Control BMPs," March 2003.

Finally, we offer to provide copies of all permits, contracts, and inspections reports required by our State or Federal approvals to the Town, if so desired.

CONDITION 3. "ADDRESS LIMITS TO THE DAILY TRUCKING RATE FOR EARTH/ROCK REMOVAL"

The MDoT requirements are applicable on its roads and no Town Code performance standards exist that apply to allow the Town to regulate a daily trucking rate (see Title 16, Section 16.8.9.1, General Standards). State traffic movement permitting requirement thresholds are 100 or more passenger car equivalents (PCE) trips during **peak hour** of traffic generation which this project will not generate.

The "uniform trucking rate" questioned in the peer review letter was simply a calculation by Gorrill-Palmer using conservative assumptions to establish parameters for its traffic impact analysis study (i.e., number of yards to remove, swelled / divided by a standard truck capacity / divided by an estimated 200 days of activity) (enclosure 8). On that basis, Gorrill-Palmer's results show that the trucking activity will result in a traffic impact factor well below the 100 PCE threshold required for a Maine DoT traffic movement permit. It is usual for the contractor to establish an operational approach to accomplish the task within the given time frame.

Based on the MeDOT public traffic counts for 2013, the average daily traffic at the intersection of Route 1 and Idlewood Lane is 9,820 vehicles. Discussion with contractors suggests that 120 truckloads per day would be optimal to remove the requisite material from the site. The probable 120 trucks/day is 2.4% of that volume. Maine traffic monitoring data shows the peak hour at that location is 4:00-5:00pm and the contractor would have to create 25 truck round trips **in that one hour** to generate a level of need requiring a permit. This is not feasible, as no contractor will have the ability to generate that many truck trips per hour.

The Gorrill-Palmer Route 1 South consideration was only the simplest basis to review the "all one way" scenario, which conservatively examines the greatest possible impact. Routing is also a function of the delivery location(s) selected by the contractor. It is possible that the greatest majority of trucks would travel North on Route 1, or South to Cutts Road.

The contractor's capabilities and operational considerations are unknown until a contract is awarded. Variables include how much equipment the contractor has available at a given time for the job; where the contractor can find a market for use of the material extracted, based on the presence of major construction projects in the region; and, exactly what subsurface conditions are encountered at the site, dictating the pace of the excavation. A few more trips per day would get the job done that much sooner allowing less impact overall, especially with the activity taking place during the winter and tourist off-season. The excavation removal rate depends upon the final quantity and type of excavation equipment ultimately selected by the Contractor.

The total excavation timeframe is estimated at 28-30 work weeks. Hauling will be from Monday-Friday, beginning no earlier than 7:00am and suspended no later than 5:00pm daily. Hauling will be suspended from June 30th through Labor Day, as may be necessary.

Accounting for mobilization/de-mobilization and other construction activities, the construction excavation phase of the project is anticipated to last approximately 7-8 months.

We suggest that arbitrarily constraining the hauling contractor to a particular limit of daily trips or a specific route is unwarranted provided he does not conduct any activity that would invoke MDoT review.

CONDITION 4. "DEVELOPMENT OF A MITIGATION PLAN FOR IDLEWOOD LANE DAMAGE, INCLUDING FINANCIAL ASSURANCE AND CONCURRENCE WITH KITTERY COMMISSIONER OF PUBLIC WORKS"

Idlewood Lane was originally part of Route 1 and built to major arterial standards. Whether most removal hauling trips will transit the 300' direct access to Route 1 North or South, or turn right on Idlewood, we certainly accept a condition to mitigate damage with financial assurance in concurrence with the Public Works Commissioner.

A pre-construction examination and assessment with photography and post-development review to determine any extent of damage and responsibility to assume cost of needed repair is warranted.

CONDITION 5. "AMENDMENT TO TRAFFIC REPORT TO ADDRESS TRAFFIC QUESTIONS IN THE CMA'S SEPTEMBER 1ST LETTER"

There is no "need" due to the project construction activity, or the completed development, for the Rectangular Rapid Flashing Beacons, and no possible routing or performance standards are found anywhere to suggest any impacts requiring mitigation of any kind. Gorrill-Palmer felt, with our concurrence, that providing those would demonstrate our willingness to be a good neighbor. We do believe it would create a safer pedestrian situation for current and future vehicular traffic in transit through that area.

Even with the indeterminate fact of the actual routes to be used for the trucking activity, the "worst case" possibility of trips causes no identifiable impact to be mitigated.

The other peer reviewer considerations are answered in Conditions #3 and #4, above

CONDITION 6. "PROVIDE AN ESTIMATE OF THE LEVEL OF DIESEL EMISSIONS AT THE SITE WITH RESPECT TO PARTICULATES, NITROUS OXIDES, CARBON MONOXIDE, VOLATILE ORGANIC COMPOUNDS AND OZONE"

Title 16, Section 9.1.6, Air pollution, states: "All air pollution control **shall comply with the minimum state requirements, and detailed plans shall be submitted to the state of Maine Department of Environmental Protection for approval**, before a building/regulated activity permit is granted. In any case, no **objectionable odor, dust or smoke** shall be detectable beyond the property line."

Town Code Title 16, Section 10.8.3.4 Findings of Fact, Subsection N, Water and Air Pollution Minimized, also requires: "*The proposed development will not result in undue water or air pollution.*" No additional clarifying standard, or other information, is included in the Town Code to define parameters or thresholds of any kind for what constitutes "undue air pollution" which in any case, applies to the completed development and not construction activity.

Thus, the Town's authority to regulate air emissions from construction activity under its Code is limited to: (a) ensuring that applicants meet applicable State requirements for air emissions; (b) requiring that objectionable levels of odor, dust, and smoke are not detectable beyond the property boundaries; and (c) that the development itself will not result in undue air pollution.

The air emissions from the project are already regulated by State and Federal requirements. As required by 06-096 CMR 375.1, No Adverse Environmental Effect Standard of the Site Location Law - 1. No Unreasonable Adverse Effect on Air Quality (enclosure 3), as noted in MDEP Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N (W5095012x7AC2E) (enclosure 7):

> *"BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 481 et seq.:*
>
> *B. The applicant has made adequate provision for fitting the development harmoniously into the existing natural environment and the development* ***will not adversely affect*** *existing uses, scenic character,* ***air quality,*** *water quality or other natural resources in the municipality or in neighboring municipalities provided that the* ***applicant ensures that any rock crusher used at the site is licensed by the Department's Bureau of Air Quality and operated in accordance with that license****."*

Furthermore:

> *"THEREFORE, the Department APPROVES the application of STEPHEN A. HYNES REAL PROPERTY TRUST AGREEMENT to construct an expansion at an existing mobile home park in the Town of Kittery, as described in Finding I, SUBJECT TO THE FOLLOWING CONDITIONS and all applicable standards and regulations:*
>
> *11. Prior to conducting blasting at the site, a site-specific blasting plan shall be submitted to the BLWQ for review and approval.*
>
> *12. If a rock crusher is being utilized on site, the applicant shall insure that the crusher is licensed by the Department's Bureau of Air Quality and is being operated in accordance with that license."*

In addition, all diesel trucks, excavators, rock crushers, or other diesel-engine equipment present on the site are obligated to be compliant with Federal and State emission and standards.

Thus, the project will meet all applicable State and Federal air emission requirements, and, in the words of the Department of Environmental Protection, "will not adversely affect ... air quality." As a result, the local standards are clearly met.

With that said, we recognize the concern expressed over air quality, but one must consider air emissions from a temporary construction project like this one in context. Totally unclear is the factor of the emissions caused by the 35,000 vehicles per day passing the site on the Turnpike, located immediately to the west, or the 9,820 on Route 1, located immediately to the east. Nor is it possible to evaluate the impact of the 45-75 vehicles stopping and/or idling overnight at the Maine Information Center; or the same number at the Irving Truck Stop and big-rig wash facilities on the Route 1 ByPass.

Regardless, it seems clear that the actual diesel emissions contributed from construction activities will be minimal in comparison to the existing emissions from transportation activities in the area, one of the busiest in the State.

We also unequivocally agree that the removal trucks will comply with the State's anti-idling statute in 38 MRS §585-L.

In addition to compliance with all presently required regulatory standards as noted above, we fully anticipate that the excavation operations will not emit dust, dirt, fly ash, fumes, vapors or gases which could be injurious to humans, animals or vegetation, detrimental to the enjoyment of adjoining or nearby properties or which could soil or stain persons or property, at any point beyond the lot lines, and any air emissions will meet all applicable state and federal statutes. As a further demonstration of assurance, we have engaged AMEC Foster Wheeler to calculate emissions and conduct dispersion modeling (enclosure 9). That report is expected to be provided by the end of November and will be delivered upon receipt.

CONDITION 7. "SUPPLY INPUT FROM THE OPEN SPACE COMMITTEE"

The written offer to be presented to the Town Council was endorsed by the Open Space Advisory Committee on Nov 10th (enclosure 10). Council action on the offer is anticipated at its Regular meeting on Nov 23rd, 2015, and the results will be provided as soon as made available.

CONDITION 8. "RESPOND TO THE CONCERNS FROM THE CONSERVATION COMMISSION IN WRITING"

ITEM 1: HYDROGEOLOGY.

Town Code Title16, Section 10.3.5, Subdivision Plan Review by State, requires a proposed subdivision approval be obtained in writing from the Maine Department of Environmental Protection (DEP) before submitting a final subdivision plan.

S.W. Cole, a highly-respected environmental consulting and engineering firm, has reviewed the comments from the Conservation Commission, which were presented to convey input from Donald Moore, about the application materials (enclosure 11). S.W. Cole's response addressing the Commission's concerns in full is provided in its letter, dated October 2, 2015 (also in enclosure 11), which concludes:

> *"The amount of water flowing to the wetlands as surface or groundwater recharge will remain proportional to the amount of precipitation and seasonal conditions. With no groundwater removal and maintenance of drainage patterns the mechanism for change to the recharge of wetlands is limited to the increased infiltration due to reduced slopes and the construction of infiltration basins;*
>
> *The removal of bedrock as part of the site preparation is interpreted to result in slopes with lower gradients which may increase infiltration and evapotranspiration, thus reducing runoff. However, the increase in the amount of impermeable surface is interpreted to result in an increase in runoff, thus negating the impact of the lower slopes and increased evaporation; and*
>
> *Based on the above, with little or no change in the amount or direction of runoff, there should be no adverse impact to the wetlands."*

S.W. Cole also advises:

> *"As noted in our July 20, 2015 report, the stormwater management plan makes allowances for maintenance and monitoring that will be necessary to confirm the functionality of the infiltration system. Stormwater management during construction needs to be monitored to confirm that the necessary controls are maintained and that short term impacts of construction are minimized.*

It should be noted that the greatest potential for impact to the wetlands will be during the construction period, and it is our interpretation that this potential will increase with an extended work period."

Thus, the Commission's concerns have been addressed.

In addition, the Maine Department of Environmental Protection Site Location of Development Approval Findings of Fact, June 2013 (enclosure 7), found:

"11. GROUNDWATER:
The project site is not located over a mapped sand and gravel aquifer. The proposed project does not propose any withdrawal from, or discharge to, the groundwater.

The Department finds that the proposed project will not have an unreasonable adverse effect on ground water quality or quantity."

There is also an MDEP SLoD Special Condition that requires us to engage a third party inspector to monitor and report to the State on Stormwater Management activities at the site (pages 15-19 of enclosure 7). We are certainly agreeable to providing the Town all communications related to that activity.

ITEM 2: VERNAL POOL (separate communication).

The Conservation Commission also stated in its letter dated September 21, 2015:

"During the September 10, 2015 Planning Board meeting the representative for the above proposed development, Gary Beers, stated that the vernal pool on the property had been evaluated as a significant vernal with only fairy shrimp inhabiting it. He further stated that since there were no migrating creatures found in this vernal pool, that the Army Corp. of Engineers would not enforce the 750 foot buffer rule, therefore, the applicants would only need to have a 100 foot buffer from the vernal pool.

The Conservation Commission has contacted Maine DEP and spoken to both Michael Morse and Chris Coppy. KCC has been informed that, while the Army Corps has different rules, Maine DEP requires a review and a MDEP permit to be within the 250 feet of a significant vernal pool."

While the Commission's statement about the differing State and Federal rules on vernal pools and the need for approvals is generically correct, this issue has already been addressed for this project. As provided in our July 23rd, 2015, response to planner notes:

"As shown in the Stantec documentation provided, as visited twice, in 2007 and 2008, the vernal pool in question only contains fairy shrimp. The Corps of Engineers acknowledged fairy shrimp do not migrate to the upland areas and no other migrants were present. They concluded that a 100 foot setback would be acceptable and "If the roadway to your development cuts across at 75' from the pool then so be it. It would be great if you could extend the buffer to the northerly property line but that would be your call". (e-mail copy, encl 1). This information was not submitted because we removed the originally proposed nearby MDoT-approved road entrance off Route 1 at the Board's request during the 2012 site walk.

MDEP's follow-up in 2011 establishes the record for 250' to be the area Natural Resources Protection Act, 38 M.R.SA §§480-A to 480-FF, and the Significant Wildlife Habitat rules, 06-096 CMR 335 (encl 4a).

The pool area is not part of the development project and is not impacted by it. The Maine Bureau of Water Quality map (http://www.maine.gov/dep/gis/datamaps/ (NRPA Vernal Pools (8/19/2014)) (aerial photos, encl 2a-b) show the state-designated protection area does not extend into the development parcel. Consequently, the pool area is not part of the revised development project and is not impacted by it.

The DEP Site Location of Development review, as shown in these plans, includes a 250' non-disturbance setback. Far less than the allowed 25% allowable disturbance will occur in the installation of stormwater filtration basins. The US Army Corps of Engineers signed off on those characteristics with DEP's approval.

Please note that DEP's Site Location of Development review and approval demonstrated compliance with all provisions of MDEP 06-096 Chapter 375, No Adverse Environmental Effect Standard of the Site Location Law; and, Chapter 335.9, Significant Wildlife Habitat (copies attached), as agreed by the Corps of Engineers and Maine Department of Inland Fisheries and Wildlife. (ibid Maine DEP 06-096 Department of Environmental Protection / General - Rule Chapters 371-378)."

Further to the issue, the proposed installation of one stormwater filtration basin will require disturbance within the 250' boundary at approximately 4.5%, which must be approved by MDEP. A copy of the applicable Permit By Rule documentation will be provided to the Town when it is submitted. Finally, the US Corps of Engineers has confirmed a not greater than 100' non-disturbance due to absence of migratory species (enclosure 12).

Please note in that communication, the Corps acknowledges BioDiversity's study showing no presence of New England Long-Eared Bats.

CONDITION 9. "ADDRESS TRAFFIC CONCERNS ABOUT REMOVAL OF MATERIAL"

Response provided in Conditions #3, #4, and #5, above.

ADDED INFORMATION:

A draft copy of the Park Rules, agreed to by all tenants before occupancy is approved; and, administered by the Park manager and staff, is provided for your information (enclosure 13).

A local concerned citizen reported to the Maine Department of Inland Fisheries and Wildlife that NE Cottontail rabbits were present at the project site. Four site visits by a Department Biologist and six weeks of motion cameras discovered no evidence, which was the finding by that Department in the Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

"6. WILDLIFE AND FISHERIES:
The Maine Department of Inland Fisheries and Wildlife (MDIFW) reviewed the proposed project. In its comments, MDIFW stated that it found no records of any Essential or Significant Wildlife Habitats, or other wildlife habitats of special concern associated with this site. No fisheries concerns were identified.

The Department finds that the applicant has made adequate provision for the protection of wildlife and fisheries.

Additionally, the US Department of the Interior, Fish and Wildlife Service, in 50 CFR Part 17, [Docket No. FWS–R5–ES–2015–0136; 4500030113], Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition To List the New England Cottontail as an Endangered or Threatened Species, September 15, 2015:

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce a 12-month finding on a petition to list the New England cottontail (Sylvilagus transitionalis) as an endangered or threatened species and to designate critical habitat under the Endangered Species Act of 1973, as amended (Act).

After review of the best available scientific and commercial information, we find that listing the New England cottontail is not warranted at this time.

Beyond that, after the first site-meeting with the Biologist, we conveyed the following message to him: Be it what it may, I reiterate my offer that, in the context of our proposed project, we would welcome recommendations in support of NE cottontail habitat if DIF&W cares to offer any. Planting appropriate shrubbery that may be attractive habitat could well even better serve groundwater protection systems and maintenance.

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Section 5

Enclosure 1

Fire & Police Chief Letters of Approval of One-Way Roadway

Jay Stephens

From: Theodor Short [tshort@kitterypolice.com]
Sent: Wednesday, October 14, 2015 3:55 PM
To: jay@civcon.com
Cc: David O'Brien
Subject: RE: Yankee Commons Mobile Home Park Expansion - Internal Roadway Change (CC# 0668402)

Jay,

I have reviewed the proposed modification and, as indicated in our discussion, I do not have any concerns contingent upon Chief O'Brien's approval.

Ted

From: Jay Stephens [mailto:jay@civcon.com]
Sent: Thursday, October 08, 2015 12:42 PM
To: Theodor Short <tshort@kitterypolice.com>
Subject: Yankee Commons Mobile Home Park Expansion - Internal Roadway Change (CC# 0668402)

Chief Short –

Please find attached information regarding a changes to the interior roadway network for the subject project.

Based upon discussions with the Planning Board, we are proposing to change some of the roadways from two-way to one-way.

If you have any questions, please call.

Respectfully,

Jay E. Stephens, P.E., Vice President

CIVIL CONSULTANTS
Engineers · Planners · Surveyors
P.O. Box 100 · South Berwick, ME 03908
tel 207-384-2550 · fax 207-384-2112

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Town of Kittery, Maine
Fire Department

3 Gorges Road
Kittery, Maine 03904
Tel (207) 439-2262

Chief David O'Brien
firechief@kitteryme.org

Mr. Christopher DiMatteo, Town Planner
Town of Kittery
200 Rogers Road
Kittery, ME 03904

20 October 2015

Subj: Yankee Commons Mobile Home Park Expansion; Road Widths

Chris:

I have reviewed the plan(s) recently submitted by Civil Consultants specifically for emergency fire, police and medical access and egress. The original proposal included a roadway right of way with twenty (20) feet of paving. The new proposal has lessened the width of the paving to sixteen (16) feet, instituted one way roadways and eliminated roadway parking.

A meeting was held in early October with Mr. Gary Beers, Police Chief Ted Short and myself in attendance. Discussion centered around public safety access and egress and at that time consensus was reached where a fourteen (14) paved roadway, one way roadways and the elimination of roadway parking was agreed upon. Concern was raised by the Fire Chief on how the elimination of roadway parking was to be administered. Mr. Beers stated that the rules of the private park association would include the wording to ensure all inhabitants would understand and follow this requirement. It would also be enforced by the on-site park management.

The width of the roadway has increased by two (2) feet since this meeting was held. I support this increase and believe this will provide better access and egress throughout this park. Please ensure the approved mylar plans for this development include the one way roadways and the elimination of roadway parking.

Respectfully

D. W. O'Brien

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Section 5

Enclosure 2

Earth/Rock Removal Operations Plan

EARTH/ROCK REMOVAL OPERATIONS PLAN

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1.0 INTRODUCTION

The project is a proposed expansion of the Yankee Commons mobile home park off Idlewood Lane in Kittery, Maine on Map 66 Lots 24 & 25. The adjacent existing park will be expanded by 77 units and a central community facility. The expansion is planned to be developed over five years.

This work consists of grubbing, blasting, excavation, and disposal of all materials in the excavation areas in accordance with this plan and in conformity with the limits, lines and grades shown on the plans or as established in the field by the Engineer.

It is estimated that approximately 190,000 cy of material will need to be excavated to prepare the site for the mobile homes, which will yield approximately 300,000 cy of material to be hauled away once it is excavated. Trucks removing the material will have a capacity of approximately18 cy/load which would result in an average of 120 truckloads per day, or 12 truck trips entering and 12 truck trips exiting an hour between the hours of 7:00am – 5:00pm Monday-Friday. Achieving that as a daily average means the removal would be completed in approximately 138 work days.

1.1 PROJECT REQUIREMENTS & OBJECTIVES

1.1.1 Pre-Construction Submittals.

At least two weeks prior to start of excavation, the Contractor shall submit for approval by the Owners Representative:

(a) Copies of all Contractor's forms that are to be used to meet the requirements of this specification. At a minimum, these must include blast design and blast report forms.

(b) Manufacturers' data sheets for all explosives, primers and initiators to be used.

(c) The proposed excavation plans and procedures, including:

- (1) Equipment and methods for accessing the work area.
- (2) Equipment and methods to be used for drilling, loading and firing blastholes.
- (3) Equipment and methods to be used for blast monitoring
- (4) Locations, dimensions and sequence of blasts.
- (5) Intended direction of rock movement and delay plan.
- (6) Methods of removing shot rock from the cut bench.
- (7) Expected excavation rates.
- (8) Methods of stabilizing or protecting adjacent structures and vegetation.
- (9) Proposed method of controlling flyrock.
- (10) Methods for protecting the traffic and roadway from debris produced by the Contractor's excavation and hauling operations.
- (11) A description of the pre-blast warning system to be used.

(d) Traffic control procedures and procedures for cleaning of blast debris in accordance with subsection 3.10.8 below and the traffic control specification.

(e) Excavation plans, schedules and procedures.

(f) Rock Scaling procedures.

(g) Proof of current blasting related insurance.

(h) Seismographic equipment specifications.

(i) Documentation confirming that blasting supervisors have a minimum of five years of experience in designing, supervising, loading and firing of blasts for rock slopes or tunnel excavations, as applicable, and have all licenses and permits required by local agencies and others having jurisdiction..

1.1.2 Construction Submittals.

Depending on the composition of the material to be removed in situ, and a desire to use small blasts versus a few large ones, blasting may occur on as many as 68 days of the construction period. Unless otherwise directed, the following must be submitted at least one week prior to the initial blast as noted below:

A. A blast design for the initial blast at each rock cut must be submitted not later than seven days prior to beginning drilling at that cut location. A blast design must be submitted for each subsequent blast at that rock cut or foundation excavation not later than 24 hours prior to drilling for that blast, if there are substantial differences from the original.

(a) Blast plans must include the following:

1) Location of blast.

2) Drilling pattern, including diameters, spacing, depth, and orientation of drill holes.

3) Types, strengths and quantities of explosives proposed for use in each hole, on each delay and for each blast.

4) Distribution of the charge in the holes, priming of each hole and stemming of holes.

5) Type, sequence and number of delays, delay pattern, diagram for blast, size and type of hookup lines and lead lines and type and capacity of blast initiation device.

6) Name and signature of blasting supervisor.

(b) Procedures for the control and disposal of water during excavation.

(c) Daily records of scaling and excavation work must be maintained, and one copy of the record of each day's work must be submitted to the Owner's Representative on the following day. Daily records must include: Locations of scaling work.

(B) A blast report for each round of blasting that includes a complete description of each blast conducted. The report must be furnished to the Owner's Representative no later than 24 hours after the round is fired, and include:

1) Date, time and limits of blast by station and offset from centerline of roadway.

2) Diagram of the blast pattern and delay sequence drawn to scale with diameter, spacing, depth and orientation of drill holes. Indicate holes that were not drilled, drilled but not loaded and changes in spacing, pattern, delays or loading of holes.

3) General response to drilling action (noting especially any soft zones or voids encountered) and what if any, adjustments were made in the blast parameters as a result.

4) Quantity of explosives used by weight and number of cartridges per hole and per round and distribution of explosives in holes.

5) Total number of delays used, number of holes for each delay period, maximum charge per delay and type of detonators.

6) Power factor (the weight of explosives per cubic yard of rock in place as determined from the blast pattern).
7) Name and signature of blasting supervisor.
8) An evaluation of the blast indicating areas of significant overbreak and planned adjustments to the blast design for the next blast.
9) Unusual occurrences (including rock falls, unstable ground, groundwater problems, equipment malfunction and the location elevation and time of each occurrence).
10) Seismographic data.

1.1.3 Definitions

Production Blasting. The controlled use of explosives and blasting accessories in carefully spaced and aligned drill holes to provide a distribution of charge that will excavate the rock to the required limits and minimize overbreak, stressing and fracturing of the rock beyond the design lines.

Controlled Blasting. The use of explosives and blasting accessories in carefully spaced and aligned drill holes to produce a free surface or shear plane along the controlled blast line.

Trim (Cushion) Blasting. A controlled blasting method involving the drilling of a single row of holes which are loaded with light, decoupled, well distributed charges and are fired either after the main excavation is removed or in the last delay of a single blast.

Pre-splitting. A controlled blasting method involving a single row of drilled holes which are loaded and fired before any holes in the main excavation are fired.

Line Drilling. A controlled blasting method, which includes a single row of closely spaced, unloaded, small diameter drilled holes providing a plane of weakness in the rock mass to which the primary blast can break.

Controlled Blast Line. The single row of holes used to achieve the results of all controlled blasting methods including trim blasting, line drilling, and pre-splitting.

Trial Blast. A blast or series of blasts to assist in determining the combination of blast parameters that are most appropriate to achieve the desired result as described in this special provision.

Final Wall Face. The remaining slope surface after all excavation is complete.

1.1.4 Special Considerations.

The Contractor shall utilize controlled blasting techniques, where required, to reduce overbreak and to control slope contour. The Contractor shall conduct the work in a manner that ensures the safety of employees, authorized visitor personnel, adjacent properties, and the public.

The Contractor shall prevent damage outside the excavation limits, and prevent rocks and blast debris from entering adjacent streams, or properties. All damages resulting from rock excavation operations must be repaired, and items replaced to the satisfaction of the Owner's Representative, at the Contractor's expense.

1.2 HEALTH AND SAFETY

The health and safety of the community and site workers during construction activities are of primary concern. Health and safety practices to be implemented during construction include

preparation of a health and safety plan, excavation plan and traffic control plan. ***(****Appendix A Site-Specific Health and Safety Plan - to be provided by contractor)*

In addition, the Contractor will be required to submit a detailed excavation plan before excavation showing the design of shoring, bracing, sloping, or other provisions, to be made for worker protection from the hazard of caving ground during the excavation of any trench or excavations five feet or more in depth. If the excavation plan varies from shoring system standards, the excavation plan will be required to bear the signature of a civil engineer registered in the State of Maine.

Construction activities will involve using public rights-of-way and therefore, appropriate measures will be implemented to minimize potential traffic concerns. Equipment decontamination, dust suppression, and other precautions will be implemented to minimize potential exposure to waste or impacted soil.

Although dust plumes are mitigated with snow on the ground, dust suppression for all exposed materials during site construction will be performed. This includes monitoring for and controlling dust on haul roads, areas where materials will be consolidated, areas where material will be excavated, and staging areas. Measures to minimize fugitive dust from exposed or un-vegetated cover soils will also be implemented. Dust emissions will meet the minimum health and safety requirements to site workers and the community.

1.3 MITIGATION MEASURES

The mitigation measures incorporated into the project are summarized below.

1.3.1 Health & Safety Plan

The Contractor will maintain proper emissions systems on construction vehicles and comply with emissions standards for vehicles. The Contractor will implement fugitive dust control measures.

Adequate provision will be made, as approved by the Maine Department of Environmental Protection (MDEP), for fitting the development harmoniously into the existing natural environment and the development will not adversely affect existing uses, scenic character, air quality, water quality or other natural resources in the municipality or in neighboring municipalities provided that any rock crusher used at the site is licensed by the MDEP's Bureau of Air Quality and operated in accordance with that license.

Local air quality standards require "All air pollution control shall comply with the minimum state requirements, and detailed plans shall be submitted to the state of Maine Department of Environmental Protection for approval, before a building/regulated activity permit is granted. In any case, no objectionable odor, dust or smoke shall be detectable beyond the property line."

All removal hauling vehicles will comply with the State's anti-idling statute in 38 M.R.S. § 585-L, and MDEP 06 096 Chapters 110, Ambient Air Quality Standards, and 146, Diesel-Powered Motor Vehicle Emissions Standards.

1.3.2 Biological Resources Monitoring

The Contractor will implement the avoidance and protection measures specified by Maine Department Environmental Protection to protect the wetlands & nearby vernal pool, that are slated for a conservation easement cession to the Town.

1.3.3 Cultural Resources Monitoring

If any archaeological, cultural, historical resources, artifacts or other features are discovered during the course of construction anywhere on the site, work will be suspended in that location until a qualified professional archaeologist assesses the significance of the discovery.

1.3.4 Hazardous Materials Management

The Contractor will be required to store and use hazardous materials in a manner that is protective of the public, on-site workers, and the environment. The Contractor will present its proposed storing, handling and spill contingency methods in its Health and Safety Plan and its Construction Storm Water Pollution Prevention Plan. These plans will require that on-site staff is appropriately trained in identifying, monitoring for, and responding to releases of hazardous materials.

1.3.5 Noise Control

Statutory obligations for excavation blasting, noise, and hauling, must be conducted in accordance with 38 MRS §480-D et seq; §490-Z, §§14; 25 MRS Chapter 318, §2475; and noise from construction activities will not exceed the limits described in MDEP 06-096 Chapter 375(10)(C)(2)."

Prior to conducting blasting at the site, a site-specific blasting plan shall be submitted to the MDEP Bureau of Land and Water Quality (BLWQ) for review and approval.

If a rock crusher is to be utilized on site, the Contractor shall insure that the crusher is licensed by MDEP's Bureau of Air Quality and is being operated in accordance with that license.

1.3.6 Underground Utilities

There are no known underground utilities on the site, however, prior to the removal activities, the Contractor will be responsible for identifying and confirming the location of any buried utilities.

1.3.7 Soil Erosion and Sediment Control

In addition to any specific erosion control measures described in this plan, the applicant shall take all necessary actions to ensure that its activities or those of its agents do not result in noticeable erosion of soils or fugitive dust emissions on the site during the construction and operation of the project covered by this approval.

- Following the completion ground levels and grades must be established in accordance with approved plans.
- Debris, stumps, boulders and similar materials removed and disposed of in an approved location or, in the case of inorganic material, buried and covered with a minimum of two feet of soil.
- Sufficient topsoil or loam must be retained to cover all disturbed areas.
- Revegetated and properly restored to a stable condition adequate to meet the provisions of the "Maine Erosion & Sediment Control BMPs," March 2003.

Prior to construction, the Contractor will be responsible for installing erosion and sedimentation control devices to minimize the potential for discharges of waste and impacted storm water during construction. These controls will be described in detail in the Construction SWPPP and include:

- Installation of silt fencing and sedimentation barriers;
- Slope minimization;
- Stabilization of temporary waste stockpiles;
- Use of plastic tarps, mulching, or hydro-seeding on areas that are not being actively graded or completed and will be exposed for extended periods (i.e., longer than 45 days);
- Construction and stabilization of storm water ditches and down chutes; and
- Planting of permanent native vegetative cover when construction is complete.

Additional prevention measures include performing heavy equipment fueling and storing hazardous materials in designated areas and parking vehicles and locating stockpiles away from storm water drainage points.

1.3.8 Storm Water Management

The site construction will be subject to the requirements of the MDEP-approved stormwater management plan,

Temporary storm water pollution prevention controls must remain in place until restoration is complete and final vegetation is fully established. If excavation activities span more than one construction season, erosion and sedimentation controls in the wet season between periods of construction will need to accommodate greater volumes of storm water.

An required in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

> "*SUBJECT TO THE FOLLOWING CONDITIONS and all applicable standards and regulations: 7. The applicant shall retain the services of a third-party inspector in accordance with the Special Condition for Third-Party Inspection Program, which is attached to this Order*."

Prior to the start of construction, the applicant shall conduct a pre-construction meeting. This meeting shall be attended by the applicant's representative, Department staff: the design engineer, the contractor, and the third-party inspector.

The applicant shall retain the services of the design engineer to oversee the construction of the stormwater management structures in accordance with the details and notes specified on the approved plans. Within 30 days of the completion of each structure, the applicant shall submit a log of inspection reports including the items inspected, photos taken, and dates of each inspection to the BLWQ for review.

Storm sewer grit and sediment materials removed from stormwater control structures during maintenance activities shall be disposed of in compliance with the Maine Solid Waste Management Rules."

A. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life.

B. The proposed activity will not violate any state water quality law including those governing the classifications of the State's waters.

C. The proposed development will be built on soil types which are suitable to the nature of the undertaking and will not cause unreasonable erosion of soil or sediment nor inhibit the natural transfer of soil provided that the applicant submits an acceptable blasting plan to the BLWQ for review and approval prior to conducting blasting at the site.

D. The proposed development meets the standards for storm water management in Section 420-D and the standard for erosion and sedimentation control in Section 420-C, provided the applicant retains the services of the design engineer to oversee construction of the stormwater management structures, grit and sediment removed from stormwater structures during maintenance activities is disposed of properly, a third-party inspector is retained, and a pre-construction meeting is conducted, all as outlined in Finding 10.

E. The proposed development will not pose an unreasonable risk that a discharge to a significant groundwater aquifer will occur."

1.3.9 Traffic Control and Temporary Parking

Minimum requirements for traffic control will be identified in the design specifications and include: haul routes, anticipated times and frequency of hauling, equipment decontamination, truck tarping procedures, and roadway cleaning practices. To avoid disturbing residents of the area development, the Contractor must access the excavation site via the new Idlewood Lane entrance and avoid the Yankee Commons and Wilson Road entrances.

Additionally:

- Loaded vehicles must be suitably covered.
- Trucking routes and methods are subject to approval by the Chief of Police.
- Access roads from extraction site to public ways treated with stone, calcium or other suitable materials to reduce dust and mud for a distance of at least one hundred (100) feet from such public ways.

2.0 COMMUNITY RELATIONS

The community surrounding the Site includes, occupants of the surrounding residences and employees at Landmark Hill. Outreach to the community during the project will include neighborhood meetings, public notices, a project website, property inspections, and signs.

3.0 SCOPE OF WORK

3.1 OVERVIEW

3.1.1 Construction Deliverables

Deliverables for the project consist of Owner deliverables and Contractor deliverables as summarized below. A copy of each deliverable will be provided to the regulatory agencies upon request.

3.1.2 Owner Deliverables

Deliverables to be prepared by the Owner's project Engineer include design drawings and the site specific Stormwater Management Plan.

- Design Drawings: the Planning Board Approved Plan Set for the project.
- Design Specifications: the following topics are anticipated in the specification set.
  - General Requirements (health and safety, submittals, construction progress schedule, work sequence, dust control, air emissions and noise control, stormwater pollution prevention, security, traffic control, excavation plan, etc.)
  - Site Work (protection of existing features, demolition, excavation, segregation, stockpile management, stockpile characterization and determination of disposal/reuse, transportation and disposal, confirmation sampling, revegetation, erosion control, etc.)
- Cost Estimate
- Stormwater Management Plan

3.1.3 Contractor Deliverables

Deliverables to be prepared by the Contractor include the following items.

- Health and Safety Plan (including Utility Shut-off and Contingency Plan)
- Construction Schedule
- Construction Sequencing Plan
- Environmental Management Plan (dust control, protection of trees, etc.)
- Traffic Control Plan
- Excavation Plan
- Winterization Plan
- Final Record Drawing survey package
- Material submittals (hydroseed mix, geotextile, gravel, soil binders, dust suppressing chemicals, fencing, concrete, etc.)
- Work Area Security Protocol
- Warranties and bonds

3.2 SITE SECURITY

3.2.1 Site Control

The Owner's Clerk of the Works will maintain a list of on-site workers and vehicle types, with license numbers. The Contractor will coordinate with subcontractors prior to any deliveries by vendors or mobilization to the site.

3.2.2 General Procedures

Site workers, vendors, and subcontractors are required to observe security and safety measures imposed by the Owner. These include, among others, prohibition of weapons, drugs, and alcoholic beverages. In addition, cell phone usage is prohibited by the driver when a vehicle is in motion.

3.3 PLANS, PERMITS, & PREMOBILIZATION ACTIVITIES

The following sections describe the plans, permits, and premobilization activities for the removal action.

3.3.1 Construction Schedules

A construction schedule will be prepared by the Contractor for approved by the Owner's Representative prior to implementing the field activities.

3.3.2 Permits

Prior to initiating the removal action, the proper permits will need to be obtained.

Copies of the permits will be available on-site during the construction activities.

3.3.3 Pre-Mobilization Activities

Prior to commencing the field activities, waste profiling and underground utility clearance will be completed.

3.3.4 Waste Profiling

To minimize the amount of stockpiled material, approval will be obtained from any stockpiling facility to accept the excavated soil prior to initiating the removal action.

3.9 MOBILIZATION & SITE PREPARATION

The following section describes the mobilization and site preparation activities.

3.9.1 Mobilization

The Contractor will provide all personnel, equipment, and materials to perform the removal action described in this document. All equipment brought onto the site will be clean and in good working condition.

3.9.2 Site Preparation

The Contractor will establish temporary fencing bordering the site perimeter on the side adjacent to the existing Park, since residences will be occupied during the removal action.

The Owner's surveyor will install horizontal and vertical control points, install any required perimeter boundary markers and place NO CUT/NO DISTURB markers along designated areas.

3.9.3 Soil Stockpile Site Preparation

The Contractor will designate an area to temporarily store excavated soil prior to transport and that to be reused on site. The Contractor shall size the area based on the requirements to complete the removal action effectively and efficiently.

3.10 EXCAVATION OF EARTH/ROCK

3.10.1 Demolition

Best estimate is that approximately 130,000 cy of the in-place material being removed will be rock. Assuming 2 drills and a 10' average cut, the volume of material removed could be around 1,800 to 2,000 cy per day. For 130,000 cy that would mean about 68 days or 14 weeks for the total blasting period.

Blast shots are typically scheduled at the end of the day, but timing is adjustable should conditions warrant.

All demolition work must be performed by the Contractor.

Prior to conducting blasting at the site, a site-specific blasting plan shall be submitted to the BLWQ for review and approval.

If a rock crusher is being utilized on site, the applicant shall insure that the crusher is licensed by MDEP's Bureau of Air Quality and is being operated in accordance with that license.

Federal and State regulatory requirements will be levied in the contract requirements for construction contractor compliance, including:

a. U.S. Department of Interior Rules 30 CFR sections 816.61-68 and 817.610-68, and Blasting Guidance Manual, Office of Surface Mining, Reclamation and Enforcement, U.S. Department of Interior.

b. Natural Resource Protection Act, 38 MRS, Section 480-A Et. Seq Standard Conditions.

c. 38 MRS §490-D. Performance standards: Performance Standards for Excavations for Borrow, Clay, Topsoil or Silt et seq.

d. MDEP 06-096 Chapter 375.10, §10. Control of Noise, and 38 MRS §490-Z. Performance standards.

Prior to beginning excavation, grading, or embankment operations in any area, the following items are required to be completed:

Additional subsurface investigation will need to be done to determine the amount of existing onsite overburden and the amount to be retained for project completion.

a. Clearing and grubbing is conducted. This includes the removal of all inorganic material such as tree roots, stumps, sod, weeds, agricultural debris, etc.

b. Check sections are taken and checked satisfactorily with those on the plans. The Contractor is responsible for securing check sections. The method of checking original cross sections will be reviewed by the Engineer.

3.10.2 ROCK EXCAVATION

A. Rock excavation includes removal and disposal of the following: (1) all boulders measuring 1/3 of a cubic yard or more in volume; (2) all rock material in ledges, bedding deposits, and un-stratified masses which cannot be removed without systematic drilling and blasting; (3) concrete or masonry structures which have been abandoned; and (4) conglomerate deposits which are so firmly cemented that they possess the characteristics of solid rock and which cannot be removed without systematic drilling and blasting. B. It is expected that nearly all excavation can be accomplished using conventional equipment as listed in the Table in Section 3.10.9.2 below.:

C. If material is encountered which the Contractor believes cannot be excavated by conventional equipment, the Engineer must be immediately notified. The Contractor shall provide performance tests of the specified conventional or equivalent equipment. If the Engineer confirms in writing that the specified conventional equipment cannot perform at the production rates specified, the excavation must be considered rock excavation.

3.10.3 Site Preparation

Prior to commencing excavation, the Contractor will prepare the Site by:

- Protecting nearby existing structures;
- Providing Site security;
- Establishing temporary construction facilities and staging areas; and
- Demarcating excavation limits.

3.10.4 Protection of Nearby Existing Structures

The Contractor will be responsible for coordinating with utility owners prior to construction such that these activities are planned for in the construction schedule and do not delay the completion of the overall project. These activities include demarcation and protection of existing Site structures prior to construction.

- Utilities: The Contractor will be responsible for protecting all utilities and will not assume that utilities are absent if not shown on the design drawings. The Contractor will arrange for the location and marking of underground utility lines which include, but may not be limited to: water, sanitary sewer, storm sewer, electrical, natural gas, telephone, and cable. The Contractor will request and review available as-built drawings from the Department of Public Works and applicable utility agencies and companies.

  Prior to construction, the Contractor will submit a Utility Shut-off and Contingency Plan. This plan must outline procedures and response actions for shutting down utilities and controlling releases accidentally caused by construction activities and identify the necessary emergency notifications.

- Un-Impacted Areas: The Contractor's surveyor will demarcate the horizontal extent of excavation based on the design drawings. If necessary, the Contractor will install barriers to prevent uncontrolled entry of equipment into areas outside the excavation limit (i.e., un-impacted areas). The Contractor will also provide sufficient dust control and equipment decontamination to prevent contaminating un-impacted areas. If the construction manager observes a condition that may result in contamination of an un-impacted area, the condition will be documented.

3.10.5 Site Security

The Contractor will be responsible for Site security during construction and will restrict access to the Site to authorized personnel. The Contractor will erect temporary construction fencing as necessary to secure the construction area and prevent unauthorized access. Temporary fencing will be secured across ingress and egress points when construction is not actively being performed. Signs will be posted at 50-foot intervals to prohibit trespassers.

3.10.6 Temporary Construction Facilities and Staging Areas

Temporary construction facilities and staging areas will most likely consist of a Contractor equipment and material lay down area, a construction trailer that contains a temporary project office, utilities that support the office and construction (e.g., water tanks, generators, worker sanitation facilities), stockpiles of excavated removal material destined for off-site disposal, and stockpiles of clean soil destined for backfill after excavation.

The Contractor will propose the final location and layout of temporary construction facilities and staging areas to the Owner's Representative prior to mobilization. The Contractor will establish haul roads or crossings as necessary according to the design drawings and specifications.

3.10.7 Demarcation of Excavation Area

The Contractor's surveyor will be responsible for performing the necessary construction surveying tasks outlined in the design drawings. These activities include, but may not be limited to, locating control points, and demarcating the limits of excavation areas.

3.10.8 Excavation General.

Excavation must not extend beyond the dimensions and elevations established except as specified on the plans or as directed by the Owner's Representative.

For sliver cuts, pioneering the top of cuts and preparing a working platform to begin operations may require unusual working methods and equipment. The Contractor may use angle drilled holes or fan drilled holes during the initial pioneering operation to obtain the required rock face.

Excavation, rock reinforcement, stabilization, or both, carried out below or beyond the lines and grades shown on the plans, below or beyond that established by the Engineer, or for the convenience of the Contractor, are at the Contractor's expense.

The Contractor shall provide surveyed points on [100,50] foot stations, indicating grade and centerline offset on the backslope after each lift has been excavated and before drilling begins for the next lift.

The rock on this project is not homogeneous. The Contractor shall perform trial blasts and or adjust the blast parameters as required by the existing rock conditions, in order to comply with all other specifications.

Blasts must be conducted in conformance with the following limitations as required by the Engineer. These limitations remain in effect unless it is demonstrated through trial blasts that the desired results can be achieved when said limitations are exceeded.

3.10.8.1 Drilling General

The inclination of vertical holes may not exceed 1(Vertical): 4(Horizontal).

Bench height must be a maximum of 20 feet.

Blasts must be sized such that the requirements of the traffic control specifications are fulfilled.

Maximum depth of sub-drilling for all blast holes at final grade must be 24 inches.

Drillhole conditions may vary from dry to filled with water. The Contractor shall use explosives or blasting accessories that are appropriate for the hole conditions at no additional cost to the project.

The blast design must take into consideration the natural joints, seams, fractures and bedding of the slope.

Where possible, hole alignment and stemming techniques must be used to maximize the contribution of the natural slope characteristics to the final face. The Engineer shall approve locations where the use of natural slope characteristics will be used to shape the final wall face.

3.10.8.2 Production Blasting

All blasting shall be conducted in accordance with a State approved blasting plan.

3.10.8.3 Blast Monitoring

Blast induced vibrations must be monitored by the Contractor for every blast. Data will be made available to the Owner's Representative no later than the next working day following each blast. The Contractor's seismograph equipment must, as a minimum:

(1) Be equipped with a self-triggering device.
(2) Be capable of measuring vibrations in three planes.
(3) Automatically calculate peak resultant particle velocity.
(4) Be capable of providing a hard copy of the wave form and summary results.

3.10.8.4 Rock Scaling

Immediately after each blast, the Contractor shall scale loose rock and blast debris and inspect rock surfaces.

All rock on the cut face that is loose, hanging, or that creates a potentially dangerous situation must be removed or stabilized, to the Engineer's satisfaction, during or upon completion of the excavation in each lift. Drilling of the next lift may not proceed until this work has been completed.

The slopes must be scaled throughout the duration of the Contract and at such frequency as required to remove all hazardous loose rock or overhangs.

The slopes must be scaled using a suitable standard steel mine-scaling rod. Subject to the Owner's Representative's approval, other methods such as machine scaling, hydraulic splitting, or incidental, low-quantity blasting may be used in lieu of or to supplement hand scaling.

3.10.8.5 Traffic Control

Traffic control for blasting work must be in accordance with the Traffic Control Plan.

The time of blast initiation for each blast must be furnished to the Owner's Representative by the Contractor's Traffic Control Supervisor. This notification must occur at least 12 hours prior to the blast and be confirmed 30 minutes prior to the blast by phone or traffic control radio network.

3.10.9 Excavation

This section describes the anticipated approach for excavation at the Site including the sequence, removal rate, and timeframe. The Contractor may modify the approach as necessary given that the contents of the landfill are not completely known. In addition:

- No standing water may be permitted in any extraction site during or after extraction operations.
- Except during or after extraction operations standing water permitted under strict conditions with respect to fencing, safe levels of coliform bacteria count, and treatment to prevent breeding of insects.

- No slopes steeper than three feet horizontal to one foot vertical unless a fence at least three feet high is erected to limit access to such locations.
- Any topsoil and subsoil suitable for purposes of revegetation stockpiled for use in restoring the location after extraction operations have ceased.
- No equipment, debris, junk or other material at site except those directly relating to active extraction operations.
- Temporary shelters or buildings erected for operations and equipment used removed within thirty (30) days following completion.

3.10.9.1 Excavation Sequence

The general anticipated sequence of excavation is to commence at the section abutting Idlewood Lane and then the rear section.

The routine work protocol will be preparation, blasting, crushing, sorting, loading and hauling. The number of removal hauling trips will vary day-to-day, but in no case will exceed 120 loaded trucks/day.

3.10.9.2 Excavation equipment, removal rate and timeframe

The excavation removal rate depends upon the final quantity and type of excavation equipment ultimately selected by the Contractor.

Dump trucks hauling away from the site will be 2005 models, or newer. The total excavation timeframe is estimated at 28-30 work weeks. Hauling will be from Monday-Friday, beginning no earlier than 7:00am and suspended no later than 5:00pm daily. Hauling will be suspended from June 30th through Labor Day, as may be necessary.

Accounting for mobilization/de-mobilization and other construction activities, the construction phase of the project is anticipated to last approximately 7-8 months.

The Contractor will use a variety of equipment to perform the excavation and other related activities. Representative diesel fueled equipment are shown below:

Equipment for Construction

Equipment: # / Yr / Model	GVW (lbs)	HP	Engine
1 – 2014 Atlas Copco Flexiroc T35	34,170	225	Cat® C7.1, Tier 4/stage IIIB
1 – 2012 Atlas Copco Flexiroc T40	34,170	225	Cat® C7.1, Tier 4/stage IIIB
1 – 2006 Hitachi ZX 800 Excavator	166,900	454	Isuzu BB-6WG1T
1 – 2006 Hitachi ZX 450 Excavator	103,838	349	Isuzu AH-6WG1XYSA-01
1 – 2008 Cat 330 DL Excavator with 8,000# hammer	79,700	268	Cat® C9 ACERT
1 – 2015 Komatsu PC360 Excavator	79,930	257	Komatsu SAA6D114E-5
1 – 2008 John Deere 750J Dozer	37,725	168	JD 6068H
1 – 2008 Cat 966H Loader	52,254	286	Cat® C11 ACERT
1 – 2012 Cat 930K Loader	30,479	162	Cat® C6.6 ACERT
1 – 2006 Cat 740 Haul Truck	72,400	454	Cat® C15 ACERT
1 – 1989 Cat D25C Off Road Water Truck	43,431	260	Cat 3306
TBD - Avg: Kenworth T880	80,000	500	PACCAR MX-13
1 – 1999 Nordberg Lokotrack LT105 Jaw Crusher*	82,200	300	Cat® C9 ACERT
Rock crushing capacity	400 mtph (440 stph)		
Diesel burning average	1.3 gallons/hour		
** MDEP Bureau of Air Quality license required*			

3.10.9.3 Groundwater, surface water, and leachate management

Groundwater is not anticipated to be encountered during excavation. However, some water may be trapped in some areas after periods of heavy rain. The Contractor will pump water that is observed in Site excavations to the extent practical and will contain the pumped water on-site for proper characterization and disposal.

3.11 OFF-SITE SOIL TRANSPORTATION

3.11.1 Preparation of Soil Transport Vehicles

All off-site transport vehicles will be equipped with a weatherproof tarp that will be secured over each shipment leaving the site or upon placement of removal material within the container. Following tarping, each transport vehicle will be visually inspected.

3.11.2 Stockpiling and Disposal

As material is excavated, the Contractor will stage it in a pre-determined area for stockpiling, and characterization. Excavated material may be backfilled on-site as clean soil or base rock or loaded for transport off-site. The Contractor will inspect the material as it is excavated and delivered to the staging area and segregate it based on observations of its content.

3.12 SITE RESTORATION

Upon completion of the excavation activities, areas that will not be modified as part of the new facility installation will be graded and restored to their pre-project existing conditions, unless modification of condition is appropriate based on the planned redevelopment of the site. Any remaining materials will be properly removed from the site and all equipment will be -demobilized.

CIVIL
CONSULTANTS

Engineers

Planners

Surveyors

Section 5

Enclosure 3

MDEP 06-096 Chapter 375.1 (Air Quality) & 375.10 (Control of Noise)

Chapter 375: NO ADVERSE ENVIRONMENTAL EFFECT STANDARD OF THE SITE LOCATION LAW *[EXCERPTED]*

SUMMARY: These regulations describe the scope of review of the Board in determining a developer's compliance with the "no adverse effect on the natural environment" standard of the Site Location Law (38 M.R.S.A. Section 484(3)); the information which shall be submitted, when appropriate, within an application for approval; and, the terms and conditions which the Board may impose on the approval of an application to ensure compliance with the standard.

NOTE: In determining whether the developer has made adequate provision for fitting the development harmoniously into the existing natural environment and that the development will not adversely affect existing uses, scenic character, or natural resources in the municipality or in neighboring municipalities, the Board has identified several specific areas of concern which are dealt with in detail below.

1. No Unreasonable Adverse Effect On Air Quality

A. Preamble. The Board recognizes that point source emissions from certain types of commercial and industrial developments and solid waste disposal facilities and non-point source emissions deriving from industrial, commercial, and governmental developments can have an unreasonable adverse effect on air quality.

B. Scope of Review. In determining whether the proposed development will have an unreasonable adverse effect on ambient air quality, through point or non-point sources of chemical pollutants or particulate matter, the Board shall consider all relevant evidence to that effect, such as evidence that:

(1) The best practicable treatment of point sources of air pollution will be utilized and that point source emissions meet state ambient air quality standards and state emissions standards.

(2) The amount of air pollution produced from either point or non-point sources of air emissions will be consistent with the Board's "Policy on Air Quality Use," adopted March 28, 1979.

C. Submissions. Applications for approval of proposed industrial, commercial and governmental developments and solid waste disposal facilities shall include evidence that affirmatively demonstrates that there will be no unreasonable adverse effect on air quality, including information such as the following, when appropriate:

(1) Evidence that an Air Emission License has been or will be obtained.

(2) Evidence that increased traffic generated by the development will not significantly effect the ambient air quality. Modeling of the effect of non-point sources of air pollution on ambient air quality may be requested.

D. Terms and Conditions. The Board may, as a term or condition of approval, establish any reasonable requirement to ensure that the proposed development will have no unreasonable adverse effect on air quality, such as requiring that:

(1) Emissions from point sources of pollution be monitored.

(2) The size of the parking lots be limited in order to limit the amount of non-point source pollutants generated by the development.

10. Control of Noise

A. Preamble. The Board recognizes that the construction, operation and maintenance of developments may cause excessive noise that could degrade the health and welfare of nearby neighbors. It is the intent of the Board to require adequate provision for the control of excessive environmental noise from developments proposed after the effective date of this regulation.

B. Applicability

(1) This regulation applies to proposed developments within municipalities without a local quantifiable noise standard and in unorganized areas of the State. When a proposed development is located in a municipality which has duly enacted by ordinance an applicable quantifiable noise standard, which (1) contains limits that are not higher than the sound level limits contained in this regulation by more than 5 dBA, and (2) limits or addresses the various types of noises contained in this regulation or all the types of noises generated by the development, that local standard, rather than this regulation, shall be applied by the Board within that municipality for each of the types of sounds the ordinance regulates. This regulation applies to developments located within one municipality when the noise produced by the development is received in another municipality and, in these cases, the Board will also take into consideration the municipalities' quantifiable noise standards, if any.

(2) This regulation applies to expansions and modifications of developments when such expansions and modifications are proposed after the effective date of this regulation and subject to site location approval, but only to the noise produced by the proposed expansion or modification of the development, unless (1) the existing development was constructed since 1-1-70 and (2) at the time of construction, the existing development was too small to require site location approval. In situations where conditions (1) and (2) above apply, then this regulation applies to the whole development (both existing facility and proposed expansion or modification). This regulation also applies to expansions and modifications of existing developments when such expansions and modifications require an amendment to the development's Site Law permit, but only to the noise produced by the expansion or modification.

(3) This regulation does not apply to existing developments or portions of existing developments constructed prior to 1-1-70 or approved under the Site Law prior to the effective date of this regulation. This regulation does not apply to relicensing of existing solid waste facilities previously approved under the Site Law.

(4) The sound level limits contained in this regulation apply only to areas that are defined as protected locations, and to property lines of the proposed development or contiguous property owned by the developer, whichever are farther from the proposed development's regulated sound sources.

(5) The sound level limits contained in this regulation do not apply to noise received within the development boundary.

C. Sound Level Limits

(1) **Sound From Routine Operation of Developments**

(a) Except as noted in subsections (b) and (c) below, the hourly sound levels resulting from routine operation of the development and measured in accordance with the measurement procedures described in subsection H shall not exceed the following limits:

(i) At any property line of the development or contiguous property owned by the developer, whichever is farther from the proposed development's regulated sound sources:

75 dBA at any time of day.

(ii) At any protected location in an area for which the zoning, or, if unzoned, the existing use or use contemplated under a comprehensive plan, is not predominantly commercial, transportation, or industrial;

60 dBA between 7:00 a.m. and 7:00 p.m.

(the "daytime hourly limit"), and

50 dBA between 7:00 p.m. and 7:00 a.m.

(the "nighttime hourly limit").

(iii) At any protected location in an area for which the zoning, or, if unzoned, the existing use or use contemplated under a comprehensive plan, is predominantly commercial, transportation, or industrial:

70 dBA between 7:00 a.m. and 7:00 p.m.

(the "daytime hourly limit"), and

60 dBA between 7:00 p.m. and 7:00 a.m.

(the 'nighttime hourly limit').

(iv) For the purpose of determining whether the use of an unzoned area is predominantly commercial, transportation, or industrial (e.g. non-residential in nature), the Department shall consider the municipality's comprehensive plan, if any. Furthermore, the usage of properties abutting each protected location shall be determined, and the limits applied for that protected location shall be based upon the usage occurring along the greater portion of the perimeter of that parcel; in the event the portions of the perimeter are equal in usage, the limits applied for that protected location shall be those for a protected location in an area for which the use is not predominantly commercial, transportation, or industrial.

(v) When a proposed development is to be located in an area where the daytime pre-development ambient hourly sound level at a protected location is equal to or less than 45 dBA and/or the nighttime pre-development ambient hourly sound level at a protected location is equal to or less than 35 dBA, the hourly sound levels resulting from routine operation of the development and measured in accordance with the measurement procedures described in subsection H shall not exceed the following limits at that protected location:

55 dBA between 7:00 a.m. and 7:00 p.m.

(the "daytime hourly limit"), and

45 dBA between 7:00 p.m. and 7:00 a.m.

(the "nighttime hourly limit").

For the purpose of determining whether a protected location has a daytime or nighttime pre-development ambient hourly sound level equal to or less than 45 dBA or 35 dBA, respectively, the developer may make sound level measurements in accordance with the procedures in subsection H or may estimate the sound-level based upon the population density and proximity to local highways. If the resident population within a circle of 3,000 feet radius around a protected location is greater than 300 persons, or the hourly sound level from highway traffic at a protected location is predicted to be greater than 45 dBA in the daytime or 35 dBA at night (as appropriate for the anticipated operating schedule of the development), then the developer may ,estimate the daytime or nighttime pre-development ambient hourly sound level to be greater than 45 dBA or 35 dBA, respectively.

NOTE: Highway traffic noise can be predicted using the nomograph method of FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108, December, 1978.

(vi) Notwithstanding the above, the developer need not measure or estimate the pre-development ambient hourly sound levels at a protected location if he demonstrates, by estimate or example, that the hourly sound levels resulting from routine operation of the development will not exceed 50 dBA in the daytime or 40 dBA at night.

(b) If the developer chooses to demonstrate by measurement that the daytime and/or nighttime pre-development ambient sound environment at any protected location near the development site exceeds the daytime and/or nighttime limits in subsection 1(a)(ii) or 1(a)(iii) by at least 5 dBA, then the daytime and/or nighttime limits shall be 5 dBA less than the measured daytime and/or nighttime pre-development ambient hourly sound level at the location of the measurement for the corresponding time period.

(c) For any protected location near an existing development, the hourly sound level limit for routine operation of the existing development and all future expansions of that development shall be the applicable hourly sound level limit of 1(a) or l(b) above, or, at the developer's election, the existing hourly sound level from routine operation of the existing development plus 3 dBA.

(d) For the purposes of determining compliance with the above sound level limits, 5 dBA shall be added to the observed levels of any tonal sounds that result from routine operation of the development.

(e) When routine operation of a development produces short duration repetitive sound, the following limits shall apply:

(i) For short duration repetitive sounds, 5 dBA shall be added to the observed levels of the short duration repetitive sounds that result from routine operation of the development for the purposes of determining compliance with the above sound level limits.

(ii) For short duration repetitive sounds resulting from scrap metal, drop forge and metal fabrication operations or developments which the Board determines, due to their character and/or duration, are particularly annoying or pose a threat to the health and welfare of nearby neighbors, 5 dBA shall be added to the observed levels of the short duration repetitive sounds that result from routine operation of the development for the purposes of determining compliance with the above sound level limits, and the

maximum sound level of the short duration repetitive sounds shall not exceed the following limits:

(a) At any protected location in an area for which the zoning, or, if unzoned, the existing use or use contemplated under a comprehensive plan, is not predominantly commercial, transportation, or industrial:

65 dBA between 7:00 a.m. and 7:00 p.m., and

55 dBA between 7:00 p.m. and 7:00 a.m.

(b) At any protected location in an area for which the zoning, or, if unzoned, the existing use or use contemplated under a comprehensive plan, is predominantly commercial, transportation, or industrial:

75 dBA between 7:00 a.m. and 7:00 p.m., and

65 dBA between 7:00 p.m. and 7:00 a.m.

(c) The methodology described in subsection 1(a)(iv) shall be used to determine whether the use of an unzoned area is predominantly commercial, transportation, or industrial.

(d) If the developer chooses to demonstrate by measurement that the pre-development ambient hourly sound level at any protected location near the development site exceeds 60 dBA between 7:00 a.m. and 7:00 p.m., and/or 50 dBA between 7:00 p.m. and 7:00 a.m., then the maximum sound level limit for short duration repetitive sound shall be 5 dBA greater than the measured pre-development ambient hourly sound level at the location of the measurement for the corresponding time period.

(e) For any protected location near an existing development, the maximum sound level limit for short duration repetitive sound resulting from routine operation of the existing development and all future expansions and modifications of that development shall be the applicable maximum sound level limit of (e)(ii)(a) or (e)(ii)(b) above, or, at the developer's election, the existing maximum sound level of the short duration repetitive sound resulting from routine operation of the existing development plus 3 dBA.

NOTE: The maximum sound level of the short duration repetitive sound shall be measured using the fast response [L_{AFmax}]. See the definition of maximum sound level.

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(2) **Sound From Construction of Developments**

(a) The sound from construction activities between 7:00 p.m. and 7:00 a.m. is subject to the following limits:

(i) Sound from nighttime construction activities shall be subject to the nighttime routine operation sound level limits contained in subsections l(a) and 1(b).

(ii) If construction activities are conducted concurrently with routine operation, then the combined total of construction and routine operation sound shall be subject to the nighttime routine operation sound level limits contained in subsections 1(a) and 1(b).

(iii) Higher levels of nighttime construction sound are permitted when a duly issued permit authorizing nighttime construction sound in excess of these limits has been granted by:

1. the local municipality when the duration of the nighttime construction activity is less than or equal to 90 days,

2. the local municipality and the Board when the duration of the nighttime construction activity is greater than 90 days.

(b) Sound from construction activities between 7:00 a.m. and 7:00 p.m. shall not exceed the following limits at any protected location:

Duration of Activity	Hourly Sound Level Limit
12 hours	87 dBA
8 hours	90 dBA
6 hours	92 dBA
4 hours	95 dBA
3 hours	97 dBA
2 hours	100 dBA
1 hour or less	105 dBA

(c) All equipment used in construction on development sites shall comply with applicable federal noise regulations and shall include environmental noise control devices in proper working condition, as originally provided with the equipment by its manufacturer.

(3) **Sound From Maintenance Activities**

(a) Sound from routine, ongoing maintenance activities shall be considered part of the routine operation of the development and the combined total of the routine maintenance and operation sound shall be subject to the routine operation sound level limits contained in subsection 1.

(b) Sound from occasional, major, scheduled overhaul activities shall be subject to the construction sound level limits contained in subsection 2. If overhaul activities are conducted concurrently with routine operation and/or construction activities, the combined total of the overhaul, routine operation and construction sound shall be subject to the construction sound level limits contained in subsection 2.

(4) **Sound From Production Blasting**

Sound exceeding the limits of subsection 1 and resulting from production blasting at a mine or quarry shall be limited as follows:

(a) Blasting shall not occur in the period between sundown and sunrise the following day or in the period between the hours of 7:00 p.m. and 7:00 a.m., whichever is greater. In addition, no routine production blasting shall be allowed in the daytime on Sundays.

(b) Blasting shall not occur more frequently than four times per day.

(c) Sound from blasting shall not exceed the following limits at any protected location:

Number of Blasts Per Day	Sound Level Limit
1	129 dBL
2	126 dBL
3	124 dBL
4	123 dBL.

Blast sound shall be measured in peak linear sound level (dBL) with a linear response down to 5 Hz.

NOTE: See Bureau of Mines Report of Investigations 8485 for information on airblast sound levels and pertinent scaled distances.

(5) **Exemptions**

Sound associated with the following shall be exempt from regulation by the Board:

(a) Railroad equipment which is subject to federal noise regulations.

(b) Aircraft operations which are subject to federal noise regulations.

(c) Registered and inspected vehicles:

(i) while operating on public ways, or

(ii) which enter the development to make a delivery or pickup and which are moving, starting or stopping, but not when they are parked for over 60 minutes in the development.

(d) Watercraft while underway.

(e) Residential developments, except during construction of such developments.

(f) Bells, chimes and carillons.

(g) occasional sporting, cultural, religious or public events allowed by the local municipality where the only affected protected locations are contained within that municipality.

(h) The unamplified human voice and other sounds of natural origin.

(i) Firming, fishing and aquacultural activity.

(j) Forest management, harvesting and transportation activities.

(k) Making, maintaining and grooming snow where the only affected protected locations are contained within the general boundaries of a ski area development.

(1) Snow removal, landscaping and street sweeping activities.

(m) Emergency maintenance and repairs.

(n) Warning signals and alarms.

(o) Safety and protective devices installed in accordance with code requirements.

(p) Test operations of emergency equipment occurring in the daytime and no more frequently than once per week.

(q) Boiler start-up, testing and maintenance operations occurring no more frequently than once per month.

(r) Major concrete pours that must extend after 7:00 p.m., when started before 3:00 p.m.

(s) Sounds from a regulated development received at a protected location when the generator of the sound has been conveyed a noise easement for that location. This exemption shall only be for the specific noise, land and term covered by the easement.

(t) A force majeure event and other causes not reasonably within the control of the owners or operators of the development.

(6) **Noise Abatement Structures**

Noise abatement structures of a non-permanent nature in any one location for a duration of less than one year and erected for the sole purpose of noise control shall not be considered structures as defined in 38 MRSA subsection 482(6).

D. Submissions

(1) **Developments with Minor Sound Impact**

An applicant for a proposed development with minor sound impact may choose to file as part of the site location application a statement attesting to the minor nature of the anticipated sound impact of their development. An applicant proposing an expansion or modification of an existing development with minor sound impact may follow the same procedure as described above. For the purpose of this regulation, a development or an expansion or modification of an existing development with minor sound impact means a development where the developer demonstrates, by estimate or example, that the regulated sound from routine operation of the development will not exceed 5 dBA less than the applicable limits established under subsection C. It is the intent of this subsection that an applicant need not conduct sound level measurements to demonstrate that the development or an expansion or modification of an existing development will have a minor sound impact.

NOTE: Examples include subdivisions without structures, office buildings, storage buildings which will not normally be accessed at night, and golf courses.

(2) **Other Developments**

Technical information shall be submitted describing the applicant's plan and intent to make adequate provision for the control of sound. The applicant's plan shall contain information such as the following, when appropriate:

(a) Maps and descriptions of the land uses, local zoning and comprehensive plans for the area potentially affected by sounds from the development.

(b) A description of major sound sources, including tonal sound sources and sources of short duration repetitive sounds, associated with the construction, operation and maintenance of the proposed development, including their locations within the proposed development.

(c) A description of the daytime and nighttime hourly sound levels and, for short duration repetitive sounds, the maximum sound levels expected to be produced by these sound sources at protected locations near the proposed development.

(d) A description of the protected locations near the proposed development.

(e) A description of proposed major sound control measures, including their locations and expected performance.

(f) A comparison of the expected sound levels from the proposed development with the sound level limits of this regulation.

(g) A comparison of the expected sound levels from the proposed development with any quantifiable noise standards of the municipality in which the proposed development will be located and of any municipality which may be affected by the noise.

E. Terms and Conditions

The Board may, as a term or condition of approval, establish any reasonable requirement to ensure that the developer has made adequate provision for the control of noise from the development and to reduce the impact of noise on protected locations. Such conditions may include, but are not limited to, enclosing equipment or operations, imposing limits on hours of operation, or requiring the employment of specific design technologies, site design, modes of operation, or traffic patterns.

The sound level limits prescribed in this regulation shall not preclude the Board under Chapter 375.15 from requiring a developer to demonstrate that sound levels from a development will not unreasonably disturb wildlife or adversely affect wildlife populations. In addition, the sound level limits shall not preclude the Board, as a term or condition of approval, from requiring that lower sound level limits be met to ensure that the developer has made adequate provision for the protection of wildlife.

F. Variance From Sound Level Limits

The Board recognizes that there are certain developments or activities associated with development for which noise control measures are not reasonably available. Therefore, the Board or Commissioner may grant a variance from any of the sound level limits contained in this rule upon (1) a showing by the applicant that he or she has made a comprehensive assessment of the available technologies for the development and that the sound level limits cannot practicably be met with any of these available technologies, and (2) a finding by the Board that the proposed development will not have an unreasonable impact on protected locations. In addition, a variance may be granted by the Board or Commissioner if (1) a development is deemed necessary in the interest of national defense or public safety and the applicant has shown that the sound level limits cannot practicably be met without unduly limiting the development's intended function, and (2) a finding is made by the Board or Commissioner that the proposed development will not have an unreasonable impact on protected locations. The Board or Commissioner shall consider the request for a variance as part of the review of a completed Site Location of Development Law application. In granting a variance, the Board or Commissioner may, as a condition of approval, impose terms and conditions to ensure that no unreasonable sound impacts will occur.

G. Definitions

Terms used herein are defined below for the purpose of this noise regulation.

(1) **AMBIENT SOUND**: At a specified time, the all-encompassing sound associated with a given environment, being usually a composite of sounds from many sources at many directions, near and far, including the specific development of interest.

(2) **CONSTRUCTION**: Activity and operations associated with the development or expansion of a project or its site.

(3) **EMERGENCY**: An unforeseen combination of circumstances which calls for immediate action.

(4) **EMERGENCY MAINTENANCE AND REPAIRS**: Work done in response to an emergency.

(5) **ENERGY SUM OF A SERIES OF LEVELS**: Ten times the logarithm of the arithmetic sum of the antilogarithms of one-tenth of the levels. [Note: See Section H(4.2).]

(6) **EXISTING DEVELOPMENT**: A development constructed before 1-1-70 or a development approved under the Site Law prior to the effective date of this regulation or a proposed development for which the site location application is complete for processing on or before the effective date of this regulation. Any development with a site location approval which has been remanded to the Board by a court of competent jurisdiction for further proceedings relating to noise limits or noise levels prior to the effective date of these regulations shall not be deemed an existing development and these regulations shall apply to the existing noise sources at that development.

(7) **EXISTING HOURLY SOUND LEVEL**: The hourly sound level resulting from routine operation of an existing development prior to the first expansion that is subject to this regulation.

(8) **EQUIVALENT SOUND LEVEL**: The level of the mean-square A-weighted sound pressure during a stated time period, or equivalently the level of the sound exposure during a stated time period divided by the duration of the period.

NOTE: For convenience, a one hour equivalent sound level should begin approximately on the hour.

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(9) **HISTORIC AREAS**: Historic sites administered by the Bureau of Parks and Recreation of the Maine Department of Conservation, with the exception of the Arnold Trail.

(10) **HOURLY SOUND LEVEL**: The equivalent sound level for one hour measured or computed in accordance with this regulation.

(11) **LOCALLY-DESIGNATED PASSIVE RECREATION AREA**: Any site or area designated by a municipality for passive recreation that is open and maintained for public use and which:

(a) has fixed boundaries,

(b) is owned in fee simple by a municipality or is accessible by virtue of public easement,

(c) is identified and described in a local comprehensive plan, and

(d) has been identified and designated at least nine months prior to the filing of the applicant's Site Location of Development application.

(12) **MAXIMUM SOUND LEVEL**: Ten times the common logarithm of the square of the ratio of the maximum sound to the reference sound of 20 micropascals. Symbol: L_{AFmax}.

(13) **MAXIMUM SOUND**: Largest A-weighted and fast exponential-time-weighted sound during a specified time interval. Unit: pascal (Pa).

(14) **RESIDENCE**: A building or structure, including manufactured housing, maintained for permanent or seasonal residential occupancy providing living, cooking and sleeping facilities and having permanent indoor or outdoor sanitary facilities, excluding recreational vehicles, tents and watercraft.

(15) **PRE-DEVELOPMENT AMBIENT**: The ambient sound at a specified location in the vicinity of a development site prior to the construction and operation of the proposed development or expansion.

(16) **PROTECTED LOCATION**: Any location, accessible by foot, on a parcel of land containing a residence or planned residence or approved residential subdivision, house of worship, academic school, college, library, duly licensed hospital or nursing home near the development site at the time a Site Location of Development application is submitted; or any location within a State Park, Baxter State Park, National Park, Historic Area, a nature preserve owned by the Maine or National Audubon Society or the Maine Chapter of the Nature Conservancy, The Appalachian Trail, the Moosehorn National Wildlife Refuge, federally-designated wilderness area, state wilderness area designated by statute (such as the Allagash Wilderness Waterway), or locally-designated passive recreation area; or any location within consolidated public reserve lands designated by rule by the Bureau of Public Lands as a protected location.

At protected locations more than 500 feet from living and sleeping quarters within the above noted buildings or areas, the daytime hourly sound level limits shall apply regardless of the time of day.

Houses of worship, academic schools, libraries, State and National Parks without camping areas, Historic Areas, nature preserves, the Moosehorn National Wildlife Refuge, federally-designated wilderness areas without camping areas, state wilderness areas designated by statute without camping areas, and locally-designated passive recreation areas without camping areas are considered protected locations only during their regular hours of operation and the daytime hourly sound level limits shall apply regardless of the time of day.

Transient living accommodations are generally not considered protected locations; however, in certain special situations where it is determined by the Board that the health and welfare of the guests and/or the economic viability of the establishment will be unreasonably impacted, the Board may designate certain hotels, motels, campsites and duly licensed campgrounds as protected locations.

This term does not include buildings and structures located on leased camp lots, owned by the applicant, used for seasonal purposes.

For purposes of this definition, (1) a residence is considered planned when the owner of the parcel of land on which the residence is to be located has received all applicable building and land use permits and the time for beginning construction under such permits has not expired, and (2) a residential subdivision is considered approved when the developer has received all applicable land use permits for the subdivision and the time for beginning construction under such permits has not expired.

(17) **QUANTIFIABLE NOISE STANDARD**: A numerical limit governing noise from developments that has been duly enacted by ordinance by a local municipality.

(18) **ROUTINE OPERATION**: Regular and recurrent operation of regulated sound sources associated with the purpose of the development and operating on the development site.

(19) **SHORT DURATION REPETITIVE SOUNDS**: A sequence of repetitive sounds which occur more than once within an hour, each clearly discernible as an event and causing an increase in the sound level of at least 6 dBA on the fast meter response above the sound level observed immediately before and after the event, each typically less than ten seconds in duration, and which are inherent to the process or operation of the development and are foreseeable.

(20) **SOUND COMPONENT**: The measurable sound from an audibly identifiable source or group of sources.

(21) **SOUND LEVEL**: Ten times the common logarithm of the square of the ratio of the frequency-weighted and time-exponentially averaged sound pressure to the reference sound of 20 micropascals. For the purpose of this regulation, sound level measurements are obtained using the A-weighted frequency response and fast dynamic response of the measuring system, unless otherwise noted.

(22) **SOUND PRESSURE**: Root-mean-square of the instantaneous sound pressures in a stated frequency band and during a specified time interval. Unit: pascal (Pa).

(23) **SOUND PRESSURE LEVEL**: Ten times the common logarithm of the square of the ratio of the sound pressure to the reference sound pressure of 20 micropascals.

(24) **TONAL SOUND**: for the purpose of this regulation, a tonal sound exists if, at a protected location, the one-third octave band sound pressure level in the band containing the tonal sound exceeds the arithmetic average of the sound pressure levels of the two contiguous one-third octave bands by 5 dB for center frequencies at or between 500 Hz and 10,000 Hz, by 8 dB for center frequencies at or between 160 and 400 Hz, and by 15 dB for center frequencies at or between 25 Hz and 125 Hz.

Additional acoustical terms used in work associated with this regulation shall be used in accordance with the following American National Standards Institute (ANSI) standards:

ANSI S12.9-1988 - American National Standard Quantities and Procedures for Description and Measurements of Environmental Sound, Part 1;

ANSI S3.20-1973 - American National Standard Psychoacoustical Terminology;

ANSI S1.1-1960 - American National Standard Acoustical Terminology.

H. Measurement Procedures

(1) **Scope**. These procedures specify measurement criteria and methodology for use, with applications, compliance testing and enforcement. They provide methods for measuring the ambient sound and the sound from routine operation of the development, and define the information to be reported. The same methods shall be used for measuring the sound of construction, maintenance and production blasting activities. For measurement of the sound of production blasting activities for comparison with the limits of subsection C(4)(c), these same methods shall be used with the substitution of the linear sound level for the A-weighted sound level.

(2) **Measurement Criteria**

2.1 **Measurement Personnel**

Measurements shall be supervised by personnel who are well qualified by training and experience in measurement and evaluation of environmental sound, or by personnel trained to operate under a specific measurement plan approved by the Board or Commissioner.

2.2 **Measurement Instrumentation**

(a) A sound level meter or alternative sound level measurement system used shall meet all of the Type 1 or 2 performance requirements of American National Standard Specifications for Sound Level Meters, ANSI S1.4-1983.

(b) An integrating sound level meter (or measurement system) shall also meet the Type 1 or 2 performance requirements for integrating/averaging in the International Electrotechnical Commission Standard on Integrating-Averaging Sound Level Meters, IEC Publication 804 (1985).

(c) A filter for determining the existence of tonal sounds shall meet all the requirements of-American National Standard Specification for Octave-Band and Fractional Octave-Band Analog and Digital Filters, ANSI S1.11-1986 for Order 3, Type 3-D performance.

(d) An acoustical calibrator shall be used of a type recommended by the manufacturer of the sound level meter and that meets the requirements of American National Standard Specification for Acoustical Calibrators, ANSI S1.40-1984.

(e) A microphone windscreen shall be used of a type recommended by the manufacturer of the sound level meter.

2.3 **Calibration**

(a) The sound level meter shall have been calibrated by a laboratory within 12 months of the measurement, and the microphone's response shall be traceable to the National Bureau of Standards.

(b) Field calibrations shall be recorded before and after each measurement period and at shorter intervals if recommended by the manufacturer.

2.4 **Measurement Location, Configuration and Environment**

(a) Except as noted in subsection (b) below, measurement locations shall be at nearby protected locations that are most likely affected by the sound from routine operation of the development.

(b) For determining compliance with the 75 dBA property line hourly sound level limit described in subsection C(l)(a)(i), measurement locations shall be selected at the property lines of the proposed development or contiguous property owned by the developer, as appropriate.

(c) The microphone shall be positioned at a height of approximately 4 to 5 feet above the ground, and oriented in accordance with the manufacturer's recommendations.

(d) Measurement locations should be selected so that no vertical reflective surface exceeding the microphone height is located within 30 feet. When this is not possible, the measurement location may be closer than 30 feet to the reflective surface, but under no circumstances shall it be closer than 6 feet.

(e) When possible, measurement locations should be at least 50 feet from any regulated sound source on the development.

(f) Measurement periods shall be avoided when the local wind speed exceeds 12 mph and/or precipitation would affect the measurement results.

2.5 **Measurement Plans**. Plans for measurement of pre-development ambient sound or post-development sound may be discussed with the Department staff.

(3) **Measurement of Ambient Sound**

3.1 **Pre-Development Ambient Sound**

Measurements of the pre-development ambient sound are required only when the developer elects to establish the sound level limit in accordance with subsections C(1)(b) and C(1)(e)(ii)(d) for a development in an area with high ambient sound levels, such as near highways, airports, or pre-existing developments; or when the developer elects to establish that the daytime and nighttime ambient hourly sound levels at representative protected locations exceed 45 dBA and 35 dBA, respectively.

(a) Measurements shall be made at representative protected locations for periods of time sufficient to adequately characterize the ambient sound. At a minimum, measurements shall be made on three different weekdays (Monday through Friday) during all hours that the development will operate. If the proposed development will operate on Saturdays and/or Sundays, measurements shall also be made during all hours that the development will operate.

(b) Measurement periods with particularly high ambient sounds, such as during holiday traffic activity, significant insect activity or high coastline waves, should generally be avoided.

(c) At any measurement location the daytime and nighttime ambient hourly sound level shall be computed by arithmetically averaging the daytime and nighttime values of the measured one hour equivalent sound levels. Multiple values, if they exist, for any specific hour on any specific day shall first be averaged before the computation described above.

3.2 **Post-Development Ambient Sound**

(a) Measurements of the post-development ambient one hour equivalent sound levels and, if short duration repetitive sounds are produced by the development, the maximum sound levels made at nearby protected locations and during representative routine operation of the development that are not greater than the applicable limits of subsection C clearly indicate compliance with those limits.

(b) Compliance with the limits of subsection C(l)(b) may also be demonstrated by showing that the post-development ambient hourly sound level, measured in accordance with the procedures of subsection 3.1 above during routine operation of the development, does not exceed the pre-development ambient hourly sound level by more than one decibel, and that the sound from routine operation of the development is not characterized by either tonal sounds or short duration repetitive sounds.

(c) Compliance with the limits of subsection C(1)(e)(ii)(d) may also be demonstrated by showing that the post development maximum sound level of any short duration repetitive sound, measured in accordance with the procedures of subsection 3.1 above, during routine operation of the development, does not exceed the pre-development ambient hourly sound level by more than five decibels.

(d) If any of the conditions in (a), (b) or (c) above are not met, compliance with respect to the applicable limits must be determined by measuring the sound from routine operation of the development in accordance with the procedures described in subsection 4.

(4) **Measurement of the Sound from Routine Operation of Developments.**

4.1 **General**

(a) Measurements of the sound from routine operation of developments are generally necessary only for specific compliance testing purposes in the event that community complaints result from operation of the development, for validation of an applicant's calculated sound levels when requested by the Board or Commissioner, for determination of existing hourly sound levels for an existing development or for enforcement by the Department.

(b) Measurements shall be obtained during representative weather conditions when the development sound is most clearly noticeable. Preferable weather conditions for sound measurements at distances greater than about 500 feet from the sound source include overcast days when the measurement location is downwind of the development and inversion periods (which most commonly occur at night).

(c) Measurements of the development sound shall be made so as to exclude the contribution of sound from development equipment that is exempt from this regulation.

4.2 **Measurement of the Sound Levels Resulting from Routine Operation of the Development**

(a) When the ambient sound levels are greater than the sound level limits, additional measurements can be used to determine the hourly sound level that results from routine operation of the development. These additional measurements may include diagnostic measurements such as measurements made close to the development and extrapolated to the protected location, special checkmark measurement techniques that include the separate identification of audible sound sources, or the use of sound level meters with pause capabilities that allow the operator to exclude non-development sounds.

(b) For the purposes of computing the hourly sound level resulting from routine operation of the development, sample diagnostic measurements may be made to obtain the one hour equivalent sound levels for each sound component.

(c) Identification of tonal sounds produced by the routine operation of a development for the purpose of adding the 5 dBA penalty in accordance with subsection C(l)(d) requires aural perception by the measurer, followed by use of one-third octave band spectrum analysis instrumentation. If one or more of the sounds of routine operation of the development are found to be tonal sounds, the hourly sound level component for tonal sounds shall be computed by adding 5 dBA to the one hour equivalent sound level for those sounds.

(d) Identification of short duration repetitive sounds produced by routine operation of a development requires careful observations. For the sound to be classified as short duration repetitive sound, the source(s) must be inherent to the process or operation of the development and not the result of an unforeseeable occurrence. If one or more of the sounds of routine operation of the development are found to be short duration repetitive sounds, the hourly sound level component for short duration repetitive sounds shall be computed by adding 5 dBA to the one hour equivalent sound level for those sounds. If required, the maximum sound levels of short duration repetitive sounds shall be measured using the fast response

[L_{AFmax}]. The duration and the frequency of occurrence of the events shall also be measured. In some cases, the sound exposure levels of the events may be measured. The one hour equivalent sound level of a short duration repetitive sound may be determined from measurements of the maximum sound level during the events, the duration and frequency of occurrence of the events, and their sound exposure levels.

(e) The daytime or nighttime hourly sound level resulting from routine operation of a development is the energy sum of the hourly sound level components from the development, including appropriate penalties, (see (c) and (d) above). If the energy sum does not exceed the appropriate daytime or nighttime sound level limit, then the development is in compliance with that sound level limit at that protected location.

(5) **Reporting Sound Measurement Data**. The sound measurement data report should include the following:

(a) The dates, days of the week and hours of the day when measurements were made.

(b) The wind direction and speed, temperature, humidity and sky condition.

(c) Identification of all measurement equipment by make, model and serial number.

(d) The most recent dates of laboratory calibration of sound level measuring equipment.

(e) The dates, times and results of all field calibrations during the measurements.

(f) The applicable sound level limits, together with the appropriate hourly sound levels and the measurement data from which they were computed, including data relevant to either tonal or short duration repetitive sounds.

(g) A sketch of the site, not necessarily to scale, orienting the development, the measurement locations, topographic features and relevant distances, and containing sufficient information for another investigator to repeat the measurements under similar conditions.

(h) A description of the sound from the development and the existing environment by character and location.

STATUTORY AUTHORITY: 38 M.R.S.A. Section 343
EFFECTIVE DATE:
November 1, 1979, filing 79-507
AMENDED:
November 21, 1989 – Section 10, filing 89-500
June 12, 1991 - Section 9, filing 91-211
EFFECTIVE DATE (ELECTRONIC CONVERSION): May 4, 1996
AMENDED:
September 22, 2001 - Section 9, filing 2001-402
January 18, 2006 - Section 15, filing 2006-12
June 10, 2012 – Section 10, filing 2012-147 (Final adoption, major substantive)

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Enclosure 4

38 MRS 480 et seq, NRPA Standard Conditions

Natural Resources Protection Act (NRPA)
Standard Conditions

THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCE PROTECTION ACT, TITLE 38, M.R.S.A. SECTION 480-A ET. SEQ. UNLESS OTHERWISE SPECIFICALLY STATED IN THE PERMIT.

A. Approval of Variations From Plans. The granting of this permit is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.

B. Compliance With All Applicable Laws. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

C. Erosion Control. The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during the construction and operation of the project covered by this Approval.

D. Compliance With Conditions. Should the project be found, at any time, not to be in compliance with any of the Conditions of this Approval, or should the applicant construct or operate this development in any way other the specified in the Application or Supporting Documents, as modified by the Conditions of this Approval, then the terms of this Approval shall be considered to have been violated.

E. Time frame for approvals. If construction or operation of the activity is not begun within four years, this permit shall lapse and the applicant shall reapply to the Board for a new permit. The applicant may not begin construction or operation of the activity until a new permit is granted. Reapplications for permits may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.

F. No Construction Equipment Below High Water. No construction equipment used in the undertaking of an approved activity is allowed below the mean high water line unless otherwise specified by this permit.

G. Permit Included In Contract Bids. A copy of this permit must be included in or attached to all contract bid specifications for the approved activity.

H. Permit Shown To Contractor. Work done by a contractor pursuant to this permit shall not begin before the contractor has been shown by the applicant a copy of this permit.

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Enclosure 5

38 MRS §490-D Performance Standards for Excavations

§490-D. PERFORMANCE STANDARDS

1. **Significant wildlife habitat and other protected areas.** Affected land may not be located in, on or over a significant wildlife habitat or other type of protected natural resource, as defined in section 480-B, or in an area listed pursuant to the Natural Areas Program, Title 12, section 544. The department may allow excavation to occur under this section as long as a permit is obtained pursuant to article 5-A. Permit requirements for certain excavations in, on or over high and moderate value inland waterfowl and wading bird habitat are also governed by section 480-GG.

[2009, c. 293, §5 (AMD) .]

2. **Solid waste.** Solid waste, including stumps, wood waste and land-clearing debris generated on the affected land must be disposed of in accordance with chapter 13, including any rules adopted to implement those laws. The department may not grant a variance from the provisions of this subsection.

[1995, c. 287, §8 (AMD) .]

3. **Groundwater protection.** Excavation may not occur within 5 feet of the seasonal high water table. A benchmark sufficient to verify the location of the seasonal high water table must be established and at least one test pit or monitoring well must be established on each 5 acres of unreclaimed land.

A. A 200-foot separation must be maintained between any excavation and any private drinking water supply that is a point-driven or dug well and was in existence prior to that excavation. [1995, c. 700, §24 (AMD).]

B. A 100-foot separation must be maintained between any excavation and any private drinking water supply that is drilled into saturated bedrock and was in existence prior to that excavation. [1995, c. 700, §24 (AMD).]

C. Separation must be maintained between any affected land and any public drinking water source existing prior to the filing of a notice of intent to comply under section 490-C as follows:

(1) For systems serving a population of 500 persons or less, the minimum separation must be 300 feet;

(2) For systems serving a population of 501 persons up to 1,000 persons, the separation must be 500 feet;

(3) For systems serving a population of more than 1,000 persons, the separation must be 1,000 feet; and

(4) For any system that holds a valid filtration waiver in accordance with the federal Safe Drinking Water Act, the separation must be 1,000 feet.

The department may grant a variance from the provisions of this paragraph upon consultation with the public water supply affected by the excavation. The department may not grant a waiver from the provisions of paragraph A, B or D. [2007, c. 297, §5 (AMD).]

D. Refueling operations, oil changes and other maintenance activities requiring the handling of fuels, petroleum products, hydraulic fluids, and other on-site activity involving the storage or use of products that, if spilled, may contaminate groundwater, must be conducted in accordance with the department's spill prevention, control and countermeasures plan. Petroleum products and other substances that

may contaminate groundwater must be stored and handled over impervious surfaces that are designed to contain spills. The spill prevention, control and countermeasures plan must be posted at the site. [1995, c. 287, §8 (AMD).]

E. Excavation below the seasonal high water table of an area previously designated for potential use as a public drinking water source by a municipality or private water company is prohibited. If the yield of groundwater flow to protected waters or wetlands is not adversely affected, the department may grant a variance allowing excavation below the seasonal high water table of a mapped significant sand and gravel aquifer, or primary sand and gravel recharge area, or an unconsolidated deposit in other locations. [1995, c. 700, §24 (NEW).]

F. In the event of excavation below the seasonal high water table, the operator of a mining activity that affects a public drinking water source or private drinking water supply by excavation activities causing contamination, interruption or diminution must restore or replace the affected water supply with an alternate source of water, adequate in quantity and quality for the purpose served by the supply. This paragraph is not intended to replace any independent action that a person whose water supply is affected by a mining activity may have. [1995, c. 700, §24 (NEW).]

G. In the event of excavation below the seasonal high water table, a 300-foot separation must be maintained between the permitted limit of excavation and any predevelopment private drinking water supply, and a 1,000-foot separation must be maintained between the permitted limit of excavation and any predevelopment public drinking water source or area previously designated for potential use as a public drinking water source by a municipality or private water company. [2007, c. 297, §6 (AMD).]

The department may grant a variance allowing excavation between 2 and 5 feet of the seasonal high water table. The separation distance requirements described in paragraphs A, B and C do not apply when the private water supply or public drinking water source is owned by the owner of the excavation site.

[2007, c. 297, §§5, 6 (AMD) .]

3-A. **Medium borrow pits unlicensed on October 1, 1993.** Notwithstanding subsection 3, the following provisions apply to a medium borrow pit that on October 1, 1993 was not licensed under article 6 and on which gravel had been extracted to a level less than 5 feet above, at or below the seasonal high water table.

The medium borrow pit owner or operator may not further excavate in areas where gravel had been extracted to a level less than 5 feet above, at or below the seasonal high water table unless a variance is granted by the department.

A. The department may not require the medium borrow pit owner or operator to elevate the medium borrow pit floor to 5 feet or more above the seasonal high water table as a condition of operation. [1995, c. 287, §9 (NEW).]

B. [1995, c. 700, §24 (RP).]

C. The medium borrow pit owner or operator may reclaim as a pond that area of the medium borrow pit on which gravel had been extracted to a level at or below the seasonal high water table. [1997, c. 603, §6 (AMD).]

[1997, c. 603, §6 (AMD) .]

4. **Natural buffer strip.** Existing vegetation within a natural buffer strip may not be removed. If vegetation within the natural buffer strip has been removed or disturbed by the excavation or activities related to the excavation before submission of a notice of intent to comply, that vegetation must be reestablished as soon as practicable after filing the notice of intent to comply. The department may not grant a variance from the provisions of this subsection.

[1995, c. 700, §24 (AMD) .]

5. **Protected natural resources.**

[1995, c. 287, §10 (RP) .]

5-A. **Protected natural resource buffers.** A natural buffer strip must be maintained between the working edge of an excavation and a river, stream, brook, great pond or coastal wetland as defined in section 480-B. A natural buffer strip must also be maintained between the working edge of an excavation and certain freshwater wetlands as defined in section 480-B and having the characteristics listed in paragraph B. Excavation activities conducted within 100 feet of a protected natural resource must comply with the applicable permit requirement under article 5-A. The width requirements for natural buffer strips are as follows.

A. A natural buffer strip at least 100 feet wide must be maintained between the working edge of the excavation and the normal high-water line of a great pond classified as GPA, a river flowing to a great pond classified as GPA or a segment of the Kennebec River identified in Title 12, section 403, subsection 7. [2007, c. 616, §4 (AMD).]

B. A natural buffer strip at least 75 feet wide must be maintained between the working edge of the excavation and any other water body, river, stream, brook, coastal wetland or significant wildlife habitat contained within a freshwater wetland or a freshwater wetland consisting of or containing:

(1) Under normal circumstances, at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water, except for artificial ponds or impoundments; or

(2) Peat lands dominated by shrubs, sedges and sphagnum moss. [1995, c. 700, §24 (AMD).]

C. [1995, c. 460, §12 (AFF); 1995, c. 460, §8 (RP).]

For purposes of this subsection, the width of a natural buffer strip is measured from the upland edge of floodplain wetlands; if no floodplain wetlands are present, the width of the natural buffer strip is measured from the normal high-water mark of a great pond, river, stream or brook or the upland edge of a freshwater or coastal wetland. The department may allow excavation to occur under this subsection as long as a permit is obtained pursuant to article 5-A. An excavation is not eligible for a permit by rule under department rules regarding activities adjacent to a protected natural resource.

[2007, c. 616, §4 (AMD) .]

6. **Roads.**

[1995, c. 287, §12 (RP) .]

6-A. **Public and private roads.** A natural buffer strip must be maintained between the working edge of an excavation and a road or right-of-way as follows.

A. A natural buffer strip at least 150 feet wide must be maintained between the working edge of an excavation and a road designated as a scenic highway by the Department of Transportation. [1995, c. 287, §13 (NEW).]

B. A natural buffer strip at least 100 feet wide must be maintained between the working edge of an excavation and any public road not designated as a scenic highway by the Department of Transportation. A natural buffer strip at least 25 feet wide must be maintained between the working edge of a topsoil excavation and any public road not designated as a scenic highway by the Department of Transportation. A natural buffer strip at least 50 feet wide must be maintained between the working edge of an excavation and any public right-of-way that does not contain a road. The width of a natural buffer strip adjacent to a public road or right-of-way may be reduced if there is a public entity or entities with authority to grant permission and the applicant receives permission from each authority in writing. [2005, c. 158, §4 (AMD).]

C. A natural buffer strip at least 50 feet wide must be maintained between the working edge of an excavation and any private road or right-of-way. If a private road is contained within a wider right-of-way, the buffer is measured from the edge of the right-of-way. The width of the natural buffer strip adjacent to a private road may be reduced if the applicant receives written permission from the person or persons having a right-of-way over the private road. [1995, c. 700, §24 (AMD).]

Except for paragraph B, the department may not grant a variance from the provisions of this subsection. The department may grant a variance from paragraph B if the variance will not result in the natural buffer strip being reduced to less than 50 feet between the working edge of the excavation and any road or right-of-way, whichever is farther from the excavation, and if the owner or operator installs visual screening and safety measures as required by the department.

A distance specified in this subsection is measured from the outside edge of the shoulder of the road or edge of the right-of-way unless otherwise specifically provided.

[2005, c. 158, §4 (AMD) .]

6-B. **Medium borrow pits unlicensed on October 1, 1993.** Notwithstanding subsection 6-A, the following provisions apply to a medium borrow pit that on October 1, 1993 was not licensed under article 6 and on which gravel had been extracted closer than 50 feet to a public or private road.

A. The department may not require the owner or operator of a medium borrow pit to reestablish the required natural buffer strip as a condition of operation. [1997, c. 364, §21 (NEW).]

B. The owner or operator of a medium borrow pit shall regrade and seed the sideslopes to a slope no steeper than 2 horizontal feet for each vertical foot unless otherwise approved by the department.

The owner or operator of a medium borrow pit shall install visual screening and safety measures as required by the department. [1997, c. 364, §21 (NEW).]

[1997, c. 364, §21 (NEW) .]

7. **Property boundary.** A natural buffer strip at least 50 feet wide must be maintained between any excavation and any property boundary. A natural buffer strip at least 25 feet wide must be maintained between any topsoil excavation and a property boundary. These distances may be reduced to not less than 10 feet with the written permission of the affected property owner or owners, except that the distance may not be reduced to less than 25 feet from the boundary of a cemetery or burial ground. The buffer strip between excavations owned by abutting owners may be eliminated with the abutter's written permission, provided the elimination of this buffer strip does not increase the runoff from either excavation across the property boundary. Any written permission to reduce a buffer must provide that it remains in effect until mining ceases and must be recorded in the registry of deeds. All property boundaries must be identified in the field by markings such as metal posts, stakes, flagging or blazed trees. The department may not grant a variance from the provisions of this subsection.

[2005, c. 158, §4 (AMD) .]

8. **Erosion and sedimentation control.** A working pit must be naturally internally drained at all times unless a variance is obtained from the department.

A. The area of a working pit may not exceed 10 acres. [1993, c. 350, §5 (NEW).]

B. Stockpiles consisting of topsoil to be used for reclamation must be seeded, mulched or otherwise temporarily stabilized. [1993, c. 350, §5 (NEW).]

C. Sediment may not leave the parcel or enter a protected natural resource. [1995, c. 700, §24 (NEW).]

D. Grubbed areas not internally drained must be stabilized. [1995, c. 700, §24 (NEW).]

E. Erosion and sedimentation control for access roads must be conducted in accordance with the department's best management practices for erosion and sedimentation control. [2005, c. 561, §2 (AMD).]

F. All areas other than a working pit area that are not naturally internally drained must meet the erosion and sedimentation control standards of section 420-C. [2005, c. 561, §2 (NEW).]

The department may grant a variance from this subsection, except for paragraphs C, D, E and F. Areas are not considered "naturally internally drained" if surface discharge is impeded through the use of structures such as detention ponds, retention ponds and undersized culverts.

[2005, c. 561, §2 (AMD) .]

9. **Water quality protection and storm water management.** Standards of the laws governing storm water management and waste discharge must be met as provided in this subsection.

A. A variance must be obtained and storm water standards adopted pursuant to section 420-D must be met for any part of a project, other than the working pit area, that is not naturally internally drained if that part of the project would require a storm water management permit pursuant to section 420-D but for the exception for certain excavations in section 420-D, subsection 5. A storm water management permit pursuant to section 420-D is not required. [2005, c. 158, §5 (NEW).]

B. A waste discharge must meet standards and obtain authorization if required pursuant to section 413. [2005, c. 158, §5 (NEW).]

C. If a reclaimed slope or working pit is adjacent to steep slopes and a protected natural resource, measures must be taken to prevent storm water from ponding at the base of the reclaimed slope or working pit. [2007, c. 507, §1 (NEW).]

[2007, c. 507, §1 (AMD) .]

10. **Stockpiles.**

[1995, c. 700, §24 (RP) .]

11. **Traffic.** The following provisions govern traffic.

A. [T. 38, §490-D, sub-§11, ¶ A (RP).]

B. Any excavation activity that generates 100 or more passenger car equivalents at peak hour must comply with the applicable permit requirements under Title 23, section 704-A. [1999, c. 468, §16 (AMD).]

[1999, c. 468, §16 (AMD) .]

12. **Noise.** Noise levels may not exceed applicable noise limits in rules adopted by the board.

[1995, c. 700, §24 (AMD) .]

13. **Dust.** Dust generated by activities at the excavation site, including dust associated with traffic to and from the excavation site, must be controlled by sweeping, paving, watering or other best management practices for control of fugitive emissions. Dust control methods may include the application of calcium chloride, providing the manufacturer's labeling guidelines are followed. The department may not grant a variance from the provisions of this subsection. Visible emissions from a fugitive emission source may not exceed an opacity of 20% for more than 5 minutes in any one-hour period.

[2005, c. 158, §6 (AMD) .]

14. **Reclamation.** Except as provided in subsection 15, the affected land must be restored to a condition that is similar to or compatible with the conditions that existed before excavation. Reclamation should be conducted in accordance with the department's best management practices for erosion and sediment control, and must include:

A. Regrading side slopes to a slope no steeper than 2 1/2 horizontal feet for each vertical foot; [1993, c. 350, §5 (NEW).]

B. Establishing a vegetative cover by seeding within one year of the completion of excavation. Vegetative cover is acceptable if, within one year of seeding:

(1) The planting of trees and shrubs results in a permanent stand or a stand capable of regeneration and succession, sufficient to ensure a 75% survival rate; and

(2) The planting of all materials results in permanent 90% ground coverage; [1993, c. 350, §5 (NEW).]

C. Removing all structures and, once no longer in use, reclaiming all access roads, haul roads and other support roads; [1995, c. 700, §24 (AMD).]

D. Reclaiming all affected lands within 2 years after final grading; and [1995, c. 700, §24 (AMD).]

E. Stockpiling soil that is stripped or removed for use in reclaiming disturbed land areas. [1995, c. 700, §24 (NEW).]

The department may require a bond payable to the State with sureties satisfactory to the department or such other security as the department may determine adequately secures compliance with this article, conditioned upon the faithful performance of the requirements set forth in this article. Other security may include a security deposit with the State, an escrow account and agreement, insurance or an irrevocable trust. In determining the amount of the bond or the security, the department shall take into consideration the character and nature of the overburden, the future suitable use of the land involved and the cost of grading and reclamation required. All proceeds of forfeited bonds or other security must be expended by the department for the reclamation of the area for which the bond was posted and any remainder returned to the operator.

The board may adopt or amend rules to carry out this subsection, including rules relating to operation or maintenance plans; standards for determining the reclamation period; annual revisions of those plans; limits, terms and conditions on bonds or other security; proof of financial responsibility of a person engaged in excavation activity or the affiliated person who guarantees performance; estimation of reclamation costs; reports on reclamation activities; or the manner of determining when the bond or other security may be discharged. Rules adopted under this subsection are major substantive rules as defined in Title 5, chapter 375, subchapter II-A.

The department may grant a variance from paragraph A, provided that the slopes exhibit substantial vegetation and are stable. The department may not assess a fee for a request for a variance from paragraph A. The department may grant a variance from paragraph E if the applicant demonstrates that the soil is not needed for reclamation purposes. The department may not grant a variance from the other provisions of this subsection.

[2001, c. 466, §9 (AMD) .]

15. **Recreational management areas.** An owner or operator may request a variance to develop a recreational management area on the affected land as an alternative to reclamation in accordance with subsection 14. The department may grant a variance under section 490-E if the Off-road Recreational Vehicle Office determines the site is suitable under Title 12, section 1893-A.

[2013, c. 405, Pt. D, §17 (AMD) .]

16. **Blasting.** Blasting must be conducted in accordance with the standards in section 490-Z, subsection 14 unless otherwise approved by the department.

[2007, c. 297, §7 (NEW) .]

17. **Lighting.** Lighting must be shielded from adjacent highways and residential areas.

[2007, c. 616, §5 (NEW) .]

SECTION HISTORY
1993, c. 350, §5 (NEW). 1995, c. 287, §§8-15 (AMD). 1995, c. 460, §8 (AMD). 1995, c. 460, §12 (AFF). 1995, c. 700, §24 (AMD). 1997, c. 364, §21 (AMD). 1997, c. 603, §6 (AMD). 1999, c. 468, §16 (AMD). 1999, c. 556, §34 (AMD). 2001, c. 466, §§9,10 (AMD). 2005, c. 158, §§4-6 (AMD). 2005, c. 561, §2 (AMD). 2007, c. 290, §11 (AMD). 2007, c. 297, §§5-7 (AMD). 2007, c. 364, §2 (AMD). 2007, c. 507, §1 (AMD). 2007, c. 616, §§3-5 (AMD). 2009, c. 293, §5 (AMD). 2013, c. 405, Pt. D, §17 (AMD).

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Section 5

Enclosure 6

38 MRS §490-Z Performance Standards for Blasting

§490-Z. PERFORMANCE STANDARDS FOR QUARRIES

1. **Significant wildlife habitat and other protected areas.** Affected land may not be located in, on or over a significant wildlife habitat or other type of protected natural resource, as defined in section 480-B, or in an area listed pursuant to the Natural Areas Program, Title 12, section 544. The department may allow excavation to occur under this section as long as a permit is obtained pursuant to article 5-A. Permit requirements for certain excavations in, on or over high and moderate value inland waterfowl and wading bird habitat are also governed by section 480-GG.

[2009, c. 293, §6 (AMD) .]

2. **Solid waste.** Solid waste, including stumps, wood waste and land-clearing debris generated on the affected land must be disposed of in accordance with chapter 13, including any rules adopted to implement those laws. The department may not grant a variance from the provisions of this subsection.

[1995, c. 700, §35 (NEW) .]

3. **Groundwater protection.** To ensure adequate groundwater protection, the following setback requirements must be met.

A. A 200-foot separation must be maintained between an excavation and a private drinking water supply that is point driven or dug and was in existence prior to the excavation. [1995, c. 700, §35 (NEW).]

B. A 100-foot separation must be maintained between an excavation and a private drinking water supply that is drilled into saturated bedrock and was in existence prior to the excavation. [1995, c. 700, §35 (NEW).]

C. Separation must be maintained between an excavation and a public drinking water source as follows:

(1) For systems serving a population of 500 persons or less, the minimum separation must be 300 feet;

(2) For systems serving a population of 501 persons up to 1,000 persons, the separation must be 500 feet;

(3) For systems serving a population of more than 1,000 persons, the separation must be 1,000 feet; and

(4) For any system that holds a valid filtration waiver in accordance with the federal Safe Drinking Water Act, 42 United States Code, Sections 300f to 300j-26 (1988), the separation must be 1,000 feet. [1995, c. 700, §35 (NEW).]

D. Refueling operations, oil changes, other maintenance activities requiring the handling of fuels, petroleum products and hydraulic fluids and other on-site activity involving storage or use of products that, if spilled, may contaminate groundwater, must be conducted in accordance with the department's spill prevention, control and countermeasures plan. Petroleum products and other substances that may contaminate groundwater must be stored and handled over impervious surfaces that are designed to contain spills. The spill prevention, control and countermeasures plan must be posted at the site. [1995, c. 700, §35 (NEW).]

E. In the event of excavation below the seasonal high water table, a 300-foot separation must be maintained between the limit of excavation and any predevelopment private drinking water supply and a 1000-foot separation must be maintained between the limit of excavation and any public drinking water source or area previously designated for potential use as a public drinking water source by a municipality or private water company. [1995, c. 700, §35 (NEW).]

The department may grant a variance from the provisions of paragraph C upon consultation with the person or entity that controls the public drinking water supply affected by the excavation. The department may not grant a waiver from the provisions of paragraph A, B or D.

Excavation below the seasonal high water table is prohibited. The department may grant a variance allowing excavation below the seasonal high water table if the applicant demonstrates that the yield of groundwater flow to protected waters or wetlands or public drinking water sources or private drinking water supplies will not be adversely affected by the excavation.

In the event of excavation below the seasonal high water table, the operator of a mining activity that affects by excavation activities a public drinking water source or private drinking water supply by contamination, interruption or diminution must restore or replace the affected water supply with an alternate source of water, adequate in quantity and quality for the purpose served by the supply. This provision is not intended to replace any independent action that a person may have whose water supply is affected by a mining activity.

[2005, c. 158, §11 (AMD) .]

4. **Natural buffer strip.** Existing vegetation within a natural buffer strip may not be removed. If vegetation within the natural buffer strip has been removed or disturbed by the excavation or activities related to operation of a quarry before submission of a notice of intent to comply, that vegetation must be reestablished as soon as practicable after filing the notice of intent to comply. The department may not grant a variance from the provisions of this subsection.

[1995, c. 700, §35 (NEW) .]

5. **Protected natural resource buffers.** A natural buffer strip must be maintained between the working edge of an excavation and a river, stream, brook, great pond or coastal wetland as defined in section 480-B. A natural buffer strip must also be maintained between the working edge of an excavation and certain freshwater wetlands as defined in section 480-B and have the characteristics listed in paragraph B. Excavation activities conducted within 100 feet of a protected natural resource must comply with the applicable permit requirements under article 5-A. The width requirements for natural buffer strips are as follows.

A. A natural buffer strip at least 100 feet wide must be maintained between the working edge of the excavation and the normal high-water line of a great pond classified as GPA, a river flowing to a great pond classified as GPA or a segment of the Kennebec River identified in Title 12, section 403, subsection 7. [2007, c. 616, §7 (AMD).]

B. A natural buffer strip at least 75 feet wide must be maintained between the working edge of the excavation and a body of water other than as described in paragraph A, a river, stream or brook, coastal wetland or significant wildlife habitat contained within a freshwater wetland consisting of or containing:

(1) Under normal circumstances, at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water, except for artificial ponds or impoundments; or

(2) Peat lands dominated by shrubs, sedges and sphagnum moss. [1995, c. 700, §35 (NEW).]

For purposes of this subsection, the width of a natural buffer strip is measured from the upland edge of a floodplain wetland. If no floodplain wetlands are present, the width is measured from the normal high-water mark of the river, stream or brook. The width is measured from the normal high-water mark of a great pond and upland edge of a freshwater or coastal wetland.

The department may allow excavation to occur under this subsection as long as a permit is obtained pursuant to article 5-A. A quarry is not eligible for a permit by rule under department rules regarding activities adjacent to a protected natural resource.

[2007, c. 616, §7 (AMD) .]

6. **Roads.** A natural buffer strip must be maintained between the working edge of an excavation and a road or right-of-way as follows.

A. A natural buffer strip at least 150 feet wide must be maintained between the working edge of an excavation and a road designated as a scenic highway by the Department of Transportation. [1995, c. 700, §35 (NEW).]

B. A natural buffer strip at least 100 feet wide must be maintained between the working edge of the excavation and any other public road. A natural buffer strip at least 50 feet wide must be maintained between the working edge of an excavation and any public right-of-way that does not contain a road. The width of a natural buffer strip adjacent to a public road or right-of-way may be reduced if there is a public entity or entities with authority to grant permission and the applicant receives permission from each authority in writing. [2005, c. 158, §12 (AMD).]

C. A natural buffer strip at least 50 feet wide must be maintained between the working edge of an excavation and a private road or a right-of-way. If a private road is contained within a wider right-of-way, the buffer is measured from the edge of the right-of-way. The width of the natural buffer strip adjacent to a private road may be reduced if the applicant receives written permission from the persons having a right-of-way over the private road. [1995, c. 700, §35 (NEW).]

The department may not grant a variance from the provisions of paragraph A or C. The department may grant a variance from paragraph B if the variance does not result in the natural buffer strip being reduced to less than 50 feet between the working edge of the excavation and any road or right-of-way, whichever is farther from the excavation, and if the owner or operator installs visual screening and safety measures as required by the department.

A distance specified in this subsection is measured from the outside edge of the shoulder of the road or edge of the right-of-way unless otherwise specifically provided.

[2005, c. 158, §12 (AMD) .]

7. **Property boundary.** A natural buffer strip at least 100 feet wide must be maintained between an excavation and any property boundary. This distance may be reduced to 10 feet with the written permission of the affected abutting property owner or owners, except that the distance may not be reduced to less than 25 feet from the boundary of a cemetery or burial ground. The natural buffer strip between quarries owned by abutting owners may be eliminated with the abutter's written permission if the elimination of this natural buffer strip does not increase the runoff from either excavation across the property boundary. Any written permission to reduce a buffer must provide that it remains in effect until mining ceases and must be recorded in the registry of deeds. All property boundaries must be identified in the field by markings such as metal posts, stakes, flagging or blazed trees. The department may not grant a variance from the provisions of this subsection.

[2005, c. 158, §12 (AMD) .]

8. **Erosion and sedimentation control.** A working pit must be naturally internally drained at all times unless a variance is obtained from the department. Stockpiles consisting of topsoil to be used for reclamation must be seeded, mulched or otherwise temporarily stabilized.

A. Sediment may not leave the parcel or enter a protected natural resource. [1995, c. 700, §35 (NEW).]

B. Grubbed areas not internally drained must be stabilized. [1995, c. 700, §35 (NEW).]

C. Erosion and sedimentation control for access roads must be conducted in accordance with the department's best management practices for erosion and sedimentation control. [2005, c. 561, §4 (AMD).]

D. All areas other than a working pit area that are not naturally internally drained must meet the erosion and sedimentation control standards of section 420-C. [2005, c. 561, §4 (NEW).]

The department may not grant a variance from the provisions of paragraph A, B, C or D. Areas are not considered "naturally internally drained" if surface discharge is impeded through the use of structures such as detention ponds, retention ponds and undersized culverts.

[2005, c. 561, §4 (AMD) .]

9. **Water quality protection and storm water management.** Standards of the laws governing storm water management and waste discharge must be met as provided in this subsection.

A. A variance must be obtained and storm water standards adopted pursuant to section 420-D must be met for any part of a project, other than the working pit area, that is not naturally internally drained if that part of the project would require a storm water management permit pursuant to section 420-D but for the exception for certain excavations in section 420-D, subsection 5. A storm water management permit pursuant to section 420-D is not required. [2005, c. 158, §13 (NEW).]

B. A waste discharge must meet standards and obtain authorization if required pursuant to section 413. [2005, c. 158, §13 (NEW).]

[2005, c. 158, §13 (RPR) .]

10. **Traffic.** The following provisions govern traffic.

B. Any excavation activity that generates 100 or more passenger car equivalents at peak hour must comply with the applicable permit requirements under Title 23, section 704-A. [1999, c. 468, §17 (AMD).]

[1999, c. 468, §17 (AMD) .]

11. **Noise.** Noise levels may not exceed applicable noise limits in rules adopted by the board.

[1995, c. 700, §35 (NEW) .]

12. **Dust.** Dust generated by activities at a quarry, including dust associated with traffic to and from a quarry, must be controlled by sweeping, paving, watering or other best management practices for control of fugitive emissions. Dust control methods may include calcium chloride as long as the manufacturer's labeling guidelines are followed. The department may not grant a variance from the provisions of this subsection. Visible emissions from a fugitive emission source may not exceed an opacity of 20% for more than 5 minutes in any one-hour period.

[2005, c. 158, §14 (AMD) .]

13. **Reclamation.** The affected land must be restored to a condition that is similar to or compatible with the conditions that existed before excavation. Reclamation may be conducted in accordance with the department's best management practices for erosion and sedimentation control and must include the following.

A. Highwalls, or quarry faces, must be treated in such a manner as to leave them in a condition that minimizes the possibility of rock falls, slope failures and collapse. A highwall that is loose must be controlled by the use of blasting or scaling, the use of safety benches, the use of flatter slopes or reduced face heights or the use of benching near the top of the face or rounding the edge of the face. [1995, c. 700, §35 (NEW).]

B. A vegetative cover must be established by seeding or planting within one year of the completion of excavation. Vegetative cover must be established on all affected land except for quarry walls and flooded areas. A vegetative cover must be established on safety benches, unless otherwise approved by the department. Topsoil must be placed, seeded and mulched within 30 days of final grading. Vegetative cover is acceptable if within one year of seeding:

(1) The planting of trees and shrubs results in a permanent stand or a stand capable of regeneration and succession sufficient to ensure a 75% survival rate; and

(2) The planting of all material results in permanent 90% ground cover.

Vegetative cover used in reclamation must consist of grasses, legumes, herbaceous or woody plants, shrubs, trees or a mixture of these. [1997, c. 364, §23 (AMD).]

C. All structures, once no longer in use, and all access roads, haul roads and other support roads must be reclaimed. [1995, c. 700, §35 (NEW).]

D. All affected lands must be reclaimed within 2 years after final grading. [1995, c. 700, §35 (NEW).]

E. Topsoil that is stripped or removed must be stockpiled for use in reclaiming disturbed land areas. The department may grant a variance from this paragraph if the applicant demonstrates that the soil is not needed for reclamation purposes. [1995, c. 700, §35 (NEW).]

F. The department may require a bond payable to the State with sureties satisfactory to the department or such other security as the department determines adequately secures compliance with this article, conditioned upon the faithful performance of the requirements set forth in this article. Other security may include a security deposit with the State, an escrow account and agreement, insurance or an irrevocable trust. In determining the amount of the bond or the security, the department shall take into consideration the character and nature of the overburden, the future suitable use of the land involved and the cost of grading and reclamation required. All proceeds of forfeited bonds or other security must be expended by the department for the reclamation of the area for which the bond was posted and any remainder returned to the operator. [1995, c. 700, §35 (NEW).]

G. The board may adopt or amend rules to carry out this subsection, including rules relating to operational or maintenance plans; standards for determining the reclamation period; annual revisions of those plans; limits, terms and conditions on bonds or other security; proof of financial responsibility of a person engaged in excavation activity or the affiliated person who guarantees performance; estimation of reclamation costs; reports on reclamation activities; and the manner of determining when the bond or other security may be discharged. [1995, c. 700, §35 (NEW).]

[1997, c. 364, §23 (AMD) .]

14. **Blasting.** The applicant must ensure that the blasting is conducted in accordance with Title 25, chapter 318.

A. The owner or operator shall use sufficient stemming, matting or natural protective cover to prevent flyrock from leaving property owned or under control of the owner or operator or from entering protected natural resources or natural buffer strips. Crushed rock or other suitable material must be used for stemming when available; native gravel, drill cuttings or other material may be used for stemming only if no other suitable material is available. [1995, c. 700, §35 (NEW).]

B. The maximum allowable airblast at any inhabited building not owned or controlled by the developer may not exceed 129 decibels peak when measured by an instrument having a flat response (+ or - 3 decibels) over the range of 5 to 200 hertz. [1995, c. 700, §35 (NEW).]

C. The maximum allowable airblast at an uninhabited building not owned or controlled by the developer may not exceed 140 decibels peak when measured by an instrument having a flat response (+ or - 3 decibels) over the range of 5 to 200 hertz. [1995, c. 700, §35 (NEW).]

D. Monitoring of airblast levels is required in all cases for which a preblast survey is required by paragraph F. The department may waive the monitoring requirement if the owner or operator secures the permission of affected property owners to increase allowable airblast levels on their property and the department determines that no protected natural resource will be adversely affected by the increased airblast levels. [1995, c. 700, §35 (NEW).]

E. If a blast is to be initiated by detonating cord, the detonating cord must be covered by crushed rock or other suitable cover to reduce noise and concussion effects. [1995, c. 700, §35 (NEW).]

F. A preblast survey is required for all production blasting and must extend a minimum radius of 1/2 mile from the blast site. The preblast survey must document any preexisting damage to structures and buildings and any other physical features within the survey radius that could reasonably be affected by blasting. Assessment of features such as pipes, cables, transmission lines and wells and other water supply systems must be limited to surface conditions and other readily available data, such as well yield and water quality. The preblast survey must be conducted prior to the initiation of blasting at the operation. The owner or operator shall retain a copy of all preblast surveys for at least one year from the date of the last blast on the development site.

(1) The owner or operator is not required to conduct a preblast survey if the department determines that no protected natural resource within the limits of the otherwise required survey is likely to be affected by blasting and production blasting will not occur within 2000 feet of any building not owned or under the control of the developer.

(2) The owner or operator is not required to conduct a preblast survey on properties for which the owner or operator documents the rejection of an offer by registered letter, return receipt requested, to conduct a preblast survey. Any person owning a building within a preblast survey radius may voluntarily waive the right to a survey.

(3) The owner or operator is not required to conduct a preblast survey if the owner or operator agrees to design all blasts so that the weight of explosives per 8 millisecond or greater delay does not exceed that determined by the equation W=(D/Ds)2, where W is the maximum allowable weight of explosives per delay of 8 milliseconds or greater, D is the shortest distance between any area to be blasted and any inhabitable structure not owned or controlled by the developer and Ds equals 70 ft./(lb.) 1/2. [2005, c. 158, §15 (AMD).]

G. Blasting may not occur in the period between sundown and sunrise the following day or in the period between 7:00 p.m. and 7:00 a.m., whichever is greater. Routine production blasting is not allowed in the daytime on Sunday. Detonation of misfires may occur outside of these times but must be reported to the department within 5 business days of the misfire detonation. Blasting may not occur more frequently than 4 times per day. Underground production blasting may be exempted from these requirements provided that a waiver is granted by the department. [1995, c. 700, §35 (NEW).]

H. Sound from blasting may not exceed the following limits at any protected location:

Number of Blasts Per Day	Sound Level Limit
1	129 decibels
2	126 decibels
3	124 decibels
4	123 decibels

[1995, c. 700, §35 (NEW).]

I. The maximum peak particle velocity at inhabitable structures not owned or controlled by the developer may not exceed the levels established in Table 1 in paragraph K and the graph published by the United States Department of the Interior in "Bureau of Mines Report of Investigations 8507," Appendix B, Figure B-1. The department may grant a variance to allow ground vibration levels greater than 2 inches per second on undeveloped property not owned or controlled by the applicant if the department determines that no protected natural resource, unusual natural area or historic site will be adversely affected by the increased ground vibration levels. If inhabitable structures are constructed on the property

after approval of the development and prior to completion of blasting, the developer immediately must notify the department and modify blasting procedures to remain in compliance with the standards of this subsection. [1995, c. 700, §35 (NEW).]

J. Based upon an approved engineering study, the department may grant a variance to allow higher vibration levels for certain buildings and infrastructures. In reviewing a variance application, the department shall take into account that the standards in this paragraph and paragraph I are designed to protect conventional low-rise structures such as churches, homes and schools. In cases of practical difficulty, the department may grant a variance from paragraph I if it can be demonstrated that no adverse impacts on existing infrastructures or protected natural resources, unusual natural areas or historic sites will result. [1995, c. 700, §35 (NEW).]

K. Table 1 of this paragraph or the graph published by the United States Department of the Interior in "Bureau of Mines Report of Investigations 8507," Appendix B, Figure B-1 must be used to evaluate ground vibration effects for those blasts for which a preblast survey is required.

(1) Either Table 1 of this paragraph or the graph published by the United States Department of the Interior in "Bureau of Mines Report of Investigations 8507," Appendix B, Figure B-1 may be used to evaluate ground vibration effects when blasting is to be monitored by seismic instrumentation.

(2) Blasting measured in accordance with Table 1 of this paragraph must be conducted so that the peak particle velocity of any one of the 3 mutually perpendicular components of motion does not exceed the ground vibration limits at the distances specified in Table 1 of this paragraph.

(3) Seismic instruments that monitor blasting in accordance with Table 1 of this paragraph must have the instrument's transducer firmly coupled to the ground.

(4) An owner or operator using Table 1 of this paragraph must use the scaled-distance equation, W=(D/Ds)2, to determine the allowable charge weight of explosives to be detonated in any 8 millisecond or greater delay period without seismic monitoring, where W is equal to the maximum weight of explosives, in pounds, and D and Ds are defined as in Table 1 of this paragraph. The department may authorize use of a modified scaled-distance factor for production blasting if the owner or operator can demonstrate to a 95% confidence level, based upon records of seismographic monitoring at the specific site of the mining activity covered by the permit, that use of the modified scaled-distance factor will not cause the ground vibration to exceed the maximum allowable peak particle velocities of Table 1 of this paragraph.

(5) Blasting monitored in accordance with the graph published by the United States Department of the Interior in "Bureau of Mines Report of Investigations 8507," Appendix B, Figure B-1 must be conducted so that the continuously variable particle velocity criteria are not exceeded.

The owner or operator may apply for a variance of the ground vibration monitoring requirement prior to conducting blasting at the development site if the owner or operator agrees to design all blasts so that the weight of explosives per 8 millisecond or greater delay does not exceed that determined by the equation W=(D/Ds)2, where W is the maximum allowable weight of explosives per delay of 8 milliseconds or greater, D is the shortest distance between any area to be blasted and any inhabitable structure not owned or controlled by the developer and Ds equals 70 ft./lb.1/2. As a condition of the variance, the department may require submission of records certified as accurate by the blaster and may require the owner or operator to document compliance with the conditions of this paragraph.

The following is Table 1.

Distance versus Peak Particle Velocity Method

Distance (D) from the blast area (feet)	Maximum allowable peak particle velocity (Vmax) for ground vibration (in./sec.)	Scaled-distance factor (Ds) to be applied without seismic monitoring
0 to 300	1.25	50
301-5000	1.00	55
Greater than 5000	0.75	65

[1995, c. 700, §35 (NEW).]

L. A record of each blast, including seismographic data, must be kept for at least one year from the date of the last blast, must be available for inspection at the development or at the offices of the owner or operator if the development has been closed, completed or abandoned before the one-year limit has passed and must contain at a minimum the following data:

(1) Name of blasting company or blasting contractor;

(2) Location, date and time of blast;

(3) Name, signature and social security number of blaster;

(4) Type of material blasted;

(5) Number and spacing of holes and depth of burden or stemming;

(6) Diameter and depth of holes;

(7) Type of explosives used;

(8) Total amount of explosives used;

(9) Maximum amount of explosives used per delay period of 8 milliseconds or greater;

(10) Maximum number of holes per delay period of 8 milliseconds or greater;

(11) Method of firing and type of circuit;

(12) Direction and distance in feet to the nearest dwelling, public building, school, church or commercial or institutional building neither owned nor controlled by the developer;

(13) Weather conditions, including factors such as wind direction and cloud cover;

(14) Height or length of stemming;

(15) Amount of mats or other protection used;

(16) Type of detonators used and delay periods used;

(17) The exact location of each seismograph and the distance of each seismograph from the blast;

(18) Seismographic readings;

(19) Name and signature of the person operating each seismograph; and

(20) Names of the person and the firm analyzing the seismographic data. [1995, c. 700, §35 (NEW).]

M. All field seismographs must record the full analog wave form of each of the 3 mutually perpendicular components of motion in terms of particle velocity. All seismographs must be capable of sensor check and must be calibrated according to the manufacturer's recommendations. [1995, c. 700, §35 (NEW).]

N. If any blasting activity exceeds the standards in this subsection, the department must be notified within 48 hours of the blast event. Notification must include the name of the blasting operator, the location, date and time of the blasting event and a description of the specific occurrence that is in noncompliance with this subsection. Use of explosives at the quarry may be suspended by the department until the cause of the noncompliance is identified and appropriate steps are implemented to reduce, prevent or eliminate reoccurrence. [2007, c. 297, §10 (NEW).]

O. Prior to blasting, the owner or operator shall develop and implement a plan that provides an opportunity for prior notification of a planned blast for all persons located within 1,000 feet of the blast site. Notification may be by telephone, in writing, by public notice in a newspaper of general circulation in the area affected or by other means identified in the plan. The plan must be in writing and available for inspection by the department. [2007, c. 297, §11 (NEW).]

[2007, c. 297, §§10, 11 (AMD) .]

15. **Lighting.** Lighting must be shielded from adjacent highways and residential areas.

[2007, c. 616, §8 (NEW) .]

SECTION HISTORY
1995, c. 700, §35 (NEW). 1997, c. 364, §23 (AMD). 1999, c. 468, §17 (AMD). 1999, c. 556, §35 (AMD). 1999, c. 652, §10 (AMD). 2005, c. 158, §§11-15 (AMD). 2005, c. 561, §4 (AMD). 2007, c. 290, §12 (AMD). 2007, c. 297, §§10, 11 (AMD). 2007, c. 364, §3 (AMD). 2007, c. 616, §§6-8 (AMD). 2009, c. 293, §6 (AMD).

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Section 5

Enclosure 7

2013-06-10 SLoD and NRPA Order - L-19638-A-C-N (W509512x7AC2E

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
COMMISSIONER

June 2013

Stephen A. Hynes Real Property Trust Agreement
3 Idlewood Lane
Kittery, ME 03904
ATTN: Gary Beers

RE: Site Location of Development Act and Natural Resources Protection Act Applications, Kittery, DEP #L-19638-L2-B-N/L-19638-TA-C-N

Dear Mr. Beers:

Please find enclosed a signed copy of your Department of Environmental Protection land use permit. You will note that the permit includes a description of your project, findings of fact that relate to the approval criteria the Department used in evaluating your project, and conditions that are based on those findings and the particulars of your project. Please take several moments to read your permit carefully, paying particular attention to the conditions of the approval. The Department reviews every application thoroughly and strives to formulate reasonable conditions of approval within the context of the Department's environmental laws. You will also find attached some materials that describe the Department's appeal procedures for your information.

If you have any questions about the permit or thoughts on how the Department processed this application please get in touch with me directly. I can be reached at (207) 615-3149 or at Bill.Bullard@maine.gov.

Sincerely,

Bill Bullard

Bill Bullard, Project Manager
Division of Land Resource Regulation
Bureau of Land & Water Quality

pc: File

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STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

IN THE MATTER OF

STEPHEN A. HYNES REAL PROPERTY TRUST AGREEMENT	) SITE LOCATION OF DEVELOPMENT ACT
Kittery, York County	)
YANKEE COMMONS EXPANSION	) NATURAL RESOURCES PROTECTION ACT
L-19638-L2-B-N (approval)	) FRESHWATER WETLAND ALTERATION
L-19638-TA-C-N (approval)	) WATER QUALITY CERTIFICATION
	) FINDINGS OF FACT AND ORDER

Pursuant to the provisions of 38 M.R.S.A. Sections 481 et seq. and 480-A et seq., and Section 401 of the Federal Water Pollution Control Act, the Department of Environmental Protection has considered the application of STEPHEN A. HYNES REAL PROPERTY TRUST AGREEMENT with the supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. PROJECT DESCRIPTION:

A. History of Project: Department Order #L-19638-L2-A-N, dated September 4, 1998, approved the development of a 130-lot expansion at the Yankee Commons Park, located off Idlewood Lane in the Town of Kittery.

B. Summary: The applicant proposes to expand the existing mobile home park to accommodate 77 new mobile home units and a community center with access roads and associated utilities on a 50.1-acre parcel in the Town of Kittery. The project is shown on a set of plans, the first of which is entitled "Yankee Commons – Mobile Home Expansion, Idlewood Lane/US Route One, Kittery, Maine," prepared by Civil Consultants, and dated August 1, 2012, with a last revision date of April 3, 2013. The project site is located on the northerly side of Idlewood Lane, off the westerly side of US Route One.

The applicant is also seeking approval under the Natural Resources Protection Act to fill approximately 900 square feet of freshwater wetland associated with an adjacent emergent wetland of special significance. The applicant submitted a Permit by Rule notification (DEP #55419) to install stormwater underdrained filter outfall pipes adjacent to the emergent wetland. The Permit by Rule was approved on December 10, 2012.

C. Current Use of Site: The site of the proposed project is recently harvested woodland. The Wilson family cemetery is located on the northwesterly side of the parcel.

2. FINANCIAL CAPACITY:

The total cost of the project is estimated to be $3.29 million. The applicant submitted a financial statement demonstrating that it has sufficient funds available to construct the project.

The Department finds that the applicant has demonstrated adequate financial capacity to comply with Department standards.

3. TECHNICAL ABILITY:

The applicant provided resume information for key persons involved with the project and a list of projects successfully constructed by the applicant. The applicant also retained the services of Civil Consultants, a professional engineering firm, to assist in the design and engineering of the project.

The Department finds that the applicant has demonstrated adequate technical ability to comply with Department standards.

4. NOISE:

The applicant stated that the project is expected to produce a minor noise impact because the uses will be predominantly residential. Noise from construction activities will not exceed the limits described in Chapter 375(10)(C)(2).

The Department finds that no regulated sources of noise have been identified.

5. SCENIC CHARACTER:

The existing mobile home park abuts the southwesterly side of the project site; a large wetland and remaining woodland is located northeasterly of the site. The project will be set back approximately 400 feet from the Maine Turnpike to the northwest and approximately 800 feet from US Route One on the southeast. Existing trees near Idlewood Lane will provide further visual screening on the southeasterly side of the project.

Based on the project's location and design, the Department finds that the proposed project will not have an unreasonable adverse effect on the scenic character of the surrounding area.

6. WILDLIFE AND FISHERIES:

The Maine Department of Inland Fisheries and Wildlife (MDIFW) reviewed the proposed project. In its comments, MDIFW stated that it found no records of any Essential or Significant Wildlife Habitats, or other wildlife habitats of special concern associated with this site. No fisheries concerns were identified.

The Department finds that the applicant has made adequate provision for the protection of wildlife and fisheries.

7. HISTORIC SITES AND UNUSUAL NATURAL AREAS:

The Maine Historic Preservation Commission reviewed the proposed project and stated that it will have no effect upon any structure or site of historic, architectural, or archaeological significance as defined by the National Historic Preservation Act of 1966.

The Wilson family cemetery is located within designated open space toward the northwesterly side of the project site. The cemetery will be protected with a designated 25-foot wide buffer within the open space area.

The Maine Natural Areas Program database does not contain any records documenting the existence of rare or unique botanical features on the project site and, as discussed in Finding 6, MDIFW did not identify any unusual wildlife habitats located on the project site.

The Department finds that the proposed development will not have an adverse effect on the preservation of any historic sites or unusual natural areas either on or near the development site.

8. BUFFER STRIPS:

A 50-foot wide, no-disturbance buffer surrounds the perimeter of the entire project, as required by local review requirements. Emergent wetlands will be protected with buffers of 75 feet in width. No formal stormwater buffers are proposed.

The Department finds that the applicant has made adequate provision for buffer strips.

9. SOILS:

The applicant submitted a soil survey map and report and extensive test pit information based on the soils found at the project site. This report was prepared by a certified soils scientist and reviewed by staff from the Division of Environmental Assessment (DEA) of the Bureau of Land and Water Quality (BLWQ). Soils investigation results indicate that blasting will be required to construct the project. The applicant proposes to submit a Blasting Plan to the BLWQ for review and approval prior to the start of any blasting at the site. If a rock crusher is being utilized on site, the applicant must insure that the crusher is licensed by the Department's Bureau of Air Quality and will be operated in accordance with that license.

The Department finds that, based on this report and DEA's review, the soils on the project site present no limitations to the proposed project that cannot be overcome through standard engineering practices, provided that a site-specific blast plan is

submitted to the BLWQ for review and approval prior to the start of construction, and provided any rock crusher utilized on site is licensed and operated as described above.

10. STORMWATER MANAGEMENT:

The proposed project includes approximately 7 acres of impervious area and 18.5 acres of developed area. It lies within the watershed of Libby Brook and the York River. The applicant submitted a stormwater management plan based on the Basic, General, and Flooding standards contained in Department Rules, Chapter 500. The proposed stormwater management system consists of a catch basin collection system, 13 grassed underdrained soil filters, one bio-retention basin near Idlewood Lane and roofline drip edge filters for building runoff.

A. Basic Standards:

(1) Erosion and Sedimentation Control: The applicant submitted an Erosion and Sedimentation Control Plan that is based on the performance standards contained in Appendix A of Chapter 500 and the Best Management Practices outlined in the Maine Erosion and Sediment Control BMPs, which were developed by the Department. This plan and plan sheets containing erosion control details were reviewed by, and revised in response to the comments of, the Division of Land Resource Regulation (DLRR) of the BLWQ.

Erosion control details will be included on the final construction plans and the erosion control narrative will be included in the project specifications to be provided to the construction contractor.

Given the size and nature of the project site, the applicant must retain the services of a third party inspector in accordance with the Special Condition for Third Party Inspection Program, which is attached to this Order.

Prior to the start of construction, the applicant must conduct a pre-construction meeting to discuss the construction schedule and the erosion and sediment control plan with the appropriate parties. This meeting must be attended by the applicant's representative, Department staff, the design engineer, the contractor, and the third-party inspector.

(2) Inspection and Maintenance: The applicant submitted a maintenance plan that addresses both short and long-term maintenance requirements. This plan was reviewed by, and revised in response to the comments of, DLRR. The maintenance plan is based on the standards contained in Appendix B of Chapter 500. The applicant will be responsible for the maintenance of all common facilities including the stormwater management system.

Storm sewer grit and sediment materials removed from stormwater control structures during maintenance activities must be disposed of in compliance with the Maine Solid Waste Management Rules.

(3) Housekeeping: The proposed project will comply with the performance standards outlined in Appendix C of Chapter 500.

Based on DLRR's review of the erosion and sedimentation control plan and the maintenance plan, the Department finds that the proposed project meets the Basic Standards contained in Chapter 500(4)(A).

B. General Standards:

The applicant's stormwater management plan includes general treatment measures that will mitigate for the increased frequency and duration of channel erosive flows due to runoff from smaller storms, provide for effective treatment of pollutants in stormwater, and mitigate potential temperature impacts. This mitigation is being achieved by using Best Management Practices (BMPs) that will control runoff from 90% of the new impervious area and 84% of the new developed area. All treatment BMPs have been oversized by 25% to treat a greater depth of runoff than specified in the stormwater general standards, resulting an at least an equivalent amount of treatment for the new impervious area at the site. The stormwater management system proposed by the applicant was reviewed by, and revised in response to comments from, DLRR staff. DLRR stated that the proposed oversized treatment plan will provide the equivalent treatment of stormwater runoff in accordance with Chapter 500(4)(B)(2).

After a final review, DLRR commented that the proposed stormwater management system is designed in accordance with the General Standards contained in Chapter 500(4)(B) and recommended that the applicant retain the services of the design engineer to oversee the construction of the stormwater management structures in accordance with the details and notes specified on the approved plans. Within 30 days of the completion of each structure, the applicant shall submit a log of inspection reports including the items inspected, photos taken, and dates of each inspection to the BLWQ for review.

Based on the stormwater system's design and DLRR's review, the Department finds that the applicant has made adequate provision to ensure that the proposed project will meet the General Standards contained in Chapter 500(4)(B).

C. Flooding Standard:

The applicant is proposing to utilize a stormwater management system based on estimates of pre- and post-development stormwater runoff flows obtained by using Hydrocad, a stormwater modeling software that utilizes the methodologies outlined in Technical Releases #55 and #20, U.S.D.A., Soil Conservation Service and detains stormwater from 24-hour storms of 2-, 10-, and 25-year frequency. The post-development peak flow from the site will not exceed the pre-development peak flow from the site and the peak flow of the receiving waters will not be increased as a result of stormwater runoff from the development site.

DLRR commented that the proposed system is designed in accordance with the Flooding Standard contained in Chapter 500(4)(E).

Based on the system's design and DLRR's review, the Department finds that the applicant has made adequate provision to ensure that the proposed project will meet the Flooding Standard contained in Chapter 500(4)(E) for peak flow from the project site, and channel limits and runoff areas.

The Department further finds that the proposed project will meet the Chapter 500 standards for discharge to freshwater or coastal wetlands.

11. GROUNDWATER:

The project site is not located over a mapped sand and gravel aquifer. The proposed project does not propose any withdrawal from, or discharge to, the groundwater.

The Department finds that the proposed project will not have an unreasonable adverse effect on ground water quality or quantity.

12. WATER SUPPLY:

When completed, the proposed project is anticipated to use 14,040 gallons of water per day. Water will be supplied by the Kittery Water District. The applicant submitted a letter from the District, dated May 3, 2012, indicating that it will be capable of servicing this project.

The Department finds that the applicant has made adequate provision for securing and maintaining a sufficient and healthful water supply.

13. WASTEWATER DISPOSAL:

When completed, the proposed project is anticipated to discharge up to 14,040 gallons of wastewater per day to the Town of Kittery's wastewater treatment facility. The applicant submitted a letter from the Kittery Sewer Department stating that it will accept these flows. This project was reviewed by the Division of Water Quality Management (DWQM) of the BLWQ, which commented that the Kittery Sewer Department has the capacity to treat these flows and is operating in compliance with the water quality laws of the State of Maine.

Based on DWQM's comments, the Department finds that the applicant has made adequate provision for wastewater disposal at a facility that has the capacity to ensure satisfactory treatment.

14. SOLID WASTE:

When completed, the proposed project is anticipated to generate 237 tons of household solid waste per year. All general solid wastes from the proposed project will be collected by a licensed hauler and disposed of at the Town of Kittery's Transfer Station, which is currently in substantial compliance with the Maine Solid Waste Management Rules.

The proposed project will generate approximately 15,000 cubic yards of stumps and grubbings. All stumps and grubbings generated will be chipped and used for erosion control and for stabilization of sideslopes. Limited amounts of clearing debris may be burned in compliance with all local ordinances and the Maine Solid Waste Management Rules.

The proposed project will generate up to 500 pounds of construction debris with the installation of each mobile home unit. All construction debris generated will be disposed of at the Kittery Transfer Station, which is currently in substantial compliance with the Maine Solid Waste Management Rules.

Based on the above information, the Department finds that the applicant has made adequate provision for solid waste disposal.

15. FLOODING:

No construction is proposed within the 100-year flood plain associated with a stream at the northwest corner of the project site.

The Department finds that the proposed project is unlikely to cause or increase flooding or cause an unreasonable flood hazard to any structure.

16. WETLAND IMPACTS:

To construct a portion of the access road network, the applicant proposes to fill 900 square feet of scrub shrub wetland which is associated with an adjacent emergent wetland of special significance.

After reviewing the information in the file and conducting a site visit, the Department determined that the activity will not negatively affect the freshwater wetland of special significance or other protected natural resources; therefore the proposed project is eligible for Tier 1 review. To minimize wetland impacts, the applicant aligned the project's access road over a portion of an existing park road. This alignment will also avoid direct impacts to the larger, contiguous emergent wetland.

The Department finds that the applicant has avoided and minimized wetland impacts to the greatest extent practicable, and that the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project.

BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 480-A et seq. and Section 401 of the Federal Water Pollution Control Act:

A. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life.

B. The proposed activity will not violate any state water quality law including those governing the classifications of the State's waters.

BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 481 et seq.:

A. The applicant has provided adequate evidence of financial capacity and technical ability to develop the project in a manner consistent with state environmental standards.

B. The applicant has made adequate provision for fitting the development harmoniously into the existing natural environment and the development will not adversely affect existing uses, scenic character, air quality, water quality or other natural resources in the municipality or in neighboring municipalities provided that the applicant ensures that any rock crusher used at the site is licensed by the Department's Bureau of Air Quality and operated in accordance with that license.

C. The proposed development will be built on soil types which are suitable to the nature of the undertaking and will not cause unreasonable erosion of soil or sediment nor inhibit the natural transfer of soil provided that the applicant submits an acceptable blasting plan to the BLWQ for review and approval prior to conducting blasting at the site.

D. The proposed development meets the standards for storm water management in Section 420-D and the standard for erosion and sedimentation control in Section 420-C, provided the applicant retains the services of the design engineer to oversee construction of the stormwater management structures, grit and sediment removed from stormwater structures during maintenance activities is disposed of properly, a third-party inspector is retained, and a pre-construction meeting is conducted, all as outlined in Finding 10.

E. The proposed development will not pose an unreasonable risk that a discharge to a significant groundwater aquifer will occur.

F. The applicant has made adequate provision of utilities, including water supplies, sewerage facilities and solid waste disposal required for the development and the development will not have an unreasonable adverse effect on the existing or proposed utilities in the municipality or area served by those services.

G. The activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties nor create an unreasonable flood hazard to any structure.

THEREFORE, the Department APPROVES the application of STEPHEN A. HYNES REAL PROPERTY TRUST AGREEMENT to construct an expansion at an existing mobile home park in the Town of Kittery, as described in Finding 1, SUBJECT TO THE FOLLOWING CONDITIONS and all applicable standards and regulations:

1. The Standard Conditions of Approval, a copy attached.

2. In addition to any specific erosion control measures described in this or previous orders, the applicant shall take all necessary actions to ensure that its activities or those of its agents do not result in noticeable erosion of soils or fugitive dust emissions on the site during the construction and operation of the project covered by this approval.

3. Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

4. The applicant or other responsible party shall, within three months of the expiration of each five-year interval from the date of this Order, submit a report certifying that the items listed in Department Rules, Chapter 500, Appendix B(4) have been completed in accordance with the approved plans.

5. The applicant shall include in all conveyances of subdivision lots deed restrictions making the conveyance subject to all terms and conditions of this Department permit and any applicable municipal approval. These terms and conditions may be incorporated by specific and prominent reference to the permit in the deed. All conveyances required by this approval to contain restrictions shall include in the restrictions the requirement that any subsequent conveyance shall specifically include the same restrictions.

6. The applicant shall give a copy of this permit, including the standard conditions, and a copy of the approved subdivision plan to each lot buyer at least 14 days prior to the date of closing on the sale or lease of the lot. The applicant also shall maintain a file containing signed and dated statements by lot buyers or lessees acknowledging that they have received and read their copy of this permit and the subdivision plan prior to the closing on their lot. The file shall also contain a copy of the signed and dated deed or lease containing the restrictive covenants required under this approval. The applicant shall make this file available for inspection upon request by the Department.

7. The applicant shall retain the services of a third-party inspector in accordance with the Special Condition for Third-Party Inspection Program, which is attached to this Order.

8. Prior to the start of construction, the applicant shall conduct a pre-construction meeting. This meeting shall be attended by the applicant's representative, Department staff, the design engineer, the contractor, and the third-party inspector.

9. The applicant shall retain the services of the design engineer to oversee the construction of the stormwater management structures in accordance with the details and notes specified on the approved plans. Within 30 days of the completion of each structure, the applicant shall submit a log of inspection reports including the items inspected, photos taken, and dates of each inspection to the BLWQ for review.

10. Storm sewer grit and sediment materials removed from stormwater control structures during maintenance activities shall be disposed of in compliance with the Maine Solid Waste Management Rules.

11. Prior to conducting blasting at the site, a site-specific blasting plan shall be submitted to the BLWQ for review and approval.

12. If a rock crusher is being utilized on site, the applicant shall insure that the crusher is licensed by the Department's Bureau of Air Quality and is being operated in accordance with that license.

THIS APPROVAL DOES NOT CONSTITUTE OR SUBSTITUTE FOR ANY OTHER REQUIRED STATE, FEDERAL OR LOCAL APPROVALS NOR DOES IT VERIFY COMPLIANCE WITH ANY APPLICABLE SHORELAND ZONING ORDINANCES.

DONE AND DATED IN AUGUSTA, MAINE, THIS 10th DAY OF June, 2013.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Filed

JUN 10 2013

State of Maine
Board of Environmental Protection

BY: Michael Kuhns
For: Patricia W. Aho, Commissioner

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES...

WB/L#19638BNCN/ATS#75525,75914

Department of Environmental Protection

SITE LOCATION OF DEVELOPMENT (SITE) STANDARD CONDITIONS

A. **Approval of Variations from Plans.** The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation. Further subdivision of proposed lots by the applicant or future owners is specifically prohibited without prior approval of the Board, and the applicant shall include deed restrictions to that effect.

B. **Compliance with All Applicable Laws.** The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

C. **Compliance with All Terms and Conditions of Approval.** The applicant shall submit all reports and information requested by the Board or the Department demonstrating that the applicant has complied or will comply with all preconstruction terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.

D. **Advertising.** Advertising relating to matters included in this application shall refer to this approval only if it notes that the approval has been granted WITH CONDITIONS, and indicates where copies of those conditions may be obtained.

E. **Transfer of Development.** Unless otherwise provided in this approval, the applicant shall not sell, lease, assign or otherwise transfer the development or any portion thereof without prior written approval of the Board where the purpose or consequence of the transfer is to transfer any of the obligations of the developer as incorporated in this approval. Such approval shall be granted only if the applicant or transferee demonstrates to the Board that the transferee has the technical capacity and financial ability to comply with conditions of this approval and the proposals and plans contained in the application and supporting documents submitted by the applicant.

F. **Time frame for approvals.** If the construction or operation of the activity is not begun within four years, this approval shall lapse and the applicant shall reapply to the Board for a new approval. The applicant may not begin construction or operation of the development until a new approval is granted. A reapplication for approval may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.

G. **Approval Included in Contract Bids.** A copy of this approval must be included in or attached to all contract bid specifications for the development.

H. **Approval Shown to Contractors.** Work done by a contractor pursuant to this approval shall not begin before the contractor has been shown by the developer a copy of this approval.

(2/81)/Revised December 27, 2011

Natural Resource Protection Act (NRPA)
Standard Conditions

THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCE PROTECTION ACT, TITLE 38, M.R.S.A. SECTION 480-A ET.SEQ. UNLESS OTHERWISE SPECIFICALLY STATED IN THE PERMIT.

A. Approval of Variations From Plans. The granting of this permit is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.

B. Compliance With All Applicable Laws. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

C. Erosion Control. The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during the construction and operation of the project covered by this Approval.

D. Compliance With Conditions. Should the project be found, at any time, not to be in compliance with any of the Conditions of this Approval, or should the applicant construct or operate this development in any way other the specified in the Application or Supporting Documents, as modified by the Conditions of this Approval, then the terms of this Approval shall be considered to have been violated.

E. Time frame for approvals. If construction or operation of the activity is not begun within four years, this permit shall lapse and the applicant shall reapply to the Board for a new permit. The applicant may not begin construction or operation of the activity until a new permit is granted. Reapplications for permits may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.

F. No Construction Equipment Below High Water. No construction equipment used in the undertaking of an approved activity is allowed below the mean high water line unless otherwise specified by this permit.

G. Permit Included In Contract Bids. A copy of this permit must be included in or attached to all contract bid specifications for the approved activity.

H. Permit Shown To Contractor. Work done by a contractor pursuant to this permit shall not begin before the contractor has been shown by the applicant a copy of this permit.

Revised (4/92) DEP LW0428

STORMWATER STANDARD CONDITIONS

STRICT CONFORMANCE WITH THE STANDARD AND SPECIAL CONDITIONS OF THIS APPROVAL IS NECESSARY FOR THE PROJECT TO MEET THE STATUTORY CRITERIA FOR APPROVAL

Standard conditions of approval. Unless otherwise specifically stated in the approval, a department approval is subject to the following standard conditions pursuant to Chapter 500 Stormwater Management Law.

(1) Approval of variations from plans. The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents must be reviewed and approved by the department prior to implementation. Any variation undertaken without approval of the department is in violation of 38 M.R.S.A. §420-D(8) and is subject to penalties under 38 M.R.S.A. §349.

(2) Compliance with all terms and conditions of approval. The applicant shall submit all reports and information requested by the department demonstrating that the applicant has complied or will comply with all terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.

(3) Advertising. Advertising relating to matters included in this application may not refer to this approval unless it notes that the approval has been granted WITH CONDITIONS, and indicates where copies of those conditions may be obtained.

(4) Transfer of project. Unless otherwise provided in this approval, the applicant may not sell, lease, assign, or otherwise transfer the project or any portion thereof without written approval by the department where the purpose or consequence of the transfer is to transfer any of the obligations of the developer as incorporated in this approval. Such approval may only be granted if the applicant or transferee demonstrates to the department that the transferee agrees to comply with conditions of this approval and the proposals and plans contained in the application and supporting documents submitted by the applicant. Approval of a transfer of the permit must be applied for no later than two weeks after any transfer of property subject to the license.

(5) Time frame for approvals. If the construction or operation of the activity is not begun within four years, this approval shall lapse and the applicant shall reapply to the department for a new approval. The applicant may not begin construction or operation of the project until a new approval is granted. A reapplication for approval may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.

(6) Certification. Contracts must specify that "all work is to comply with the conditions of the Stormwater Permit." Work done by a contractor or subcontractor pursuant to this approval may not begin before the contractor and any subcontractors have been shown a copy of this approval with the conditions by the developer, and the owner and each contractor and subcontractor has certified, on a form provided by the department, that the approval and conditions have been received and read, and that the work will be carried out in accordance

with the approval and conditions. Completed certification forms must be forwarded to the department.

(7) Maintenance. The components of the stormwater management system must be adequately maintained to ensure that the system operates as designed, and as approved by the department.

(8) Recertification requirement. Within three months of the expiration of each five-year interval from the date of issuance of the permit, the permittee shall certify the following to the department.

(a) All areas of the project site have been inspected for areas of erosion, and appropriate steps have been taken to permanently stabilize these areas.

(b) All aspects of the stormwater control system have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the facilities.

(c) The erosion and stormwater maintenance plan for the site is being implemented as written, or modifications to the plan have been submitted to and approved by the department, and the maintenance log is being maintained.

(9) Severability. The invalidity or unenforceability of any provision, or part thereof, of this permit shall not affect the remainder of the provision or any other provisions. This permit shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

November 16, 2005 (revised December 27, 2011)

Special Condition
for
Third Party Inspection Program

DEPLW078-B2001 November 2008

THIRD-PARTY INSPECTION PROGRAM

1.0 THE PURPOSE OF THE THIRD-PARTY INSPECTION

As a condition of this permit, the Maine Department of Environmental Protection (MDEP) requires the permit applicant to retain the services of a third-party inspector to monitor compliance with MDEP permit conditions during construction. The objectives of this condition are as follows:

1) to ensure that all construction and stabilization activities comply with the permit conditions and the MDEP-approved drawings and specifications,

2) to ensure that field decisions regarding erosion control implementation, stormwater system installation, and natural resource protection are based on sound engineering and environmental considerations, and

3) to ensure communication between the contractor and MDEP regarding any changes to the development's erosion control plan, stormwater management plan, or final stabilization plan.

This document establishes the inspection program and outlines the responsibilities of the permit applicant, the MDEP, and the inspector.

2.0 SELECTING THE INSPECTOR

At least 30 days prior to starting any construction activity on the site, the applicant will submit the names of at least two inspector candidates to the MDEP. Each candidate must meet the minimum qualifications listed under section 3.0. The candidates may not be employees, partners, or contracted consultants involved with the permitting of the project or otherwise employed by the same company or agency except that the MDEP may accept subcontractors who worked for the project's primary consultant on some aspect of the project such as, but not limited to, completing wetland delineations, identifying significant wildlife habitats, or conducting geotechnical investigations, but who were not directly employed by the applicant, as Third Party inspectors on a case by case basis. The MDEP will have 15 days from receiving the names to select one of the candidates as the inspector or to reject both candidates. If the MDEP rejects both candidates, then the MDEP shall state the particular reasons for the rejections. In this case, the applicant may either dispute the rejection to the Director of the Bureau of Land and Water Quality or start the selection process over by nominating two, new candidates.

3.0 THE INSPECTOR'S QUALIFICATIONS

Each inspector candidate nominated by the applicant shall have the following minimum qualifications:

1) a degree in an environmental science or civil engineering, or other demonstrated expertise,

2) a practical knowledge of erosion control practices and stormwater hydrology,

3) experience in management or supervision on large construction projects,

4) the ability to understand and articulate permit conditions to contractors concerning erosion control or stormwater management,

5) the ability to clearly document activities being inspected,

6) appropriate facilities and, if necessary, support staff to carry out the duties and responsibilities set forth in section 6.0 in a timely manner, and

7) no ownership or financial interest in the development other than that created by being retained as the third-party inspector.

4.0 INITIATING THE INSPECTOR'S SERVICES

The applicant will not formally and finally engage for service any inspector under this permit condition prior to MDEP approval or waiver by omission under section 2.0. No clearing, grubbing, grading, filling, stockpiling, or other construction activity will take place on the development site until the applicant retains the MDEP-approved inspector for service.

5.0 TERMINATING THE INSPECTOR'S SERVICES

The applicant will not terminate the services of the MDEP-approved inspector at any time between commencing construction and completing final site stabilization without first getting written approval to do so from the MDEP.

6.0 THE INSPECTOR'S DUTIES AND RESPONSIBILITIES

The inspector's work shall consist of the duties and responsibilities outlined below.

1) Prior to construction, the inspector will become thoroughly familiar with the terms and conditions of the state-issued site permit, natural resources protection permit, or both.

2) Prior to construction, the inspector will become thoroughly familiar with the proposed construction schedule, including the timing for installing and removing erosion controls, the timing for constructing and stabilizing any basins or ponds, and the deadlines for completing stabilization of disturbed soils.

3) Prior to construction, the inspector will become thoroughly familiar with the project plans and specifications, including those for building detention basins, those for installing the erosion control measures to be used on the site, and those for temporarily or permanently stabilizing disturbed soils in a timely manner.

4) During construction, the inspector will monitor the contractor's installation and maintenance of the erosion control measures called for in the state permit(s) and any additional measures the inspector believes are necessary to prevent sediment discharge to off-site properties or natural resources. This direction will be based on the approved erosion control plan, field conditions at the time of construction, and the natural resources potentially impacted by construction activities.

5) During construction, the inspector will monitor the contractor's construction of the stormwater system, including the construction and stabilization of ditches, culverts, detention basins, water quality treatment measures, and storm sewers.

6) During construction, the inspector will monitor the contractor's installation of any stream or wetland crossings.

7) During construction, the inspector will monitor the contractor's final stabilization of the project site.

8) During construction, the inspector will keep logs recording any rain storms at the site, the contractor's activities on the site, discussions with the contractor(s), and possible violations of the permit conditions.

9) During construction, the inspector will inspect the project site at least once a week and before and after any significant rain event. The inspector will photograph all protected natural resources both before and after construction and will photograph all areas under construction. All photographs will be identified with, at a minimum the date the photo was taken, the location and the name of the individual taking the photograph. *Note: the frequency of these inspections as contained in this condition may be varied to best address particular project needs.*

10) During construction, the inspector will prepare and submit weekly *(or other frequency)* inspection reports to the MDEP.

11) During construction, the inspector will notify the designated person at the MDEP immediately of any sediment-laden discharges to a protected natural resource or other significant issues such as the improper construction of a stormwater control structure or the use of construction plans not approved by the MDEP.

7.0 INSPECTION REPORTS

The inspector will submit weekly written reports *(or at another designated frequency)*, including photographs of areas that are under construction, on a form provided by the Department to the designated person at the MDEP. Each report will be due at the MDEP by the Friday *(or other designated day)* following the inspection week (Monday through Sunday).

The weekly report will summarize construction activities and events on the site for the previous week as outlined below.

1) The report will state the name of the development, its permit number(s), and the start and end dates for the inspection week (Monday through Sunday).

2) The report will state the date(s) and time(s) when the inspector was on the site making inspections.

3) The report will state the date(s) and approximate duration(s) of any rainfall events on the site for the week.

4) The report will identify and describe any erosion problems that resulted in sediment leaving the property or sediment being discharged into a wetland, brook, stream, river, lake, or public storm sewer system. The report will describe the contractor's actions to repair any damage to other properties or natural resources, actions to eliminate the erosion source, and actions to prevent future sediment discharges from the area.

5) The report will list the buildings, roads, parking lots, detention basins, stream crossings or other features open to construction for the week, including those features or areas actively worked and those left unworked (dormant).

6) For each area open to construction, the report will list the date of initial soil disturbance for the area.

7) For each area open to construction, the report will note which areas were actively worked that week and which were left dormant for the week. For those areas actively worked, the report will briefly state the work performed in the area that week and the progress toward final stabilization of the area -- e.g. "grubbing in progress", " grubbing complete", "rough grading in progress", "rough grading complete", "finish grading in progress", "finish grading complete", "permanent seeding completed", "area fully stable and temporary erosion controls removed", etc.

8) For each area open to construction, the report will list the erosion and sedimentation control measures installed, maintained, or removed during the week.

9) For each erosion control measure in-place, the report will note the condition of the measure and any maintenance performed to bring it to standard.

Third Party Inspection Form

This report is prepared by a Third Party Inspector to meet the requirements of the Third Party Inspector Condition attached as a Special Condition to the Department Order that was issued for the project identified below. The information in this report/form is not intended to serve as a determination of whether the project is in compliance with the Department permit or other applicable Department laws and rules. Only Department staff may make that determination.

TO: *PM, Maine DEP (@maine.gov)*	FROM:
PROJECT NAME/ LOCATION:	DEP #:
DATE OF INSPECTION:	DATE OF REPORT:
WEATHER:	CONDITIONS:

SITE CHARACTERISTICS:

# ACRES OPEN:	# ACRES ACTIVE:	# ACRES INACTIVE:
LOCATION OF OPEN LAND:	LOCATION OF ACTIVE LAND:	LOCATION OF INACTIVE LAND:
OPEN SINCE:	OPEN SINCE:	OPEN SINCE:

PROGRESS OF WORK:

INSPECTION OF:	**Satisfactory**	**Minor Deviation** (corrective action required)	**Unsatisfactory** (include photos)
STORMWATER CONTROL (VEGETATIVE & STRUCTURAL BMP'S)			
EROSION & SEDIMENTATION CONTROL (TEMPORARY & PERMANENT BMP'S)			
OTHER: (PERMIT CONDITIONS, ENGINEERING DESIGN, ETC.)			

COMMENTS/CORRECTIVE ACTIONS TAKEN (attach additional sheets as necessary):

Photos (must be labeled with date, photographer and location):

Cc:		
Original and all copies were sent by email only.		

DEP INFORMATION SHEET
Appealing a Department Licensing Decision

Dated: March 2012 **Contact: (207) 287-2811**

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's ("DEP") Commissioner: (1) in an administrative process before the Board of Environmental Protection ("Board"); or (2) in a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S.A. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S.A. § 480-HH(1)) or a general permit for a tidal energy demonstration project (38 M.R.S.A. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

This INFORMATION SHEET, in conjunction with a review of the statutory and regulatory provisions referred to herein, can help a person to understand his or her rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

The laws concerning the DEP's *Organization and Powers*, 38 M.R.S.A. §§ 341-D(4) & 346, the *Maine Administrative Procedure Act*, 5 M.R.S.A. § 11001, and the DEP's *Rules Concerning the Processing of Applications and Other Administrative Matters* ("Chapter 2"), 06-096 CMR 2 (April 1, 2003).

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written appeal within 30 days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days of the date on which the Commissioner's decision was filed with the Board will be rejected.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, c/o Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; faxes are acceptable for purposes of meeting the deadline when followed by the Board's receipt of mailed original documents within five (5) working days. Receipt on a particular day must be by 5:00 PM at DEP's offices in Augusta; materials received after 5:00 PM are not considered received until the following day. The person appealing a licensing decision must also send the DEP's Commissioner a copy of the appeal documents and if the person appealing is not the applicant in the license proceeding at issue the applicant must also be sent a copy of the appeal documents. All of the information listed in the next section must be submitted at the time the appeal is filed. Only the extraordinary circumstances described at the end of that section will justify evidence not in the DEP's record at the time of decision being added to the record for consideration by the Board as part of an appeal.

WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

Appeal materials must contain the following information at the time submitted:

1. *Aggrieved Status.* The appeal must explain how the person filing the appeal has standing to maintain an appeal. This requires an explanation of how the person filing the appeal may suffer a particularized injury as a result of the Commissioner's decision.
2. *The findings, conclusions or conditions objected to or believed to be in error.* Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
3. *The basis of the objections or challenge.* If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.
5. *All the matters to be contested.* The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.
6. *Request for hearing.* The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing on the appeal is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.
7. *New or additional evidence to be offered.* The Board may allow new or additional evidence, referred to as supplemental evidence, to be considered by the Board in an appeal only when the evidence is relevant and material and that the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process <u>or</u> that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2.

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, made easily accessible by DEP. Upon request, the DEP will make the material available during normal working hours, provide space to review the file, and provide opportunity for photocopying materials. There is a charge for copies or copying services.
2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer questions regarding applicable requirements.
3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed the license normally remains in effect pending the processing of the appeal. A license holder may proceed with a project pending the outcome of an appeal but the license holder runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will formally acknowledge receipt of an appeal, including the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials accepted by the Board Chair as supplementary evidence, and any materials submitted in response to the appeal will be sent to Board members with a recommendation from DEP staff. Persons filing appeals and interested persons are notified in advance of the date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, a license holder, and interested persons of its decision.

II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court, see 38 M.R.S.A. § 346(1); 06-096 CMR 2; 5 M.R.S.A. § 11001; & M.R. Civ. P 80C. A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. Failure to file a timely appeal will result in the Board's or the Commissioner's decision becoming final.

An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S.A. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board's Executive Analyst at (207) 287-2452 or for judicial appeals contact the court clerk's office in which your appeal will be filed.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.

CIVIL
CONSULTANTS

Engineers

Planners

Surveyors

Section 5

Enclosure 8

Gorrill-Palmer Traffic Report, 07-22-2015
Construction & Post-Development Traffic Impact

Relationships.
Responsiveness.
Results.

Traffic Impact Analysis
Yankee Commons Mobile Home Park Expansion
Kittery, Maine

PREPARED FOR:

GB Park Services
PO Box 642
54 Lewis Road
Kittery, ME 03904-0642

July 2015

SUBMITTED BY:

Gorrill Palmer
P.O. Box 1237
15 Shaker Road
Gray, ME 04039
207.657.6910

Traffic Impact Analysis
Yankee Commons Mobile Home Park Expansion
Kittery, Maine

Index

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Appendix A

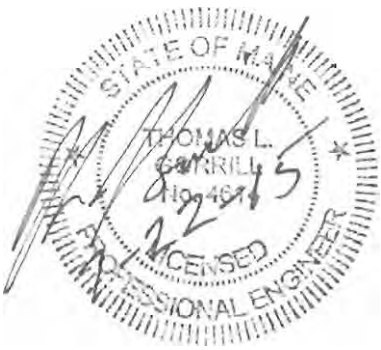
Site Location Map
Turning Movement Diagrams

Appendix B

Capacity and Queuing Analyses Results

Appendix C

MaineDOT Crash Data
Trip Generation Information



Executive Summary

The following Executive Summary is prepared for the reader's convenience, but is not intended to be a substitute for reading the full report. Gorrill Palmer (GP) was retained by Stephen A. Hynes Real Property Trust Agreement to examine the traffic impacts associated with the proposed expansion of the Yankee Commons mobile home park off Idlewood Lane in Kittery, Maine. The existing 77 unit park, consisting of 65 lots and 12 apartments will be expanded by 77 units and will be restricted to residents over the age of 55. The expansion is planned to be developed over five years. A site survey and proposed site plan are included in Appendix A.

In order for the trailer park expansion to occur, it is our understanding that approximately 190,000 cy of material will be excavated which will swell to 300,000 cy when removed and crushed. The purpose of this analysis is to assess the impact of the additional mobile home and construction truck traffic on the existing street system and to make recommendations as appropriate to mitigate the impact.

Following are the major findings of the study:

a. The proposed additional 77 mobile homes are forecast to generate an additional 43 and 37 trip ends in the weekday AM and PM peak hours of the adjacent street traffic respectively. This level of trip generation does not require a traffic movement permit from the MaineDOT.

b. The applicant estimates that approximately 190,000 cy of material will need to be excavated to prepare the site for the mobile homes, which will yield approximately 300,000 cy of material to be hauled away once it is excavated. The applicant anticipates that it will take approximately a year to remove the material which will be hauled south to I-95. We recommend that this hauling be suspended during the core of the tourist season, between June 30th and Labor Day. We understand from the applicant that the trucks removing the material will have a capacity of approximately 22 cy which results in an average of 68 truckloads per day, or 9 truck trips entering and 9 truck trips exiting an hour.

c. Access to the site will be from two driveways off the easterly end of Idlewood Lane near Route 1. An interconnection to the existing mobile home park is also planned.

d. The capacity analysis shows that the proposed expansion will have minimal impacts to the adjacent roadway network, and that the network will operate at acceptable levels of service upon completion of the project.

e. The MaineDOT crash data showed there are no high crash locations in the vicinity of the site.

f. The available sight distances at the existing / proposed entrances exceed MaineDOT requirements as well as at the intersection of Idlewood Lane / Route 1.

g. There are currently two mid-block pedestrian crossings of Route 1 in the vicinity of the Kittery Malls. While this project should not increase the number of pedestrian crossings, and the truck traffic is anticipated to end after a year, we do recommend that rapid rectangular flashing beacons be installed at these two crossings.

Based on these findings, it is the opinion of GP that the site generated traffic can be accommodated on the existing roadway network.

I. *Existing and Proposed Site*

The site is located off Idlewood Lane on the northeasterly side of the existing 77 unit Yankee Commons Mobile Home Park. The proposed site includes 65 lots and 12 apartments. All the units, with the exception of one, were constructed more than ten years ago. The existing park is accessed from Idlewood Lane. The proposal is to expand the existing mobile home park by 77 additional units yielding a total of 154 units upon completion of the project. We understand the proposed units will be restricted to 55 years of age and older. Access will be from the easterly end of Idlewood Drive at two locations and will also have an internal driveway connecting to the existing park. A site survey and proposed site location map are included in Appendix A.

II. *Background Traffic Conditions*

GP based the study on the following information:

- A site plan prepared by Civil Consultants.
- Crash data for 2012-2014 provided by MaineDOT.
- Turning movement counts collected on Tuesday, June 30th, 2015 from 2:30 to 5:00 PM by GP.
- A posted speed of 45 mph on Route 1.
- Annual Average Daily Traffic Counts (AADT) are furnished by the MaineDOT at the following locations:
    - Route 1 southwest of the Rest Area Road- 2013 AADT=9,820
    - Route 1 northeast of Haley Road- 2013 AADT= 10,940
    - Route 1 at the Spruce Creek Bridge- 2013 AADT= 16,260
    - Route 1 southwest of Route 101-2013 AADT=16,930

Predevelopment Traffic Volumes

Seasonal Adjustment

The traffic counts were collected during the week of July 4th, which is one of the highest weeks of traffic for the year. Therefore a seasonal adjustment was not necessary. The PM peak hour was determined to be from 4:00 to 5:00 PM. The raw volumes collected during the PM peak hour are shown in Figure 2 of Appendix A.

Annual Growth

The mobile home park expansion is anticipated to be fully occupied by 2020. Based on recent MaineDOT traffic information, traffic volumes have generally been declining since 2010. However, to be conservative a 2% annual growth factor was applied to the counts collected to yield 2020 volumes.

Other Development

Approved projects that are not yet opened as well as projects for which applications have been filed are required to be included in the predevelopment volumes for this project. GP contacted Chris DiMatteo, the Planner for the Town of Kittery to determine if other projects should be included in our study. Mr. DiMatteo stated there are no recently approved projects; however, there is a pending project for a

Hampton Inn located at 275 US Route 1 on the west side of the Old Wilson Road. The hotel is anticipated by the applicant for that project to generate 50 PM peak hour trip ends. The large majority of these trips will likely be oriented to and from the south and should not have a significant effect on Route 1 north of their site.

2020 Predevelopment Volumes

The 2020 predevelopment volumes resulting from a 2% per year increase of the 2015 volumes are shown on Figure 3 of Appendix A.

III. *Trip Generation*

Mobile Home Traffic

The proposal is to expand the existing mobile home park by 77 additional units. The trip generation for the mobile home park was based on Land Use Code (LUC) 251, Senior Adult Housing, of the Institute of Transportation Engineers' publication *Trip Generation*, Ninth Edition. LUC 240, Mobile Home Park was not used because the database did not reflect age restricted units. The forecast trip generation is as follows with calculations provided in Appendix C:

Trip Generation Summary

Land Use	Weekday	AM peak hour Adjacent St.	PM peak hour Adjacent St.	eak of Generator	PM peak hour of Generator
Senior Adult Housing Detached 77 Units	375	43	37	39	59

Based on this table the proposed project will generate less than 100 peak hour trip ends during its peak hour and therefore will not require a MaineDOT Traffic Movement Permit (TMP).

Construction Traffic

The applicant estimates that there will be approximately 190,000 cy of in place material to be excavated to prepare the site for the mobile homes, which will yield approximately 300,000 cy of material to be hauled away once it is excavated. The applicant anticipates that it will take approximately a year to remove the material which will be hauled south to I-95. We recommend that this hauling be suspended during the core of the tourist season, between June 30th and Labor Day. Assuming this restriction, there will be approximately 200 days of the year that material can be hauled. We understand from the applicant that the trucks removing the material will have a capacity of approximately 22 cy which results in an average of 68 truckloads per day, or 9 truck trips entering and 9 truck trips exiting an hour.

IV. *Trip Distribution*

GP has obtained the ratio of entering and exiting traffic from the Institute of Transportation Engineers publication *Trip Generation,* Ninth Edition for Land Use Code 251, Senior Adult Housing-Detached. The trip distribution is as follows:

AM peak hour:	35% entering, 65% exiting
PM peak hour:	60% entering, 40% exiting

V. *Trip Composition and Assignment*

GP has assumed all the traffic to and from the site is primary traffic. These trips are shown in Figure 4 of Appendix A to this report for the weekday PM peak hours. We have assigned the traffic to the roadway system based on the traffic counts completed at the northerly intersection of Route 1 and Idlewood Lane.

VI. *2020 Post-development Traffic*

Our office combined the 2020 weekday predevelopment volumes shown in Figure 3 with the trip assignment volumes shown in Figure 4 to obtain the estimated 2020 weekday post-development volumes shown in Figure 5 in Appendix A.

VII. *2016 Construction Traffic*

The 18 PM peak hour truck trip ends have been combined with the Route 1 traffic shown in Figure 6 of Appendix A. The Route 1 2015 pre-development volumes were increased by 2% to estimate the 2016 volumes.

VIII. *Study Area*

The primary area of impact for this project is the intersection of Route 1 and Idlewood Lane.

IX. *Capacity Analyses*

GP completed capacity analyses for the intersection of Idlewood Lane and Route 1. This intersection has single lanes on each approach with Idlewood Lane being stop controlled.

The analysis was completed with Synchro / SimTraffic analysis software. Levels of service rankings are similar to the academic ranking system where an 'A' is very good with little control delay and an 'F' represents very poor conditions. At an unsignalized intersection, if the level of service falls below a 'D', an evaluation should be made to determine if mitigation is warranted.

The following table summarizes the relationship between control delay and level of service at an unsignalized intersection:

Level of Service Criteria for Unsignalized Intersections

Level of Service	Control Delay per Vehicle (sec)
A	Up to 10.0
B	10.1 to 15.0
C	15.1 to 25.0
D	25.1 to 35.0
E	35.1 to 50.0
F	Greater than 50.0

Mobile Home Analysis

The results of the capacity analyses for the 2020 pre and post development conditions at the unsignalized intersection of Idlewood Lane / Route 1 are summarized as follows with the computer printouts attached.

Level of Service-2020 Mobile Home Park

Intersection / Approach	Time Period	
	PM Pre – LOS (Delay)	PM Post – LOS (Delay)
Idlewood Lane / Route 1		
Idlewood - EB	B (12)	B (16)
Route 1 - NB	A (2)	A (2)
Route 1 - SB	A (2)	A (2)

As can be seen from the above summary, the proposed housing is forecast to have minimal impact to the intersection, and all the approaches are forecast to operate at acceptable levels of service.

Construction Traffic Analysis

The results of the capacity analysis for the 2016 construction traffic is summarized below:

Level of Service-2016 Construction Traffic

Intersection / Approach	Time Period
	PM Post – LOS (Delay)
Idlewood Lane / Route 1	
Idlewood - EB	B (11)
Route 1 - NB	2 (A)
Route 1 - SB	2 (A)

As can be seen from the results, all the approaches are forecast to operate at acceptable levels of service during excavation.

As these trucks proceed south, they will be crossing two midblock pedestrian crossings. GP recommends that consideration be given to the installation of rectangular rapid flashing beacons (RRFB's) at these two locations.

X. *Crash Data*

GP obtained the crash data from MaineDOT for the period of 2012-2014, the most recent period available.

In order to evaluate whether a location has a crash problem, MaineDOT uses two criteria to define a High Crash Location (HCL). Both criteria must be met in order to be classified as an HCL.

1. A critical rate factor of 1.00 or more for a three-year period. (A Critical Rate Factor {CRF} compares the actual crash rate to the rate for similar intersections in the state. A CRF of less than 1.00 indicates a rate of less than average) **and:**
2. A minimum of 8 crashes over the same three-year period.

Based on the information provided by MaineDOT, there was one crash in the last three years with a critical rate factor of 0.30, therefore it is not a high crash location. The crash history is provided in Appendix C.

XI. *Sight Line Analysis*

The Town of Kittery and the MaineDOT have adopted requirements for sight distances at driveways. This section of Route 1 is classified by MaineDOT as a Retrograde Arterial, which has additional sight distance criteria they strive to meet. The sight distance standards for entrances are as follows:

Standards for Sight Distance

Speed Limit (mph)	Sight Distance (ft)		
	Town of Kittery	MaineDOT Standard	MaineDOT Retrograde
25	250	200	N/A
30	300	250	N/A
35	350	305	N/A
40	400	360	580
45	450	425	710
50	500	495	840
55	550	570	990

GP has evaluated the available sight lines at the proposed driveway in accordance with MaineDOT standards. The MaineDOT standards are as follows:

Driveway observation point:	10 feet off major street travelway
Height of eye at driveway:	3 ½ feet above ground
Height of approaching vehicle:	4 ¼ feet above road surface

The posted speed for Route 1 is 45 mph. The results of the sight line analysis for traffic exiting the site driveway is summarized in the following table:

Sight Line Evaluation for Exiting Idlewood onto Route 1

Direction	Kittery Required (ft)	MaineDOT Standard (ft)	MaineDOT Retrograde (ft)	Actual Sight Distance (ft)
Exiting Looking				
Left	450	425 (635)*	710	750
Right	450	425 (635)*	710	1,000+

*Sight distance required for trucks

As shown, the available sight distances exiting Idlewood looking left and right exceeds even the highest requirements of MaineDOT Retrogrades as well as the requirements for truck traffic. GP recommends that all plantings, which will be located within the right of way, not exceed two feet in height and be maintained at or below that height. Signage should not interfere with sight lines. In addition, we recommend that during construction, when heavy equipment is entering and exiting the site, that appropriate measures, such as signage and flag persons, be utilized in accordance with the Manual on Uniform Traffic Control Devices.

In addition to exiting onto Route 1, the sight distances exiting both the proposed driveway, as well as the existing Wilson Lane were evaluated. Idlewood Lane is posted at 25 mph. The available sight distances are summarized in the following table.

Sight Line Evaluation Exiting onto Idlewood Lane

Direction	Kittery Required (ft)	MaineDOT Standard (ft)	MaineDOT Retrograde (ft)	Actual Sight Distance (ft)
Exiting Wilson Lane Looking				
Left	250	200 (300)*	N/A	275
Right	250	200 (300)*	N/A	275+
Exiting Proposed Driveway Looking				
Left	250	200 (300)*	N/A	To Route 1
Right	250	200 (300)*	N/A	300+

*Sight distance required for trucks

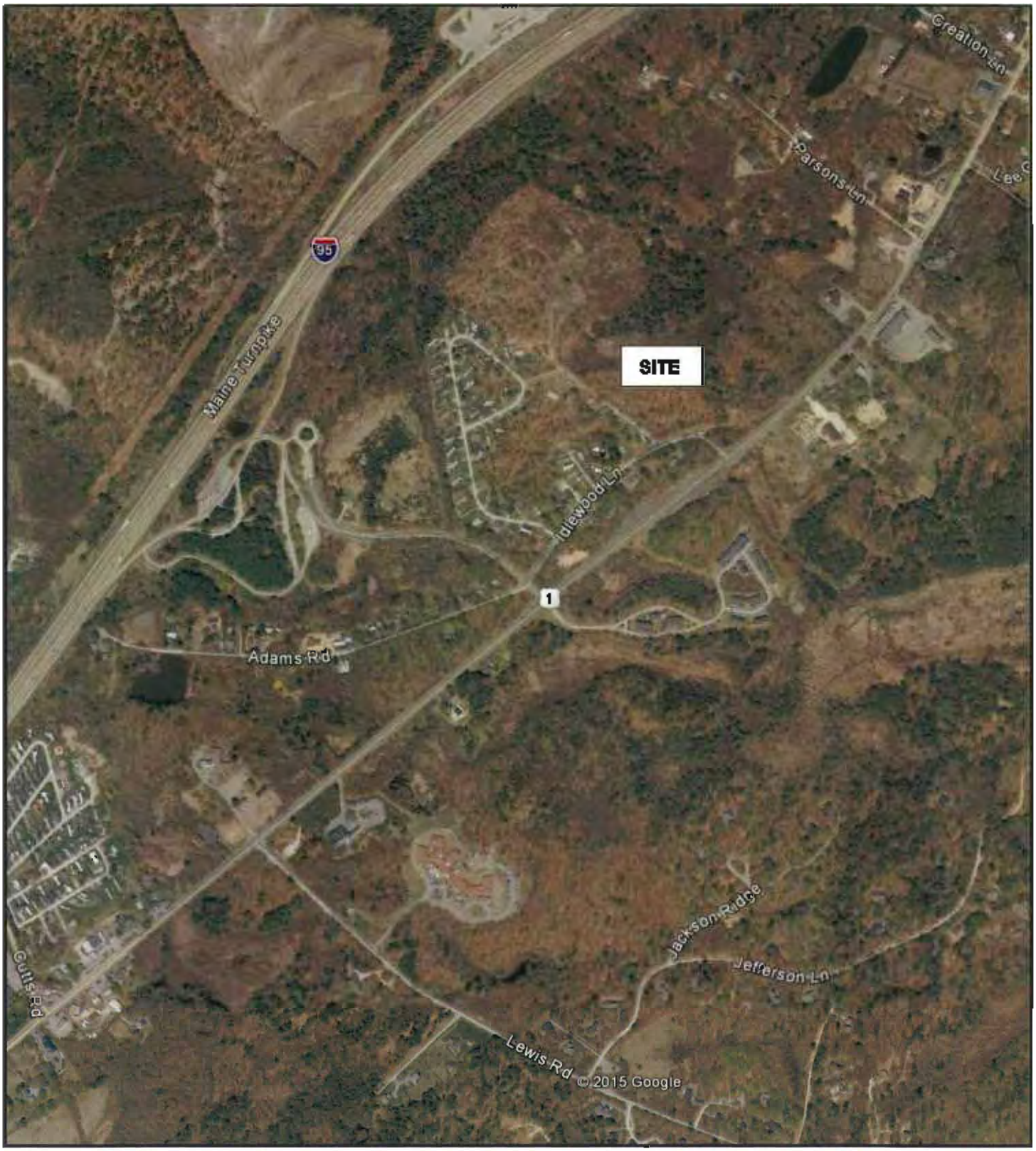
As can be seen from the results, available sight distance for typical vehicles meets or exceeds requirements. GP recommends that while excavation is being completed and construction vehicles are active, appropriate signs be erected to inform drivers of the heavy vehicle usage.

Appendix A

Site Location Map
Turning Movement Diagrams

Location Map

1



YANKEE COMMONS EXPANSION
KITTERY, MAINE

Design:	ET	Scale:	NONE
Draft:	LAN	Date:	JULY 2015
Checked:	RED	File Name:	3036-TRAFF.dwg

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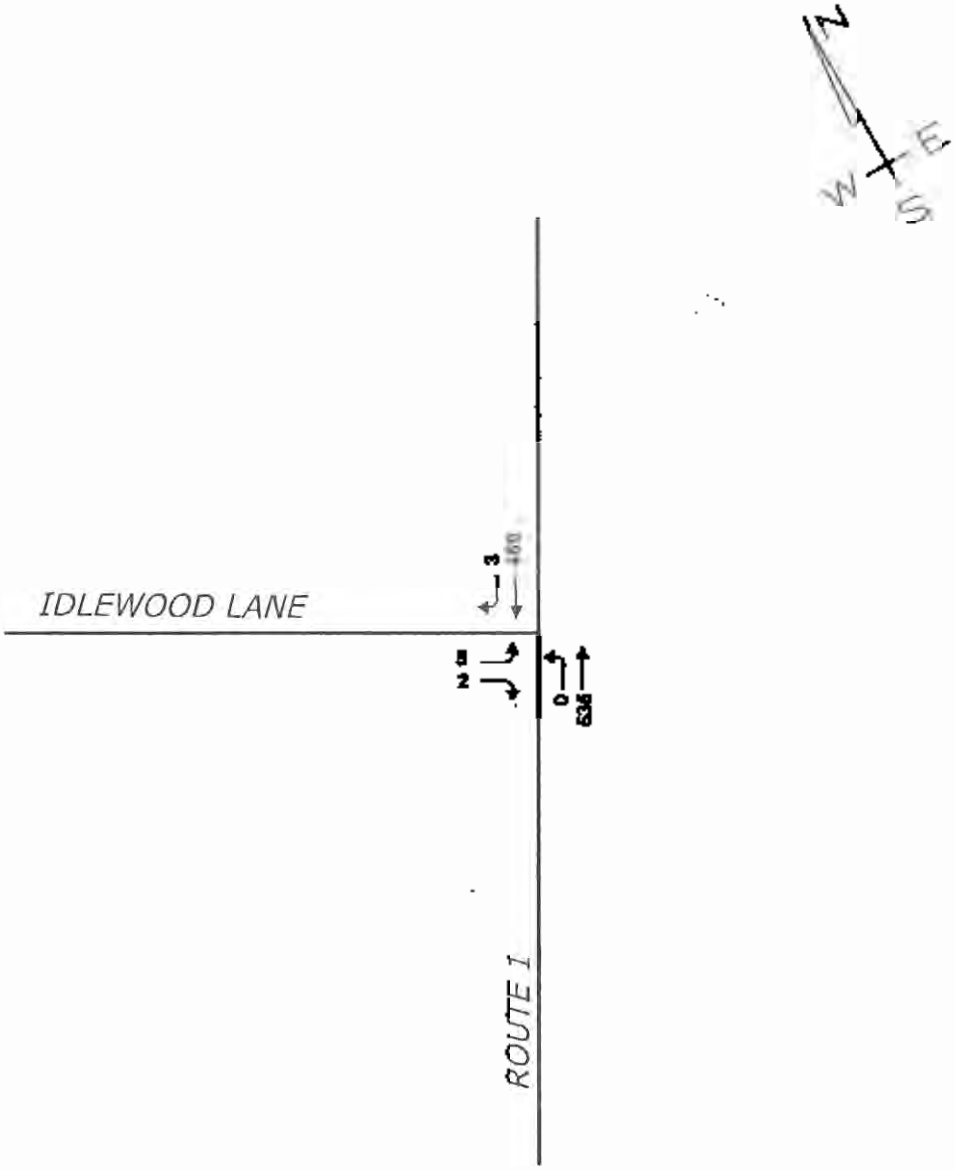
Raw Data

Figure No. 2



NOTE: ALL COUNTS COLLECTED 6/30/2015

PEAK HOUR
4:00-5:00 PM

YANKEE COMMONS EXPANSION
KITTERY, MAINE

Design:	**ET**	**Scale:**	**NONE**
Draft:	**LAN**	**Date:**	**JULY 2015**
Checked:	RED	File Name:	3038-TRAFF.dwg

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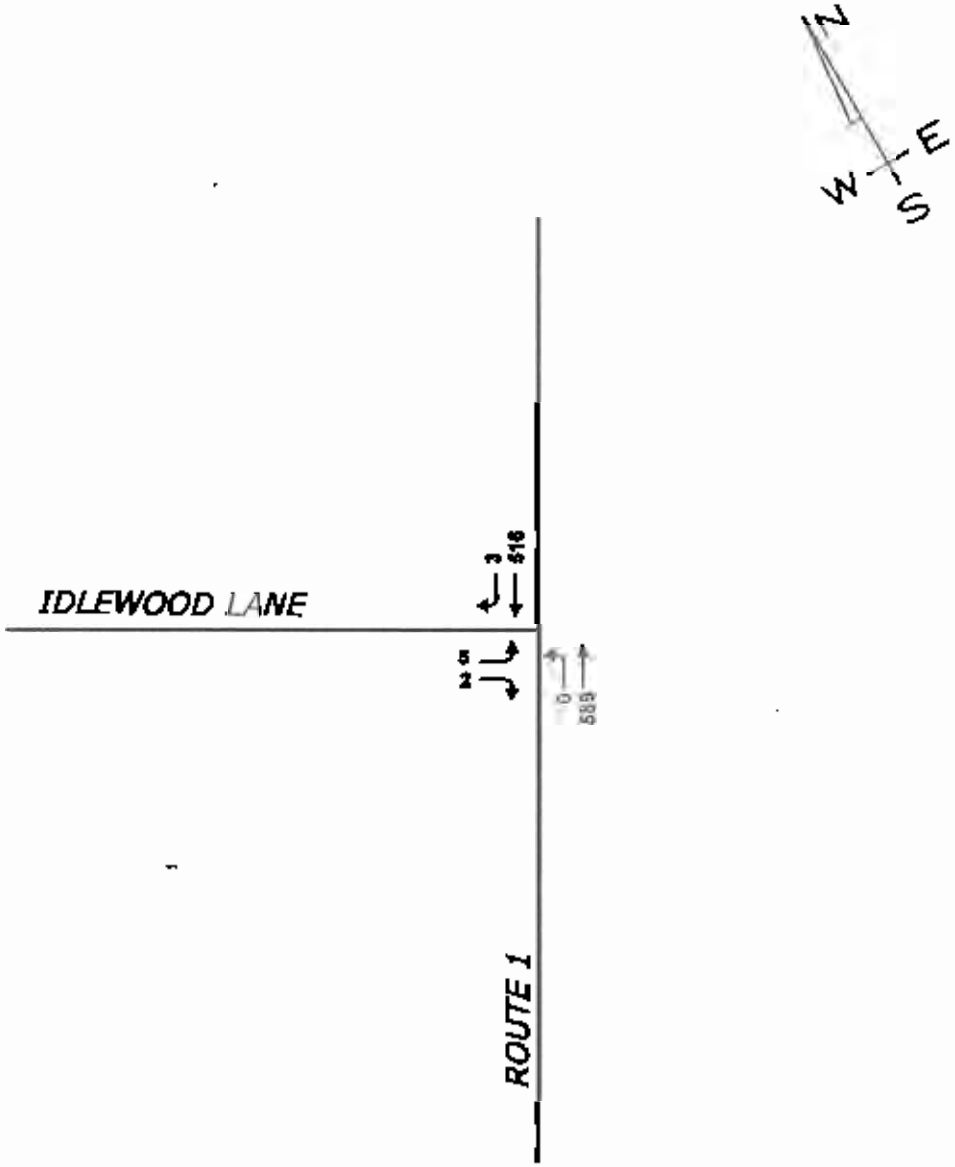
2020 Predevelopment Volumes

Figure No. 3



ANNUAL GROWTH: 2%/YEAR

PEAK HOUR
4:00-5:00 PM

YANKEE COMMONS EXPANSION
KITTERY, MAINE

Design:	ET	Scale:	NONE
Draft:	LAN	Date:	JULY 2015
Checked:	RED	File Name:	3038-TRAFF.dwg

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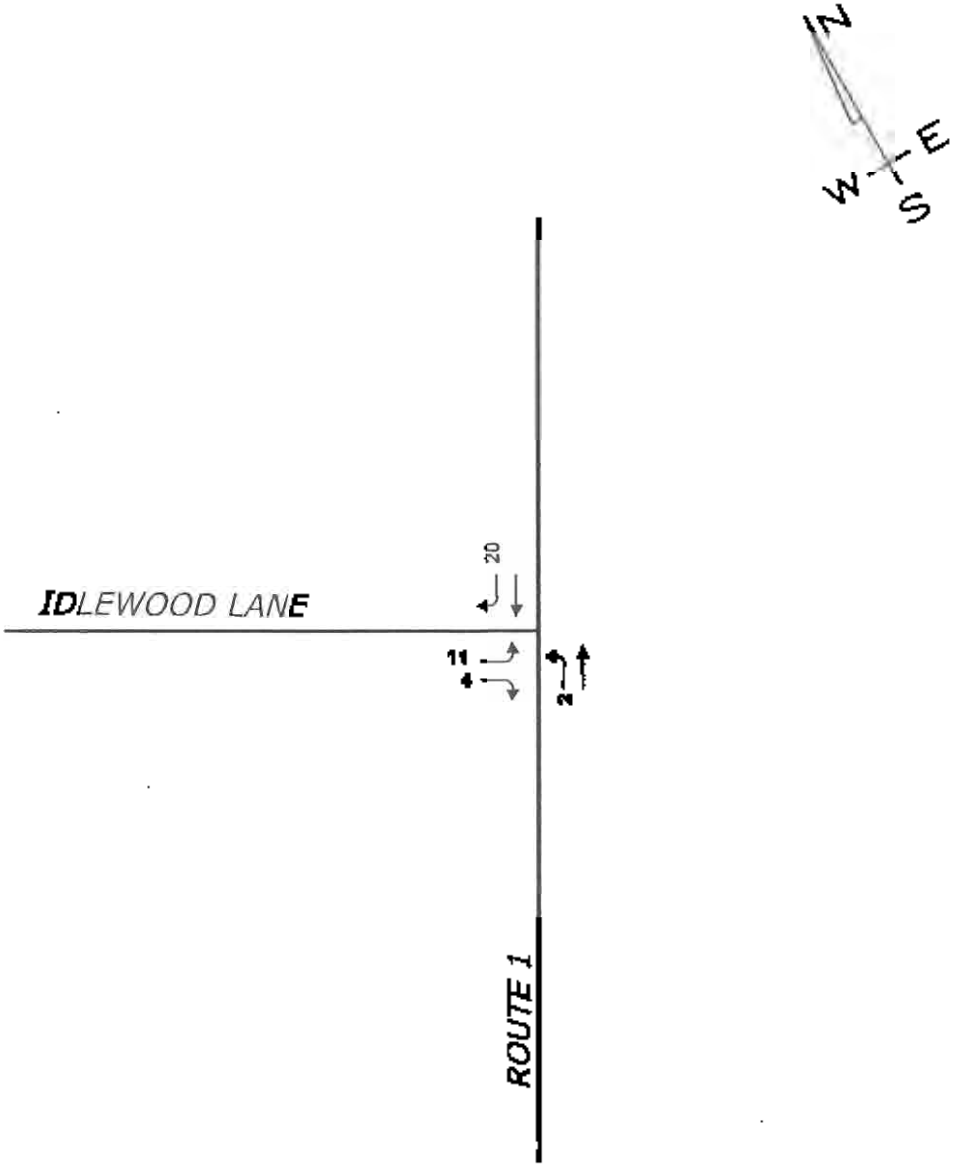
Trip Composition and Assignment

Figure No. 4



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KITTERY, MAINE

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Scale: NONE
Date: JULY 2015
File Name: 3038-TRAFF.dwg

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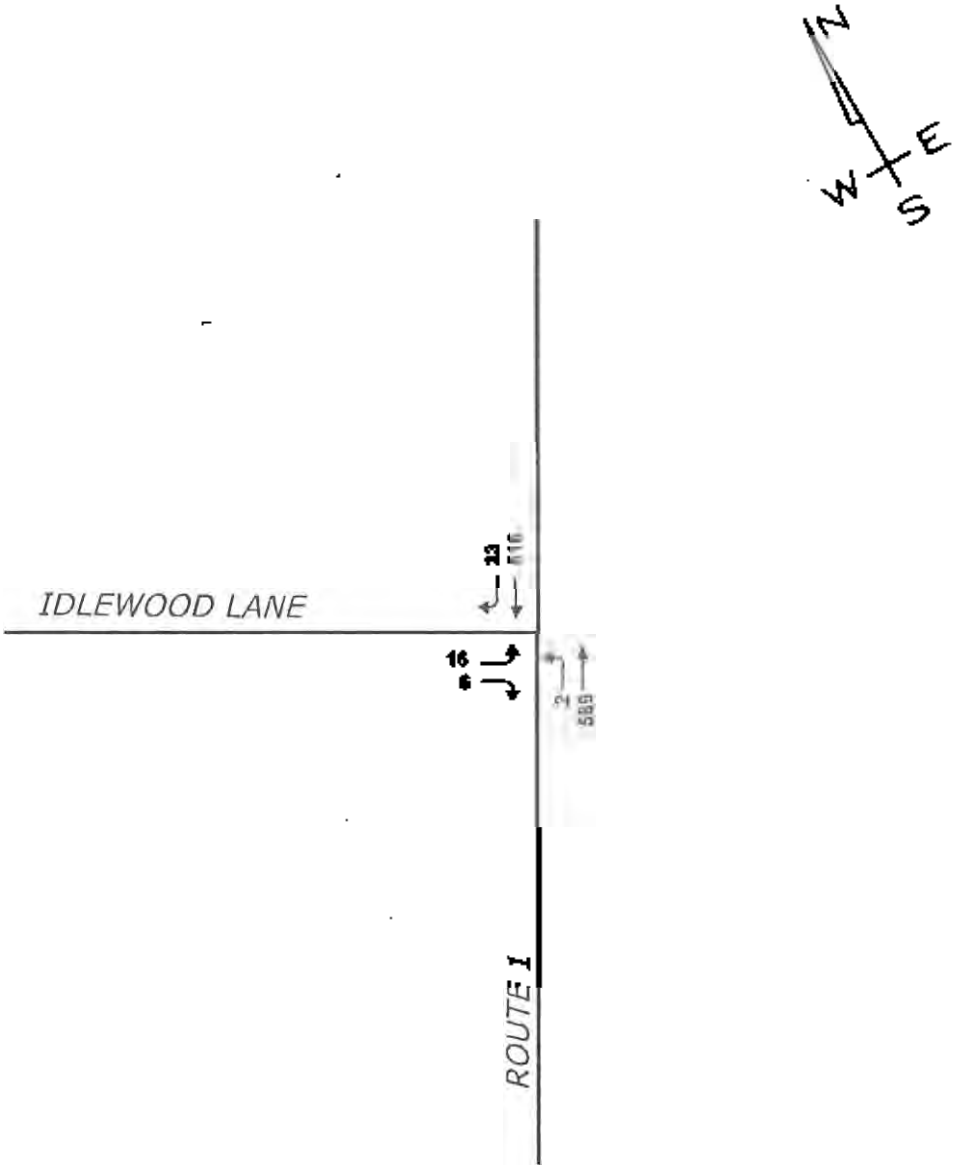
2020 Postdevelopment Volumes

Figure No. 5



PEAK HOUR
4:00-5:00 PM

YANKEE COMMONS EXPANSION
KITTERY, MAINE

Design:	ET	Scale:	NONE
Draft:	LAN	Date:	JULY 2015
Checked:	RED	File Name:	3038-TRAFF.dwg

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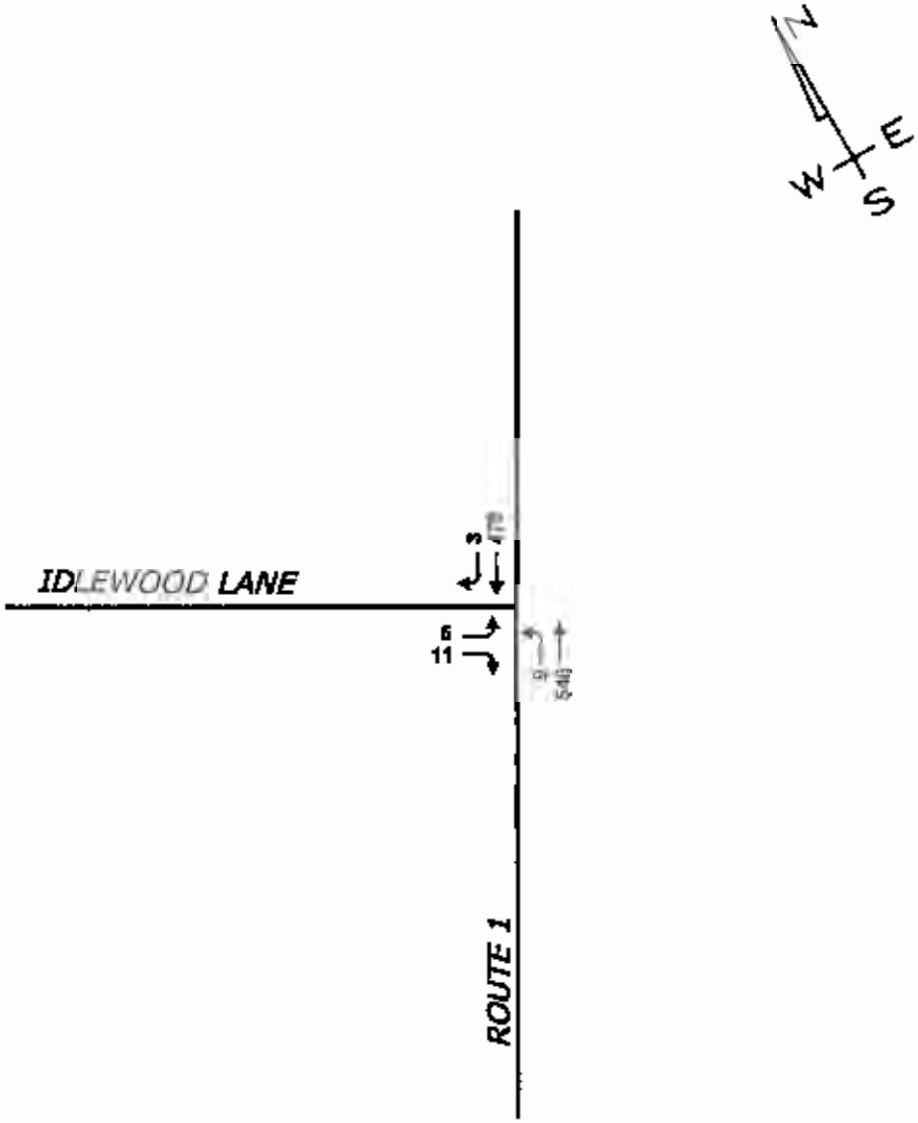
2016 With Truck Traffic

Figure No. 6



PEAK HOUR
4:00-5:00 PM

YANKEE COMMONS EXPANSION
KITTERY, MAINE

Design:	ET	Scale:	NONE
Draft:	LAN	Date:	JULY 2015
Checked:	RED	File Name:	3038-TRAFF.dwg

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Appendix B

Capacity and Queuing Analyses Results

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	**6:57**	**6:57**	**6:57**	**6:57**	**6:57**	**6:57**
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	**63**	**63**	**63**	**63**	**63**	**63**
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	**2**	**2**	**2**	**2**	**2**	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	**1144**	**1171**	**1133**	**1080**	**1043**	**1114**
Vehs Exited	1149	1170	1137	1090	1045	1118
Starting Vehs	**11**	**5**	**8**	**10**	**7**	**8**
Ending Vehs	6	6	4	0	5	5
Travel Distance (mi)	240	245	237	227	219	234
Travel Time (hr)	7.5	7.7	7.4	7.1	6.7	7.3
Total Delay (hr)	**0.7**	**0.7**	**0.7**	**0.6**	**0.6**	**0.6**
Total Stops	8	11	11	6	3	8
Fuel Used (gal)	**6.0**	**6.2**	**5.9**	**5.6**	**5.4**	**5.8**

Interval #0 Information Seeding

Start Time	6:57
End Time	**7:00**
Total Time (min)	3

Volumes adjusted by Growth Factors.

No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	**8:00**
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	**1144**	**1171**	**1133**	**1080**	**1043**	**1114**
Vehs Exited	1149	1170	1137	1090	1045	1118
Starting Vehs	**11**	**5**	**8**	**10**	**7**	**8**
Ending Vehs	6	6	4	0	5	5
Travel Distance (mi)	**240**	**245**	**237**	**227**	**219**	**234**
Travel Time (hr)	7.5	7.7	7.4	7.1	6.7	7.3
Total Delay (hr)	**0.7**	**0.7**	**0.7**	**0.6**	**0.6**	**0.6**
Total Stops	8	11	11	6	3	8
Fuel Used (gal)	**6.0**	**6.2**	**5.9**	**5.6**	**5.4**	**5.8**

4: Performance by approach

Approach	SE	NE	SW	All
Denied Del/Veh (s)	**0.1**	**0.4**	**0.4**	**0.4**
Total Del/Veh (s)	11.5	1.3	1.2	1.3

Total Network Performance

Denied Del/Veh (s)	**0.4**
Total Del/Veh (s)	1.6

Intersection: 4:

Movement	SE	SW
Directions Served	LR	R
Maximum Queue (ft)	21	5
Average Queue (ft)	5	0
95th Queue (ft)	19	4
Link Distance (ft)	228	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		25
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	**6:57**	**6:57**	**6:57**	**6:57**	**6:57**	**6:57**
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	**63**	**63**	**63**	**63**	**63**	**63**
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	**2**	**2**	**2**	**2**	**2**	**2**
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	**1178**	**1206**	**1174**	1118	1083	1152
Vehs Exited	1182	1205	1177	1127	1083	1155
Starting Vehs	**11**	**5**	**9**	**10**	**7**	**8**
Ending Vehs	7	6	6	1	7	4
Travel Distance (mi)	250	256	249	237	230	244
Travel Time (hr)	8.0	8.2	8.0	7.6	7.2	7.8
Total Delay (hr)	**0.9**	**0.9**	**0.8**	**0.7**	**0.7**	**0.8**
Total Stops	29	34	35	29	22	30
Fuel Used (gal)	**6.6**	**6.7**	**6.4**	**6.1**	**5.9**	**6.3**

Interval #0 Information Seeding

Start Time	6:57
End Time	7:00
Total Time (min)	3

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60

Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	**1178**	**1206**	**1174**	**1118**	**1083**	**1152**
Vehs Exited	1182	1205	1177	1127	1083	1155
Starting Vehs	**11**	**5**	**9**	**10**	**7**	**8**
Ending Vehs	7	6	6	1	7	4
Travel Distance (mi)	**250**	**256**	249	237	230	244
Travel Time (hr)	8.0	8.2	8.0	7.6	7.2	7.8
Total Delay (hr)	0.9	0.9	0.8	0.7	0.7	0.8
Total Stops	29	34	35	29	22	30
Fuel Used (gal)	**6.6**	**6.7**	**6.4**	**6.1**	**5.9**	**6.3**

4: Performance by approach

Approach	SE	NE	SW	All
Denied Del/Veh (s)	**0.1**	**0.5**	**0.6**	**0.5**
Total Del/Veh (s)	15.7	1.4	1.4	1.7

Total Network Performance

Denied Del/Veh (s)	**0.5**
Total Del/Veh (s)	2.0

Intersection: 4:

Movement	SE	NE	SW
Directions Served	**LR**	**L**	**R**
Maximum Queue (ft)	46	22	29
Average Queue (ft)	13	1	4
95th Queue (ft)	35	10	19
Link Distance (ft)	**228**		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		25	25
Storage Blk Time (%)		**0**	**0**
Queuing Penalty (veh)		**0**	**0**

Network Summary

Network wide Queuing Penalty: **1**

Summary of All Intervals

Run Number	1	2	3	4	5	Avg
Start Time	6:57	6:57	6:57	6:57	6:57	6:57
End Time	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	63	63	63	63	63	63
Time Recorded (min)	60	60	60	60	60	60
# of Intervals	2	2	2	2	2	2
# of Recorded Intervals	1	1	1	1	1	1
Vehs Entered	1077	1123	1051	1033	1007	1058
Vehs Exited	1080	1122	1055	1030	1008	1059
Starting Vehs	7	3	9	3	7	6
Ending Vehs	4	4	5	6	6	5
Travel Distance (mi)	230	239	225	220	215	226
Travel Time (hr)	7.2	7.6	7.0	6.9	6.7	7.1
Total Delay (hr)	0.7	0.7	0.6	0.6	0.6	0.7
Total Stops	24	18	17	23	15	19
Fuel Used (gal)	5.9	6.1	5.7	5.6	5.4	5.7

Interval #0 Information Seeding

Start Time 6:57
End Time 7:00
Total Time (min) 3
Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time 7:00
End Time 8:00
Total Time (min) 60
Volumes adjusted by Growth Factors.

Run Number	1	2	3	4	5	Avg
Vehs Entered	1077	1123	1051	1033	1007	1058
Vehs Exited	1080	1122	1055	1030	1008	1059
Starting Vehs	7	3	9	3	7	6
Ending Vehs	4	4	5	6	6	5
Travel Distance (mi)	230	239	225	220	215	225
Travel Time (hr)	7.2	7.6	7.0	6.9	6.7	7.1
Total Delay (hr)	0.7	0.7	0.6	0.6	0.6	0.7
Total Stops	24	18	17	23	15	19
Fuel Used (gal)	5.9	6.1	5.7	5.6	5.4	5.7

4: Performance by approach

Approach	SE	NE	SW	All
Denied Del/Veh (s)	**0.1**	**0.6**	**0.4**	**0.4**
Total Del/Veh (s)	10.3	1.5	1.2	1.5

Total Network Performance

Denied Del/Veh (s)	**0.4**
Total Del/Veh (s)	1.8

Intersection: 4:

Movement	SE	NE	NE	SW
Directions Served	LR	L	T	R
Maximum Queue (ft)	74	64	12	6
Average Queue (ft)	**15**	**8**	**0**	**0**
95th Queue (ft)	61	39	9	5
Link Distance (ft)	**228**		**552**	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		25		25
Storage Blk Time (%)		**1**	**0**	**0**
Queuing Penalty (veh)		4	0	0

Network Summary

Network wide Queuing Penalty: 4

Appendix C

MDOT Crash Data

Trip Generation Information

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

☑ Crash Summary I ☐ Section Detail ☑ Crash Summary II ☐ 1320 Public ☐ 1320 Private ☐ 1320 Summary

REPORT DESCRIPTION

Rt 1 area

REPORT PARAMETERS

Year 2012, Start Month 1 **through** Year 2014 End Month: **12**

Route: **0001X**	Start Node: **56536**	**Start Offset: 0**	☐ Exclude First Node
	End Node: **56537**	**End Offset: 0**	☐ Exclude Last Node
Route: **3101603**	Start Node: **56971**	**Start Offset: 0**	☑ Exclude First Node
	End Node: **56536**	**End Offset: 0**	☑ Exclude Last Node

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary I

Nodes														
Node	Route - MP	Node Description	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF
56536	0001X - 4.07	Int of ACCESS RD, US 1	1	2	0	0	0	0	2	0.0	4.057	0.16 Statewide Crash Rate: 0.10	0.29	0.00
56971	0001X - 4.32	Int of IDLEWOOD LN US 1	1	1	0	0	0	0	1	0.0	3.674	0.09 Statewide Crash Rate: 0.10	0.30	0.00
56537	0001X - 4.66	TL - Kittery, York	2	0	0	0	0	0	0	0.0	1.788	0.00 Statewide Crash Rate: 0.14	0.46	0.00
51588	3101603 - 0.31	Int of ACCESS RD, ADAMS RD, IDLEWOOD LN	1	0	0	0	0	0	0	0.0	0.790	0.00 Statewide Crash Rate: 0.13	0.52	0.00
Study Years: 3.00		NODE TOTALS:		3	0	0	0	0	3	0.0	10.309	0.10	0.25	0.39

Crash Summary I

Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section Length	U/R	Total Crashes	K	Injury Crashes A	B	C	PD	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
56536	56971	3120581	0 - 0.25	0001X - 4.07	0.25	1	3	0	0	0	0	3	0.0	0.00919	108.85	284.40	0.00
Int of ACCESS RD, US 1				US 1											Statewide Crash Rate: 127.40		
56537	56971	3114221	0 - 0.34	0001X - 4.32	0.34	1	1	0	0	0	0	1	0.0	0.01216	27.41	265.92	0.00
TL - Kittery, York				US 1											Statewide Crash Rate: 127.40		
51588	56971	233707	0 - 0.31	3101603 - 0	0.31	1	0	0	0	0	0	0	0.0	0.00030	0.00	967.43	0.00
Int of ACCESS RD, ADAMS RD, IDLEWOOD LN				RD INV 31 01603											Statewide Crash Rate: 227.67		
51588	56536	233706	0 - 0.04	3101603 - 0.31	0.04	1	0	0	0	0	0	0	0.0	0.00032	0.00	962.13	0.00
Int of ACCESS RD, ADAMS RD, IDLEWOOD LN				RD INV 31 01603											Statewide Crash Rate: 227.67		
Study Years: 3.00				Section Totals:	0.94		4	0	0	0	0	4	0.0	0.02197	60.70	237.15	0.28
				Grand Totals:	0.94		7	0	0	0	0	7	0.0	0.02197	106.22	278.17	0.38

Crash Summary

Section Details

Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	Injury Crashes K	A	B	C	PD	Crash Report	Crash Date	Crash Mile Point	Injury Degree
56536	56971	3129581	0 - 0.25	0001X - 4.07	3	0	0	0	0	3	2012-52152	11/17/2012	4.11	PD
											2012-51935	02/03/2012	4.22	PD
											2012-52146	11/06/2012	4.25	PD
56537	56971	3114221	0 - 0.34	0001X - 4.32	1	0	0	0	0	1	2013-18030	07/19/2013	4.64	PD
51588	56971	233707	0 - 0.31	3101603 - 0	0	0	0	0	0	0				
51588	56536	233708	0 - 0.04	3101603 - 0.31	0	0	0	0	0	0				
				Totals:	4	0	0	0	0	4				

Crash Summary II - Characteristics

Crashes by Day and Hour

	AM												PM													
	Hour of Day																									
Day Of Week	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	Un	Tot
SUNDAY	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
MONDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TUESDAY	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
WEDNESDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
THURSDAY	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
FRIDAY	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
SATURDAY	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Totals	1	0	0	0	0	1	1	1	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	7

Vehicle Counts by Type

Unit Type	Total
1-Passenger Car	6
2-(Sport) Utility Vehicle	3
3-Passenger Van	1
4-Cargo Van (10K lbs or Less)	0
5-Pickup	2
6-Motor Home	0
7-School Bus	0
8-Transit Bus	0
9-Motor Coach	0
10-Other Bus	0
11-Motorcycle	0
12-Moped	0
13-Low Speed Vehicle	0
14-Autocycle	0
15-Experimental	0
16-Other Light Trucks (10,000 lbs or Less)	0
17-Medium/Heavy Trucks (More than 10,000 lbs)	0
18-ATV - (4 wheel)	0
20-ATV - (2 wheel)	0
21-Snowmobile	0
22-Pedestrian	0

Unit Type	Total
23-Bicyclist	0
24-Witness	0
25-Other	0
Total	12

Crash Summary II - Characteristics

Crashes by Driver Action at Time of Crash

Driver Action at Time of Crash	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
No Contributing Action	6	2	1	0	0	0	9
Ran Off Roadway	0	0	0	0	0	0	0
Failed to Yield Right-of-Way	1	1	0	0	0	0	2
Ran Red Light	0	0	0	0	0	0	0
Ran Stop Sign	0	0	0	0	0	0	0
Disregarded Other Traffic Sign	0	0	0	0	0	0	0
Disregarded Other Road Markings	0	0	0	0	0	0	0
Exceeded Posted Speed Limit	0	0	0	0	0	0	0
Drove Too Fast For Conditions	0	0	0	0	0	0	0
Improper Turn	0	0	0	0	0	0	0
Improper Backing	0	0	0	0	0	0	0
Improper Passing	0	0	0	0	0	0	0
Wrong Way	0	0	0	0	0	0	0
Followed Too Closely	0	0	1	0	0	0	1
Failed to Keep in Proper Lane	0	0	0	0	0	0	0
Operated Motor Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner	0	0	0	0	0	0	0
Swerved or Avoided Due to Wind, Slippery Surface, Motor Vehicle, Object, Non-Motorist in Roadway	0	0	0	0	0	0	0
Over-Correcting/Over-Steering	0	0	0	0	0	0	0
Other Contributing Action	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0
Total	7	3	2	0	0	0	12

Crashes by Apparent Physical Condition And Driver

Apparent Physical Condition	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
Apparently Normal	7	3	2	0	0	0	12
Physically Impaired or Handicapped	0	0	0	0	0	0	0
Emotional(Depressed, Angry, Disturbed, etc.)	0	0	0	0	0	0	0
Ill (Sick)	0	0	0	0	0	0	0
Asleep or Fatigued	0	0	0	0	0	0	0
Under the Influence of Medications/Drugs/Alcohol	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Total	7	3	2	0	0	0	12

Driver Age by Unit Type

Age	Driver	Bicycle	SnowMobile	Pedestrian	ATV	Total
09-Under	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	0	0	0	0	0	0
20-24	2	0	0	0	0	2
25-29	1	0	0	0	0	1
30-39	2	0	0	0	0	2
40-49	1	0	0	0	0	1
50-59	3	0	0	0	0	3
60-69	2	0	0	0	0	2
70-79	0	0	0	0	0	0
80-Over	1	0	0	0	0	1
Unknown	0	0	0	0	0	0
Total	12	0	0	0	0	12

Crash Summary II - Characteristics

Most Harmful Event

Most Harmful Event	Total
1-Overturn / Rollover	0
2-Fire / Explosion	0
3-Immersion	0
4-Jackknife	0
5-Cargo / Equipment Loss Or Shift	0
6-Fell / Jumped from Motor Vehicle	0
7-Thrown or Falling Object	0
8-Other Non-Collision	0
9-Pedestrian	0
10-Pedalcycle	0
11-Railway Vehicle - Train, Engine	0
12-Animal	4
13-Motor Vehicle in Transport	6
14-Parked Motor Vehicle	0
15-Struck by Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle	0
16-Work Zone / Maintenance Equipment	0
17-Other Non-Fixed Object	0
18-Impact Attenuator / Crash Cushion	0
19-Bridge Overhead Structure	0
20-Bridge Pier or Support	0
21-Bridge Rail	0
22-Cable Barrier	0
23-Culvert	0
24-Curb	0
25-Ditch	0
26-Embankment	0
27-Guardrail Face	0
28-Guardrail End	0
29-Concrete Traffic Barrier	0
30-Other Traffic Barrier	0
31-Tree (Standing)	0
32-Utility Pole / Light Support	0
33-Traffic Sign Support	0
34-Traffic Signal Support	0
35-Fence	0
36-Mailbox	0
37-Other Post Pole or Support	0
38-Other Fixed Object (wall, building, tunnel, etc.)	0
39-Unknown	2
40-Gate or Cable	0
41-Pressure Ridge	0
Total	12

Traffic Control Devices

Traffic Control Device	Total
1-Traffic Signals (Stop & Go)	0
2-Traffic Signals (Flashing)	0
3-Advisory/Warning Sign	0
4-Stop Signs - All Approaches	0
5-Stop Signs - Other	2
6-Yield Sign	0
7-Curve Warning Sign	0
8-Officer, Flagman, School Patrol	0
9-School Bus Stop Arm	0
10-School Zone Sign	0
11-R.R. Crossing Device	0
12-No Passing Zone	0
13-None	5
14-Other	0
Total	7

Injury Data

Severity Code	Injury Crashes	Number Of Injuries
K	0	0
A	0	0
B	0	0
C	0	0
PD	7	0
Total	7	0

Road Character

Road Grade	Total
1-Level	7
2-On Grade	0
3-Top of Hill	0
4-Bottom of Hill	0
5-Other	0
Total	7

Light

Light Condition	Total
1-Daylight	5
2-Dawn	0
3-Dusk	0
4-Dark - Lighted	2
5-Dark - Not Lighted	0
6-Dark - Unknown Lighting	0
7-Unknown	0
Total	7

Crash Summary II - Characteristics

Crashes by Year and Month

Month	2012	2013	2014	Total
JANUARY	0	0	0	0
FEBRUARY	1	0	0	1
MARCH	0	0	0	0
APRIL	0	0	0	0
MAY	0	0	0	0
JUNE	0	0	0	0
JULY	0	1	0	1
AUGUST	0	0	0	0
SEPTEMBER	2	0	0	2
OCTOBER	0	0	0	0
NOVEMBER	2	1	0	3
DECEMBER	0	0	0	0
Total	**5**	**2**	**0**	**7**

Report is limited to the last 10 years of data.

Maine Department Of Transportation - Traffic Engineering, Crash Records Section

Crash Summary II - Characteristics

Crashes by Crash Type and Type of Location

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five or More Leg Intersection	Driveways	Bridges	Interchanges	Other	Parking Lot	Private Way	Cross Over	Railroad Crossing	Total
Object In Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rear End / Sideswipe	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Head-on / Sideswipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intersection Movement	0	0	1	0	0	1	0	0	0	0	0	0	0	2
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Went Off Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0
All Other Animal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackknife	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rollover	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Submersion	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thrown or Falling Object	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bear	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deer	3	0	1	0	0	0	0	0	0	0	0	0	0	4
Moose	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	3	0	2	0	0	2	0	0	0	0	0	0	0	7

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather / Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Blowing Sand, Soil, Dirt												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Blowing Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Clear												
Dark - Lighted	1	0	0	0	0	0	0	0	0	0	0	1
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	3	0	0	0	0	0	0	0	0	0	0	3
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Cloudy												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	1	0	0	0	0	0	0	0	0	0	0	1
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

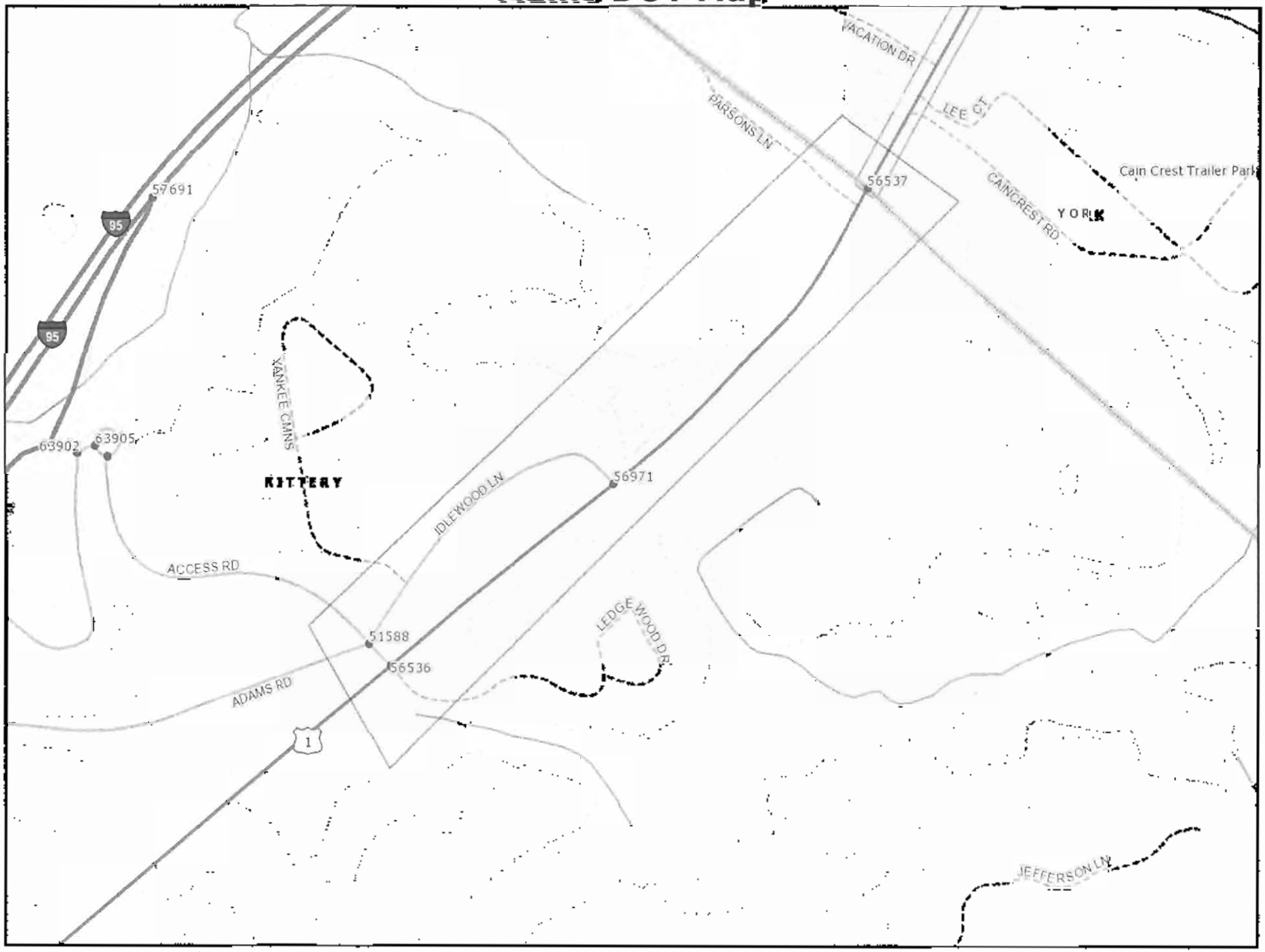
Weather / Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Fog, Smog, Smoke												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	1	1
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Other												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Rain												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	1	1
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Severe Crosswinds												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Sleet, Hail (Freezing Rain or Drizzle)												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	5	0	0	0	0	0	0	0	0	0	0	7

Maine DOT Map



Map Generated on Tuesday, June 30, 2015 09:51:52 AM

Map Scale 1:7154

The Maine Department of Transportation provides this publication for information only. Reliance upon this information is at user risk. It is subject to revision and may be incomplete depending upon changing conditions. The Department assumes no liability if injuries or damages result from this information. This map is not intended to support emergency dispatch. Road names used on this map may not match official road names.

JN:	3038	Gorrill-Palmer Consulting Engineers, Inc.
Project Description:	Yankee Mobile Home Park	P.O. Box 1237
Project Location:	Idlewood Lane, Kittery	15 Shaker Road
Date:	7-Jul-15	Gray, Maine 04039

Senior Adult Housing - Detached
Land Use Code (LUC) 251

Dwelling Units: 77

Average Rate

Time Period	ITE Trip Rate	Trip Ends	Directional Split * IN	Directional Split * OUT	Directional Distribution IN	Directional Distribution OUT
Weekday	T = 3.68 (X)	283	50%	50%	142	141
Peak Hour of Adjacent Street Traffic 7-9 AM	T = 0.22 (X)	17	35%	65%	6	11
Peak Hour of Adjacent Street Traffic 4-6 PM	T = 0.27 (X)	21	60%	40%	13	8
AM Peak Hour of Generator	T = 0.29 (X)	22	45%	55%	10	12
PM Peak Hour of Generator	T = 0.34 (X)	26	55%	45%	14	12
Saturday	T = 2.73 (X)	210	50%	50%	105	105

* Percentages rounded to nearest 5%

Fitted Curve Equation

Time Period	ITE Trip Rate	Trip Ends	Directional Split * IN	Directional Split * OUT	Directional Distribution IN	Directional Distribution OUT
Weekday	Ln(T) = 0.89 Ln(X) + 2.06	375	50%	50%	188	187
Peak Hour of Adjacent Street Traffic 7-9 AM	(T) = 0.17 (X) + 28.85	41	35%	65%	15	27.85
Peak Hour of Adjacent Street Traffic 4-6 PM	Ln(T) = 0.76 Ln(X) + 0.35	37	60%	40%	22	15
AM Peak Hour of Generator	T=0.25(X) + 19.67	39	45%	55%	—	—
PM Peak Hour of Generator	T=0.25(X) + 40.26	59	55%	45%	—	—
Saturday	—	—	50%	50%	—	—

* Percentages rounded to nearest 5%

CIVIL
CONSULTANTS

Engineers

Planners

Surveyors

Section 5

Enclosure 9

AMEC Ambient Air Quality Analysis for YCE Proposed Excavation Operation

October 21, 2015

Mr. Gary Beers
Yankee Mobile Home Parks
3 Idlewood Lane
Kittery, Maine 03904

RE: Proposal for Air Quality Modeling Services

Dear Mr. Beers:

Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) is pleased to present Yankee Mobile Home Parks (Yankee) with a proposal to assist with the preparation of an air quality analysis of traffic patterns resulting from construction activities associated with the proposed expansion of the Yankee Commons Mobile Home Park (Yankee Commons) located in Kittery.

PROJECT UNDERSTANDING

Yankee is seeking approval from the Town of Kittery Planning Board for the proposed expansion of Yankee Commons. The Planning Board has requested an analysis of air quality impacts associated with the construction activities. A traffic impact study of the proposed development has been completed by Gorrill-Palmer Consulting Engineers and would be made available to Amec Foster Wheeler. Additionally, Yankee has provided Amec Foster Wheeler with a listing of equipment that is representative of the equipment that would be used in performing the construction activities.

SCOPE OF SERVICES

Task 1. Calculate Emissions

Amec Foster Wheeler will use the USEPA's MOVES model to calculate emission factors for the construction equipment. Amec Foster Wheeler will calculate emission factors for 2016, the expected earliest year of full project build-out. Emission factors for carbon monoxide (CO), nitrogen oxides (NO_X), particulate matter (PM), and volatile organic compounds will be calculated. Expected equipment activity levels will be applied to the emission factors to quantify emissions input to the dispersion model.

Task 2. Dispersion Modeling

USEPA's AERMOD dispersion model will be used to predict ambient concentrations from equipment emissions. Amec Foster Wheeler will determine roadway coordinates from a site plan provided by Yankee and from digital U.S. Geological Survey (USGS) aerial orthophotos. Amec Foster Wheeler will also obtain data from Gorrill-Palmer's traffic study as needed.

Amec Foster Wheeler
Environment & Infrastructure, Inc.
511 Congress Street
Portland, ME 04101 USA
Tel (207) 775-5401
amecfw.com

The AERMOD dispersion model proposed for the analysis requires the input of a 3-dimensional receptor grid. Amec Foster Wheeler will develop a receptor grid in accordance with USEPA guidance. Amec Foster Wheeler will also acquire a representative set of meteorological data to use with the AERMOD dispersion model. Amec Foster Wheeler proposes using a 5-year data set constructed from surface observations measured at the Portsmouth International Airport at Pease (Pease). The New Hampshire Department of Environmental Services (NHDES) has posted an AERMOD-ready data set for Pease on their website; the use of this data set provides savings to Yankee compared to having Amec Foster Wheeler develop a meteorological data set.

Task 3. Prepare Report

The AERMOD-predicted concentrations will be compiled and compared to Maine Ambient Air Quality Standards (MAAQS) and National Ambient Air Quality Standards (NAAQS). Amec Foster Wheeler will prepare a report that includes a detailed modeling protocol and compilation of modeling results, and will provide an opinion of the project's conformance with air quality standards. A draft report will be submitted to Yankee for review and comment.

EXCLUSIONS

The proposed scope of services does not include participation in Planning Board meetings per discussions with Yankee to date. Should Yankee request Amec Foster Wheeler's presence at such meetings, this will be addressed by a change order.

PROJECT TEAM

Jeff Harrington, P.E., will be the technical lead engineer on the project. He is an Air Quality Engineer and a registered professional engineer in Maine. Mr. Harrington has over 25 years of experience in performing dispersion modeling analyses for environmental assessments, air permit applications, and risk assessments. He also has considerable experience with air quality permitting, advanced data analysis, control technology analyses (RACT/BACT/LAER), emissions inventory development, control equipment evaluation, and ambient and emissions monitoring.

Other Amec Foster Wheeler staff will be used as needed to successfully complete the project.

PROJECT SCHEDULE

Amec Foster Wheeler can commence work on the scope of services within one week of receipt of written authorization of this proposal. Per discussions with Yankee, we currently anticipate completion of the effort by the end of November 2015. The project schedule will be affected by receipt of data and strategy decisions from Yankee, as well as the number of modeling iterations required to achieve a successful outcome.

COMPENSATION

Amec Foster Wheeler proposes a cost of $8,600 to complete the proposed scope of work. Costs are estimated based on the labor hours anticipated to complete a task and the billing rates of the assigned individuals (see attached Rate Schedule). The scope of services will be performed on a time and materials basis. Project costs will be billed in accordance with the attached terms and conditions. Issuance of a purchase order or other form of written notice to proceed implicitly acknowledges acceptance of Amec Foster Wheeler's proposal cost, and terms and conditions as stated in the Professional Services Agreement. By executing this contract, the signatory warrants that he or she has the full authority to enter into this agreement with Amec Foster Wheeler.

We appreciate your business and look forward to working with you. If you have any questions, please feel free to call me at (207) 828-2642.

Very truly yours,
Amec Foster Wheeler Environment & Infrastructure, Inc.

Jeffrey R. Harrington, P.E.
Senior Project Engineer

Philip A. Kuszpa
EP&P Group Manager

Amec Foster Wheeler
Environment & Infrastructure, Inc.
511 Congress Street
Portland, ME 04101 USA
Tel (207) 775-5401
amecfw.com

Professional Services Agreement

PARTIES

THIS AGREEMENT (the "Agreement"), effective this 21st day of October 2015, is made by and between **Amec Foster Wheeler Environment & Infrastructure, Inc.,** a Nevada corporation, with an address at 511 Congress Street, Portland, ME 04101 ("Amec Foster Wheeler") and Stephen A. Hynes Real Property Trust Agreement d/b/a Yankee Mobile Home Parks, a Maine company, with an address at 3 Idlewood Lane, Kittery, Maine 03904 ("CLIENT").

NOW, THEREFORE, in consideration of the mutual undertakings and subject to the terms set forth below and intending to be legally bound, the parties agree as follows:

PROJECT
CLIENT engages Amec Foster Wheeler to provide services in connection with: Air Quality Modeling Services.

SCOPE OF SERVICES
Amec Foster Wheeler agrees to perform services in accordance with its Proposal as follows:

See attached proposal dated October 21, 2015

CLIENT agrees that all services not expressly included are excluded from Amec Foster Wheeler's Scope of Services.

COMPENSATION (in U.S. Dollars) (check one)

____ **Firm-fixed price:** CLIENT agrees to compensate Amec Foster Wheeler on a firm-fixed price basis in the amount of: $_____.

_×_ **Time and materials:** CLIENT agrees to compensate Amec Foster Wheeler for all hours worked and other costs incurred at the rates and terms set forth herein. Should the total cost of Amec Foster Wheeler's performance be greater than the estimated amount shown below, Amec Foster Wheeler will notify CLIENT and provide a revised estimate for CLIENT's approval. In such event, continued performance is subject to additional funding as mutually agreed.

Labor Categories and Hourly Labor Rates: See attached 2015 Rate Schedule

Other Direct Costs (Reimbursed at cost plus 15 % mark-up):

Total estimated time and materials cost: $8,600

In addition to the Agreement amount, CLIENT assumes full responsibility for the payment of any applicable sales, use, or value-added taxes under this Agreement, except as otherwise specified.

ATTACHMENTS
The listed attachments form part of this Agreement:

1. Proposal, dated October 21, 2015

Terms and Conditions

1. COMPENSATION: Invoices will be submitted at least monthly for Services rendered. Terms of payment are net thirty (30) days from date of invoice. Payment will be made to Amec Foster Wheeler at the address specified on Amec Foster Wheeler's invoice.

If CLIENT reasonably objects to all or any portion of an invoice, CLIENT shall notify Amec Foster Wheeler of that fact in writing within ten (10) days from the date of receipt of Amec Foster Wheeler's invoice, give reasons for the objection, and pay that portion of the invoice not reasonably in dispute. Failure of CLIENT to provide such written notice within the allowed ten (10) day period shall be deemed to be a waiver of all objections to that invoice.

2. STANDARD OF CARE: Amec Foster Wheeler will perform the Scope of Services specified in a Work Order utilizing that degree of skill and care ordinarily exercised under similar conditions by reputable members of Amec Foster Wheeler's profession practicing in the same or similar locality at the time of performance. NO OTHER WARRANTY, GUARANTY, OR REPRESENTATION, EXPRESS OR IMPLIED, IS MADE OR INTENDED IN THIS AGREEMENT, OR IN ANY COMMUNICATION (ORAL OR WRITTEN), REPORT, OPINION, DOCUMENT, OR INSTRUMENT OF SERVICE, AND THE SAME ARE SPECIFICALLY DISCLAIMED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

3. INDEPENDENT CONTRACTOR: Amec Foster Wheeler shall be fully independent and shall not act, except as permitted herein, as an agent or employee of CLIENT. Amec Foster Wheeler shall be solely responsible for its employees and for their compensation, benefits, contributions, and taxes, if any.

Unless otherwise agreed to in writing by Amec Foster Wheeler and CLIENT, neither party shall directly or indirectly solicit, hire or retain, or knowingly cause a third party to solicit, hire or retain, during the term of this Agreement and for a period of one (1) year after the date on which this Agreement terminates, any employee of the other party who works on the preparation of the Proposal or otherwise performs Services under or in connection with this Agreement. Nothing herein shall prevent either party from hiring any individual who responds to a general advertisement for services.

4. INSURANCE: Amec Foster Wheeler will maintain insurance for this Agreement in the following types and limits: (i) worker's compensation insurance as required by applicable law, (ii) comprehensive general liability insurance (CGL) ($1,000,000 per occurrence / $2,000,000 aggregate), and (iii) automobile liability insurance for bodily injury and property damage ($1,000,000 CSL).

5. CHANGES: CLIENT may order changes within the general scope of the Services by altering, adding to, or deleting from the Services to be performed. Work beyond the scope of services or re-doing any part of the project through no fault of Amec Foster Wheeler, shall constitute extra work and shall be paid for on a time-and-materials basis in addition to any other payment provided for in this Agreement.

Should Amec Foster Wheeler encounter conditions which were (i) not reasonably anticipated, including, but not limited to, changes in applicable law, (ii) subsurface or otherwise concealed physical conditions that differ materially from those indicated in this Agreement or (iii) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in activities of the character contemplated by this Agreement, Amec Foster Wheeler shall promptly provide notice to CLIENT. CLIENT shall promptly investigate such conditions. If, in Amec Foster Wheeler's reasonable opinion, the conditions cause an increase or decrease in Amec Foster Wheeler's cost of, or time required for, performance of any part of its Services, CLIENT shall issue a Change Order with an equitable adjustment in Amec Foster Wheeler's compensation, schedule, or both. In the event no Change Order is agreed to, Amec Foster Wheeler reserves the right to either (i) suspend its performance until a Change Order is agreed to or (ii) discontinue its performance and terminate this Agreement.

6. FORCE MAJEURE: Should performance of Services by Amec Foster Wheeler be affected by causes beyond its reasonable control, Amec Foster Wheeler will be granted a time extension and the parties will negotiate an equitable adjustment to the price of any affected Work Order, where appropriate, based upon the effect of the Force Majeure on performance by Amec Foster Wheeler.

7. CLIENT'S RESPONSIBILITIES: CLIENT agrees to provide Amec Foster Wheeler all available material, data, and information pertaining to the Services.

8. SITE ACCESS: CLIENT shall at its cost and at such times as may be required by Amec Foster Wheeler for the successful and timely completion of Services: (i) provide unimpeded and timely access to any site, including third party sites if required (ii) provide an adequate area for Amec Foster Wheeler's site office facilities, equipment storage, and employee parking; (iii) furnish all construction utilities and utilities releases necessary for the Services; (iv) provide the locations of all subsurface

structures, including piping, tanks, cables, and utilities; (v) approve all locations for digging and drilling operations; and (vi) obtain all permits and licenses which are necessary and required to be taken out in CLIENT's name for the Services. Amec Foster Wheeler will not be liable for damage or injury arising from damage to subsurface structures that are not called to its attention and correctly shown on the plans furnished to Amec Foster Wheeler in connection with its work.

9. WARRANTY OF TITLE, WASTE OWNERSHIP: CLIENT has and shall retain all responsibility and liability for the environmental conditions on the site. Title and risk of loss with respect to all materials shall remain with CLIENT At no time will Amec Foster Wheeler assume possession or title, constructive or express, to any such samples or wastes.

10. LIMITATION OF LIABILITY: As part of the consideration Amec Foster Wheeler requires for provision of the Services indicated herein, CLIENT agrees that any claim for damages filed against Amec Foster Wheeler by CLIENT or any contractor or subcontractor hired directly or indirectly by CLIENT will be filed solely against Amec Foster Wheeler or its successors or assigns and that no individual person shall be made personally liable for damages, in whole or in part.

CLIENT's sole and exclusive remedy for any alleged breach of Amec Foster Wheeler's standard of care hereunder shall be to require Amec Foster Wheeler to re-perform any defective Services. All claims by CLIENT shall be deemed relinquished unless filed within one (1) year after substantial completion of the Services.

TO THE MAXIMUM EXTENT PERMITTED BY LAW, CLIENT AGREES THAT THE LIABILITY OF AMEC FOSTER WHEELER TO CLIENT FOR ANY AND ALL CAUSES OF ACTION, INCLUDING, WITHOUT LIMITATION, CONTRIBUTION, ASSERTED BY CLIENT AND ARISING OUT OF OR RELATED TO THE NEGLIGENT ACT(S), ERROR(S) OR OMISSION(S) OF AMEC FOSTER WHEELER IN PERFORMING SERVICES, SHALL BE LIMITED TO FIFTY THOUSAND DOLLARS ($50,000) OR THE TOTAL FEES ACTUALLY PAID TO AMEC FOSTER WHEELER BY CLIENT UNDER THIS AGREEMENT WITHIN THE PRIOR ONE (1) YEAR PERIOD, WHICHEVER IS LESS ("LIMITATION"). CLIENT HEREBY WAIVES AND RELEASES (I) ALL PRESENT AND FUTURE CLAIMS AGAINST AMEC FOSTER WHEELER OTHER THAN THOSE DESCRIBED IN THE PRECEDING SENTENCE, AND (II) ANY LIABILITY OF AMEC FOSTER WHEELER IN EXCESS OF THE LIMITATION.

In consideration of the promises contained herein and for other separate, valuable consideration, the receipt and sufficiency of which are hereby acknowledged, CLIENT acknowledges and agrees that (i) but for the Limitation, Amec Foster Wheeler would not have performed the Services, (ii) it has had the opportunity to negotiate the terms of the Limitation as part of an "arms-length" transaction, (iii) the Limitation amount may differ from the amount of professional liability insurance carried by Amec Foster Wheeler, (iv) the Limitation is merely a limitation of, and not an exculpation from, Amec Foster Wheeler's liability and does not in any way obligate CLIENT to defend, indemnify or hold harmless Amec Foster Wheeler, (v) the Limitation is an agreed remedy, and (vi) the Limitation amount is neither nominal nor a disincentive to Amec Foster Wheeler performing the Services in accordance with the Standard of Care.

Amec Foster Wheeler and CLIENT shall each waive any right to recover from the other party for any special, incidental, indirect, or consequential damages (including lost profits and loss of use) incurred by either Amec Foster Wheeler or CLIENT or for which either party may be liable to any third party, which damages have been or are occasioned by Services performed or reports prepared or other work performed hereunder.

CLIENT agrees that the damages for which Amec Foster Wheeler shall be liable are limited to that proportion of such damages which is attributable to Amec Foster Wheeler's percentage of fault subject to the other limitations herein.

11. **INDEMNITY**. CLIENT agrees to defend, indemnify, protect and hold harmless Amec Foster Wheeler and its officers, employees and agents from any and all claims, liabilities, damages or expenses, including but not limited to delay of the project, reduction of property value, fear of or actual exposure to or release of toxic or hazardous substances, and any consequential damages of whatever nature, which may arise directly or indirectly, to any party, as a result of the services provided by Amec Foster Wheeler under this Agreement, unless such injury or loss is caused by the sole negligence of Amec Foster Wheeler.

12. ASSIGNMENT AND SUBCONTRACTING: Neither party shall assign its interest in this Agreement without the written consent of the other.

13. COST ESTIMATES: If included in the Services, Amec Foster Wheeler will provide cost estimates based upon Amec Foster Wheeler's experience on similar projects, which are not intended for use by CLIENT or any other party in developing firm budgets or financial models, or in making investment decisions. Such cost estimates represent only Amec Foster Wheeler's judgment as a professional and, if furnished, are only for CLIENT's general guidance and are not guaranteed as to accuracy.

14. **TERMINATION** Either party may terminate this Agreement at any time by providing not less than ten (10) days advance written notice to the other party. In the event of a termination, CLIENT shall pay for all reasonable charges for work

performed and demobilization by Amec Foster Wheeler to date of notice of termination. The limitation of liability and indemnity obligations of this Agreement shall be binding notwithstanding any termination of this Agreement.

15. GOVERNING LAWS/LANGUAGE: This Agreement shall be governed and construed in accordance with the laws of the state of the Amec Foster Wheeler office entering into this Agreement. All communications relating to or arising out of this Agreement shall be in the English language.

16. FIELD REPRESENTATION: The Services do not include supervision or direction of the means, methods or actual work of other consultants, contractors and subcontractors not retained by Amec Foster Wheeler. The presence of Amec Foster Wheeler's representative will not relieve any such other party from its responsibility to perform its work and services in accordance with its contractual and legal obligations and in conformity with the plans and specifications for the project. CLIENT agrees that each such other party will be solely responsible for its working conditions and safety on the site. Amec Foster Wheeler's monitoring of the procedures of any such other party is not intended to include a review of the adequacy of its safety measures. It is agreed that Amec Foster Wheeler is not responsible for safety or security at a site, other than for Amec Foster Wheeler's employees, and that Amec Foster Wheeler does not have the contractual duty or legal right to stop the work of others.

17. DISPUTES. Any dispute arising hereunder shall first be resolved by taking the following steps, where a successive step is taken if the issue is not resolved at the preceding step: 1) by the technical and contractual personnel for each party performing this Agreement, 2) by executive management of each party, 3) by mediation, or 4) through the court system of the state of the Amec Foster Wheeler office that is entering into this Agreement. CLIENT hereby waives the right to trial by jury for any disputes arising out of this Agreement. Except as otherwise provided herein, each party shall be responsible for its own legal costs and attorneys' fees.

18. EXCLUSIVE USE. Services provided under this Agreement, including all reports, information or recommendations prepared or issued by Amec Foster Wheeler, are for the exclusive use of the CLIENT for the project specified. No other use is authorized under this Agreement. CLIENT will not distribute or convey Amec Foster Wheeler's reports or recommendations to any person or organization other than those identified in the project description without Amec Foster Wheeler's written authorization. CLIENT releases Amec Foster Wheeler from liability and agrees to defend, indemnify, protect and hold harmless Amec Foster Wheeler from any and all claims, liabilities, damages or expenses arising, in whole or in part, from such unauthorized distribution. All reports, drawings, plans, documents, software, source code, object code, field notes and work product (or copies thereof) in any form prepared or furnished by Amec Foster Wheeler under this Agreement are instruments of service. Exclusive ownership, copyright and title to all instruments of service remain with Amec Foster Wheeler.

19. ENTIRE AGREEMENT: The terms and conditions set forth herein constitute the entire understanding and agreement of Amec Foster Wheeler and CLIENT with respect to the Services. All previous proposals, offers, and other communications relative to the provisions of these Services are hereby superseded. Should CLIENT utilize its purchase order or any other form to procure services, CLIENT acknowledges and agrees that its use of such purchase order or other form is solely for administrative purposes and in no event shall Amec Foster Wheeler be bound to any terms and conditions on such purchase order or other form, regardless of reference to (e.g. on invoices) or signature upon (e.g. acknowledgement) such purchase order or other form by Amec Foster Wheeler. CLIENT shall reference this Agreement on any purchase order or other form it may issue to procure Amec Foster Wheeler services, but CLIENT's failure to do so shall not operate to modify this Agreement.

IN WITNESS WHEREOF, CLIENT and Amec Foster Wheeler have caused this Agreement to be executed by their respective duly authorized representatives as of the date first set forth above.

CLIENT		**Amec Foster Wheeler Environment & Infrastructure, Inc.**	
By:	_____	By:	_____
Name:	_____	Name:	Philip A. Kuszpa
Title:	_____	Title:	EP&P Group Manager

AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE, INC.
2015 RATE SCHEDULE

The hourly labor rates set forth below are valid from January 1, 2015 and are subject to annual revision thereafter. Amec Foster Wheeler will provide CLIENT thirty days advance written notice of any such revisions.

PROFESSIONAL SERVICES

CLIENT agrees to reimburse Amec Foster Wheeler for all hours worked by professionals at the following classifications and associated hourly labor rates. For expert witness testimony and related services in connection with litigation, CLIENT agrees to reimburse Amec Foster Wheeler for all hours worked by professionals at the following classifications, but at one and one half times the associated hourly labor rates.

CLASSIFICATION	RATE/HOUR	CLASSIFICATION	RATE/HOUR
Professional Levels 1	$55.00	Professional Level 14	$120.00
Professional Levels 2	$60.00	Professional Level 15	$130.00
Professional Levels 3	$65.00	Professional Level 16	$140.00
Professional Level 4	$70.00	Professional Level 17	$145.00
Professional Level 5	$75.00	Professional Level 18	$155.00
Professional Level 6	$80.00	Professional Level 19	$165.00
Professional Level 7	$85.00	Professional Level 20	$170.00
Professional Level 8	$90.00	Professional Level 21	$180.00
Professional Level 9	$95.00	Professional Level 22	$190.00
Professional Level 10	$100.00	Professional Level 23	$200.00
Professional Level 11	$105.00	Professional Level 24	$210.00
Professional Level 12	$110.00	Professional Level 25	$220.00
Professional Level 13	$115.00	Professional Level 26	$240.00

TECHNICIAN SERVICES

CLIENT agrees to reimburse Amec Foster Wheeler for all hours worked by technicians at the following classifications and associated hourly labor rates.

CLASSIFICATION	RATE/HOUR	OVERTIME	CLASSIFICATION	RATE/HOUR	OVERTIME
Technician Level 1	$30.00	$45.00	Technician Level 10	$55.00	$82.50
Technician Level 2	$32.50	$48.75	Technician Level 11	$60.00	$90.00
Technician Level 3	$35.00	$52.50	Technician Level 12	$65.00	$97.50
Technician Level 4	$37.50	$56.25	Technician Level 13	$70.00	$105.00
Technician Level 5	$40.00	$60.00	Technician Level 14	$75.00	$112.50
Technician Level 6	$42.50	$63.75	Technician Level 15	$80.00	$120.00
Technician Level 7	$45.00	$67.50	Technician Level 16	$85.00	$127.50
Technician Level 8	$47.50	$71.25	Technician Level 17	$90.00	$135.00
Technician Level 9	$50.00	$75.00	Technician Level 18	$95.00	$142.50

ADMINISTRATIVE SERVICES

CLIENT agrees to reimburse Amec Foster Wheeler for all hours worked by administrative staff at the following classifications and associated hourly labor rates.

CLASSIFICATION	RATE/HOUR	OVERTIME	CLASSIFICATION	RATE/HOUR	OVERTIME
Administrative Level 1	$35.00	$52.50	Administrative Level 6	$60.00	$90.00
Administrative Level 2	$40.00	$60.00	Administrative Level 7	$65.00	$97.50
Administrative Level 3	$45.00	$67.50	Administrative Level 8	$70.00	$105.00
Administrative Level 4	$50.00	$75.00	Administrative Level 9	$75.00	$112.50
Administrative Level 5	$55.00	$82.50	Administrative Level 10	$80.00	$120.00

MISCELLANEOUS EXPENSES – 6% of Labor Charges

CLIENT agrees to reimburse Amec Foster Wheeler for miscellaneous expenses incurred, such as consumable supplies, telephone & facsimile charges, photo processing, and small tools, etc., not otherwise invoiced as other direct expenses, at the rate of 6% of labor charges.

OTHER DIRECT EXPENSES

CLIENT agrees to reimburse Amec Foster Wheeler for all other direct expenses incurred at the following rates, except as otherwise specified by Amec Foster Wheeler in its proposal:

Travel Expenses: Transportation (mileage, air travel, car rental, etc.), lodging, meals, & incidental expenses	Cost plus 15%
Subcontract Expenses: Supplies or services furnished to Amec Foster Wheeler in support of project activities by any supplier or firm, except temporary agency or consultant staff charged at above hourly rates	Cost plus 15%
Direct Expenses: Other expenses in support of project activities	Cost Plus 15%

CIVIL
CONSULTANTS

Engineers

Planners

Surveyors

Section 5

Enclosure 10

Conservation Easement Offer and Draft Agreement

Date: November 17, 2015

Responsible Individual: Stephen A. Hynes Real Property Trust Agreement, Owner's Agent, Gary Beers

Subject: Open Space – Conservation Easement Cession Offer to the Town of Kittery

EXECUTIVE SUMMARY:

Stephen A. Hynes Real Property Trust Agreement has proposed a mobile home park expansion on Kittery Map 66 Lots 24 & 25, adjacent to the existing Yankee Commons Mobile Home Park on Idlewood Lane, presently under review by the Planning Board. Final approval and development would leave approximately 34.5 acres available offered as a gift to the Town and placed in a maintained conservation easement in perpetuity.

Such open space preservation easements are addressed in Kittery Town Code Title 16. This Report includes draft documents for Council consideration of an offer for the Conservation Easement Cession and Management Plan. Those documents were reviewed and endorsed by the Open Space Advisory Committee *[At it's Nov. meeting, KOSAC decided to support and comment on that proposal.]*; and, an opinion from the Town Attorney as to the legal sufficiency of the documents would be necessary.

Agreement by Council that it is satisfied with the sufficiency of the written evidence is sought and concurrence for Council to give reasonable consideration, contingent on final plan approval, and presentation of final documents, for the Easement Cession and Management Plan.

FACTS BEARING ON THE EQUATION:

- **Yankee Commons Location**
  - Development Plan Aerial View (*atch 1*)
  - Project Proposed Open Space and Easement Layout (*atch 2*)
  - Kittery Open Space Map (*atch 3*)
  - Kittery Vernal Pool 012 (*atch 4*)
- **Kittery Comprehensive Plan, Town Code, Open Space Map:**
  - Pursuant to Comprehensive Plan (*atch 5*)
  - Consistency with Title 16 (*atch 6*)
  - Kittery Title 16 Open Space Excerpts (*atch 7*)
- **Maine Revised Statutes:**
  - 33 MRS §476-479 Conservation Easement (*atch 8*)

BACKGROUND:

Hynes purchased Yankee Mobile Home Parks in 1996, which includes the 120-lot park on Cutts Road (Yankee Green); the 64-lot and 12-apartment complex on Idlewood Lane (Yankee Commons); and, the two undeveloped parcels (Map 66 Lots 24 & 25) adjacent and abutting US Route 1 and Wilson Lane (50+ acres). Aerial site view and proposed project layout (*atch 1*); the proposed open space and easement layout *(atch 2);* and, the site locus on Kittery's Open Space Map are provided (*atch 3*).

Also noted in that area in the US Route 1 ROW and extending into adjacent parcels, is an aerial view of Kittery's MDEP Vernal Pool 012 (*atch 4*).

> ***NOTE**: With no migratory species (e.g., wood frog, salamander), the USA Corps of Engineers requires only a 100' non-disturbance setback and that area will be considered for future easement consideration.*

The current expansion project was conceived in June of 2011. Initial cursory review indicated that 138 mobile home lots were readily possible under the net residential density standards. The project sketch plan was filed on 20 December 2011, proposing 83 home lots and a community center. A Maine Department of Transportation approved US Route 1 curb cut was centered on parcel 25 and crossed a wetland to access the rear (northerly) section.

The development design objectives were to be compliant with: (1) all Federal Housing &Urban Development (HUD) requirements; (2) Maine Manufactured Housing Board (MHB) park standards regulations; (3) Maine Department of Environmental (DEP) regulations (including Inland Fisheries & Wildlife); (4) USA Corps of Engineers regulations; and, (5) Town Code Title 16, Land Use and Development.

Recognizing that there are conflicts between state statutes (*30-A M.R.S. §4358, Regulation of manufactured housing*); Maine Manufactured Housing Board standards; and, Kittery Title 16, the primary plan objectives included efforts to be consistent with and pursuant to Kittery's Comprehensive Plan *(atch 5*); and, the concepts in Title 16 related to elderly housing, clustered residential development, and the mixed use zone (*atch 6*).

The Planning Board asked, during the initial site walk in January 2012, if it was possible to eliminate that curb cut/roadway, as Title 16 suggests there should be no more on Route 1 than absolutely necessary. In response to the Board's request, the plan was redesigned to provide access from Route 1 via Idlewood Lane. That resulted in a reconfiguration plan for Wilson Lane; a reduction of five lots to 78 (77 home lots and a community center); and, resulting in no more than 900sf wetland impact to reconfigure the access roadway to better avoid an emergent wetland.

The owner has committed to a plan Condition of Approval to maintain the housing as age-restricted (55+) and the project plans eight mixed use zone permitted uses. Those include a community garden; walking trail, active and passive recreation space. The Community Center facility will contain business and sales offices; meeting rooms; a medium size (125 seating) function room; and, an accessory maintenance shop/garage. There is also the potential for future provision for personal services, such as OT/PT and equipment; hair care; etc., although these must be viable for the provider.

Also noted is the net positive fiscal impact to the town. The project must pay for a Water District pumping station benefitting that system. Significant public safety impact and sewer betterment/impact fees will be paid. The owner will maintain on-site roads, street lighting, utility infrastructure, and provide curbside waste disposal for residents. With prospectively no school students the project foresees very limited financial cost (police-fire response, ambulance) to the Town. The estimated added valuation, when completed, would contribute more than $230,000 annually in new taxes, along with the sewer department and water district added revenues.

As a "good neighbor" gesture, permanent Rectangular Rapid Flashing Beacons are proposed at applicant's expense for the unsignalized crosswalks on US Route 1 in the outlet area to promote better pedestrian safety.

The current development plan was submitted to Maine Department of Environmental Protection (MDEP) for Site Location of Development review and approval, a process that includes professional staff review of multiple environmental regulations, including impacts to natural resources, storm water, groundwater, sensitive wildlife habitat, and scenic character. MDEP approved the plan as presented (including review and approval by Maine Department of Inland Fisheries & Wildlife) in June 2013.

The nearby vernal pool was assessed by the US Army Corps of Engineers to have non-migratory, fairy shrimp requiring only a 100' non-disturbance area. MDEP's 250' area will have only 4.5% disturbed for the side slope of a stormwater filtration basin where 25% is allowed. All wetlands and a stream are mapped and categorized. Mapped wetland areas total approximately 6.6 acres, 0.8 acres of which are designated as emergent wetlands. 900sf of wetland would be impacted which requires a Corps of Engineers Category 1 permit requiring only start-work notice two weeks before commencement. The plan is currently under review by the Planning Board.

Title 16 open space requirements for mobile home parks are:

> ***16.8.12.3 Mobile Home Parks.*** *O. Open space calculations are as follows: 1. For mobile home parks served by a public sewer, an area amounting to ten (10) percent of the total area devoted to individual lots must be set aside for open space and/or recreation.*

That result for the proposed plan open space requirement would be less than two acres. Title 16 requires developed open space to be designed and landscaped for the use and enjoyment of the park residents and maintained for their long-term use. Low- intensity recreation improvements (walking trail), picnic areas, and community garden plots are planned.

To the maximum extent possible, undeveloped open space must be left in its natural state. Contingent upon a final plan approval, the owner proposes to place all of the parcel's undeveloped areas (approximately 34.5 acres) into a Conservation Easement with a supported future Management Plan.

Town Code Title 16 provisions that apply to this proposal are (*more at atch 7*):

> ***16.8.11.7 Open Space Dedication and Maintenance.***
> *A. Prior to approval of the final plan by the Planning Board, documents for open space must be submitted to the Town for review by legal counsel. Subsequent to approval, there may be no further division of the open space; however, tracts or easements dedicated for public utilities, public access or structures accessory to noncommercial recreation, agriculture or conservation may be permitted within the open space.*

> ***16.9.2.3 Land Dedication.***
> *Reserved land acceptable to the Planning Board and applicant may be gifted to the municipality as a condition of approval, only when Council has agreed to the gifting.*

> ***16.10.7.2 Final Plan Application Submittal Content.***
> *N. Open Space Land Cession Offers. Written offers of cession to the municipality of all public open space shown on the plan, and copies of agreements, or other documents showing the manner in which space(s), Code to which is reserved by the subdivider, are to be maintained.*

O. Open Space Land Cession Offers Acknowledgement by Town. Written evidence that the municipal officers are satisfied with the legal sufficiency of the documents referred to in Section 16.10.7.2O. Such written evidence does not constitute an acceptance by the municipality of any public open space referred to in Section 16.10.7.2O.

16.10.9.1.3 Approval Not Acceptance of Property.
The approval by the Planning Board of a plan, a master site development plan or any other subsequent development plan does not constitute, nor is it evidence of any acceptance by the municipality of any street, easement, or other open space shown on the plan. When a park, playground, or other recreation area is shown on the plan, approval of the plan does not constitute an acceptance by the municipality of such areas. The Planning Board must require the plan to be endorsed with appropriate notes to this effect. The Planning Board may also require the filing of a written agreement between the applicant and the municipal officials covering future deed and Code, dedication, and provision for the cost of grading, development, equipment, and maintenance of any such recreation area.

CURRENT SITUATION:

Of the 50+ acres in the parcels, the Net Residential Acreage is 755,454 sf, which would allow 151 lots at 5,000 sf. (Lot size allowed by Maine law – 755,000sf). We are proposing 78 lots which would take up 390,000 sf (leaving 8.4 unused residential area acres remaining) and propose no additional future development.

Gross Land Area	**2,185,044**	**sq. ft.**
Cemetery	-7,290	sq. ft.
Wetland/Floodplain	-1,128,513	sq. ft.
Street/Access (20%)	-209,848	sq. ft.
Open Space (10%)	-83,939	sq. ft.
Net Residential Acreage	**755,454**	**sq. ft.**
Possible Lots @ 5,000sf	151	each
Possible Lots @ 6,500sf	116	each
Proposed Lots	78	each

This table shows the approximately 34.5 acres available for this environmental protection consideration. The owner also proposes to maintain the conservation areas; permit public access; and, create/maintain a low-intensity recreation walking trail.

Gross Land Area	**2,185,044**	**sq. ft.**
Housing Lots	-390,000	sq. ft.
Street/Access (20%)	-209,848	sq. ft.
Net Undeveloped	**1,585,196**	**sq. ft.**
Cemetery	7,290	sq. ft.
Wetland/Floodplain	1,128,513	sq. ft.
Other Undeveloped	365,454	sq. ft.
Conservation Easement	**34.5**	**acres**

Essential Maine statute requirements are found in 33 MRS §476-479 Conservation Easement (*atch 8*).

The agreement for the proposed offer of conservation easement cession (*encl 1*) is the MDEP standard and is consistent with, and pursuant to, Kittery's Comprehensive Plan and the Open Space Reservation concepts in Title 16, supporting the public benefit in the following areas:

- *The importance of the land by virtue of its size or uniqueness in the vicinity or proximity to extensive development or comprising an entire landscape feature;*
- *The likelihood that development of the land would contribute to degradation of the scenic, natural, historic or archeological character of the area;*
- *The opportunity for regular and substantial use of the land by the general public for recreational or educational use;*
- *The likelihood that the preservation of the land as undeveloped open space will provide economic benefit to the town by limiting municipal expenditures required to service development;*
- *The existence of a conservation easement, other legally enforceable restriction, or ownership by a nonprofit entity committed to conservation of the property that will permanently preserve the land in its natural, scenic or open character;*
- *Whether the land is maintained in accordance with criteria that are adopted under local ordinance that provide for preserving the integrity of historically important structures.*

Key Features of the Proposed Offer and Agreement are:
Cession is an irrevocable offer of dedication of undeveloped land in Tax map 66 Lots 24 &25 to be gifted to the Town. The offer continues indefinitely and may be accepted by the Town at any time, it being the intent that if said offer is to be accepted, it will be accepted, at the discretion of the Town Council, only upon delivery by Grantor of such other documents, certifications and securities as the Town requires pursuant to its Code for the acceptance of the dedication of public reserved open space lands.

Purpose:
It is the purpose of the Easement to protect the property to safeguard biological diversity by protecting the environments and ecological processes including those described in the Whereas Clauses, that support viable populations of native plants, animals and other organisms, and to preserve and maintain the property as free from human disturbance, noise, artificial light and pollution as practicable.

Prohibited Acts and Uses, Exceptions Thereto, and Permitted Uses:
To ensure the continued character of the property, a number of acts and uses would be prohibited on, above, through or below the property. Notwithstanding the prohibitions, certain acts and uses may be permitted to the extent that do not materially impair the conservation values and interests of the property and are not inconsistent with the conservation easement purpose. Any such act or use must be part of an approved Management Plan. The exercise of any right reserved by the Grantor shall be in compliance with all applicable federal, state, and local laws.

Management Plan:
The depth and extent of inquiry of the Plan and its level of specificity will be appropriate to the proposed activity and any ecological disturbance which might occur as a result of the proposed actions. The Plan may consider the surrounding landscape context of the property as well as the property itself. It will include specific provisions for approval procedures, monitoring, evaluation, updates, notices, time frames and dispute resolution.

CONCLUSION

Kittery Open Space Advisory Committee Caveats (*encl 2*)

> "The easements need to be vetted by some legal authority versed in easements to guarantee that they accomplish the goal of preservation. Some individual/dept./or committee within the Town infrastructure should be designated as the steward/enforcer of the easement. There should be an appropriate sum of money placed in a trust controlled by the Town for any stewardship and enforcement actions that may arise. Lastly, there should be a management plan submitted by the applicant for the OS- especially the trail corridor- ie best management practices used in construction, rules for the use of the trail, enforcement responsibilities for those rules, signage at the property boundaries of the OS noting it designation, etc."

We would be pleased to work with that group or others, as Council may desire, to complete mutually agreeable covenants for this proposal. The proposed offer and agreements and final documents would need to be reviewed by the Town Attorney as required by Title 16, Section 8.11.7 (paid for by owner under Title 3 Applicant Service Agreement).

REQUEST:

Council agree by motion that it is satisfied with the legal sufficiency of the written evidence documents; and, to give reasonable consideration to the Conservation Easement offer and Management Plan when presented, contingent upon final development plan approval.

Enclosures
1. Draft Deed of Conservation Easement
2. Kittery Open Space Advisory Committee, e-mail 11-16-15

Town Council Attachments (Previously provided to Planning Board)
1. Development Plan Aerial View
2. Project Proposed Open Space and Easement Layout
3. Kittery Open Space Map 0328061

4a. Kittery Vernal Pool 012
4b. Vernal Pool 012 – Close up

5. Pursuant to Comprehensive Plan
6. Consistency with Title 16
7. Kittery Title 16, Open Space Excerpts
8. 33 MRS §476-479, Conservation Easement

SUGGESTED AGENDA ITEM & MOTION:

AGENDA: The Kittery Town Council moves to discuss the offer of a conservation easement gift of land the Town by owner Stephen A. Hynes Real Property Trust Agreement.

MOTION TO APPROVE: The Kittery Town Council moves to affirm that it is satisfied with the legal sufficiency of the written evidence documents for a conservation easement of a portion of Kittery Map 66 Lots 24 & 25 to be gifted to the Town by Stephen A. Hynes Real Property Trust Agreement (Owner); and, to also affirm it will give reasonable consideration to the Conservation Easement offer and Management Plan when completed and presented for action; and, that such consideration is contingent upon a final development plan approval.

THIS GRANT DEED OF CONSERVATION EASEMENT is made this _____ day of 20___, by Stephen A. Hynes Real Property Trust Agreement of West Vancouver, British Columbia, Canada, (hereinafter referred to as the "GRANTOR"), in favor the Town of Kittery, Maine (hereinafter referred to as the "HOLDER") and the State of Maine by and through its Department of Environmental Protection, (hereinafter referred to as the "THIRD PARTY").

WITNESSETH

WHEREAS this Indenture is created pursuant to Title 33, Maine Revised Statutes, Sections 476 through 479-B, inclusive, as amended; and

WHEREAS the GRANTOR holds title to certain real property situated on Tax Map 66, Lots 24 and 25, in Kittery, York County, Maine (hereinafter referred to as the "Property") described **[**on recorded plan ####, date, Book, page **]** at the York County Registry of Deeds and further described **[** in exhibit A attached hereto. **]**

WHEREAS the Property remains in a substantially undisturbed natural state and has significant aesthetic and ecological value, in particular, **[** here describe the conservation purposes of the easement **]**; and

WHEREAS, the GRANTOR and the HOLDER, recognizing the value of the Property as described above, have the common purpose of conserving the natural values of the Property by the conveyance of a Conservation Easement over the Property, which easement is to benefit, protect and conserve the natural values of the Property; conserve and protect the indigenous animal and plant populations; and, prevent the use or development of the Property for any purpose or in any manner that would conflict with its natural, scenic condition; and

WHEREAS the THIRD PARTY will receive THIRD PARTY Rights of Enforcement under this Deed;

NOW, THEREFORE, in consideration of the foregoing and the covenants, terms, conditions, and restrictions herein contained, the GRANTOR hereby GRANTS to the HOLDER, its successors and assigns, as an absolute and unconditional gift, forever and in perpetuity, with Warranty Covenants, a Conservation Easement in gross over the Property as set forth herein (the "Conservation Easement"); and to the THIRD PARTY, its successors and assigns, as an absolute and unconditional gift, forever and in perpetuity, rights of enforcement hereunder.

l. PURPOSE: It is the purpose of this Easement to assure that the Property will be retained forever in its natural undeveloped condition and to prevent any use of the Property that will significantly impair or interfere with the conservation values of the Property. GRANTOR intends that this Easement will confine the use of the Property to such activities as are consistent with the purpose of this Easement.

2. RIGHTS OF HOLDER: To accomplish the purpose of this Easement the following rights are conveyed to the HOLDER by this easement:

a. the right to preserve and protect the conservation values of the Property;

b. the right to enter and inspect the Property over other lands of the GRANTOR at any reasonable time and in any reasonable manner provided that the time and manner of such entry does not unreasonably interfere with the uses of the Property permitted hereunder or the quiet enjoyment of other lands of GRANTOR, and to enforce by proceedings at law or in equity the covenants hereinafter set forth, including the right to require restoration of the Property to its condition prior to any breach hereof; and

c. the right to prevent any activity on or use of the Property that is inconsistent with the purpose of this Easement and to require the restoration of such areas or features of the Property that may be damaged by any inconsistent activity or use, pursuant to paragraph 6.

3. USE OF THE PROPERTY: The Property may be used for limited recreational and conservation purposes only. No commercial, industrial, quarrying or mining activities are permitted on the Property. No structures or facilities of any kind whatsoever may be constructed on the Property, except walking paths designed in keeping with the natural scenic quality of the Property. No motor vehicles of any kind, including recreational vehicles, all-terrain vehicles, motorcycles, dirt bikes, and snowmobiles may be permitted on the Property, except in emergency and when necessary to accomplish the rights reserved by GRANTOR and HOLDER, their successors and assigns. No filling, paving, dumping, excavation, or other alteration, may be made to the surface of the Property other than that caused by the forces of nature. Any activity on or use of the Property inconsistent with the purposes of this Easement is prohibited.

4. RESERVED RIGHTS: GRANTOR reserves to itself, and to their personal representatives, heirs, successors, and assigns, all rights accruing from its ownership of the Property, including the right to engage in, or permit, or invite others to engage in, all uses of the Property that are not expressly prohibited herein and are not inconsistent with the purpose of this Easement. Without limiting the generality of the foregoing, the following rights are expressly reserved:

a. The right of the GRANTOR, its guests, employees and invitees, to use the Property for recreational purposes which may include hiking, picnicking, bird watching, camping, tenting and any other use that is not expressly prohibited above or destructive to the natural values to be conserved herein.

b. The right to advertise the Property for sale and to convey the Property, always subject to the terms of this Conservation Easement.

5. CUTTING OF TIMBER AND VEGETATION: The destruction or removal of standing timber, plants, shrubs or other vegetation is not permitted, except however, there are retained in the GRANTOR the following rights:

a. The right to clear and restore forest cover and other vegetation that is damaged or destroyed by the forces of nature, such as fire or disease and, with the prior written approval of the HOLDER and the THIRD PARTY, when necessary to prevent the spread of disease.

b. The right to clear and restore forest cover and other vegetation, in the event of an emergency, when necessary to prevent the spread of fire.

c. The right to gather, use or remove dead wood.

6. RIGHTS OF THE THIRD PARTY: The GRANTOR hereby grants to the THIRD PARTY the same inspection and enforcement rights as are granted to the HOLDER under this easement. However, the Parties hereto intend that the HOLDER be primarily responsible for the enforcement of this Easement, and that the THIRD PARTY will assume such responsibility only if the HOLDER fails to enforce it. If the THIRD PARTY determines that the HOLDER is failing in such enforcement, the THIRD PARTY may give notice of such failure to the HOLDER and the GRANTOR, and if such failure is not corrected within a reasonable time thereafter, the THIRD PARTY may exercise, in its own name and for its own account, all the rights of enforcement granted the HOLDER under this Easement.

The THIRD PARTY also has reasonable access to any and all records of the HOLDER relevant to the Protected Property.

7. CONSTRUCTION: If uncertainty should arise in the interpretation of these restrictions, judgment should be made in favor of conserving the Property in its natural, open, and scenic condition.

The GRANTOR agrees to bear all costs and responsibility of operation, upkeep, and maintenance of the Property and to pay any and all real property taxes and assessments levied by competent authority on the Property and does hereby relieve, indemnify and hold harmless the HOLDER therefrom.

The GRANTOR has provided the HOLDER with sufficient information to determine the condition of the Property as of the effective date hereof and has certified that such information is an accurate representation of the same.

8. SUCCESSORS: The covenants, terms, conditions, and restrictions of this Easement are binding upon, and inure to the benefit of, the parties hereto and their respective personal representatives, heirs, successors, and assigns and continue as a servitude running in perpetuity with the Property.

9. TERMINATION OF RIGHTS AND OBLIGATIONS: A party's rights and obligations under this Easement terminate upon transfer of the party's interest in the Easement or Property, except that liability for acts or omissions occurring prior to any transfer, survive said transfer.

TO HAVE AND TO HOLD the said Conservation Easement unto the said HOLDER and its successors and assigns forever and the said THIRD PARTY rights unto the said THIRD PARTY and its successors and assigns forever.

GRANTOR'S SIGNATURE

IN WITNESS WHEREOF, the said GRANTOR, has hereunto set his hand this ____ day of 20___.

By: _____

Its: Owner

NOTARIZATION OF GRANTOR'S SIGNATURE

HOLDER'S ACCEPTANCE

The above and foregoing Conservation Easement was authorized to be accepted by HOLDER as aforesaid, and the said HOLDER does hereby accept the foregoing Conservation Easement, by and through _____, its _____, hereunto duly authorized, this ____ day of 20___.

By: _____

Its: tbd

NOTARIZATION OF HOLDER'S SIGNATURE

THIRD PARTY ENFORCER ACCEPTANCE

The third party rights of enforcement granted under the above and foregoing Conservation Easement, pursuant to Title 33 M.R.S Section 476 et seq., were authorized to be accepted by the State of Maine Department of Environmental Protection by _____, its Director of the Bureau of Land & Water Quality, hereunto duly authorized and the said _____ does hereby accept the foregoing Conservation Easement this ____ day of 20___.

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

By: _____

Its: Director, Bureau of Land & Water Quality

Exhibit A – Property Description

Gmail by Google

Gary Beers <gbeers.ktc@gmail.com>

Re: Yankee Commons Eppansion's Open Space proposal

1 message

cwilson515@aol.com <cwilson515@aol.com> Mon, Nov 16, 2015 at 8:48 PM
To: Ncolbertpuff@kitteryme.org, cdimatteo@kitteryme.org, gbeers.ktc@gmail.com
Cc: gb-pksvc@hotmail.com

Memo:

From: KOSAC
To: Town Manager, Planner, Town Council Chair, Mr. G. Beers, representative for the YCMHP expansion proposal
Re: Comments on the Open Space Proposal that is part of the application to expand YCMHP.

First a brief history about KOSAC's involvement with the proposal. In May of 2015, Mr. Beers made a presentation at a KOSAC meeting about the proposal to preserve approx. 36 acres of land adjacent to the proposed expansion of the MHP. He was asking the committee's opinion as to how best to structure the preservation. Subsequently, the PB invited the Committee to participate in their site walk and at a later date 2 committee members walked the Open Space

Over the following months, the Committee continued to discuss the proposal but could not come to a consensus as to the best form the preservation should take.

In the meantime, lacking guidance from KOSAC, the applicant developed the current proposal that's before the PB and TC.

At it's Nov. meeting, KOSAC decided to support and comment on that proposal.

The committee recognizes that the proposal has features that KOSAC favors OS set asides. First and foremost, the general public will have access to the trail that will be built and maintained by YCMHP management. All others have restricted access to only development members. As well as access, the Park will construct and maintain parking for the general public for trail use. The area outside of the trail will be preserved as per the proposed easements. Habitat for flora and fauna is to be protected The existing tree line along I-95 will be maintained to mitigate the nuisances inherent in that corridor. Additionally, maintaining the OS as forested will act as a sink for some of the greenhouse gases we as a community produce.

The committee's support comes with several caveats. The easements need to be vetted by some legal authority versed in easements to guarantee that they accomplish the goal of preservation. Some individual/dept./or committee within the Town infrastructure should be designated as the steward/enforcer of the easement. There should be an appropriate sum of money placed in a trust controlled by the Town for any stewardship and enforcement actions that may arise. Lastly, there should be a management plan submitted by the applicant for the OS-especially the trail corridor- ie best management practices used in construction, rules for the use of the trail, enforcement responsibilities for those rules, signage at the property boundaries of the OS noting it designation, etc.

Respectfully submitted

Steve Hall, Megan Kline, Page Mead, Craig Wilson

For the Kittery Open Space Advisory Comittee

CIVIL
CONSULTANTS

Engineers

Planners

Surveyors

Section 5

Enclosure 11

SW Cole 15-0640 G - Hydro Review Responses to Comments

15-0640 G

July 20, 2015

Civil Consultants
Attention: Mr. Thomas W. Harmon, P.E.
293 Main Street
P.O. Box 100
South Berwick, ME 03908

Subject: Hydrogeological Evaluation
Stormwater and Groundwater Flow
Yankee Commons Mobile Home Park Expansion
Kittery, Maine

In accordance with our July 08, 2015 Agreement, S. W. Cole Engineering, Inc. (S.W.COLE) is providing this report of findings from our hydrogeological review of potential changes to stormwater and groundwater flow associated with the proposed expansion of the Yankee Commons Mobile Home Park.

The Stormwater Management Plan (Plan) describes the proposed expansion as including 77 mobile home park units on 18.5 acres of a 50.1 acre lot located on Idlewood Lane along U.S. Route 1 in Kittery, Maine. An additional 2.0 acres will be modified in association with stormwater treatment and road improvements, with a total of 7.0 acres being impervious. The stormwater runoff from the developed site is treated using 13 grassed filter basins and 1 bioretention basin. Mapped wetland areas total approximately 6.6 acres, 0.8 acres of which are designated as emergent wetlands. The remaining area is undeveloped wooded vegetation.

We understand that the site has been permitted by the Maine Department of Environmental Protection (MeDEP) and that Civil Consultants is requesting this review of the potential impacts to adjacent wetlands associated with changes to drainage patterns and the proposed blasting and bedrock removal associated with site preparation.

SCOPE OF SERVICES:
Civil Consultants has provided the high intensity soils survey and the grading and storm water management plans for the site. We have also reviewed published surficial geological, bedrock geological and soils (web soil survey) mapping of the site. This review focused on:

- Potential changes to surface water drainage;
- Potential changes to infiltration;
- Siltation to wetlands associated with construction;
- Long term siltation associated with development; and
- Possible impacts to water quantity and quality in the adjacent wetlands. A Maine Certified Geologist provided the evaluation.

We did not perform a field investigation in association with this evaluation.

FINDINGS
Our review of the information resulted in the following findings:

1. Bedrock in the area is mapped as metasandstone and phyllite of the Kittery Formation.
2. Soil types mapped in the area are generally interpreted to be hydrological soil groups C and D, and are associated with shallow bedrock on pre-construction slopes generally less than 15%, while small areas are mapped as having slopes between 15 and 25% or greater than 25%.
3. The 20-year average precipitation[1] is approximately 47 inches, however the 2014 precipitation was 58.30.
4. The overall drainage patterns, with surficial flow to the wetlands to the north and the emergent wetland near the center of the proposed development are virtually unchanged.
5. The removal of bedrock as part of the site preparation is interpreted to result in slopes with lower gradients which may increase infiltration and evapo-

[1] NOAA 2014 annual precipitation for the Kennebunkport weather station.

transpiration, thus reducing runoff. However, the increase in the amount of impermeable surface is interpreted to result in an increase in runoff, thus negating the impact of the lower slopes and increased evaporation.

6. The majority of the stormwater runoff will be directed to sand filters, designed per Best Management Practices (BMPs) guidelines, prior to draining to the wetlands. Several small areas from lots adjoining the wetlands drain directly to the wetlands.
7. The Stormwater Management Plan shows design water levels in association with 2 year, 10 year and 25 year stormwater events in the infiltration basins.
8. The Stormwater Management Plan includes provisions for inspection and maintenance at regular intervals and associated with major storms.

We understand that the site development process will require that approximately 190,000 cubic yards (in place volume) of bedrock will be removed to establish the final grades. Additional bedrock will be moved on the site for road construction. Topsoil will be stripped from the areas where bedrock will be removed, stockpiled, and subsequently reused on site.

We understand that water supply and domestic wastewater management will be at off-site facilities.

SUMMARY AND CONCLUSIONS

It is our interpretation that the quantity of runoff and infiltration will be substantially unchanged, as we understand that topsoil removed for construction (bedrock removal) will be utilized on site. The soil filters for runoff management and buffer soils to wetlands meet the requirements for water treatment prior to discharge to a wetland.

The key site water issues will be stormwater management during construction and the inspection and maintenance of stormwater management systems subsequent to construction.

Please contact us if you have any questions.

S. W. Cole Engineering, Inc.

STATE OF MAINE
CLIFFORD R. LIPPITT
GE292
GEOLOGIST

Clifford R. Lippitt, C.G.
Senior Geologist

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October 7, 2015

Civil Consultants
Attention: Mr. Thomas W. Harmon, P.E.
293 Main Street
P.O. Box 100
South Berwick, ME 03908

Subject: Hydrogeological Evaluation
Response to Conservation Commission Comments.
Yankee Commons Mobile Home Park Expansion
Kittery, Maine

Dear Mr. Harmon:

The following are our responses to comments provided by Civil Consultants from the Conservation Commission for the Town of Kittery, Maine. We understand that these comments were made by Donald Moore, a Professional Geologist (New Hampshire PG), a Conservation Commission member and hydrogeologist for Stantec. Mr. Moore's comments are in *italics*, with our response immediately following.

Moore: "I do not see data or calculations describing the existing groundwater flow regime. Issues such as water table elevation contours (i.e. is the water table within the bedrock level that is going to be blasted and removed), groundwater flow direction, or flux/volume of groundwater recharging wetlands are not quantified or presented. If the existing system is not described or defined, I think it's difficult to evaluate or describe any potential changes or alterations during the construction or post construction phases."

Groundwater elevation measurements, groundwater contours, and flux/volume calculations were not performed or quantified for the following reasons:

- Based on our review of existing data, it is not expected that groundwater will be encountered within the proposed blasting area;

- Should the groundwater table be intersected during construction, the surface water management plan maintains the surface runoff pattern and balance (based on direction of drainage and area drained) consistent with the preconstruction drainage distribution;
- As groundwater removal (pumping wells) is not proposed in association with site development there is no apparent driving force to change the groundwater flow direction;
- It is our interpretation that any groundwater recharge contribution to the wetlands will be in either the shallow overburden or shallow weathered bedrock flow regime that will not be impacted during construction due to Maine DEP mandatory setback requirements from the wetlands and proposed non-disturbance setbacks of 25 feet to 100 feet; and
- It is our interpretation that the primary recharge to the wetlands will be the result of surface water drainage[1].

Moore: "I still see unanswered questions such as:

- *How much groundwater is recharging (flowing into) these wetlands on a monthly or annual basis?*
- *Will the proposed blasting/construction and final development decrease or increase this recharge?*
- *Will this create a negative impact to the wetlands?"*

Response:

- The amount of water flowing to the wetlands as surface or groundwater recharge will remain proportional to the amount of precipitation and seasonal conditions. With no groundwater removal and maintenance of drainage patterns the mechanism for change to the recharge of wetlands is limited to the increased infiltration due to reduced slopes and the construction of infiltration basins;

[1] Soils mapping for the area indicates that the soils in the blasting area are generally of hydrologic soil group C and D. Based on TR-55 run-off curve numbers, a woods/grass combination area of fair quality results in 76% to 82% runoff.

- The removal of bedrock as part of the site preparation is interpreted to result in slopes with lower gradients which may increase infiltration and evapotranspiration, thus reducing runoff. However, the increase in the amount of impermeable surface is interpreted to result in an increase in runoff, thus negating the impact of the lower slopes and increased evaporation; and
- Based on the above, with little or no change in the amount or direction of runoff, there should be no adverse impact to the wetlands.

As noted in our July 20, 2015 report, the stormwater management plan makes allowances for maintenance and monitoring that will be necessary to confirm the functionality of the infiltration system. Stormwater management during construction needs to be monitored to confirm that the necessary controls are maintained and that short term impacts of construction are minimized. It should be noted that the greatest potential for impact to the wetlands will be during the construction period, and it is our interpretation that this potential will increase with an extended work period.

Please contact us if you have any questions.

S. W. Cole Engineering, Inc.

STATE OF MAINE
CLIFFORD R. LIPPITT
GE292
GEOLOGIST

Clifford R. Lippitt, C.G.
Senior Geologist

CRL:crl/slh

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Enclosure 12

USACE Letter 11-12-15, Vernal Pool and NE Long-Eared Bat

DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO
ATTENTION OF

November 12, 2015

Regulatory Division
CENAE-R-PEC
Permit Number: NAE-2015-01519

Thomas Harmon
Civil Consultants
P.O. Box 100
South Berwick, Maine 03908

RE: Yankee Commons Expansion, Idlewood Lane, Kittery, Maine.

Hi Tom,

In response to your letter dated July 6, 2015, you are correct; your revised project with 900 SF of wetland impact will qualify for a Category 1 General Permit. The typical 100' setback from the vernal pool does not apply in this case as the pool only contained Fairy shrimp, an aquatic species that does not migrate to the terrestrial habitat. The percent of development within 750' of the pool also does not apply. While a vegetated buffer around the pool is recommended, it is not required by the Corps.

As you are aware the Corps is currently in Section 7 consultation for endangered species with the USFWS. The service is currently reviewing the bat survey data submitted by Dave Yates. Once they have concurred that there will be no affect on Northern long eared bats I will be able to issue the permit.

HOWE.RODNEY.A.1228502266

Digitally signed by HOWE.RODNEY.A.1228502266
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=HOWE.RODNEY.A.1228502266
Date: 2015.11.12 10:47:20 -05'00'

Rodney A. Howe
Senior Project Manager
Maine Project Office

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Section 5

Enclosure 13

Yankee Commons Expansion Draft Tenant Rules

YANKEE COMMONS EXPANSION

MOBILE HOME COMMUNITY

3 IDLEWOOD LANE, SUITE 3

KITTERY, ME 04904

PARK RULES AND REGULATIONS

Effective TBD

NOTE: UPON COMPLETION OF THE PARK DEVELOPMENT THE RULES WILL BE AMENDED TO INCLUDE THE WALKING TRAIL LAYOUT; HOW THE OPEN SPACE IS TO BE USED AND MAINTAINED; AND WHAT CONDITIONS APPLY TO ITS USE. THE AREA TO BE DEDICATED OPEN SPACE OR RECREATION WILL BE SPECIFIED. AND THE CENTRAL FACILITY AMENITIES WILL BE PUBLISHED.

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ANY VIOLATION OF THESE RULES MAY BE A CAUSE FOR TERMINATION OF OCCUPANCY (EVICTION). PLEASE READ ALL RULES CAREFULLY.

RULES & REGULATIONS

INTRODUCTION

The owner of Yankee Commons Expansion Mobile Home Park (referred to herein as the "Community"), intends to maintain and operate Yankee Commons Expansion as a quality residential community. The purpose and intent of these Rules & Regulations is to promote the character of the Community as a peaceful, attractive and enjoyable setting for all residents; promote order, safety, and harmony in the Community; and, set forth the terms of lot tenancy. The Community's Management ("Management") strives to render prompt and efficient service and to provide all tenants with an enjoyable lifestyle in quality surroundings.

Each tenant renting a lot in the Community is referred to as the "tenant" in these Rules & Regulations. The term "household members" includes in all instances any tenant's spouse, or any other cohabiters or individuals authorized to reside in the tenant's home. The term "resident" includes the tenant and any household members.

These Rules & Regulations apply equally to tenants, their household members and to any guests or visitors. These individuals are considered to be under the control of the tenant and the tenant is responsible for any Rule & Regulation violations by any of these individuals.

A. RIGHTS AND RESPONSIBILITIES.

1. Age-Restricted Community. Yankee Commons Expansion is a 55 and older community. One occupant must be at least 55 years old and every other occupant must be at least 40 years old.

2. Management Rights. Management shall have all of the rights set forth in the Maine Mobile Home Park Law (10 MRS Chapter 953), as well as all rights set forth in these Rules, and all other rights and abilities that are reasonably necessary to carry out Management's responsibilities, or that are reasonably necessary to enforce these Rules or to promote the peace and safety of the residents of the Park. Without limitation of the foregoing, Management reserves the right to inspect any lot or the exterior of any home in the Park at all reasonable hours.

3. Services Provided by Management. Roads will be plowed by Management as may be necessary, subject to weather conditions and other matters outside the reasonable control of Management. Management is responsible for the reasonable and necessary removal or alteration of bushes or trees on each lot, and will have the right to enter on any lot and perform work related to those activities, at all reasonable times. Tenants must not trim or cut limbs from any tree or bush without first obtaining specific written permission from Management.

4. Tenant Complaints and Concerns. Any and all complaints or concerns should be submitted in writing, signed, and addressed to the Community Manager, 3 Idlewood Lane, Suite 3, Kittery, ME 03904.

5. Safeguards and Alterations, Installations or Construction. Management reserves the right to require the addition of safeguards and/or alteration of improvements to personal property if necessary to comply with the safety requirements of the Community's insurance carrier, or reasonable safety measures in general. Any alterations, installations, additions or construction on lots must be approved in advance by Management, in writing, and conform to all applicable building codes.

6. Liability and Indemnity. Neither Management nor the Community owner is responsible for fire, theft, or damage in any manner to any home, vehicle, or other property of any resident, guest, or visitor, in the Community; nor for any injuries to, or death of, any person, arising from, among other things, storm damage, flooding, snow or ice on any lot or other Community property. It is fully understood that each tenant, household member, visitor, or guest, uses and occupies all Community property at their own risk. This provision may not be interpreted or construed so as to absolve the Community Owner or its agents from liability for its own willful acts or gross negligence.

Each tenant shall hold the Community Owner and Management harmless from any and all claims, expenses, damages, liabilities, judgments, rights and causes of action of whatever kind or nature, caused in whole or in part by, arising out of, or attributable to any matter for which the tenant, household members, visitors, or guests is responsible under these Rules & Regulations.

Neither the Community Owner nor its Management may be held responsible for any interruption of services, or damages resulting therefrom, caused in whole or in part by conditions beyond its control.

7. Insurance Coverage. The Community carries standard property insurance which does not cover loss or damage to the property of the Community's residents or injury or death to any persons, in situations where the damage results from a tenant's own negligence, failure to adhere to the Rules & Regulations, or any condition that is within the control of the tenant. The foregoing is not intended to be an exclusive list of the items which are not covered by the Community's insurance, and additional losses, damages, or claims may not be covered for any variety of reasons. The failure to specify herein any type of loss, damage, or claim is not an admission of insurance coverage or of any liability for any such loss, damage or claim. Tenants are required to purchase their own insurance coverage for their home and other possessions for liability purposes. Policy data is to be provided at move-in.

B. ENFORCEMENT OF RULES & REGULATIONS.

1. In General. Any failure of a tenant, their household members, guests, or visitors to observe and comply with any of these Rules & Regulations will be considered unacceptable behavior, which may subject the tenant to eviction from the Community after written notice and an opportunity to comply.

2. Violations. Any tenant, their household members, guests, or visitors who commits, or is responsible for, any violation of these Rules & Regulations will receive at least one written violation notice with an opportunity to correct the violation within a time frame specified in the notice. Any tenant continuing violation of a provision of these Rules & Regulations will be subject to an eviction notice, with an opportunity to correct the violation within a timeframe specified in the notice. Tenants receiving three (3) eviction notices within a 12 month period may be subject to an eviction from the Community by a writ of possession.

3. Costs and Fees for Non-Compliance. Tenants may be subject to payment of certain fees for failure to comply with Community Rules & Regulations as defined in the Community Fee Schedule. Costs and reasonable attorney fees may be charged to a tenant who fails to pay rent or otherwise violates Community Rules & Regulations whether or not a legal action is filed against the tenant.

4. Termination of Tenancy. Any tenancy in the Park may be terminated for any of the reasons set forth in 10 MRS §9097 (1), as it may be amended, or set forth in any successor provision, by Notice of Termination (which may also be called an Eviction Notice, or other words of similar meaning) delivered by Management to the tenant. Without limiting the right to terminate tenancies for any of those reasons, each tenant's attention is specifically directed to the following reasons, any one or more of which may result in eviction:

(a) Nonpayment of rent or other amounts when due;

(b) Failure to correct in a timely fashion any continuing violation of these Rules after notice;

(c) Receipt of any three (3) violation or nonpayment notices in any 12-month period, even if timely corrected; and

(d) Repeated conduct that disturbs the peace and quiet or safety of other tenants.

Management prefers to avoid evictions whenever reasonably possible. However, Management also intends to maintain the Park as a safe, attractive and healthy environment for all tenants, and will evict tenants when necessary.

All tenants are encouraged to pay their rent and other charges on time, and to be sure to observe all Park Rules, and to make sure that those for whom they are responsible (household members (including children), guests, visitors, etc.) also observe all of these Rules.

Tenants are subject to eviction not only for their own actions and behavior, but also for the actions and behavior of others for whom they are responsible under these Rules and/or state law.

Once an eviction has been served for nonpayment of rent, the tenant will not only have to pay all amounts then owed to the Park, but will also have to pay an administrative fee of five percent (5%) of the then outstanding rent, in order to reinstate the tenancy. See 10 MRS §9097(1)(A).

C. ENTRANCE INTO THE COMMUNITY.

1. Application for Tenancy. All prospective tenants of the Community and their household members are required to complete an Application for Tenancy. Management review will include a credit report and criminal background check. Management approval must be received prior to any property transfer or entrance into the Community. This includes any heirs or devisees of a deceased tenant who wish to reside within the Community or others who acquire an interest in a home by operation of law.

2. Subletting Prohibited. Homes must be owner occupied and tenants are not permitted to sub-rent or sub-lease the rented lot, or any part thereof, or all or any part of any home on the lot. Tenancies are not transferable, and no home in the Community may be occupied by others, unless the new occupant is approved for entrance into the Community as a resident in accordance with all requirements of these Rules & Regulations.

D. RENT AND OTHER CHARGES; PAYMENT.

1. Rent. The monthly lot rental amount for each lot in the Community is listed on the Community Fee Schedule which may be revised or updated from time to time at the Community owner's discretion and with at least sixty (60) days written notice to the tenant. All rent payments are due in advance, on the first day of each month. Tenants are not permitted to deduct or set off any amounts that they may claim are owed to them by the Community from their monthly rent payments. The date when Management actually receives the payment will determine when it was received for purposes of these Rules; neither the postmark on the envelope or the date on the check will be taken into consideration as to whether or not the payment is made on time. Postdated checks will be deemed received on the later of the date of actual receipt, or the date of the check, and not before.

2. Returned Checks. Any checks returned for nonsufficient funds (NSF) or otherwise will result in a service charge to the tenant in the amount set forth in the Community Fee Schedule. Any more than two (2) returned checks will require future payments being made by cashier's check or money order.

3. Failure to Pay. If rent or any other charges due are not received by the end of the day on the fifth day of the month, the tenant is subject to a late fee as indicated in the Community Fee Schedule on balances of $100.00 or greater, and to receiving a Demand for Rent and Eviction Notice.

4. Taxes. Tenants are responsible for paying all municipal and other taxes on their homes on a timely basis.

E. OCCUPANCY.

1. Owner Occupancy; Number of Occupants. All homes must be occupied by an owner aged 55 or older. No other permanent residents under the age of 40 are permitted. No more than two (2) persons per bedroom are permitted to occupy any home in the Community. Any individual not approved for residency will be considered a visitor in the Community.

2. Additional Occupants. Any additional occupants to the household must be approved by Management, by completion of application process prior to moving into the Community.

3. Visitors. Overnight visitors are permitted on a temporary basis, except visitors may not remain as overnight guests in any home for a period in excess of thirty (30) days within a sixty (60) day period, without applying for Community entrance through the application process.

4. Restrictions on Visitors and Occupants. No tenant may have as an overnight visitor, or as a permanent resident in any home, any person who has been:

a) evicted from the Community based on any violation(s) of these Rules & Regulations other than nonpayment; or

b) convicted of any crime that occurred on Community property, or that occurred while the individual was a resident of the Community, or the victim of the crime was a Community resident, or

c) convicted of a sex crime (including, but not limited to, rape, statutory rape and unlawful sexual contact), or any felony conviction unless Management specifically waives this restriction in writing with respect to a particular circumstance and a particular individual, which Management has no obligation to do.

F. CONDUCT & COMPLIANCE WITH RULES & REGULATIONS.

1. Prohibitions: The following are prohibited at all times in the Community:

a) Loud parties; loud musical instruments, music, radios; other offensive noise or commotion.

b) Shouting, fighting and other forms of disorderly behavior.

c) The public consumption of alcoholic beverages, or drunken behavior in public.

d) Open fires of any kind. UL-approved chimaeras, charcoal grills, gas grills, and hibachis may be used if they are operated properly and are in good working order.

e) Absolutely no firearms, bb guns, paintball guns, or fireworks may be fired or discharged in the Community under any circumstances.

f) Trampolines, swimming pools, playground equipment and/or basketball hoops (free standing, mounted or otherwise).

g) Assault, or the threat of assault, harassment, intimidation or other interference with Management or other employees or damage or threat of damage to any Community property.

h) Peddling or soliciting of any kind. This is not intended to prevent sales "parties" (e. g. Avon parties) held by a resident of the Community, involving only previously invited guests.

i) Storage of any materials or substances that pose a fire hazard, are toxic or hazardous, or that are likely to attract insects or rodents.

j) Interference with any other tenants' quiet enjoyment of their home and lot.

k) Feeding, or other care, of stray cats, dogs, or feral creatures.

l) Storage of materials or equipment for any commercial enterprise.

2. Quiet Hours. Noise that can be heard outside of the home is to be kept to a minimum between the hours of 9:00 p.m. and 7:30 a.m. No unnecessary noise may be audible outside of the home during those hours.

3. Dealing with Neighbors. Complaints of Rules & Regulations violations should be reported in a signed letter to Management. In the event of afterhours disturbances or in case of an emergency, tenants are requested to contact the police department for corrective action, and advise Management in writing of the incident and the circumstances surrounding the complaint on the next working day, so that Management can follow-up and help correct the problem.

4. Vacant Lots. Vacant lots are Community property and are not to be disturbed, entered, or used for any purpose whatsoever.

5. Property Damage. Any damage caused to any property or equipment in the Community by any tenant, their household members, visitors, guests, or invitees, will be the financial responsibility of the tenant to correct, regardless whether such damage has been caused negligently, intentionally, inadvertently, or otherwise. The damages will be measured by the restoration or replacement cost to correct the same, in Management's discretion. Such damages are deemed additional rent and are due and payable thirty (30) days after Management has provided written demand for payment.

G. CHILDREN.

1. Responsibility. Tenants will be held responsible for any property damage or injuries caused in whole or in part by visiting children, and for any violations of these Rules & Regulations by them. Tenants may be evicted for violations of these Rules & Regulations committed by their visiting children, after notice and an opportunity to comply, as though the violations had been committed by the tenant themselves.

2. Supervision and Conduct of Children. Each tenant is responsible to provide adequate supervision of their visiting children at all times while they are in the Community. Tenants must not permit their children to enter any Community buildings or enter any other areas designated by Management as prohibited, whether for safety reasons or otherwise. No one is permitted to play or loiter on empty lots, in the streets or to trespass on other tenant's lots.

For their safety, children must never play with riding toys in parking lots or common areas. Bicycles, tricycles, and toys must never be left in any those areas nor in any street. Throwing rocks, digging on lots, destruction of trees or other Community property is not permitted.

Children may not operate any vehicle in the Community except in compliance with the State's driver's license regulations.

H. PETS AND OTHER ANIMALS.

1. Responsibility. No pets are permitted without the prior consent of Management. Tenants are responsible for all actions of their pets, and are financially liable for any damage caused to property of the Community or that of any other tenant and for any personal injuries, including death, caused by their pets. Pets are not permitted to disturb the rights, comfort, safety or convenience of the other residents or their visitors. Undue noise, aggressive behavior toward people or other pets, digging or other unruly behavior, by any pet or other violation of these Rules & Regulations may be cause for removal of the animal from the Community.

2. Types and Registration of Animals. One dog with a weight of 50 lbs. or less, or one cat will be permitted. No wild or exotic animals, farm animals, or venomous or otherwise dangerous animals are permitted to be kept in the Community, whether as pets or otherwise. A reasonable number of fish, birds, and/or constantly caged small (under 4 pounds) indoor animals, such as hamsters, gerbils, or guinea pigs, are permitted without registering with Management.

Approval of any dog or cat is contingent on completion of a "Pet Information" sheet, presentation of proof that the animal is properly licensed pursuant to municipal requirements, and submission of a certificate from a licensed veterinarian stating the animal has received all required and advisable immunizations and has been spayed or neutered. This information must be updated and kept current with the Community office on an annual basis.

Due to insurance requirements and the safety of other residents, the Community prohibits potentially aggressive breeds and cross-breeds including, but not limited to, all Pit Bulls (American Staffordshire Terriers), Doberman Pinschers, Chow-Chows, Rottweilers, and Wolf Hybrids.

3. Care of Pets. Dogs and cats may not be left outside unattended at any time, day or night. Doghouses, outdoor cages, ropes, chains and other outdoor enclosures intended to house or contain any pet or other animal are strictly prohibited. Whenever pets are outside the home, they must be kept on a leash. Any pet or other animal found loose in the Community is subject to being picked up by the Animal Control Officer and taken to the Humane Society.

Animal waste deposited anywhere in the Community must be removed immediately by the person responsible for the animal, and pets are not permitted to trespass on other tenant's lots.

4. Removal of Animals. Tenants with registered pets in violation of these Rules & Regulations will be given written notice of the violation and an opportunity to comply. If the violation continues or recurs, the Community may require removal of the pet from the Community.

The Community reserves the right to require immediate removal of any unregistered pet, or any pet with a history of aggressive behavior and/or prior or current dog bite history, or otherwise injures a person or other pet or is deemed in the sole discretion of Management to be a threat to the health or safety of other residents.

I. HOME OCCUPATIONS AND BUSINESSES PROHIBITED.

1. No home occupation, business, or commercial activity (including Day Care / Babysitting) may be conducted in the Community at any time. Usage of lots is strictly residential.

2. Individual yard sales are not permitted. Two Community sponsored yard sales will be held each year.

J. CONDITION OF HOMES IN THE COMMUNITY.

1. In General. The following Rules & Regulations set standards for homes in the Community and are applicable at all times with respect to all homes. Management will conduct an inspection of the exterior of all homes, accessory structures and lots to confirm compliance with these Rules & Regulations. Tenants who own homes that fail to meet the standards contained herein will be given written notice and a reasonable opportunity to correct any deficiencies, in order to meet these standards. If the home is not brought up to these standards, Management may elect to complete work at the tenant's expense or may pursue eviction to have the home removed from the Community.

2. Standards. The original, or replacement components, of all homes or structures must be in a safe and secure condition, without holes, rust or substantial dents, and scrapes, patching or fading. All components of homes must remain compliant with all applicable Federal, state and local building codes, including but not limited to the exterior siding, roof, windows and doors, steps and handrails, plumbing, heating and electrical systems, anchoring system, skirting, or electrically wired smoke detectors. All plumbing and heating systems must be operable at all times and compliant with all HUD and local codes. All electrical service and wiring must be in accordance with the specifications of the edition of the National Electrical Code or HUD Standards in effect on the date of the manufacture of the home. The service entrance must be adequate for the electrical load imposed by the manufactured home and any additions, given its number of occupants and the type and number of electrical appliances.

3. Appearance. All homes entering the Community or any replacement siding installed must be of vinyl, Hardie board or residential finish siding in a clapboard style. To the extent that is reasonably feasible all replacement roofs must be of a pitched cottage style. Skirting must fully enclose the area between the home and the ground and be of vinyl or comparable good quality material. Skirting must be replaced when deteriorating or damaged and installed in accordance with the manufacturer's installation instructions.

4. Utility Access. Opening(s) not less than eighteen (18") in any dimension, fully covered with an access door panel, not less than three (3) square feet in area must be provided and must be located so that any water supply and sewer drain connection located under the home are accessible for inspection and repairs. Access panels and doors may not be fastened with locks, or in a manner requiring the use of a special tool to remove or open them.

5. Pests. The ridding and/or removal of the infestation of pests; including, but not limited to: insects, rodents, skunks, raccoons or possums are the responsibility of the tenant.

6. Numbering. E911 street numbers must be visible from the street on the outside of the home.

7. Porches, Decks, Other Additions and Improvements.

a. Improvements. Tenants may not make additions or improvements on their home or lot, without first obtaining Management's written consent. Any additions or improvements approved by Management must be made solely at the expense of the tenant and in strict compliance with Management's approval with no rights to improvements being made at the Community Owner's expense.

b. Additions. An "Addition" to a home is defined to include any and all steps, porches, awnings, decks, windbreaks, and other improvements and installations, as well as all alterations to existing construction and exterior improvements and installations. "Additions" also include any separate Accessory Structures, which are defined to include all storage sheds, utility buildings, carports, patio rooms, add-a-rooms, and all other accessory structures.

(1) Prior to construction of any Addition to any home or lot, the tenant must submit a scaled drawing of the design, color (paint, stain, or finish, to match the home), size, materials and construction location.

(2) Any Addition constructed without written approval of, or not in accordance with the approval of the Management, may be required to be removed immediately by the tenant at their expense. If not removed, Management has the right to enter the lot and remove all such unapproved Additions at the tenant's expense.

(3) Additions must be harmonious with the rest of the home in style, form, exterior materials, and general appearance. Accessory Structures must be of wood or any other material that is designed to withstand exposure to the elements without deterioration or damage, and is designed to have and retain an attractive appearance.

(4) Additions must be properly constructed in a workmanlike manner, using good quality materials, in accordance with the approval granted by Management and all applicable building codes, and completed within 30 days of the beginning of the construction, unless an extension is granted by Management. Building permits must be posted during construction.

(5) Additions must be kept in good, safe, attractive and not deteriorated condition at all times.

c. Accessory Structures.

(1) One shed per lot is permitted and must not exceed the maximum of one hundred sixty eight (168) sq. ft. Sheds, must be of wood construction, with a cottage style shingle roof and sided with clapboard, vinyl or Hardie board material to match the color of the home. No shed additions of any type will be allowed. The height of any Accessory structure such as garage, carport or shed must be equal to or lower than the roof peak of the home.

(2) No fences or fence structure, (which includes temporary lawn or garden fencing) will be permitted in the Community with the exception of fencing around an approved hot tub.

(3) Hot tubs are permitted at the rear of the home but for insurance and safety purposes must be fenced and covered by a locked, commercial cover. Fencing around a hot tub must be limited to the area immediately surrounding the hot tub.

(4) Satellite dishes over 18" in diameter, and antennas (of any kind) outside the home, are not permitted.

(5) Free-standing carports in driveways are not permitted.

8. Fire Prevention. No liquid petroleum, propane or similar gas tanks may be stored inside or under any home or structure. Fuel tanks (oil or propane) must be properly installed by an authorized installer and must be placed at the rear of the home. No flammable materials, including but not limited to gasoline and kerosene, may be stored under or within the home. Tenants are encouraged to keep fire extinguishers at their homes in working condition and to install and maintain adequate smoke and carbon dioxide detectors.

9. General Aesthetic Standards and Compliance. In addition to standards set forth above, tenants must keep their manufactured home exteriors, siding, porches, awnings, decks, stairs, skirting, and any other exterior or Accessory Structures clean, neat and in good condition and repair, including painting and pressure washing as needed.

Any existing porch, awning, deck, stairs, skirting, roof siding or any other exterior structure which, in the opinion of Management, is unsightly, unsafe, unsanitary, or in poor repair, must be replaced, repaired or removed by the tenant upon written notice from Management. This repair, replacement, or removal must be done in a good and workmanlike manner. Tenants must complete the repair, replacement or removal within the timeframe given by the written notice, unless a written extension is obtained from Management.

10. Homes Damaged by Fire. Any homes damaged by fire so that it becomes uninhabitable or so that its exterior walls are burnt, paint peeled, windows broken or smoke damaged so that it appears unsightly, must be removed from the Community at the tenant's expense within forty-five (45) days after written notice from Management, regardless of insurance company representations regarding settlement.

If the home can be repaired on-site so that no danger to others exists, and so that it is no longer unsightly or a nuisance, the tenant may be afforded a reasonable time to make repairs, not to exceed ninety (90) days regardless of the availability of insurance funds. Management shall determine whether the repairs are sufficient to bring the home into compliance. Pending removal of the home from the Community or repair of the home, the tenant must close up the home and completely cover any unsightly or dangerous parts of the home and debris to minimize the risk that it poses to others within the Community.

K. CARE OF GROUNDS.

1. General Lot Maintenance Except as otherwise specifically set forth in these Rules & Regulations, it is the responsibility of tenants to maintain their entire lot in a good and attractive condition and in good repair at all times, at the tenant's expense. Grounds must be kept clean, neat, and uncluttered. No discarded or abandoned materials, unnecessary items, building materials, trash, junk, debris, or excessive lawn decorations that create a cluttered appearance may be kept, stored, left or abandoned outside the home or an accessory structure. Carports and screen rooms may not be used as a storage area. Toys, bicycles, etc., must be put away (not left outside) at the end of each day.

All flowers, shrubs, manufactured housing exteriors, additions, skirting and other visible items and areas must be kept neat and attractive at all times. All tools, wheelbarrows, and other equipment are to be stored out of sight in sheds when not actually in use. Items not considered lawn furniture; lawn ornaments or grills must be stored out of sight in the home or shed. No unsightly storage of any items is permitted at any time, and all storage arranged so as to permit easy access to the underneath of the home at all times.

Management may issue a notice of violation to any tenant whose lot is not properly maintained, or whose lot is or contains an eyesore, and to require that the lot be cleaned and restored to an attractive condition within thirty (30) days or a shorter time frame that is reasonable under the circumstances. If any lot is not properly maintained after written notice, Management reserves the right to take all necessary steps to clean and maintain the lot. All costs of lot maintenance and cleaning by Management will be charged to the tenant in accordance with the Community Fee Schedule.

2. Lawns. All lawns must be kept neat, well groomed, and reseeded as needed. Lots must be mowed and the grass must be trimmed around and to the edge of the home as often as is necessary to maintain a neat appearance. It is also the responsibility of the tenant to rake and remove leaves and any other yard debris on an as needed basis. If any lawn is not regularly mowed and trimmed, or if leaves or other debris are not kept raked, Management reserves the right to mow, trim or rake the lawn, and will charge the tenant the applicable maintenance service fee as described on the Community Fee Schedule.

3. Gardens, Shrubs, and Trees. Shrubs, trees, and reasonably sized gardens are allowed, but require prior written approval of Management in the case of trees and shrubs. Tenants may not nail or in any way attach hardware to any trees within the Community.

Tenants may not trim or remove trees without permission from Management. Tenants wishing to remove trees from their lot must first have the trees inspected and approved for removal by the Management. A permission form must be obtained from the office, which will be valid for 30 days from the date issued and the person doing the work must carry adequate liability insurance.

Within 7 days from the date the tree was cut down, tenants are required to remove from the lot; all parts of the tree, including branches, trunk, and stump.

Management is not responsible for any damage to plantings due to snow plowing, road treatment, the need to access underground systems or other causes.

4. Trash Removal. All trash containers must be kept in a storage shed or toward the rear of the home. No trash is to be stored outside at any time unless kept in a durable trash container with a secure lid. Trash containers are to be brought out to the street on collection days and removed the same day of collection. The tenant must clean up any scattered trash or garbage as soon as possible, or the Community will clean it at the tenant's expense.

5. Snow Removal. Tenants are responsible for all snow and ice removal on their lot including all steps, and must at all times maintain a clear path to all doors. Tenants are responsible for any damage caused by plowing done by another party at their request. Only driveways may be plowed and no snow may be plowed or shoveled into the roadway. All obstacles such as rocks must be at least eight (8) feet from the roadway edges during the winter. Snow plowing and snow removal vehicles are not allowed on lawns during the removal of snow. All tenants must park in their allocated driveway only and must not park on the street at any time during the snow removal process.

6. Clotheslines. Clotheslines of the rotary, umbrella or collapsible style with a solid base in the ground may be installed at the rear of the lot, at the tenant's expense. Prior written permission of Management is required as to location to avoid potential damage to water and sewer lines.

7. Playground Equipment/Temporary Enclosures.

Volleyball or badminton nets may be utilized at the rear of the home but must be neatly stored when not in use. Swing sets or playground equipment are not permitted.

Screen rooms and tents may be installed on a temporary seasonal basis and must be maintained and kept in good condition. Management may require their removal should their condition deteriorate or the duration of use be excessive.

Management can also limit the size or the area of the lot where a screen room or tent can be located. Screen rooms and tents may not be used for storage purposes. Free standing temporary canopy type car covers of vinyl or other material may not be used.

8. Swimming Pools. The only pools permitted in the Community are small wading pools not exceeding eighteen inches (18") in depth. Wading pools must be emptied each day and stored off the lawn. Any damage caused by such pools must be repaired at the tenant's expense. Proof of adequate liability insurance must be provided and a waiver must be signed prior to use of such pools. Visiting children must be supervised at all times when using a pool.

9. Sign Restrictions. Signs are not permitted on lots, homes, or elsewhere on Community property, at any time except Realtor or "For Sale" signs.

10. Firewood. Management reserves the right to approve the location of stacked firewood. Any tenant with a wood stove or fireplace may store wood, neatly stacked, so as to not be visible facing the road; in a location such as to the rear of the home. Cutting firewood with chain saws is permitted with consideration of neighbors due to the noise. All wood stove connections must be properly installed in accordance with manufacturer's specifications and all local and state fire codes, and it is the tenant's responsibility to ensure proper installation.

L. UTILITIES.

1. Water and Sewer Service. Each tenant is responsible to keep in good condition and repair at their own expense, all water and sewer lines and fixtures in and under the home, up to the point where the service lines penetrate the ground or slab.

2. Prevention of Freezing Water Lines. Water lines, from the point of surfacing in the ground well to the home connection point, must be protected against freezing by the use of adequate heat tapes and pipe insulation, provided and installed at the tenant's expense. Tenants must not leave water running to prevent freeze ups. Any damage to the common utilities or other damage to the water meter or plumbing for that lot or the Community, resulting from any tenant's failure to comply with this provision, will be repaired at the tenant's expense and be charged as additional rent.

3. Sewer System. The flushing of garbage, sanitary napkins, paper towels, disposable diapers or wipes, prophylactics, cigarettes, cigars, grease, or any other non-soluble item or substance in toilets and drains is strictly prohibited. Doing so may cause a backup in the septic or sewer systems and lead to unsafe conditions. Any cost of correcting clogged drains or other sewer problems that are due to any improper actions of the tenant, or of others for whose actions the tenant is responsible, will be charged to the tenant.

4. Electrical Service. The Community is responsible for the maintenance and repair of all underground wiring and electrical equipment from the outside disconnect located near the meter to the circuit breaker box in the home. The tenant is responsible for the circuit breaker within the home, all wiring in the home, and any additional service originating at the home including but not limited to sheds or outside lighting. Such wiring must be maintained and repaired as necessary by the tenant at their expense, in accordance with all applicable state and local codes. Tenants must contact Management immediately in the event of any electrical problem.

Tenants are prohibited from attaching any objects in any manner to electric utility poles or exterior breaker boxes. Management consent is required for tenants wishing to upgrade their electrical service above 100 amps. Damages occurring due to an unauthorized increase are the tenant's responsibility.

5. Fuel Tanks. All heating oil, propane/LP and other fuel tanks must be installed and maintained in accordance with all applicable federal, state, county, and local codes, laws and regulations governing the same. Tanks should be installed so as not to be visible facing the road. In the event that proper installation of the fuel tank causes it to be visible from the roadway, Management reserves the right to approve the location, and the tenant must provide a Management-approved enclosure around the tank that is compatible with the appearance of the home in color and design. All leaks must be repaired, and tanks must be painted and leveled when necessary.

In the event of any spillage of home heating fuel, the area of the spill must be cleaned in strict compliance with all federal and state environmental standards at the tenant's expense. Any spillage of home heating fuel or other hazardous substance must be reported to Management immediately.

6. Tampering with or Disconnection of Utilities. Interfering with, tapping into, or otherwise tampering with, any utilities or utility installations in the Community, including but not limited to Community utility connections, meters, or other installations is extremely dangerous and strictly prohibited. Water meters are owned by the Community and may only be disconnected by Management. A maintenance service fee will be charged for any disconnection of a water meter. Any costs to repair or replace water meters damaged due to a tenant's conduct or negligence will be at the tenant's expense.

M. MOTOR VEHICLES.

1. Registration. All vehicles kept in the Community must be currently licensed, registered and inspected at all times. Temporary plates on vehicles must be replaced by permanent plates within the time frame required by law.

No unregistered, un-inspected, or inoperable, motor vehicles of any size or type are permitted in the Community, and any tenant with such a vehicle in the Community is in violation of these Rules & Regulations. Any such vehicles are subject to being towed away by Management, at the owner's expense and risk.

2. Maintenance of Vehicles. Tenants are permitted to perform only minor maintenance on vehicles within the Community. Damage to paved parking areas or driveways caused by leaking gas, oil, or other automotive fluids, must be repaired by the tenant, at the tenant's expense. No tenant will be allowed to keep any vehicle at their lot that is unsightly, including various parts being different colors, excessive rust, flat tires, etc. No tenant is to use their lot for extended mechanical repairs.

3. Speed Limit and Safe Driving. The Speed limit within the Community is 15 MPH. There must be no squealing of tires, joy riding, or reckless driving. All vehicles are subject to reasonable noise levels.

Speeding, driving under the influence of drugs or alcohol, or other unsafe behavior by any tenant or by the tenant's household members, guests, or invitees will not be tolerated. Violation of this Rule will result in a violation notice, and failure to comply after notice of the violation may result in eviction.

4. Commercial and Recreational Vehicles. Tenants may not keep any commercial truck over ¾-ton on their lot.

No campers, RVs, boats, utility trailers, or recreational vehicles, including but not limited to; motorized bikes of any kind, snowmobiles, ATVs or motorized go-carts may be parked on the lot or in the driveway. Recreational vehicles, including but not limited to; motorized bikes of any kind, snowmobiles, ATVs or motorized go-carts, may not be driven on Community property.

Driveway parking of campers and/or RVs is permitted for a maximum period of 48 hours while loading or unloading, after which time the vehicle must be removed from the lot.

5. Parking. The maximum number of vehicles kept in the Community will be two (2) vehicles per driveway with no allowance for parking on the lot at any time. Management approval must be obtained for driveway parking of additional vehicles.

Tenants who wish to enlarge their driveway to accommodate additional vehicles may do so with Management approval and at the tenant's expense.

No vehicle may be parked within ten (10) feet of any fire hydrant. On-street parking is not permitted. Any vehicle parked overnight in an unauthorized place is subject to being towed at the owner's risk and expense without prior notice. Vehicles may not be parked on the grass. Vehicles may not be kept covered in any driveway except with a commercial vinyl type cover, kept in good condition.

Any vehicle parked on a street during snow removal procedures will be subject to towing without prior notice at the owner's expense. Guest parking is not permitted except in the driveway of the home, or visitor parking area if applicable, unless for short periods of time, e. g. dropping off or picking up persons or items.

N. REPLACEMENT OF HOMES.

1. Replacing a Home Already in the Park. Tenants who wish to remove their existing home in order to buy a new manufactured home to be placed on the same lot must provide Management with thirty (30) days written notice of their intent to replace the home.

Existing homes may only be replaced with new manufactured homes which meet all HUD standards and are installed in accordance with Federal, state, and local regulations or ordinances, the manufacturer standards and Rules & Regulations of the Community.

O. TRANSFER OF HOMES.

1. Requirement of Full Payment. Before any home can be removed from the Community, sold, or occupied by a new tenant owner, all rental payments and all other charges and fees due must be paid to Management in full, with written verification that all real estate taxes have been paid.

2. Sale of Manufactured Housing/Requirements for Sale. Tenants have the right to sell their home to whomever they choose, however, homes to remain in the Community must be safe, sanitary and in compliance with applicable aesthetic standards. Buyers must be approved for residency prior to the conveyance.

A thirty (30) day notice to Management is required prior to the proposed date of sale or removal of a home. Homes remaining in the Community will be subject to a pre-sale inspection of the exterior of the home, additions, and lot by Management within three (3) days of receipt of intent to sell for compliance with Community Rules & Regulations.

Management will provide a written notice of any repairs, improvements, or lot maintenance required prior to an in-Community sale. Removal of non–conforming structures may be required. Management will re-inspect the home and lot for compliance prior to the sale.

P. SEVERABILITY.

If any terms or provisions of these Rules & Regulations are determined to be invalid or unenforceable under any applicable law, ordinance or regulation, or as to any particular individual or situation only, such invalidity or unenforceability does not affect the validity or enforceability of these Rules & Regulations with respect to any other individuals or situations, and does not, in any event, affect the remainder of these Rules & Regulations, which remain in full force and effect as though the invalid or unenforceable provisions were not included herein. The partial invalidity of any Rule does not affect the enforceability of the remainder of that Rule.

Yankee Commons Expansion

1 Idlewood Lane
Kittery, Maine

PARK FEE RATE SCHEDULE

Effective TBD

Item:	**Charge**:
Entrance Fee:	
(Move in New Home) (3 x lot rent)	$1,302.00
(Purchase Existing Home) (2 x lot rent)	$ 868.00
Monthly Lot Rent:	$ 464.00
Late Fee (4% of monthly rent):	$ $18.56
(Payable if rent is not paid by the 15th day of the month)	
NSF (Returned check) Fee	$ 35.00
Maintenance Service Fee	$ 25.00 per hour
($15.00 minimum)	
Water Service	$3.49/1,000 gals X District Multiplier
Sewer Service	$7.10/1,000 gals X District Multiplier
Violation Fees	$ 15.00 (first notice)
	$ 50.00 (second notice)
	$ 100.00 (third notice)
Storage of trailers and recreational vehicles	$ 10.00 / month
Recreation Center Security Deposit	$ 25.00

All payments should be delivered to the Park's on-site representative or mailed to:

Yankee Mobile Home Parks
3 Idlewood Lane, Suite 1
Kittery, Maine 03904

NOTE: Management reserves the right to change fees upon 30 days notice in accordance with 10 MRS, Part 11, Chapter 953, §9093.

Section 6

Draft Findings of Fact for Final Approval
(Requested by Planning Staff)

KITTERY TITLE 16, LAND USE & DEVELOPMENT, FINAL PLAN REVIEW CRITERIA

KITTERY PLANNING BOARD

FINDINGS OF FACT UNAPPROVED

For Idlewood Lane Yankee Commons Mobile Home Park expansion.

Note: This approval by the Planning Board constitutes an agreement between the Town and the Developer incorporating the Development plan and supporting documentation, the Findings of Fact, and all waivers and/or conditions approved and required by the Planning Board.

WHEREAS: Stephen A. Hynes Real Property Trust Agreement, owner and applicant, requested approval for expansion of a mobile home park consisting of seventy-seven (77) mobile home lots and a central multi-function facility at Idlewood Lane, Tax Map 66, Lots 24 & 25, in the Mixed Use and Residential-Rural zones.

Hereinafter the "Development".

Pursuant to the Plan Review meetings conducted by the Planning Board as duly noted;

Project Tracking

REQ'd	Action	Comments	Status
YES	Sketch Plan	2/23/12	**Accepted**
YES	Site Visit	9/4/12; 6/2/2015 (2nd visit)	**Held**
YES	Completeness/Acceptance	8/23/2012	**Granted**
YES	Public Hearing	3/12; 6/11/2015 (2nd hearing)	**Held**
YES	Preliminary Plan Review and Approval	**9/13/12** mtg continued for addt'l info re: mineral extraction (90 days max) **12/13/12 &3/14/13** granted 90-day continuance **5/9/13** tabled requested by Applicant **6/13/13** Reconsideration of **9/13/12** decision failed **7/11/13** Board continued for addt'l info re: preparation of findings with Town Attorney **8/8/13** Board continued for CEO's recommendation on a special permit for Mineral/Earth Extraction **9/12/13** Board continued to **9/26/13** meeting due to time constraints and denied preliminary plan approval. **3/11/2015** Superior Court grants Rule 80B appeal to applicant 5/28/15 Board Update Revew; **6/11/15** Public Hearing	**Pending**
YES	Final Plan Review/Approval		**TBD**
TBD	Wetland Alteration		**TBD**

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.

and pursuant to 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 Civil Consultants final plan application packet, November 19, 2015 (Hereinafter the "Plan").

Section 1 - Updated Application Form (Based on 2013 Application Document)
Section 2 - Discussion of Chapter 16.10.7.2 Final Submission Requirements
Section 3 - Updated Discussion of Chapter 16.10.5.2 Preliminary Submission Requirements
Section 4 - An Updated Discussion of Chapter 16.8.12.3 Mobile Home Park Requirements
Section 5 - Responses to Conditions of Preliminary Approval (Includes Earth/Rock Removal Plan)
Section 6 - Draft Findings of Fact for Final Approval (Requested by Planning Staff (May 2015)
Section 7 - State Subdivision Requirements vs. Town of Kittery Subdivision Requirements
Section 8 - Updated Plan Set

NOW THEREFORE, based on the entire record before the Planning Board, as presented, and pursuant to the applicable standards in the Land Use and Development Code, the Planning Board makes the following factual findings, as required by 30-A MRS §4404 and defined in Section 16.10.8.3.4, as recorded below:

16.10.8.3.4 Findings of Fact.

Action by the Planning Board must be based upon findings of fact which certify or waive compliance with all the required standards of this Code, and which certify the development meets 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.

1. Substantial evidence was presented to the Board demonstrating that the project is pursuant to and consistent with Kittery's Comprehensive Plan in the April 23, 2015 applicant submittal:

> "1999 Update of the Kittery Comprehensive Plan: ADOPTED BY COUNCIL 3/25/2002
>
> I Housing. 164
>
> 6. GOALS AND POLICIES
>
> State Goal: To encourage and promote affordable, decent housing opportunities for all Maine citizens. (Growth Management Act)
>
> Local Goals: To encourage a diversity of housing to meet the needs of a wide range of residents.
>
> To assure that as new housing is built in Kittery, at least 10% of the new units are affordable to lower or moderate income households.
>
> 2. The Town will continue to allow housing for the elderly to be built at higher densities than other types of housing in areas that are currently zoned Urban Residential and will explore providing an elderly housing density bonus in other areas that are residentially zoned and served by public sewerage in recognition of the lower impact that this type of housing has on the community.
>
> 4. The Town should work with nonprofit organizations and private developers to encourage that a balance is maintained in the supply of housing so that a range of lower, mid, and higher cost housing is available in Kittery including housing that is affordable to low and moderate income households."

Also noted in that submittal were features demonstrating consistency with Title 16 provisions pursuant to the Comprehensive Plan regarding clustering, elderly housing, and the mixed use zone.

2. Applicant has included a plan note on subdivision Plan Sheet S1designating age-restricted residency in the expanded section of the Yankee Commons mobile home park that requires at least one of the tenant owners to be a minimum of 55 years old, as shown in the Park Rules.

3. Applicant proposes an offer of conservation easement cession and maintenance plan consistent with the Open Space Reservation concepts in Title 16, supporting the public benefit, endorsed by the Town's Open Space Advisory Committee and as may be agreed by the Kittery Town Council.

4. The project submittals show that the proposed development is fully compliant with all required Title 16, Land Use and Development code provisions, with one exception requested to be acknowledged as regulated by state statute: LOT SIZE. Town Planning Department staff suggests finding that 16.8.12.3.C.1 is preempted by 30-A MRS §4358(3)(A)(1)(b).

5. Title 16.8.12.3, Mobile Home Parks standards are met as shown in Section 4 of the Final Subdivision Review Application Package.

6. Standards related to all other Title 16 submittal requirements are met as shown in Section 2 of the Final Subdivision Review Application Package.

ADDITIONALLY:

The Preliminary Plan Approval Conditions Response (Section 5 of the Final Subdivision Review Application Package) conveys further detail for these Findings.

The Board's consideration of walkways and safe pedestrian movement (Title 16, Section 8.12.3M) was addressed by revising travel lanes and the traffic flow in the major portion of the development to one-way streets as approved by the Kittery Police and Fire Chiefs.

Title 16, Section 9.1.2, Earth/Mineral Extraction and Title 16, Section 9.1.9, Noise abatement, ordinance provisions are not applicable. However, more stringent standards must be met with the statutory obligations for excavation blasting, noise, and hauling, conducted in accordance with 38 MRS §480-D et seq; §490-Z, §§14; and, 25 MRS §2475.

Expected regulatory compliance is verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

> *"4. NOISE: The applicant stated that the project is expected to produce a minor noise impact because the uses will be predominantly residential. Noise from construction activities will not exceed the limits described in Chapter 375(10)(C)(2)."*

> *"9. SOILS:*
> *The applicant submitted a soil survey map and report and extensive test pit information based on the soils found at the project site. This report was prepared by a certified soils scientist and reviewed by staff from the Division of Environmental Assessment (DEA) of the Bureau of Land and Water Quality (BLWQ). Soils investigation results indicate that blasting will be required to construct the project. The applicant proposes to submit a Blasting Plan to the BLWQ for review and approval prior to the start of any blasting at the site. If a rock crusher is being utilized on site, the applicant must insure that the crusher is licensed by the Department's Bureau of Air Quality and will be operated in accordance with that license.*

> *The Department finds that, based on this report and DEA's review, the soils on the project site present no limitations to the proposed project that cannot be overcome through standard engineering practices, provided that a site-specific blast plan is submitted to the BLWQ for review and approval prior to the start of construction, and provided any rock crusher utilized on site is licensed and operated as described above.",* and

> *Maine DEP Approval, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N: SUBJECT TO THE FOLLOWING CONDITIONS and all applicable standards and regulations:*

> *"Prior to conducting blasting at the site, a site-specific blasting plan shall be submitted to the BLWQ for review and approval.*

> *If a rock crusher is being utilized on site, the applicant shall insure that the crusher is licensed by the Department's Bureau of Air Quality and is being operated in accordance with that license.", and*

> *"BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 481 et seq.:*

B. The applicant has made adequate provision for fitting the development harmoniously into the existing natural environment and the development will not adversely affect existing uses, scenic character, air quality, water quality or other natural resources in the municipality or in neighboring municipalities provided that the applicant ensures that any rock crusher used at the site is licensed by the Department's Bureau of Air Quality and operated in accordance with that license."

Additional reports and documentation demonstrating compliance with Town Code, as well as Federal and State standards were provided as follows:

Item B: US Army Corps of Engineers Letter, 11-12-15, Vernal pool

Items H, I, L, N: S.W. COLE Reports # 15-0640 G, July 20 and October 02, 2015

Item M: Gorrill-Palmer Report, 07-22-2015: Construction & Post-Development Traffic Impact

Item N: Air Quality: AMEC Foster Wheeler

Absent any local standards, applicant will comply with Federal and state air emissions rules, regulations, and laws with respect to diesel idling and dust control activities. In any case, no objectionable odor, dust or smoke shall be detectable beyond the property line.

Item O: BioDiversity Report, July 14, 2015/ US Army Corps of Engineers / USF&W Letter: Northern Long-eared Bats

No related standard or Finding of Fact Item: Earth/Rock Removal Operations Plan

Finding: The proposed development conforms to the adopted comprehensive plan as per adopted provisions in the Title 16; a residency age-restriction condition of approval is warranted; the Board concurs with the offer of conservation easement cession contingent upon Town Council approval; the Board agrees that the noted exception is met as regulated by state statute; see final plan approval conditions (#4) below.

Conclusion: These standards have been met.

Vote of ____ in favor ____ against ____ abstaining.

B. Freshwater Wetlands Identified.

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.

Shown on Plan Sheets C1-C6, L1 & L2.

Verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

"16. WETLAND IMPACTS:
To construct a portion of the access road network, the applicant proposes to fill 900 square feet of scrub shrub wetland which is associated with an adjacent emergent wetland of special significance.

After reviewing the information in the file and conducting a site visit, the Department determined that the activity will not negatively affect the freshwater wetland of special significance or other protected natural resources; therefore the proposed project is eligible for Tier 1 review. To minimize wetland impacts, the applicant aligned the project's access road over a portion of an existing park road. This alignment will also avoid direct impacts to the larger, contiguous emergent wetland. The Department finds that the applicant has avoided and minimized wetland impacts to the greatest extent practicable, and that the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project."

Finding: All wetlands and a stream are mapped and categorized. Mapped wetland areas total approximately 6.6 acres, 0.8 acres of which are designated as emergent wetlands. 900sf of wetland will

be impacted which requires a U.S. Army Corps of Engineers Category 1 permit requiring only start-work notice two weeks before commencement. Applicant has approval for wetland impacts from the MDEP.

The nearby vernal pool was assessed by the US Army Corps of Engineers to be non-migratory, requiring only a 100' non-disturbance area, which is met here. MDEP's 250' area will have only a 4.5% disturbance for the side slope of a stormwater filtration basin where 25% is allowed. A Permit by Rule application must be made and approved by MDEP for this specific work.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

C. River, Stream or Brook Identified.

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.

Shown on Plan Sheets C1, C2, C4, C6 & L2.

Finding: As mapped by the Town and FEMA, Libby Brook is shown in the plans. No activity will take place within 100' of the brook unless an allowable walking trail crossing is permitted. See Item J, below.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

D. Water Supply Sufficient.

The proposed development has sufficient water available for the reasonably foreseeable needs of the development.

Finding: The site is serviced by public water. See Item E, following.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

E. Municipal Water Supply Available.

The proposed development will not cause an unreasonable burden on an existing water supply, if one is to be used.

Verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

> *"F. The applicant has made adequate provision of utilities, **including water supplies**, sewerage facilities and solid waste disposal required for the development and the development will not have an unreasonable adverse effect on the existing or proposed utilities in the municipality or area served by those services."*

Finding: The Kittery Water District provided a letter of evaluation, May 03, 2012, verifying its capacity to supply water to the proposed project, a finding that was confirmed by the MDEP.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

F. Sewage Disposal Adequate.

The proposed development will provide for adequate sewage waste disposal and will not cause an unreasonable burden on municipal services if they are utilized.

Verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

> *"F. The applicant has made adequate provision of utilities, including water supplies,* ***sewerage facilities*** *and solid waste disposal required for the development and the development will not have an unreasonable adverse effect on the existing or proposed utilities in the municipality or area served by those services."*

Finding: The Kittery Sewer Department Superintendent has provided a letter, September 02, 2012, verifying capacity to accept 14,040 gallons per day of wastewater, which is adequate to serve the project, as confirmed by the MDEP.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

G. Municipal Solid Waste Disposal Available.

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.

Verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

> *"F. The applicant has made adequate provision of utilities, including water supplies, sewerage facilities and* ***solid waste disposal*** *required for the development and the development will not have an unreasonable adverse effect on the existing or proposed utilities in the municipality or area served by those services."*

Finding: The proposed development operation will provide required storage containers and curbside pickup collected by a licensed commercial hauler and disposed of at the Kittery solid waste transfer station. It will, therefore, not cause an unreasonable burden on the Town's ability to dispose of solid waste, as confirmed by the MDEP.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

H. Water Body Quality and Shoreline Protected.

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.

Verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

> *"11. GROUNDWATER:*
> *The project site is not located over a mapped sand and gravel aquifer. The proposed project does not propose any withdrawal from, or discharge to, the groundwater.*
>
> *The Department finds that the proposed project will not have an unreasonable adverse effect on ground water quality or quantity."*

"BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 480-A et seq, and Section 401 of the Federal Water Pollution Control Act:

A. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life.

B. The proposed activity will not violate any state water quality law including those governing the classifications of the State's waters.

C. The proposed development will be built on soil types which are suitable to the nature of the undertaking and will not cause unreasonable erosion of soil or sediment nor inhibit the natural transfer of soil provided that the applicant submits an acceptable blasting plan to the BLWQ for review and approval prior to conducting blasting at the site.

D. The proposed development meets the standards for storm water management in Section 420-D and the standard for erosion and sedimentation control in Section 420-C, provided the applicant retains the services of the design engineer to oversee construction of the stormwater management structures, grit and sediment removed from stormwater structures during maintenance activities is disposed of properly, a third-party inspector is retained, and a pre-construction meeting is conducted, all as outlined in Finding 10.

E. The proposed development will not pose an unreasonable risk that a discharge to a significant groundwater aquifer will occur."

Further, S. W. Cole concluded in its second hydrogeological review as reflected in their letter, dated October 7, 2015:

"The amount of water flowing to the wetlands as surface or groundwater recharge will remain proportional to the amount of precipitation and seasonal conditions. With no groundwater removal and maintenance of drainage patterns the mechanism for change to the recharge of wetlands is limited to the increased infiltration due to reduced slopes and the construction of infiltration basins;

The removal of bedrock as part of the site preparation is interpreted to result in slopes with lower gradients which may increase infiltration and evapotranspiration, thus reducing runoff. However, the increase in the amount of impermeable surface is interpreted to result in an increase in runoff, thus negating the impact of the lower slopes and increased evaporation; and

Based on the above, with little or no change in the amount or direction of runoff, there should be no adverse impact to the wetlands."

S.W. Cole also advises:

"As noted in our July 20, 2015 report, the stormwater management plan makes allowances for maintenance and monitoring that will be necessary to confirm the functionality of the infiltration system. Stormwater management during construction needs to be monitored to confirm that the necessary controls are maintained and that short term impacts of construction are minimized. It should be noted that the greatest potential for impact to the wetlands will be during the construction period, and it is our interpretation that this potential will increase with an extended work period.

There is also a MDEP SLoD Special Condition that the project engages a third party inspector to monitor Stormwater Management Activities and report same to the State. Applicant shall provide copies to the Town of all communications related to that activity.

Finding: As approved by MDEP with all wetland setbacks respected, and with additional confirmation as shown in S.W. COLE Reports # 15-0640 G, July 20 and October 02, 2015, no environmental issues arise for these requirements. MDEP's SLoD Department Order includes the proposed compliant stormwater management plan and a third-party inspector is required to review annually. Adequate provisions have been made to insure that the project will not adversely affect the quality of, or unreasonably affect the shoreline of, any body of water, including wetlands and vernal pools.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

I. Groundwater Protected.

The proposed development will not, alone or in conjunction with existing activities, adversely affect the quality or quantity of groundwater.

No groundwater will be withdrawn, nor will any discharge be made into, site groundwater, Also see MDEP findings, SW Cole comments, and the Finding for Item H, above.

Finding: The site is serviced by public sewer. The project will, therefore, not adversely affect the quality or quantity of groundwater.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

J. Flood Areas Identified and Development Conditioned.

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.

Verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

> *"G. The activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties nor create an unreasonable flood hazard to any structure."*
>
> *15. FLOODING:*
> *No construction is proposed within the 100-year flood plain associated with a stream at the northwest corner of the project site.*
> *The Department finds that the proposed project is unlikely to cause or increase flooding or cause an unreasonable flood hazard to any structure."*

Finding: The development portion of the property is not located within a floodplain area as verified by the MDEP. The project non-disturbance area is greater than 250' from a Floodplain Zone A boundary.

Conclusion: This standard is not applicable.

Vote of ____ in favor ____ against ____ abstaining.

K. Stormwater Managed.

The proposed development will provide for adequate stormwater management.

Verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

> *"SUBJECT TO THE FOLLOWING CONDITIONS and all applicable standards and regulations:*
>
> *7. The applicant shall retain the services of a third-party inspector in accordance with the Special Condition for Third-Party Inspection Program, which is attached to this Order.*
>
> *Prior to the start of construction, the applicant shall conduct a pre-construction meeting. This meeting shall be attended by the applicant's representative, Department staff, the design engineer, the contractor, and the third-party inspector.*
>
> *The applicant shall retain the services of the design engineer to oversee the construction of the stormwater management structures in accordance with the details and notes specified on the approved plans. Within 30 days of the completion of each structure, the applicant shall submit a log of inspection reports including the items inspected, photos taken, and dates of each inspection to the BLWQ for review.*
>
> *Storm sewer grit and sediment materials removed from stormwater control structures during maintenance activities shall be disposed of in compliance with the Maine Solid Waste Management Rules."*

Also see MDEP findings in item H, above.

Finding: The applicant has prepared a stormwater management system and associated analysis and report that is logical and complete, and meets the requirements of Title 16. The design was prepared by Civil Consultants, approved by Maine DEP and reviewed by the Town's peer reviewer. The proposed development conforms to Title 16.8.8 Surface Drainage and will provide for adequate stormwater management.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

L. Erosion Controlled.

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.

Verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

> *"SUBJECT TO THE FOLLOWING CONDITIONS and all applicable standards and regulations:*
>
> *2. In addition to any specific erosion control measures described in this or previous orders, the applicant shall take all necessary actions to ensure that its activities or those of its agents do not result in noticeable erosion of soils or fugitive dust emissions on the site during the construction and operation of the project covered by this approval.*

The applicant will also comply with best industry practices for excavation operations as prudent conditions of approval for assurance that no harm befalls public health or safety:

- Topsoil and subsoil suitable for purposes of revegetation will be stockpiled for use in restoring the location after extraction operations have ceased.

- Following the completion of excavation operations ground levels and grades must be established in accordance with approved plans.
- Revegetated and properly restored to a stable condition adequate to meet the provisions of the "Maine Erosion & Sediment Control BMPs," March 2003.

Finding: As approved by MDEP in their SLoD permit, and affirmed again by the S.W. Cole's studies, no environmental or regulatory issues arise for this requirement as noted in Item H, above. The Contractor must follow MDEP best management practices for erosion and sediment control and the Town will be notified to observe application during construction (see conditions of approval #2, below). The proposed development conforms to Title 16.8.8 Surface Drainage and will provide for adequate erosion and sediment control measures on site, and will not cause unreasonable soil erosion or a reduction in the land's capacity to hold water so that a dangerous or unhealthy condition will result.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

M. Traffic Managed.

The proposed development will:

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

2. Provide adequate traffic circulation, both on-site and offsite.

As affirmed by Gorrill-Palmer Report #TIA_07-22-2015_OPT, July 2015, a traffic movement permit from Maine DOT, for both the excavation and finished development, is not required and no regulatory issues arise for these requirements.

Further to the issue, although not required by any regulation, Gorrill-Palmer's recommendations regarding hauling suspension and installation of Rectangular Rapid Flashing Beacons (RRFB's) are accepted:

a. Removal of material hauling be suspended between June 30th and Labor Day.

b. RRFB's shall be installed at applicant's expense at the unsignalized crosswalks on US Route 1 at the crosswalks by Robert's Maine Grill and at Supershoes to promote better pedestrian safety.

The applicant will also comply with the following best industry practices:

- Loaded vehicles must be suitably covered.
- Trucking routes and methods are subject to approval by the Chief of Police**.**

A condition to mitigate damage to Idlewood Lane with financial assurance in concurrence with the Public Works Commissioner is warranted. A pre-construction examination and assessment with photography and post-development review to determine any extent of damage and responsibility to assume cost of needed repair is also warranted (see conditions of approval #9, below).

Finding: Analysis of the traffic generation and sight distances was completed, supporting the proposed development including the construction activity. The proposed development conforms to Title 16.8.9 Parking, Loading and Traffic, will not cause unreasonable or unsafe conditions, and will provide for adequate traffic circulation.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

N. Water and Air Pollution Minimized.

The proposed development will not result in undue water or air pollution. In making this determination, the following must be considered:

1. *Elevation of the land above sea level and its relation to the floodplains;*
2. *Nature of soils and sub-soils and their ability to adequately support waste disposal;*
3. *Slope of the land and its effect on effluents;*
4. *Availability of streams for disposal of effluents;*
5. *Applicable state and local health and water resource rules and regulations; and*
6. *Safe transportation, disposal and storage of hazardous materials.*

The excavation operations will not emit dust, dirt, fly ash, fumes, vapors or gases which could be injurious to humans, animals or vegetation, detrimental to the enjoyment of adjoining or nearby properties or which could soil or stain persons or property, at any point beyond the lot lines, and any air emissions will meet all applicable state and federal statutes. The applicant will also comply with the following best industry practices:

- Access roads from the extraction site to public ways treated with stone, calcium or other suitable materials to reduce dust and mud for a distance of at least one hundred (100) feet from such public ways to reduce dust and mud on such public ways.

Verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

> *"BASED on the ….findings of fact, and subject to the conditions listed …., the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 480-A et seq, and Section 401 of the Federal Water Pollution Control Act:*
>
> *A. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life.*
>
> *B. The proposed activity will not violate any state water quality law including those governing the classifications of the State's waters."*

Finding: As approved by MDEP and further reviewed by S.W. COLE, and AMEC Foster Wheeler, as addressed in items B, C, F, H, I, K, and L, there will be no undue water or air pollution as a result of the project No transportation, disposal, or storage of hazardous materials other than typical quantities of housekeeping and landscaping products will be present.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

O. Aesthetic, Cultural and Natural Values Protected.

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.

Verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

> *"6. WILDLIFE AND FISHERIES:*
> *The Maine Department of Inland Fisheries and Wildlife (MDIFW) reviewed the proposed project. In its comments, MDIFW stated that it found no records of any Essential or Significant Wildlife Habitats, or other wildlife habitats of special concern associated with this site. No fisheries concerns were identified.*
>
> *The Department finds that the applicant has made adequate provision for the protection of wildlife and fisheries.*
>
> *16. WETLAND IMPACTS:*
> *BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 480-A et~ and Section 40 I of the Federal Water Pollution Control Act:*
>
> *The applicant has made adequate provision for fitting the development harmoniously into the existing natural environment and the development will not adversely affect existing uses, scenic character, air quality, water quality or other natural recourses in the municipality or in neighboring municipalities provided that the applicant ensures that any rock crusher used at the site is licensed by the Department's Bureau of Air Quality and operated in accordance with that license."*

Additionally, Maine DIF&W identified no significant habitat or rare and irreplaceable natural area, as evidenced with its SLoD approval.

Four site visits by a Department Biologist and six weeks of motion cameras on site discovered no evidence of cottontail presence, which bears out the finding by that Department in the Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

> *"6. WILDLIFE AND FISHERIES:*
> *The Maine Department of Inland Fisheries and Wildlife (MDIFW) reviewed the proposed project. In its comments, MDIFW stated that it found no records of any Essential or Significant Wildlife Habitats, or other wildlife habitats of special concern associated with this site. No fisheries concerns were identified.*
>
> *The Department finds that the applicant has made adequate provision for the protection of wildlife and fisheries.*

Additionally, the US Department of the Interior, Fish and Wildlife Service, in 50 CFR Part 17, [Docket No. FWS–R5–ES–2015–0136; 4500030113] , Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition To List the New England Cottontail as an Endangered or Threatened Species, September 15, 2015:

> *SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce a 12-month finding on a petition to list the New England cottontail (Sylvilagus transitionalis) as an endangered or threatened species and to designate critical habitat under the Endangered Species Act of 1973, as amended (Act).*

After review of the best available scientific and commercial information, we find that listing the New England cottontail is not warranted at this time.

Beyond that, after the first site-meeting with the Biologist, we conveyed the following message to him: Be it what it may, I reiterate my offer that, in the context of our proposed project, we would welcome recommendations in support of NE cottontail habitat if DIF&W cares to offer any. Planting appropriate shrubbery that may be attractive habitat could well even better serve groundwater protection systems and maintenance.

7. HISTORIC SITES AND UNUSUAL NATURAL AREAS:

The Maine Historic Preservation Commission reviewed the proposed project and stated that it will have no effect upon any structure or site of historic, architectural, or archaeological significance as defined by the National Historic Preservation Act of 1966.

The Wilson family cemetery is located within designated open space toward the northwesterly side of the project site. The cemetery will be protected with a designated 25-foot wide buffer within the open space area.

The Maine Natural Areas Program database does not contain any records documenting the existence of rare or unique botanical features on the project site and, as discussed in Finding 6, MDIFW did not identify any unusual wildlife habitats located on the project site.

The Department finds that the proposed development will not have an adverse effect on the preservation of any historic sites or unusual natural areas either on or near the development site."

Neither classified "scenic or natural beauty" nor any "rare and irreplaceable" areas are present in the project area.

BioDiversity conducted an acoustic site survey for the Northern Long-eared Bat threatened species:

"Acoustic monitoring was conducted at 2 locations in the forest to determine the presence of northern long-eared bat (MYSE). Acoustic surveys were performed from July 27- July 28, 2015 in accordance with the USFWS Range-Wide Indiana Bat [Northern long-eared bat] Summer Survey Guidelines, April 2015. Based on the acoustic survey results, northern long-eared bats are not likely present in the Idlewood Lane Project area; therefore, a further Biological Assessment will not be required for this species in association with the proposed project."

No public right of physical or visual access to a normal high water line or upland edge of a wetland is impacted by the project.

A condition of approval to provide the Town with copies of all permitting applications, inspection results and reports from the cognizant regulatory agencies; third-party inspection results; and, those reports required for blasting monitoring in accordance with the following State statutory requirements is warranted: (see conditions of approval #8, below):

a. U.S. Department of Interior Rules, 30 CFR sections 816.61-68 and 817.610-68, and Blasting Guidance Manual, Office of Surface Mining, Reclamation and Enforcement, U.S. Department of Interior;
b. Natural Resource Protection Act, 38 MRS, Section 480-A et seq., Standard Conditions;
c. 38 MRS §490-D. Performance standards: Performance Standards for Excavations for Borrow, Clay, Topsoil or Silt; and
d. 38 MRS 490-Z, Performance standards, Blasting.

Finding: No construction activity or the proposed change in the use of the property will have an undue adverse impact on the scenic or natural beauty of the area, aesthetics, historic sites, or cultural or natural values, as verified by MDEP. The property does not include any significant aesthetic, cultural, or natural values, significant wildlife habitat, or rare and irreplaceable natural areas that require protection.

There are no public rights for physical or visual access to any shorelines on the property. The historical Wilson family cemetery will be preserved, site improved, and maintained.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

P. Developer Financially and Technically Capable.

Developer is financially and technically capable to meet the standards of this section.

Verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

> *"BASED on the …. findings of fact, and subject to the conditions listed …., the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 481 et seq.:*
>
> *A. The applicant has provided adequate evidence of financial capacity and technical ability to develop the project in a manner consistent with state environmental standards."*

Finding: The developer has adequate financial capacity, as affirmed by Steven A. Hynes Real Property Trust Agreement, Hynes Net Worth documentation, dated 12/31/11, as also found by MDEP. The developer will provide an Applicant Service Account in accordance with Town Code Title 3, Section 3.3.1, in an amount suitable to cover the costs of on-site inspection to ensure the proposed development is constructed according to the approved plan. As the owner and operator of 16 mobile home parks in four states, the developer also has adequate technical capacity to manage the project. Civil Consultants of South Berwick, Maine, will provide professional engineering and surveying services during the construction of the project and has been providing these types of services in the local area for over 38 years.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

Q. For Wireless Communication System Facility(WCSF).

Conclusion: This standard is not applicable.

Vote of ____ in favor ____ against ____ abstaining.

R. In Shoreland, Resource Protection or Commercial Fisheries/Maritime Use Overlay Zones.

Conclusion: This standard is not applicable.

Vote of ____ in favor ____ against ____ abstaining.

S. For a Right of Way Plan. *The proposed ROW:*

1. *Does not create any nonconforming lots or buildings; and*
2. *Could reasonably permit the right of passage for an automobile.*

Conclusion: This standard is not applicable.

Vote of ____ in favor ____ against ____ abstaining.

T. For Special Exception Use – Special Exception Use Permitted.

Conclusion: This standard is not applicable.

Vote of ____ in favor ____ against ____ abstaining.

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 Final Approval for the Development at the above referenced property, including any waivers granted or conditions as noted:

Waivers: As requested by the applicant on 8/30/12.

1. Scale of drawings. Section 16.10.5.2.A.2.

   Waiver for scale on overall site plan page (all other sheets conform to scale requirements). Larger scale allows the entire site to be viewed on one sheet.

2. Prevention of Erosion. Section 16.10.5.2.C.6, Subsection C.

   Since this ordinance was put in place much emphasis has been put on erosion control and prevention. Personnel in Civil Consultants office are Certified Professionals in Erosion and Sedimentation Control (CPESC) and are responsible for preparation of erosion control plans. In addition, the project was approved by MDEP personnel during the course of SLoD review.

3. Review of storm drainage by YCSWC. Section 16.8.12.3.S.

   A storm drainage plan has been prepared and a peer reviewer has been contracted by the town of Kittery to review plans. In addition, this portion of the project was also approved by MDEP personnel during the course of SLoD review.

4. Minimum turnaround radius. Section 16.8.12.3.I.4.

   Waiver request to reduce cul-de-sac turn around radius from 50’ to 30’. The turnaround only services 2 sites and a 30’ radius is more than adequate. No reason is foreseeable for any vehicles other than cars and light pickups to utilize the turnaround.

Conditions of Approval (to be included on the final plan):

1. No changes, erasures, modifications or revisions may be made to any Planning Board approved final plan. (Title 16.10.9.1.2)

2. Applicant/contractor will follow Maine Erosion & and Sediment Control Practices Field Guide for Contractors, March 2015, for all work associated with site and building construction to ensure adequate erosion and sediment control and slope stabilization.

3. Prior to the commencement of grading and/or construction within a building envelope, as shown on the Plan, the owner 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.

4. Residency in the expanded Yankee Commons mobile home park section is age-restricted to 55 years of age, or older, of at least one of the tenant owners. All other approved occupants to be at least 40 years.

5. All Notices to Applicant contained in the Findings of Fact (dated: **Board Decision Date**).

Conditions of Approval (Not to be included on the final plan):

6. Incorporate any plan revisions required by the Planning Board on the final plan and submit for Staff review prior to presentation of final Mylar.

7. All of the code-required open spaces will be managed by Yankee Commons via a management plan. Applicant shall propose to the Town an offer of conservation easement cession and management plan for the undeveloped land shown on Plan Sheets S1 & S2 in accordance with the provisions of Title 16.

8. During the excavation period:

- Hauling must be suspended between June 30th and Labor Day.
- Topsoil and subsoil suitable for purposes of revegetation may be stockpiled for use in restoring the location after extraction operations have ceased.
- Loaded vehicles must be suitably covered.
- Trucking routes and methods are subject to approval by the Chief of Police**.**
- Access roads from extraction site to public ways treated with stone, calcium or other suitable materials to reduce dust and mud for a distance of at least one hundred (100) feet from such public ways to reduce dust and mud on such public ways.
- No equipment, debris, junk or other material at site except those directly relating to active extraction operations.
- Temporary shelters or buildings erected for operations and equipment used removed within thirty (30) days following completion of excavation operations.
- Debris, stumps, boulders and similar materials removed and disposed of in an approved location or, in the case of inorganic material, buried and covered with a minimum of two feet of soil.
- Revegetated and properly restored to a stable condition adequate to meet the provisions of the "Maine Erosion & Sediment Control BMPs," March 2003.
- Applicant will provide the Town copies of all permitting applications, inspection results and reports required by State or Federal approvals from the cognizant regulatory agencies; third-party inspection results; and, those reports required for blasting monitoring in timely fashion.

9. A pre-construction examination and assessment of Idlewood Lane with photography; and, post-development review to determine any extent of damage and responsibility to assume cost of needed repair, will be arranged with the concurrence of the Commissioner of Public Works. Financial assurance to cover estimated costs will be arranged with Town Manager (see Notice #4).

Notices to Applicant: (not to be included on the final plan)

1. Prior to the release of the signed plans, the applicant must pay all outstanding fees associated with review, including, but not limited to, Town Attorney fees, peer review, newspaper advertisements and abutter notification.

2. State law requires all subdivision and shoreland development 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 one (1) paper copy of the final plan (recorded plan if applicable) and any and all related state/federal permits or legal documents that may be required, must be submitted to the Town Planning Department. Date of Planning Board approval shall be included on the final plan in the Signature Block.

4. The owner and/or developer, in an amount and form acceptable to the Town Manager, must file with the municipal treasurer an instrument to cover the cost of all infrastructure and right-of-way improvements and site erosion and stormwater stabilization, including inspection fees for same.

Vote of ____ in favor ____ against ____ abstaining.

Section 7

State Subdivision Requirements vs. Kittery Subdivision Requirements
(Comparison)

WHEREAS, Stephen A. Hynes Real Property Trust Agreement, owner and applicant, requested approval for expansion of a mobile home park consisting of seventy-seven (77) mobile home lots and a central multi-function facility at Idlewood Lane, Tax Map 66, Lots 24 & 25 in the Mixed Use and Residential-Rural zones, and pursuant to the Project Application and Plan and other documents considered to be a part of the approval by the Planning Board in this finding consisting of the following:

Section 1 - Updated Application Form (Based on 2013 Application Document)
Section 2 - Discussion of Chapter 16.10.7.2 Final Submission Requirements
Section 3 - Updated Discussion of Chapter 16.10.5.2 Preliminary Submission Requirements
Section 4 - An Updated Discussion of Chapter 16.8.12.3 Mobile Home Park Requirements
Section 5 - Responses to Conditions of Preliminary Approval (Includes Earth/Rock Removal Plan)
Section 6 - Draft Findings of Fact for Final Approval (Requested by Planning Staff (May 2015)
Section 7 - State Subdivision Requirements vs. Town of Kittery Subdivision Requirements
Section 8 - Updated Plan Set

NOW THEREFORE, based on the entire record before the Planning Board as presented and pursuant to the applicable standards in 30-A MRS, Part 2, Chapter 187, Subchapter 4: Subdivisions, the Planning Board makes the following factual findings as required by §4404. Review criteria, as recorded below:

Title 30-A, Maine Revised Statutes, Part 2, Chapter 187, Subchapter 4: Subdivisions §4404. Review criteria

When adopting any subdivision regulations and when reviewing any subdivision for approval, the municipal reviewing authority shall consider the following criteria and, before granting approval, must determine that:

1. Pollution. The proposed subdivision will not result in undue water or air pollution. In making this determination, it shall at least consider:

A. The elevation of the land above sea level and its relation to the flood plains;
B. The nature of soils and subsoils and their ability to adequately support waste disposal;
C. The slope of the land and its effect on effluents;
D. The availability of streams for disposal of effluents; and
E. The applicable state and local health and water resource rules and regulations;

The excavation operations will not emit dust, dirt, fly ash, fumes, vapors or gases which could be injurious to humans, animals or vegetation, detrimental to the enjoyment of adjoining or nearby properties or which could soil or stain persons or property, at any point beyond the lot lines, and any air emissions will meet all applicable state and federal statutes.

Verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

"BASED on the ….findings of fact, and subject to the conditions listed …., the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 480-A et seq, and Section 401 of the Federal Water Pollution Control Act:

A. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life.

B. The proposed activity will not violate any state water quality law including those governing the classifications of the State's waters."

The applicant will also comply with the following best industry practices:

Access roads from the extraction site to public ways treated with stone, calcium or other suitable materials to reduce dust and mud for a distance of at least one hundred (100) feet from such public ways to reduce dust and mud on such public ways.

Finding: As approved by MDEP and further reviewed by S.W. COLE, and as addressed in other sections of this statute, there will be no undue water or air pollution as a result of the project No transportation, disposal, or storage of hazardous materials other than typical quantities of housekeeping and landscaping products will be present.

Conclusion: This standard has been met.

2. Sufficient water. The proposed subdivision has sufficient water available for the reasonably foreseeable needs of the subdivision;

Finding: The site is serviced by public water. See Item 3, following.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

3. Municipal water supply. The proposed subdivision will not cause an unreasonable burden on an existing water supply, if one is to be used;

Verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

*"F. The applicant has made adequate provision of utilities, **including water supplies**, sewerage facilities and solid waste disposal required for the development and the development will not have an unreasonable adverse effect on the existing or proposed utilities in the municipality or area served by those services."*

Finding: The Kittery Water District provided a letter of evaluation, May 03, 2012, verifying its capacity to supply water to the proposed project.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

4. Erosion. The proposed subdivision 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;

Verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

> *"SUBJECT TO THE FOLLOWING CONDITIONS and all applicable standards and regulations:*
>
> *2. In addition to any specific erosion control measures described in this or previous orders, the applicant shall take all necessary actions to ensure that its activities or those of its agents do not result in noticeable erosion of soils or fugitive dust emissions on the site during the construction and operation of the project covered by this approval.*

The applicant will also comply with best industry practices for excavation operations as prudent conditions of approval for assurance that no harm befalls public health or safety:

- Topsoil and subsoil suitable for purposes of revegetation will be stockpiled for use in restoring the location after extraction operations have ceased.
- Following the completion of excavation operations ground levels and grades must be established in accordance with approved plans.
- Revegetated and properly restored to a stable condition adequate to meet the provisions of the "Maine Erosion & Sediment Control BMPs," March 2003.

Finding: As approved by MDEP in their SLoD permit, and affirmed again by the S.W. Cole's studies, no environmental or regulatory issues arise for this requirement as noted in Item H, above. The Contractor must follow MDEP best management practices for erosion and sediment control (silt fencing, silt sacks, etc.), and the Town will be notified to observe application during construction (see conditions of approval #2). The proposed development conforms to Title 16.8.8 Surface Drainage and will provide for adequate erosion and sediment control measures on site, and will not cause unreasonable soil erosion or a reduction in the land's capacity to hold water so that a dangerous or unhealthy condition will result.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

5. Traffic. The proposed subdivision will 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, if the proposed subdivision requires driveways or entrances onto a state or state aid highway located outside the urban compact area of an urban compact municipality as defined by Title 23, section 754, the Department of Transportation has provided documentation indicating that the driveways or entrances conform to Title 23, section 704 and any rules adopted under that section;

As affirmed by Gorrill-Palmer Report #TIA_07-22-2015_OPT, July 2015, a traffic movement permit from Maine DOT, for both the excavation and finished development, is not required and no regulatory issues arise for these requirements.

Further to the issue, although not required by any regulation, Gorrill-Palmer's recommendations regarding hauling suspension and installation of Rectangular Rapid Flashing Beacons (RRFB's) are accepted:

a. Removal of material hauling be suspended between June 30th and Labor Day.

b. RRFB's shall be installed at applicant's expense at the unsignalized crosswalks on US Route 1 at the crosswalks by Robert's Maine Grill and at Supershoes to promote better pedestrian safety.

The applicant will also comply with the following best industry practices:

- Loaded vehicles must be suitably covered.
- Trucking routes and methods are subject to approval by the Chief of Police**.**

A condition to mitigate damage to Idlewood Lane with financial assurance in concurrence with the Public Works Commissioner is warranted. A pre-construction examination and assessment with photography and post-development review to determine any extent of damage and responsibility to assume cost of needed repair is also warranted.

Finding: Analysis of the traffic generation and sight distances was completed, supporting the proposed development including the construction activity. The proposed development conforms to Title 16.8.9 Parking, Loading and Traffic, will not cause unreasonable or unsafe conditions, and will provide for adequate traffic circulation.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

6. Sewage disposal. The proposed subdivision will provide for adequate sewage waste disposal and will not cause an unreasonable burden on municipal services if they are utilized;

Verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

> *"F. The applicant has made adequate provision of utilities, including water supplies, **sewerage facilities** and solid waste disposal required for the development and the development will not have an unreasonable adverse effect on the existing or proposed utilities in the municipality or area served by those services."*

Finding: The Kittery Sewer Department Superintendent has provided a letter, September 02, 2012, verifying capacity to accept 14,040 gallons per day of wastewater, which is adequate to serve the project.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

7. Municipal solid waste disposal. The proposed subdivision will not cause an unreasonable burden on the municipality's ability to dispose of solid waste, if municipal services are to be utilized;

Verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

> *"F. The applicant has made adequate provision of utilities, including water supplies, sewerage facilities and **solid waste disposal** required for the development and the development will not have an unreasonable adverse effect on the existing or proposed utilities in the municipality or area served by those services."*

Finding: The proposed development operation will provide required storage containers and curbside pickup collected by a licensed commercial hauler and disposed of at the Kittery solid waste transfer station. It will, therefore, not cause an unreasonable burden on the Town's ability to dispose of solid waste, as confirmed by the MDEP.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

8. Aesthetic, cultural and natural values. The proposed subdivision 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;

Verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

> *"6. WILDLIFE AND FISHERIES:*
> *The Maine Department of Inland Fisheries and Wildlife (MDIFW) reviewed the proposed project. In its comments, MDIFW stated that it found no records of any Essential or Significant Wildlife Habitats, or other wildlife habitats of special concern associated with this site. No fisheries concerns were identified.*
>
> *The Department finds that the applicant has made adequate provision for the protection of wildlife and fisheries.*
>
> *16. WETLAND IMPACTS:*
> *BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 480-A et~ and Section 40 I of the Federal Water Pollution Control Act:*
>
> *The applicant has made adequate provision for fitting the development harmoniously into the existing natural environment and the development will not adversely affect existing uses, scenic character, air quality, water quality or other natural recourses in the municipality or in neighboring municipalities provided that the applicant ensures that any rock crusher used at the site is licensed by the Department's Bureau of Air Quality and operated in accordance with that license."*

Neither classified "scenic or natural beauty" nor any "rare and irreplaceable" areas are present in the project area. Additionally, Maine DIF&W identified no significant habitat or rare and irreplaceable natural area, as evidenced with its SLoD approval.

Four site visits by a Department Biologist and six weeks of motion cameras on site discovered no evidence of cottontail presence, which bears out the finding by that Department in the Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

> *"6. WILDLIFE AND FISHERIES:*
> *The Maine Department of Inland Fisheries and Wildlife (MDIFW) reviewed the proposed project. In its comments, MDIFW stated that it found no records of any Essential or Significant Wildlife Habitats, or other wildlife habitats of special concern associated with this site. No fisheries concerns were identified.*
>
> *The Department finds that the applicant has made adequate provision for the protection of wildlife and fisheries.*

7. HISTORIC SITES AND UNUSUAL NATURAL AREAS:

The Maine Historic Preservation Commission reviewed the proposed project and stated that it will have no effect upon any structure or site of historic, architectural, or archaeological significance as defined by the National Historic Preservation Act of 1966.

The Wilson family cemetery is located within designated open space toward the northwesterly side of the project site. The cemetery will be protected with a designated 25-foot wide buffer within the open space area.

The Maine Natural Areas Program database does not contain any records documenting the existence of rare or unique botanical features on the project site and, as discussed in Finding 6, MDIFW did not identify any unusual wildlife habitats located on the project site.

The Department finds that the proposed development will not have an adverse effect on the preservation of any historic sites or unusual natural areas either on or near the development site."

Additionally, the US Department of the Interior, Fish and Wildlife Service, in 50 CFR Part 17, [Docket No. FWS–R5–ES–2015–0136; 4500030113] , Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition To List the New England Cottontail as an Endangered or Threatened Species, September 15, 2015:

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce a 12-month finding on a petition to list the New England cottontail (Sylvilagus transitionalis) as an endangered or threatened species and to designate critical habitat under the Endangered Species Act of 1973, as amended (Act).

After review of the best available scientific and commercial information, we find that listing the New England cottontail is not warranted at this time.

Beyond that, after the first site-meeting with the Biologist, we conveyed the following message to him: Be it what it may, I reiterate my offer that, in the context of our proposed project, we would welcome recommendations in support of NE cottontail habitat if DIF&W cares to offer any. Planting appropriate shrubbery that may be attractive habitat could well even better serve groundwater protection systems and maintenance.

Also, BioDiversity conducted an acoustic site survey for the Northern Long-eared Bat threatened species:

"Acoustic monitoring was conducted at 2 locations in the forest to determine the presence of northern long-eared bat (MYSE). Acoustic surveys were performed from July 27- July 28, 2015 in accordance with the USFWS Range-Wide Indiana Bat [Northern long-eared bat] Summer Survey Guidelines, April 2015. Based on the acoustic survey results, northern long-eared bats are not likely present in the Idlewood Lane Project area; therefore, a further Biological Assessment will not be required for this species in association with the proposed project."

Finally, no public right of physical or visual access to a normal high water line or upland edge of a wetland is impacted by the project.

A condition of approval to provide the Town with copies of all permitting applications, inspection results and reports from the cognizant regulatory agencies; third-party inspection results; and, those reports required for blasting monitoring in accordance with the following State statutory requirements is warranted:

a. U.S. Department of Interior Rules, 30 CFR sections 816.61-68 and 817.610-68, and Blasting Guidance Manual, Office of Surface Mining, Reclamation and Enforcement, U.S. Department of Interior;
b. Natural Resource Protection Act, 38 MRS, Section 480-A et seq., Standard Conditions;
c. 38 MRS §490-D. Performance standards: Performance Standards for Excavations for Borrow, Clay, Topsoil or Silt; and
d. 38 MRS 490-Z, Performance standards, Blasting.

Finding: No construction activity or the proposed change in the use of the property will have an undue adverse impact on the scenic or natural beauty of the area, aesthetics, historic sites, or cultural or natural values, as verified by MDEP. The property does not include any significant aesthetic, cultural, or natural values, significant wildlife habitat, or rare and irreplaceable natural areas that require protection.

The historical Wilson family cemetery will be preserved, site improved, and maintained.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

9. Conformity with local ordinances and plans. The proposed subdivision conforms with a duly adopted subdivision regulation or ordinance, comprehensive plan, development plan or land use plan, if any. In making this determination, the municipal reviewing authority may interpret these ordinances and plans;

1. Substantial evidence was presented to the Board demonstrating that the project is pursuant to and consistent with Kittery's Comprehensive Plan in the April 23, 2015 applicant submittal:

"1999 Update of the Kittery Comprehensive Plan / Revised 11/10/00

ADOPTED BY COUNCIL 3/25/02

As is seen following, the project overall meets many goals of the current plan:

SECTION C. NATURAL RESOURCES

12. GOALS AND POLICIES (pg 63)

State Goals: *To protect the quality and manage the quantity of the State's water resources, including lakes, aquifers, great ponds, estuaries, rivers and coastal areas. (Growth Management Act)*

To protect the State's other critical natural resources, including without limitation, wetlands, wildlife and fisheries habitat, sand dunes, shorelands, scenic vistas and unique natural areas. (Growth Management Act)

Local Goals:

To protect and improve the quality of the surface waters within Kittery.

To protect and preserve the quality and supply of groundwater resources.

To protect wetlands that have significant functional value and adjacent uplands from encroachment and degradation.

To manage the use of flood prone areas to reduce the risk of property and environmental damage.

To protect significant wildlife and fisheries habitat and critical and unique areas.

SECTION I. NATURAL RESOURCES

6. GOALS AND POLICIES (pg 184)

State Goal: *To encourage and promote affordable, decent housing opportunities for all Maine citizens. (Growth Management Act)*

Local Goals:

To encourage a diversity of housing to meet the needs of a wide range of residents.

To assure that as new housing is built in Kittery, at least 10% of the new units are affordable to lower or moderate income households.

Pursuant to these goals, the Town's policies are:

2. The Town will continue to allow housing for the elderly to be built at higher densities than other types of housing in areas that are currently zoned Urban Residential and will explore providing an elderly housing density bonus in other areas that are residentially zoned and served by public sewerage in recognition of the lower impact that this type of housing has on the community.

4. The Town should work with nonprofit organizations and private developers to encourage that a balance is maintained in the supply of housing so that a range of lower, mid, and higher cost housing is available in Kittery including housing that is affordable to low and moderate income households.

SECTION K. RECREATION AND OPEN SPACE

11. GOALS AND POLICIES (pp 209-211)

State Goal: *To promote and protect the availability of outdoor recreation opportunities for all Maine citizens, including access to surface waters. (Growth Management Act)*

Local Goals:

To provide recreational facilities to adequately meet the needs of the Town's current population and to provide facilities for the growing population.

To maintain the current level of public access to the Atlantic Ocean and Piscataqua River and to expand and improve access as opportunities arise.

To maintain the rural, open landscape in designated nongrowth areas.

Pursuant to these goals, the Town's policies are:

1. The Town will continue to require that new subdivisions address the need for recreation and open space resulting from the development but the Town should revise its system to allow either the provision of on-site facilities or financial participation in off-site facilities through the payment of in-lieu of or impact fees.

4. The Town should work to develop interconnections between the existing trails and begin developing information about the nature trails within the Town and promoting usage of them for recreational purposes.

6. The Town should have the Planning Board and Conservation Commission develop an open space plan for the Town that identifies important areas that are suitable for open space and recreational use and establishes priorities for the protection or acquisition of a land. This plan should encourage the linkage of open spaces to create a continuous open space network that can also function as a contiguous wildlife corridor. The Town should continue to explore and support opportunities to purchase and acquire open space/conservation easements and land. The Town should also explore creating a land acquisition fund to be used for acquiring key open space that is identified in the plan that is threatened by change in ownership or potential development.

7. The Town should explore requiring developers to contribute to a fund for the purchase of recreation and/or conservation land or creating an impact fee for this purpose.

8. The Town should support efforts by the Kittery Land Trust to privately acquire key parcels of open space.

9. The Town should actively work with the owners of large parcels of open land to educate them about non development options and to find ways that the owners' interests can be met without developing the land.

SECTION M. HISTORIC AND ARCHAEOLOGICAL RESOURCES

5. GOALS AND POLICIES (pp 226-228)

State Goal: *To preserve the State's historic and archaeological resources. (Growth Management Act)*

Local Goals:

To preserve the community's historic buildings, sites, and neighborhoods.

To assure that the community's archaeological resources are identified and protected from inadvertent damage or destruction.

To preserve and promote Kittery's historic and archaeological resources.

Pursuant to these goals, the Town's policies are:

4. As part of its development review process, the Town will require applicants for subdivision or site plan approval to document any identified historic resources that may be impacted by the project and to address the impact of the project on these resources."

Also noted in that submittal were features demonstrating consistency with Title 16 provisions pursuant to the Comprehensive Plan regarding clustering, elderly housing, and the mixed use zone.

2. Applicant has included a plan note on subdivision Plan Sheet S1designating age-restricted residency in the expanded section of the Yankee Commons mobile home park that requires at least one of the tenant owners to be a minimum of 55 years old, as shown in the Park Rules.

3. Applicant proposes an offer of conservation easement cession and maintenance plan consistent with the Open Space Reservation concepts in Title 16, supporting the public benefit, endorsed by the Town's Open Space Advisory Committee and as may be agreed by the Kittery Town Council.

4. The project submittals show that the proposed development is fully compliant with all required Title 16, Land Use and Development code provisions, with one exception requested to be acknowledged as regulated by state statute: LOT SIZE. Town Planning Department staff suggests finding that 16.8.12.3.C.1 is preempted by 30-A MRS §4358(3)(A)(1)(b).

5. Title 16.8.12.3, Mobile Home Parks standards are met as shown in Section 4 of the Final Subdivision Review Application Package.

6. Standards related to all other Title 16 submittal requirements are met as shown in Section 2 of the Final Subdivision Review Application Package.

ADDITIONALLY:

The Preliminary Plan Approval Conditions Response (Section 5 of the Final Subdivision Review Application Package) conveys further detail for these Findings.

The Board's consideration of walkways and safe pedestrian movement (Title 16, Section 8.12.3M) was addressed by revising travel lanes and the traffic flow in the major portion of the development to one-way streets as approved by the Kittery Police and Fire Chiefs.

Title 16, Section 9.1.2, Earth/Mineral Extraction and Title 16, Section 9.1.9, Noise abatement, ordinance provisions are not applicable. However, more stringent standards must be met with the statutory obligations for excavation blasting, noise, and hauling, conducted in accordance with 38 MRS §480-D et seq; §490-Z, §§14; and, 25 MRS §2475.

Expected regulatory compliance is verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

"4. NOISE: The applicant stated that the project is expected to produce a minor noise impact because the uses will be predominantly residential. Noise from construction activities will not exceed the limits described in Chapter 375(10)(C)(2)."

"9. SOILS:
The applicant submitted a soil survey map and report and extensive test pit information based on the soils found at the project site. This report was prepared by a certified soils scientist and reviewed by staff from the Division of Environmental Assessment (DEA) of the Bureau of Land and Water Quality (BLWQ). Soils investigation results indicate that blasting will be required to construct the project. The applicant proposes to submit a Blasting Plan to the BLWQ for review and approval prior to the start of any blasting at the site. If a rock crusher is being utilized on site, the applicant must insure that the crusher is licensed by the Department's Bureau of Air Quality and will be operated in accordance with that license.

The Department finds that, based on this report and DEA's review, the soils on the project site present no limitations to the proposed project that cannot be overcome through standard engineering practices, provided that a site-specific blast plan is submitted to the BLWQ for review and approval prior to the start of construction, and provided any rock crusher utilized on site is licensed and operated as described above.", and

Maine DEP Approval, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N: SUBJECT TO THE FOLLOWING CONDITIONS and all applicable standards and regulations:

"Prior to conducting blasting at the site, a site-specific blasting plan shall be submitted to the BLWQ for review and approval.

If a rock crusher is being utilized on site, the applicant shall insure that the crusher is licensed by the Department's Bureau of Air Quality and is being operated in accordance with that license.", and

"BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 481 et seq.:

B. The applicant has made adequate provision for fitting the development harmoniously into the existing natural environment and the development will not adversely affect existing uses, scenic character, air quality, water quality or other natural resources in the municipality or in neighboring municipalities provided that the applicant ensures that any rock crusher used at the site is licensed by the Department's Bureau of Air Quality and operated in accordance with that license."

Additional reports and documentation demonstrating compliance with Town Code, as well as Federal and State standards were provided as follows:

Item B: US Army Corps of Engineers Letter, 11/ - 12/15Vernal pool

Items H, I, L, N: S.W. COLE Reports # 15-0640 G, July 20 and October 02, 2015.

Item M: Gorrill-Palmer Report, 07-22-2015: Construction & Post-Development Traffic Impact

Item N: Air Quality: AMEC Foster Wheeler Air Quality Study

Absent any local standards, applicant will comply with Federal and state air emissions rules, regulations, and laws with respect to diesel idling and dust control activities. In any case, no objectionable odor, dust or smoke shall be detectable beyond the property line.

Item O: BioDiversity Report, July 14, 2015/ US Army Corps of Engineers / USF&W Letter,: Northern Long-eared Bats

No related standard or Finding of Fact Item: Earth/Rock Removal Operations Plan

Finding: The proposed development conforms to the adopted comprehensive plan as per adopted provisions in the Title 16; a residency age-restriction condition of approval is warranted; the Board concurs with the offer of conservation easement cession contingent upon Town Council approval; the Board agrees that the noted exception is met as regulated by state statute.

Conclusion: These standards have been met.

Vote of ____ in favor ____ against ____ abstaining.

10. Financial and technical capacity. The subdivider has adequate financial and technical capacity to meet the standards of this section;

Verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

"BASED on the …. findings of fact, and subject to the conditions listed …., the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 481 et seq.:

A. The applicant has provided adequate evidence of financial capacity and technical ability to develop the project in a manner consistent with state environmental standards."

Finding: The developer has adequate financial capacity, as affirmed by Steven A. Hynes Real Property Trust Agreement, Hynes Net Worth documentation, dated 12/31/11, as also found by MDEP. The developer will provide an Applicant Service Account in accordance with Town Code Title 3, Section 3.3.1, in an amount suitable to cover the costs of on-site inspection to ensure the proposed development is constructed according to the approved plan. As the owner and operator of 16 mobile home parks in four states, the developer also has adequate technical capacity to manage the project. Civil Consultants of South Berwick, Maine, will provide professional engineering and surveying services during the construction of the project and has been providing these types of services in the local area for over 38 years.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

11. Surface waters; outstanding river segments. Whenever situated entirely or partially within the watershed of any pond or lake or within 250 feet of any wetland, great pond or river as defined in Title 38, chapter 3, subchapter I, article 2-B, the proposed subdivision will not adversely affect the quality of that body of water or unreasonably affect the shoreline of that body of water.

Verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

"11. GROUNDWATER:
The project site is not located over a mapped sand and gravel aquifer. The proposed project does not propose any withdrawal from, or discharge to, the groundwater.

The Department finds that the proposed project will not have an unreasonable adverse effect on ground water quality or quantity."

"BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 480-A et seq, and Section 401 of the Federal Water Pollution Control Act:

A. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life.

B. The proposed activity will not violate any state water quality law including those governing the classifications of the State's waters.

C. The proposed development will be built on soil types which are suitable to the nature of the undertaking and will not cause unreasonable erosion of soil or sediment nor inhibit the natural transfer of soil provided that the applicant submits an acceptable blasting plan to the BLWQ for review and approval prior to conducting blasting at the site.

D. The proposed development meets the standards for storm water management in Section 420-D and the standard for erosion and sedimentation control in Section 420-C, provided the applicant retains the services of the design engineer to oversee construction of the stormwater management structures, grit and sediment removed from stormwater structures during maintenance activities is disposed of properly, a third-party inspector is retained, and a pre-construction meeting is conducted, all as outlined in Finding 10.

E. The proposed development will not pose an unreasonable risk that a discharge to a significant groundwater aquifer will occur."

Further, S. W. Cole concluded in its second hydrogeological review as reflected in their letter, dated October 7, 2015:

> *"The amount of water flowing to the wetlands as surface or groundwater recharge will remain proportional to the amount of precipitation and seasonal conditions. With no groundwater removal and maintenance of drainage patterns the mechanism for change to the recharge of wetlands is limited to the increased infiltration due to reduced slopes and the construction of infiltration basins;*
>
> *The removal of bedrock as part of the site preparation is interpreted to result in slopes with lower gradients which may increase infiltration and evapotranspiration, thus reducing runoff. However, the increase in the amount of impermeable surface is interpreted to result in an increase in runoff, thus negating the impact of the lower slopes and increased evaporation; and*
>
> *Based on the above, with little or no change in the amount or direction of runoff, there should be no adverse impact to the wetlands."*

S.W. Cole also advises:

> *"As noted in our July 20, 2015 report, the stormwater management plan makes allowances for maintenance and monitoring that will be necessary to confirm the functionality of the infiltration system. Stormwater management during construction needs to be monitored to confirm that the necessary controls are maintained and that short term impacts of construction are minimized. It should be noted that the greatest potential for impact to the wetlands will be during the construction period, and it is our interpretation that this potential will increase with an extended work period.*

There is also a MDEP SLoD Special Condition that the project engages a third party inspector to monitor Stormwater Management Activities and report same to the State. Applicant shall provide copies to the Town of all communications related to that activity.

Finding: As approved by MDEP with all wetland setbacks respected, and with additional confirmation as shown in S.W. COLE Reports # 15-0640 G, July 20 and October 02, 2015, no environmental issues arise for these requirements. MDEP's SLoD Department Order includes the proposed compliant stormwater management plan and a third-party inspector is required to review annually. Adequate provisions have been made to insure that the project will not adversely affect the quality of, or unreasonably affect the shoreline of, any body of water, including wetlands and vernal pools.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

12. Ground water. The proposed subdivision will not, alone or in conjunction with existing activities, adversely affect the quality or quantity of ground water;

No groundwater will be withdrawn, nor will any discharge be made into, site groundwater, Also see MDEP findings, SW Cole comments.

Finding: The site is serviced by public sewer. The project will, therefore, not adversely affect the quality or quantity of groundwater.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

13. Flood areas. Based on the Federal Emergency Management Agency's Flood Boundary and Floodway Maps and Flood Insurance Rate Maps, and information presented by the applicant whether the subdivision is in a flood-prone area. If the subdivision, or any part of it, is in such an area, the subdivider shall determine the 100-year flood elevation and flood hazard boundaries within the subdivision. The proposed subdivision plan must include a condition of plan approval requiring that principal structures in the subdivision will be constructed with their lowest floor, including the basement, at least one foot above the 100-year flood elevation;

Verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

> *"G. The activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties nor create an unreasonable flood hazard to any structure."*
>
> *15. FLOODING:*
> *No construction is proposed within the 100-year flood plain associated with a stream at the northwest corner of the project site.*
> *The Department finds that the proposed project is unlikely to cause or increase flooding or cause an unreasonable flood hazard to any structure."*

Finding: The development portion of the property is not located within a floodplain area as verified by the MDEP. The project non-disturbance area is greater than 250' from a Floodplain Zone A boundary.

Vote of ____ in favor ____ against ____ abstaining.

14. Freshwater wetlands. All freshwater wetlands within the proposed subdivision have been identified on any maps submitted as part of the application, regardless of the size of these wetlands. Any mapping of freshwater wetlands may be done with the help of the local soil and water conservation district;

Shown on Plan Sheets C1-C6, L1 & L2.

Verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

> *"16. WETLAND IMPACTS:*
> *To construct a portion of the access road network, the applicant proposes to fill 900 square feet of scrub shrub wetland which is associated with an adjacent emergent wetland of special significance.*
>
> *After reviewing the information in the file and conducting a site visit, the Department determined that the activity will not negatively affect the freshwater wetland of special significance or other protected natural resources; therefore the proposed project is eligible for Tier 1 review. To minimize wetland impacts, the applicant aligned the project's access road over a portion of an existing park road. This alignment will also avoid direct impacts to the larger, contiguous emergent wetland. The Department finds that the applicant has avoided and minimized wetland impacts to the greatest extent practicable, and that the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project."*

Finding: All wetlands and a stream are mapped and categorized. Mapped wetland areas total approximately 6.6 acres, 0.8 acres of which are designated as emergent wetlands. 900sf of wetland will be impacted which requires a U.S. Army Corps of Engineers Category 1 permit requiring only start-work notice two weeks before commencement. Applicant has approval for wetland impacts from the MDEP.

The nearby vernal pool was assessed by the US Army Corps of Engineers to be non-migratory, requiring only a 100' non-disturbance area, which is met here. MDEP's 250' area will have only a 4.5% disturbance for the side slope of a stormwater filtration basin where 25% is allowed. A Permit by Rule application must be made and approved by MDEP for this specific work.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

14-A. Farmland. NOT APPLICABLE

15. River, stream or brook. Any river, stream or brook within or abutting the proposed subdivision 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 Title 38, section 480-B, subsection 9;

Shown on Plan Sheets C1, C2, C4, C6 & L2.

Finding: As mapped by the Town and FEMA, Libby Brook is shown in the plans. No activity will take place within 100' of the brook unless an allowable walking trail crossing is permitted.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

16. Storm water. The proposed subdivision will provide for adequate storm water management;

Verified in Maine DEP Site Location of Development Approval Findings of Fact, 2013-06-10 Site Location of Development Act and NRPA Order - L-19638-L2-B-N-L-19638-A-C-N:

"SUBJECT TO THE FOLLOWING CONDITIONS and all applicable standards and regulations:

7. The applicant shall retain the services of a third-party inspector in accordance with the Special Condition for Third-Party Inspection Program, which is attached to this Order.

Prior to the start of construction, the applicant shall conduct a pre-construction meeting. This meeting shall be attended by the applicant's representative, Department staff, the design engineer, the contractor, and the third-party inspector.

The applicant shall retain the services of the design engineer to oversee the construction of the stormwater management structures in accordance with the details and notes specified on the approved plans. Within 30 days of the completion of each structure, the applicant shall submit a log of inspection reports including the items inspected, photos taken, and dates of each inspection to the BLWQ for review.

Storm sewer grit and sediment materials removed from stormwater control structures during maintenance activities shall be disposed of in compliance with the Maine Solid Waste Management Rules."

Finding: The applicant has prepared a stormwater management system and associated analysis and report that is logical and complete, and meets the requirements of Title 16. The design was prepared by Civil Consultants, approved by Maine DEP and reviewed by the Town's peer reviewer. The proposed development conforms to Title 16.8.8 Surface Drainage and will provide for adequate stormwater management.

Conclusion: This standard has been met.

Vote of ____ in favor ____ against ____ abstaining.

17. Spaghetti-lots prohibited. **NOT APPLICABLE**

18. Lake phosphorus concentration. **NOT APPLICABLE**

19. Impact on adjoining municipality. **NOT APPLICABLE**

20. Lands subject to liquidation harvesting. **NOT APPLICABLE**

Section 8

Updated Plan Set

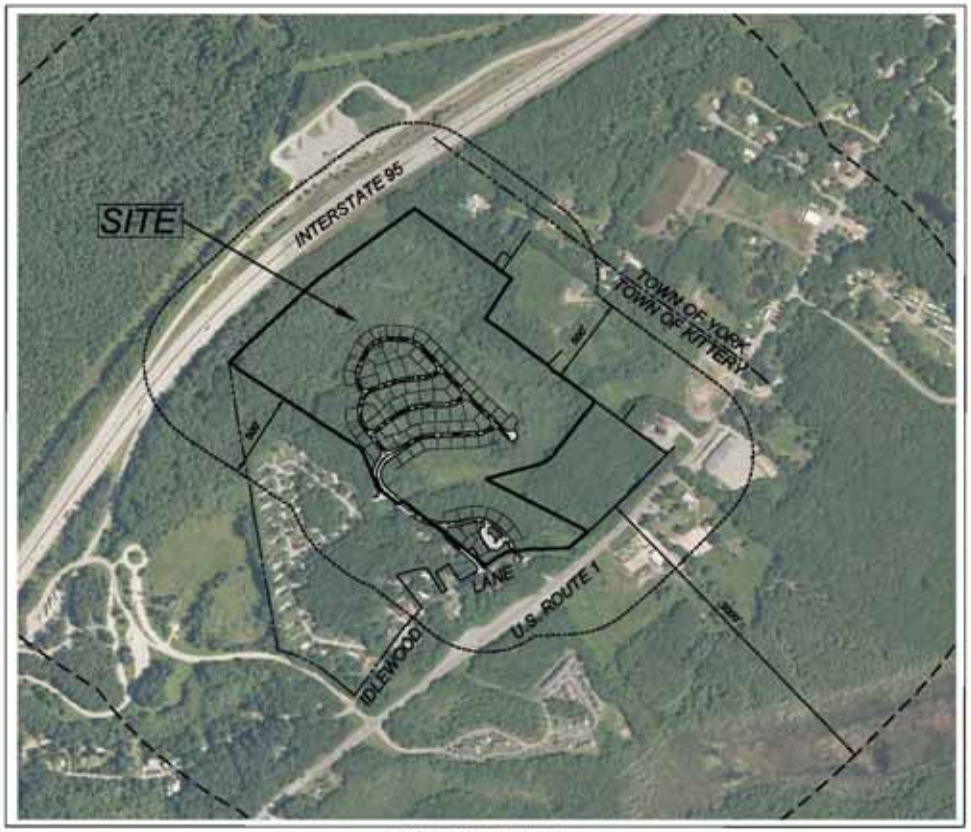
(25 Plan Sheets including cover)

CIVIL
CONSULTANTS

P.O. Box 100 South Berwick, Maine 03908 207-384-2550

FINAL PLAN - YANKEE COMMONS MOBILE HOME PARK EXPANSION (2015)

IDLEWOOD LANE / US ROUTE 1
KITTERY, ME
SUBDIVISION APPLICATION



LOCATION PLAN

APPROXIMATE SCALE

SHEET NUMBER	SHEET TITLE
	BOUNDARY PLAN
S1	SUBDIVISION PLAN
S2	SUBDIVISION PLAN SITE LAYOUT
S3	SUBDIVISION PLAN SITE DETAIL LAYOUT
C1	BOUNDARY ADJUSTMENT & EXISTING CONDITIONS PLAN
C2	OVERALL SITE PLAN
C3	GRADING & DRAINAGE PLAN
C4	GRADING & DRAINAGE PLAN
C5	UTILITY & UNDERDRAIN PLAN
C6	UTILITY & UNDERDRAIN PLAN
C7	GRASSED FILTER CONTROL STRUCTURES
C8	GRASSED FILTER SECTION & SCHEDULES
R1	ROADWAY A PLAN & PROFILE
R2	ROADWAY A PLAN & PROFILE
R3	ROADWAY B & C PLAN & PROFILE
R4	ROADWAY D PLAN & PROFILE
R5	ROADWAY E & F PLAN & PROFILE
R6	CONSTRUCTION DETAILS
R7	CONSTRUCTION DETAILS
R8	MAINTENANCE NOTES
L1	LANDSCAPE PLAN
L2	LANDSCAPE PLAN
ES	OVERALL SITE LIGHTING PLAN
EP	OVERALL LIGHTING STUDY

FINAL PLAN SET
11/19/15
NOT FOR CONSTRUCTION

CIVIL CONSULTANTS

PREPARED FOR:

STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT

TAX MAP 66 LOT 24
AND PORTION OF LOT 25

PROJECT # 06684.02
DATE: 18 NOVEMBER 2015

VICINITY MAP: (NOT TO SCALE)

GENERAL NOTES:

1) THIS PLAN AND ALL WORK ASSOCIATED WITH IT WAS PERFORMED BY SGC ENGINEERING, LLC PURSUANT TO A PROFESSIONAL SERVICES CONTRACT BETWEEN MR. STEPHEN HYNES AND SGC ENGINEERING LLC, DATED NOVEMBER 23, 2005

2) REFERENCE DEED FOR THE LOCUS PARCEL IS CONRAD L. FARR TO STEPHEN A. HYNES, TRUSTEE DATED MARCH 30, 1995 AND RECORDED IN DEED BOOK 7378, PAGE 52 AT THE YORK COUNTY REGISTRY OF DEEDS

3) THE BEARINGS SHOWN HEREON ARE BASED THE DEED REFERENCED IN GENERAL NOTE 2

4) THE LOCUS PARCEL IS DEPICTED AS LOT 16 ON TOWN OF KITTERY ASSESSORS MAP 66. ABUTTING PROPERTY OWNER INFORMATION REFERENCED HEREON WAS TAKEN FROM THE TOWN OF KITTERY ASSESSOR'S DATA AS OF THE DATE OF THIS SURVEY

5) ACCORDING TO DISCUSSIONS WITH THE TOWN OF KITTERY DEPARTMENT OF PUBLIC WORKS ON 1-31-06, IDLEWOOD LANE IS A PUBLIC WAY AND WILSON LANE IS PRIVATE

6) NO SUBSURFACE INVESTIGATION HAS BEEN PERFORMED BY SGC ENGINEERING, LLC. DIG-SAFE SHOULD BE CONTACTED PRIOR TO COMMENCING ANY EXCAVATION. (888-344-7233). ALL UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON SURFACE-OBSERVABLE STRUCTURES AND RECORD PLANS

7) THIS PLAN IS THE RESULT OF A FIELD SURVEY CONDUCTED BY SGC ENGINEERING, LLC BETWEEN DECEMBER 14TH - 20TH, 2005 AND JANUARY 6TH, 2006 IN SNOW CONDITIONS. CONSEQUENTLY, NOT ALL SURFACE DETAIL MAY BE DEPICTED

8) SUBJECT PREMISES ARE LOCATED IN ZONE C (AREA OF MINIMUM FLOODING) PER FIRM COMMUNITY PANEL 230171 0001 C DATED JULY 5, 1984

9) THE PROPERTY SURVEYED CONTAINS 41 MANUFACTURED HOUSING HOME SITES

10) ACCESS TO THE MAINE TURNPIKE IS NOT ALLOWED FROM ABUTTING PROPERTIES IN THIS AREA. CONSEQUENTLY, SUCH COMMON BOUNDARIES CANNOT BE UTILIZED AS ROADWAY FRONTAGE. MAINE TURNPIKE IS A LIMITED ACCESS HIGHWAY

MAP REFERENCES:

1) A PLAN ENTITLED "YANKEE COMMONS LOT LAYOUT OF EXISTING MOBILE HOME PARK EXTENSION, KITTERY MAINE, FOR CONRAD FARR" BY JOHN W. DURGIN ASSOCIATES, INC. DATED NOVEMBER 30TH, 1978, UNRECORDED.

LEGEND:

BOUNDARY MONUMENTS (SEE PLAN FOR SPECIFIC INFORMATION)
IRON PIPE OR ROD FOUND
CONCRETE BOUND FOUND
EXISTING FEATURES
PAVED SURFACE
WIRE FENCE
LOT NUMBER (SEE MAP REF. 1)
EXISTING UTILITIES
UTILITY POLE
UTILITY SUPPORT POLE
OVERHEAD WIRES
COMBINED SANITARY LINE
GUY WIRE
ELECTRIC METER BOX
LIGHT POLE
WATER SHUT-OFF
CATCH BASIN
SEWER MANHOLE
FIRE HYDRANT
WATER VALVE

GRAPHIC SCALE: 1" = 100'

100 50 0 100 200 300

CHICAGO TITLE INSURANCE COMPANY
COMMITMENT NUMBER: 05-1567-2
EFFECTIVE DATE: JANUARY 23, 2006
SCHEDULE B-SECTION II

ITEM 1-8) 1-8) EXCEPTIONS NOT PLOTTABLE

ITEM 9) SEE PLOTTED LOCATION OF WILSON FAMILY CEMETERY PLOTTED HEREON (AFFECTS PARCEL 4)

ITEM 10-12) EXCEPTIONS NOT PLOTTABLE

ITEM 13) EXCEPTION NOT PLOTTABLE. AFFECTS PARCEL 1 BY DESCRIPTION

ITEM 14) BOOK 9808-PAGE 217 DESCRIBES A STANDARD EASEMENT RELATED TO THE RIGHT TO " ERECT, BURY, MAINTAIN, REBUILD, RESPACE, OPERATE AND PATROL AND DO ALL OTHER ACTIONS INVOLVING ELECTRIC AND COMMUNICATIONS EQUIPMENT. " SAID EASEMENT IS NOT PLOTTABLE BY DESCRIPTION (ASSUMED TO AFFECT PARCELS 1, 2, & 3)

ITEM 15) EXCEPTION NOT PLOTTABLE. AFFECTS PARCEL 3 BY DESCRIPTION

ITEM 16) EXCEPTION NOT PLOTTABLE. AFFECTS PARCEL 2 BY DESCRIPTION

ITEM 17) BOOK 1609, PAGE 320 DESCRIBES A STANDARD EASEMENT RELATED TO THE RIGHT TO " ERECT, BURY, MAINTAIN, REBUILD, RESPACE, OPERATE AND PATROL AND DO ALL OTHER ACTIONS INVOLVING ELECTRIC AND COMMUNICATIONS EQUIPMENT. " SAID EASEMENT IS NOT PLOTTABLE BY DESCRIPTION. BOOK 1609, PAGES 320 WERE NOT PROVIDED

ITEM 18) BOOK 2003-PAGE 150 DESCRIBES A STANDARD EASEMENT RELATED TO THE RIGHT TO " ERECT, BURY, MAINTAIN, REBUILD, RESPACE, OPERATE AND PATROL AND DO ALL OTHER ACTIONS INVOLVING ELECTRIC AND COMMUNICATIONS EQUIPMENT. " SAID EASEMENT IS NOT PLOTTABLE BY DESCRIPTION. AFFECTS PARCEL 1 BY DESCRIPTION

ITEM 19) BOOK 2910, PAGE 186 DESCRIBES SLOPE EASEMENTS GRANTED TO THE MAINE DEPARTMENT OF TRANSPORTATION FOR " THE RIGHT TO ENTER, CLEAR, GRUB, AND/OR CONSTRUCT, AND MAINTAIN SLOPES OF THE HIGHWAY, AS LONG AS THEY ARE NECESSARY FOR HIGHWAY PURPOSES, ON LAND OUTSIDE OF AND ADJOINING THE BOUNDARY LIES OF STATE HIGHWAY "1" AND WITHIN THE LIMITS DEFINED BY THE "CONSTRUCTION LIMIT LINES" AS SHOWN ON THE ABOVE MENTIONED RIGHT-OF-WAY MAP. " SAID EASEMENT IS NOT PLOTTABLE BY DESCRIPTION. IT SHOULD BE NOTED THAT ONLY PARCEL 2 HAS FRONTAGE ON STATE ROUTE 1

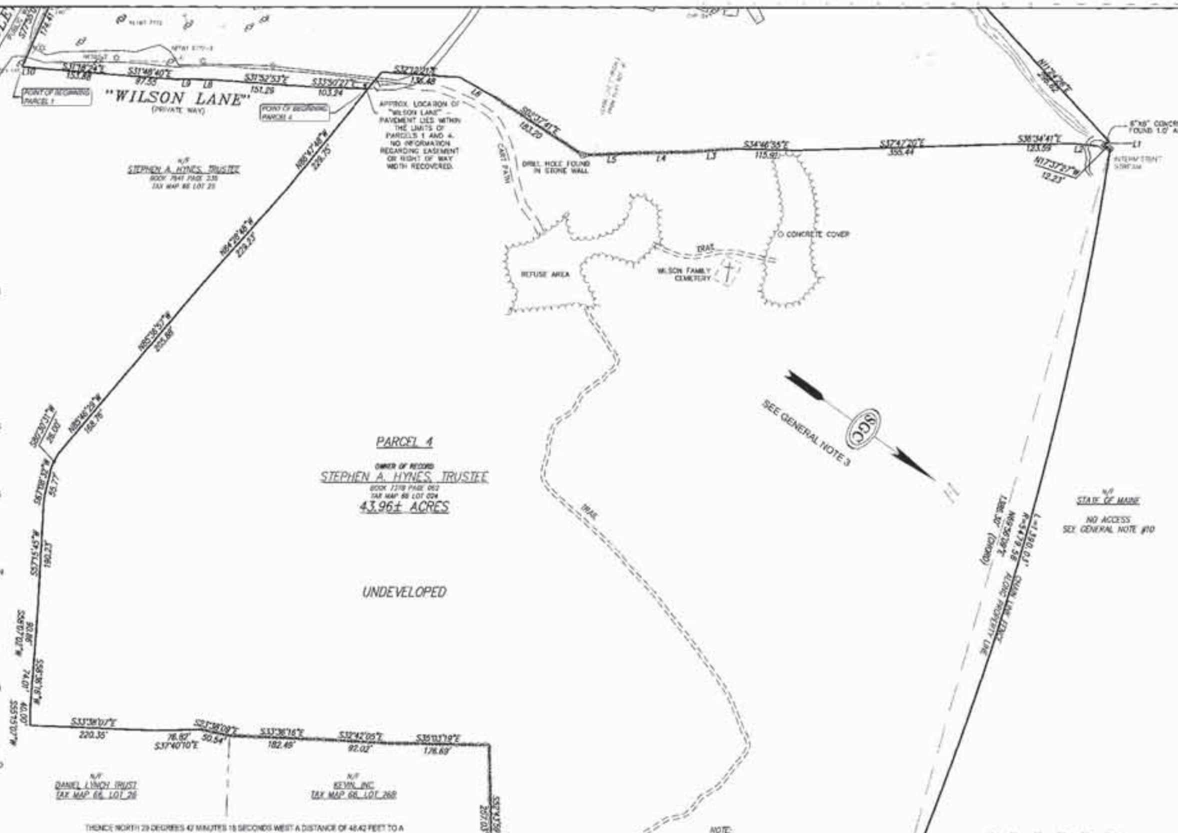
ITEM 20) SEE LOCATION OF WILSON LANE PLOTTED HEREON (AFFECTS PARCELS 1 & 4)

ITEM 21) SEE CURRENT LOCATION OF CUTTS ROAD PLOTTED HEREON LOCATION OF WATER MAINS NOT VISIBLE (AFFECTS PARCEL 3)

ITEM 22) SEE PLOTTED LOCATION HEREON (AFFECTS PARCEL 3)

ITEM 23) EXCEPTION NOT PLOTTABLE

ITEM 24) BOOK 2168, PAGE 610 DESCRIBES A TAKING FOR I-95 ALONG WITH APPURTENANT SLOPE AND GRADING EASEMENTS. SAID EASEMENTS ARE NOT PLOTTABLE BY DESCRIPTION. ASSUMED TO AFFECT PARCELS 1, 2, 3, & 4



LINE	BEARING	DISTANCE
L1	[illegible]	13.46'
L2	[illegible]	48.42'
L3	[illegible]	75.36'
L4	[illegible]	90.12'
L5	[illegible]	99.50'
L6	[illegible]	88.45'
L7	[illegible]	38.06'
L8	[illegible]	44.84'
L9	[illegible]	34.32'
L10	[illegible]	13.20'
L11	[illegible]	130.07'
L12	[illegible]	39.06'
L13	[illegible]	176.47'
L14	[illegible]	83.37'
L15	[illegible]	99.40'
L16	[illegible]	54.68'

LEGAL DESCRIPTION

PARCEL 4

A CERTAIN LOT OR PARCEL OF LAND WITH THE BUILDINGS THEREON, SHOWN ON A PLAN ENTITLED, "ALTA/ACSM LAND TITLE SURVEY OF PROPERTY LOCATED ON 3 IDLEWOOD LANE, KITTERY, YORK COUNTY, MAINE" DATED 12-29-05, BY SGC ENGINEERING, LLC TO BE RECORDED IN THE YORK COUNTY REGISTRY OF DEEDS, AND BEING MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

A CERTAIN PARCEL OF LAND LOCATED NORTHERLY OF, BUT NOT ABUTTING ROUTE ONE IN THE TOWN OF KITTERY, YORK COUNTY AND STATE OF MAINE, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT AN IRON PIPE AT OTHER LAND NOW OR FORMERLY OF CONRAD L. FARR, BEING 602 FEET, MORE OR LESS, FROM IDLEWOOD LANE ALONG WILSON'S LANE;

THENCE NORTH 65 DEGREES 51 MINUTES 08 SECONDS WEST ALONG SAID FARR LAND A DISTANCE OF 39.26 FEET TO THE SOUTHEAST CORNER OF THE HEREIN DESCRIBED PARCEL;

THENCE NORTH 32 DEGREES 12 MINUTES 21 SECONDS WEST A DISTANCE OF 136.48 FEET;

THENCE NORTH 05 DEGREES 55 MINUTES 38 SECONDS WEST A DISTANCE OF 58.45 FEET TO A DRILL HOLE;

THENCE NORTH 02 DEGREES 37 MINUTES 41 SECONDS WEST A DISTANCE OF 183.20 FEET TO A DRILL HOLE IN THE NOW OR FORMERLY STONE WALL;

THENCE NORTH 38 DEGREES 18 MINUTES 38 SECONDS WEST ALONG NOW OR FORMERLY A STONE WALL A DISTANCE OF 88.50 FEET;

THENCE NORTH 37 DEGREES 00 MINUTES 14 SECONDS WEST ALONG NOW OR FORMERLY A STONE WALL A DISTANCE OF 85.13 FEET TO A DRILL HOLE, THENCE

THENCE NORTH 40 DEGREES 22 MINUTES 17 SECONDS WEST ALONG NOW OR FORMERLY A STONE WALL A DISTANCE OF 75.35 FEET TO A DRILL HOLE;

THENCE NORTH 34 DEGREES 46 MINUTES 55 SECONDS WEST ALONG NOW OR FORMERLY A STONE WALL A DISTANCE OF 115.91 FEET TO A DRILL HOLE;

THENCE NORTH 37 DEGREES 47 MINUTES 20 SECONDS WEST A DISTANCE OF 355.44 FEET TO A FENCE POST;

THENCE NORTH 38 DEGREES 34 MINUTES 41 SECONDS WEST A DISTANCE OF 123.59 FEET;

THENCE NORTH 29 DEGREES 47 MINUTES 18 SECONDS WEST A DISTANCE OF 48.42 FEET TO A CONCRETE HIGHWAY BOUND;

THENCE NORTH 17 DEGREES 37 MINUTES 27 SECONDS WEST A DISTANCE OF 12.23 FEET TO A CONCRETE HIGHWAY BOUND;

THENCE ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 3,479.58 FEET, AN ARC LENGTH OF 1,390.03 FEET, AND A CHORD WHICH BEARS NORTH 69 DEGREES 56 MINUTES 09 SECONDS EAST HAVING A DISTANCE OF 1,386.30 FEET TO NOW OR FORMERLY A STONE WALL;

THENCE SOUTH 35 DEGREES 02 MINUTES 13 SECONDS EAST ALONG OTHER LAND OF CONRAD L. FARR A DISTANCE OF 258.85 FEET ALONG NOW OR FORMERLY A STONE WALL;

THENCE SOUTH 34 DEGREES 25 MINUTES 01 SECONDS EAST ALONG NOW OR FORMERLY A STONE WALL A DISTANCE OF 208.39 FEET;

THENCE SOUTH 34 DEGREES 58 MINUTES 29 SECONDS EAST A DISTANCE OF 92.83 FEET TO A DRILL HOLE AT NOW OR FORMERLY AN INTERSECTING STONE WALL;

THENCE SOUTH 31 DEGREES 51 MINUTES 31 SECONDS EAST ALONG NOW OR FORMERLY A STONE WALL AT THE PARSONS FAMILY CEMETERY A DISTANCE OF 61.93 FEET TO A DRILL HOLE IN STONE WALL;

THENCE SOUTH 35 DEGREES 38 MINUTES 44 SECONDS EAST ALONG LAND NOW OR FORMERLY OF ROBERT & KATHLEEN PREWITT A DISTANCE OF 70.96 FEET TO A DRILL HOLE;

THENCE SOUTH 58 DEGREES 16 MINUTES 52 SECONDS WEST ALONG NOW OR FORMERLY A STONE WALL AND SAID PREWITT LAND A DISTANCE OF 21.30 FEET TO A DRILL HOLE;

THENCE SOUTH 52 DEGREES 43 MINUTES 59 SECONDS WEST ALONG NOW OR FORMERLY A STONE WALL A DISTANCE OF 257.03 FEET TO A DRILL HOLE;

THENCE SOUTH 35 DEGREES 03 MINUTES 19 SECONDS EAST ALONG NOW OR FORMERLY A STONE WALL A DISTANCE OF 176.69 FEET TO A DRILL HOLE;

THENCE SOUTH 32 DEGREES 42 MINUTES 05 SECONDS EAST ALONG NOW OR FORMERLY A STONE WALL A DISTANCE OF 92.02 FEET TO A DRILL HOLE;

THENCE SOUTH 33 DEGREES 36 MINUTES 16 SECONDS EAST ALONG NOW OR FORMERLY A STONE WALL AND LAND OF SAID PREWITT A DISTANCE OF 182.49 FEET TO AN IRON PIPE IN THE WALL AT LAND NOW OR FORMERLY OF THE DANIEL G. LYNCH TRUST;

THENCE SOUTH 23 DEGREES 38 MINUTES 09 SECONDS EAST ALONG NOW OR FORMERLY A STONE WALL AND LAND OF SAID LYNCH TRUST A DISTANCE OF 50.54 FEET TO A DRILL HOLE;

THENCE SOUTH 37 DEGREES 40 MINUTES 10 SECONDS EAST ALONG SAID LYNCH TRUST LAND A DISTANCE OF 76.82 FEET TO A DRILL HOLE IN NOW OR FORMERLY A STONE WALL;

THENCE SOUTH 33 DEGREES 39 MINUTES 07 SECONDS EAST ALONG THE STONE WALL AND SAID LYNCH TRUST LAND A DISTANCE OF 220.35 FEET TO A DRILL HOLE AT A BEND IN NOW OR FORMERLY A STONE WALL AT OTHER LAND OF SAID FARR;

THENCE SOUTH 55 DEGREES 15 MINUTES 07 SECONDS WEST ALONG NOW OR FORMERLY A STONE WALL AND LAND OF SAID FARR A DISTANCE OF 40.00 FEET;

THENCE SOUTH 58 DEGREES 36 MINUTES 16 SECONDS WEST ALONG NOW OR FORMERLY A STONE WALL A DISTANCE OF 74.01 FEET;

THENCE SOUTH 58 DEGREES 07 MINUTES 02 SECONDS WEST ALONG NOW OR FORMERLY A STONE WALL A DISTANCE OF 90.86 FEET TO AN IRON PIPE;

THENCE SOUTH 57 DEGREES 15 MINUTES 45 SECONDS WEST A DISTANCE OF 190.23 FEET TO AN IRON PIPE;

THENCE SOUTH 67 DEGREES 08 MINUTES 32 SECONDS WEST A DISTANCE OF 55.77 FEET TO AN IRON PIPE;

THENCE SOUTH 60 DEGREES 30 MINUTES 31 SECONDS WEST A DISTANCE OF 26.00 FEET TO AN IRON PIPE;

THENCE NORTH 65 DEGREES 48 MINUTES 29 SECONDS WEST A DISTANCE OF 168.76 FEET TO AN IRON PIPE;

THENCE NORTH 65 DEGREES 36 MINUTES 57 SECONDS WEST A DISTANCE OF 205.88 FEET TO AN IRON PIPE;

THENCE NORTH 64 DEGREES 28 MINUTES 48 SECONDS WEST A DISTANCE OF 229.23 FEET TO AN IRON PIPE;

THENCE NORTH 56 DEGREES 47 MINUTES 45 SECONDS WEST A DISTANCE OF 229.75 FEET TO THE POINT OF BEGINNING, AND CONTAINING 43.9535 ACRES OF LAND, MORE OR LESS.

000233

YORK, ss REGISTRY OF DEEDS
Received May 16, 2006
At 3 h 18 m P M., and
Filed in Plan Book 311, page 3
ATTEST: Debra L. Anderson
Regi...

ALTA/ACSM LAND TITLE SURVEY
OF PROPERTY LOCATED ON
3 IDLE WOOD LANE
KITTERY, YORK COUNTY, MAINE
PREPARED FOR:
STEPHEN HYNES
c/o TANGLEWOOD ESTATES
16 SPARROW STREET
KEENE, NH 03431

SGC ENGINEERING, LLC
• Civil Design & Survey Engineering
• Environmental & Regulatory Permitting
• Electrical Power Systems Engineering
SERVING OUR CLIENTS IN THE U.S.A. & CANADA

DATE: 12-29-05 SCALE: 1" = 100'
SHEET 2 OF 2

REVISIONS:

NO.	DATE	
0	12/29/05	APPROVED FOR SUBMITTAL
1	2/17/06	MISC EDITS REQ BY ATTORNEY

Seal
ONLY VALID WITH ORIGINAL STAMP
2/17/06

YORK, ss. REGISTRY OF DEEDS
Received
at h m M. and
Filed in Plan Book Page
ATTEST:
Register

SITE NO.	AREA (SQ.FT.)	AREA (ACRES)
1	5,123	0.12
2	5,685	0.13
3	5,578	0.13
4	5,549	0.13
5	5,493	0.13
6	5,614	0.13
7	23,178	0.53
8	6,046	0.13
9	7,815	0.17
10	5,297	0.12
11	7,853	0.18
12	5,743	0.13
13	5,452	0.12
14	5,973	0.14
15	5,263	0.12
16	5,341	0.12
17	5,308	0.12
18	5,779	0.13
19	7,953	0.18
20	5,726	0.13
21	5,444	0.12
22	5,386	0.12
23	6,408	0.15
24	5,899	0.14
25	5,220	0.12
26	5,290	0.12
27	5,538	0.13
28	5,596	0.13
29	5,971	0.14
30	6,059	0.14
31	7,194	0.17
32	7,007	0.16
33	7,003	0.16
34	7,159	0.16
35	8,255	0.19
36	7,859	0.18
37	5,490	0.13
38	5,350	0.12
39	5,651	0.13
40	6,844	0.16

SITE NO.	AREA (SQ.FT.)	AREA (ACRES)
41	6,237	0.14
42	6,357	0.15
43	6,343	0.15
44	5,533	0.13
45	6,247	0.14
46	6,013	0.14
47	5,355	0.12
48	5,614	0.13
49	5,722	0.13
50	7,230	0.16
51	7,539	0.17
52	7,656	0.17
53	6,222	0.14
54	5,778	0.13
55	5,232	0.12
56	7,656	0.17
57	5,350	0.12
58	5,350	0.12
59	5,350	0.12
60	6,148	0.14
61	10,007	0.23
62	9,417	0.22
63	8,940	0.21
64	6,854	0.16
65	5,428	0.12
66	7,380	0.17
67	9,113	0.21
68	9,492	0.22
69	7,556	0.17
70	5,350	0.12
71	5,630	0.13
72	5,640	0.13
73	5,518	0.13
74	5,670	0.13
75	5,670	0.13
76	5,529	0.13
77	5,481	0.13
78	5,491	0.13

OPEN SPACE LEGEND:

- OPEN SPACE PROPOSED FOR CONSERVATION EASEMENT
- OPEN SPACE TO BE MANAGED BY MOBILE HOME PARK MANAGEMENT

SETBACK LEGEND:

NON-DISTURBANCE SETBACK:

- 75' EMERGENT WETLAND SETBACK
- 100' STREAM SETBACK
- 25' WETLAND SETBACK
- 100' BUILDING SETBACK

LEGEND

- N/F — NOW OF FORMERLY
- Y.C.R.D. — YORK COUNTY REGISTRY OF DEEDS
- PROPERTY LINE
- APPROXIMATE ADJACENT PROPERTY LINE
- DRILL HOLE (AS NOTED)
- BOUND (AS NOTED)
- EXISTING STONE WALL
- EXISTING TREE LINE
- MOBILE HOME PARK SITE
- MOBILE HOME PARK SITE SETBACK

OWNER:

STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
1571 BELLEVUE AVENUE
SUITE 210
WEST VANCOUVER, B.C. V7V1A6

ENGINEER:

CIVIL CONSULTANTS
P.O. BOX 100
293 MAIN STREET
SOUTH BERWICK, ME 03908

SURVEY NOTE:

THE PROPERTY LINES DEPICTED HEREON ARE BASED SOLELY ON REFERENCE PLANS 1 AND 2 AND FIELD LOCATION (IF A SAMPLING OF MONUMENTATION DEPICTED ON SAID PLANS. AT THIS TIME, THE POSITION OF EVERY MONUMENT ON REFERENCE PLANS 1 AND 2 HAS NOT BEEN INDEPENDENTLY VERIFIED. DEED RESEARCH BY CIVIL CONSULTANTS HAS BEEN LIMITED TO THE TIME PERIOD BETWEEN MARCH, 1995 (DATE OF REFERENCE PLAN 2) AND NOVEMBER 13, 2015. CIVIL CONSULTANTS HAS NOT PERFORMED AN INDEPENDENT BOUNDARY RETRACEMENT SURVEY.

PLAN APPROVED BY TOWN OF KITTERY PLANNING BOARD

CHAIRMAN

DATE:

STATE OF MAINE
YORK COUNTY ss. REGISTRY OF DEEDS
RECEIVED_____, 20____
AT ___h___m___M, AND RECORDED IN
PLAN BOOK_____, PAGE_____

ATTEST_____REGISTER

REFERENCE PLANS:

1. "ALTA/ACSM LAND TITLE SURVEY OF PROPERTY LOCATED ON 3 IDLE WOOD LANE, KITTERY, YORK COUNTY, MAINE, PREPARED FOR: STEPHEN HYNES, C/O TANGLEWOOD ESTATES, 10 SPARROW STREET, KEENE, NH 03431", DATED DECEMBER 29, 2005, LAST REVISED FEBRUARY 17, 2006, PREPARED BY SGC ENGINEERING, LLC. PLAN RECORDED AT THE YORK COUNTY REGISTRY OF DEEDS IN PLAN BOOK 311 PAGE 3.
2. "STANDARD BOUNDARY SURVEY OF YANKEE COMMONS MOBILE HOME PARK, IDLEWOOD LANE, KITTERY, MAINE", DATED MARCH, 1995, PREPARED BY ANDERSON LIVINGSTON ENGINEERS, INC.
3. "REVISED COMPILED BOUNDARY AND EXISTING CONDITIONS PLAN OF LAND OF STEPHEN A. HYNES, TRUSTEE IDLEWOOD LANE / U.S. ROUTE ONE TOWN OF KITTERY, YORK COUNTY, MAINE", BY CIVIL CONSULTANTS, DATED: MAY 22, 2012. PLAN TO BE RECORDED.

OPEN SPACE CALCULATION:

OPEN SPACE REQUIRED (10% OF ACTUAL LOT AREA):

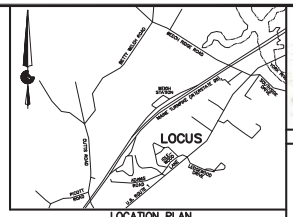
TOTAL AREA OF SITES (SITES 1–78) = 507,195 SQ.FT.
10% OF TOTAL AREA OF SITES = 50,720 SQ.FT.

OPEN SPACE PROVIDED:

CONSERVATION EASEMENT = 1,220,551 SQ.FT.
YANKEE COMMONS MANAGED = 284,490 SQ.FT.
TOTAL OPEN SPACE = 1,505,041 SQ.FT. > 50,720 SQ.FT. = O.K.

ACTIVE OPEN SPACE (50% OF REQUIRED OPEN SPACE):
REQUIRED = 25,360 SQ.FT.

ACTIVE OPEN SPACE PROVIDED:
PROVIDED YANKEE COMMONS OPEN SPACE = 27,260 SQ.FT. > 25,360 SQ.FT. = O.K.



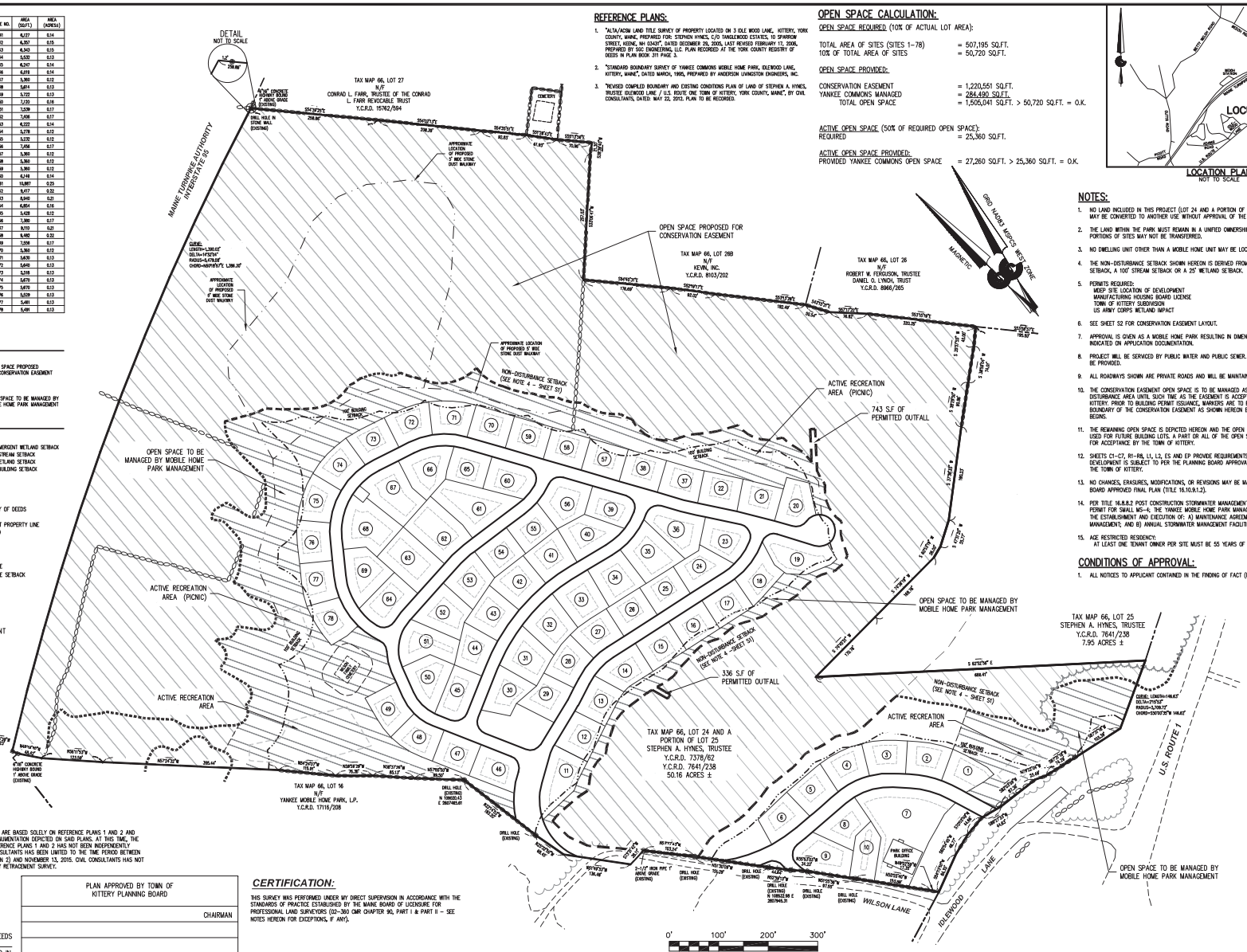
LOCATION PLAN
NOT TO SCALE

NOTES:

1. NO LAND INCLUDED IN THIS PROJECT (LOT 24 AND A PORTION OF LOT 25 AS SHOWN HEREON) MAY BE CONVERTED TO ANOTHER USE WITHOUT APPROVAL OF THE PLANNING BOARD.
2. THE LAND WITHIN THE PARK MUST REMAIN IN A UNIFIED OWNERSHIP AND THE FEE TO SITES OR PORTIONS OF SITES MAY NOT BE TRANSFERRED.
3. NO DWELLING UNIT OTHER THAN A MOBILE HOME UNIT MAY BE LOCATED WITHIN THE PARK.
4. THE NON-DISTURBANCE SETBACK SHOWN HEREON IS DERIVED FROM A 75' EMERGENT WETLAND SETBACK, A 100' STREAM SETBACK OR A 25' WETLAND SETBACK.
5. PERMITS REQUIRED:
   MDEP SITE LOCATION OF DEVELOPMENT
   MANUFACTURING HOUSING BOARD LICENSE
   TOWN OF KITTERY SUBDIVISION
   US ARMY CORPS WETLAND IMPACT
6. SEE SHEET S2 FOR CONSERVATION EASEMENT LAYOUT.
7. APPROVAL IS GIVEN AS A MOBILE HOME PARK RESULTING IN DIMENSIONAL REDUCTIONS AS INDICATED ON APPLICATION DOCUMENTATION.
8. PROJECT WILL BE SERVICED BY PUBLIC WATER AND PUBLIC SEWER. UNDERGROUND UTILITIES WILL BE PROVIDED.
9. ALL ROADWAYS SHOWN ARE PRIVATE ROADS AND WILL BE MAINTAINED AS PRIVATE ROADS.
10. THE CONSERVATION EASEMENT OPEN SPACE IS TO BE MANAGED AS A NO CUT/ NO DISTURBANCE AREA UNTIL SUCH TIME AS THE EASEMENT IS ACCEPTED BY THE TOWN OF KITTERY. PRIOR TO BUILDING PERMIT ISSUANCE, MARKERS ARE TO BE INSTALLED ALONG THE BOUNDARY OF THE CONSERVATION EASEMENT AS SHOWN HEREON BEFORE CONSTRUCTION BEGINS.
11. THE REMAINING OPEN SPACE IS DEPICTED HEREON AND THE OPEN SPACE SHOWN MAY NOT BE USED FOR FUTURE BUILDING LOTS. A PART OR ALL OF THE OPEN SPACE MAY BE DEDICATED FOR ACCEPTANCE BY THE TOWN OF KITTERY.
12. SHEETS C1–C7, R1–R8, L1, L2, ES AND EP PROVIDE REQUIREMENTS AND DETAILS THAT THE DEVELOPMENT IS SUBJECT TO PER THE PLANNING BOARD APPROVAL AND ARE ON RECORD AT THE TOWN OF KITTERY.
13. NO CHANGES, ERASURES, MODIFICATIONS, OR REVISIONS MAY BE MADE TO ANY PLANNING BOARD APPROVED FINAL PLAN (TITLE 16.10.9.1.2).
14. PER TITLE 16.8.8.2 POST CONSTRUCTION STORMWATER MANAGEMENT AND THE MDEP GENERAL PERMIT FOR SMALL MS-4, THE YANKEE MOBILE HOME PARK MANAGEMENT IS RESPONSIBLE FOR THE ESTABLISHMENT AND EXECUTION OF: A) MAINTENANCE AGREEMENT FOR STORMWATER MANAGEMENT; AND B) ANNUAL STORMWATER MANAGEMENT FACILITIES CERTIFICATION.
15. AGE RESTRICTED REGIDENCY:
    AT LEAST ONE TENANT OWNER PER SITE MUST BE 55 YEARS OF AGE OR OLDER.

CONDITIONS OF APPROVAL:

1. ALL NOTICES TO APPLICANT CONTAINED IN THE FINDING OF FACT (DATED: XX/XX/XXXX)



TAX MAP 66, LOT 24 & A PORTION OF LOT 25

CERTIFICATION:

THIS SURVEY WAS PERFORMED UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH THE STANDARDS OF PRACTICE ESTABLISHED BY THE MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS (02-380 CMR CHAPTER 90, PART I & PART II – SEE NOTES HEREON FOR EXCEPTIONS, IF ANY).

MICHAEL P. PEVERETT — DATE
MAINE PROFESSIONAL LAND SURVEYOR #2362
CIVIL CONSULTANTS
SOUTH BERWICK, MAINE 03908

© CIVIL CONSULTANTS

CIVIL CONSULTANTS
Engineers
Planners
Surveyors
P.O. Box 100
South Berwick
Maine
03908
207-384-2550
civcon@civcon.com

NO.	REVISIONS	INT.	DATE
1			

FINAL PLAN – YANKEE COMMONS
MOBILE HOME PARK EXPANSION (2015)
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS:1571 BELLEVUE AVE., SUITE 210 WEST VANCOUVER, B.C. V7V1A6

CIVIL CONSULTANTS

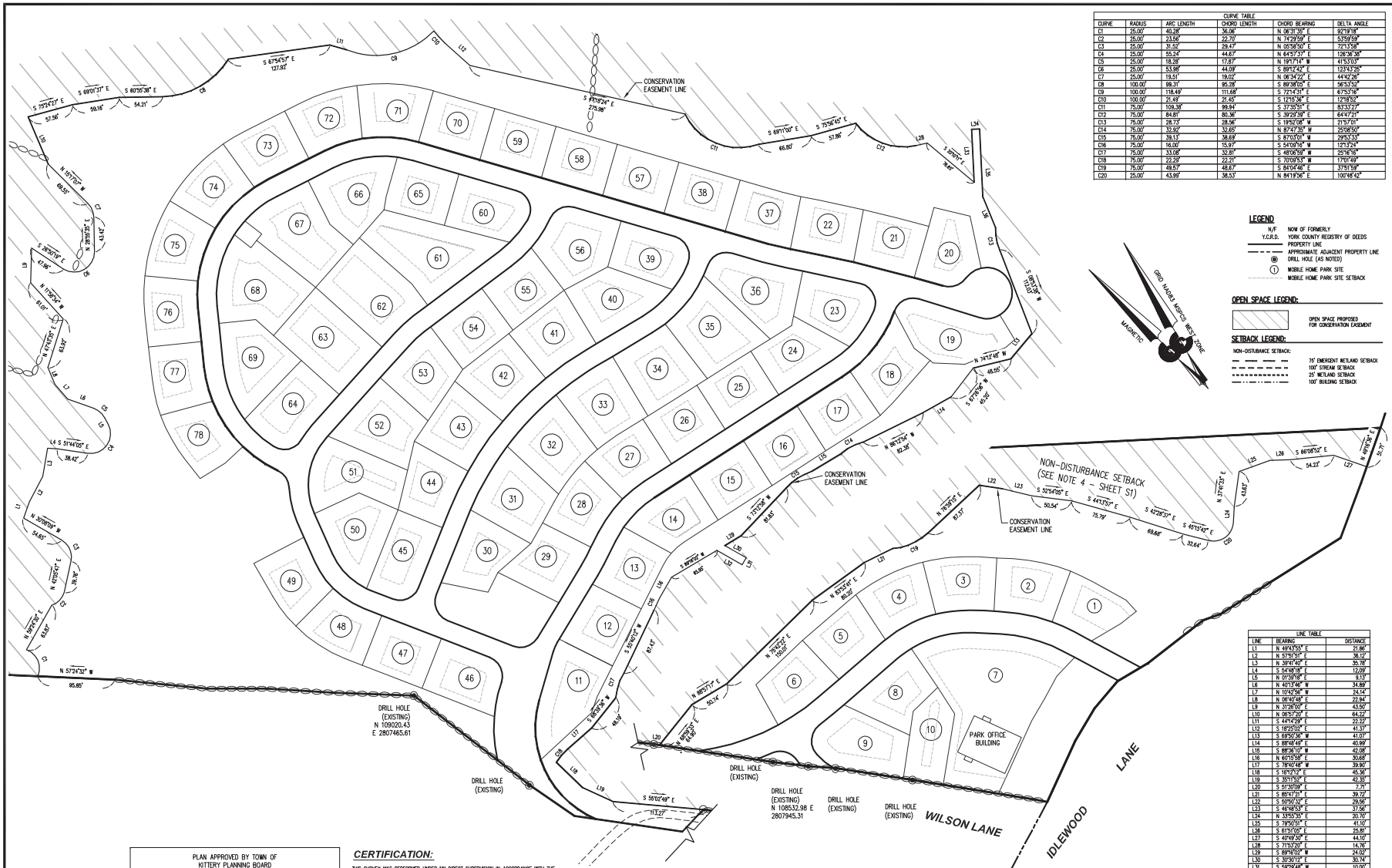
DRAWN JAA	CALC.
DATE 19 NOVEMBER 2015	
CHECKED	
APPROVED	
SCALE 1"=100'	

SHEET TITLE:
SUBDIVISION PLAN

SHEET NUMBER:
S1

SHEET 1 of 3

PROJECT # 06-684.02



CURVE TABLE					
CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	25.00'	40.28'	36.08'	N 06°31'35" E	92°19'18"
C2	25.00'	23.56'	22.70'	N 74°29'59" E	53°59'59"
C3	25.00'	31.52'	29.47'	N 05°58'50" E	72°13'58"
C4	25.00'	55.24'	44.67'	N 64°57'37" E	126°36'38"
C5	25.00'	18.28'	17.87'	N 19°7'14" W	41°53'03"
C6	25.00'	53.98'	44.09'	S 69°12'42" E	123°43'25"
C7	25.00'	19.51'	19.02'	N 06°34'22" E	44°42'26"
C8	100.00'	99.31'	95.28'	S 89°38'05" E	56°53'52"
C9	100.00'	118.49'	111.68'	S 72°14'51" E	67°53'16"
C10	100.00'	21.49'	21.45'	S 12°15'36" E	12°18'52"
C11	75.00'	109.38'	99.94'	S 37°35'51" E	83°33'27"
C12	75.00'	84.81'	80.36'	S 39°29'39" E	64°47'21"
C13	75.00'	28.73'	28.56'	S 19°52'08" W	21°57'01"
C14	75.00'	32.92'	32.65'	N 87°47'35" W	25°08'50"
C15	75.00'	39.13'	38.69'	S 87°03'01" W	29°53'33"
C16	75.00'	16.00'	15.97'	S 54°06'16" W	12°13'24"
C17	75.00'	33.08'	32.81'	S 48°06'59" W	25°16'16"
C18	75.00'	22.29'	22.21'	S 70°09'53" W	17°01'49"
C19	75.00'	49.57'	48.67'	S 84°04'46" E	37°51'59"
C20	25.00'	43.99'	38.53'	N 84°19'56" E	100°48'42"

LEGEND

N/F	NOW OF FORMERLY
Y.C.R.D.	YORK COUNTY REGISTRY OF DEEDS
	PROPERTY LINE
	APPROXIMATE ADJACENT PROPERTY LINE
	DRILL HOLE (AS NOTED)
1	MOBILE HOME PARK SITE
	MOBILE HOME PARK SITE SETBACK

OPEN SPACE LEGEND:

OPEN SPACE PROPOSED FOR CONSERVATION EASEMENT

SETBACK LEGEND:

NON-DISTURBANCE SETBACK:

- 75' EMERGENT WETLAND SETBACK
- 100' STREAM SETBACK
- 25' WETLAND SETBACK
- 100' BUILDING SETBACK

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N 49°43'55" E	21.86'
L2	N 57°51'01" E	36.12'
L3	N 39°47'40" E	35.78'
L4	S 54°48'18" E	12.09'
L5	N 01°39'18" E	9.13'
L6	N 40°13'46" W	34.89'
L7	N 10°42'56" W	24.14'
L8	N 06°40'48" E	22.94'
L9	N 31°26'00" E	43.50'
L10	N 06°57'20" E	64.22'
L11	S 44°14'29" E	22.22'
L12	S 16°25'02" E	41.37'
L13	S 69°50'36" W	41.07'
L14	S 88°48'49" E	40.99'
L15	S 88°36'10" W	42.08'
L16	N 60°15'58" E	30.68'
L17	S 78°40'48" W	39.90'
L18	S 16°12'12" E	45.36'
L19	S 35°17'52" E	42.33'
L20	S 51°30'09" E	7.71'
L21	S 85°47'31" E	39.72'
L22	S 50°50'32" E	29.56'
L23	S 46°48'53" E	37.56'
L24	N 33°55'35" E	20.70'
L25	S 79°50'51" E	41.10'
L26	S 61°51'05" E	25.81'
L27	S 40°49'30" E	44.10'
L28	S 71°53'20" E	14.76'
L29	S 89°16'02" W	24.02'
L30	S 30°30'12" E	30.74'
L31	S 59°29'48" W	10.00'
L32	N 30°30'12" W	36.46'
L33	N 27°20'15" E	66.32'
L34	S 62°39'45" E	10.00'
L35	S 27°20'15" W	84.82'
L36	S 07°36'32" W	41.87'

PLAN APPROVED BY TOWN OF KITTERY PLANNING BOARD

CHAIRMAN

DATE:

STATE OF MAINE
YORK COUNTY ss. REGISTRY OF DEEDS
RECEIVED_____, 20____
AT___h___m___M, AND RECORDED IN
PLAN BOOK_____, PAGE_____

ATTEST_____REGISTER

CERTIFICATION:

THIS SURVEY WAS PERFORMED UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH THE STANDARDS OF PRACTICE ESTABLISHED BY THE MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS (02-380 CMR CHAPTER 90, PART I & PART II – SEE NOTES HEREON FOR EXCEPTIONS, IF ANY).

MICHAEL P. PEVERETT
MAINE PROFESSIONAL LAND SURVEYOR #2362
CIVIL CONSULTANTS
SOUTH BERWICK, MAINE 03908

DATE

0' 60' 120' 180'

TAX MAP 66, LOT 24 &
A PORTION OF LOT 25

© CIVIL CONSULTANTS

CIVIL CONSULTANTS
Engineers
Planners
Surveyors
P.O. Box 100
South Berwick
Maine
03908
207-384-2550
civcon@civcon.com

NO.	REVISIONS	INT.	DATE
1			

FINAL PLAN – YANKEE COMMONS MOBILE HOME PARK EXPANSION (2015)

IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS: 1571 BELLEVUE AVE., SUITE 210 WEST VANCOUVER, B.C. V7V1A6

CIVIL CONSULTANTS

DRAWN JAA CALC.
DATE 19 NOVEMBER 2015
CHECKED
APPROVED
SCALE 1"=60'

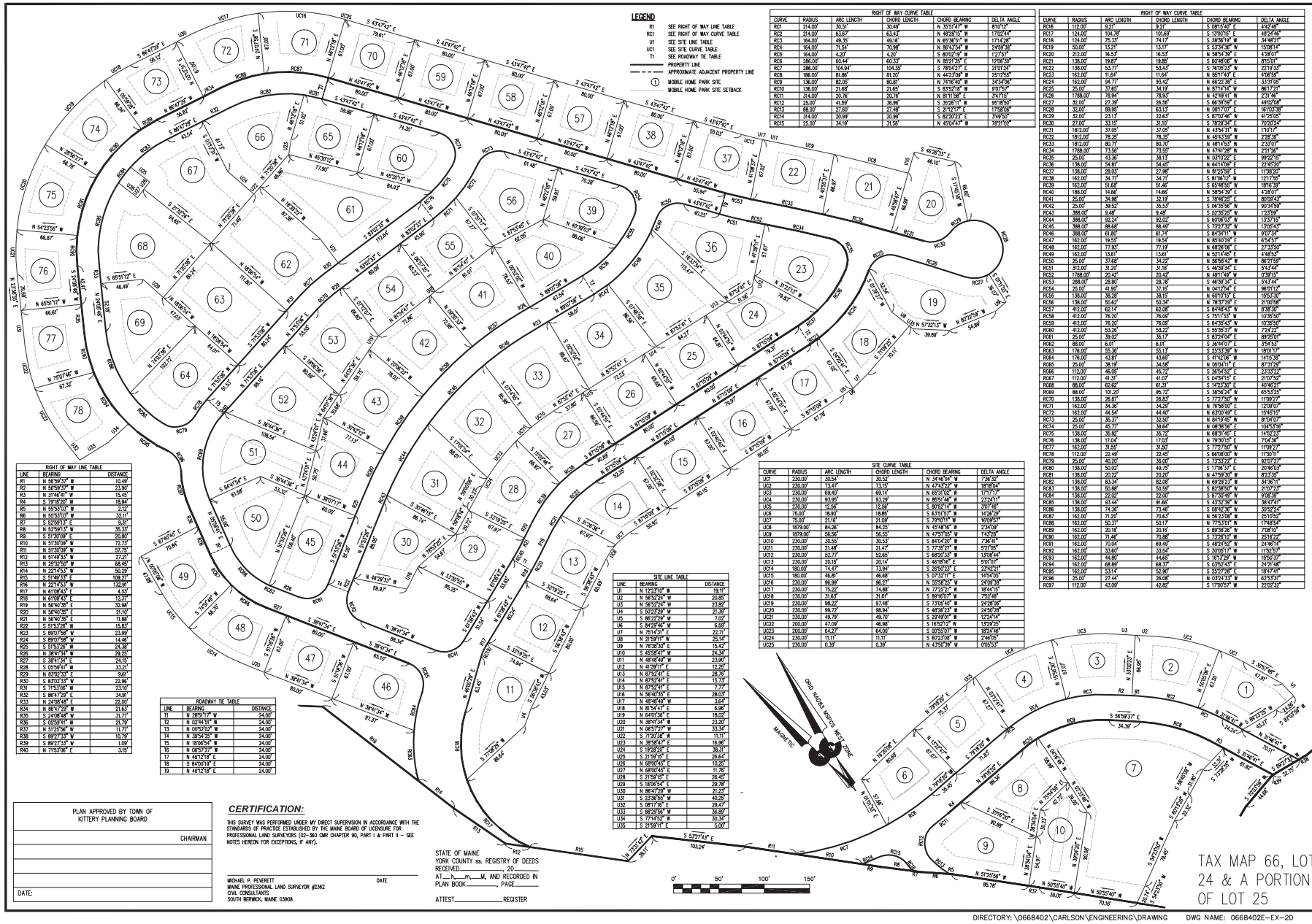
SHEET TITLE:
SUBDIVISION PLAN
SITE LAYOUT

SHEET NUMBER:
S2

SHEET 2 of 3

PROJECT # 06-684.02

DIRECTORY: \0668402\CARLSON\ENGINEERING\DRAWING DWG NAME: 0668402E-EX-2D DATE: 11/19/2015



LEGEND

R1	SEE RIGHT OF WAY LINE TABLE
RC1	SEE RIGHT OF WAY CURVE TABLE
U1	SEE SITE LINE TABLE
UC1	SEE SITE CURVE TABLE
T1	SEE ROADWAY TIE TABLE
	PROPERTY LINE
	APPROXIMATE ADJACENT PROPERTY LINE
1	MOBILE HOME PARK SITE
	MOBILE HOME PARK SITE SETBACK

RIGHT OF WAY CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
RC1	214.00'	30.51'	30.49'	N 35°51'47" W	8°10'12"
RC2	214.00'	63.67'	63.43'	N 48°28'15" W	17°02'44"
RC3	164.00'	49.35'	49.16'	N 65°36'51" W	17°14'28"
RC4	164.00'	71.54'	70.98'	N 86°43'54" W	24°59'38"
RC5	164.00'	4.20'	4.20'	S 80°02'19" W	1°27'57"
RC6	286.00'	60.44'	60.33'	N 85°21'35" E	12°06'30"
RC7	286.00'	104.94'	104.35'	S 78°04'27" E	21°01'24"
RC8	186.00'	81.86'	81.20'	N 44°23'09" W	25°12'50"
RC9	136.00'	82.05'	80.81'	N 74°16'40" W	34°34'06"
RC10	136.00'	21.68'	21.65'	S 83°52'18" W	9°07'52"
RC11	314.00'	20.78'	20.78'	N 81°11'58" E	3°47'15"
RC12	25.00'	41.59'	36.96'	S 35°28'11" W	95°18'50"
RC13	88.00'	27.60'	27.48'	S 21°12'17" E	17°58'08"
RC14	314.00'	30.99'	30.99'	S 83°09'33" E	5°49'50"
RC15	25.00'	34.19'	31.58'	N 45°04'47" W	78°31'02"

RIGHT OF WAY CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
RC16	112.00'	9.31'	9.31'	S 08°15'40" E	4°47'49"
RC17	124.00'	104.76'	101.69'	S 17°07'15" E	48°24'46"
RC18	124.00'	75.33'	74.17'	S 28°36'19" W	34°48'21"
RC19	50.00'	13.21'	13.17'	S 53°34'36" W	15°08'14"
RC20	212.00'	16.53'	16.53'	N 58°54'39" E	4°28'07"
RC21	138.00'	19.87'	19.85'	S 60°48'08" W	8°12'01"
RC22	138.00'	53.77'	53.43'	S 76°05'23" W	22°19'33"
RC23	162.00'	11.64'	11.64'	N 85°11'40" E	4°06'59"
RC24	162.00'	94.77'	93.42'	N 66°22'38" E	33°31'05"
RC25	25.00'	37.65'	34.19'	N 87°14'14" W	86°17'21"
RC26	1788.00'	78.94'	78.93'	N 42°49'41" W	2°31'46"
RC27	32.00'	27.39'	26.56'	S 66°26'59" E	49°02'08"
RC28	32.00'	89.95'	63.13'	N 08°17'07" E	161°03'38"
RC29	32.00'	23.13'	22.63'	S 67°07'46" W	41°25'05"
RC30	27.00'	33.15'	31.10'	S 78°29'34" E	70°20'24"
RC31	1812.00'	37.05'	37.05'	N 43°54'31" W	1°10'17"
RC32	1812.00'	78.35'	78.35'	N 45°43'09" W	2°28'36"
RC33	1812.00'	80.71'	80.70'	N 48°14'53" W	2°33'07"
RC34	1788.00'	73.56'	73.55'	N 47°41'28" W	2°21'26"
RC35	25.00'	43.36'	38.13'	N 03°07'22" E	99°22'15"
RC36	138.00'	54.81'	54.45'	N 64°41'09" E	22°45'20"
RC37	138.00'	28.03'	27.98'	N 82°25'09" E	11°38'20"
RC38	162.00'	34.77'	34.71'	S 81°38'12" W	12°17'55"
RC39	162.00'	51.68'	51.46'	S 65°48'55" W	18°16'39"
RC40	188.00'	14.66'	14.66'	N 58°54'39" E	4°28'07"
RC41	25.00'	34.98'	32.19'	S 78°48'23" E	80°09'43"
RC42	25.00'	39.52'	35.53'	S 06°25'56" W	90°54'59"
RC43	388.00'	9.49'	9.49'	S 60°35'25" W	1°23'59"
RC44	388.00'	92.24'	92.02'	S 60°06'03" W	13°37'15"
RC45	388.00'	88.68'	88.49'	S 73°27'32" W	13°05'43"
RC46	388.00'	61.80'	61.74'	S 84°34'11" W	9°07'34"
RC47	162.00'	19.55'	19.54'	N 85°40'29" E	6°54'57"
RC48	162.00'	77.83'	77.19'	N 68°26'06" E	27°33'50"
RC49	162.00'	13.61'	13.61'	N 52°14'45" E	4°48'53"
RC50	25.00'	37.68'	34.22'	N 86°58'43" W	86°21'59"
RC51	312.00'	31.20'	31.18'	S 46°39'34" E	5°43'44"
RC52	1788.00'	20.42'	20.42'	N 49°11'49" W	0°39'15"
RC53	288.00'	28.80'	28.78'	S 46°39'34" E	5°43'44"
RC54	25.00'	41.90'	37.16'	N 04°17'54" E	96°01'12"
RC55	138.00'	38.28'	38.15'	N 60°10'15" E	15°53'30"
RC56	138.00'	50.62'	50.34'	N 78°37'29" E	21°00'58"
RC57	412.00'	62.14'	62.08'	S 84°46'43" W	8°38'30"
RC58	412.00'	76.20'	76.09'	S 75°11'33" W	10°35'50"
RC59	412.00'	76.20'	76.09'	S 64°35'43" W	10°35'50"
RC60	412.00'	53.26'	53.22'	S 55°55'19" W	7°24'22"
RC61	25.00'	39.02'	35.17'	S 83°24'04" E	89°28'01"
RC62	88.00'	6.01'	6.01'	S 36°44'07" E	3°54'53"
RC63	176.00'	55.36'	55.13'	S 25°33'36" W	18°01'17"
RC64	176.00'	43.81'	43.69'	S 41°42'06" W	14°15'38"
RC65	25.00'	38.19'	34.58'	N 06°04'11" E	87°31'29"
RC66	112.00'	46.06'	45.72'	S 26°54'52" E	23°33'22"
RC67	112.00'	41.31'	41.07'	S 04°34'15" E	21°07'52"
RC68	88.00'	62.62'	61.31'	S 14°23'30" E	40°46'21"
RC69	88.00'	101.00'	95.72'	S 36°56'24" W	65°37'25"
RC70	138.00'	26.87'	26.83'	S 77°27'50" W	11°09'27"
RC71	162.00'	34.36'	34.29'	N 76°58'00" E	12°08'07"
RC72	162.00'	44.54'	44.40'	N 63°00'49" E	15°45'15"
RC73	25.00'	35.37'	32.50'	N 84°19'45" W	81°04'07"
RC74	25.00'	45.77'	39.84'	N 08°38'56" E	104°53'16"
RC75	138.00'	35.82'	35.72'	N 68°31'45" E	14°52'23"
RC76	138.00'	17.04'	17.03'	N 79°30'15" E	7°04'36"
RC77	162.00'	31.55'	31.50'	S 72°27'50" W	11°09'27"
RC78	112.00'	22.49'	22.45'	S 66°08'07" W	11°30'11"
RC79	25.00'	40.20'	36.00'	S 33°33'22" E	92°07'37"
RC80	138.00'	50.02'	49.75'	S 17°06'37" E	20°46'03"
RC81	138.00'	20.22'	20.20'	N 47°59'06" W	8°23'36"
RC82	138.00'	83.34'	82.06'	N 69°29'23" W	34°36'11"
RC83	138.00'	50.88'	50.59'	S 83°38'50" W	21°07'23"
RC84	138.00'	22.02'	22.00'	S 67°30'49" W	9°08'39"
RC85	138.00'	93.44'	91.66'	S 43°32'59" W	38°47'41"
RC86	138.00'	74.36'	73.48'	S 08°42'36" W	30°52'24"
RC87	162.00'	71.20'	70.63'	N 06°23'08" W	25°10'52"
RC88	162.00'	50.37'	50.17'	N 77°57'01" W	17°48'54"
RC89	162.00'	20.16'	20.16'	S 89°38'26" W	7°08'10"
RC90	162.00'	71.46'	70.88'	S 73°26'10" W	25°16'32"
RC91	162.00'	70.04'	69.49'	S 48°24'52" W	24°46'14"
RC92	162.00'	33.60'	33.54'	S 30°05'17" W	11°52'57"
RC93	162.00'	44.80'	44.65'	S 16°13'29" W	15°50'37"
RC94	162.00'	44.80'	44.65'	S 03°52'43" E	15°50'37"
RC95	162.00'	53.14'	52.90'	S 25°27'28" E	18°47'41"
RC96	25.00'	27.44'	26.08'	N 03°24'33" W	62°53'31"
RC97	112.00'	43.09'	42.82'	S 17°05'57" W	22°02'32"

RIGHT OF WAY LINE TABLE

LINE	BEARING	DISTANCE
R1	N 56°59'37" W	10.49'
R2	N 56°59'37" W	23.90'
R3	N 31°46'41" W	15.45'
R4	S 79°18'20" W	18.94'
R5	N 55°53'03" W	2.12'
R6	N 55°53'03" W	33.11'
R7	S 52°59'13" E	9.31'
R8	N 52°59'13" W	35.33'
R9	S 51°30'09" E	20.80'
R10	N 51°30'09" W	72.73'
R11	N 51°30'09" W	57.75'
R12	N 51°45'53" W	27.21'
R13	N 29°33'50" W	68.45'
R14	N 22°14'53" W	50.29'
R15	S 51°48'53" E	109.27'
R16	N 22°14'53" W	132.96'
R17	N 61°08'43" E	4.53'
R18	N 61°08'43" E	12.37'
R19	N 56°40'35" E	32.98'
R20	N 56°40'35" E	21.10'
R21	N 56°40'35" E	11.88'
R22	S 51°57'26" W	15.83'
R23	S 89°07'58" W	23.99'
R24	S 89°07'58" W	14.46'
R25	S 51°57'26" W	24.38'
R26	N 38°41'34" W	29.25'
R27	S 38°41'34" E	24.15'
R28	S 00°56'41" W	33.21'
R29	N 83°02'33" E	9.61'
R30	S 83°02'33" W	22.96'
R31	S 71°53'08" W	23.10'
R32	S 88°47'29" E	34.91'
R33	N 24°08'48" E	22.00'
R34	N 88°47'29" W	21.63'
R35	S 24°08'48" W	31.77'
R36	S 00°56'41" W	21.79'
R37	N 51°25'56" W	11.77'
R38	S 89°27'33" W	10.79'
R39	S 89°27'33" W	1.09'
R40	N 71°53'08" E	3.15'

SITE CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
UC1	230.00'	30.54'	30.52'	N 34°46'04" W	7°36'32"
UC2	230.00'	73.47'	73.15'	N 47°43'22" W	18°18'04"
UC3	230.00'	69.40'	69.14'	N 65°31'02" W	17°17'17"
UC4	230.00'	93.95'	93.29'	N 85°51'46" W	23°24'11"
UC5	230.00'	12.56'	12.56'	S 80°52'14" W	3°07'48"
UC6	75.00'	18.90'	18.85'	S 63°01'57" W	14°26'29"
UC7	75.00'	21.16'	21.09'	S 78°10'11" W	16°09'57"
UC8	1879.00'	84.36'	84.35'	N 45°48'16" W	2°34'09"
UC9	1879.00'	56.56'	56.55'	N 47°57'05" W	1°43'28"
UC10	230.00'	30.55'	30.53'	S 84°04'20" W	7°36'41"
UC11	230.00'	21.48'	21.47'	S 77°35'27" W	5°21'05"
UC12	230.00'	52.77'	52.65'	S 68°02'34" W	13°08'44"
UC13	230.00'	20.15'	20.14'	S 46°18'16" E	5°01'07"
UC14	180.00'	74.47'	73.94'	S 26°50'23" E	23°42'21"
UC15	180.00'	46.86'	46.68'	S 07°21'11" E	14°54'26"
UC16	230.00'	96.99'	96.27'	N 55°58'25" W	24°09'38"
UC17	230.00'	75.22'	74.88'	N 77°25'21" W	18°44'15"
UC18	230.00'	31.83'	31.81'	S 89°16'10" W	7°52'48"
UC19	230.00'	98.22'	97.48'	S 73°09'40" W	24°28'06"
UC20	230.00'	99.72'	98.94'	S 48°26'23" W	24°50'28"
UC21	230.00'	49.79'	49.70'	S 29°49'01" W	12°24'14"
UC22	200.00'	47.09'	46.98'	S 16°52'12" W	13°29'25"
UC23	200.00'	64.27'	64.00'	S 00°50'07" W	18°24'46"
UC24	230.00'	11.11'	11.11'	S 60°23'06" W	2°46'05"
UC25	230.00'	0.39'	0.39'	N 43°50'39" W	0°05'53"

SITE LINE TABLE

LINE	BEARING	DISTANCE
U1	N 12°23'10" W	19.11'
U2	N 56°52'24" W	20.85'
U3	N 56°52'24" W	23.85'
U4	S 50°23'29" W	21.39'
U5	S 86°22'28" W	7.02'
U6	S 84°29'46" W	6.58'
U7	N 75°14'31" E	22.71'
U8	N 21°59'11" W	25.14'
U9	N 78°36'30" E	15.42'
U10	S 45°58'47" W	24.34'
U11	N 48°48'49" W	23.90'
U12	N 61°39'11" E	12.25'
U13	N 87°52'41" E	28.78'
U14	N 87°52'41" E	15.73'
U15	N 87°52'41" E	7.77'
U16	N 56°40'35" E	28.03'
U17	N 48°48'49" W	3.64'
U18	N 81°54'47" E	6.98'
U19	N 64°01'36" E	18.02'
U20	N 38°41'34" W	23.20'
U21	N 08°57'27" W	33.34'
U22	S 71°20'38" W	11.11'
U23	N 38°58'47" E	16.96'
U24	S 19°28'20" E	38.31'
U25	S 21°59'15" E	26.64'
U26	N 68°00'45" E	10.25'
U27	N 68°00'45" E	11.70'
U28	S 21°59'15" E	26.45'
U29	S 18°06'54" E	28.78'
U30	N 86°47'29" W	21.23'
U31	S 23°36'59" W	40.25'
U32	S 08°17'16" E	29.47'
U33	S 88°29'56" W	36.86'
U34	S 77°14'52" W	30.34'
U35	S 21°59'11" E	5.00'

ROADWAY TIE TABLE

LINE	BEARING	DISTANCE
T1	N 28°51'17" W	24.00'
T2	N 02°46'51" W	24.00'
T3	N 00°52'00" W	24.00'
T4	N 39°54'25" W	24.00'
T5	N 18°06'54" W	24.00'
T6	N 06°57'27" W	24.00'
T7	N 46°12'18" E	24.00'
T8	S 84°00'18" E	24.00'
T9	N 46°12'18" E	24.00'

PLAN APPROVED BY TOWN OF KITTERY PLANNING BOARD

CHAIRMAN

DATE:

CERTIFICATION:

THIS SURVEY WAS PERFORMED UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH THE STANDARDS OF PRACTICE ESTABLISHED BY THE MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS (02-380 CMR CHAPTER 90, PART I & PART II – SEE NOTES HEREON FOR EXCEPTIONS, IF ANY).

MICHAEL P. PEVERETT — DATE
MAINE PROFESSIONAL LAND SURVEYOR #2362
CIVIL CONSULTANTS
SOUTH BERWICK, MAINE 03908

STATE OF MAINE
YORK COUNTY ss. REGISTRY OF DEEDS
RECEIVED_____, 20_____
AT___h___m___M, AND RECORDED IN PLAN BOOK_____, PAGE_____

ATTEST_____REGISTER

© CIVIL CONSULTANTS

CIVIL CONSULTANTS
Engineers
Planners
Surveyors
P.O. Box 100
South Berwick
Maine
03908
207-384-2550
civcon@civcon.com

NO.	REVISIONS	INT.	DATE
1			

FINAL PLAN – YANKEE COMMONS
MOBILE HOME PARK EXPANSION (2015)
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS: 1571 BELLEVUE AVE., SUITE 210 WEST VANCOUVER, B.C. V7V1A6

CIVIL CONSULTANTS

DRAWN JAA — CALC.
DATE 19 NOVEMBER 2015
CHECKED
APPROVED
SCALE 1"=50'

SHEET TITLE:
SUBDIVISION PLAN
SITE DETAIL
LAYOUT

SHEET NUMBER:
S3

SHEET 3 of 3
PROJECT # 06-684.02

DIRECTORY: \0668402\CARLSON\ENGINEERING\DRAWING DWG NAME: 0668402E-EX-2D DATE: 11/19/2015

SURVEY NOTES:

1. PLANIMETRIC AND TOPOGRAPHIC DETAIL WITHIN THE U.S. ROUTE ONE RIGHT-OF-WAY AS DEPICTED HEREON IS BASED ON AN ON-THE-GROUND FIELD SURVEY BY CIVIL CONSULTANTS BETWEEN SEPTEMBER, 2007 AND JANUARY, 2008. PLANIMETRIC AND TOPOGRAPHIC DETAIL ON THE REMAINDER OF THE SITE IS DIGITIZED FROM REFERENCE PLANS 3 AND 4.
2. BEARINGS AS DEPICTED HEREON ARE REFERENCED TO GRID NORTH, MAINE, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE (EPOCH 2002.0). COORDINATE VALUES AND ORIENTATION ARE DERIVED FROM A GPS SURVEY COMPUTED UTILIZING THE NGS OPUS ON-LINE PROCESSING SERVICE. THE SURVEY IS TIED TO CORS STATIONS BOSTON MAS 1 CORS (2BM1), BARTLETT CORS (BARN) AND BRUNSWICK 1 CORS (BRU1). DISTANCES DEPICTED HEREON ARE GRID. TO CONVERT GRID DISTANCES TO GROUND DISTANCES, MULTIPLY THE GRID DISTANCE BY 1.0000077300 (AVERAGE COMBINED SCALE FACTOR FOR THE SITE).
3. ELEVATIONS DEPICTED HEREON ARE BASED ON NGVD29 AS DERIVED FROM TIES TO BENCHMARKS DEPICTED ON REFERENCE PLANS 3 AND 4. ELEVATIONS WERE CHECKED BY THE ABOVE REFERENCED GPS SURVEY.
4. UTILITY INFORMATION DEPICTED HEREON IS COMPILED USING PHYSICAL EVIDENCE LOCATED IN THE FIELD. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS NEED TO CONTACT DIGSAFE AND FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
5. THE PROPERTY LINES DEPICTED HEREON ARE BASED SOLELY ON REFERENCE PLANS 1 AND 2 AND FIELD LOCATION OF A SAMPLING OF MONUMENTATION DEPICTED ON SAID PLANS AT THIS TIME. THE POSITION OF EVERY MONUMENT ON REFERENCE PLANS 1 AND 2 HAS NOT BEEN INDEPENDENTLY VERIFIED. DEED RESEARCH BY CIVIL CONSULTANTS HAS BEEN LIMITED TO THE TIME PERIOD BETWEEN MARCH, 1995 (DATE OF REFERENCE PLAN 2) AND NOVEMBER 13, 2015. CIVIL CONSULTANTS HAS NOT PERFORMED AN INDEPENDENT BOUNDARY RETRACEMENT SURVEY.
6. WETLAND BOUNDARIES DEPICTED HEREON ARE BASED ON FIELD LOCATION OF WETLAND DELINEATION FLAGS MARKED BY STAN-TEC. FLAGS WERE LOCATED BY CIVIL CONSULTANTS ON OCTOBER 14, 18 AND NOVEMBER 15, 2007 UTILIZING GPS EQUIPMENT GENERALLY CAPABLE OF ATTAINING HORIZONTAL POSITIONS WITH 1-2 METER ACCURACY.
7. TEST PITS DEPICTED HEREON ARE BASED ON FIELD LOCATION OF TEST PITS EXCAVATED BY KENNETH GARDNER, SOILS SCIENTIST. TEST PITS WERE LOCATED BY CIVIL CONSULTANTS ON OCTOBER 16, 18 AND NOVEMBER 15, 2007 UTILIZING GPS EQUIPMENT GENERALLY CAPABLE OF ATTAINING HORIZONTAL POSITIONS WITH 1-2 METER ACCURACY.
8. A PORTION OF THE LOCUS PARCEL IS LOCATED IN "ZONE A" ON THE NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP (FIRM) FOR THE TOWN OF KITTERY, MAINE, YORK COUNTY, COMMUNITY PANEL NUMBER 230171 0001 C, EFFECTIVE DATE JULY 5, 1984. ZONE A IS DEFINED AS "AREAS OF 100-YEAR FLOOD; BASE FLOOD ELEVATIONS AND FLOOD HAZARD FACTORS NOT DETERMINED". THE REMAINDER OF THE SITE IS IN "ZONE C". ZONE C IS DEFINED AS "AREAS OF MINIMAL FLOODING". THE FLOOD ZONE BOUNDARY DEPICTED HEREON IS BASED ON SCANNING AND GEO-REFERENCING THE ABOVE REFERENCED FIRM. THE EASTERLY PORTION OF THE "A ZONE" DOES NOT APPEAR TO MATCH THE PHYSICAL LOCATION OF THE STREAM.
9. ACCORDING TO REFERENCE PLAN 2, THE WILSON FAMILY CEMETERY IS EXCEPTED FROM THE LOCUS PARCEL AND A RIGHT-OF-WAY TO THE CEMETERY WAS RESERVED.

LEGEND:

7378/62	DEED VOLUME / PAGE NUMBER
N/F	NOW OR FORMERLY
S.F.	SQUARE FEET
Y.C.R.D.	YORK COUNTY REGISTRY OF DEEDS
	LIGHT POLE
	UTILITY POLE
	OVERHEAD WIRES
	FIRE HYDRANT
	SANITARY SEWER MANHOLE
	SINGLE AND DOUBLE POST SIGNS
	WETLAND
	TEST PIT
	STONE WALL
	SURVEY BENCHMARK
	TREE LINE
	LOCUS PROPERTY LINE
	APPROXIMATE ADJOINING PROPERTY LINE
	CONTIGUOUS OWNERSHIP
	EXISTING CONTOUR
	STREAM
	ROCK OUTCROP (AS NOTED)
	HIGH INTENSITY SOIL SURVEY
	RESOURCE PROTECTION OVERLAY ZONE 76
	FLOOD ZONE / OVERLAY ZONE RESOURCE PROTECTION

SOILS LEGEND:

Ab– ABRAMS SANDY LOAM, EXCESSIVELY DRAINED
Bk– BECKET, FINE SANDY LOAM, MODERATELY WELL DRAINED
Bd– BIDDEFORD, MUCKY PEAT, VERY POORLY DRAINED
Bu– BUXTON, SILT LOAM, SOMEWHAT POORLY DRAINED
Lo– LAMOINE, SILT LOAM, SOMEWHAT POORLY DRAINED
Ly– LYMAN, FINE SANDY LOAM, SOMEWHAT EXCESSIVLY DRAINED
Md– MADE LAND
Mr– MARLOW, FINE SANDY LOAM, WELL DRAINED
Pr– PERU, FINE SANDY LOAM, MODERATELY WELL DRAINED
Sc– SCANTIC, SILT LOAM, POORLY DRAINED
Sk– SKERRY, FINE SANDY LOAM, MODERATELY WELL DRAINED
Tu– TUNBRIDGE, FINE SANDY LOAM, WELL DRAINED

SOILS SLOPES:

B 0–8%
C 8–15%
D 15–25%%
E >25%

HIGH INTENSITY SOIL SURVEY WAS PERFORMED BY KENNETH GARDNER, NOVEMBER 2007. THE HIGH INTENSITY SOIL SURVEY MEETS THE STANDARD FOR A CLASS B SOIL SURVEY. REFER TO THE HIGH INTENSITY SOILS REPORT FOR SOILS CLASSIFICATIONS AND TEST PIT LOGS.

NOTES:

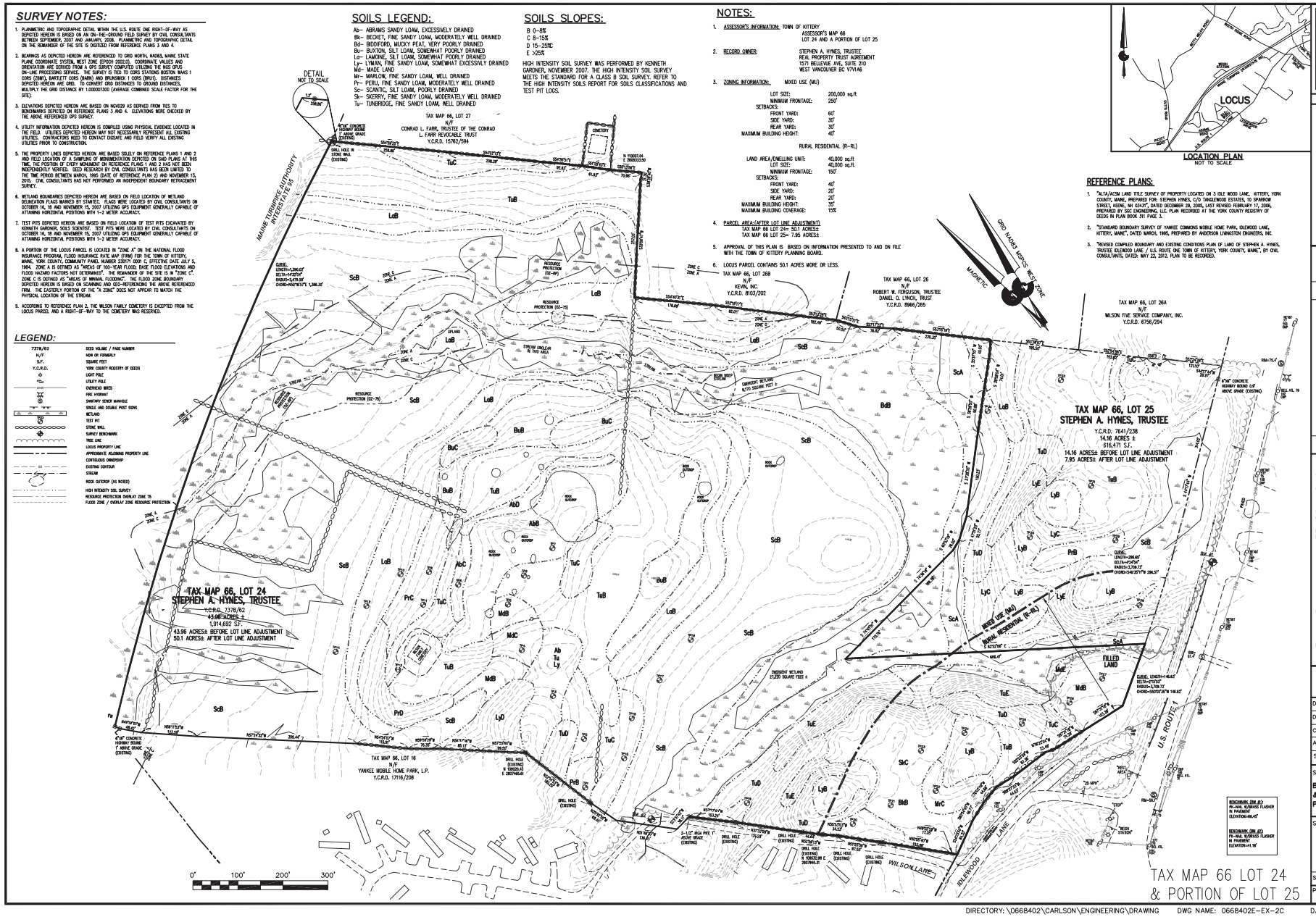
1. ASSESSOR'S INFORMATION: TOWN OF KITTERY
   ASSESSOR'S MAP 66
   LOT 24 AND A PORTION OF LOT 25
2. RECORD OWNER: STEPHEN A. HYNES, TRUSTEE
   REAL PROPERTY TRUST AGREEMENT
   1571 BELLEVUE AVE, SUITE 210
   WEST VANCOUVER BC V7V1A6
3. ZONING INFORMATION: MIXED USE (MU)

LOT SIZE:	200,000 sq.ft
MINIMUM FRONTAGE:	250'
SETBACKS:	
FRONT YARD:	60'
SIDE YARD:	30'
REAR YARD:	30'
MAXIMUM BUILDING HEIGHT:	40'

RURAL RESIDENTIAL (R-RL)

LAND AREA/DWELLING UNIT:	40,000 sq.ft.
LOT SIZE:	40,000 sq.ft.
MINIMUM FRONTAGE:	150'
SETBACKS:	
FRONT YARD:	40'
SIDE YARD:	20'
REAR YARD:	20'
MAXIMUM BUILDING HEIGHT:	35'
MAXIMUM BUILDING COVERAGE:	15%

4. PARCEL AREA (AFTER LOT LINE ADJUSTMENT):
   TAX MAP 66 LOT 24= 50.1 ACRES±
   TAX MAP 66 LOT 25= 7.95 ACRES±
5. APPROVAL OF THIS PLAN IS BASED ON INFORMATION PRESENTED TO AND ON FILE WITH THE TOWN OF KITTERY PLANNING BOARD.
6. LOCUS PARCEL CONTAINS 50.1 ACRES MORE OR LESS.



LOCATION PLAN
NOT TO SCALE

REFERENCE PLANS:

1. "ALTA/ACSM LAND TITLE SURVEY OF PROPERTY LOCATED ON 3 IDLE WOOD LANE, KITTERY, YORK COUNTY, MAINE, PREPARED FOR: STEPHEN HYNES, C/O TANGLEWOOD ESTATES, 10 SPARROW STREET, KEENE, NH 03431", DATED DECEMBER 20, 2005, LAST REVISED FEBRUARY 17, 2006, PREPARED BY SGC ENGINEERING, LLC. PLAN RECORDED AT THE YORK COUNTY REGISTRY OF DEEDS IN PLAN BOOK 311 PAGE 3.
2. "STANDARD BOUNDARY SURVEY OF YANKEE COMMONS MOBILE HOME PARK, IDLEWOOD LANE, KITTERY, MAINE", DATED MARCH, 1995, PREPARED BY ANDERSON LIVINGSTON ENGINEERS, INC.
3. "REVISED COMPILED BOUNDARY AND EXISTING CONDITIONS PLAN OF LAND OF STEPHEN A. HYNES, TRUSTEE IDLEWOOD LANE / U.S. ROUTE ONE TOWN OF KITTERY, YORK COUNTY, MAINE", BY CIVIL CONSULTANTS, DATED: MAY 22, 2012. PLAN TO BE RECORDED.

TAX MAP 66 LOT 24
& PORTION OF LOT 25

© CIVIL CONSULTANTS

CIVIL CONSULTANTS
Engineers
Planners
Surveyors
P.O. Box 100
South Berwick
Maine
03908
207-384-2550
civcon@civcon.com

NO.	REVISIONS	INT.	DATE
1			

FINAL PLAN – YANKEE COMMONS
MOBILE HOME PARK EXPANSION (2015)
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS: 1571 BELLEVUE AVE., SUITE 210 WEST VANCOUVER, B.C. V7V1A6

CIVIL CONSULTANTS

DRAWN MPP/JAA	CALC.
DATE 19 NOVEMBER 2015	
CHECKED	
APPROVED	
SCALE 1"=100'	

SHEET TITLE:
BOUNDARY ADJUSTMENT & EXISTING CONDITIONS PLAN

SHEET NUMBER:
C1

SHEET C1 of C8

PROJECT # 06-684.02

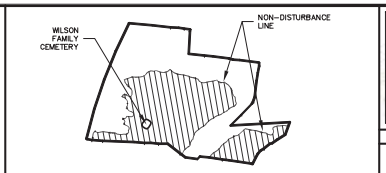
DIRECTORY: \0668402\CARLSON\ENGINEERING\DRAWING DWG NAME: 0668402E-EX-2C DATE: 11/19/2015

LOT NO.	AREA (SQ.FT.)	AREA (ACRES)
1	5,133	0.12
2	5,638	0.13
3	5,577	0.13
4	5,528	0.13
5	5,482	0.13
6	5,588	0.13
7	23,148	0.53
8	6,045	0.13
9	7,813	0.17
10	5,287	0.12
11	7,429	0.17
12	5,202	0.12
13	5,414	0.12
14	5,973	0.14
15	5,263	0.12
16	5,341	0.12
17	5,308	0.12
18	5,779	0.13
19	7,862	0.18
20	5,726	0.13
21	5,444	0.12
22	5,386	0.12
23	6,408	0.15
24	5,899	0.14
25	5,229	0.12
26	5,290	0.12
27	5,527	0.13
28	5,662	0.13
29	5,913	0.14
30	6,309	0.14
31	7,193	0.17
32	7,003	0.16
33	7,003	0.16
34	7,128	0.16
35	8,255	0.19
36	7,859	0.18
37	5,490	0.13
38	5,350	0.12
39	5,651	0.13
40	6,844	0.16

LOT NO.	AREA (SQ.FT.)	AREA (ACRES)
41	6,237	0.14
42	6,357	0.15
43	6,343	0.15
44	5,532	0.13
45	6,247	0.14
46	6,213	0.14
47	5,359	0.12
48	5,623	0.13
49	5,734	0.13
50	7,245	0.16
51	7,218	0.17
52	7,606	0.17
53	6,223	0.14
54	5,778	0.13
55	5,232	0.12
56	7,656	0.17
57	5,350	0.12
58	5,350	0.12
59	5,350	0.12
60	6,148	0.14
61	10,007	0.23
62	9,417	0.22
63	9,940	0.21
64	6,854	0.16
65	5,428	0.12
66	7,385	0.17
67	9,713	0.22
68	9,492	0.22
69	7,556	0.17
70	5,350	0.12
71	5,633	0.13
72	5,641	0.13
73	5,719	0.13
74	5,684	0.13
75	5,687	0.13
76	5,531	0.13
77	5,485	0.13
78	5,559	0.13

NOTES:

1. NO LAND INCLUDED IN THIS PROJECT (i.e. WITHIN LOT 24 AS MODIFIED) MAY BE CONVERTED TO ANOTHER USE WITHOUT APPROVAL OF THE PLANNING BOARD.
2. THE LAND WITHIN THE PARK MUST REMAIN IN A UNIFIED OWNERSHIP AND THE FEE TO LOTS OR PORTIONS OF LOTS MAY NOT BE TRANSFERRED.
3. NO DWELLING UNIT OTHER THAN A MOBILE HOME UNIT MAY BE LOCATED WITHIN THE PARK.
4. THE NON-DISTURBANCE SETBACK SHOWN HEREON IS EITHER 75' EMERGENT WETLAND SETBACK, THE 100' STREAM SETBACK OR THE 25' WETLAND SETBACK.
5. NON-DISTURBANCE SETBACK LINE TO BE FLAGGED PRIOR TO INITIAL CONSTRUCTION.
6. PERMITS REQUIRED:
   MDEP SITE LOCATION
   MANUFACTURING HOUSING BOARD
   TOWN OF KITTERY SUBDIVISION
   US ARMY CORPS



ALLOWABLE DENSITY PER MAINE MANUFACTURER HOUSING REGULATIONS:

AVAILABLE AREA=	983,949 sq.ft.
LESS 20% ROADS=	196,790 sq.ft.
LESS 10% OPEN SPACE=	98,395 sq.ft.
AVAILABLE AREA FOR SITES=	688,764 sq.ft.
@ 5000 sq.ft./SITE = 137 POTENTIAL SITES	

AS PROPOSED:

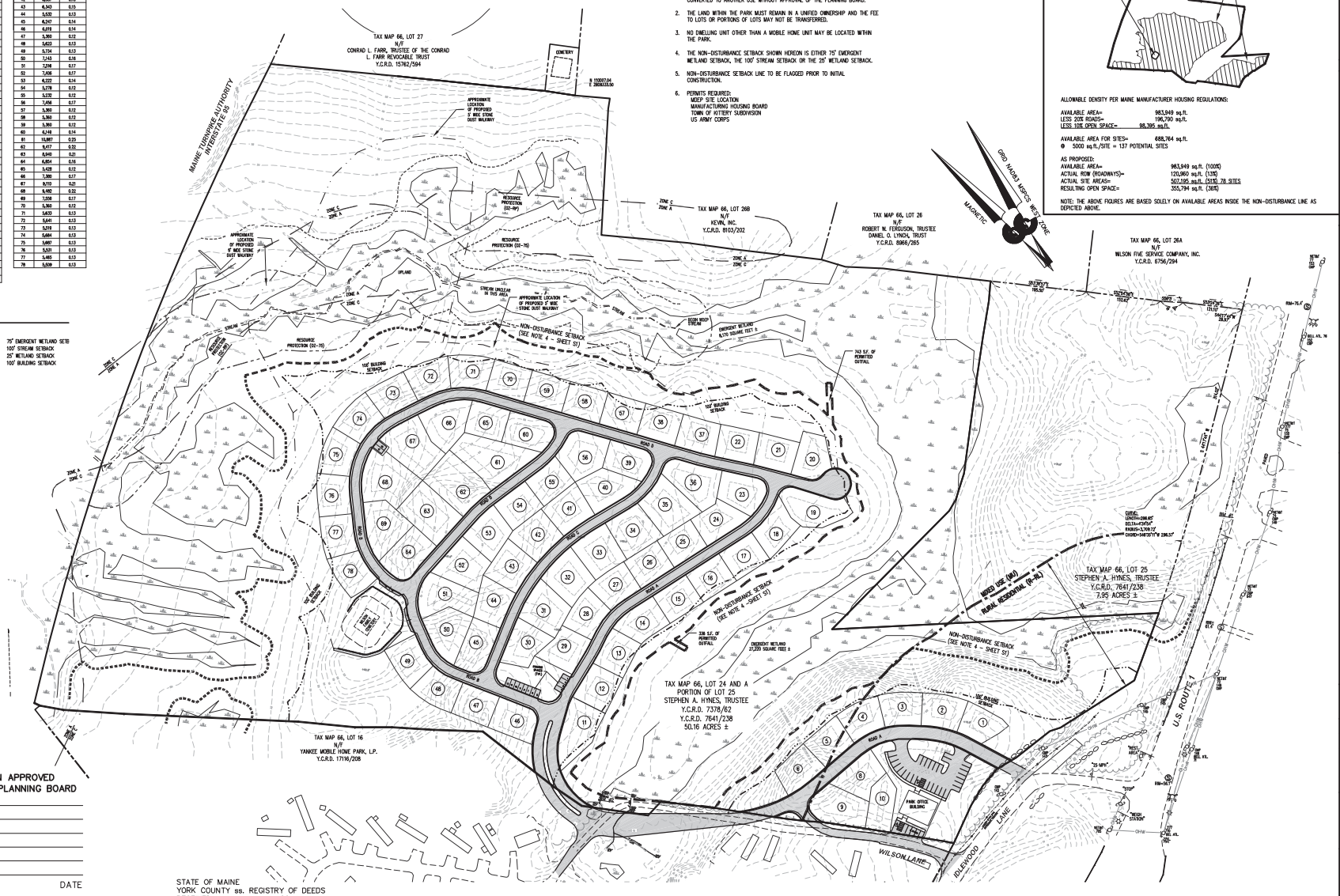
AVAILABLE AREA=	983,949 sq.ft. (100%)
ACTUAL ROW (ROADWAYS)=	120,969 sq.ft. (13%)
ACTUAL SITE AREAS=	502,595 sq.ft. (51%) 78 SITES
RESULTING OPEN SPACE=	355,794 sq.ft. (36%)

NOTE: THE ABOVE FIGURES ARE BASED SOLELY ON AVAILABLE AREAS INSIDE THE NON-DISTURBANCE LINE AS DEPICTED ABOVE.

SETBACK LEGEND:

NON-DISTURBANCE SETBACK:

- 75' EMERGENT WETLAND SETB
- 100' STREAM SETBACK
- 25' WETLAND SETBACK
- 100' BUILDING SETBACK



PLAN APPROVED
KITTERY PLANNING BOARD

DATE

OWNER: DATE:

STATE OF MAINE
YORK COUNTY ss. REGISTRY OF DEEDS
RECEIVED _____, 20_____
AT____h,____m,____M, AND RECORDED IN PLAN BOOK _____, PAGE _____

ATTEST _____ REGISTER

TAX MAP 66 LOT 24
& PORTION OF LOT 25

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NO.	REVISIONS	INT.	DATE
1			

FINAL PLAN – YANKEE COMMONS
MOBILE HOME PARK EXPANSION (2015)
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS: 1571 BELLEVUE AVE., SUITE 210 WEST VANCOUVER, B.C. V7V1A6

CIVIL CONSULTANTS

DRAWN GDC/JAA	CALC.
DATE 19 NOVEMBER 2015	
CHECKED	
APPROVED	
SCALE 1"=100'	

SHEET TITLE:
OVERALL SITE PLAN

SHEET NUMBER:
C2

SHEET C2 of C8

PROJECT # 06-684.02

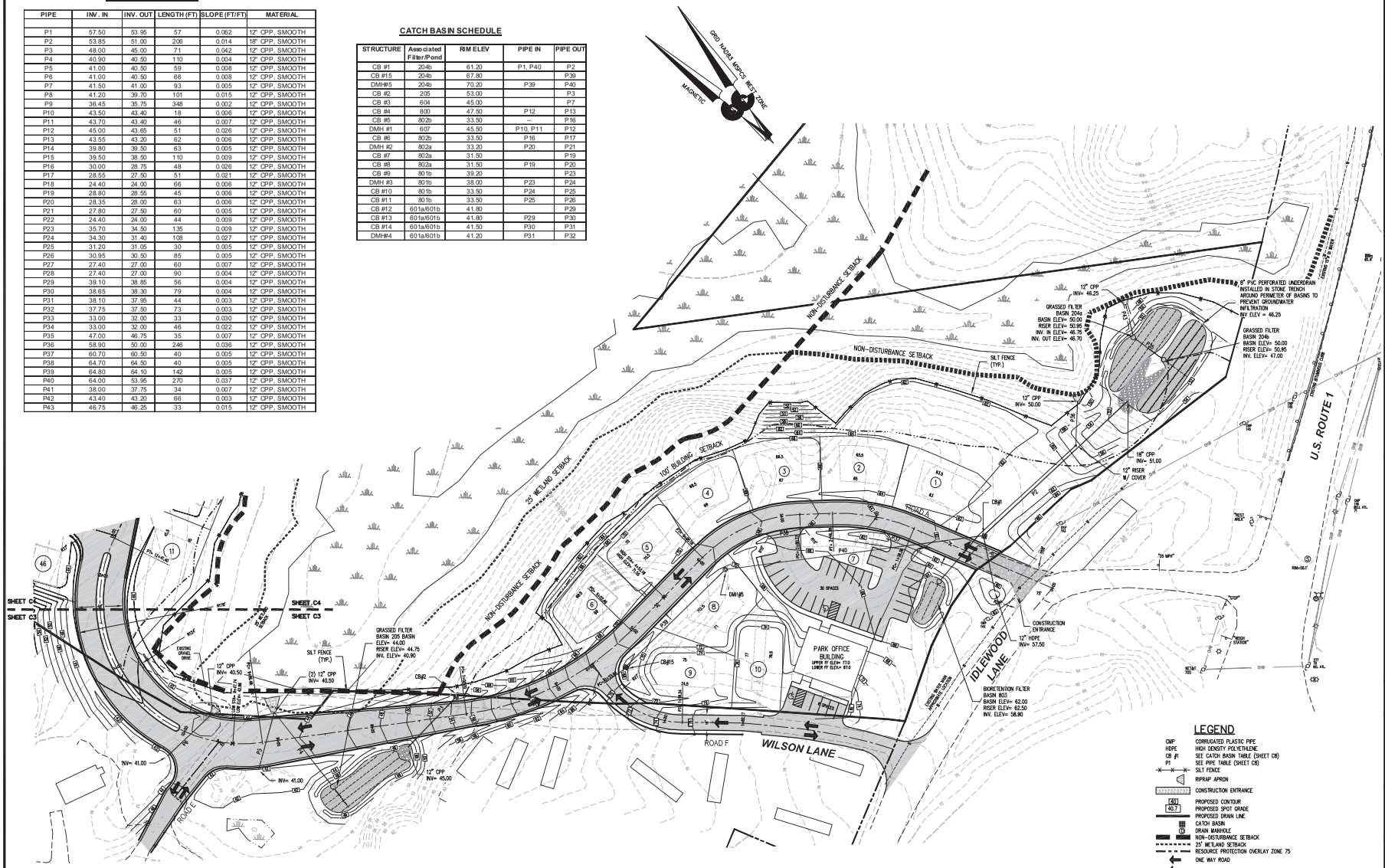
DIRECTORY: \0668402\CARLSON\ENGINEERING\DRAWING DWG NAME: 0668402E-EX-2C DATE: 11/19/2015

DRAIN PIPE SCHEDULE

PIPE	INV. IN	INV. OUT	LENGTH (FT)	SLOPE (FT/FT)	MATERIAL
P1	57.50	53.95	57	0.062	12" CPP, SMOOTH
P2	53.85	51.00	206	0.014	18" CPP, SMOOTH
P3	48.00	45.00	71	0.042	12" CPP, SMOOTH
P4	40.90	40.50	110	0.004	12" CPP, SMOOTH
P5	41.00	40.50	59	0.008	12" CPP, SMOOTH
P6	41.00	40.50	66	0.008	12" CPP, SMOOTH
P7	41.50	41.00	93	0.005	12" CPP, SMOOTH
P8	41.20	39.70	101	0.015	12" CPP, SMOOTH
P9	36.45	35.75	348	0.002	12" CPP, SMOOTH
P10	43.50	43.40	18	0.006	12" CPP, SMOOTH
P11	43.70	43.40	46	0.007	12" CPP, SMOOTH
P12	45.00	43.65	51	0.026	12" CPP, SMOOTH
P13	43.55	43.20	62	0.006	12" CPP, SMOOTH
P14	39.80	39.50	63	0.005	12" CPP, SMOOTH
P15	39.50	38.50	110	0.009	12" CPP, SMOOTH
P16	30.00	28.75	48	0.026	12" CPP, SMOOTH
P17	28.55	27.50	51	0.021	12" CPP, SMOOTH
P18	24.40	24.00	66	0.006	12" CPP, SMOOTH
P19	28.80	28.55	45	0.006	12" CPP, SMOOTH
P20	28.35	28.00	63	0.006	12" CPP, SMOOTH
P21	27.80	27.50	60	0.005	12" CPP, SMOOTH
P22	24.40	24.00	44	0.009	12" CPP, SMOOTH
P23	35.70	34.50	135	0.009	12" CPP, SMOOTH
P24	34.30	31.40	108	0.027	12" CPP, SMOOTH
P25	31.20	31.05	30	0.005	12" CPP, SMOOTH
P26	30.95	30.50	85	0.005	12" CPP, SMOOTH
P27	27.40	27.00	60	0.007	12" CPP, SMOOTH
P28	27.40	27.00	90	0.004	12" CPP, SMOOTH
P29	39.10	38.85	56	0.004	12" CPP, SMOOTH
P30	38.65	38.30	79	0.004	12" CPP, SMOOTH
P31	38.10	37.95	44	0.003	12" CPP, SMOOTH
P32	37.75	37.50	73	0.003	12" CPP, SMOOTH
P33	33.00	32.00	33	0.030	12" CPP, SMOOTH
P34	33.00	32.00	46	0.022	12" CPP, SMOOTH
P35	47.00	46.75	35	0.007	12" CPP, SMOOTH
P36	58.90	50.00	246	0.036	12" CPP, SMOOTH
P37	60.70	60.50	40	0.005	12" CPP, SMOOTH
P38	64.70	64.50	40	0.005	12" CPP, SMOOTH
P39	64.80	64.10	142	0.005	12" CPP, SMOOTH
P40	64.00	53.95	270	0.037	12" CPP, SMOOTH
P41	38.00	37.75	34	0.007	12" CPP, SMOOTH
P42	43.40	43.20	66	0.003	12" CPP, SMOOTH
P43	46.75	46.25	33	0.015	12" CPP, SMOOTH

CATCH BASIN SCHEDULE

STRUCTURE	Associated Filter/Pond	RIM ELEV	PIPE IN	PIPE OUT
CB #1	204b	61.20	P1, P40	P2
CB #15	204b	67.80		P39
DMH#5	204b	70.20	P39	P40
CB #2	205	53.00		P3
CB #3	604	45.00		P7
CB #4	800	47.50	P12	P13
CB #5	802b	33.50		P16
DMH #1	607	45.50	P10, P11	P12
CB #6	802b	33.50	P16	P17
DMH #2	802a	33.20	P20	P21
CB #7	802a	31.50		P19
CB #8	802a	31.50	P19	P20
CB #9	801b	39.20		P23
DMH #3	801b	38.00	P23	P24
CB #10	801b	33.50	P24	P25
CB #11	801b	33.50	P25	P26
CB #12	601a/601b	41.80		P29
CB #13	601a/601b	41.80	P29	P30
CB #14	601a/601b	41.50	P30	P31
DMH#4	601a/601b	41.20	P31	P32



LEGEND

CMP	CORRUGATED PLASTIC PIPE
HDPE	HIGH DENSITY POLYETHLENE
CB #1	SEE CATCH BASIN TABLE (SHEET C8)
P1	SEE PIPE TABLE (SHEET C8)
	SILT FENCE
	RIPRAP APRON
	CONSTRUCTION ENTRANCE
40	PROPOSED CONTOUR
40.7	PROPOSED SPOT GRADE
	PROPOSED DRAIN LINE
	CATCH BASIN
	DRAIN MANHOLE
	NON-DISTURBANCE SETBACK
	25' WETLAND SETBACK
	RESOURCE PROTECTION OVERLAY ZONE 75
	ONE WAY ROAD
	TWO WAY ROAD

TAX MAP 66 LOT 24
& PORTION OF LOT 25

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NO.	REVISIONS	INT.	DATE
1			

FINAL PLAN – YANKEE COMMONS
MOBILE HOME PARK EXPANSION
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS: 1571 BELLEVUE AVE., SUITE 210 WEST VANCOUVER, B.C. V7V1A6

CIVIL CONSULTANTS

DRAWN GDC/JAA	CALC.
DATE 19 NOVEMBER 2015	
CHECKED	
APPROVED	
SCALE 1"=50'	

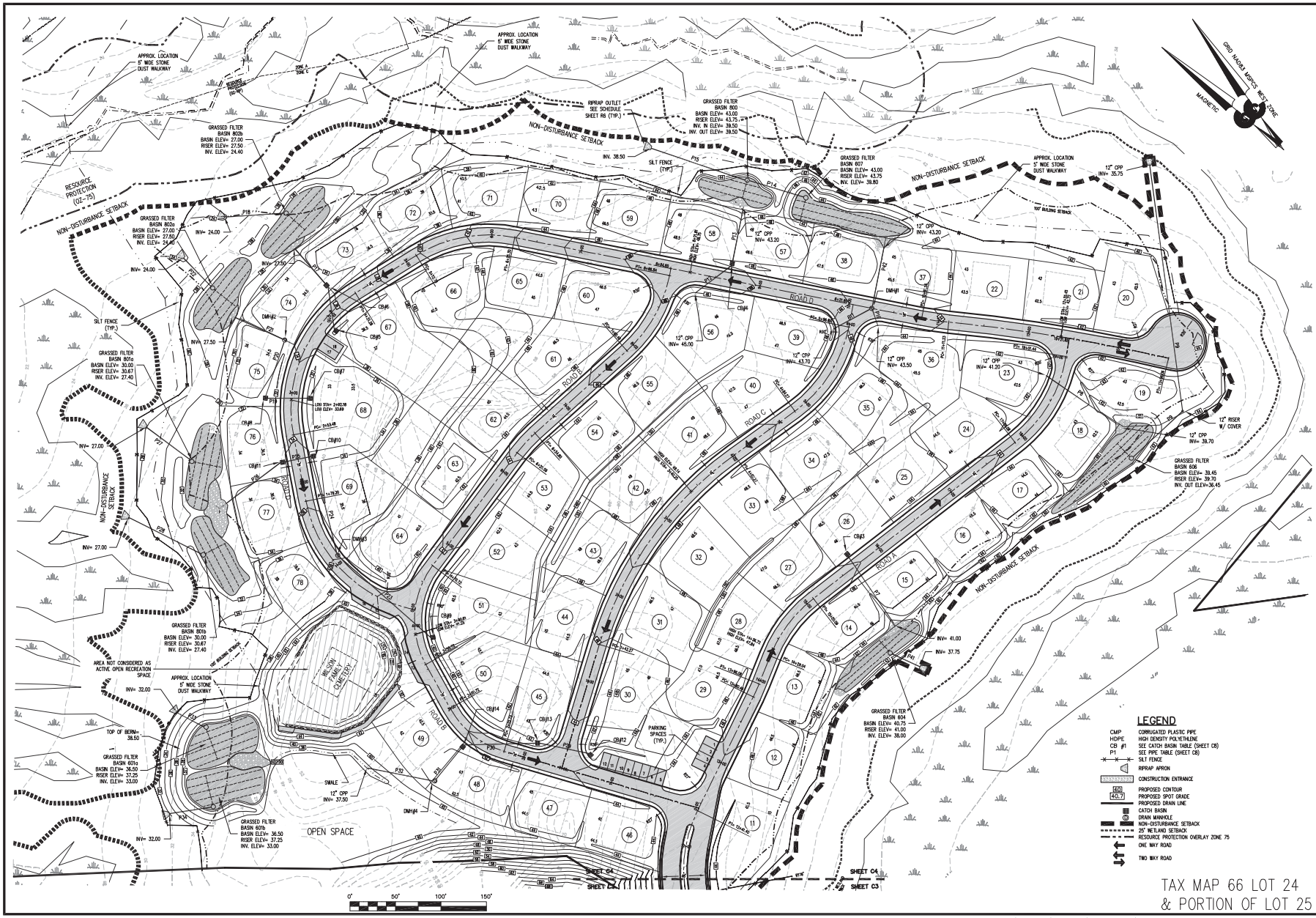
SHEET TITLE:
GRADING & DRAINAGE PLAN

SHEET NUMBER:
C3

SHEET C3 of C8

PROJECT # 06-684.02

DIRECTORY: \0668402\CARLSON\ENGINEERING\DRAWING DWG NAME: 0668402E-ST-2D DATE: 11/19/2015



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NO.	REVISIONS	INT.	DATE
1			

FINAL PLAN – YANKEE COMMONS
MOBILE HOME PARK EXPANSION (2015)
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS: 1571 BELLEVUE AVE., SUITE 210 WEST VANCOUVER, B.C. V7V1A6

CIVIL CONSULTANTS

DRAWN GDC/JAA	CALC.
DATE 19 NOVEMBER 2015	
CHECKED	
APPROVED	
SCALE 1"=50'	

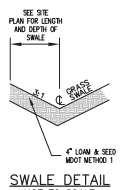
SHEET TITLE:
GRADING & DRAINAGE PLAN

SHEET NUMBER:
C4

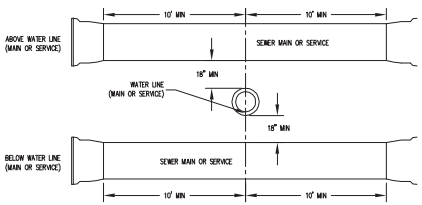
SHEET C4 of C8

PROJECT # 06-684.02

DIRECTORY: \0668402\CARLSON\ENGINEERING\DRAWING DWG NAME: 0668402E-ST-2D DATE: 11/19/2015

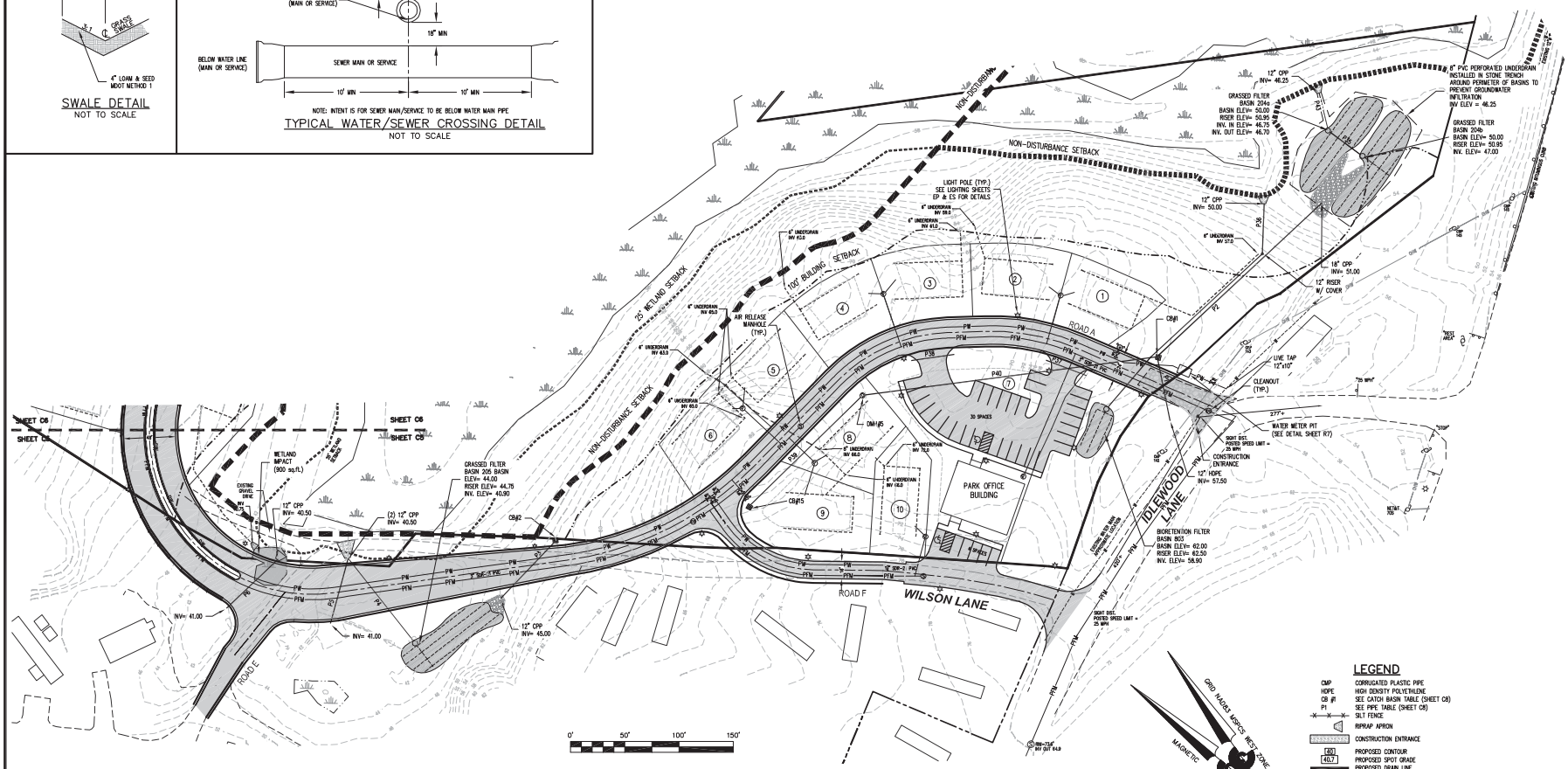


SWALE DETAIL
NOT TO SCALE



NOTE: INTENT IS FOR SEWER MAIN/SERVICE TO BE BELOW WATER MAIN PIPE

TYPICAL WATER/SEWER CROSSING DETAIL
NOT TO SCALE



LEGEND

CMP	CORRUGATED PLASTIC PIPE
HDPE	HIGH DENSITY POLYETHYLENE
CB #1	SEE CATCH BASIN TABLE (SHEET C8)
P1	SEE PIPE TABLE (SHEET C8)
	SILT FENCE
	RIPRAP APRON
	CONSTRUCTION ENTRANCE
80	PROPOSED CONTOUR
40.7	PROPOSED SPOT GRADE
	PROPOSED DRAIN LINE
	CATCH BASIN
	DRAIN MANHOLE
S	EXISTING SEWER MAIN
PFM	PROPOSED FORCE MAIN
PW	PROPOSED WATER LINE
	SEWER MANHOLE
	SEWER CLEANOUT
WV	WATER VALVE
	UNDERDRAIN (SIZE AS NOTED)
	SEWER AIR RELEASE MANHOLE
	SEWER PUMP STATION
	HYDRANT
	WATER VALVE
	LIGHT POLE
	NON-DISTURBANCE SETBACK
	25' WETLAND SETBACK
	RESOURCE PROTECTION OVERLAY ZONE 75

TAX MAP 66 LOT 24
& PORTION OF LOT 25

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NO.	REVISIONS	INT.	DATE
1			

FINAL PLAN – YANKEE COMMONS
MOBILE HOME PARK EXPANSION (2015)
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS: 1571 BELLEVUE AVE., SUITE 210 WEST VANCOUVER, B.C. V7V1A6

CIVIL CONSULTANTS

DRAWN GDC/JAA	CALC.
DATE 19 NOVEMBER 2015	
CHECKED	
APPROVED	
SCALE 1"=50'	

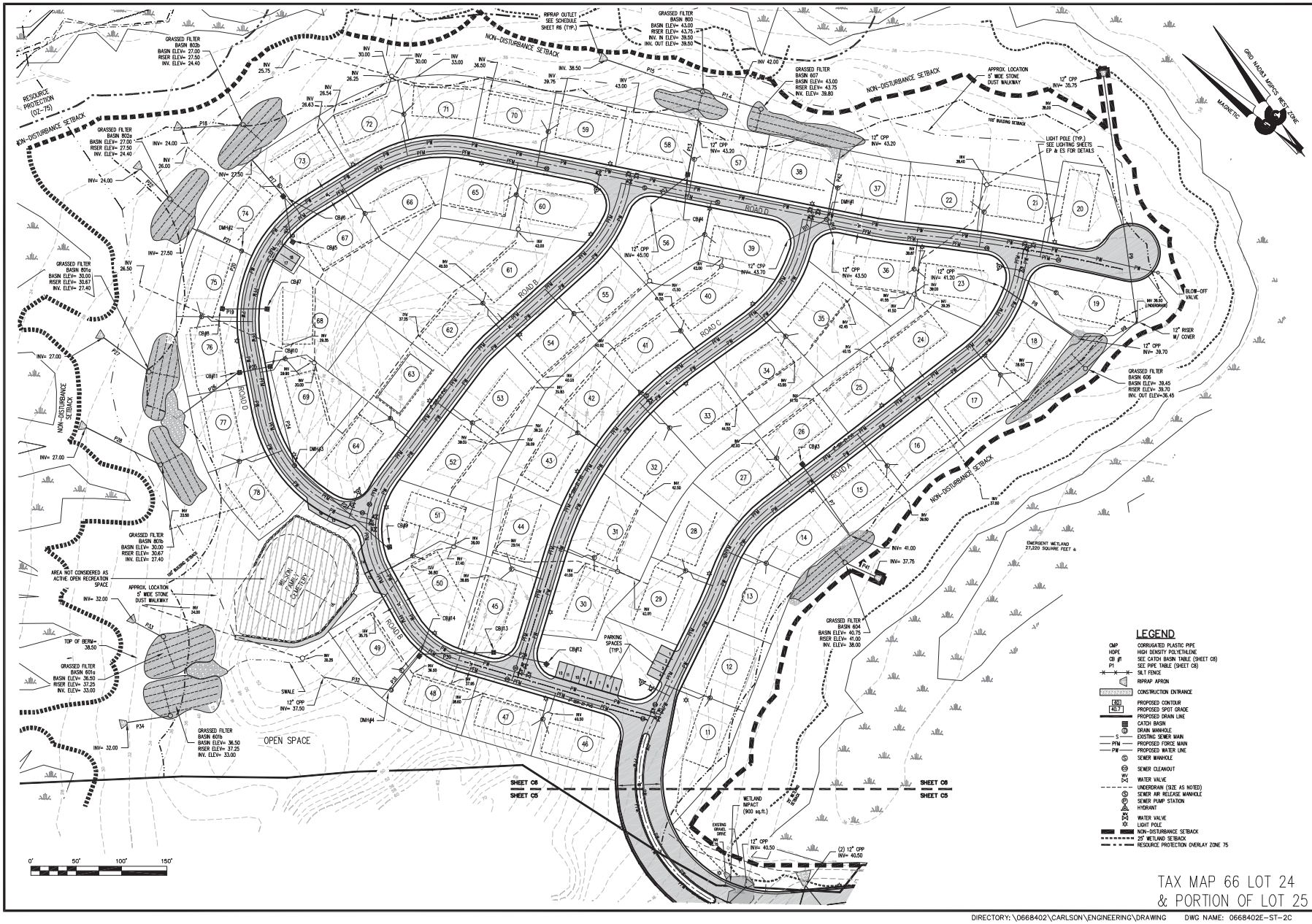
SHEET TITLE:
UTILITY & UNDERDRAIN PLAN

SHEET NUMBER:
C5

SHEET C5 of C8

PROJECT # 06–684.02

DIRECTORY: \0668402\CARLSON\ENGINEERING\DRAWING DWG NAME: 0668402E-ST-2C DATE: 11/19/2015



LEGEND

CMP	CORRUGATED PLASTIC PIPE
HDPE	HIGH DENSITY POLYETHLENE
CB #1	SEE CATCH BASIN TABLE (SHEET C8)
P1	SEE PIPE TABLE (SHEET C8)
	SILT FENCE
	RIPRAP APRON
	CONSTRUCTION ENTRANCE
40 / 40.7	PROPOSED CONTOUR / PROPOSED SPOT GRADE
	PROPOSED DRAIN LINE
	CATCH BASIN
	DRAIN MANHOLE
S	EXISTING SEWER MAIN
PFM	PROPOSED FORCE MAIN
PW	PROPOSED WATER LINE
	SEWER MANHOLE
	SEWER CLEANOUT
	WATER VALVE
	UNDERDRAIN (SIZE AS NOTED)
	SEWER AIR RELEASE MANHOLE
	SEWER PUMP STATION
	HYDRANT
	WATER VALVE
	LIGHT POLE
	NON-DISTURBANCE SETBACK
	25' WETLAND SETBACK
	RESOURCE PROTECTION OVERLAY ZONE 75

TAX MAP 66 LOT 24
& PORTION OF LOT 25

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NO.	REVISIONS	INT.	DATE
1			

FINAL PLAN – YANKEE COMMONS
MOBILE HOME PARK EXPANSION (2015)
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS: 1571 BELLEVUE AVE., SUITE 210 WEST VANCOUVER, B.C. V7V1A6

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DRAWN GDC/JAA	CALC.
DATE 19 NOVEMBER 2015	
CHECKED	
APPROVED	
SCALE 1"=50'	

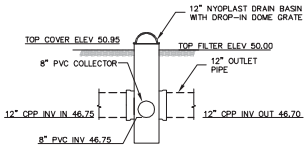
SHEET TITLE:
UTILITY & UNDERDRAIN PLAN

SHEET NUMBER:
C6

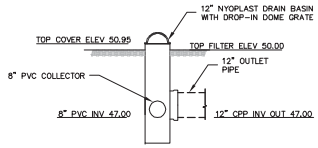
SHEET C6 of C8

PROJECT # 06-684.02

DIRECTORY: \0668402\CARLSON\ENGINEERING\DRAWING DWG NAME: 0668402E-ST-2C DATE: 11/19/2015



GRASSED FILTER 204a CONTROL STRUCTURE
NOT TO SCALE



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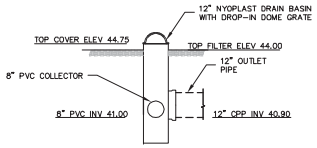

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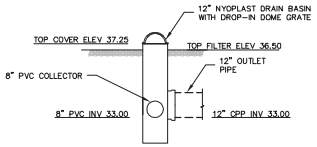

GRASSED FILTER 601a CONTROL STRUCTURE
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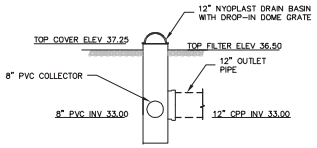

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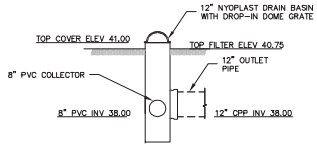
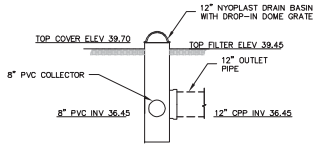


GRASSED FILTER 604 CONTROL STRUCTURE
NOT TO SCALE



GRASSED FILTER 606 CONTROL STRUCTURE
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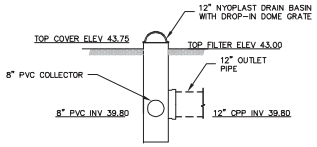

GRASSED FILTER 607 CONTROL STRUCTURE
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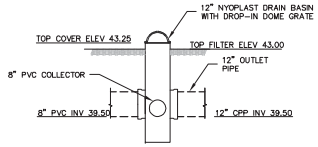

GRASSED FILTER 800 CONTROL STRUCTURE
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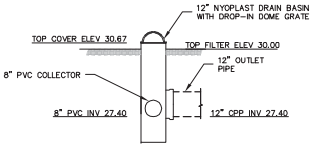
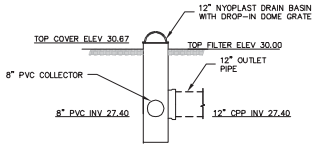
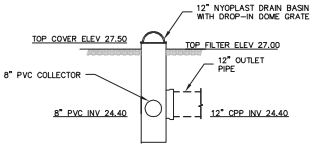


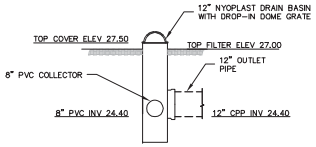
GRASSED FILTER 801a CONTROL STRUCTURE
NOT TO SCALE



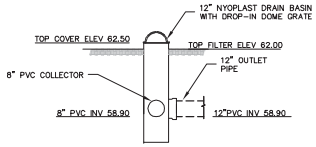
GRASSED FILTER 801b CONTROL STRUCTURE
NOT TO SCALE



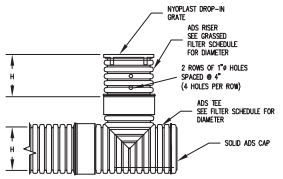
GRASSED FILTER 802a CONTROL STRUCTURE
NOT TO SCALE



GRASSED FILTER 802b CONTROL STRUCTURE
NOT TO SCALE



BIORETENTION BASIN 803 CONTROL STRUCTURE
NOT TO SCALE



TEMPORARY RISER DETAIL
NOT TO SCALE

NOTE:
TEMPORARY RISER TO USED DURING CONSTRUCTION FOR SEDIMENT CONTROL. TYPICAL FOR ALL LOTS PRIOR TO LOT DEVELOPMENT. RISER TO BE REPLACED WITH SOLID RISER WHEN INDIVIDUAL LOT IS DEVELOPED. CAPPED END OF TEE TO BE FACING FUTURE FILTER COLLECTOR, PERFORATE AS NEEDED TO ALLOW FOR COLLECTOR INSTALLATION UPON DEVELOPMENT OF CONTRIBUTING LOT. SEE GRASSED FILTER SCHEDULE FOR FINAL LAYOUT.

TAX MAP 66 LOT 24
& PORTION OF LOT 25

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NO.	REVISIONS	INT.	DATE
1			

FINAL PLAN – YANKEE COMMONS
MOBILE HOME PARK EXPANSION (2015)
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS: 1571 BELLEVUE AVE., SUITE 210 WEST VANCOUVER, B.C. V7V1A6

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DATE 19 NOVEMBER 2015	
CHECKED	
APPROVED	
SCALE AS NOTED	

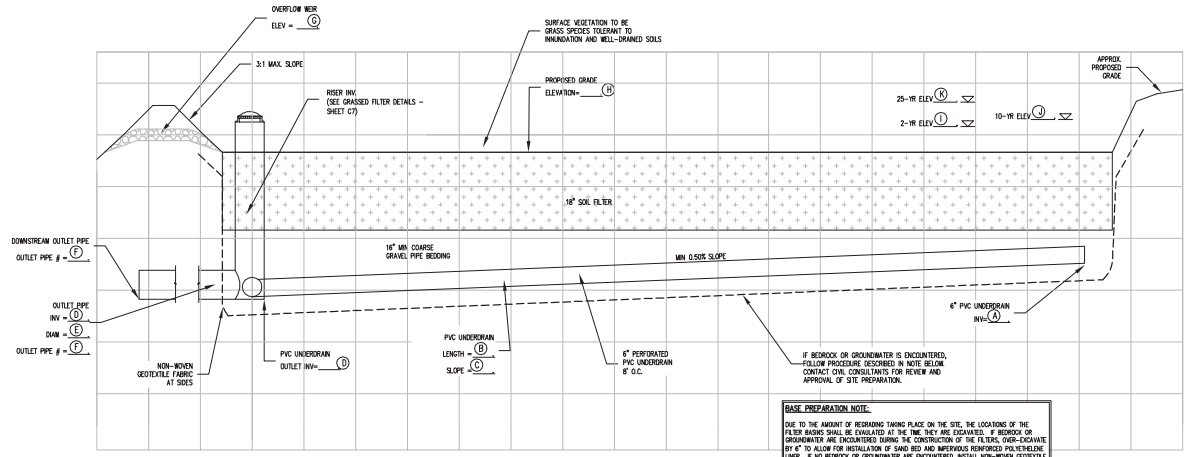
SHEET TITLE:
•GRASSED FILTER BASIN DETAILS

SHEET NUMBER:
C7

SHEET C7 of C8

PROJECT # 06–684.02

DIRECTORY: \0668402\CARLSON\ENGINEERING\DRAWING DWG NAME: 0668402E–ST–2C DATE: 11/19/2015



BASE PREPARATION NOTE:

DUE TO THE AMOUNT OF REGRADING TAKING PLACE ON THE SITE, THE LOCATIONS OF THE FILTER BASINS SHALL BE EVAULATED AT THE TIME THEY ARE EXCAVATED. IF BEDROCK OR GROUNDWATER ARE ENCOUNTERED DURING THE CONSTRUCTION OF THE FILTERS, OVER-EXCAVATE BY 6" TO ALLOW FOR INSTALLATION OF SAND BED AND IMPERVIOUS REINFORCED POLYETHELENE LINER. IF NO BEDROCK OR GROUNDWATER ARE ENCOUNTERED, INSTALL NON-WOVEN GEOTEXTILE AT BASE OF EXCAVATION (NO IMPERVIOUS LINER NEEDED).

GRASSED FILTER BASIN DETAIL

NOT TO SCALE

GRASSED FILTER & BIORETENTION BASIN SCHEDULE

	Underdrain Properties				Outlet	Outlet	Weir outlet	Top of	2-yr	10-yr	25-yr
	Inv In	Length*	Slope	Inv Out	Structure**	Pipe	Elev	Filter	Elev	Elev	Elev
Designation	A	B	C	D	E	F	G	H	I	J	K
Basin 204(a)	47.50	53.00	1.4%	46.75	12" Diam.	P43	51.50	50.00	50.76	51.18	51.30
Basin 204(b)	47.50	60.00	0.8%	47.00	12" Diam.	P35	51.50	50.00	50.76	51.18	51.30
Basin 205	41.50	76.00	0.7%	41.00	12" Diam.	P4	45.25	44.00	44.82	45.08	45.21
Basin 601(a)	34.00	60.00	1.7%	33.00	12" Diam.	P33	38.25	36.50	37.33	37.77	38.14
Basin 601(b)	34.00	42.00	2.4%	33.00	12" Diam.	P34	38.25	36.50	37.33	37.77	38.14
Basin 604	38.25	62.00	0.5%	37.95	12" Diam.	P41	41.50	40.75	41.11	41.33	41.42
Basin 606	36.70	95.00	0.3%	36.45	12" Diam.	P9	40.30	39.45	39.88	40.25	40.42
Basin 607	40.00	20.00	0.5%	39.90	12" Diam.	P14	44.25	43.00	43.85	44.26	44.45
Basin 800	40.50	50.00	2.0%	39.50	12" Diam.	P15	43.75	43.00	43.17	43.34	43.41
Basin 801(a)	27.50	40.00	0.4%	27.35	12" Diam.	P27	31.50	30.00	30.71	30.99	31.17
Basin 801(b)	27.50	50.00	0.3%	27.35	12" Diam.	P28	31.50	30.00	30.71	30.99	31.17
Basin 802(a)	24.50	47.00	0.5%	24.25	12" Diam.	P22	28.25	27.00	27.57	28.05	28.36
Basin 802(b)	24.50	47.00	0.5%	24.25	12" Diam.	P18	28.25	27.00	27.57	28.05	28.36
Basin 803	59.25	50.00	0.5%	59.00	12" Diam.	P36	63.25	62.00	62.59	62.71	62.74

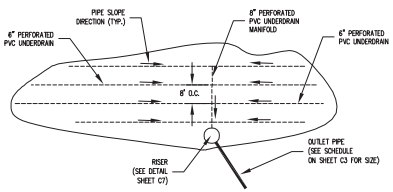
*If describing a cell with varying lengths of drain pipes, length shown is the maximum.
**All grassed filter basin outlet structures to be Nyoplast drainage basins with a 12" diameter.

GRASSED FILTER SEEDING MIX

TYPE	APPLICATION RATE
CREEPING RED FESCUE	20 LBS/ACRE
TALL FESCUE	20 LBS/ACRE
BIRDSFOOT TREFOIL	8 LBS/ACRE
TOTAL	48 LBS/ACRE

MANIFOLD INSTALLATION NOTE:

THE 8" HDPE MANIFOLD ORIENTATIONS VARY, REFER TO SHEET C5 & C6 FOR INTENDED LAYOUT. CIVIL CONSULTANTS TO CONFIRM PROPER PLACEMENT OF DRAINS AND MANIFOLDS PRIOR TO PLACEMENT OF PIPE BEDDING MATERIAL AND FILTER MATERIAL. CONTACT ENGINEER FOR CLARIFICATION IF NEEDED.



TYPICAL GRASSED FILTER UNDERDRAIN LAYOUT

NOT TO SCALE

CONSTRUCTION OVERSIGHT NOTES:

INSPECTION OF THE FILTER/BIORETENTION BASINS 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 (OR PLANTED AND MULCHED IF BIORETENTION BASIN);
- AFTER ONE YEAR TO INSPECT HEALTH OF THE VEGETATION AND MAKE CORRECTIONS;
- 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.

FILTER MEDIA

COMPONENT MATERIAL	PERCENT OF MIXTURE BY VOLUME	GRADATION OF MATERIAL: SIEVE NO.	GRADATION OF MATERIAL: PERCENT BY WEIGHT PASSING STANDARD SIEVE
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH, WITH FINES AS INDICATED	20 TO 25	200	< 5
LOAMY COARSE SAND (MDOT 703.01)	75 TO 80	¾"	100
		4	85 TO 100
		8	60 TO 100
		16	50 TO 85
		30	25 TO 60
		60	10 TO 30
		100	2 TO 10
		200	0 TO 5

GRASSED SOIL FILTER MAINTENANCE NOTES:

SOIL FILTER INSPECTION: THE SOIL FILTER SHOULD BE INSPECTED AFTER EVERY MAJOR STORM IN THE FIRST FEW MONTHS TO ENSURE PROPER FUNCTION. THEREAFTER, THE FILTER SHOULD BE INSPECTED AT LEAST ONCE EVERY SIX MONTHS TO ENSURE THAT IT IS DRAINING BETWEEN 24 AND 48 HOURS.

SOIL FILTER REPLACEMENT: THE TOP SEVERAL INCHES OF THE FILTER SHALL BE REPLACED WITH FRESH MATERIAL WHEN WATER PONDS ON THE SURFACE OF THE BED FOR MORE THAN 72 HOURS. THE REMOVED SEDIMENTS SHOULD BE DISPOSED IN AN ACCEPTABLE MANNER.

SEDIMENT REMOVAL: SEDIMENT AND PLANT DEBRIS SHOULD BE REMOVED FROM THE PRE-TREATMENT STRUCTURE AT LEAST ANNUALLY.

MOWING: FILTERS WITH GRASS COVER SHOULD BE MOWED NO MORE THAN 2 TIMES PER GROWING SEASON TO MAINTAIN GRASS HEIGHTS LESS THAN 12 INCHES.

FERTILIZATION: FERTILIZATION OF THE UNDERDRAINED FILTER AREA SHOULD BE AVOIDED UNLESS ABSOLUTELY NECESSARY TO ESTABLISH VEGETATION.

HARVESTING AND WEEDING: HARVESTING AND PRUNING OF EXCESSIVE GROWTH WILL NEED TO BE DONE OCCASIONALLY. WEEDING TO CONTROL UNWANTED OR INVASIVE PLANTS MAY ALSO BE NECESSARY.

UNDERDRAIN PIPE BEDDING MATERIAL

COMPONENT MATERIAL	GRADATION OF MATERIAL: SIEVE NO.	GRADATION OF MATERIAL: PERCENT BY WEIGHT PASSING STANDARD SIEVE
UNDERDRAIN BACKFILL MATERIAL (MDOT 703.22 TYPE C)	4"	100
	¾"	90 TO 100
	⅜"	0 TO 75
	4	0 TO 25
	10	0 TO 5

BIORETENTION FILTER MAINTENANCE NOTES:

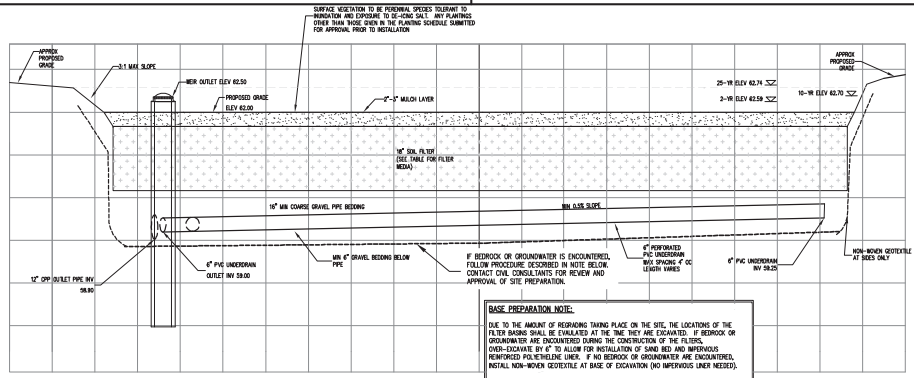
SOIL FILTER INSPECTION: THE SOIL FILTER SHOULD BE INSPECTED AFTER EVERY MAJOR STORM IN THE FIRST FEW MONTHS TO ENSURE PROPER FUNCTION. THEREAFTER, THE FILTER SHOULD BE INSPECTED AT LEAST ONCE EVERY SIX MONTHS TO ENSURE THAT IT IS DRAINING BETWEEN 24 AND 48 HOURS. IF PONDED WATER REMAINS FOR MORE THAN 48 HOURS, FILTER BED MUST BE ROTOTILLED AND RE-ESTABLISHED.

SOIL FILTER REPLACEMENT: THE MULCH SHALLL BE REPLACED WITH FRESH MATERIAL ON A YEARLY BASIS.

SEDIMENT REMOVAL: SEDIMENT AND PLANT DEBRIS SHOULD BE REMOVED FROM THE PRE-TREATMENT AREA AND BASIN AT LEAST ANNUALLY.

FERTILIZATION: FERTILIZATION OF THE UNDERDRAINED FILTER AREA SHOULD BE AVOIDED UNLESS ABSOLUTELY NECESSARY TO ESTABLISH VEGETATION.

HARVESTING AND WEEDING: HARVESTING AND PRUNING OF EXCESSIVE GROWTH WILL NEED TO BE DONE OCCASIONALLY. WEEDING TO CONTROL UNWANTED OR INVASIVE PLANTS MAY ALSO BE NECESSARY. PLANTINGS THAT ARE NOT THRIVING MUST BE REPLACED.

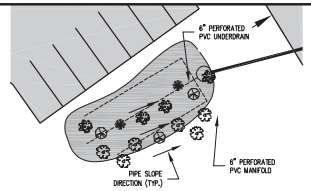


BASE PREPARATION NOTE:

DUE TO THE AMOUNT OF REGRADING TAKING PLACE ON THE SITE, THE LOCATIONS OF THE FILTER BASINS SHALL BE EVAULATED AT THE TIME THEY ARE EXCAVATED. IF BEDROCK OR GROUNDWATER ARE ENCOUNTERED DURING THE CONSTRUCTION OF THE FILTERS, OVER-EXCAVATE BY 6" TO ALLOW FOR INSTALLATION OF SAND BED AND IMPERVIOUS REINFORCED POLYETHELENE LINER. IF NO BEDROCK OR GROUNDWATER ARE ENCOUNTERED, INSTALL NON-WOVEN GEOTEXTILE AT BASE OF EXCAVATION (NO IMPERVIOUS LINER NEEDED).

TYPICAL BIORETENTION BASIN DETAIL-COLLECTOR PIPE AT CENTER

NOT TO SCALE

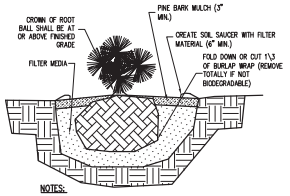


TYPICAL BIORETENTION BASIN PLANTING LAYOUT

SCALE: 1" = 20'

BIORETENTION BASIN PLANTING SCHEDULE

SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE/UNIT
	VACCINIUM CORYBOSUM	HIGHBUSH BLUEBERRY	4	12" HT.
	VIBURNUM TRILOBUM	AMERICAN CRANBERRY VIBURNUM	3	15" HT.
	ROSA PALUSTRIS	SWAMP ROSE	2	5'-7' HT.
	SAMBUCUS CANADENSIS	COMMON ELDERBERRY	6	6'-8' HT.



NOTES:

1. DO NOT DAMAGE MAIN ROOTS OR DESTROY ROOT BALL WHEN STAKING
2. WATER THOROUGHLY BEFORE PLANTING
3. REMOVE ANY STAKES WITHIN TWO YEARS OF PLANTING

SHRUB INSTALLATION DETAIL

NOT TO SCALE

TAX MAP 66 LOT 24
& PORTION OF LOT 25

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NO.	REVISIONS	INT.	DATE
1			

FINAL PLAN - YANKEE COMMONS
MOBILE HOME PARK EXPANSION (2015)
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS: 1571 BELLEVUE AVE., SUITE 210 WEST VANCOUVER, B.C. V7V1A6

CIVIL CONSULTANTS

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DATE	19 NOVEMBER 2015
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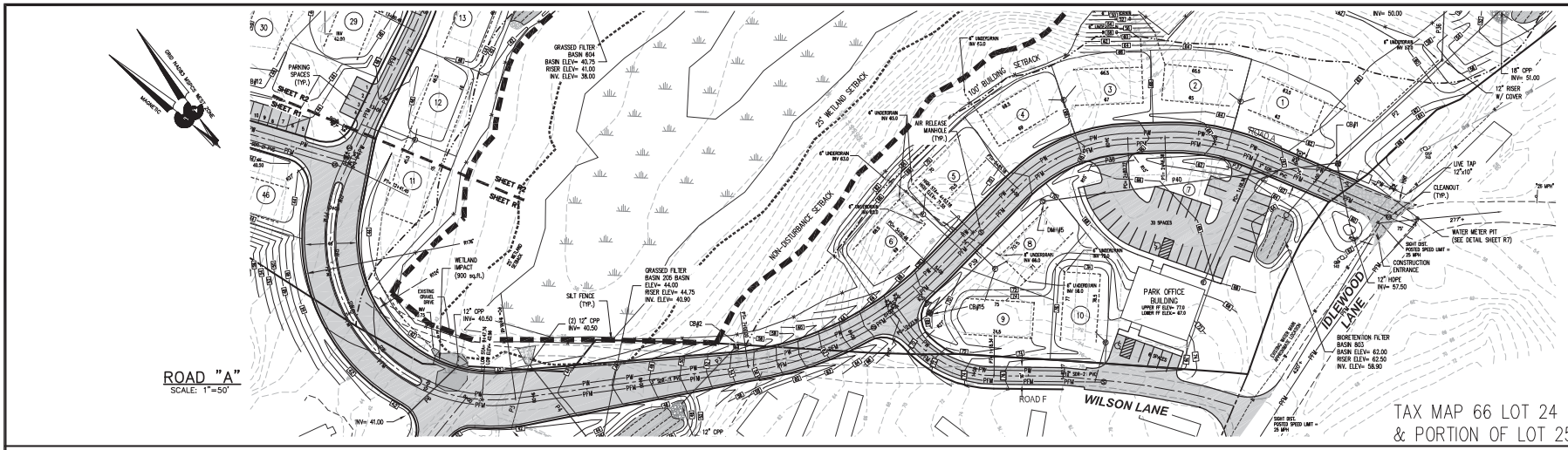
APPROVED	
SCALE	AS NOTED

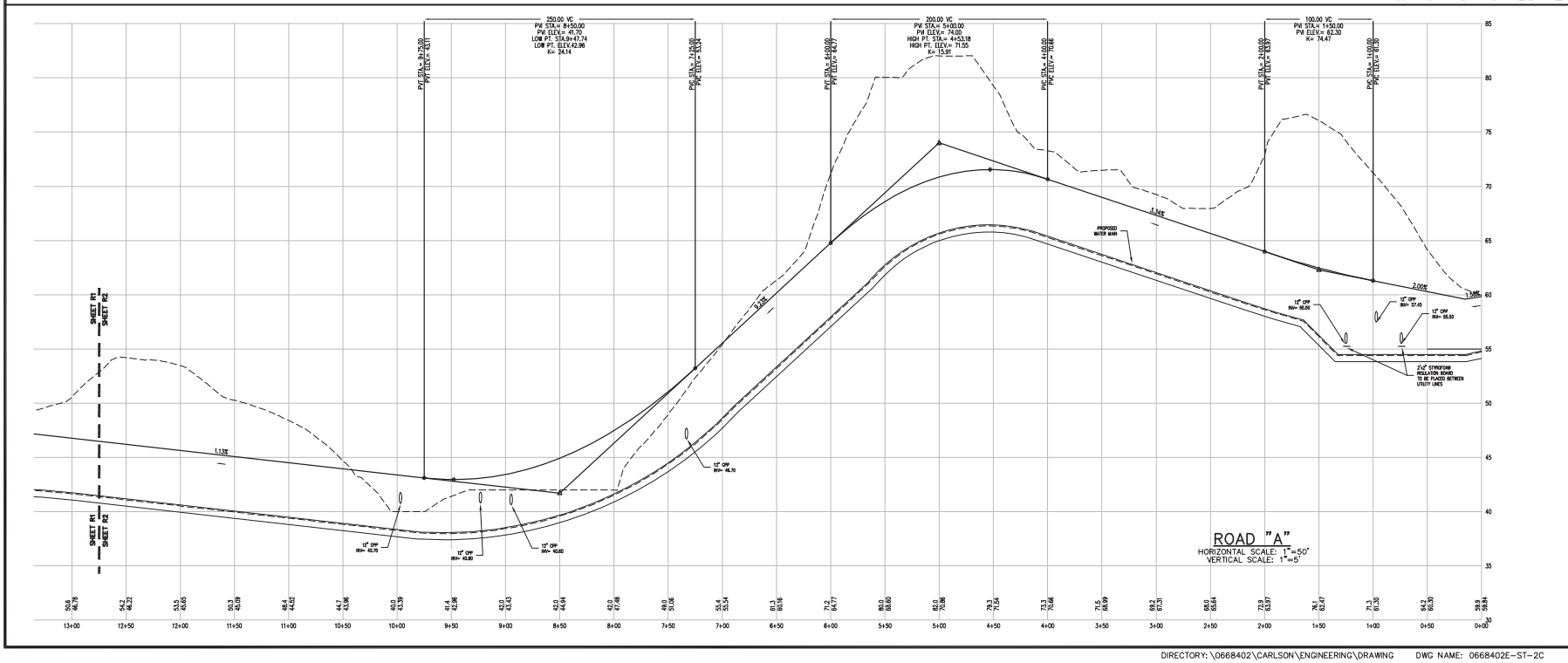
SHEET TITLE:
GRASSED FILTER BASIN DETAILS & SCHEDULES

SHEET NUMBER:
C8

SHEET C8 of C8

PROJECT # 06-684.02





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1			

FINAL PLAN – YANKEE COMMONS
MOBILE HOME PARK EXPANSION (2015)
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
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CIVIL CONSULTANTS

DRAWN GDC/JAA	CALC.
DATE 19 NOVEMBER 2015	
CHECKED	
APPROVED	
SCALE AS NOTED	

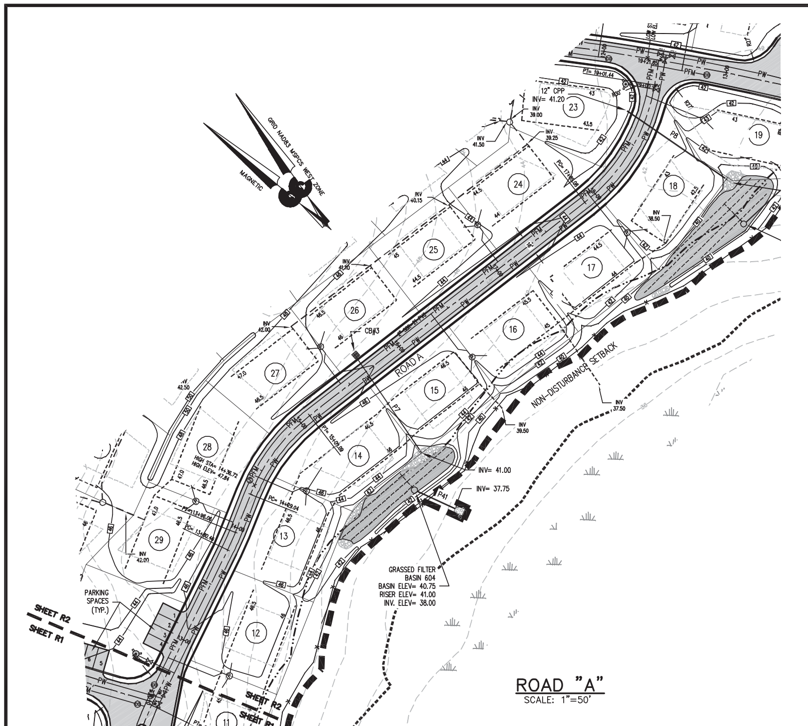
SHEET TITLE:
ROADWAY PLAN & PROFILE ROAD A

SHEET NUMBER:
R1

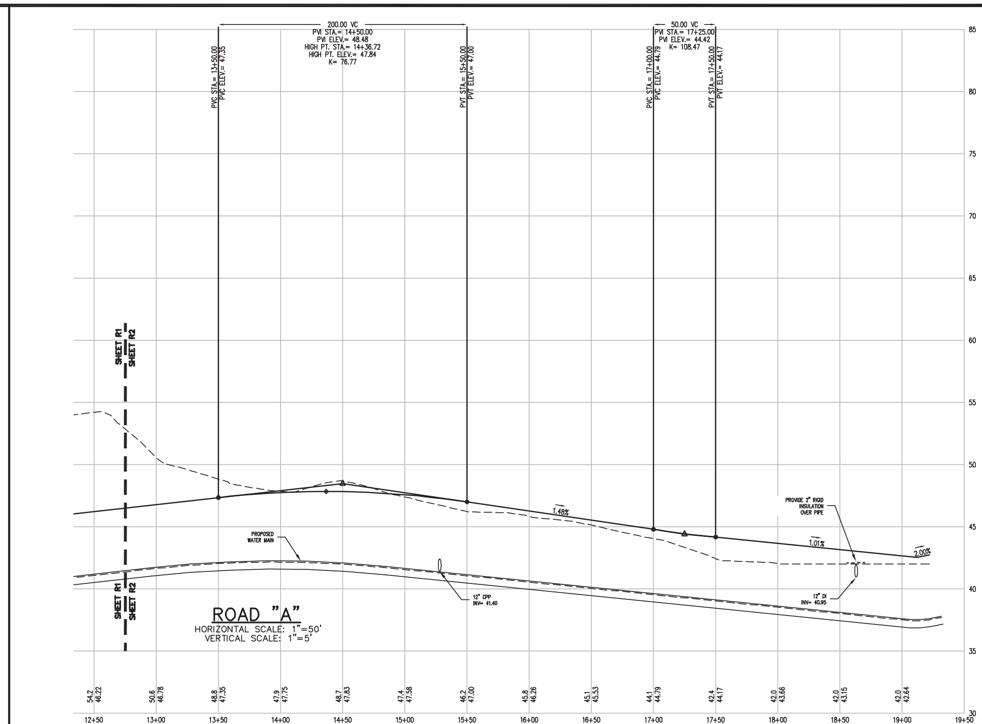
SHEET R1 of R8

PROJECT # 06-684.02

DIRECTORY: \0668402\CARLSON\ENGINEERING\DRAWING DWG NAME: 0668402E-ST-2C DATE: 11/19/2015



ROAD "A"
SCALE: 1"=50'



ROAD "A"
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

CONSTRUCTION SEQUENCE

THE GENERAL SEQUENCE OF EVENTS FOR THE DEVELOPMENT OF THE SITE WILL BE AS FOLLOWS:

1. PRIOR TO COMMENCING ANY OPERATION ON THE SITE:
   a.) A PRE-CONSTRUCTION MEETING SHALL BE REQUIRED.
   b.) SATISFACTORY SURETY SHALL BE PLACED WITH THE TOWN
   c.) INSTALL TEMPORARY EROSION CONTROL DEVICES (SILT FENCE AND/OR HAY BALE BARRIER) AS INDICATED.
2. CLEAR AND GRUB SITE AS REQUIRED. UPON GRUBBING OF THE FIRST 150' OF ROADWAY, THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED.
3. CONSTRUCT BIORETENTION CELLS AND STORMWATER CONTROL STRUCTURES. ADEQUATE SEDIMENTATION CONTROL SHALL BE EMPLOYED TO PROTECT THE BIORETENTION CELLS UNTIL STABILIZATION.
4. STRAW BALE CATCH BASIN STRUCTURES TO BE MAINTAINED AT ALL CATCH BASINS UNTIL VEGETATION IS ESTABLISHED.
5. UTILITY AND ROADWAY CONSTRUCTION SHALL PROCEED IN CONJUCTION WITH LOT DEVELOPMENT.
6. SHAPE, LOAM AND SEED ROADWAY SIDE SLOPES, BIORETENTION AREAS AND ANY DISTURBED AREAS.
7. AFTER GRASS HAS BEEN ESTABLISHED ON DISTURBED AREAS, CLEAN, REPAIR AND RESEED AS REQUIRED.
8. INSTALL SURFACE PAVEMENT.
9. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH APPLICABLE TOWN STANDARDS. INSPECTION SHALL BE REQUIRED DURING CONSTRUCTION.

ROAD INTERSECTIONS			
ROAD	STA.	NORTHING	EASTING
IDLEWOOD LANE/ ROAD A	0+00	108370.26	2808389.58
ROAD A/ ROAD F	5+56	108582.51	2807947.81
ROAD A/ ROAD E	9+62	108740.31	2807579.48
ROAD A/ ROAD B	12+44	108979.97	2807614.64
ROAD A/ROAD D	19+22	109169.44	2808244.21
ROAD B/ ROAD C	1+57	109102.40	2807516.58
ROAD B/ ROAD D	4+18	109337.46	2807484.45
ROAD B/ ROAD D	8+95	109483.12	5807929.76
ROAD C/ ROAD D	6+22	109335.81	2808070.99

```
Centerline Report (ROAD A)                          Fri Oct 26 09:50:17 2012
Centerline File: J:\aaa\2006\0668402\Carlson\Engineering\Data\ROAD-A.cl

Station     Northing     Easting       Bearing          Distance
0+00.000    108370.262   2808389.583
                                       N 31°46'41" W    158.361'
1+58.361    108504.884   2808306.185   PC
 Radius:    108399.558   2808136.167   Radius Length: 200.000'
 PI:        108542.912   2808282.627   2+03.095  Tangent: 44.734'
 Arc Len:   88.018'      Delta: 25°12'55" Left   Degree: 28°38'52"
 Chord Len: 87.310'      N 44°23'09" W: Chord Brg
 Radial-In: S 58°13'19" W Radial-Out: S 33°00'23" W
 Tangential-In Tangential-Out
2+46.380    108567.280   2808245.113   PT
                                       N 56°59'37" W    34.391'
2+80.771    108586.014   2808216.272   PC
 Radius:    108460.222   2808134.562   Radius Length: 150.000'
 PI:        108618.779   2808165.831   3+40.920  Tangent: 60.149'
 Arc Len:   114.408'     Delta: 43°42'03" Left   Degree: 38°11'50"
 Chord Len: 111.655'     N 78°50'38" W: Chord Brg
 Radial-In: S 33°00'23" W Radial-Out: S 10°41'40" E
 Tangential-In Tangential-Out
3+95.179    108607.617   2808106.727   PT
                                       S 79°18'20" W    107.278'
5+02.457    108587.709   2808001.313   PC
 Radius:    108882.499   2807945.641   Radius Length: 300.000'
 PI:        108568.688   2807900.590   6+04.959  Tangent: 102.503'
 Arc Len:   197.544'     Delta: 37°43'41" Right  Degree: 19°05'55"
 Chord Len: 193.994'     N 81°49'49" W: Chord Brg
 Radial-In: N 10°41'40" W Radial-Out: N 27°02'01" E
 Tangential-In Tangential-Out
7+00.001    108615.277   2807809.287   PT
                                       N 62°57'59" W    216.478'
9+16.479    108713.669   2807616.461   PC
 Radius:    108847.280   2807684.638   Radius Length: 150.000'
 PI:        108842.193   2807384.584   11+99.252  Tangent: 282.773'
 Arc Len:   324.924'     Delta: 124°06'42" Right  Degree: 38°11'50"
 Chord Len: 265.021'     N 00°54'38" W: Chord Brg
 Radial-In: N 27°02'01" E Radial-Out: S 28°51'17" E
 Tangential-In Tangential-Out
12+41.403   108978.657   2807612.250   PT
                                       N 61°08'43" E    139.061'
13+80.463   109045.766   2807734.046   PC
 Radius:    109220.936   2807637.528   Radius Length: 200.000'
 PI:        109049.532   2807740.880   13+88.267  Tangent: 7.803'
 Arc Len:   15.599'      Delta: 04°28'07" Left   Degree: 28°38'52"
 Chord Len: 15.595'      N 58°54'39" E: Chord Brg
 Radial-In: N 28°51'17" W Radial-Out: N 33°19'24" W
 Tangential-In Tangential-Out
13+96.062   109053.819   2807747.400   PT
                                       N 56°40'36" E    32.979'
14+29.041   109071.937   2807774.957   PC
 Radius:    108946.599   2807857.362   Radius Length: 150.000'
 PI:        109094.461   2807809.218   14+70.043  Tangent: 41.002'
 Arc Len:   80.048'      Delta: 30°34'34" Right  Degree: 38°11'50"
 Chord Len: 79.102'      N 71°57'53" E: Chord Brg
 Radial-In: S 33°19'24" E Radial-Out: S 02°44'50" E
 Tangential-In Tangential-Out
15+09.089   109096.427   2807850.172   PT
                                       N 87°15'10" E    279.995'
17+89.084   109109.847   2808129.845   PC
 Radius:    109259.675   2808122.655   Radius Length: 150.000'
 PI:        109112.673   2808188.737   18+48.044  Tangent: 58.960'
 Arc Len:   112.354'     Delta: 42°54'58" Left   Degree: 38°11'50"
 Chord Len: 109.746'     N 65°47'41" E: Chord Brg
 Radial-In: N 02°44'50" W Radial-Out: N 45°39'49" W
 Tangential-In Tangential-Out
19+01.438   109154.844   2808229.942   PT
                                       N 44°20'11" E    20.408'
19+21.846   109169.441   2808244.205
```

```
Centerline Report (ROAD B)                          Fri Oct 26 09:52:56 2012
Centerline File: J:\aaa\2006\0668402\Carlson\Engineering\Data\ROAD-B.cl

Station     Northing     Easting       Bearing          Distance
0+00.000    108979.974   2807614.641
                                       N 38°41'34" W    222.729'
2+22.729    109153.817   2807475.403   PC
 Radius:    109216.331   2807553.454   Radius Length: 100.000'
 PI:        109185.897   2807449.708   2+63.831  Tangent: 41.102'
 Arc Len:   77.994'      Delta: 44°41'15" Right  Degree: 57°17'45"
 Chord Len: 76.032'      N 16°20'56" W: Chord Brg
 Radial-In: N 51°18'26" E Radial-Out: S 84°00'19" E
 Tangential-In Tangential-Out
3+00.723    109226.775   2807454.001   PT
                                       N 05°59'41" E    55.000'
3+55.723    109281.474   2807459.745   PC
 Radius:    109271.030   2807559.198   Radius Length: 100.000'
 PI:        109345.924   2807466.513   4+20.528  Tangent: 64.805'
 Arc Len:   115.000'     Delta: 65°53'25" Right  Degree: 57°17'45"
 Chord Len: 108.767'     N 38°56'24" E: Chord Brg
 Radial-In: S 84°00'19" E Radial-Out: S 18°06'54" E
 Tangential-In Tangential-Out
4+70.724    109366.074   2807528.106   PT
                                       N 71°53'06" E    154.870'
6+25.594    109414.227   2807675.299   PC
 Radius:    109271.662   2807721.938   Radius Length: 150.000'
 PI:        109418.782   2807689.225   6+40.245  Tangent: 14.651'
 Arc Len:   29.210'      Delta: 11°09'27" Right  Degree: 38°11'50"
 Chord Len: 29.164'      N 77°27'50" E: Chord Brg
 Radial-In: S 18°06'54" E Radial-Out: S 06°57'27" E
 Tangential-In Tangential-Out
6+54.804    109420.557   2807703.768   PT
                                       N 83°02'33" E    135.592'
7+90.396    109436.982   2807838.362   PC
 Radius:    109585.877   2807820.192   Radius Length: 150.000'
 PI:        109443.033   2807887.947   8+40.349  Tangent: 49.953'
 Arc Len:   96.440'      Delta: 36°50'15" Left   Degree: 38°11'50"
 Chord Len: 94.786'      N 64°37'26" E: Chord Brg
 Radial-In: N 06°57'27" W Radial-Out: N 43°47'42" W
 Tangential-In Tangential-Out
8+86.836    109477.604   2807924.004   PT
                                       N 46°12'18" E    7.968'
8+94.804    109483.118   2807929.755
```

```
Centerline Report (ROAD C)                          Wed Mar 14 11:51:24 2012
Centerline File: J:\aaa\2006\0668402\Carlson\Engineering\Data\ROAD-C.cl

Station     Northing     Easting       Bearing          Distance
0+00.000    109102.403   2807516.582
                                       N 51°53'26" E    142.267'
1+42.267    109190.206   2807628.523   PC
 Radius:    108875.473   2807875.389   Radius Length: 400.000'
 PI:        109273.387   2807734.571   2+77.046  Tangent: 134.779'
 Arc Len:   260.000'     Delta: 37°14'32" Right  Degree: 14°19'26"
 Chord Len: 255.447'     N 70°30'42" E: Chord Brg
 Radial-In: S 38°06'34" E Radial-Out: S 00°52'02" E
 Tangential-In Tangential-Out
4+02.267    109275.427   2807869.335   PT
                                       N 89°07'58" E    82.000'
4+84.267    109276.668   2807951.325   PC
 Radius:    109426.651   2807949.055   Radius Length: 150.000'
 PI:        109277.562   2808010.401   5+43.350  Tangent: 59.083'
 Arc Len:   112.567'     Delta: 42°59'51" Left   Degree: 38°11'50"
 Chord Len: 109.944'     N 67°38'02" E: Chord Brg
 Radial-In: N 00°52'02" W Radial-Out: N 43°51'53" W
 Tangential-In Tangential-Out
5+96.834    109318.504   2808052.999   PT
                                       N 46°08'07" E    24.967'
6+21.801    109335.805   2808070.999
```

```
Centerline Report (ROAD D)                          Wed Mar 14 11:52:48 2012
Centerline File: J:\aaa\2006\0668402\Carlson\Engineering\Data\ROAD-D.cl

Station     Northing     Easting       Bearing          Distance
0+00.000    109337.458   2807484.449
 Radius:    109442.297   2807591.728   Radius Length: 150.000'
 PI:        109410.485   2807413.083   1+02.108  Tangent: 102.108'
 Arc Len:   179.300'     Delta: 68°29'16" Right  Degree: 38°11'50"
 Chord Len: 168.815'     N 10°05'50" W: Chord Brg
 Radial-In: N 45°39'32" E Radial-Out: S 65°51'12" E
 168.815'-Out
1+79.300    109503.658   2807454.853   PT
                                       N 24°08'48" E    74.177'
2+53.477    109571.344   2807485.197   PC
 Radius:    109509.983   2807622.072   Radius Length: 150.000'
 PI:        109665.525   2807527.418   3+56.689  Tangent: 103.212'
 Arc Len:   180.804'     Delta: 69°03'43" Right  Degree: 38°11'50"
 Chord Len: 170.056'     N 58°40'40" E: Chord Brg
 Radial-In: S 65°51'12" E Radial-Out: S 03°12'31" W
 Tangential-In Tangential-Out
4+34.281    109659.748   2807630.468   PT
                                       S 86°47'29" E    78.450'
5+12.731    109655.357   2807708.795   PC
 Radius:    109505.592   2807700.399   Radius Length: 150.000'
 PI:        109652.050   2807767.783   5+71.812  Tangent: 59.081'
 Arc Len:   112.564'     Delta: 42°59'46" Right  Degree: 38°11'50"
 Chord Len: 109.941'     S 65°17'35" E: Chord Brg
 Radial-In: S 03°12'31" W Radial-Out: S 46°12'18" W
 Tangential-In Tangential-Out
6+25.295    109609.404   2807808.672   PT
                                       S 43°47'42" E    455.943'
10+81.238   109280.296   2808124.221   PC
 Radius:    109487.920   2808340.767   Radius Length: 300.000'
 PI:        109269.461   2808134.610   10+96.248  Tangent: 15.011'
 Arc Len:   29.997'      Delta: 05°43'44" Left   Degree: 19°05'55"
 Chord Len: 29.984'      S 46°39'34" E: Chord Brg
 Radial-In: N 46°12'18" E Radial-Out: N 40°28'34" E
 Tangential-In Tangential-Out
11+11.234   109259.717   2808146.028   PT
 Radius:    107890.496   2806977.595   Radius Length: 1800.000'
 PI:        109180.132   2808239.290   12+33.837  Tangent: 122.603'
 Arc Len:   244.827'     Delta: 07°47'35" Right  Degree: 03°10'59"
 Chord Len: 244.639'     S 45°37'39" E: Chord Brg
 Radial-In: S 40°28'34" W Radial-Out: S 48°16'09" W
 Tangential-In
13+56.062   109088.636   2808320.898   PT
```

```
Centerline Report (ROAD E)                          Fri Oct 26 09:51:11 2012
Centerline File: J:\aaa\2006\0668402\Carlson\Engineering\Data\ROAD-E.cl

Station     Northing     Easting       Bearing          Distance
0+00.000    108740.311   2807579.484
                                       S 73°49'19" W    75.237'
0+75.237    108719.348   2807507.226     Deflection: 07°12'35" Left
                                       S 66°36'44" W    53.706'
1+28.944    108698.029   2807457.932
```

```
Centerline Report (ROAD F)                          Wed Mar 14 11:57:30 2012
Centerline File: J:\aaa\2006\0668402\Carlson\Engineering\Data\ROAD-F.cl

Station     Northing     Easting       Bearing          Distance
0+00.000    108582.506   2807947.810
                                       S 00°24'51" E    23.936'
0+23.936    108558.572   2807947.983   PC
 Radius:    108559.294   2808047.980   Radius Length: 100.000'
 PI:        108507.520   2807948.352   0+74.988  Tangent: 51.053'
 Arc Len:   94.406'      Delta: 54°05'27" Left   Degree: 57°17'45"
 Chord Len: 90.939'      S 27°27'34" E: Chord Brg
 Radial-In: N 89°35'09" E Radial-Out: N 35°29'42" E
 Tangential-In Tangential-Out
1+18.342    108477.878   2807989.917   PT
                                       S 54°30'18" E    63.924'
1+82.266    108440.762   2808041.961
```

TAX MAP 66 LOT 24
& PORTION OF LOT 25

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NO.	REVISIONS	INT.	DATE
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FINAL PLAN – YANKEE COMMONS MOBILE HOME PARK EXPANSION (2015)

IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS: 1571 BELLEVUE AVE., SUITE 210 WEST VANCOUVER, B.C. V7V1A6

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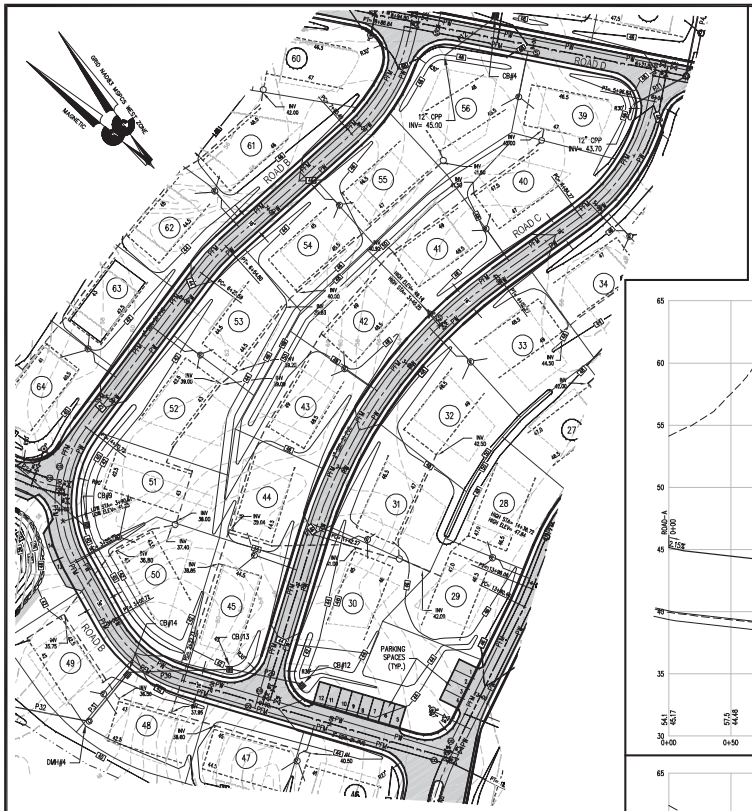
SHEET TITLE:
- ROADWAY PLAN & PROFILE ROAD A

SHEET NUMBER:
R2

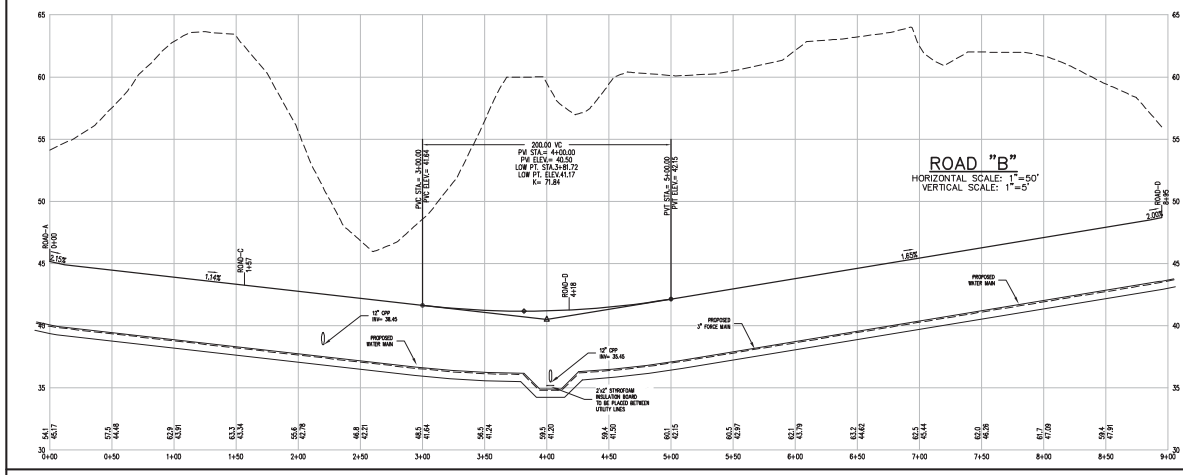
SHEET R2 of R8

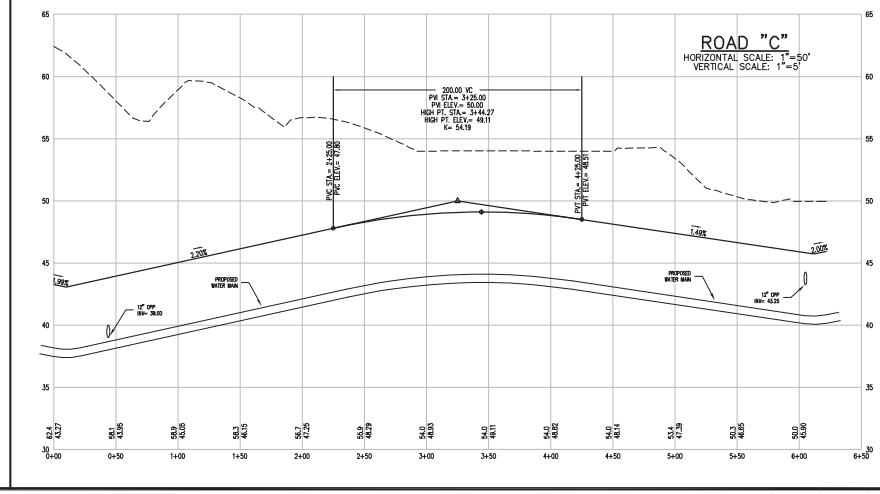
PROJECT # 06-684.02

DIRECTORY: \0668402\CARLSON\ENGINEERING\DRAWING DWG NAME: 0668402E-ST-2C DATE: 11/19/2015



ROAD "B" & "C"
SCALE: 1"=50'





TAX MAP 66 LOT 24
& PORTION OF LOT 25

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FINAL PLAN – YANKEE COMMONS
MOBILE HOME PARK EXPANSION (2015)
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
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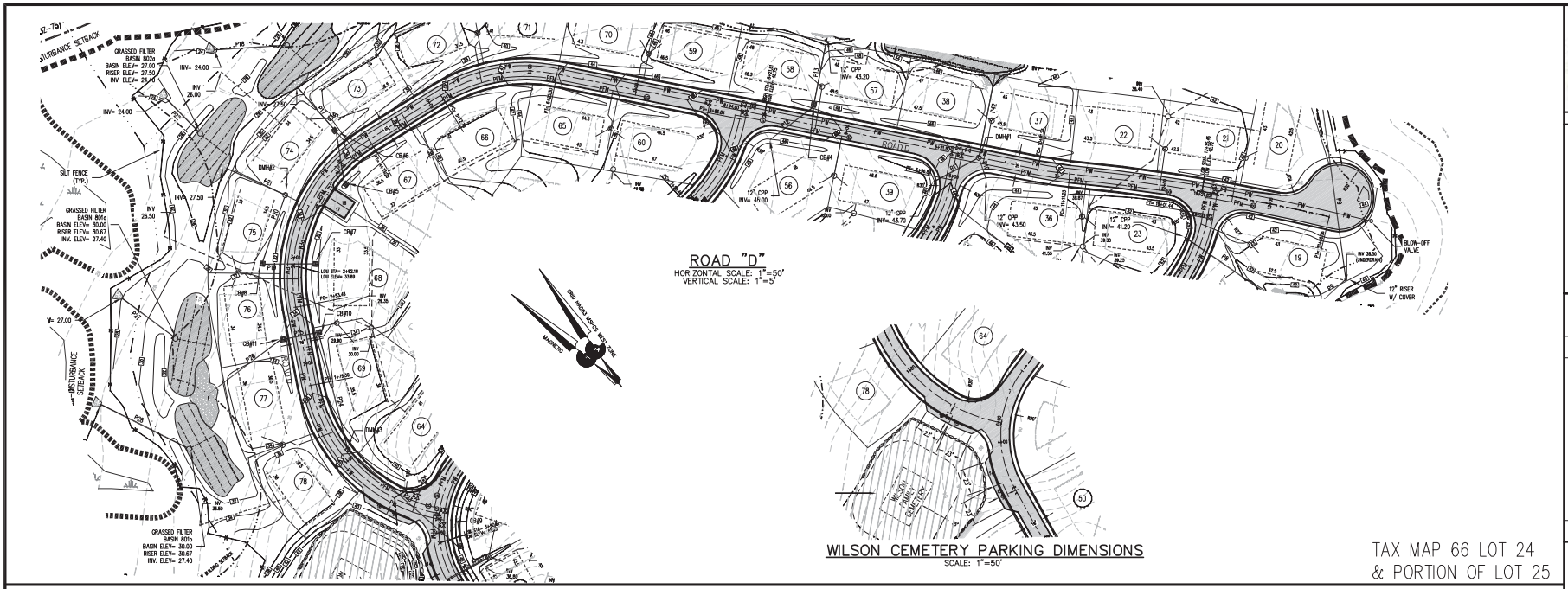
SHEET TITLE:
ROADWAY PLAN & PROFILE ROAD B & C

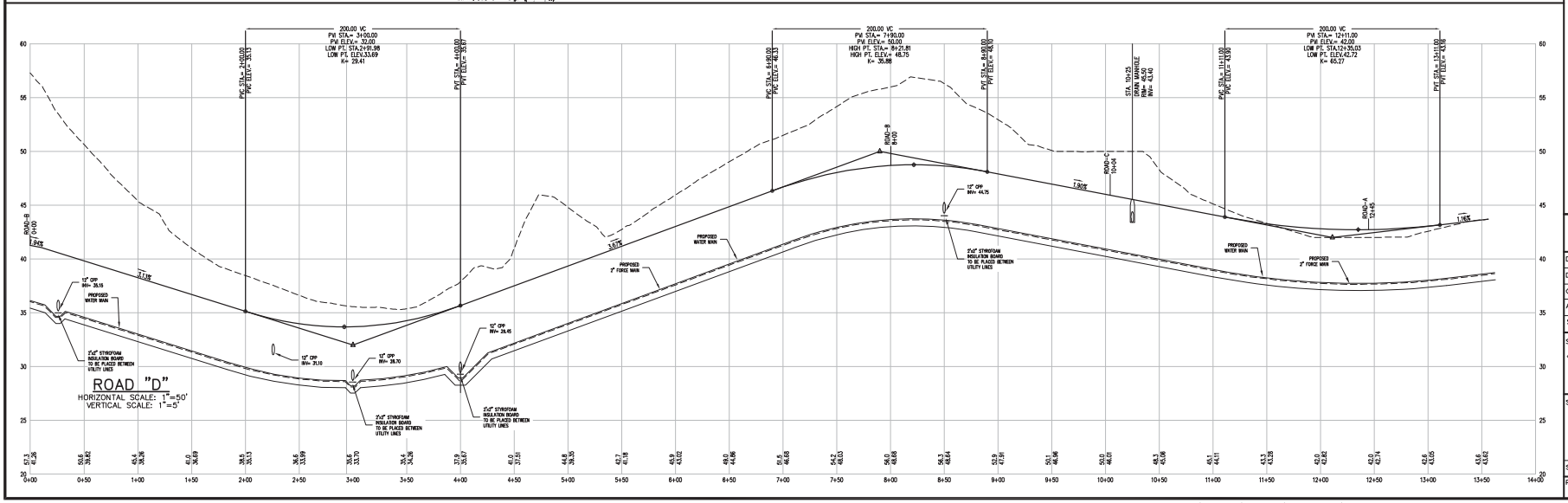
SHEET NUMBER:
R3

SHEET R3 of R8

PROJECT # 06-684.02

DIRECTORY: \0668402\CARLSON\ENGINEERING\DRAWING DWG NAME: 0668402E-ST-2C DATE: 11/19/2015





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NO.	REVISIONS	INT.	DATE
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FINAL PLAN – YANKEE COMMONS
MOBILE HOME PARK EXPANSION (2015)
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS: 1571 BELLEVUE AVE., SUITE 210 WEST VANCOUVER, B.C. V7V1A6

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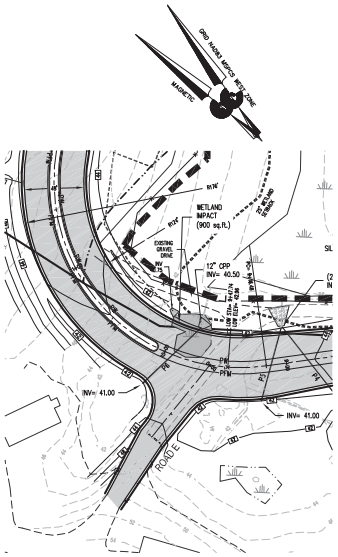
SHEET TITLE:
ROADWAY PLAN & PROFILE ROAD D

SHEET NUMBER:
R4

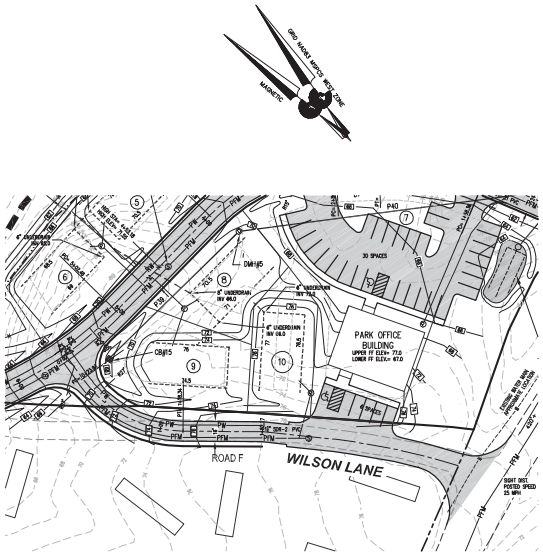
SHEET R4 of R8

PROJECT # 06-684.02

DIRECTORY: \0668402\CARLSON\ENGINEERING\DRAWING DWG NAME: 0668402E-ST-2C DATE: 11/19/2015



ROAD "E"
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'



ROAD "F"
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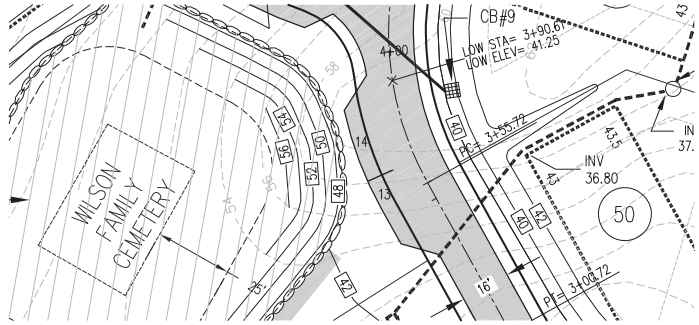
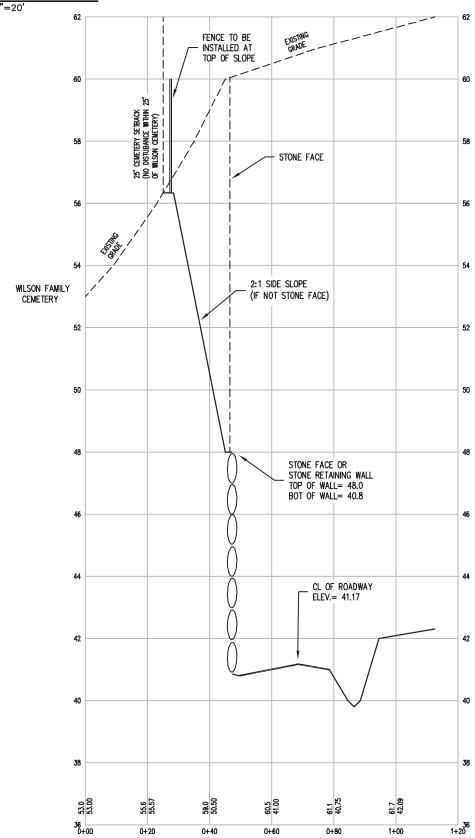
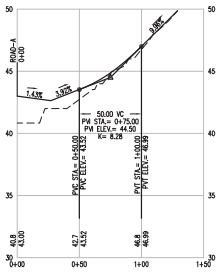
VERTICAL SCALE: 1"=5'



CEMETERY PLAN
SCALE: 1"=20'



CEMETERY SECTION
HORIZONTAL SCALE= 1"=20
VERTICAL SCALE =1" =2



ROAD "E"
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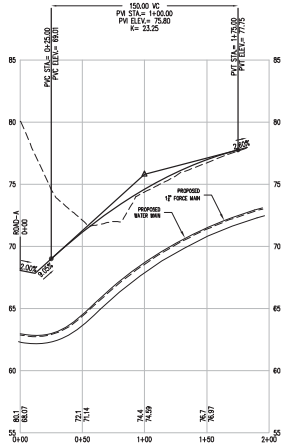
VERTICAL SCALE: 1"=5'



ROAD "F"
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

TAX MAP 66 LOT 24
& PORTION OF LOT 25

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FINAL PLAN – YANKEE COMMONS
MOBILE HOME PARK EXPANSION (2015)
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS: 1571 BELLEVUE AVE., SUITE 210 WEST VANCOUVER, B.C. V7V1A6

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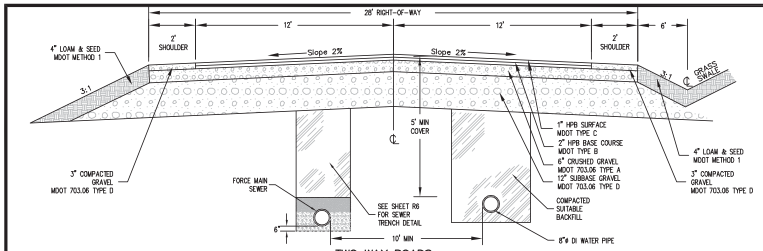
SHEET TITLE:
• ROADWAY PLAN & PROFILE – ROAD E&F–SECTION

SHEET NUMBER:
R5

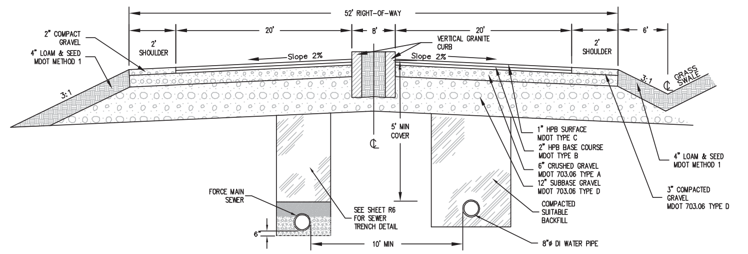
SHEET R5 of R8

PROJECT # 06–684.02

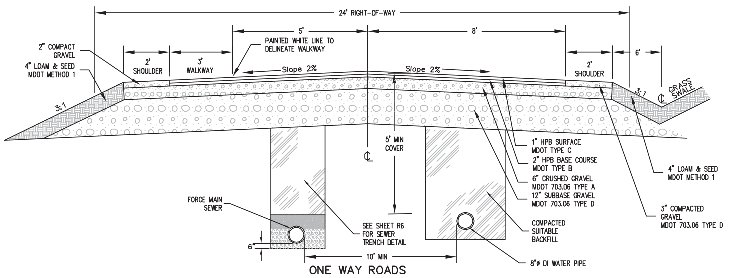
DIRECTORY: \0668402\CARLSON\ENGINEERING\DRAWING DWG NAME: 0668402E–ST–2C DATE: 11/19/2015



TWO WAY ROADS
TYPICAL ROAD SECTION
NOT TO SCALE



ROAD A STATION 10+00–11+85
TYPICAL ROAD SECTION
NOT TO SCALE



ONE WAY ROADS
PROPOSED ROAD SECTION
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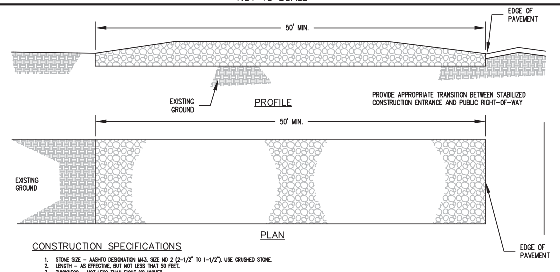
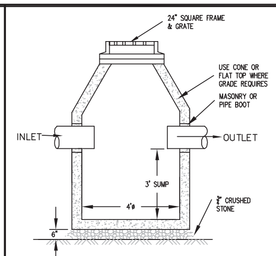


CONSTRUCTION SPECIFICATIONS

1. STONE SIZE – AASHTO DESIGNATION M43, SIZE NO 2 (2-1/2" TO 1-1/2"). USE CRUSHED STONE.
2. LENGTH – AS EFFECTIVE, BUT NOT LESS THAT 50 FEET.
3. THICKNESS – NOT LESS THAN EIGHT (8) INCHES.
4. WIDTH – NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
5. WASHING – WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATER COURSE THROUGH USE OF SAND BAGS, GRAVEL, BOARDS, OR OTHER APPROVED METHODS.
6. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED, ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



CATCH BASIN DETAIL
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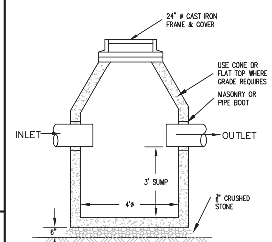

DRAIN MANHOLE DETAIL
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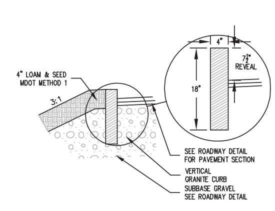

VERTICAL GRANITE CURB DETAIL
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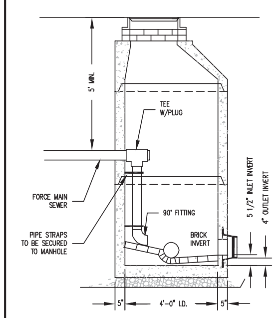
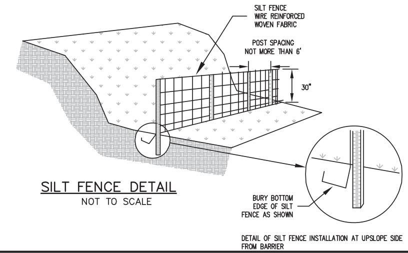
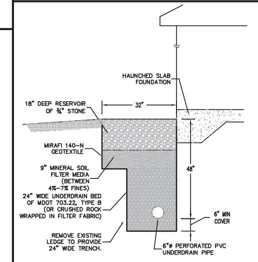


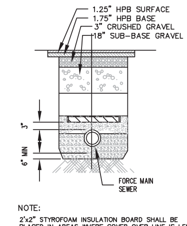
FORCE MAIN CONNECTION
TO EXISTING MANHOLE
NOT TO SCALE



SILT FENCE DETAIL
NOT TO SCALE

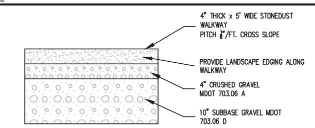


ROOFLINE DRIPEDGE FILTER DETAIL
SCALE: NOT TO SCALE

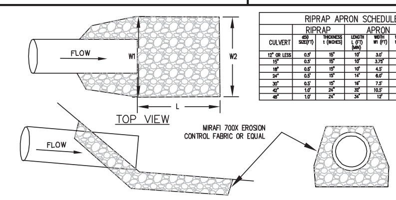


NOTE:
2'x2" STYROFOAM INSULATION BOARD SHALL BE PLACED IN AREAS WHERE COVER OVER LINE IS LESS THAN 5', OR WHERE SHOWN.
SEWER MAINS SHALL HAVE 10' MINIMUM HORIZONTAL SEPERATION FROM WATER MAINS.

FORCEMAIN TRENCH DETAIL
NOT TO SCALE



STONEDUST SIDEWALK DETAIL
NOT TO SCALE



RIPRAP APRON SCHEDULE

CULVERT	RIPRAP d50 SIZE(FT)	RIPRAP THICKNESS t (INCHES)	APRON LENGTH L (FT) (MIN)	APRON WIDTH W1 (FT)	APRON WIDTH W2 (FT)
12" OR LESS	0.5'	15"	10'	3.0'	12'
15"	0.5'	15"	10'	3.75'	12'
18"	0.5'	15"	10'	4.5'	12'
24"	0.5'	15"	14'	6.0'	16'
30"	0.5'	15"	16'	7.5'	18'
42"	1.0'	24"	32'	10.5'	36'
48"	1.0'	24"	34'	12'	38'

RIPRAP APRON PIPE OUTLET DETAIL
NOT TO SCALE

RIPRAP APRON OUTLET PROTECTION SCHEDULE

Pipe/BMP		Velocity (fps)	Tailwater (feet)	Diameter (inches)	Flow (cfs)	Apron Length (L feet)	Width outlet (W1 feet)	Width end (W2 feet)	Min d50 (inches)	d50 spec (inches)
P43	BIO #204 – 12"	1.87	0.33	12	4.65	Not needed			N/A	6
P4,P5,P6	BIO #205 – 12"	3.10	0.33	12	2.56	12	3.00	13	3	6
P33 & P34	BIO #601 – 12"	4.53	0.33	12	3.63	14	3.00	15	4	6
P41	BIO #604 – 12"	3.09	0.33	12	2.51	12	3.00	13	2	6
P9	BIO #606 – 12"	4.07	0.33	12	3.31	13	3.00	14	4	6
P14	BIO #607 – 12"	4.00	0.33	12	3.32	13	3.00	14	4	6
P15	BIO #800 – 12"	1.32	0.33	12	0.70	Not needed			N/A	6
P27 & P28	BIO #801 – 12"	3.42	0.33	12	2.75	12	3.00	13	3	6
P18 & P22	BIO #802 – 12"	4.45	0.33	12	1.20	9	3.00	11	1	6
P36	BIO #803 - 12"	1.60	0.33	12	1.24	Not needed			N/A	6
P4,P5,P6	Pond #500 – 12"	3.44	0.33	12	9.54	24	3.00	26	15	16
P4,P5,P6	Pond #600 - 12"	6.11	0.33	12	4.80	16	3.00	17	6	6

Where multiple outlets, flow assumed to split evenly. Worst case culvert to govern sizing.

Assumed tailwaters at outlet, greater than water depth in wider receiving channels.

* Where velocity indicates that no outfall protection is necessary, install apron per detail controled by culvert diameter.

* Calculated using guidelines from Maine Erosion and Sediment Control BMPs (1991) and NH DES Erosion and Sediment Control Handbook (1992) Flows are result of 25 year storm event.

EROSION AND SEDIMENT CONTROL PRACTICES

1. NO SOIL SHALL BE DISTURBED DURING THE PERIOD OF MARCH 1 THROUGH APRIL 15, NOR DURING ANY OTHER PERIOD WHEN SOILS ARE SATURATED DUE TO RAIN OR SNOW MELT.
2. DISTURBED SOILS SHALL BE STABILIZED WITHIN ONE (1) WEEK FROM THE TIME IT WAS LAST ACTIVELY WORKED USING TEMPORARY OR PERMANENT MEASURES SUCH AS PLACEMENT OF RIPRAP, MULCH OR OTHER EROSION CONTROL BLANKET, OR OTHER COMPARABLE MEASURES.
3. HAY OR STRAW MULCH, WHERE USED, SHALL BE APPLIED AT A RATE OF AT LEAST ONE (1) BALE PER 500 SQUARE FEET (1-2 TONS PER ACRE).
4. IF MULCH IS LIKELY TO BE REMOVED DUE TO TO STEEP SLOPES OR WIND, IT SHALL BE ANCHORED WITH NETTING, PEG OR TWINE, OR OTHER SUITABLE METHOD AND SHALL BE MAINTAINED UNTIL A CATCH OF VEGETATION IS ESTABLISHED OVER THE ENTIRE DISTURBED AREA.
5. IN ADDITION TO PLACEMENT OF RIPRAP, MULCH OR EROSION CONTROL BLANKETS, ADDITIONAL STEPS SHALL BE TAKEN WHERE NECESSARY IN ORDER TO PREVENT SEDIMENTATION OF THE WATER. EVIDENCE OF SEDIMENTATION INCLUDES VISIBLE GULLY EROSION, DISCOLORATION OF WATER BY SUSPENDED PARTICLES AND SLUMPING OF BANKS. SILT FENCES, STAKED HAY BALES AND OTHER SEDIMENTATION CONTROL MEASURES, WHERE PLANNED FOR, SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF WORK, BUT SHALL ALSO BE INSTALLED WHEREVER NECESSARY DUE TO SEDIMENTATION.
6. MULCH OR OTHER TEMPORARY MEASURES SHALL BE MAINTAINED UNTIL THE SITE IS PERMANENTLY STABILIZED WITH VEGETATION OR OTHER PERMANENT CONTROL MEASURES AFTER WHICH TEMPORARY MEASURES WILL BE REMOVED.
7. PERMANENT RE-VEGETATION OF ALL DISTURBED AREAS, USING NATIVE PLANT MATERIAL WHEN POSSIBLE, SHALL OCCUR WITHIN 30 DAYS FROM THE TIME THE AREAS WERE LAST ACTIVELY WORKED, OR FOR FALL AND WINTER ACTIVITIES, BY JUNE 15, EXCEPT WHERE PRECLUDED BY THE TYPE OF ACTIVITY (E.G.RIRRAP, ROAD SURFACES, ETC.). THE VEGETATIVE COVER SHALL BE MAINTAINED.
8. DISPOSAL OF COLLECTED DEBRIS MUST BE IN CONFORMANCE WITH MAINE SOLID WASTE LAW, TITLE 38 MRSA SECTION 1301 ET. SEQ.
9. LIME AND FERTILIZER APPLICATION RATES SHALL NOT EXCEED THE FOLLOWING:

GROUND LIMESTONE: 3 TONS/ACRE (130 LBS./1000 S.F.)
FERTILIZER, 10-10-10 OF EQUIVALENT: 600 LBS./ACRE (14 LBS./1000 S.F.)

FERTILIZER SHALL NOT BE APPLIED BEFORE START OF THE GROWING SEASON NOR AFTER SEPTEMBER 30. FERTILIZED AREAS SHALL BE MULCHED TO REDUCE OFF-SITE TRANSPORT OF NUTRIENTS UNTIL USED BY VEGETATIVE GROWTH.

SEEDING MIXTURE AND SCHEDULE:

SPREAD TOPSOIL UNIFORMLY 6" DEEP OVER AREAS TO BE RECLAIMED. THE FOLLOWING SEED MIXTURE SHALL BE USED:

LAWNS:

KENTUCKY BLUEGRASS	0.46 LBS./1000 S.F.
CREEPING RED FESCUE	0.46 LBS./1000 S.F.
PERENNIAL RYE GRASS	0.11 LBS./1000 S.F.
TOTAL	1.03 LBS./1000 S.F.

APPLY LIME AND FERTILIZER AS SPECIFIED UNDER THE EROSION AND SEDIMENTATION CONTROL NOTES. WORK INTO THE TOP (4) INCHES OF SOIL PRIOR TO SEEDING. AFTER SEEDING, APPLY MULCH HAY AS SPECIFIED. ON FLAT AREAS AND NOT EXPOSED TO WIND, THE MULCH WILL BE ANCHORED BY WETTING DOWN. IN OTHER AREAS, JUTE NETTING SHALL BE USED FOR ANCHORAGE. THE ABOVE SEEDING SCHEDULE IS APPLICABLE IF SEEDING DURING THE GROWING SEASON (APRIL 15 TO JUNE 15 AND AUGUST 30 TO SEPTEMBER 30). BETWEEN JUNE 15 AND AUGUST 30, SEEDING WILL BE DELAYED UNTIL AUGUST 30. IF SOIL IS DISTURBED BETWEEN OCTOBER 1 AND NOVEMBER 1, DELAY SEEDING UNTIL NOVEMBER 1. AFTER NOVEMBER 1 AND BEFORE A SNOW COVER FORMS, THE SAME PROCEDURE WILL BE FOLLOWED EXCEPT THE SEED RATE WILL BE DOUBLED. AFTER SNOW COVER AND BEFORE APRIL 15, SEEDING WILL BE DELAYED UNTIL APRIL 15. HAY MULCH WILL BE APPLIED AT A RATE OF 150 LBS./1000 SQUARE FEET. THIS WILL BE ANCHORED BY NON-ASPHALTIC TACKIFIER SPRAYED ON LAWNS AND JUTE NETTING IN DRAINAGE WAYS AND OTHER AREAS.

TAX MAP 66 LOT 24
& PORTION OF LOT 25

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NO.	REVISIONS	INT.	DATE
1			

FINAL PLAN – YANKEE COMMONS
MOBILE HOME PARK EXPANSION (2015)
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE
PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS: 1571 BELLEVUE AVE., SUITE 210 WEST VANCOUVER, B.C. V7V1A6

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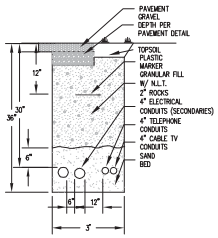
DATE 19 NOVEMBER 2015	
CHECKED	
APPROVED	
SCALE AS NOTED	
SHEET TITLE: •CONSTRUCTION DETAILS	
SHEET NUMBER: R6	
SHEET R6 of R8	
PROJECT # 06-684.02	

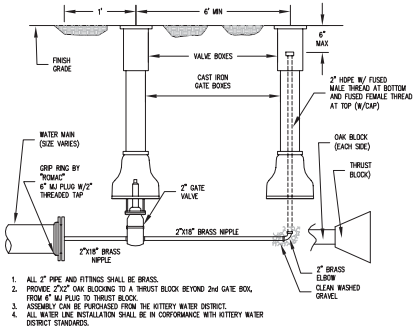
DIRECTORY: \0668402\CARLSON\ENGINEERING\DRAWING   DWG NAME: 0668402E-ST-2C   DATE: 11/19/2015



ELECTRICAL & TELEPHONE TRENCH DETAIL

NOT TO SCALE

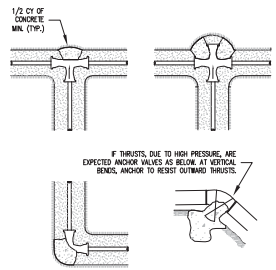
NOTE:
1. UNDERGROUND ELECTRIC, TELEPHONE AND CABLE TV LINES TO BE COORDINATED WITH CMP, VERIZON AND COMCAST UTILITY COMPANIES.



1. ALL 2" PIPE AND FITTINGS SHALL BE BRASS.
2. PROVIDE 2"X2" OAK BLOCKING TO A THRUST BLOCK BEYOND 2nd GATE BOX, FROM 4" MJ PLUG TO THRUST BLOCK.
3. ASSEMBLY CAN BE PURCHASED FROM THE KITTERY WATER DISTRICT.
4. ALL WATER LINE INSTALLATION SHALL BE IN CONFORMANCE WITH KITTERY WATER DISTRICT STANDARDS.

KITTERY WATER DISTRICT BLOWOFF DETAIL

NOT TO SCALE

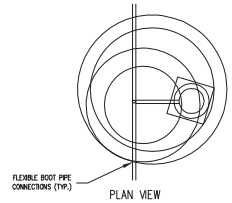


CONCRETE THRUST BLOCKS ARE CONSTRUCTED BY POURING CONCRETE BETWEEN THE FITTING AND THE UNDISTURBED BEARING WALL OF THE TRENCH. A DRY MIXTURE IS PREPARED SO THAT THE CONCRETE MAY BE EASILY SHAPED INTO THE DESIRED FORM, A WEDGE WITH THE WIDE END AGAINST THE SOLID WALL. NOTE THE SHAPES AND POSITIONS OF THE THRUST BLOCKS IN THE DRAWINGS.

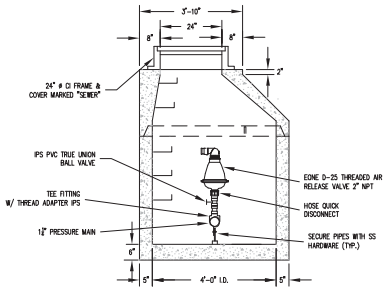
THRUST BLOCK DETAIL
(WATER MAIN & SEWER FORCE MAIN)

NOT TO SCALE

NOTE:
ALL WATER LINE INSTALLATION SHALL BE IN CONFORMANCE WITH KITTERY WATER DISTRICT STANDARDS.



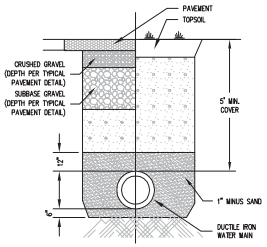
PLAN VIEW



SEWER FORCE MAIN AIR RELEASE MANHOLE

NOT TO SCALE

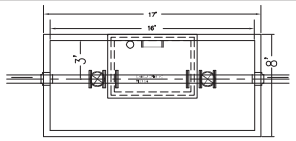
NOTES:
1. CONCRETE: 4,000 PSI AFTER 28 DAYS.
2. REINFORCING: H-20 LOADING 4X4/4X4WWM
3. SHIPLAP JOINTS SEALED WITH 1 STRIP OF 1" DIA. BUTYL RUBBER SEALANT.
4. EXTERIOR 2 COATS ASPHALT WATERPROOFING.
5. LOCK JOINT FLEXIBLE PIPE SLEEVES, CAST IN MANHOLE WALLS.
6. EACH CASTING TO HAVE LIFTING HOLES CAST IN.
7. MANHOLE STEPS @12" O.C.
8. 2" LIP AT TOP OF CONE PROVIDED TO ACCOMMODATE VACUUM TESTING



WATERLINE TRENCH DETAIL

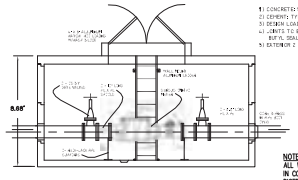
NOT TO SCALE

NOTE:
ALL WATER LINE INSTALLATION SHALL BE IN CONFORMANCE WITH KITTERY WATER DISTRICT STANDARDS.



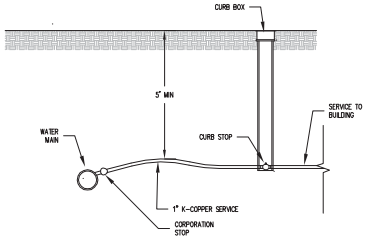
PRECAST NOTES

1) CONCRETE 5,000 PSI @ 28 DAYS
2) CEMENT: TYPE III PER ASTM C150-91
3) DESIGN LOADING AASHTO H20-44
4) JOINTS TO BE SEALED WATERTIGHT W/ASPHALTIC BUTYL SEALANT
5) EXTERIOR 2 COATS ASPHALT WATERPROOFING



WATER METER PIT DETAIL
SCALE: NOT TO SCALE

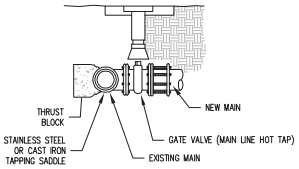
NOTE:
ALL WATER LINE INSTALLATION SHALL BE IN CONFORMANCE WITH KITTERY WATER DISTRICT STANDARDS.



WATER SERVICE CONNECTION

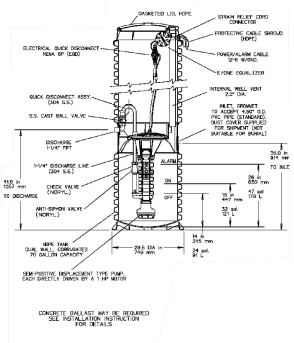
NOT TO SCALE

NOTE:
ALL WATER LINE INSTALLATION SHALL BE IN CONFORMANCE WITH KITTERY WATER DISTRICT STANDARDS.



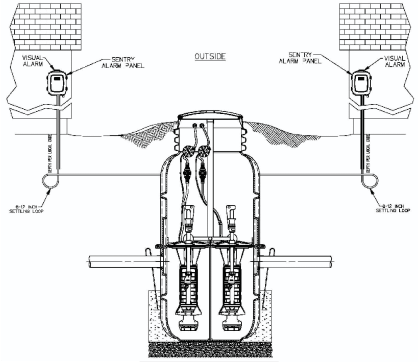
WATER MAIN CONNECTION DETAIL

NOT TO SCALE



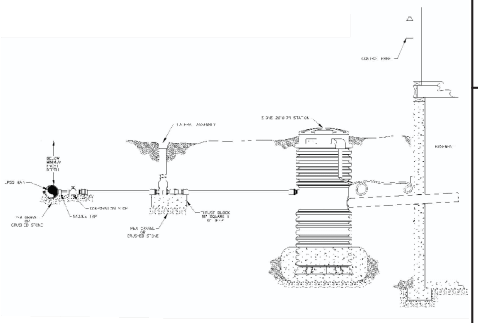
TYPICAL MOBILE HOME SIMPLEX PUMP STATION

NOT TO SCALE



TYPICAL MOBILE HOME DUPLEX PUMP STATION

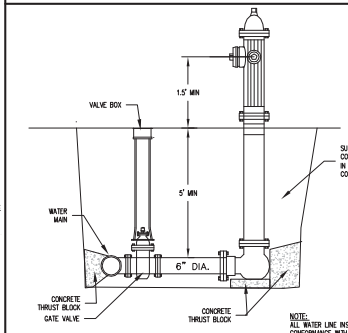
NOT TO SCALE



TYPICAL MOBILE HOME SEWER LATERAL CONNECTION

NOT TO SCALE

TAX MAP 66 LOT 24
& PORTION OF LOT 25



NOTE:
ALL WATER LINE INSTALLATION SHALL BE IN CONFORMANCE WITH KITTERY WATER DISTRICT STANDARDS.

FIRE HYDRANT DETAIL

NOT TO SCALE

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NO.	REVISIONS	INT.	DATE
1			

FINAL PLAN – YANKEE COMMONS
MOBILE HOME PARK EXPANSION (2015)
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS: 1571 BELLEVUE AVE., SUITE 210 WEST VANCOUVER, B.C. V7V1A6

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DATE 19 NOVEMBER 2015	
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SHEET TITLE:
·CONSTRUCTION DETAILS

SHEET NUMBER:
R7

SHEET R7 of R8

PROJECT # 06-684.02

DIRECTORY: \0668402\CARLSON\ENGINEERING\DRAWING DWG NAME: 0668402E-ST-2C DATE: 11/19/2015

MAINTENANCE PROCEDURES

THE FOLLOWING PROCEDURES WILL BE FOLLOWED FOR INITIAL AND LONG TERM MAINTENANCE OF THE STORMWATER MANAGEMENT FACILITIES AT THIS SITE. NOTE: FOR THE PURPOSES OF THESE PROCEDURES, A MAJOR STORM EVENT IS CLSSIFIED AS A RAINFALL EXCEEDING 3.0 INCHES. A SIGNIFICANT RAINFALL IS 1/2" IN A 24 HOUR PERIOD.

MAINTENANCE LOG
THE RESPONSIBLE PARTY SHALL ESTABLISH A MAINTENANCE LOG/PLAN FOR USE IN RECORDING MAINTENANCE ACTIVITIES. AS A MINIMUM, THE LOG SHALL INCLUDE THE DATE(S) OF ACTIVITIES, WHO PERFORMED THE DUTIES, WHAT WAS DONE (I.E. LOOKED AT DETENTION BERMS, CLEANED DROP INLETS, ETC.), THE RESULTS OF THE ACTIVITY (I.E. ALL STRUCTURES WERE IN GOOD SHAPE, OR, POND #44 NEEDS TO BE REPAIRED). IF ANY ITEM NEEDS TO BE REPAIRED, A FOLLOW-UP ENTRY SHALL SHOW THE DATE THAT REPAIRS WERE COMPLETED.

FILTRATION BASINS (INITIAL AND LONG TERM)
MAINTENANCE IS NECESSARY IF DETENTION BASINS ARE TO CONTINUE TO FUNCTION AS ORIGINALLY DESIGNED. THE RESPONSIBLE PARTY SHALL DESIGNATE AN INDIVIDUAL (OR COMPANY) TO MAINTAIN THE STRUCTURES AND THE BASIN AREA.

THE FOLLOWING MAINTENANCE ITEMS ARE TO BE PERFORMED IN ACCORDANCE WITH THE MAINTENANCE PLAN:
1. EMBANKMENT – EMBANKMENTS SHOULD BE INSPECTED ANNUALLY TO DETERMINE IF RODENT BURROWS, WET AREAS, OR EROSION OF THE FILL IS TAKING PLACE.
2. VEGETATION – THE VEGETATED AREAS OF STRUCTURE DEVICES SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH. SEDIMENT AND PLANT DEBRIS SHOULD BE REMOVED FROM PRE-TREATMENT AREAS AT LEAST ANNUALLY. FERTILIZATION OF THE PLANTINGS SHOULD BE AVOIDED UNLESS ABSOLUTELY NECESSARY TO ESTABLISH VEGETATION. HARVESTING AND PRUNING OF EXCESSIVE GROWTH WILL BE DONE AS NEEDED. MOWING OF THE FILTER (IF DESIRED) SHALL BE PERFORMED BY PUSH MOWER NO MORE THAN 2 TIMES PER GROWING SEASON TO MAINTAIN GRASS HEIGHTS OF NO LESS THAN 6".
3. INLETS – PIPE INLETS AND SPILLWAY STRUCTURES SHOULD BE INSPECTED ANNUALLY AND AFTER EVERY MAJOR STORM. ACCUMULATED DEBRIS AND SEDIMENT SHOULD BE REMOVED. IF PIPES ARE COATED, THE COATING SHOULD BE CHECKED AND REPAIRED AS NECESSARY.
4. OUTLETS – PIPE OUTLETS SHOULD BE INSPECTED ANNUALLY AND AFTER EVERY MAJOR STORM. THE CONDITION OF THE PIPES SHOULD BE NOTED AND REPAIRS MADE AS NECESSARY. IF EROSION IS TAKING PLACE THEN MEASURES SHOULD BE TAKEN TO STABILIZE AND PROTECT THE AFFECTED AREA OF THE OUTLET.
5. SEDIMENT – SEDIMENT SHOULD BE CONTINUALLY CHECKED IN THE BASIN. WHEN SEDIMENT ACCUMULATIONS REACH THE PREDETERMINED DESIGN ELEVATION, THEN THE SEDIMENT SHOULD BE REMOVED AND PROPERLY DISPOSED OF.
6. SAFETY INSPECTIONS – ALL BERMS OVER 2' IN HEIGHT SHALL BE INSPECTED BY A QUALIFIED PROFESSIONAL ENGINEER EVERY 5 YEARS. THE DESIGNATED INDIVIDUAL SHOULD ALSO MAKE INSPECTIONS AFTER EVERY MAJOR STORM EVENT.

LAND GRADING AND SLOPE STABILIZATION
ALL SLOPES SHOULD BE CHECKED PERIODICALLY TO SEE THAT VEGETATION IS IN GOOD CONDITION. ANY RILLS OR DAMAGE FROM EROSION AND ANIMAL BURROWING SHOULD BE REPAIRED IMMEDIATELY TO AVOID FURTHER DAMAGE. IF SEEPS DEVELOP ON THE SLOPES, THE AREA SHOULD BE EVALUATED TO DETERMINE IF THE SEEP WILL CAUSE AN UNSTABLE CONDITION. SUBSURFACE DRAINS OR GRAVEL MULCHING MAY BE REQUIRED TO SOLVE SEEP PROBLEMS. DIVERSIONS, BERMS, AND WATERWAYS IN THE LAND GRADING AREA SHOULD BE CHECKED TO SEE THAT THEY ARE FUNCTIONING PROPERLY. PROBLEMS FOUND DURING THE INSPECTIONS SHOULD BE REPAIRED. SLOPES AND ASSOCIATED PRACTICES UTILIZING VEGETATION SHOULD BE LIMED AND FERTILIZED AS NECESSARY TO KEEP THE VEGETATION HEALTHY. ENCROACHMENT OF UNDESIRABLE VEGETATION SUCH AS WEEDS AND WOODY GROWTH THAT IS NOT PLANNED SHOULD BE CONTROLLED TO AVOID PROBLEMS OF BANK STABILITY IN THE FUTURE.

LEVEL SPREADER
LEVEL SPREADERS SHOULD BE CHECKED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE IF THE LIP HAS BEEN DAMAGED AND THAT THE DESIGN CONDITIONS HAVE NOT CHANGED. ANY SEDIMENT ACCUMULATION SHOULD BE REMOVED. DAMAGE SHOULD BE REPAIRED AND RE-VEGETATED. THE VEGETATION SHOULD BE MOWED OCCASIONALLY TO CONTROL WEEDS AND THE ENCROACHMENT OF WOODY VEGETATION. CLIPPINGS SHOULD BE REMOVED AND DISPOSED OF OUTSIDE THE SPREADER AND AWAY FROM THE OUTLET AREA. FERTILIZATION SHOULD BE DONE AS NECESSARY TO KEEP THE VEGETATION HEALTHY AND DENSE.

OUTLET PROTECTION
OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM. IF THE RIPRAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED, IT SHOULD BE REPAIRED. THE CHANNEL IMMEDIATELY BELOW THE OUTLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION APRON.

ROCK RIPRAP (INITIAL & LONG TERM)
ROCK RIPRAP SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM TO DETERMINE IF THE RIPRAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED. WOODY VEGETATION SHOULD BE REMOVED FROM THE ROCK RIPRAP ANNUALLY. IF THE RIPRAP IS ON A CHANNEL BANK, THE STREAM SHOULD BE KEPT CLEAR OF OBSTRUCTIONS. IF DAMAGE HAS OCCURED, REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE RIPRAP.

STORM DRAIN INLET PROTECTION
ALL STRUCTURES SHALL BE INSPECTED AFTER SIGNIFICANT RAIN EVENTS AND REPAIRED AS NEEDED.

SEDIMENT SHALL BE REMOVED AND THE STORMDRAIN SEDIMENT BARRIER RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.

STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

ALL CATCHBASINS AND STORMDRAIN INLETS SHALL BE CLEANED AT THE END OF CONSTRUCTION AND AFTER THE SITE HAS BEEN FULLY STABILIZED.

STRAW OR HAY BALE BARRIER, SILT FENCE AND FILTER BERM
HAY BALE BARRIERS, SILT FENCES AND FILTER BERMS SHALL BE INSPECTED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. THEY SHALL BE REPAIRED IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OF THE EDGES OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM.

SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED.

SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN THE DEPOSITS REACH APPROXIMATELY ONE-HALF OF THE HEIGHT OF THE BARRIER.

FILTER BERMS SHOULD BE RESHAPED AS NEEDED.

SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHOULD BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

TEMPORARY CHECK DAMS
REGULAR INSPECTIONS MUST BE MADE TO ENSURE THAT THE CENTER OF THE CHECK DAM IS LOWER THAT THE EDGES. EROSION CAUSED BY HIGH FLOWS AROUND THE EDGES OF THE CHECK DAM MUST BE CORRECTED. IF EVIDENCE OF SILTATION IN THE WATER IS APPARENT DOWNSTREAM OF THE CHECK DAM, THE CHECK DAM MUST BE INSPECTED AND ADJUSTED.

CHECK DAMS MUST BE CHECKED FOR SEDIMENT ACCUMULATION AFTER EACH SIGNIFICANT RAINFALL. SEDIMENT MUST BE REMOVED WHEN IT REACHES ONE HALF THE ORIGINAL HEIGHT OF BEFORE.

IF IT POSSIBLE, LEAVE THE CHECK DAM IN PLACE PERMANENTLY. IN TEMPORARY DITCHES AND SWALES, CHECK DAMS MUST BE REMOVED WHEN A PERMANENT LINING HAS BEEN ESTABLISHED. IF A CHECK DAM MUST BE REMOVED FROM A GRASS LINED DITCH, WAIT UNTIL THE GRASS HAS MATURED TO PROTECT THE DITCH OR SWALE. THE AREA BENEATH THE CHECK DAM MUST BE SEEDED AND MULCHED REMOVAL.

STABILIZED CONSTRUCTION ENTRANCE (ANTI-TRACKING PAD)
EXITS SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED ALONG WITH THE COLLECTED SOIL MATERIAL AND REDISTRIBUTED ON SITE IN A STABLE MANNER AND THE ENTRANCE RECONSTRUCTED. THE CONTRACTOR SHALL SWEEP OR WASH PAVEMENT AT EXITS, WHICH HAVE EXPERIENCED MUD-TRACKING ONTO THE PAVEMENT OR TRAVELED WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES OR WATERWAYS.

CULVERTS
CULVERTS MUST BE MAINTAINED BY KEEPING INLETS, TRASH GUARDS, AND COLLECTION BOXES AND STRUCTURES CLEAN AND FREE OF MATERIALS THAT CAN REDUCE THE FLOW. ALL LEAKS SHALL BE REPAIRED TO ENSURE PROPER FUNCTIONING OF THE CULVERT. ANIMAL GUARDS MUST BE INSPECTED AND MAINTAINED IN PROPER WORKING ORDER.

ROAD DITCH TURN OUT
AFTER CONSTRUCTION, DITCH TURNOUTS SHALL BE CAREFULLY INSPECTED AND REPAIRED IF SIGNS OF CHANNELIZATION APPEAR. IT WILL BE NECESSARY TO REMOVE SEDIMENT FROM THE DITCH TURNOUT TRENCH WHEN THE SWALE IS FULL AND THE STRUCTURE IS NO LONGER FUNCTIONING PROPERLY.

VEGETATED SWALE
TIMELY MAINTENANCE IS IMPORTANT TO KEEP THE VEGETATION IN THE SWALE IN GOOD CONDITION. MOWING SHOULD BE DONE FREQUENTLY ENOUGH TO KEEP THE VEGETATION IN VIGOROUS CONDITION AND TO CONTROL ENCROACHMENT OF WEEDS AND WOODY VEGETATION, HOWEVER IT SHOULD NOT BE MOWED TOO CLOSELY SO AS TO REDUCE THE FILTERING EFFECT. FERTILIZE ON AN "AS NEEDED" BASIS TO KEEP THE GRASS HEALTHY. OVER FERTILIZATION CAN RESULT IN THE SWALE BECOMING A SOURCE OF POLLUTION.

THE SWALE SHOULD BE INSPECTED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE THE CONDITION OF THE SWALE. RILLS AND DAMAGED AREAS SHOULD BE PROMPTLY REPAIRED AS NECESSARY TO PREVENT FURTHER DETERIORATION.

ROOF DRIPLINE FILTRATION
MAINTENANCE OF THE ROOF DRIPLINE FILTERS INCLUDES THE REMOVAL OF ANY DEBRIS PRESENT AT THE TOP OF THE RESIVOIR COURSE. IF RUNOFF TO THE FILTERS HAS NOT DRAINED IN 48 HOURS, REMOVAL AND REPLACEMENT OF THE FILTER MATERIAL MAY BE REQUIRED.

THE FILTERS SHOULD BE INSPECTED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE THE CONDITION OF THE RECEIVING MATERIALS.

NO PORTION OF THE SURFACE OF THE FILTERS MAY BE PAVED OVER OR OTHERWISE ALTERED IN ANY WAY, EXCEPT TO PROVIDE ACCESS TO THE BUILDING.

OVERWINTER CONSTRUCTION
MAINE EROSION AND SEDIMENT CONTROL BMP (3/2003)

THE WINTER CONSTRUCTION PERIOD IS FROM NOVEMBER 1 THROUGH APRIL 15. IF THE CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 15 THEN THE SITE NEEDS TO BE PROTECTED WITH OVER-WINTER STABILIZATION. AN AREA CONSIDERED OPEN IS ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MATS, RIPRAP OR GRAVEL BASE ON A ROAD.

WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY TIME. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDER TAKEN DURING THE PROCEEDING 15 DAYS AND THAT CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT. ALL AREA SHALL BE CONSIDERED TO BE DENUDED UNTIL THE SUBBASE GRAVEL IS INSTALLED IN ROADWAY AREAS OR THE AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. A COVER OF EROSION CONTROL MIX PERFORMS THE BEST.
ANY ADDED MEASURES, WHICH MAY BE NECESSARY TO CONTROL EROSION/SEDIMENTATION, MUST BE BE INSTALLED. THESE MAY BE DEPENDENT UPON SITE AND WEATHER CONDITIONS AND THE ACTUAL SITE SIZE.
TO MINIMIZE AREAS WITHOUT EROSION CONTROL PROTECTION, CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED.

1. NATURAL RESOURCES PROTECTION
ANY AREAS WITHIN 100 FEET FROM ANY NATURAL RESOURCE, IF NOT STABILIZED WITH A MINIMUM OF 75% MATURE VEGETATION CATCH, SHALL BE MULCHED BY DECEMBER 1 AND ANCHORED WITH PLASTIC NETTING OR PROTECTED WITH AN EROSION CONTROL COVER.
DURING WINTER CONSTRUCTION, A DOUBLE ROW OF SEDIMENT BARRIERS (I.E. SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX) WILL BE PLACED BETWEEN ANY NATURAL RESOURCE AND THE DISTURBED AREA. PROJECTS CROSSING THE NATURAL RESOURCE SHALL BE PROTECTED A MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE FROM THE RESOURCE. EXISTING PROJECTS NOT STABILIZED BY DECEMBER 1 SHALL BE PROTECTED WITH THE SECOND LINE OF SEDIMENT BARRIER TO ENSURE FUNCTIONALITY DURING THE SPRING THAW AND RAINS.

2. SEDIMENT BARRIERS
DURING FROZEN CONDITIONS, SEDIMENT BARRIERS MAY CONSIST OF EROSION CONTROL MIX BERMS OR ANY OTHER RECOGNIZED SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES AND SEDIMENT SILT FENCES.

3. MULCHING
ALL AREA SHALL BE CONSIDERED TO BE DENUDED UNTIL SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75 LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. EROSION CONTROL MIX MUST BE APPLIED WITH A MINIMUM 4 INCH THICKNESS.
MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW WILL BE REMOVED DOWN TO A ONE INCH DEPTH OR LESS PRIOR TO APPLICATION.
AFTER EACH DAY OF FINAL GRADING, THE AREA WILL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING.
AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED OR ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THOUGH THE MULCH.
BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER MULCH NETTING, ASPHALT EMULSION CHEMICAL, TRACKING OR WOOD CELLULOSE FIBER. THE COVER WILL BE CONSIDERED SUFFICIENT WHEN THE GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH.
AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL EXPOSED SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.

4. SOIL STOCKPILES
STOCKPILES OF SOIL OR SUBSOIL WILL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A FOUR-INCH LAYER OF EROSION CONTROL MIX. THIS WILL BE DONE WITHIN 24 HOURS OF STOCKING AND REESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. ANY SOIL STOCKPILE WILL NOT BE PLACED (EVEN COVERED WITH MULCH) WITHIN 100 FEET FROM ANY NATURAL RESOURCES.

5. SEEDING
BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS NOVEMBER 1ST AND IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED.
DORMANT SEEDING MAY BE SELECTED TO BE PLACED PRIOR TO THE PLACEMENT OF MULCH AND EROSION CONTROL BLANKETS. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4" OF LOAM AND SEED AT AN APPLICATION RATE OF 5LBS/1,000 S.F. ALL AREAS SEEDED DURING THE WINTER WILL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75% CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH.
IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING.

OVERWINTER STABILIZATION
MAINE EROSION AND SEDIMENT CONTROL BMP (3/2003)

1. STABILIZATION OF DITCHES AND CHANNELS
ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. ALL GRASS-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY SEPTEMBER 1. IF A DITCH OR CHANNEL IS NOT GRASS-LINED BY SEPTEMBER 1, THEN ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE DITCH FOR LATE FALL AND WINTER MUST BE TAKEN.

SOD LINING: A DITCH OR CHANNEL MUST BE LINED WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES: PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL, AND ANCHORING THE SOD AT THE BASE OF THE DITCH WITH JUTE OR PLASTIC MESH TO PREVENT THE SOD FROM SLOUGHING DURING FLOW CONDITIONS.

STONE LINING: A DITCH OR CHANNEL MUST BE LINED WITH STONE RIPRAP BY NOVEMBER 15. A REGISTERED PROFESSIONAL ENGINEER MUST DETERMINE THE STONE SIZE AND LINING THICKNESS NEEDED TO WITHSTAND THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHIN THE DITCH. IF NECESSARY, THE CONTRACTOR WILL REGRADE THE DITCH PRIOR TO PLACING THE STONE LINING TO PREVENT THE STONE LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA.

2. STABILIZATION OF DISTURBED SLOPES
ALL STONE-COVERED SLOPES MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. ALL SLOPES TO BE VEGETATED MUST BE SEEDED AND MULCHED BY SEPTEMBER 1. THE DEPARTMENT WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% TO BE A SLOPE. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER.

TEMPORARY VEGETATION AND EROSION CONTROL MATS: BY OCTOBER 1, THE DISTURBED SLOPE MUST BE SEEDED WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET FOLLOWED BY INSTALLATION OF EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE SLOPE BY NOVEMBER 1, THEN THE CONTRACTOR WILL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR STONE RIPRAP AS DESCRIBED IN THE FOLLOWING STANDARDS.

SOD: THE DISTURBED SLOPE MUST BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR WILL NOT USE LATE-SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (3H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

EROSION CONTROL MIX: EROSION CONTROL MIX MUST BE PROPERLY INSTALLED BY NOVEMBER 15. THE CONTRACTOR WILL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GRADES GREATER THAT 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

STONE RIPRAP: PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE DEVELOPMENT'S OWNER WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY ON THE SLOPE AND TO DESIGN A FILTER LAYER TO BE INSTALLED BENEATH THE RIPRAP.

3. STABILIZATION OF DISTURBED SOILS
TEMPORARY VEGETATION: BY OCTOBER 1, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3-LBS PER 1,000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75-LBS PER 1,000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 1, THEN MULCH THE AREA FOR OVERWINTER PROTECTION AS FOLLOWS.

MULCH: BY NOVEMBER 15, MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150-LBS PER 1,000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

MAINTENANCE
MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION.
FOLLOWING THE TEMPORARY AND OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL IN THE SPRING INSPECT AND REPAIR ANY DAMAGES AND/OR BARE SPOTS. AN ESTABLISHED VEGETATIVE COVER MEANS A MINIMUM OF 85% TO 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH.

STABILIZATION SCHEDULE BEFORE WINTER
SEPTEMBER 15 ALL DISTURBED AREAS MUST BE SEEDED AND MULCHED.
ALL SLOPES MUST BE STABILIZED, SEEDED AND MULCHED.
ALL GRASS-LINED DITCHES AND CHANNELS MUST BE STABILIZED WITH MULCH OR AN EROSION CONTROL BLANKET.
OCTOBER 1 IF THE SLOPE IS STABILIZED WITH AN EROSION CONTROL BLANKET AND SEEDED.
ALL DISTURBED AREAS TO BE PROTECTED WITH ANNUAL GRASS MUST BE SEEDED AT A SEEDING RATE OF 3-LBS PER 1,000 SQUARE FEET AND MULCHED.
NOVEMBER 15 ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED.
SLOPES THAT ARE COVERED WITH RIPRAP MUST BE CONSTRUCTED BY THIS DATE.
DECEMBER 1 ALL DISTURBED AREAS WHERE GROWTH OF VEGETATION FAILS TO BE AT LEAST THREE INCHES TALL OR AT LEAST 75% OF THE DISTURBED SOIL IS COVERED BY VEGETATION, MUST BE PROTECTED FOR OVER-WINTER.
NOTE: THE DATES GIVEN ARE FOR PROJECTS IN SOUTH-CENTRAL MAINE.

PROJECT MAINTENANCE ITEMS:
THE DEVICES THAT WILL REQUIRE MAINTENANCE FOR THIS PROJECT ARE:

TAX MAP 66 LOT 24
& PORTION OF LOT 25

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NO.	REVISIONS	INT.	DATE
1			

FINAL PLAN – YANKEE COMMONS
MOBILE HOME PARK EXPANSION (2015)
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE
PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS: 1571 BELLEVUE AVE., SUITE 210 WEST VANCOUVER, B.C. V7V1A6

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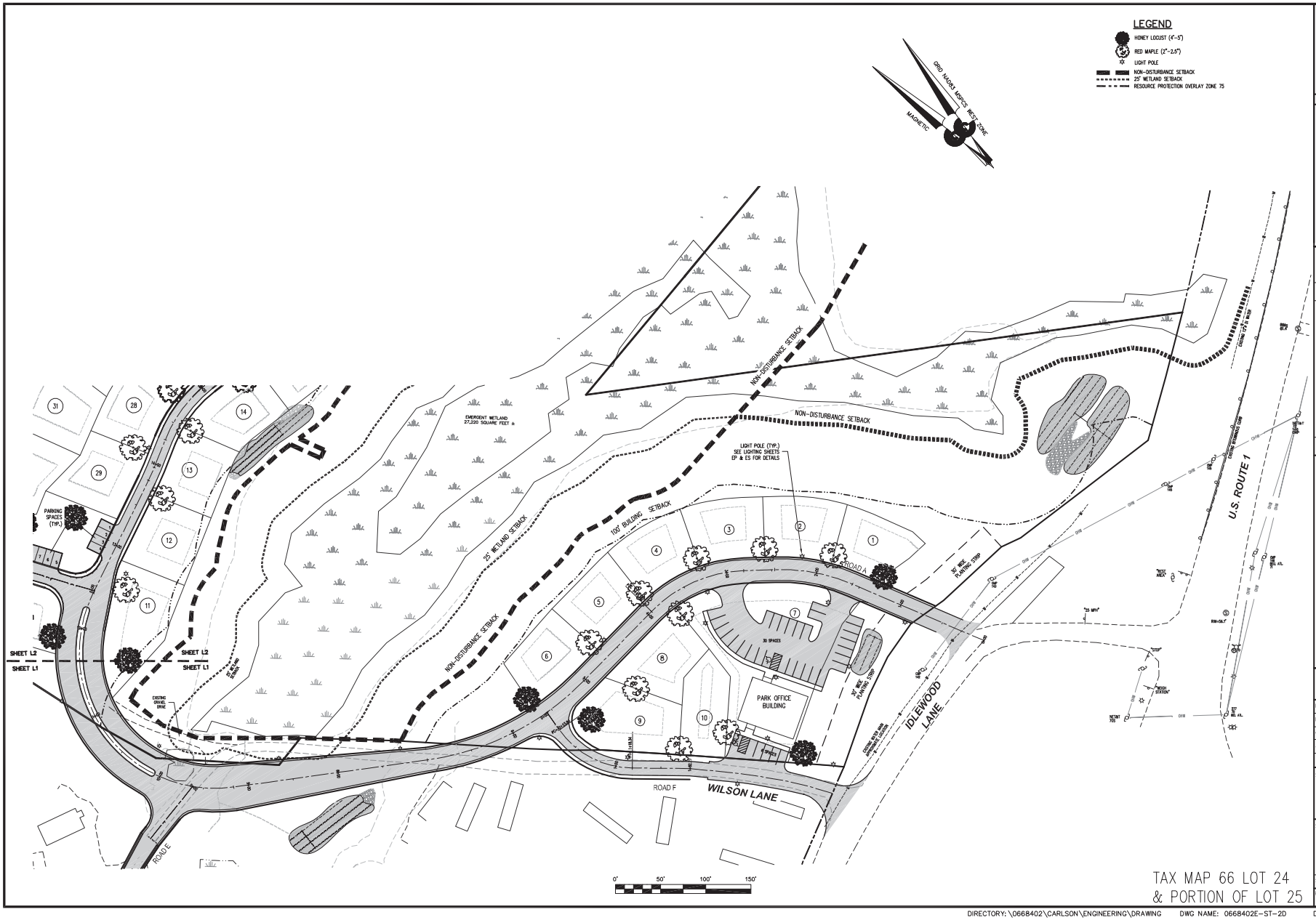
DRAWN GDC/JAA	CALC.
DATE 19 NOVEMBER 2015	
CHECKED	
APPROVED	
SCALE NOT TO SCALE	

SHEET TITLE:
MAINTENANCE NOTES

SHEET NUMBER:
R8

SHEET R8 of R8

PROJECT # 06-684.02



TAX MAP 66 LOT 24
& PORTION OF LOT 25

DIRECTORY: \0668402\CARLSON\ENGINEERING\DRAWING DWG NAME: 0668402E-ST-2D DATE: 11/19/2015

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FINAL PLAN – YANKEE COMMONS
MOBILE HOME PARK EXPANSION (2015)
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
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DATE 19 NOVEMBER 2015	
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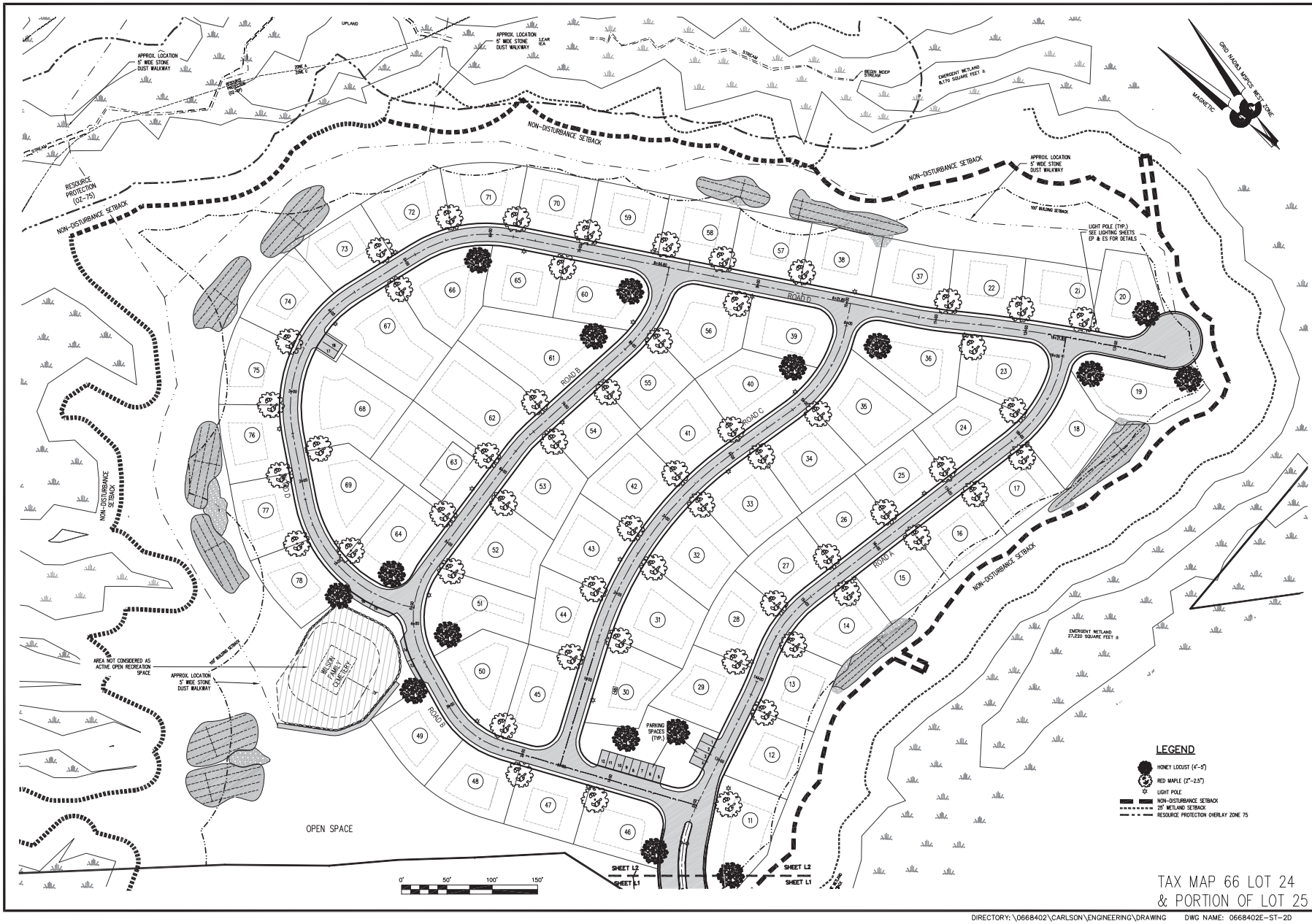
SHEET TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
L1

SHEET L1 of L2

PROJECT # 06-684.02



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FINAL PLAN – YANKEE COMMONS
MOBILE HOME PARK EXPANSION (2015)
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
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DATE 19 NOVEMBER 2015	
CHECKED	
APPROVED	
SCALE 1"=50'	

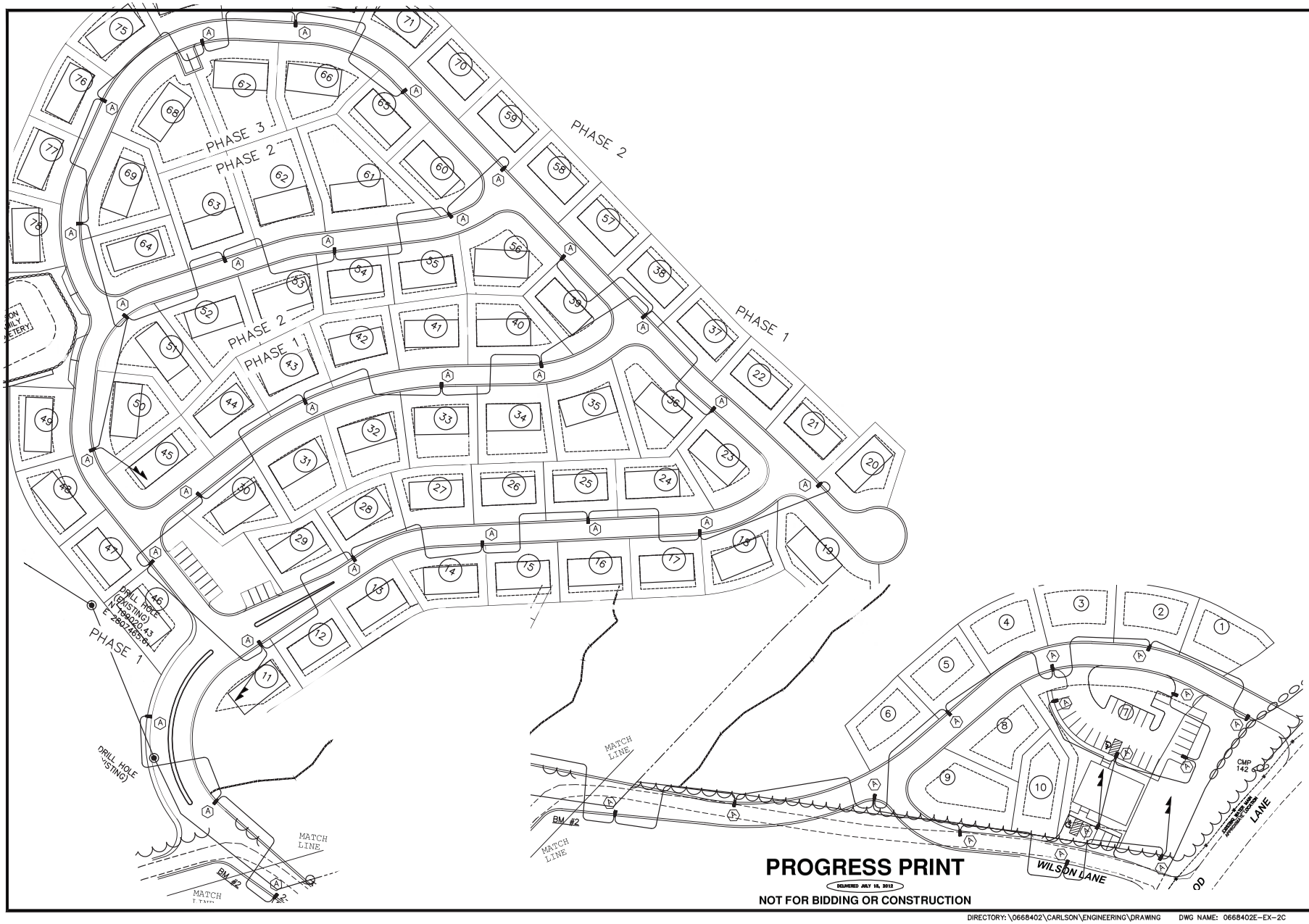
SHEET TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
L2

SHEET L2 of L2

PROJECT # 06-684.02

DIRECTORY: \0668402\CARLSON\ENGINEERING\DRAWING DWG NAME: 0668402E-ST-2D DATE: 11/19/2015



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1	CHANGED SHEET NAME	JAA	08/31/12

YANKEE COMMONS
MOBILE HOME PARK EXPANSION
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT

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DATE	
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APPROVED	
SCALE 1"=50'	

SHEET TITLE:
•OVERALL SITE LIGHTING PLAN

SHEET NUMBER:
ES

SHEET 1 of 2

PROJECT # 06-684.02

DIRECTORY: \0668402\CARLSON\ENGINEERING\DRAWING DWG NAME: 0668402E-EX-2C DATE:

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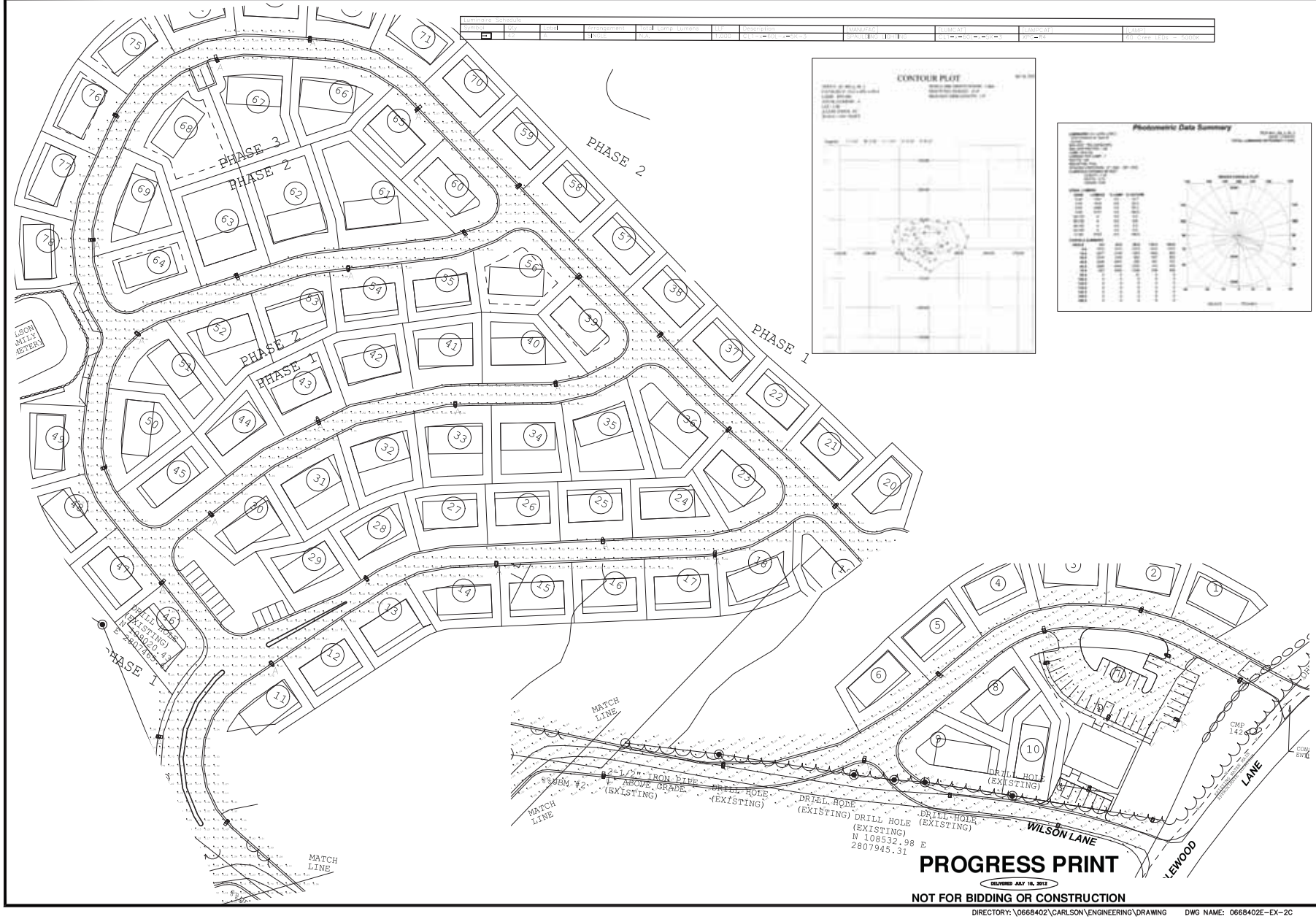

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YANKEE COMMONS
MOBILE HOME PARK EXPANSION
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE

PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS: 1571 BELLEVUE AVE., SUITE 210 WEST VANCOUVER, B.C. V7V1A6

CIVIL CONSULTANTS

DRAWN RFS/BMC	CALC.
DATE	
CHECKED	
APPROVED	
SCALE 1"=50'	

SHEET TITLE:
•OVERALL LIGHTING STUDY

SHEET NUMBER:
EP

SHEET 2 of 2

PROJECT # 06-684.02

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Rebecca Spitko

From: Chris DiMatteo
Sent: Thursday, December 03, 2015 12:52 PM
To: Steve Hall
Cc: Karen Kalmar; Nancy Colbert Puff; Christine Bennett; Rebecca Spitko
Subject: RE: Yankee Commons Expansion Open Space proposal

Thank you Steve.
I will include it in our packets.

Chris

From: Steve Hall [mailto:stehall@comcast.net]
Sent: Thursday, December 03, 2015 11:55 AM
To: Chris DiMatteo <CDiMatteo@kitteryme.org>; Karen Kalmar <those7@comcast.net>; Nancy Colbert Puff <NColbertPuff@kitteryme.org>
Subject: Fwd: Yankee Commons Expansion Open Space proposal

I am forwarding Christine's letter because I feel it is important for the Planning Board to know that KOSAC was not unanimous in approving Craig's memo. Craig was under pressure to get a KOSAC response out right away. I thank him for getting out a well worded response under difficult constraints.

Steve Hall
Conservation Commission representative on KOSAC

Begin forwarded message:

> **From:** Christine Bennett <cbennett@kitterylandtrust.org>
> **Subject: Re: Yankee Commons Expansion Open Space proposal**
> **Date:** November 13, 2015 at 10:45:24 AM EST
> **To:** cwilson515@aol.com, clayton@5devonwoods.com
> **Cc:** mlrkline@comcast.net, krconnor@comcast.net, stehall@comcast.net, rbwhite@gmail.com, kyoung@mta2c.org, pagemead@comcast.net, earldeanwells@myfairpoint.net
>
> Dear Craig,
>
> I have to respectfully disagree about your three points below.
>
> 1.) At the KOSAC meeting prior to this Tuesday's I shared input with Mr. Beers from my perspective that a deed restriction would be the best tool, followed by a fee donation and that I could not recommend an easement, because of liability, cost, complication and the town's inexperience with this conservation tool. I'm pretty certain that under IRS code, the town will need to establish a stewardship endowment fund and stewardship program in order to be deemed a "qualified holder of conservation easements".

2.) I recall the applicant's response vis a vis their legal counsel's advice about a fee donation adversely effecting the density calculations. Their is precedent of this being overcome by Planning Board assent, namely in the Clayton Lane subdivision. Our code clearly states that fee simple interest of the land can be offered to the town as part of the cluster ordinance without any effect on net buildable calculations. This proposal is exempt from cluster, but unless there is some state regulation that is superceding/prohibiting this treatment, it seems like a simple route for the Planning Board to take.

3.) Just because the applicant will not consider any of our recommendations or address our concerns, does not mean we should alter them.

Nonetheless, it appears that the train has left the station and that a recommendation from KOSAC to the planning board for a conservation easement on the remainder land will be made.

I'm sorry that I was not able to attend the meeting on Tuesday. I will be willing to sign this letter under two conditions. Those are that a stewardship contribution of no less than $50,000 be made to the Town for the perpetual stewardship, legal fees and other transaction costs along with covering the salary or salaries of those town employees who will be tasked with monitoring and enforcing the easement. They will have extra duties and need training.

The letter should also include a statement that cautions the applicant, Planning Board and eventually the Town Council that the donation of this easement is highly unlikely to qualify for a federal income tax credit because it is not a voluntary donation but a "quid pro quo" transaction as part of the permitting process. We can not give legal advice, the applicant should solicit their own tax attorney, but this standard caution is a best practice in the land conservation field.

Best regards,
Christine

Date: November 17, 2015

Responsible Individual: Stephen A. Hynes Real Property Trust Agreement, Owner's Agent, Gary Beers

Subject: Open Space – Conservation Easement Cession Offer to the Town of Kittery

EXECUTIVE SUMMARY:

Stephen A. Hynes Real Property Trust Agreement has proposed a mobile home park expansion on Kittery Map 66 Lots 24 & 25, adjacent to the existing Yankee Commons Mobile Home Park on Idlewood Lane, presently under review by the Planning Board. Final approval and development would leave approximately 34.5 acres available offered as a gift to the Town and placed in a maintained conservation easement in perpetuity.

Such open space preservation easements are addressed in Kittery Town Code Title 16. This Report includes draft documents for Council consideration of an offer for the Conservation Easement Cession and Management Plan. Those documents were reviewed and endorsed by the Open Space Advisory Committee *[At it's Nov. meeting, KOSAC decided to support and comment on that proposal.]*; and, an opinion from the Town Attorney as to the legal sufficiency of the documents would be necessary.

Agreement by Council that it is satisfied with the sufficiency of the written evidence is sought and concurrence for Council to give reasonable consideration, contingent on final plan approval, and presentation of final documents, for the Easement Cession and Management Plan.

FACTS BEARING ON THE EQUATION:

- **Yankee Commons Location**
  - Development Plan Aerial View (*atch 1*)
  - Project Proposed Open Space and Easement Layout (*atch 2*)
  - Kittery Open Space Map (*atch 3*)
  - Kittery Vernal Pool 012 (*atch 4*)
- **Kittery Comprehensive Plan, Town Code, Open Space Map:**
  - Pursuant to Comprehensive Plan (*atch 5*)
  - Consistency with Title 16 (*atch 6*)
  - Kittery Title 16 Open Space Excerpts (*atch 7*)
- **Maine Revised Statutes:**
  - 33 MRS §476-479 Conservation Easement (*atch 8*)

BACKGROUND:

Hynes purchased Yankee Mobile Home Parks in 1996, which includes the 120-lot park on Cutts Road (Yankee Green); the 64-lot and 12-apartment complex on Idlewood Lane (Yankee Commons); and, the two undeveloped parcels (Map 66 Lots 24 & 25) adjacent and abutting US Route 1 and Wilson Lane (50+ acres). Aerial site view and proposed project layout (*atch 1*); the proposed open space and easement layout *(atch 2);* and, the site locus on Kittery's Open Space Map are provided (*atch 3*).

Also noted in that area in the US Route 1 ROW and extending into adjacent parcels, is an aerial view of Kittery's MDEP Vernal Pool 012 (*atch 4*).

> ***NOTE**: With no migratory species (e.g., wood frog, salamander), the USA Corps of Engineers requires only a 100' non-disturbance setback and that area will be considered for future easement consideration.*

The current expansion project was conceived in June of 2011. Initial cursory review indicated that 138 mobile home lots were readily possible under the net residential density standards. The project sketch plan was filed on 20 December 2011, proposing 83 home lots and a community center. A Maine Department of Transportation approved US Route 1 curb cut was centered on parcel 25 and crossed a wetland to access the rear (northerly) section.

The development design objectives were to be compliant with: (1) all Federal Housing &Urban Development (HUD) requirements; (2) Maine Manufactured Housing Board (MHB) park standards regulations; (3) Maine Department of Environmental (DEP) regulations (including Inland Fisheries & Wildlife); (4) USA Corps of Engineers regulations; and, (5) Town Code Title 16, Land Use and Development.

Recognizing that there are conflicts between state statutes (*30-A M.R.S. §4358, Regulation of manufactured housing*); Maine Manufactured Housing Board standards; and, Kittery Title 16, the primary plan objectives included efforts to be consistent with and pursuant to Kittery's Comprehensive Plan *(atch 5*); and, the concepts in Title 16 related to elderly housing, clustered residential development, and the mixed use zone (*atch 6*).

The Planning Board asked, during the initial site walk in January 2012, if it was possible to eliminate that curb cut/roadway, as Title 16 suggests there should be no more on Route 1 than absolutely necessary. In response to the Board's request, the plan was redesigned to provide access from Route 1 via Idlewood Lane. That resulted in a reconfiguration plan for Wilson Lane; a reduction of five lots to 78 (77 home lots and a community center); and, resulting in no more than 900sf wetland impact to reconfigure the access roadway to better avoid an emergent wetland.

The owner has committed to a plan Condition of Approval to maintain the housing as age-restricted (55+) and the project plans eight mixed use zone permitted uses. Those include a community garden; walking trail, active and passive recreation space. The Community Center facility will contain business and sales offices; meeting rooms; a medium size (125 seating) function room; and, an accessory maintenance shop/garage. There is also the potential for future provision for personal services, such as OT/PT and equipment; hair care; etc., although these must be viable for the provider.

Also noted is the net positive fiscal impact to the town. The project must pay for a Water District pumping station benefitting that system. Significant public safety impact and sewer betterment/impact fees will be paid. The owner will maintain on-site roads, street lighting, utility infrastructure, and provide curbside waste disposal for residents. With prospectively no school students the project foresees very limited financial cost (police-fire response, ambulance) to the Town. The estimated added valuation, when completed, would contribute more than $230,000 annually in new taxes, along with the sewer department and water district added revenues.

As a "good neighbor" gesture, permanent Rectangular Rapid Flashing Beacons are proposed at applicant's expense for the unsignalized crosswalks on US Route 1 in the outlet area to promote better pedestrian safety.

The current development plan was submitted to Maine Department of Environmental Protection (MDEP) for Site Location of Development review and approval, a process that includes professional staff review of multiple environmental regulations, including impacts to natural resources, storm water, groundwater, sensitive wildlife habitat, and scenic character. MDEP approved the plan as presented (including review and approval by Maine Department of Inland Fisheries & Wildlife) in June 2013.

The nearby vernal pool was assessed by the US Army Corps of Engineers to have non-migratory, fairy shrimp requiring only a 100' non-disturbance area. MDEP's 250' area will have only 4.5% disturbed for the side slope of a stormwater filtration basin where 25% is allowed. All wetlands and a stream are mapped and categorized. Mapped wetland areas total approximately 6.6 acres, 0.8 acres of which are designated as emergent wetlands. 900sf of wetland would be impacted which requires a Corps of Engineers Category 1 permit requiring only start-work notice two weeks before commencement. The plan is currently under review by the Planning Board.

Title 16 open space requirements for mobile home parks are:

> ***16.8.12.3 Mobile Home Parks.*** *O. Open space calculations are as follows: 1. For mobile home parks served by a public sewer, an area amounting to ten (10) percent of the total area devoted to individual lots must be set aside for open space and/or recreation.*

That result for the proposed plan open space requirement would be less than two acres. Title 16 requires developed open space to be designed and landscaped for the use and enjoyment of the park residents and maintained for their long-term use. Low- intensity recreation improvements (walking trail), picnic areas, and community garden plots are planned.

To the maximum extent possible, undeveloped open space must be left in its natural state. Contingent upon a final plan approval, the owner proposes to place all of the parcel's undeveloped areas (approximately 34.5 acres) into a Conservation Easement with a supported future Management Plan.

Town Code Title 16 provisions that apply to this proposal are (*more at atch 7*):

> ***16.8.11.7 Open Space Dedication and Maintenance.***
> *A. Prior to approval of the final plan by the Planning Board, documents for open space must be submitted to the Town for review by legal counsel. Subsequent to approval, there may be no further division of the open space; however, tracts or easements dedicated for public utilities, public access or structures accessory to noncommercial recreation, agriculture or conservation may be permitted within the open space.*

> ***16.9.2.3 Land Dedication.***
> *Reserved land acceptable to the Planning Board and applicant may be gifted to the municipality as a condition of approval, only when Council has agreed to the gifting.*

> ***16.10.7.2 Final Plan Application Submittal Content.***
> *N. Open Space Land Cession Offers. Written offers of cession to the municipality of all public open space shown on the plan, and copies of agreements, or other documents showing the manner in which space(s), Code to which is reserved by the subdivider, are to be maintained.*

O. Open Space Land Cession Offers Acknowledgement by Town. Written evidence that the municipal officers are satisfied with the legal sufficiency of the documents referred to in Section 16.10.7.2O. Such written evidence does not constitute an acceptance by the municipality of any public open space referred to in Section 16.10.7.2O.

16.10.9.1.3 Approval Not Acceptance of Property.
The approval by the Planning Board of a plan, a master site development plan or any other subsequent development plan does not constitute, nor is it evidence of any acceptance by the municipality of any street, easement, or other open space shown on the plan. When a park, playground, or other recreation area is shown on the plan, approval of the plan does not constitute an acceptance by the municipality of such areas. The Planning Board must require the plan to be endorsed with appropriate notes to this effect. The Planning Board may also require the filing of a written agreement between the applicant and the municipal officials covering future deed and Code, dedication, and provision for the cost of grading, development, equipment, and maintenance of any such recreation area.

CURRENT SITUATION:

Of the 50+ acres in the parcels, the Net Residential Acreage is 755,454 sf, which would allow 151 lots at 5,000 sf. (Lot size allowed by Maine law – 755,000sf). We are proposing 78 lots which would take up 390,000 sf (leaving 8.4 unused residential area acres remaining) and propose no additional future development.

Gross Land Area	**2,185,044**	**sq. ft.**
Cemetery	-7,290	sq. ft.
Wetland/Floodplain	-1,128,513	sq. ft.
Street/Access (20%)	-209,848	sq. ft.
Open Space (10%)	-83,939	sq. ft.
Net Residential Acreage	**755,454**	**sq. ft.**
Possible Lots @ 5,000sf	151	each
Possible Lots @ 6,500sf	116	each
Proposed Lots	78	each

This table shows the approximately 34.5 acres available for this environmental protection consideration. The owner also proposes to maintain the conservation areas; permit public access; and, create/maintain a low-intensity recreation walking trail.

Gross Land Area	**2,185,044**	**sq. ft.**
Housing Lots	-390,000	sq. ft.
Street/Access (20%)	-209,848	sq. ft.
Net Undeveloped	**1,585,196**	**sq. ft.**
Cemetery	7,290	sq. ft.
Wetland/Floodplain	1,128,513	sq. ft.
Other Undeveloped	365,454	sq. ft.
Conservation Easement	**34.5**	**acres**

Essential Maine statute requirements are found in 33 MRS §476-479 Conservation Easement (*atch 8*).

The agreement for the proposed offer of conservation easement cession (*encl 1*) is the MDEP standard and is consistent with, and pursuant to, Kittery's Comprehensive Plan and the Open Space Reservation concepts in Title 16, supporting the public benefit in the following areas:

- *The importance of the land by virtue of its size or uniqueness in the vicinity or proximity to extensive development or comprising an entire landscape feature;*
- *The likelihood that development of the land would contribute to degradation of the scenic, natural, historic or archeological character of the area;*
- *The opportunity for regular and substantial use of the land by the general public for recreational or educational use;*
- *The likelihood that the preservation of the land as undeveloped open space will provide economic benefit to the town by limiting municipal expenditures required to service development;*
- *The existence of a conservation easement, other legally enforceable restriction, or ownership by a nonprofit entity committed to conservation of the property that will permanently preserve the land in its natural, scenic or open character;*
- *Whether the land is maintained in accordance with criteria that are adopted under local ordinance that provide for preserving the integrity of historically important structures.*

Key Features of the Proposed Offer and Agreement are:
Cession is an irrevocable offer of dedication of undeveloped land in Tax map 66 Lots 24 &25 to be gifted to the Town. The offer continues indefinitely and may be accepted by the Town at any time, it being the intent that if said offer is to be accepted, it will be accepted, at the discretion of the Town Council, only upon delivery by Grantor of such other documents, certifications and securities as the Town requires pursuant to its Code for the acceptance of the dedication of public reserved open space lands.

Purpose:
It is the purpose of the Easement to protect the property to safeguard biological diversity by protecting the environments and ecological processes including those described in the Whereas Clauses, that support viable populations of native plants, animals and other organisms, and to preserve and maintain the property as free from human disturbance, noise, artificial light and pollution as practicable.

Prohibited Acts and Uses, Exceptions Thereto, and Permitted Uses:
To ensure the continued character of the property, a number of acts and uses would be prohibited on, above, through or below the property. Notwithstanding the prohibitions, certain acts and uses may be permitted to the extent that do not materially impair the conservation values and interests of the property and are not inconsistent with the conservation easement purpose. Any such act or use must be part of an approved Management Plan. The exercise of any right reserved by the Grantor shall be in compliance with all applicable federal, state, and local laws.

Management Plan:
The depth and extent of inquiry of the Plan and its level of specificity will be appropriate to the proposed activity and any ecological disturbance which might occur as a result of the proposed actions. The Plan may consider the surrounding landscape context of the property as well as the property itself. It will include specific provisions for approval procedures, monitoring, evaluation, updates, notices, time frames and dispute resolution.

CONCLUSION

Kittery Open Space Advisory Committee Caveats (*encl 2*)

> "The easements need to be vetted by some legal authority versed in easements to guarantee that they accomplish the goal of preservation. Some individual/dept./or committee within the Town infrastructure should be designated as the steward/enforcer of the easement. There should be an appropriate sum of money placed in a trust controlled by the Town for any stewardship and enforcement actions that may arise. Lastly, there should be a management plan submitted by the applicant for the OS- especially the trail corridor- ie best management practices used in construction, rules for the use of the trail, enforcement responsibilities for those rules, signage at the property boundaries of the OS noting it designation, etc."

We would be pleased to work with that group or others, as Council may desire, to complete mutually agreeable covenants for this proposal. The proposed offer and agreements and final documents would need to be reviewed by the Town Attorney as required by Title 16, Section 8.11.7 (paid for by owner under Title 3 Applicant Service Agreement).

REQUEST:

Council agree by motion that it is satisfied with the legal sufficiency of the written evidence documents; and, to give reasonable consideration to the Conservation Easement offer and Management Plan when presented, contingent upon final development plan approval.

Enclosures
1. Draft Deed of Conservation Easement
2. Kittery Open Space Advisory Committee, e-mail 11-16-15

Town Council Attachments (Previously provided to Planning Board)
1. Development Plan Aerial View
2. Project Proposed Open Space and Easement Layout
3. Kittery Open Space Map 0328061

4a. Kittery Vernal Pool 012
4b. Vernal Pool 012 – Close up

5. Pursuant to Comprehensive Plan
6. Consistency with Title 16
7. Kittery Title 16, Open Space Excerpts
8. 33 MRS §476-479, Conservation Easement

SUGGESTED AGENDA ITEM & MOTION:

AGENDA: The Kittery Town Council moves to discuss the offer of a conservation easement gift of land the Town by owner Stephen A. Hynes Real Property Trust Agreement.

MOTION TO APPROVE: The Kittery Town Council moves to affirm that it is satisfied with the legal sufficiency of the written evidence documents for a conservation easement of a portion of Kittery Map 66 Lots 24 & 25 to be gifted to the Town by Stephen A. Hynes Real Property Trust Agreement (Owner); and, to also affirm it will give reasonable consideration to the Conservation Easement offer and Management Plan when completed and presented for action; and, that such consideration is contingent upon a final development plan approval.

Gmail by Google

Gary Beers <gbeers.ktc@gmail.com>

Re: Yankee Commons Eppansion's Open Space proposal

1 message

cwilson515@aol.com <cwilson515@aol.com> Mon, Nov 16, 2015 at 8:48 PM
To: Ncolbertpuff@kitteryme.org, cdimatteo@kitteryme.org, gbeers.ktc@gmail.com
Cc: gb-pksvc@hotmail.com

Memo:

From: KOSAC
To: Town Manager, Planner, Town Council Chair, Mr. G. Beers, representative for the YCMHP expansion proposal
Re: Comments on the Open Space Proposal that is part of the application to expand YCMHP.

First a brief history about KOSAC's involvement with the proposal. In May of 2015, Mr. Beers made a presentation at a KOSAC meeting about the proposal to preserve approx. 36 acres of land adjacent to the proposed expansion of the MHP. He was asking the committee's opinion as to how best to structure the preservation. Subsequently, the PB invited the Committee to participate in their site walk and at a later date 2 committee members walked the Open Space

Over the following months, the Committee continued to discuss the proposal but could not come to a consensus as to the best form the preservation should take.

In the meantime, lacking guidance from KOSAC, the applicant developed the current proposal that's before the PB and TC.

At it's Nov. meeting, KOSAC decided to support and comment on that proposal.

The committee recognizes that the proposal has features that KOSAC favors OS set asides. First and foremost, the general public will have access to the trail that will be built and maintained by YCMHP management. All others have restricted access to only development members. As well as access, the Park will construct and maintain parking for the general public for trail use. The area outside of the trail will be preserved as per the proposed easements. Habitat for flora and fauna is to be protected The existing tree line along I-95 will be maintained to mitigate the nuisances inherent in that corridor. Additionally, maintaining the OS as forested will act as a sink for some of the greenhouse gases we as a community produce.

The committee's support comes with several caveats. The easements need to be vetted by some legal authority versed in easements to guarantee that they accomplish the goal of preservation. Some individual/dept./or committee within the Town infrastructure should be designated as the steward/enforcer of the easement. There should be an appropriate sum of money placed in a trust controlled by the Town for any stewardship and enforcement actions that may arise. Lastly, there should be a management plan submitted by the applicant for the OS-especially the trail corridor- ie best management practices used in construction, rules for the use of the trail, enforcement responsibilities for those rules, signage at the property boundaries of the OS noting it designation, etc.

Respectfully submitted

Steve Hall, Megan Kline, Page Mead, Craig Wilson

For the Kittery Open Space Advisory Comittee

THIS GRANT DEED OF CONSERVATION EASEMENT is made this _____ day of 20___, by Stephen A. Hynes Real Property Trust Agreement of West Vancouver, British Columbia, Canada, (hereinafter referred to as the "GRANTOR"), in favor the Town of Kittery, Maine (hereinafter referred to as the "HOLDER") and the State of Maine by and through its Department of Environmental Protection, (hereinafter referred to as the "THIRD PARTY").

WITNESSETH

WHEREAS this Indenture is created pursuant to Title 33, Maine Revised Statutes, Sections 476 through 479-B, inclusive, as amended; and

WHEREAS the GRANTOR holds title to certain real property situated on Tax Map 66, Lots 24 and 25, in Kittery, York County, Maine (hereinafter referred to as the "Property") described **[**on recorded plan ####, date, Book, page **]** at the York County Registry of Deeds and further described **[** in exhibit A attached hereto. **]**

WHEREAS the Property remains in a substantially undisturbed natural state and has significant aesthetic and ecological value, in particular, **[** here describe the conservation purposes of the easement **]**; and

WHEREAS, the GRANTOR and the HOLDER, recognizing the value of the Property as described above, have the common purpose of conserving the natural values of the Property by the conveyance of a Conservation Easement over the Property, which easement is to benefit, protect and conserve the natural values of the Property; conserve and protect the indigenous animal and plant populations; and, prevent the use or development of the Property for any purpose or in any manner that would conflict with its natural, scenic condition; and

WHEREAS the THIRD PARTY will receive THIRD PARTY Rights of Enforcement under this Deed;

NOW, THEREFORE, in consideration of the foregoing and the covenants, terms, conditions, and restrictions herein contained, the GRANTOR hereby GRANTS to the HOLDER, its successors and assigns, as an absolute and unconditional gift, forever and in perpetuity, with Warranty Covenants, a Conservation Easement in gross over the Property as set forth herein (the "Conservation Easement"); and to the THIRD PARTY, its successors and assigns, as an absolute and unconditional gift, forever and in perpetuity, rights of enforcement hereunder.

l. PURPOSE: It is the purpose of this Easement to assure that the Property will be retained forever in its natural undeveloped condition and to prevent any use of the Property that will significantly impair or interfere with the conservation values of the Property. GRANTOR intends that this Easement will confine the use of the Property to such activities as are consistent with the purpose of this Easement.

2. RIGHTS OF HOLDER: To accomplish the purpose of this Easement the following rights are conveyed to the HOLDER by this easement:

a. the right to preserve and protect the conservation values of the Property;

b. the right to enter and inspect the Property over other lands of the GRANTOR at any reasonable time and in any reasonable manner provided that the time and manner of such entry does not unreasonably interfere with the uses of the Property permitted hereunder or the quiet enjoyment of other lands of GRANTOR, and to enforce by proceedings at law or in equity the covenants hereinafter set forth, including the right to require restoration of the Property to its condition prior to any breach hereof; and

c. the right to prevent any activity on or use of the Property that is inconsistent with the purpose of this Easement and to require the restoration of such areas or features of the Property that may be damaged by any inconsistent activity or use, pursuant to paragraph 6.

3. USE OF THE PROPERTY: The Property may be used for limited recreational and conservation purposes only. No commercial, industrial, quarrying or mining activities are permitted on the Property. No structures or facilities of any kind whatsoever may be constructed on the Property, except walking paths designed in keeping with the natural scenic quality of the Property. No motor vehicles of any kind, including recreational vehicles, all-terrain vehicles, motorcycles, dirt bikes, and snowmobiles may be permitted on the Property, except in emergency and when necessary to accomplish the rights reserved by GRANTOR and HOLDER, their successors and assigns. No filling, paving, dumping, excavation, or other alteration, may be made to the surface of the Property other than that caused by the forces of nature. Any activity on or use of the Property inconsistent with the purposes of this Easement is prohibited.

4. RESERVED RIGHTS: GRANTOR reserves to itself, and to their personal representatives, heirs, successors, and assigns, all rights accruing from its ownership of the Property, including the right to engage in, or permit, or invite others to engage in, all uses of the Property that are not expressly prohibited herein and are not inconsistent with the purpose of this Easement. Without limiting the generality of the foregoing, the following rights are expressly reserved:

a. The right of the GRANTOR, its guests, employees and invitees, to use the Property for recreational purposes which may include hiking, picnicking, bird watching, camping, tenting and any other use that is not expressly prohibited above or destructive to the natural values to be conserved herein.

b. The right to advertise the Property for sale and to convey the Property, always subject to the terms of this Conservation Easement.

5. CUTTING OF TIMBER AND VEGETATION: The destruction or removal of standing timber, plants, shrubs or other vegetation is not permitted, except however, there are retained in the GRANTOR the following rights:

a. The right to clear and restore forest cover and other vegetation that is damaged or destroyed by the forces of nature, such as fire or disease and, with the prior written approval of the HOLDER and the THIRD PARTY, when necessary to prevent the spread of disease.

b. The right to clear and restore forest cover and other vegetation, in the event of an emergency, when necessary to prevent the spread of fire.

c. The right to gather, use or remove dead wood.

6. RIGHTS OF THE THIRD PARTY: The GRANTOR hereby grants to the THIRD PARTY the same inspection and enforcement rights as are granted to the HOLDER under this easement. However, the Parties hereto intend that the HOLDER be primarily responsible for the enforcement of this Easement, and that the THIRD PARTY will assume such responsibility only if the HOLDER fails to enforce it. If the THIRD PARTY determines that the HOLDER is failing in such enforcement, the THIRD PARTY may give notice of such failure to the HOLDER and the GRANTOR, and if such failure is not corrected within a reasonable time thereafter, the THIRD PARTY may exercise, in its own name and for its own account, all the rights of enforcement granted the HOLDER under this Easement.

The THIRD PARTY also has reasonable access to any and all records of the HOLDER relevant to the Protected Property.

7. CONSTRUCTION: If uncertainty should arise in the interpretation of these restrictions, judgment should be made in favor of conserving the Property in its natural, open, and scenic condition.

The GRANTOR agrees to bear all costs and responsibility of operation, upkeep, and maintenance of the Property and to pay any and all real property taxes and assessments levied by competent authority on the Property and does hereby relieve, indemnify and hold harmless the HOLDER therefrom.

The GRANTOR has provided the HOLDER with sufficient information to determine the condition of the Property as of the effective date hereof and has certified that such information is an accurate representation of the same.

8. SUCCESSORS: The covenants, terms, conditions, and restrictions of this Easement are binding upon, and inure to the benefit of, the parties hereto and their respective personal representatives, heirs, successors, and assigns and continue as a servitude running in perpetuity with the Property.

9. TERMINATION OF RIGHTS AND OBLIGATIONS: A party's rights and obligations under this Easement terminate upon transfer of the party's interest in the Easement or Property, except that liability for acts or omissions occurring prior to any transfer, survive said transfer.

TO HAVE AND TO HOLD the said Conservation Easement unto the said HOLDER and its successors and assigns forever and the said THIRD PARTY rights unto the said THIRD PARTY and its successors and assigns forever.

GRANTOR'S SIGNATURE

IN WITNESS WHEREOF, the said GRANTOR, has hereunto set his hand this ____ day of 20___.

By: _____

Its: Owner

NOTARIZATION OF GRANTOR'S SIGNATURE

HOLDER'S ACCEPTANCE

The above and foregoing Conservation Easement was authorized to be accepted by HOLDER as aforesaid, and the said HOLDER does hereby accept the foregoing Conservation Easement, by and through _____, its _____, hereunto duly authorized, this ____ day of 20___.

By: _____

Its: tbd

NOTARIZATION OF HOLDER'S SIGNATURE

THIRD PARTY ENFORCER ACCEPTANCE

The third party rights of enforcement granted under the above and foregoing Conservation Easement, pursuant to Title 33 M.R.S Section 476 et seq., were authorized to be accepted by the State of Maine Department of Environmental Protection by _____, its Director of the Bureau of Land & Water Quality, hereunto duly authorized and the said _____ does hereby accept the foregoing Conservation Easement this ____ day of 20___.

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

By: _____

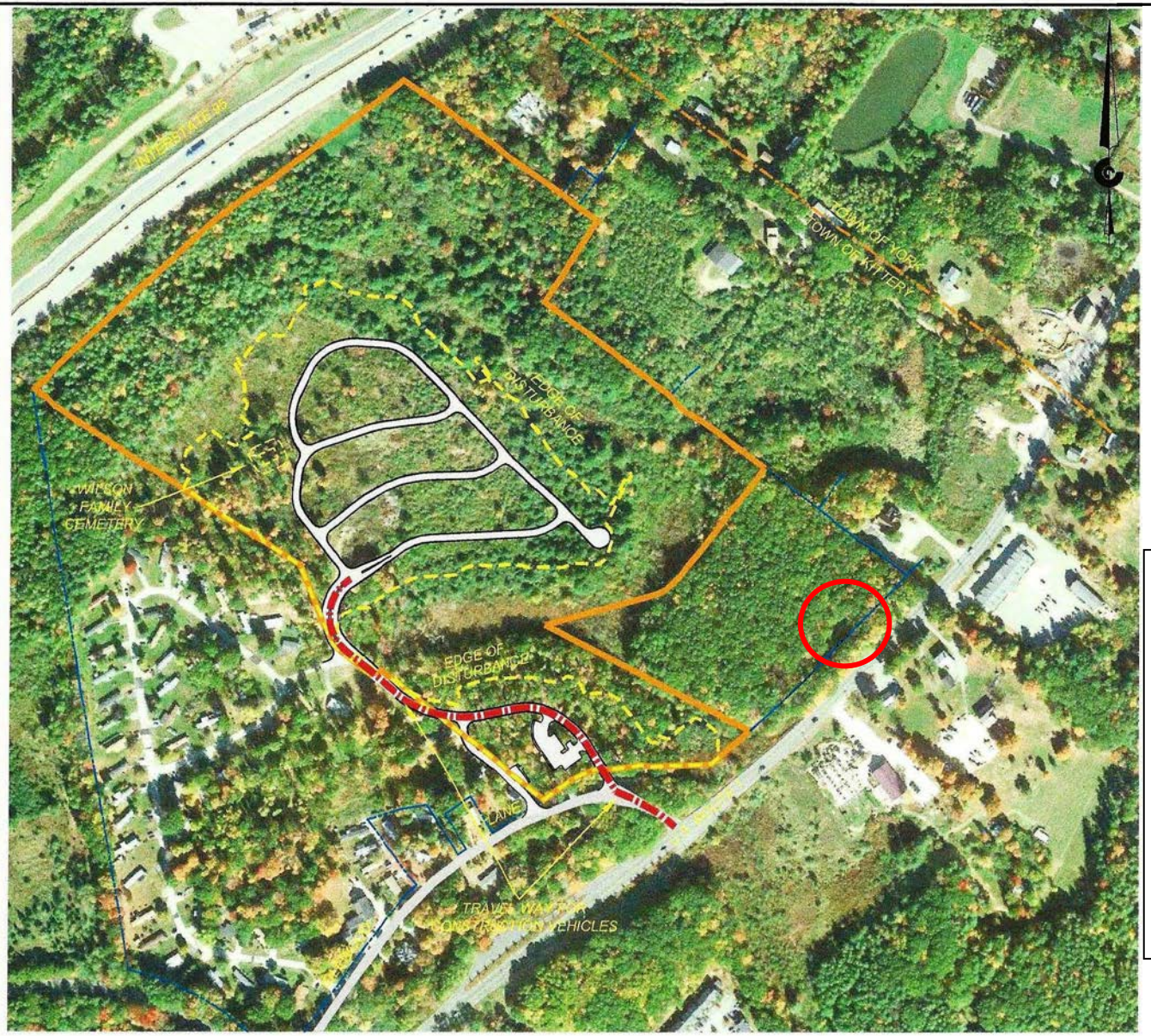
Its: Director, Bureau of Land & Water Quality

Exhibit A – Property Description

HISTORY & OVERVIEW

YANKEE COMMONS EXPANSION PROJECT
THE HYNES GROUP

Enclosure 5 • Overview



1. THIS EXHIBIT INDICATES THE APPROXIUATE AREA OF DISTURbNICE (YELIOW DASHED OUTUNE) AND THE TRAVEL WAY FOR CONSTRUCTION VEHICLES AT U.S. ROVIE 1 ENTRANCE TO IOLEWOOD LANE (RED CENTER UNE). THE COOGLE LIAPS AERIAL PHOTOGRAPHY (DATED APRIL 2014) HAS BEEN ROTATED TO THE SURVEY BOUNDARY.

2. TOTAL PARCEL AREA AREA OF DISTURBANCE: POR110N NEAR IOLEV«))]) LANE 50 ACRES
   'NILSON FALBILY fARM LOCATION 3.5 ACRES
   TOTAL PARCEL DISTURBANCE 19.2 ACRES
   REVECETATEO 12.2. ACRES

J, THE UNDISTURBED AREAS (APPROXIMATELY :50.8 ACRES/60F SITE) 'MLL BE PLACED IN A CONSERVATION EASEMENT.

Red Circle represents approximate 100' USACE Vernal Pool (fairy shrimp only) setback (not survey accurate)

RTC – Attachment 1

CIVIL CONSULTAtffS

eleon@eleon.com

NO.	REVISIONS	INT.	DATE
1			

HISTORY & OVERVIEW
YANKEE COMMONS EXPANSION PROJECT – THE HYNES GROUP
IDLEWOOD LANE / U.S. ROUTE 1 KITTERY, MAINE
PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS: 1571 BELLEVUE AVE., SUITE 200 WEST VANCOUVER, B.C. V7V1A6

CIVIL CONSULTANTS

DRAWN JAA	CALC.
DATE 21 APRIL 2015	
CHECKED	
APPROVED	
SCALE 1"=150'	
SHEET TITLE: ENCLOSURE 5	
SHEET NUMBER: EC5	
SHEET	
PROJECT # 06-684.02	

TAX MAP 66 LOT 24

DIRECTORY:
DWG NAME: ENCLOSURE MAPS
DATE: 04/21/2015

OPEN SPACE CALCULATION:

OPEN SPACE REQUIRED (10% OF ACTUAL LOT AREA):

TOTAL AREA OF LOTS (LOTS 1–78) =	506,169 SQ.FT.
10% OF LOTS =	50,617 SQ.FT.

OPEN SPACE PROVIDED:

KITTERY OPEN SPACE ADVISORY COMMITTEE =	1,259,066 SQ.FT.
YANKEE COMMONS =	283,411 SQ.FT.
TOTAL OPEN SPACE =	1,542,477 SQ.FT. > 50,617 SQ.FT. = O.K.

ACTIVE OPEN SPACE (50% OF REQUIRED OPEN SPACE):

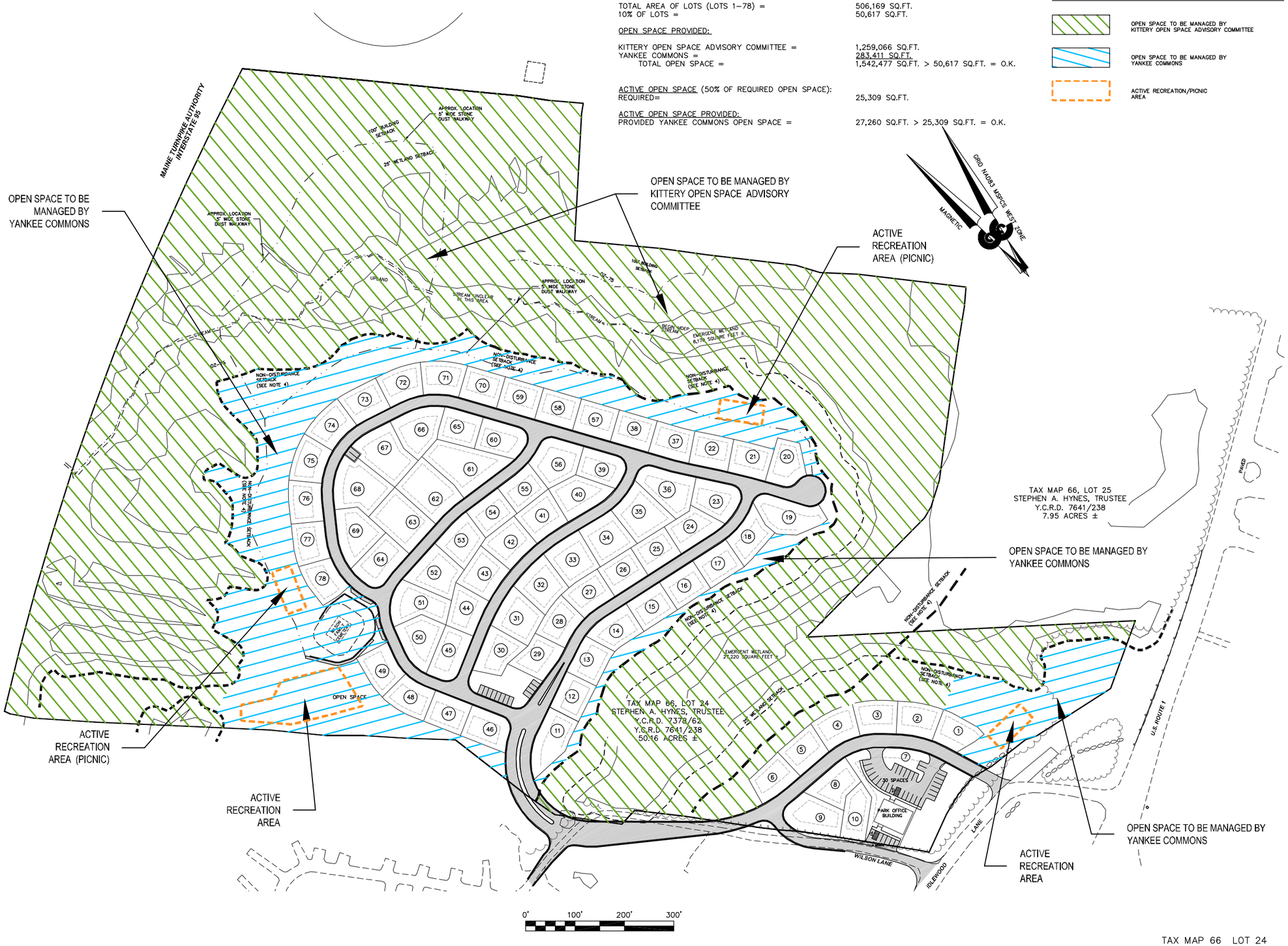
REQUIRED=	25,309 SQ.FT.

ACTIVE OPEN SPACE PROVIDED:

PROVIDED YANKEE COMMONS OPEN SPACE =	27,260 SQ.FT. > 25,309 SQ.FT. = O.K.

OPEN SPACE LEGEND:

- OPEN SPACE TO BE MANAGED BY KITTERY OPEN SPACE ADVISORY COMMITTEE
- OPEN SPACE TO BE MANAGED BY YANKEE COMMONS
- ACTIVE RECREATION/PICNIC AREA



TAX MAP 66 LOT 24

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Planners
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P.O. Box 100
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Maine
03908
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NO.	REVISIONS	INT.	DATE
1			

YANKEE COMMONS
MOBILE HOME PARK EXPANSION
IDLEWOOD LANE/ U.S. ROUTE 1 KITTERY, MAINE
PREPARED FOR:
STEPHEN A. HYNES, TRUSTEE
REAL PROPERTY TRUST AGREEMENT
MAILING ADDRESS: 1571 BELLEVUE AVE., SUITE 210 WEST VANCOUVER, B.C. V7V1A6

CIVIL CONSULTANTS

DRAWN JAA	CALC.
DATE 23 JULY 2015	
CHECKED	
APPROVED	
SCALE 1"=100'	

SHEET TITLE:
• OPEN SPACE PLAN

SHEET NUMBER:
OSP

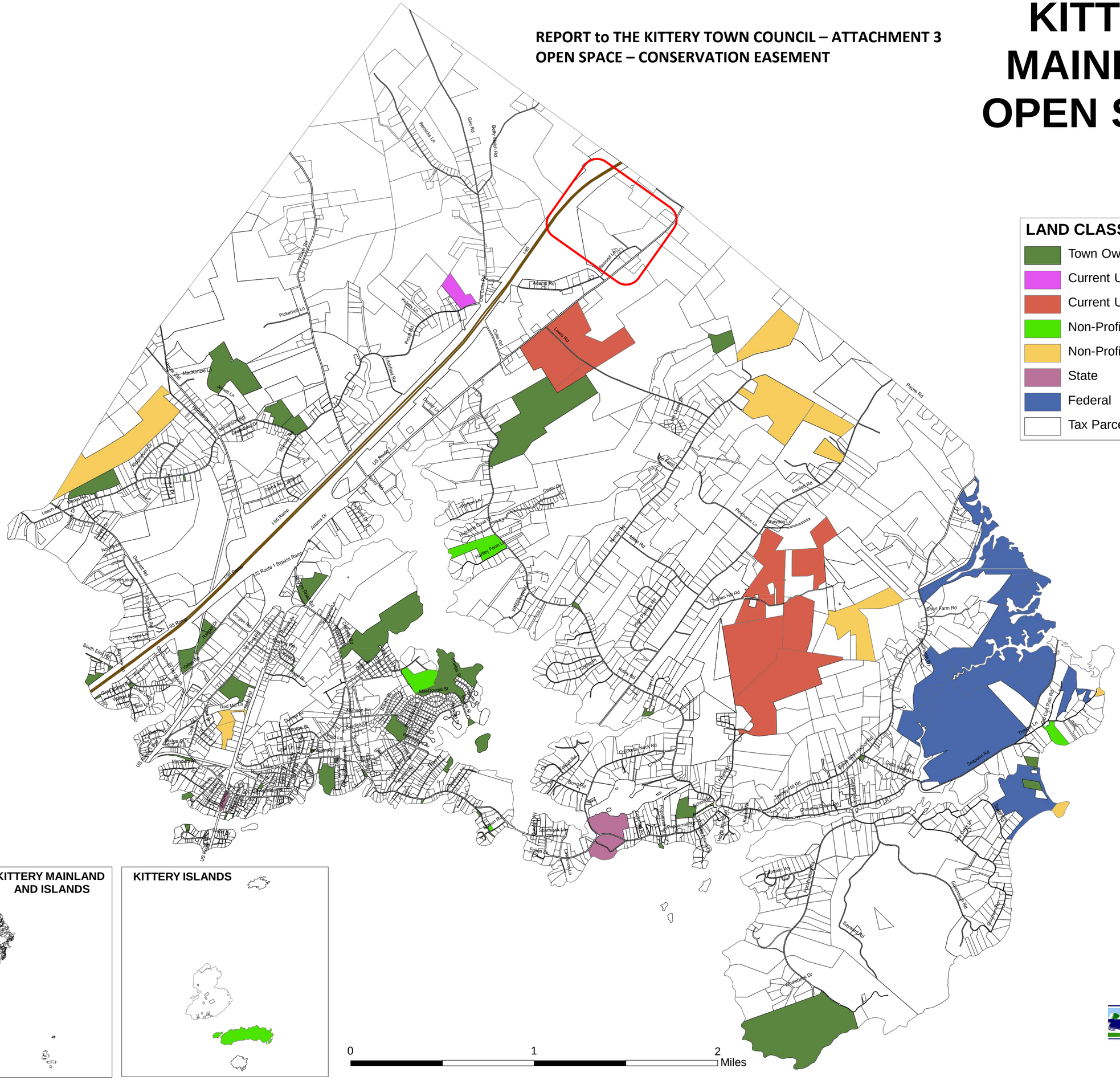
SHEET 1 of 1

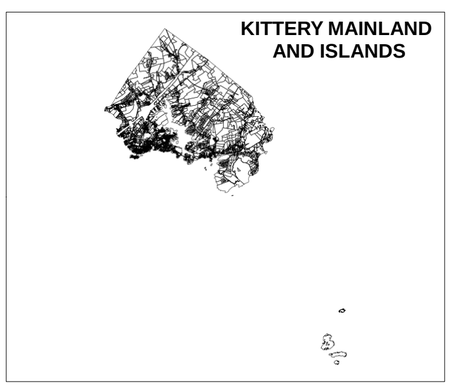
PROJECT # 06–684.02

DIRECTORY: \0668402\CARLSON\ENGINEERING\DRAWING DWG NAME: 0668402E–EX–2C DATE: 07/23/2015

KITTERY MAINLAND OPEN SPACE

REPORT to THE KITTERY TOWN COUNCIL – ATTACHMENT 3
OPEN SPACE – CONSERVATION EASEMENT





SOUTHERN MAINE REGIONAL PLANNING COMMISSION

Attachment 4a to Yankee Commons Report to Council

Maine Bureau of Land and Water Quality - http://www.maine.gov/dep/gis/datamaps/

NRPA Vernal Pools (8/19/2014)

Kittery 012	
PoolID	1602
ExportDate	4/9/2015
CenterLat	43.130524
CenterLong	-70.705087
CenterX	361314
CenterY	4776720
IFWPoolID	1602
SurveyDate	4/16/2009
ProjectID	85
Township	Kittery
SiteName	Kittery 012
ObsSiteName	VP-01
PoolMapMethod	Pool outline was delineated in the field with a GPS
GISSharing	Public
PubReview	Y
SVPStatus	SIGNIFICANT
Status_General	Significant
SHAPE	Point

Image modified 22 July 2015 to show approximate site boundaries

REPORT to THE KITTERY TOWN COUNCIL – OPEN SPACE – CONSERVATION EASEMENT

ATTACHMENT 4b, KITTERY SIGNIFICANT VERNAL POOL 012 – 06/14/15 - CLOSEUP

Image modified 22 July 2015 to show approximate site boundaries

PURSUANT TO KITTERY COMPREHENSIVE PLAN

1999 Update of the Kittery Comprehensive Plan / Revised 11/10/00
ADOPTED BY COUNCIL 3/25/02

As is seen following, the project overall meets many goals of the current plan:

SECTION C. NATURAL RESOURCES

12. GOALS AND POLICIES (pg 63)

State Goals: To protect the quality and manage the quantity of the State's water resources, including lakes, aquifers, great ponds, estuaries, rivers and coastal areas. (Growth Management Act)
To protect the State's other critical natural resources, including without limitation, wetlands, wildlife and fisheries habitat, sand dunes, shorelands, scenic vistas and unique natural areas. (Growth Management Act)

Local Goals:

To protect and improve the quality of the surface waters within Kittery.

To protect and preserve the quality and supply of groundwater resources.

To protect wetlands that have significant functional value and adjacent uplands from encroachment and degradation.

To manage the use of flood prone areas to reduce the risk of property and environmental damage.

To protect significant wildlife and fisheries habitat and critical and unique areas.

SECTION I. NATURAL RESOURCES

6. GOALS AND POLICIES (pg 184)

State Goal: To encourage and promote affordable, decent housing opportunities for all Maine citizens. (Growth Management Act)

Local Goals:

To encourage a diversity of housing to meet the needs of a wide range of residents.

To assure that as new housing is built in Kittery, at least 10% of the new units are affordable to lower or moderate income households.

Pursuant to these goals, the Town's policies are:

2. The Town will continue to allow housing for the elderly to be built at higher densities than other types of housing in areas that are currently zoned Urban Residential and will explore providing an elderly housing density bonus in other areas that are residentially zoned and served by public sewerage in recognition of the lower impact that this type of housing has on the community.

4. The Town should work with nonprofit organizations and private developers to encourage that a balance is maintained in the supply of housing so that a range of lower, mid, and higher cost housing is available in Kittery including housing that is affordable to low and moderate income households.

SECTION K. RECREATION AND OPEN SPACE

11. GOALS AND POLICIES (pp 209-211)

State Goal: To promote and protect the availability of outdoor recreation opportunities for all Maine citizens, including access to surface waters. (Growth Management Act)

Local Goals:

To provide recreational facilities to adequately meet the needs of the Town's current population and to provide facilities for the growing population.

To maintain the current level of public access to the Atlantic Ocean and Piscataqua River and to expand and improve access as opportunities arise.

To maintain the rural, open landscape in designated nongrowth areas.

Pursuant to these goals, the Town's policies are:

1. The Town will continue to require that new subdivisions address the need for recreation and open space resulting from the development but the Town should revise its system to allow either the provision of on-site facilities or financial participation in off-site facilities through the payment of in-lieu of or impact fees.

4. The Town should work to develop interconnections between the existing trails and begin developing information about the nature trails within the Town and promoting usage of them for recreational purposes.

6. The Town should have the Planning Board and Conservation Commission develop an open space plan for the Town that identifies important areas that are suitable for open space and recreational use and establishes priorities for the protection or acquisition of a land. This plan should encourage the linkage of open spaces to create a continuous open space network that can also function as a contiguous wildlife corridor. The Town should continue to explore and support opportunities to purchase and acquire open space/conservation easements and land. The Town should also explore creating a land acquisition fund to be used for acquiring key open space that is identified in the plan that is threatened by change in ownership or potential development.

7. The Town should explore requiring developers to contribute to a fund for the purchase of recreation and/or conservation land or creating an impact fee for this purpose.

8. The Town should support efforts by the Kittery Land Trust to privately acquire key parcels of open space.

9. The Town should actively work with the owners of large parcels of open land to educate them about non development options and to find ways that the owners' interests can be met without developing the land.

SECTION M. HISTORIC AND ARCHAEOLOGICAL RESOURCES

5. GOALS AND POLICIES (pp 226-228)

State Goal: To preserve the State's historic and archaeological resources. (Growth Management Act)

Local Goals:

To preserve the community's historic buildings, sites, and neighborhoods.

To assure that the community's archaeological resources are identified and protected from inadvertent damage or destruction.

To preserve and promote Kittery's historic and archaeological resources.

Pursuant to these goals, the Town's policies are:

4. As part of its development review process, the Town will require applicants for subdivision or site plan approval to document any identified historic resources that may be impacted by the project and to address the impact of the project on these resources.

CONSISTENCY with TITLE 16

A. CONSISTENT with CLUSTERED DEVELOPMENT CONCEPTS

Article XI. Cluster Residential and Cluster Mixed-Use Development.
16.8.11.1 Purpose.
To implement adopted Comprehensive Plan policies regarding the Town's natural, scenic, marine, cultural and historic resources, land use patterns and recreation and open space, this Article is intended to encourage and allow new concepts and innovative approaches to housing/commercial development and environmental design so development will be a permanent and long-term asset to the Town, while in harmony with the natural features of the land, water and surrounding development. Objectives include:

A. efficient use of the land and water, with small networks of utilities and streets; B. preservation of open space and creation of recreation areas;
C. maintenance of rural character, preserving farmland, forests and rural viewscapes;
D. preservation of areas with the highest ecological value;
E. location of buildings and structures on those portions of the site most appropriate for development;
F. creation of a network of contiguous open spaces or 'greenways' by linking the common open spaces within the site and to open space on adjoining lands wherever possible;
G. reduction of impacts on water resources by minimizing land disturbance and the creation of impervious surfaces and stormwater runoff;
H. preservation of historic, archaeological, and cultural features; and
I. minimization of residential development impact on the municipality, neighboring properties, and the natural environment.

Cluster Development also known as conservation development is a site planning approach that is an alternative to conventional subdivision development. It is a practice of Low Impact Development that groups residential properties in a proposed subdivision closer together in order to utilize the rest of the land for open space, recreation or agriculture.

The benefits of cluster development as opposed to a conventional subdivision include: more preserved land for open/recreational space, a better setting for community building, possible local agriculture production, and an optimal arrangement in storm water management. Furthermore cluster development makes more ecological and economical sense.

By clustering residential properties there is less impervious surface and more natural drainage which reduces storm water flooding, and soil erosion. As well, strategic areas in the extra space can be used trap nutrients and suspend runoff. Economical benefits include having fewer roads, sewer/drainage, and electric/gas utility infrastructure to construct. Higher density means reduced travel time for services as well as the possibility for public transportation, increased bicycle usage, and pedestrianism. This subsequently would mean less petroleum usage, and Co2 emission. There is the possibility of having community-supported agriculture (CSA) which decreases food miles and supports local economy. Higher density also has implications for an increase in recreation and community.

B. CONSISTENT with ELDERLY HOUSING CONCEPTS

16.2.2 Definitions.

Elderly housing *means a residential use occupied principally by residents who are at least fifty-five (55) years of age (or in the case of a couple, at least one of whom is at least fifty-five) years of age) in which the accommodations are all dwelling units with private bathrooms and cooking facilities. Occupants of this residential use may also include handicapped individuals of any age. This housing does not provide a regular program of services to all of its residents although individual residents may arrange for the provision of services within the facility. Elderly housing includes very limited shared community space and shared dining and kitchen facilities but may include limited facilities for allied health services, social services, and personal services such as physical and occupational therapy, a beauty shop, recreational programs, elderly day care, and similar programs. The use of these facilities must be accessory to the primary residential use of the facility but may be open to nonresidents of the facility. Elderly housing does not include eldercare facilities that are typically referred to as independent living units, congregate care units, assisted living units, dementia or Alzheimer's units, or hospice units, or a nursing care or convalescent care facility that provides nursing services.*

Maine is aging and Kittery is increasingly gentrifying. A great many local homeowners of 30-40-50 years are approaching, or in, retirement with reduced income. They are finding taxes and upkeep of their highly valued property moving out of their reach. Reasonably affordable alternatives mainly exist in other towns some distance inland. Selling and moving elsewhere uproots folks from the town where they have a long history they would prefer to maintain.

With EnergyStar-certified quality-built homes and garages in the $125-$175K range, they could sell and live comfortably right in this town with all it means to them. Additionally, the project becomes something of a "walkable community" (4/10ths of a mile furthest to the Community Center; a half-mile to Rte 1; 3/4ths to Landmark Hill businesses; a mile to Three Buoys restaurant). With a community garden; community center group activities, meeting spaces, and personal services (potentially); and, walking trails in an out-of-the-way quiet setting.

C. COMPLIANT for MIXED USES

16.3.2.13 Mixed Use MU.

"…..A mix of uses on a site is desired and in some cases, required…."

Permitted Use

5. Business and professional offices;
19. Personal services;
20. Public open space or recreation;
29. Accessory buildings and uses including minor or major home occupations;
32. Specialty food and/or beverage facility. [Function Hall]

Special Exception Use

6. Housing for elderly as part of a mixed use project;
11. Public utility facilities including substations, pumping stations, and sewage treatment facilities;

The project includes all the above listed uses. The Community Center facility will contain business and sales offices; meeting rooms; a medium size (125 seating) function room; and an accessory maintenance shop/garage. The prospect of personal services will be addressed (OT/PT and equipment; hair care; etc.), (must be viable for the provider). The non-developed 30+ acres is proposed to the Kittery Land Trust for a conservation easement with public access walking trails. The project must pay for a water department pumping station benefitting its system and may have to provide a similar system for the sewer department.

Also noted is the net positive fiscal impact to the town. Significant Public Safety Impact Fees will be paid. With the owner taking care of roads, water, sewer, street lighting, waste disposal, and so on; and, no school students. The estimated added valuation, when completed, would contribute more than $200,000 annually in new taxes, along with the sewer and water department added revenues.

EXCERPTS RELATED TO OPEN SPACE – CONSERVATION EASEMENT

16.2 Definitions

Open space means and includes all dedicated portions of a parcel that has vegetated surfaces or is in an undisturbed natural state. "Open space" does not include areas occupied by a building or a parking area except where required by the management plan in place to govern the open space and as approved by the Planning Board. Vegetated surfaces of outdoor commercial uses may be used to satisfy up to fifty percent (50%) of the required open space on any parcel except those parcels within a cluster residential or cluster mixed-use development. (Ordained 9/24/12; effective 10/25/12)

Open Space, Common means useable land within or related to a development, not individually owned, which is designed and intended for the common use or enjoyment of the residents of the development and may include such complementary structures, improvements and uses approved by the Planning Board. Such uses may include active or passive recreation or agriculture, where permitted. (Ordained 9/24/12; effective 10/25/12)

Open Space, Reserved means dedicated land that is permanently protected from further development and remains in a natural condition or is managed according to an approved management plan for natural resource functions, e.g. forestry, agriculture, habitat protection, passive recreation, or limited uses as approved by the Planning Board as part of cluster residential and cluster mixed-use developments. (Ordained 9/24/12; effective 10/25/12)

Open Space, Public means land accessible or dedicated for public use. (Ordained 9/24/12; effective 10/25/12)

Wetland preservation means the maintenance of an area of wetlands or adjacent upland so that it remains in a natural or undeveloped condition. Preservation measures include, but are not limited to, conservation easements and land trusts.

16.3.2.13 Mixed Use MU.

D. Standards.

8. Open Space Standards.

Open space must be provided as a percentage of the total area of the lot, including freshwater wetlands, water bodies, streams, and setbacks. Thirty-five percent (35%) of each lot must be designated as open space. Required open space must be shown on the plan with a note dedicating it as "open space."

a. An objective of the open space standard is to encourage the integration of open space throughout the entire development and with the open space on adjoining properties in order to alter the pattern of commercial activity along Route 1. To this end, a minimum of twenty-five percent (25%) of the required open space must be located in the front fifty percent (50%) of the lot area closest to U.S. Route 1, or if not fronting Route 1, closest to the public street used to enter the lot.

b. The open space must be located to create an attractive environment on the site, minimize environmental impacts, protect significant natural features or resources on the site, and maintain wildlife habitat. Where possible, the open space must be located to allow the creation of continuous open space networks in conjunction with existing or potential open space on adjacent properties.

c. Special Situations

i. Cases Where Integrating Open Space Would Require Exceeding the Open Space Standards.

In cases where the topography, wetlands, and existing development on the lot dictates that more than seventy-five percent (75%) of the required open space be located outside the front portion of the lot, a percentage of the open space normally required in the front portion of the lot may be shifted to the rear portion of the lot in order to achieve the required amount of vegetated open space and not reduce the allowable developable area on the lot, provided minimum landscaping standards are satisfied.

Article XI. Cluster Residential and Cluster Mixed-Use Development.

16.8.11.5 Application Procedure.
All development reviewed under this Article is subject to the application procedures in Chapter 16.10, Development Plan Application and Review, and the following:

A. In addition to the requirements of Chapter 16.10, the following are required at submittal of the Sketch Plan:

1. Calculations and maps to illustrate:
a. proposed dimensional modifications and the dimensional standards required in the zone in which the development will be located;
b. non-buildable area (land not suitable for development as defined in Article VIII of Chapter 16.7);
c. net residential acreage and net residential density; and
d. open space as defined in Section 16.8.11.6.D.2 of this Article.

2. A map showing constraints to development, such as, but not limited to, wetlands, resource protection zones, shoreland zones, deer wintering areas, side slopes in excess of thirty-three percent (33%), easements, rights-of-way, existing roads, driveway entrances and intersections, existing structures, and existing utilities.

3. A written statement describing the ways the proposed development furthers the purpose and objectives of this Article, including natural features which will be preserved or enhanced. Natural features include, but are not limited to, moderate-to-high value wildlife and waterfowl habitats, important agricultural soils, moderate-to-high yield aquifers and important natural or historic sites worthy of preservation.

4. The location of each of the proposed building envelopes. Only developments having a total subdivision or site plan with building envelopes will be considered.

B. An applicant with a project that includes proposed public open space must obtain Town Council acceptance for the public land or easement following Preliminary Plan approval. Town Council acceptance is contingent upon receipt of Final Plan approval by the Planning Board.

16.8.11.6 Standards.
E. Open Space Requirements:

1. Open space must contain at least 50% of the total area of the property, and no less than 30% of the total net residential acreage, as defined.

2. Total calculated open space must be designated as follows (See Open Space definitions Section 16.2):

a. Open Space, Reserved; b. Open Space, Common; and/or c. Open Space, Public.

3. The use of any open space may be further limited or controlled by the Planning Board at the time of final approval, where necessary, to protect adjacent properties or uses.

4. Open space must be deeded in perpetuity for the recreational amenity and environmental enhancement of the development and be recorded as such. Such deed provisions may include deed/plan restrictions, private covenants, or arrangements to preserve the integrity of open spaces and their use as approved by the Planning Board.

5. Open space must also be for preserving large trees, tree groves, woods, ponds, streams, glens, rock outcrops, native plant life, and wildlife cover as identified in applicant's written statement. In the Business Park (BP) zone, open space may be both man-made and natural. Man-made open space must be for the development of recreational areas, pedestrian ways and aesthetics that serve to interconnect and unify the built and natural environments.

6. Open space should be in a contiguous form of unfragmented land to protect natural resources, including plant and wildlife habitats.

7. A portion of the open space should be in close proximity to other open spaces used for recreation (e.g. a common green, multi-purpose athletic field, gardens, and playgrounds).

16.8.11.7 Open Space Dedication and Maintenance.

A. Prior to approval of the final plan by the Planning Board, documents for open space must be submitted to the Town for review by legal counsel. Subsequent to approval, there may be no further division of the open space; however, tracts or easements dedicated for public utilities, public access or structures accessory to noncommercial recreation, agriculture or conservation may be permitted within the open space.

B. The open space(s) must be shown on the development plan with appropriate notation on the face thereof to indicate that:

1. The open space must not be used for future building lots; and

2. A part or all of the open space may be dedicated for acceptance by the Town.

C. If any, or all, of the open space is to be reserved for ownership by the residents and/or by commercial entities, the bylaws of the proposed homeowner's or similar governing association for commercial owners (in the Business Park zone), and/or the recorded covenants must specify maintenance responsibilities and be submitted to the Planning Board prior to approval. See subsection A above.

D. Association Responsibilities.

1. Maintenance: The homeowner's association or similar association for commercial owners is responsible for the maintenance of open space(s), and other common facilities unless and until accepted by the Town. The stormwater management system must be maintained in accordance with Section 16.8.8.2, Post- construction Stormwater Management. Associations must maintain adequate funds to defray these expenses. The Planning Board shall require an initial capital fund for associations to be paid by the developer to cover these expenses.

2. Inspection: Annually, by June 30, the developer or association must complete and submit to the Code Enforcement Officer a Maintenance Compliance Report on a form prepared by the Code Enforcement Officer certifying compliance with any open space use and protection requirements. Said report must be completed by a Maine licensed civil engineer or certified soil scientist.

E. Transition of Responsibility. The developer must maintain control of such open space(s) and be responsible for maintenance until development, sufficient to support any and all associations, residential or commercial, has taken place. Responsibility and authority must be clearly defined and described in the recorded covenants, and such information must be distributed to any and all associations in a timely manner so the transition of responsibilities is seamless.

16.8.12.3 Mobile Home Parks.

O. Open space calculations are as follows:

1. For mobile home parks served by a public sewer, an area amounting to ten (10) percent of the total area devoted to individual lots must be set aside for open space and/or recreation. Such space is to be accessible and usable by all residents of the park. Parking space, driveways and streets and buffer areas are not considered usable open space but community recreation buildings, pools and courts are considered as open space.

2. At least fifty (50) percent of the required open space must consist of land that is suitable for active recreation.

3. All developed open space is to be designed and landscaped for the use and enjoyment of the park residents and maintained for their long-term use. Plans for these areas must be submitted by the developer.

4. To the maximum extent possible, undeveloped open space must be left in its natural state. Improvements to make trails for walking and jogging or to make picnic areas are permitted.

5. The developer must submit, as part of the application, a copy of that portion of the proposed park rules and a plan which specify how the open space is to be used and maintained and what conditions apply to its use. The plan must specify the area to be dedicated open space or recreation.

6. Open space must be maintained and used for its approved purposes.

W. The owner or operator of a mobile home park is responsible for ensuring the maintenance of all park-owned structures, open space areas, roads and pedestrian ways/sidewalks. Park management must comply with state laws. Compliance with this Code does not exempt the park owner, developer, or manager from complying with other applicable local, state and federal codes and regulations. (Ordained 9/26/11; effective 10/27/11)

16.9.2.3 Land Dedication.
Reserved land acceptable to the Planning Board and applicant may be gifted to the municipality as a condition of approval, only when Council has agreed to the gifting.

16.9.3.12 Submission Requirements for a Wetland Alteration Application.
C. Wetlands mitigation plan and report. A wetlands mitigation plan and report is required for activities which, in total, affect or fill more than five hundred (500) square feet of wetlands.
5. For projects involving preservation of wetlands or adjacent uplands, a conservation easement must be conveyed or deed restriction imposed so that the parcel will remain undeveloped in perpetuity.

16.10.7.2 Final Plan Application Submittal Content.

N. Open Space Land Cession Offers. Written offers of cession to the municipality of all public open space shown on the plan, and copies of agreements, or other documents showing the manner in which space(s), Code to which is reserved by the subdivider, are to be maintained.

O. Open Space Land Cession Offers Acknowledgement by Town. Written evidence that the municipal officers are satisfied with the legal sufficiency of the documents referred to in Section 16.10.7.2O. Such written evidence does not constitute an acceptance by the municipality of any public open space referred to in Section 16.10.7.2O.

16.10.9.1.3 Approval Not Acceptance of Property.
The approval by the Planning Board of a plan, a master site development plan or any other subsequent development plan does not constitute, nor is it evidence of any acceptance by the municipality of any street, easement, or other open space shown on the plan. When a park, playground, or other recreation area is shown on the plan, approval of the plan does not constitute an acceptance by the municipality of such areas. The Planning Board must require the plan to be endorsed with appropriate notes to this effect. The Planning Board may also require the filing of a written agreement between the applicant and the municipal officials covering future deed and Code, dedication, and provision for the cost of grading, development, equipment, and maintenance of any such recreation area.

Maine Revised Statutes

Title 33: PROPERTY
Chapter 7: CONVEYANCE OF REAL ESTATE
Subchapter 8-A: CONSERVATION EASEMENTS

§476. Definitions

As used in this subchapter, unless the context otherwise indicates, the following terms have the following meanings.

1. Conservation easement. "Conservation easement" means a nonpossessory interest of a holder in real property imposing limitations or affirmative obligations the purposes of which include retaining or protecting natural, scenic or open space values of real property; assuring its availability for agricultural, forest, recreational or open space use; protecting natural resources; or maintaining or enhancing air or water quality of real property.

2. Holder. "Holder" means:

A. A governmental body empowered to hold an interest in real property under the laws of this State or the United States; or

B. A nonprofit corporation or charitable trust, the purposes or powers of which include retaining or protecting the natural, scenic or open space values of real property; assuring the availability of real property for agricultural, forest, recreational or open space use; protecting natural resources; or maintaining or enhancing air or water quality or preserving the historical, architectural, archaeological or cultural aspects of real property.

3. Real property. "Real property" includes without limitation surface waters.

4. Third-party right of enforcement. "Third-party right of enforcement" means a right provided in a conservation easement to enforce any of its terms granted to a governmental body, nonprofit corporation or charitable trust, which, although eligible to be a holder, is not a holder.

§477. Creation, conveyance, acceptance and duration

1. Conservation easement. Except as otherwise provided in this subchapter, a conservation easement may be created, conveyed, recorded, assigned or partially released in the same manner as other easements created by written instrument. A conservation easement may be terminated or amended by the parties only as provided in section 477-A, subsection 2.

2. Right or duty. No right or duty in favor of or against a holder arises under a conservation easement unless it is accepted by the holder and no right in favor of a person having a 3rd-party right of enforcement arises under a conservation easement unless it is accepted by any person having a 3rd-party right of enforcement.

3. Limitation. Except as provided in this subchapter, a conservation easement is unlimited in duration unless:

A. The instrument creating it otherwise provides; or

B. Change of circumstances renders the easement no longer in the public interest as determined by the court as provided in section 477-A, subsection 2, paragraph B in an action under section 478.

4. Interest. An interest in real property in existence at the time a conservation easement is created shall not be impaired by it unless the owner of the interest is a party to the conservation easement or consents to it.

5. Entitled to enter land. The instrument creating a conservation easement must provide in what manner and at what times representatives of the holder of a conservation easement or of any person having a 3rd-party right of enforcement shall be entitled to enter the land to assure compliance.

§477-A. Conservation easement standards

1. Conservation values. A conservation easement executed on or after the effective date of this section must include a statement of the conservation purposes of the easement, the conservation attributes associated with the real property and the benefit to the general public intended to be served by the restriction on uses of the real property subject to the conservation easement.

2. Amendment and termination. Amendments and termination of a conservation easement may occur only pursuant to this subsection.

A. A conservation easement executed on or after the effective date of this section must include a statement of the holder's power to agree to amendments to the terms of the conservation easement in a manner consistent with the limitations of paragraph B.

B. A conservation easement may not be terminated or amended in such a manner as to materially detract from the conservation values intended for protection without the prior approval of the court in an action in which the Attorney General is made a party. In making this determination, the court shall consider, among other relevant factors, the purposes expressed by the parties in the easement and the public interest. If the value of the landowner's estate is increased by reason of the amendment or termination of a conservation easement, that increase must be paid over to the holder or to such nonprofit or governmental entity as the court may designate, to be used for the protection of conservation lands consistent, as nearly as possible, with the stated publicly beneficial conservation purposes of the easement.

3. Monitoring. The holder of a conservation easement shall monitor the condition of the real property subject to the conservation easement at least every 3 years and shall prepare and retain a written monitoring report in its permanent records. The holder shall make available to the landowner, upon request, a copy of the monitoring report.

4. Failure to comply. Failure to comply with the requirements of subsection 1, subsection 2, paragraph A or subsection 3 does not invalidate a conservation easement otherwise entitled to the protections of this subchapter.

§478. Judicial actions

1. Action or intervention. An action affecting a conservation easement may be brought or intervened in by:

A. An owner of an interest in the real property burdened by the easement;

B. A holder of the easement;

C. A person having a 3rd-party right of enforcement; or

D. The Attorney General; except that the Attorney General may initiate action seeking enforcement of a conservation easement only when the parties designated as having the right to do so under the terms of the conservation easement:

(1) Are no longer in legal existence;
(2) Are bankrupt or insolvent;
(3) Cannot be contacted after reasonable diligence to do so; or
(4) After 90 days' prior written notice by the Attorney General of the nature of the asserted failure, have failed to take reasonable actions to bring about compliance with the conservation easement

2. Intervention only. An action affecting a conservation easement may be intervened in by a political subdivision of the State in which the real property burdened by the easement is located, in accordance with court rules for permissive intervention.

3. Power of court. The court may permit termination of a conservation easement or approve amendment to a conservation easement that materially detracts from the conservation values it serves, as provided in section 477-A, subsection 2, paragraph B, and may enforce a conservation easement by injunction or proceeding at law and in equity. A court may deny equitable enforcement of a conservation easement only when it finds that change of circumstances has rendered that easement no longer in the public interest or no longer serving the publicly beneficial conservation purposes identified in the conservation easement. If the court so finds, the court may allow damages as the only remedy in an action to enforce the easement.

4. Confidentiality of records. Documents and records obtained by the Attorney General, which would otherwise not legally be subject to public disclosure, may be shared with other public agencies but must be held as legally confidential under Title 1, section 402, unless disclosed in the course of a public proceeding in court.

No comparative economic test may be used to determine under this subchapter if a conservation easement is in the public interest or serves a publicly beneficial conservation purpose.

§479. Validity

A conservation easement is valid even though:

1. Not appurtenant to interest in real property. It is not appurtenant to or does not run with an interest in real property;

2. Assigned to another holder. It can be or has been assigned to another holder;

3. Not recognized at common law. It is not of a character that has been recognized traditionally at common law;

4. Negative burden. It imposes a negative burden;

5. Affirmative obligations. It imposes affirmative obligations upon the owner of an interest in the burdened property or upon the holder;

6. Benefit does not touch or concern real property. The benefit does not touch or concern real property;

7. No privity of estate or of contract. There is no privity of estate or of contract;

8. Does not run to successors or assigns. It does not run to the successor and assigns of the holder;

9. Acquired for tax delinquency. A lien has been established for property tax delinquency under Title 36, section 552, or title to the real property subject to the conservation easement has been acquired by procedures for enforcement and foreclosure of delinquent taxes under Title 36, chapter 105, subchapter 9; or

10. Merger. The title to the real property subject to the conservation easement has been acquired by the holder, unless the holder, with the consent of any 3rd party with rights of enforcement, replaces the conservation easement with legally binding restrictions under a conservation easement or declaration of trust at least as protective of the conservation values of the protected property as provided by the replaced easement.

§479-A. Applicability

1. Interest created after effective date. This subchapter applies to any interest created after its effective date which complies with this subchapter, whether designated as a conservation easement or as a covenant, equitable servitude, restriction, easement or otherwise.

2. Conservation easement created before effective date. This subchapter applies to any conservation easement created before the effective date of this subchapter if the conservation easement would have been enforceable had it been created after the effective date of this subchapter, unless retroactive application contravenes the Constitution of Maine or the United States Constitution.

3. Subchapter does not invalidate interest. This subchapter does not invalidate any interest, whether designated as a conservation or preservation easement or as a covenant, equitable servitude, restriction, easement or otherwise, that is enforceable under other laws of this State.

§479-B. Uniformity of application and construction

This subchapter shall be applied and construed to effectuate its general purpose to make uniform the laws with respect to the subject of the subchapter among states enacting it.

§479-C. Conservation easement registry

A holder of a conservation easement that is organized or doing business in the State shall annually report to the Department of Agriculture, Conservation and Forestry the book and page number at the registry of deeds for each conservation easement that it holds, the municipality and approximate number of acres protected under each easement and such other information as the Department of Agriculture, Conservation and Forestry determines necessary to fulfill the purposes of this subchapter. The filing must be made by a date and on forms established by the Department of Agriculture, Conservation and Forestry to avoid duplicative filings when possible and otherwise reduce administrative burdens. The annual filing must be accompanied by a $30 fee. The Department of Agriculture, Conservation and Forestry shall maintain a permanent record of the registration and report to the Attorney General any failure of a holder disclosed by the filing or otherwise known to the Department of Agriculture, Conservation and Forestry. The fees established under this section must be held by the Department of Agriculture, Conservation and Forestry in a nonlapsing, special account to defray the costs of maintaining the registry and carrying out its duties under this section.

Town of Kittery Maine
Town Planning Board Meeting
December 10, 2015

ITEM 2 – 34 Goose Point Rd – Shoreland Development Plan Review

Action: Accept or deny plan application; Approve or deny plan. Owner/applicants Kevin Fickensher and Suzanne Olbricht request consideration of their plan to construct a screened porch and separate patio to an existing single family dwelling. The 1.82 acre lot is located at 34 goose Point Road (Tax Map 34 Lot 2B) in the Residential Rural (R-RL) and Shoreland Overlay (OZ-SL-250') zones. Agent is Mick Sheffield, Labrie Associates, Inc.

PROJECT TRACKING

REQ'D	DESCRIPTION	COMMENTS	STATUS
NO	Sketch Plan		NA
NO	Site Walk	At the Board's discretion	
YES	Determination of Completeness		Scheduled for 12/10
NO	Public Hearing	At the Board's discretion	
Yes	Final Plan Review and Decision		Feasible for 12/10

Plan Review Notes reflect comments and recommendations regarding applicability of Town Land Use Development Code, and standard planning and development practices. Only the PB makes final decisions on code compliance and approves, approves with conditions or denies final plans. 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 recorded at the York County Registry of Deeds. PLACE THE MAP AND LOT NUMBER IN ¼: 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.

Background

Planning Board review of this project is required by 16.10.3.2 Other Development Review because it is located in the Shoreland Overlay Zone. The existing use is a conforming single-family dwelling on a conforming lot. The existing dwelling and deck are entirely within the Shoreland Overlay Zone, but outside the 100-foot setback from the highest annual tide (HAT). All space and dimensional standards for the Residential Rural (R-RL) zone are met.

The proposal is to construct a screened porch, deck and patio on the property.

Staff Review

The proposed development exists entirely outside the 100-foot, front and side yard setbacks.

Maximum devegetated area in the shoreland overlay zone is 20%. The current devegetated area is 14.9% of the total property. The proposed development increases the devegetated coverage to 16.5% and meets standard.

Maximum building coverage in the residential rural zone is 15%. The existing building coverage is 4.1% The proposed development increases the building coverage of the lot to 4.5% and meets standard.

It appears no tress are being removed for the proposed development.

The proposal for the construction of the screened porch, deck and patio appear to meet the applicable standards of Title 16. All structures exist outside of the required setbacks, do not create nonconformity of the lot or dwelling and do not exceed devegetation or building coverage levels for the property.

Staff recommends the approval of this plan with minor changes to the plan

1. Indicate project name and type (Shoreland Development Plan) on plan
2. Include signature block for Planning Board Chair on plan
3. Replace "IMPERVIOUS SURFACE AREAS" with "DEVEGETATED SURFACE AREAS"
4. Include existing and proposed building coverage levels on plan
5. Identify zone and standards on plan
6. Indicate existing tree line on plan

Recommendations

The proposed development appears to meet the requirements of Title 16, as described with the conditions included in draft findings of fact. After accepting the application the board should determine if a public hearing is wanted.

The Board should first accept the plan application.

Move to accept the Shoreland Development Plan application dated November 19, 2015 from Kevin Fickensher & Suzanne Olbricht for 34 Goose Point Rd (Tax Map 34, Lot 2B) in the Residential-Rural and Shoreland Overlay Zones…

The Board may move to approve with conditions (suggestions provided below) and proceed to reading and voting on the Findings of Fact.

Move to grant conditional approval for the Shoreland Development Plan application dated November 19, 2015 from Kevin Fickensher & Suzanne Olbricht for 34 Goose Point Rd (Tax Map 34, Lot 2B) in the Residential-Rural and Shoreland Overlay Zones and proceed to the review and voting on the Findings of Fact…

Kittery Planning Board **UNAPPROVED**

Findings of Fact
For 34 Goose Point Rd
Shoreland Development Plan Review

WHEREAS: Kevin Fickensher & Suzanne Olbricht requested approval of their Shoreland Development Plan to construct a screened porch, deck and patio to an existing conforming dwelling located at 34 Goose Point Rd. (Tax Map 34 Lot 2B) located in the residential-rural and shoreland overlay zones, hereinafter the "Development" and

Pursuant to the Plan Review meetings conducted by the Town Planning Board as noted {in the plan review notes prepared for 12/10/2015};

Shoreland Development Plan Review	12/10/2015
Site Walk	
Public Hearing	
Approval	(include if present in approval process)

And pursuant to the application and plan and other documents considered to be a part of a plan review decision by the Planning Board in this Finding of Fact consisting of the following (hereinafter the "Plan") {as noted in the plan review notes prepared for 12/10/2015}:

1. Shoreland Development Plan Application, received November 19, 2015.
2. Site Plan, Ambit Engineering, Inc., November 2015

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 and conclusions:

FINDINGS OF FACT

Chapter 16.3 LAND USE ZONE REGULATIONS

16.3.2.17.D Shoreland Overlay Zone
1.d The total footprints of the areas devegetated for structures, parking lots and other impervious surfaces, must not exceed twenty (20) percent of the lot area, including existing development, except in the following zones… Findings: The current devegetated area is 14.9% of the total property. The proposed development increases the devegetated coverage to 16.5%. Conclusion: The requirement appears to be met.
Vote: ___ in favor ___ against ___ abstaining

Chapter 10 DEVELOPMENT PLAN APPLICATION AND REVIEW

Article 10 Shoreland Development Review

16.10.10.2 Procedure for Administering Permits

D. An application will be approved or approved with conditions if the reviewing authority makes a positive finding based on the information presented. It must be demonstrated the proposed use will:

1. Maintain safe and healthful conditions;

Finding: The proposed development does not appear to have an adverse impact.

Conclusion: This requirement appears to be met

Vote: ___ in favor ___ against ___ abstaining

2. Not result in water pollution, erosion or sedimentation to surface waters;

Finding: Maine DEP Best Management practices will be followed for erosion and sedimentation control during site preparation and building construction (see conditions #2 and #3) to avoid impact on adjacent surface waters.

Conclusion: This requirement appears to be met

Vote: ___ in favor ___ against ___ abstaining

3. Adequately provide for the disposal of all wastewater;

Finding: The proposed development doesn't require any changes to existing disposal wastewater system.

Conclusion: This requirement is not applicable.

Vote: ___ in favor ___ against ___ abstaining

4. Not have an adverse impact on spawning grounds, fish, aquatic life, bird or other wildlife habitat;

Finding: Maine DEP Best Management practices will be followed for erosion and sedimentation control during site preparation and building construction (see conditions #2 and #3) to avoid impact on adjacent surface waters. These conditions should be added to the plan.

Conclusion: The proposed development does not appear to have an adverse impact. With the suggested conditions #2 and #3, this standard appears to be met.

Vote: ___ in favor ___ against ___ abstaining

5. Conserve shore cover and visual, as well as actual points of access to inland and coastal waters;

Finding: Shore cover is not adversely impacted

Conclusion: This requirement appears to be met.

Vote: ___ in favor ___ against ___ abstaining

6. Protect archaeological and historic resources;

Finding: There does not appear to be any resources impacted.

Conclusion: This requirement appears to be met.

Vote: ___ in favor ___ against ___ abstaining

7. Not adversely affect existing commercial fishing or maritime activities in a commercial fisheries/maritime activities district;

Finding: The proposed development is not in the commercial fisheries/maritime use zone.

Conclusion: This requirement is not applicable.

Vote: ___ in favor ___ against ___ abstaining

8. Avoid problems associated with floodplain development and use;

Finding: The proposed development does not appear to be in the flood hazard zone.

Conclusion: This requirement appears to be met.

Vote: ___ in favor ___ against ___ abstaining

9. Is in conformance with the provisions of this code;

Finding: The proposed development appears to meet all the dimensional standards of the R-RL zone and exists outside of the 100 foot setback from the Highest Annual Tide.

Conclusion: This requirement appears to be met.

Vote: ___ in favor ___ against ___ abstaining

10. Be recorded with the York county Registry of Deeds.

Finding: A plan suitable for recording has been prepared.

Conclusion: As stated in the Notices to Applicant contained herein, shoreland Development plans must be recorded with the York County Registry of Deeds prior to the issuance of a building permit.

Vote: ___ in favor ___ against ___ abstaining

Based on the foregoing Findings, the Planning Board finds the applicant has satisfied each of the review standards for approval and, therefore, the Planning Board approves the Shoreland Development Plan Application of Kevin Fickensher & Suzanne Olbricht, owners and applicants, to construct a screened porch, deck and patio to a conforming single family dwelling located at

34 Goose Point Rd (Tax Map 34, Lot 2B) in the Residential-Rural (R-RL) and Shoreland Overlay (OZ-SL-250') zones and subject to any conditions or waivers, as follows:

Waivers: None

Conditions of Approval (to be depicted on final plan to be recorded):

1. No changes, erasures, modifications or revisions may be made to any Planning Board approved final plan. (Title 16.10.9.1.2)
2. Applicant/contractor will follow Maine DEP *Best Management Practices* for all work associated with site and building construction to ensure adequate erosion control and slope stabilization.
3. 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.
4. No trees are to be removed without prior approval by the Code Enforcement Officer or the Shoreland Resource Officer.
5. All Notices to Applicant contained herein (Findings of Fact dated 12/10/15).

Conditions of Approval (not to be depicted on final plan):

6. Incorporate any plan revisions on the final plan as recommended by Staff, Planning Board or Peer Review Engineer, and submit for Staff review prior to presentation on final Mylar.

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

Vote of __ in favor__ against __ abstaining

APPROVED BY THE KITTERY PLANNING BOARD ON _____December 10, 2015

Notices to Applicant:

1. Incorporate any plan revisions on the final plan as recommended by Staff, Planning Board or Peer Review Engineer, and submit for Staff review prior to presentation of final mylar.

2. 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.

3. One (1) mylar copy of the final plan and any and all related state/federal permits or legal documents that may be required, must be submitted to the Town Planning Department for signing. Date of Planning Board approval shall be included on the final plan in the Signature

Block. After the signed plan is recorded with the York County Registry of Deeds, a mylar copy of the signed original must be submitted to the Town Planning Department.

4. This approval by the Town Planning Board constitutes an agreement between the Town and the Developer, incorporating as elements the Development Plan and supporting documentation, the Findings of Fact, and any Conditions of Approval.

Per Title 16.6.2.A - 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.

Property Management Support
Commercial Maintenance Services
Landscape Construction

Roger R.
Labrie Associates, Inc.

RECEIVED
DEC 1 0 2015
BY:_____

New Hampshire LANDSCAPE ASSOCIATION
Certified Member

Shoreland Development Plan
34 Goose Point Rd.
Kittery, ME 03904

Presented to the Kittery, ME Planning Board
By Labrie Associates, Inc.
December 10, 2015

24 Walnut Avenue
N. Hampton, NH 03862

Phone: 603-964-9502
Fax: 603-964-9512

www.Labrieassociates.com

Property Management Support
Commercial Maintenance Services
Landscape Design and Construction
Labrie Associates. Inc.

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1. Application

2. Town of Kittery Zoning map

3. U.S. Geological Survey Map of surrounding area

4. U.S. Geological Survey Topographical Map

5. Survey of 34 Goose Point Rd, (includes proposed patio).

6. Plan of proposed patio.

7. Site photos

8. Professional Credentials

SHORELAND DEVELOPMENT PLAN APPLICATION

TOWN OF KITTERY

Planning & Development Department

200 Rogers Road, Kittery, ME 03904

Telephone: 207-475-1323 Fax: 207-439-6806

MAP ___ LOT ___

DATE: _____

FEE: $ 200.00

ASA#: _____

PROPERTY DESCRIPTION	Physical Address	34 Goose Point Rd Kittery, ME. 03904		
	Base Zone	Rural Residential	Overlay Zone (s)	SOZ
OWNER INFORMATION	Name	Kevin Fickenscher & Suzanne Clondit	Mailing Address	P.O. Box 640 Kittery, ME. 03904
	Phone	617-386-6924		
	Email	kfickenscher@mitre.org		
AGENT INFORMATION	Name	Mick Sheffield	Company	Labrie Associates, Inc
	Phone	603-964-9502	Mailing Address	24 Walnut Ave North Hampton, NH. 03862
	Email	labrieassociates@comcast.net		
	Fax	603-964-9512		
APPLICANT INFORMATION	Name		Mailing Address	
	Phone	see agent		
	Email			

PROJECT DESCRIPTION

Existing Use: Grassy hill

Proposed Use (describe in detail):

Patio with fire-pit
Fenced in, non paved vegetable garden
Flower beds

PROJECT DECSCRIPTION	Please describe any construction constraints (wetlands, shoreland overlay zone, flood plain, non-conformance, *etc.*)
	Construction would be within the 250' buffer zone, but would not encroach on the 100' Shoreland setback. Property is in Flood Hazard Zone A2

I certify I have provided, to the best of my knowledge, information requested for this application that is true and correct and I will not deviate from the Plan submitted without notifying the Planning and Development Department of any changes.

Applicant's Signature:		**Owner's Signature:**	
Date:	11/17/15	**Date:**	11-14-15

**Applicant Service Accounts*: Fees to *pay other direct costs necessary to complete the application process, not including application fees.* Title 3, Chapter 3.3.

MINIMUM PLAN SUBMITTAL REQUIREMENTS

☐ **15 Copies of this Application Form, all supporting documents, and the Development Plan and Vicinity Map 12 plan copies may be half-size (11"x17") and 3 must be full-size (24"x36")**

Shoreland Development Plan format and content:

A) Paper Size; no less than 11" X 17" or greater than 24" X 36"

B) Plan Scale
- ☑ Under 10 acres: no greater than 1" = 30'
- ☐ 10 + acres: 1" = 50'

C) Title Block
- ☑ Title: Shoreland Development Plan
- ☑ Applicant's name and address
- ☑ Name of preparer of plan with professional information
- ☑ Parcel's Kittery tax map identification (map – lot) in bottom right corner
- ☐ **Vicinity Map or aerial photo showing geographic features 5,000 feet around the site.**

D) Signature Block
- ☑ Area for signature by Planning Board Chair and Date of Planning Board Approval

Development Plan must include the following existing and proposed information:

Existing:	**Proposed:** (Plan must show the lightened existing topography under the proposed project plan for comparison.)
☐ Land Use Zones and boundaries	☐ Recreation areas and open space
☐ Topographic map (optional)	☐ Setback lines and building envelopes
☐ Wetlands and flood plains	☐ Lot dimensions
☐ Water bodies and water courses	☐ Utilities (Sewer/septic, water, electric, phone)
☐ Parcel area	☐ Streets, driveways and rights-of-way
☐ Lot dimensions	☐ Structures
☐ Utilities (Sewer/septic, water, electric, phone)	☐ Floor area, volume, devegetated area, and building coverage
☐ Streets, driveways and rights-of-way	
☐ Structures	Distance to:
☐ Distance from structure to water body and property lines	☐ Nearest driveways and intersections
☐ Floor area, volume, devegetated area, and building coverage	☐ Nearest fire hydrant

	☐ Nearest significant water body; ocean, wetland, stream

AN APPLICATION THE TOWN PLANNER DEEMS SUFFICIENTLY LACKING IN CONTENT WILL NOT BE SCHEDULED FOR PLANNING BOARD REVIEW.

Expansion/Construction Analysis within the Shoreland Overlay Zone[1]
(see Table 16.9)

Size of water body or wetland: ☐ <500 sf ☐ <501 sf-1 acre ☒ >1 acre

Structure distance from water body: 100 feet

STRUCTURE	Existing	Proposed	% Increase*	
SF (Area)	0 sf	1833 sf	100% new	933 of which is hardscape; the rest is permeable.
CF (Volume)	cf	cf	%	
Construction:	New: ☒ Demo/Rebuild: ☐ Maintenance/repair: ☐			Value: approx $ 50,000.00
*Total increase in area and/or volume may not exceed 30% for any new construction since 1/1/1989.				

PARCEL DE-VEGETATION	% Allowed*	Existing SF	Proposed SF	% Proposed*
Lot Size (sf) 79,500 sf	%	sf	sf	%
*See underlying zone standards for de-vegetated area percent allowed within a Shoreland Overlay.				

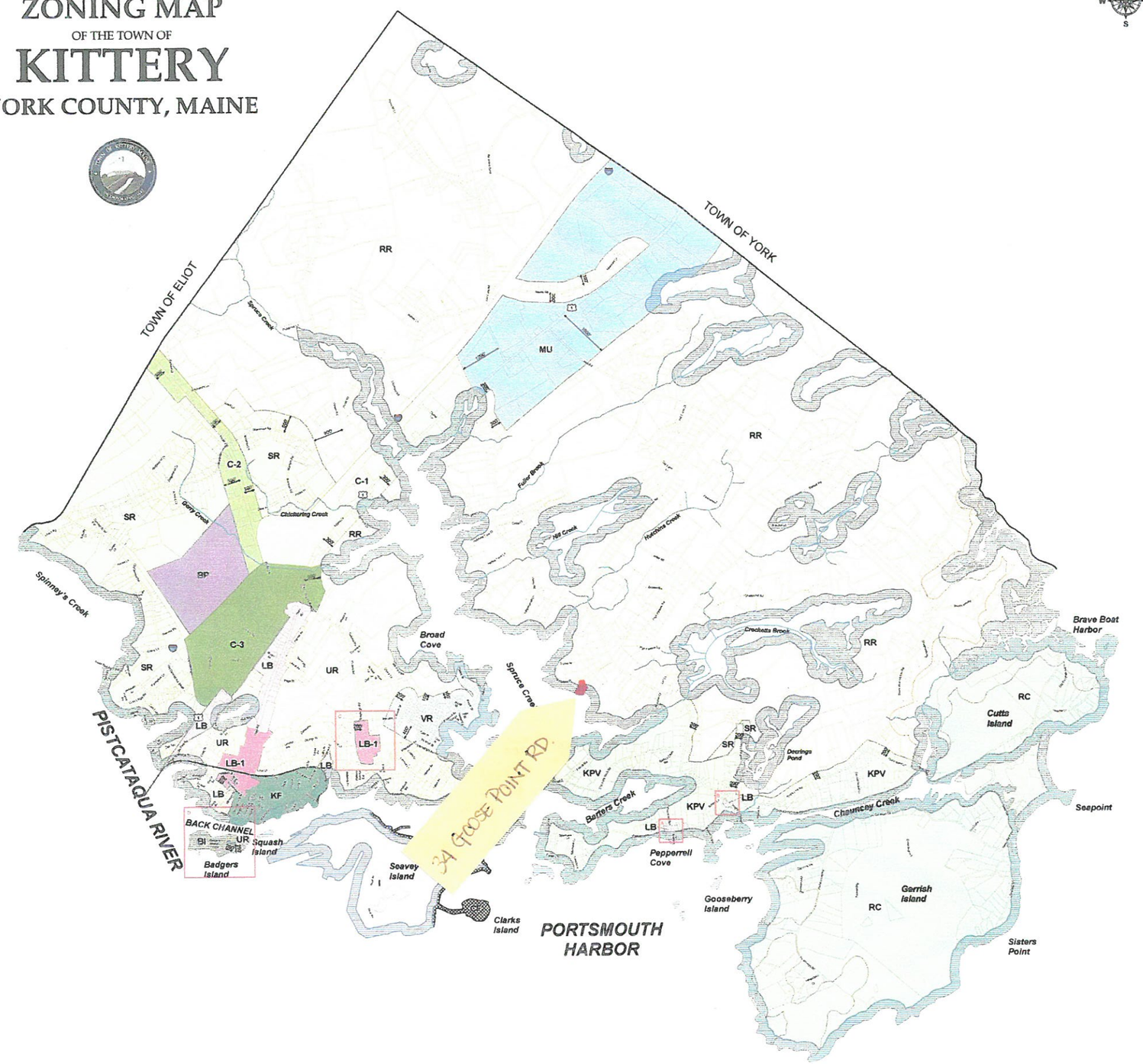
Approx. 1833 sf of grass (some of this is ledge) would be disturbed for this project. Approx. 900 sf would be replaced by permeable substances (grass, mulch, etc) The remaining 933 sf would be impermeable surfaces.

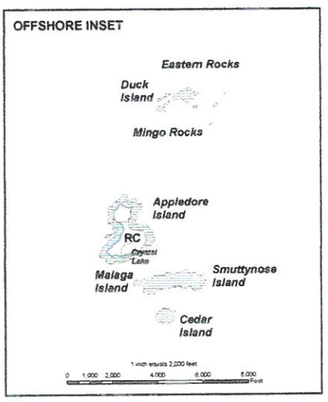
BUILDING COVERAGE	% Allowed*	Existing SF	Proposed SF	% Proposed*
Lot Size (sf)	%	sf	sf	%
*See underlying zone standards for building coverage percent allowed.				

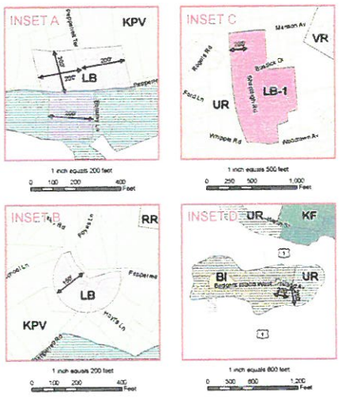
Please see table of impervious surface areas on ambit plan, enclosed.

[1]Calculations for area, volume, and de-vegetated areas must be included on the final plan and certified by a State of Maine registered architect, landscape architect, engineer, or land surveyor.

ZONING MAP
OF THE TOWN OF
KITTERY
YORK COUNTY, MAINE







Legend

- Town Boundary
- Stream
- Railroad
- Parcel Boundary
- Resource Protection District
- Shoreland Zone
- Badgers Island (BI)
- Business Park (BP)
- Commercial Fisheries / Maritime Activities Zone (CF)
- Commerical 1 District (C-1)
- Commerical 2 District (C-2)
- Commerical 3 District (C-3)
- Industrial District (I)
- Kittery Foreside (KF)
- Kittery Point Village (KPV)
- Local Business District (LB)
- Local Business 1 District (LB-1)
- Mixed Use District (MU)
- Rural Conservation District (RC)
- Rural Residential District (RR)
- Suburban Residential District (SR)
- Urban Residential District (UR)
- Village Residential District (VR)
- Water
- Wet

I hereby certify that this Zoning Map is that referred to in the Kittery Land Use and Development Code Zoning Ordinance and is the Official Zoning Map for the Town of Kittery, Maine. It includes all prior revisions and is current as of this date

The precise location of property and boundary lines as shown on this Official Zoning Map is not warranted. Where there exists any doubt in the accuracy of any such property or boundary lines, it is the responsibility of the property owner to demonstrate the exact lot line locations with respect to the zoning district boundaries. Such accuracy may be established through a licensed surveyor consistent with the provisions of this Map and the Zoning Ordinance.

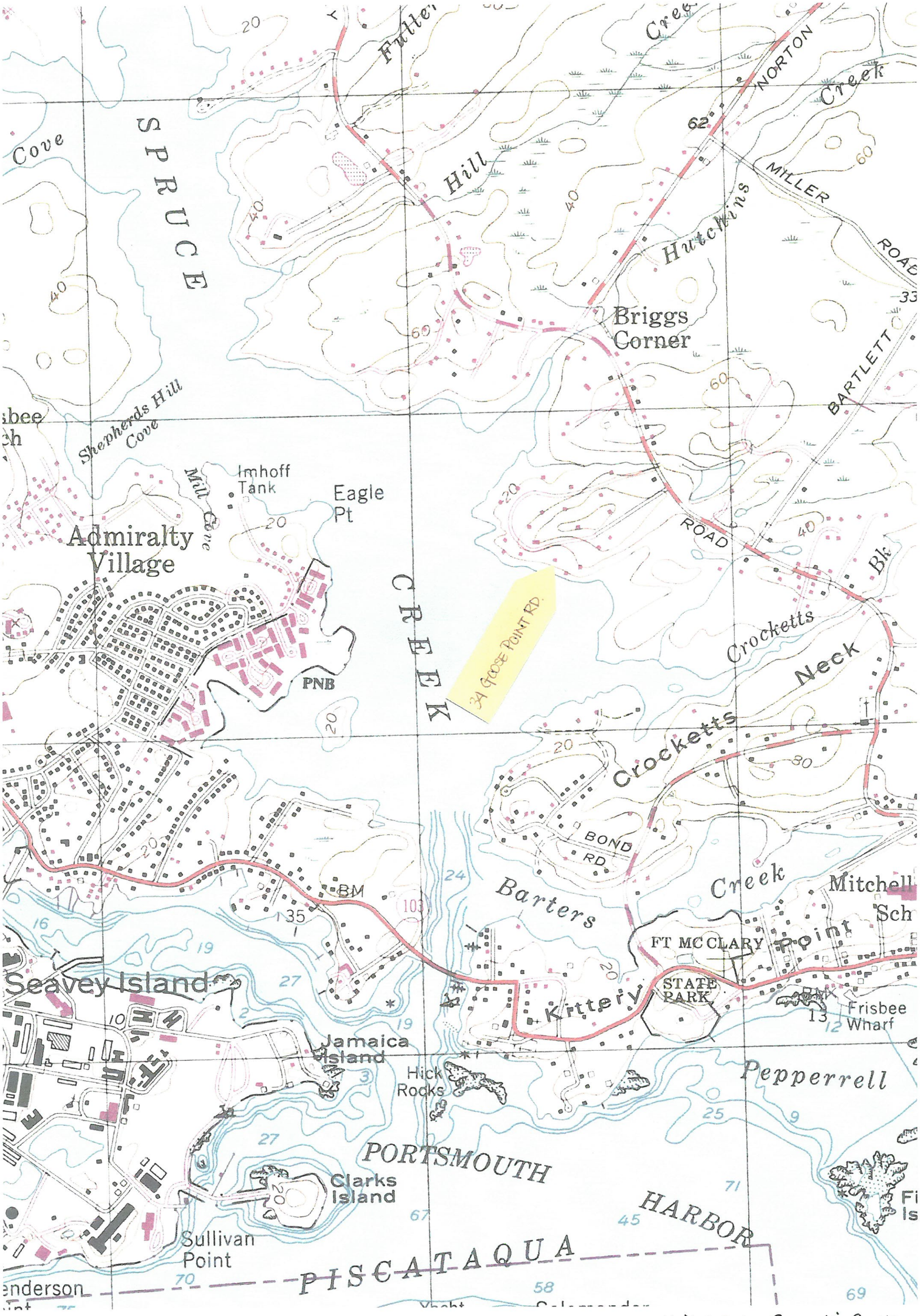
Adopted by the Kittery Town Council and Effective this December 8, 2008.

Maryann Place, Town Clerk

WOODARD & CURRAN

1 inch equals 1,000 feet

0 1,000 2,000 4,000 6,000 8,000 Feet

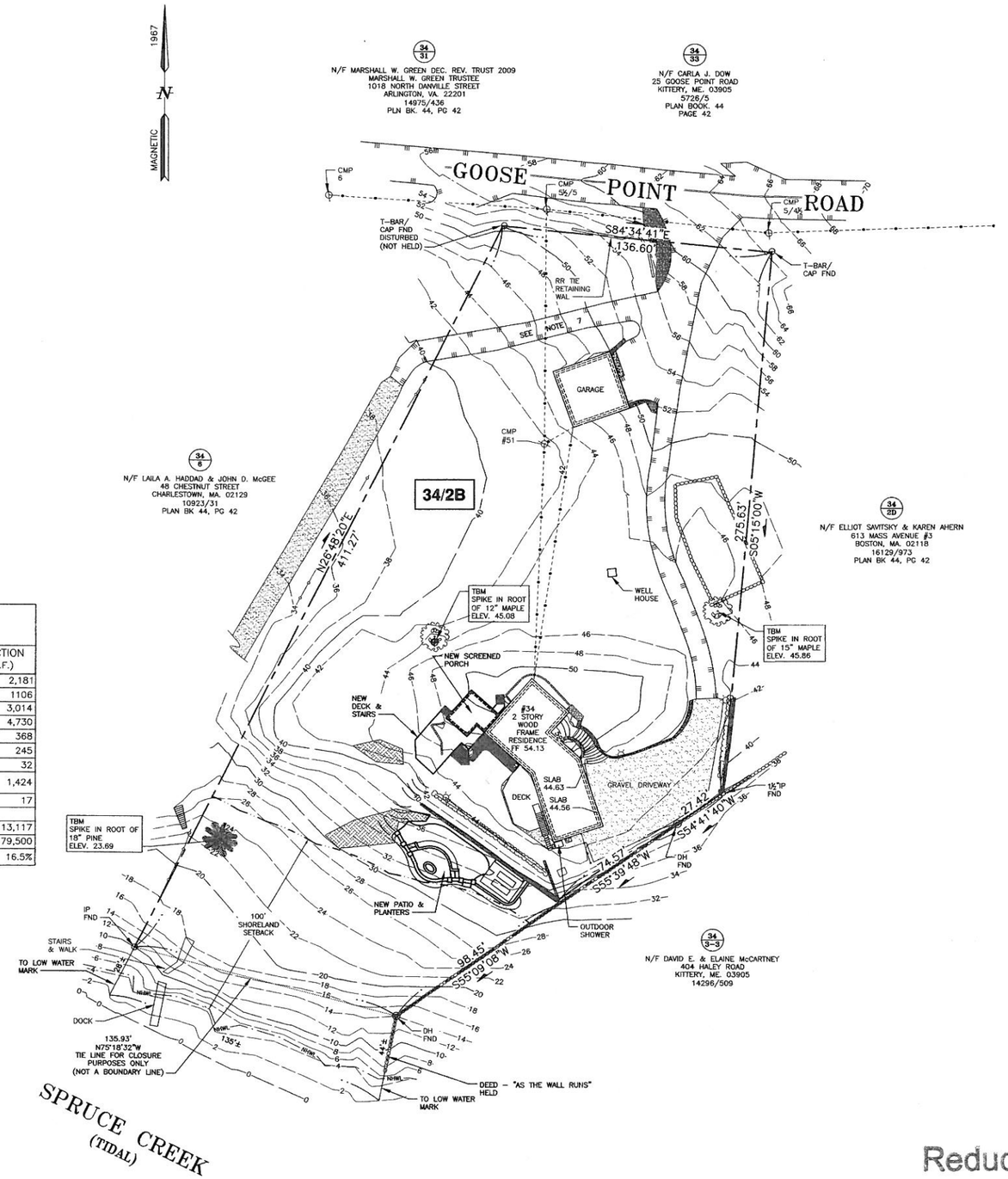


United States Geographic Survey

HALE
PARSONAGE WAY
CEDAR DR
AUTUMN WAY
NORTON RD
Hill Cr
Hutchins Cr
SPRUCE POINT RD
ELIZABETH LN
HIGH PASTURE RD
ds Hill
Shepherds Hill Cove
Briggs Corner
Imhoff Tank
Eagle Point
GOOSE PT
Captain John Dennett Lot
Charles Stimson Lot
PHILBRICK AVE
34 GOOSE POINT RD.
Spruce Creek
Admiralty Village
WOODLAWN AVE
Crocketts Neck
CROCKETT NECK RD
Kittery Poin
Brown Lot
WHIPPLE RD
Barters Creek
Kittery Point
ed States
l Shipyard Cem
Captain Benjamin Fernald Lot
PEPP
103
NSY PORTSMOUTH
RICH AVE
Old Burying Yard
Gunnison Lot
NSY PORTSMOUTH
Jamaica Island
Hicks Rocks
Congregational Church Yard
Seavey Island
CHAPEL ST
Clarks Island
MEADE AVE
Sullivan
Portsmouth Harbor
Fish
Isla
derson Point

LEGEND:

N/F	NOW OR FORMERLY
RP	RECORD OF PROBATE
YCRD	YORK COUNTY REGISTRY OF DEEDS
11/21	MAP 11/LOT 21
IR FND	IRON ROD FOUND
IP FND	IRON PIPE FOUND
T-BAR/CAP	T-BAR/CAP FOUND
DH FND	DRILL HOLE FOUND
	STONE WALL
25	CONTOUR
	OVERHEAD WIRE
NHWL	NORMAL HIGH WATER LINE



Reduced Size
Not to Scale

IMPERVIOUS SURFACE AREAS
(TO PROPERTY LINE)

STRUCTURE	PRE-CONSTRUCTION IMPERVIOUS (S.F.)	POST-CONSTRUCTION IMPERVIOUS (S.F.)
MAIN STRUCTURE & GARAGE	2,181	2,181
PAVER PATIO	173	1106
GRAVEL DRIVEWAY	3,014	3,014
PAVED DRIVEWAY	4,730	4,730
MASONRY WALLS	368	368
STONE STEPS	245	245
CONCRETE APRON	32	32
WOOD DECK, PORCH & STAIRS	1,106	1,424
WELL HOUSE	17	17
TOTAL	11,865	13,117
LOT SIZE	79,500	79,500
% LOT COVERAGE	14.9%	16.5%

AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road, Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

NOTES:

1) PARCEL IS SHOWN ON THE TOWN OF KITTERY ASSESSOR'S MAP 34 AS LOT 2B.

2) OWNERS OF RECORD:
KEVIN M. FICKENSCHER &
SUZANNE OLBRICHT
34 GOOSE POINT ROAD
KITTERY, ME. 03905
16816/802
YCRD PLAN BK. 44 PG. 42

3) PARCEL IS PARTIALLY IN FLOOD HAZARD ZONE A2 (EL 9) AS SHOWN ON FIRM PANEL 23017100050, DATED JULY 3, 1986.

4) EXISTING LOT AREA: (TO NORMAL HIGH WATER LINE)
79,500 S.F.±
1.8251 AC.±

5) DATUM:
MEAN SEA LEVEL
USGS-NAVD 88
FROM GPS OBSERVATION: 0.2'±

6) THE PURPOSE OF THIS PLAN IS TO SHOW SOME PROPOSED SITE IMPROVEMENTS ON ASSESSOR'S MAP 34 LOT 2B.

7) SUBJECT TO A 15' WIDE EASEMENT AND RIGHT OF WAY TO BENEFIT TAX MAP 34 LOT 6. (SEE RCRD 1952/735.)

8) SUBJECT TO RESERVATIONS AND RESTRICTIONS AND BENEFITS AS ENUMERATED IN YCRD 1758/392 AND REVISED AS STIPULATIONS FULFILLED. SEE 4328/128. RESTRICTIONS INCLUDE BUT NOT LIMITED TO 30' ROAD SETBACK AND 10' BOUNDARY SETBACK AND UTILITY EASEMENT.

9) SUBJECT TO AN EASEMENT TO CENTRAL MAINE POWER & NET&T; 15' WIDE FROM POLE 5 TO POLE 5.1, GOOSE POINT ROAD. (SEE 4758/285.)

10) YEAR ROUND SEPTIC DESIGN RECORDED AT RCRD 4347/329.

11) ANY RIGHTS REMAINING IN THE PROPERTY BETWEEN THE PROPERTY AND THE SOUTHERLY SIDELINE OF GOOSE POINT ROAD. ROAD HAS BEEN ACCEPTED.

12) PROPERTY DEED INCLUDES RIGHT, TITLE & INTEREST TO AND IN SHORE OR TIDELANDS TO THE LOW WATER MARK.

13) PROPOSED LANDSCAPE FEATURES FROM DESIGN BY LABRIE ASSOCIATES, INC. DATED DECEMBER 19, 2015.

14) PROPOSED PORCH/DECK ADDITION FROM PLAN DATED 7-27-15 BY CENTRAL SQUARE DESIGN, LLC.

FICKENSCHER & OLBRICHT RESIDENCE
34 GOOSE POINT ROAD
KITTERY, MAINE

NO.	DESCRIPTION	DATE
0	ISSUED FOR COMMENT	11/19/15

REVISIONS

STATE OF MAINE
JOHN A. CHAGNON
No. 2218
PROFESSIONAL LAND SURVEYOR

SCALE: 1" = 30' NOVEMBER 2015

SITE PLAN C2

FB 210, PG 57 MAP 34 - LOT 2B JN 2396

J:\JOBS2\JN2300\JN 2396\2014 Survey\Plans & Specs\Site\2396 Topo survey 2014.dwg, 24x36 SITE MAINE_C2

House as drawn by Ambit Engineering 12/14

Please see lot coverage information on full sized plan.

Existing hedge

Property Line

Rock Garden

Perennial Garden

Existing retaining wall

Grass steps

Vegetable garden with raised beds, mulch base

Patio

Gate

Retaining wall

Perennial Gardens

Retaining wall
Steps

Native plant border built on top of existing grass

100' SHORELAND SETBACK

LEDGE

Fire Pit

Steps

Retaining & Seating wall

Steps

Native plant border built on top of existing grass

0 5 10 20
SCALE IN FEET

SCALE: 1 inch = 5 feet at 36" x 24"
All other sizes use scale bar above

N

Planning Board Chair Date

Property Management Support
Commercial Maintenance Services
Landscape Design & Construction
Roger R.
Labrie Associates, Inc.

Shoreland Development Plan

Dr. Kevin Fickenscher & Dr. Suzanne Olbricht
34 Goose Point Rd.
Kittery, ME 03904

Prepared for Labrie Associates
by Wickie Rowland, Landscape Designer

November 19, 2015

Map 34/Lot 2B

Labrie Associates, Inc.

Mick Sheffield

Owner, Labrie Associates, Inc.

BS in Forestry from UNH

NH Certified Landscape Professional

Past President and board member, New Hampshire Landscape Association

www.labrieassociates.com

http://www.houzz.com/pro/mrroscoe/_public

Drawing Room Ink, LLC

Wickie Rowland

Designer, Labrie Associates, Inc.

Owner, Drawing Room Ink, LLC

B.A. in French, Bates College

Diploma, Landscape Design from KLC School of Design, London, UK (Honors)

Diploma, Landscape Design from Stonewall Associated Colleges, Cornwall, UK (Distinction)

Level 2 Certificate in Horticulture from the Royal Horticultural Society (Commendation)

Certificate in Native Plant Horticulture and Design, New England Wildflower Society

NH Certified Landscape Professional

www.drawingroomink.com

Town of Kittery Maine
Town Planning Board Meeting
December 10, 2015

ITEM 3 – 20 Whippoorwill Ln – Shoreland Development Plan Review
Action: Accept or deny plan application; Approve or deny plan. Owner/applicant Christopher Moran requests consideration of their plan to expand an existing single family dwelling located at 20 Whippoorwill Ln (Tax Map 33 Lot 3) in the Residential Rural (R-RL) and Shoreland Overlay (OZ-SL-250') zones. Agent is Anderson Livingston Engineers, Inc.

PROJECT TRACKING

REQ'D	DESCRIPTION	COMMENTS	STATUS
NO	Sketch Plan		NA
NO	Site Walk	At the Board's discretion	
YES	Determination of Completeness		Scheduled for 12/10
NO	Public Hearing	At the Board's discretion	
Yes	Final Plan Review and Decision		Feasible for 12/10

Plan Review Notes reflect comments and recommendations regarding applicability of Town Land Use Development Code, and standard planning and development practices. Only the PB makes final decisions on code compliance and approves, approves with conditions or denies final plans. 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 recorded at the York County Registry of Deeds. PLACE THE MAP AND LOT NUMBER IN ¼: 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.

Background
Planning Board review of this project is required by 16.10.3.2 Other Development Review because it is located in the Shoreland Overlay Zone. The existing use is a conforming single-family dwelling on a non-conforming lot. The existing dwelling is entirely within the Shoreland Overlay Zone, but outside the 100-foot setback from the highest annual tide (HAT). All space and dimensional standards for the Residential Rural (R-RL) zone are met.

The proposal is to construct a 1,972 square foot expansion on the easterly side of the existing principle dwelling on the property. The proposal also includes the construction of a deck, patio and expansion to an existing driveway.

Staff Review
The proposed development exists entirely outside the 100-foot, front and side yard setbacks. Maximum devegetated area in the shoreland overlay zone is 20%. The current devegetated area is 7.3% of the total property. The proposed development increases the devegetated coverage to 12.9% and meets zone standards. No additional clearing will be required for the proposed development.

Maximum building coverage in the residential rural zone is 15%. The proposed development increases the building coverage from 2.32% to 4.46% and meets zone standards.

The property has an area of approximately 67,750 square feet within the Shoreland Overlay Zone. Of this, approximately 51,550 square feet (76%) is existing cleared space. This creates a non-conforming lot per Title 16.9.2.2.D.

> *It is not permissible to clear openings for any purpose, including but not limited to, principal and accessory structures, driveways, lawns and sewage disposal areas, exceeding in the aggregate 25 percent of the lot area within the Resource Protection or Shoreland Overlay Zone or ten thousand (10,000) square feet, whichever is greater, including land previously cleared.*

Staff review of 2012 aerial photographs depicts a cleared area of approximately 39,630 square feet (58%). It appears clearing occurred between 2012-2015 that increased the cleared area within the Shoreland Overlay Zone from 58% to 76%. This increase conflicts with Title 16.9.2.2.E.

> *E. Legally existing nonconforming cleared openings may be maintained, but must not be enlarged, except as allowed by this Code.*

No additional clearing is requested for the proposed development.

A portion of the property is located in Flood Hazard Zone A. The existing structures and proposed development is at a higher elevation and not in the flood hazard zone. The applicant may need to provide additional information or documentation, such as an elevation certificate, to the Code Enforcement Officer prior to obtaining a building permit.

The proposal for the expansion of an existing single family dwelling, and construction of a deck and patio appear to meet the standards of Title 16. All structures exist outside of the required setbacks, do not increase nonconformity of the existing lot or dwelling and do not exceed devegetation or building coverage levels for the property.

Staff recommends the approval of this plan with minor changes to the plan

1. Replace “IMPERVIOUS” with “DEVEGETATED”
2. Identify zone and standards on plan
3. Remove deck and ramp from building calculation table on plan to match definition of building in Title 16.2

   > *Building – any structure having a roof supported by columns or walls and intended for the shelter, housing, or enclosure of persons, animals, or property.*
4. Change the lot number on plan from 3C to 3 to match town records
5. Develop a replanting plan to replenish previously cleared vegetation

Recommendations

The proposed development appears to meet the requirements of Title 16, as described with the conditions included in draft findings of fact. After accepting the application the board should determine if a public hearing is warranted or necessary.

The Board should first accept the plan application.

Move to accept the Shoreland Development Plan application dated November 19, 2015 from Christopher Moran for 20 Whippoorwill Ln (Tax Map 33, Lot 3) in the Residential-Rural and Shoreland Overlay Zones…

The Board may move to approve with conditions (suggestions provided below) and proceed to reading and voting on the Findings of Fact.

Move to grant conditional approval for the Shoreland Development Plan application dated November 19, 2015 from Christopher Moran for 20 Whippoorwill Ln (Tax Map 33, Lot 3) in the Residential-Rural and Shoreland Overlay Zones and proceed to the review and voting on the Findings of Fact…

Kittery Planning Board **UNAPPROVED**

Findings of Fact
For 20 Whippoorwill Ln
Shoreland Development Plan Review

WHEREAS: Christopher Moran requests approval of their Shoreland Development Plan to expand an existing conforming single-family dwelling as well as construct a deck and patio on the property located at 20 Whippoorwill Ln (Tax Map 33 Lot 3) located in the residential-rural and shoreland overlay zones, hereinafter the "Development" and

Pursuant to the Plan Review meetings conducted by the Town Planning Board as noted {in the plan review notes prepared for 12/10/2015}

Shoreland Development Plan Review	12/10/2015
Site Walk	
Public Hearing	
Approval	(include if present in approval process)

And pursuant to the application and plan and other documents considered to be a part of a plan review decision by the Planning Board in this Finding of Fact consisting of the following (hereinafter the "Plan"): {as noted in the plan review notes prepared for 12/10/2015}

1. Shoreland Development Plan Application, received November 19, 2015.
2. Site Plan, Anderson Livingston Engineers, Inc. November 18, 2015

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 and conclusions:

FINDINGS OF FACT

Chapter 16.3 LAND USE ZONE REGULATIONS

16.3.2.17.D Shoreland Overlay Zone
1.d The total footprints of the areas devegetated for structures, parking lots and other impervious surfaces, must not exceed twenty (20) percent of the lot area, including existing development, except in the following zones… Findings: The proposed development increases the property's devegetated area from 7.3% to 12.9%. Conclusion: The requirement appears to be met.
Vote: ___ in favor ___ against ___ abstaining

Chapter 10 DEVELOPMENT PLAN APPLICATION AND REVIEW
Article 10 Shoreland Development Review

16.10.10.2 Procedure for Administering Permits

D. An application will be approved or approved with conditions if the reviewing authority makes a positive finding based on the information presented. It must be demonstrated the proposed use will:

1. Maintain safe and healthful conditions;

Finding: The proposed development does not appear to have an adverse impact.

Conclusion: This requirement appears to be met

Vote: ___ in favor ___ against ___ abstaining

2. Not result in water pollution, erosion or sedimentation to surface waters;

Finding: Maine DEP Best Management practices will be followed for erosion and sedimentation control during site preparation and building construction (see conditions #2 and #3) to avoid impact on adjacent surface waters.

Conclusion: This requirement appears to be met

Vote: ___ in favor ___ against ___ abstaining

3. Adequately provide for the disposal of all wastewater;

Finding: The proposed development is connecting to an existing septic system.

Conclusion: This requirement appears to be met.

Vote: ___ in favor ___ against ___ abstaining

4. Not have an adverse impact on spawning grounds, fish, aquatic life, bird or other wildlife habitat;

Finding: Maine DEP Best Management practices will be followed for erosion and sedimentation control during site preparation and building construction (see conditions #2 and #3) to avoid impact on adjacent surface waters. These conditions should be added to the plan.

Conclusion: The proposed development does not appear to have an adverse impact. With the suggested conditions #2 and #3, this standard appears to be met.

Vote: ___ in favor ___ against ___ abstaining

5. Conserve shore cover and visual, as well as actual points of access to inland and coastal waters;

Finding: Shore cover is not adversely impacted

Conclusion: This requirement appears to be met.

Vote: ___ in favor ___ against ___ abstaining

6. Protect archaeological and historic resources;

Finding: There does not appears to be any resources impacted.

Conclusion: This requirement appears to be met.

Vote: ___ in favor ___ against ___ abstaining

7. Not adversely affect existing commercial fishing or maritime activities in a commercial fisheries/maritime activities district;

Finding: The proposed development is not in the commercial fisheries/maritime use zone.

Conclusion: This requirement is not applicable.

Vote: ___ in favor ___ against ___ abstaining

8. Avoid problems associated with floodplain development and use;

Finding: A portion of the property is located in Flood Hazard Zone A. The existing structures and proposed development is at a higher elevation and not in the flood hazard zone. The applicant may need to provide additional information or documentation, such as an elevation certificate, to the Code Enforcement Officer prior to obtaining a building permit.

Conclusion: This requirement appears to be met.

Vote: ___ in favor ___ against ___ abstaining

9. Is in conformance with the provisions of this code;

Finding: The proposed development appears meets all dimensional standards of the R-RL zone and exists outside of the 100 foot setback from the Highest Annual Tide.

Conclusion: This requirement appears to be met.

Vote: ___ in favor ___ against ___ abstaining

10. Be recorded with the York county Registry of Deeds.

Finding: A plan suitable for recording has been prepared.

Conclusion: As stated in the Notices to Applicant contained herein, shoreland Development plans must be recorded with the York County Registry of Deeds prior to the issuance of a building permit.

Vote: ___ in favor ___ against ___ abstaining

Based on the foregoing Findings, the Planning Board finds the applicant has satisfied each of the review standards for approval and, therefore, the Planning Board approves the Shoreland Development Plan Application of Christopher Moran, owner and applicant, to expand an existing

conforming single-family dwelling and construct a deck and patio located at 34 Goose Point Rd (Tax Map 34, Lot 2B) in the Residential-Rural (R-RL) and Shoreland Overlay (OZ-SL-250') zones and subject to any conditions or waivers, as follows:

Waivers: None

Conditions of Approval (to be depicted on final plan to be recorded):

1. No changes, erasures, modifications or revisions may be made to any Planning Board approved final plan. (Title 16.10.9.1.2)
2. Applicant/contractor will follow Maine DEP *Best Management Practices* for all work associated with site and building construction to ensure adequate erosion control and slope stabilization.
3. 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.
4. No trees are to be removed without prior approval by the Code Enforcement Officer or the Shoreland Resource Officer.
5. All Notices to Applicant contained herein (Findings of Fact dated 12/10/15).

Conditions of Approval (not to be depicted on final plan):

6. Incorporate any plan revisions on the final plan as recommended by Staff, Planning Board or Peer Review Engineer, and submit for Staff review prior to presentation on final Mylar.

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

Vote of __ in favor__ against __ abstaining

APPROVED BY THE KITTERY PLANNING BOARD ON December 10, 2015

Notices to Applicant:

1. Incorporate any plan revisions on the final plan as recommended by Staff, Planning Board or Peer Review Engineer, and submit for Staff review prior to presentation of final mylar.

2. 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.

3. One (1) mylar copy of the final plan and any and all related state/federal permits or legal documents that may be required, must be submitted to the Town Planning Department for

signing. Date of Planning Board approval shall be included on the final plan in the Signature Block. After the signed plan is recorded with the York County Registry of Deeds, a mylar copy of the signed original must be submitted to the Town Planning Department.

4. This approval by the Town Planning Board constitutes an agreement between the Town and the Developer, incorporating as elements the Development Plan and supporting documentation, the Findings of Fact, and any Conditions of Approval.

Per Title 16.6.2.A - 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.

SHORELAND DEVELOPMENT PLAN APPLICATION

TOWN OF KITTERY

Planning & Development Department

200 Rogers Road, Kittery, ME 03904

Telephone: 207-475-1323 Fax: 207-439-6806

MAP ___ LOT ___

DATE: _____

FEE: $ 200.00

ASA*: _____

PROPERTY DESCRIPTION	Physical Address	20 Whippoorwill Lane			
	Base Zone	R-RL	Overlay Zone (s)	OZ-SL-250'	
OWNER INFORMATION	Name	Christopher Moran		Mailing Address	20 Whippoorwill Lane
	Phone	781-864-8853			
	Email	Chris_moran1@ml.com			
AGENT INFORMATION	Name	Michael Moran		Company	
	Phone	617-406-9791		Mailing Address	32 Worcester Square Apt #3 Boston, MA 02118
	Email	mmoranarch@gmail.com			
	Fax				
APPLICANT INFORMATION	Name	Michael Moran		Mailing Address	32 Worcester Square Apt #3 Boston, MA 02118
	Phone	617-406-9791			
	Email	mmoranarch@gmail.com			

PROJECT DESCRIPTION

Existing Use: The existing structure is a single family home.

Proposed Use (describe in detail): The proposed addition will add living and storage as well as exterior deck and patio space to the existing house. This will include a first floor bedroom and new bathroom for the elderly father of the owner.

PROJECT DECSCRIPTION	Please describe any construction constraints (wetlands, shoreland overlay zone, flood plain, non-conformance, etc.)
	A portion of the property at 20 Whippoorwill Lane is within the Shoreland Overlay Zone. The proposed addition will be 152.1 feet from the high water line, which is over the required setback of 100 feet from the high water line. The proposed structure will be situated to the east of the existing building. This area is on land that is high above the flood plain and is partially covered in grass and brush. The design will meet all of the space and dimensional standards for the R-RL base zone and OZ-SL overlay zone as outlined by the town.

I certify I have provided, to the best of my knowledge, information requested for this application that is true and correct and I will not deviate from the Plan submitted without notifying the Planning and Development Department of any changes.

Applicant's Signature:		**Owner's Signature:**	
Date:	11/23/15	Date:	11/23/15

**Applicant Service Accounts*: Fees to *pay other direct costs necessary to complete the application process, not including application fees*. Title 3, Chapter 3.3.

MINIMUM PLAN SUBMITTAL REQUIREMENTS

☐ **15 Copies of this Application Form, all supporting documents, and the Development Plan and Vicinity Map 12 plan copies may be half-size (11"x17") and 3 must be full-size (24"x36")**

Shoreland Development Plan format and content:

A) Paper Size; no less than 11" X 17" or greater than 24" X 36"

B) Plan Scale
- ☐ Under 10 acres: no greater than 1" = 30'
- ☐ 10 + acres: 1" = 50'

C) Title Block
- ☐ Title: Shoreland Development Plan
- ☐ Applicant's name and address
- ☐ Name of preparer of plan with professional information
- ☐ Parcel's Kittery tax map identification (map – lot) in bottom right corner
- ☐ **Vicinity Map or aerial photo showing geographic features 5,000 feet around the site.**

D) Signature Block
- ☐ Area for signature by Planning Board Chair and Date of Planning Board Approval

Development Plan must include the following existing and proposed information:

Existing:	**Proposed:** (Plan must show the lightened existing topography under the proposed project plan for comparison.)
☐ Land Use Zones and boundaries	☐ Recreation areas and open space
☐ Topographic map (optional)	☐ Setback lines and building envelopes
☐ Wetlands and flood plains	☐ Lot dimensions
☐ Water bodies and water courses	☐ Utilities (Sewer/septic, water, electric, phone)
☐ Parcel area	☐ Streets, driveways and rights-of-way
☐ Lot dimensions	☐ Structures
☐ Utilities (Sewer/septic, water, electric, phone)	☐ Floor area, volume, devegetated area, and building coverage
☐ Streets, driveways and rights-of-way	
☐ Structures	Distance to:
☐ Distance from structure to water body and property lines	☐ Nearest driveways and intersections
☐ Floor area, volume, devegetated area, and building coverage	☐ Nearest fire hydrant

	☐ Nearest significant water body; ocean, wetland, stream

AN APPLICATION THE TOWN PLANNER DEEMS SUFFICIENTLY LACKING IN CONTENT WILL NOT BE SCHEDULED FOR PLANNING BOARD REVIEW.

Expansion/Construction Analysis within the Shoreland Overlay Zone[1]
(see Table 16.9)

Size of water body or wetland: ☐ <500 sf ☐ <501 sf-1 acre **X** >1 acre

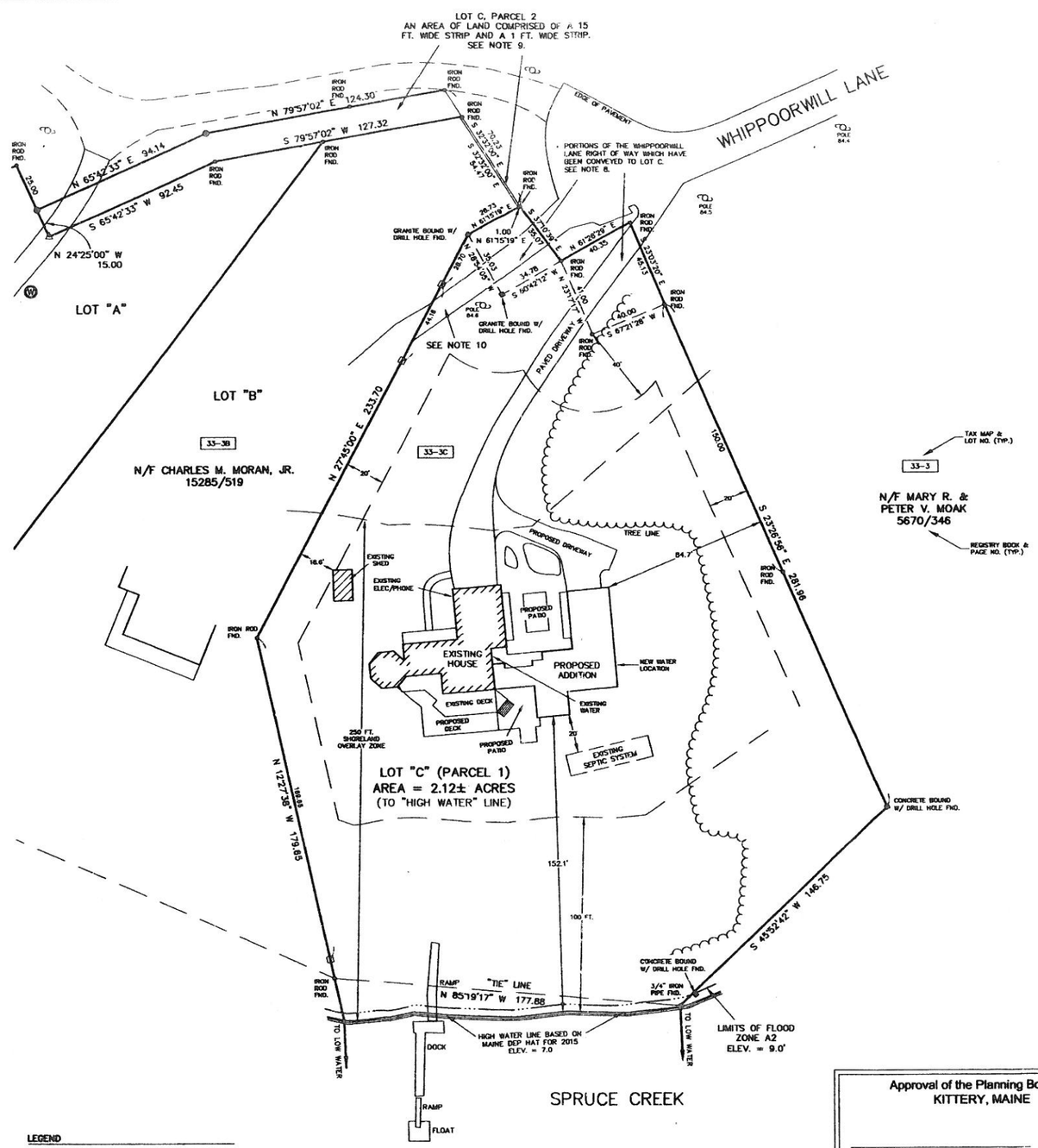
Structure distance from water body: 152.1 feet

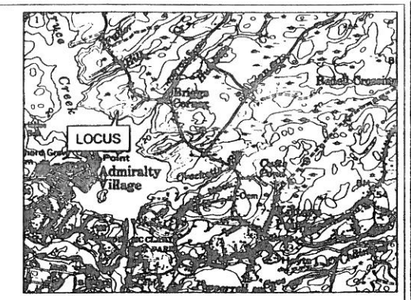
STRUCTURE	Existing	Proposed	% Increase*	
SF (Area)	3,454 sf	8,541 sf	147 %	
CF (Volume)	29,462 cf	70,694 cf	140 %	
Construction:	New: **X** Demo/Rebuild: ☐ Maintenance/repair: ☐			Value: $400,000.00
*Total increase in area and/or volume may not exceed 30% for any new construction since 1/1/1989.				

PARCEL DE-VEGETATION	% Allowed*	Existing SF	Proposed SF	% Proposed*
Lot Size (sf) 92,190	20 %	6,693 sf	11,915 sf	12.9%
*See underlying zone standards for de-vegetated area percent allowed within a Shoreland Overlay.				

BUILDING COVERAGE	% Allowed*	Existing SF	Proposed SF	% Proposed*
Lot Size (sf) 92,190	15 %	3,072 sf	5,474 sf	5.9 %
*See underlying zone standards for building coverage percent allowed.				

[1]Calculations for area, volume, and de-vegetated areas must be included on the final plan and certified by a State of Maine registered architect, landscape architect, engineer, or land surveyor.





VICINITY MAP

PARCEL DE-VEGETATION (IN SQUARE FEET)

LOT AREA = 92,190± S.F.

EXISTING IMPERVIOUS

HOUSE	1,985
DECKS	772
SHED	156
WALKWAY	130
PAVEMENT	3,491
RAMP	159
TOTAL	6,693

EXISTING COVERAGE = 6,693/92,190 = 7.3%

PROPOSED IMPERVIOUS

HOUSE	3,957
DECKS	1,202
PATIO	1,742
SHED	156
WALKWAY	130
PAVEMENT	4,569
RAMP	159
TOTAL	11,915

PROPOSED COVERAGE = 11,915/92,190 = 12.9%

BUILDING COVERAGE (IN SQUARE FEET)

LOT AREA = 92,190± S.F.

EXISTING STRUCTURES

HOUSE	1,985
DECKS	772
SHED	156
RAMP	159
TOTAL	3,072

EXISTING COVERAGE = 3,072/92,190 = 3.3%

PROPOSED STRUCTURES

HOUSE	3,957
DECKS	1,202
SHED	156
RAMP	159
TOTAL	5,474

PROPOSED COVERAGE = 5,474/92,190 = 5.9%

NOTES:

1. The boundaries as delineated are the opinion of this surveyor and are based on record information and physical evidence. This plan does not purport title or ownership.

2. Field measurements for this survey were made using a Leica total station with electronic data collection. The relative precision of the unadjusted control traverse is better than 1 in 15,000.

3. The existence or non-existence, depth, size, and location of underground utility lines, tanks, and structures was not verified by this survey. Any locations and sizes shown are approximate. Exact location should be further investigated before any excavation takes place on this lot.

4. All iron pipes marked "set" or "recov." are identified with yellow caps stamped "Anderson PLS 1197".

5. Under M.R.S.A. Title 33 as provided in Sections 460 through 469, a conveyance of land which abuts a town or private way, county road, highway or proposed unaccepted way laid out on a subdivision plan recorded in the registry of deeds shall be deemed to convey all of the grantor's interest in the portion of the road or way which abuts the land, subject to the exceptions defined in those Sections. However, these roads or ways may still be subject to access rights of other land owners and/or the general public.

6. As of the date of this plan the parcel is zoned R-RL, SHORELAND OVERLAY ZONE OZ-SL-250, and FLOOD ZONE A2. The building setbacks for this zone are – FRONT: 40', SIDE: 20', REAR: 20', "HIGH WATER" LINE: 100'.

7. All elevations noted on this plan are based on Mean Sea Level 1929 NGVD. Flood Zone shown is based on Town of Kittery FIRM #230171, Panel #50, dated July 3, 1986.

8. Lot C is subject to right of way easements shown from earlier layouts of Whippoorwill Lane.

9. The 15' wide and 1 ft. wide strips of land are part of Parcel C, but are subject to easements for ingress, egress, and utilities to Parcels A and B. See Ref. Deed 1 for more details.

10. Parcel C is subject to a utility easement to Parcel B as noted in Ref. Deed 2. A driveway was also constructed in that area but is not mentioned in that deed. A corrective deed to address this issue should be recorded.

REFERENCE PLAN:

Family Division of Land for Charles M. Moran; by Andrew E. Bradford; dated July 2007; recorded Y.C.R.D. Plan Book 326, page 12.

REFERENCE DEEDS:

1. Charles M. Moran to Christopher M. Moran; dated March 22, 2013; recorded Y.C.R.D. Book 16560, page 965.

2. Charles M. Moran to Charles B. Moran, Jr.; dated January 23, 2009; recorded Y.C.R.D. Book 15687, page 24.

SHORELAND DEVELOPMENT PLAN
FOR
CHRISTOPHER M. MORAN
WHIPPOORWILL LANE
KITTERY, MAINE

STATE OF MAINE
YORK, SS. REGISTRY OF DEEDS
RECEIVED _____
AT _____H_____M_____M. AND
Filed in Plan Book _____ Page _____
ATTEST
_____
REGISTER

LEGEND

- UTILITY POLE
- WELL
- MONUMENTS FOUND AS DESCRIBED
- 3/4" IRON PIPE SET
- "PK" NAIL W/ WASHER SET
- GRANITE BOUND W/ DRILL HOLE SET

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

Approval of the Planning Board of KITTERY, MAINE

CHAIR _____ DATE _____

CERTIFICATION:

This survey conforms to the Maine Board of Licensure for Professional Land Surveyors Chapter 90 Standards of Practice, effective April 1, 2001 except as noted on this plan.

STATE OF MAINE WILLIAM HENRY ANDERSON JR. 1197

ANDERSON LIVINGSTON ENGINEERS, INC.
281 York Street
York, ME 03909
(207) 363-4414

Scale: 1 in = 30 ft.
Date: November 18, 2015
REVISIONS:

OWNER:
Christopher M. Moran
27 Sheffield West
Winchester, MA

Sheet 1 of 1

FILE NO: 6692
PLAN NO: 2489.151101

TAX MAP 33, LOT 3C

\\acct\projects\proj6200\6692\dwg\6692-rst.dwg

BYLAWS
KITTERY PLANNING BOARD

Adopted January 17, 1074
Revised and approved, November 19, 1987
Revised and Approved, May 23, 1991
Revised and Approved October 11, 2007
Revised and Approved February 28, 2008
Revised and Approved, January 22, 2015
Revised November 12, 2015

The Planning Board of the Town of Kittery has been established under the Town Charter adopted in 1967 according to HP 521-LD768, Revised Planning and Zoning Statutes in Maine, 1969, and other applicable State Statutes.

Section 1. The Planning Board consists of seven (7) members appointed by the Town Council in accordance with the Town Charter adopted in 1967 and ~~revised on June 11, 2002~~ ~~through November 3, 2015~~ subsequent revisions. The term of office of a member is three (3) years. Upon appointment by the Town Council, and upon renewal of term, each member must take and subscribe to the oath of office as administered by the Town Clerk or any other person so authorized. Newly appointed members must attend ~~training~~ a planning board training session sponsored by the Maine Municipal Association (MMA) within one (1) year of appointment and once each subsequent term.

Section 2. At the first regularly scheduled meeting in December, the Board must elect from among its membership, a Chair, Vice-Chair and Secretary. Term of service is one year.

Section 3. Meetings of the Planning Board are held in the Town Hall at 6:00 p.m., on the second and fourth Thursdays of each calendar month, except November and December~~, when the regular meetings are held on the second and third Thursdays of those months~~. During those months, one meeting will be held on the second Thursday and a second meeting on the third Thursday, at the Board's discretion. When a regularly scheduled meeting occurs on a holiday, the regular meeting for that date must be re-scheduled by the Board

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at its last regular meeting prior to the holiday. The date, time or location of any regular meeting may be changed by an affirmative vote of four (4) or more members, taken at any regular meeting of the Board.

Section 4. Special meetings may be called by the Chair or, in case of the Chair's absence, disability or refusal, may be called by the Vice-Chair or by four (4) or more members of the Board. Notice of such special meeting must be made to Board members by telephone at least twelve (12) hours before the meeting and by email with confirmation by return email within the same twelve (12)-hour time restriction. The telephone call and text of the email must set forth the matter or matters to be discussed and/or voted on, and nothing else may be considered at such a special meeting.

Section 5. At the appointed time, the Chair, or in the absence of the Chair, the Vice-Chair, calls the members to order, calls the roll, leads the Pledge of Allegiance, and upon determining whether a quorum of members is present, proceeds with the business of the meeting. The order of business is as follows: (a) amendments to the agenda, (b) approval of the minutes of the preceding meeting(s), (c) public comment (d) old regular business (e) Board members' time (f) Planner's time (g) new regular business, (h) adjournment.

Section 6. Minutes of all meetings, workshops and site walks must be recorded. Review, correction and approval by the Board of such minutes occurs at the first meeting following transcription by the recorder and distribution to members. Upon approval, copies are furnished to the Town Manager, Town Council Chair, the Zoning Board of Appeals Chair, and the Conservation Commission Chair.

Section 7. A quorum consists of four (4) members. All decisions must be made by a minimum of four (4) like votes, except on procedural matters. A meeting may not be held with fewer than four (4) Board members present.

Section 8. Where a member may possess a conflict of interest pertaining to a matter before the Board, that member may not be permitted to vote on said matter, and that member may not be counted by the Board in

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establishing the quorum in the matter.–Public disclosure of any possible conflict must be made before discussion of the agenda item in question. To an extent determined by the Chair, members of the public may be permitted to comment on this matter at this time. A majority vote of the Board members present, minus the member under challenge, decides whether the alleged conflict exists such that it: (a) may reasonably interfere with the affected member's ability to hear and act on the item impartially, or (b) whether participation by the member in question would give the appearance to the public of an inappropriate conflict of interest so as to undermine public confidence in the fairness of the meeting and the impartial treatment of the subject matter.

Section 9. Members are expected to attend all regular and special meetings and site walks. Where a member is absent from more than three (3) consecutive regular meetings, the Board may then vote to recommend to the Town Council that the position be declared vacant.

Section 10. Site walks called by the Chair, or by four (4) or more Board members, are public meetings. All site walks must be properly noticed to applicants, abutters and the general public according to ordinance requirements. A minimum of four (4) Board members must be present to hold a site walk. No formal motions may be made nor votes taken at a site walk. The Planner, or Planner's designee, is responsible for minutes of site walks. Site walk minutes must be included in the records of applications before the Board.

Section 11. Discussion between Board members of business before the Board may only be held at a public meeting. Such business may not be discussed in private whether or not a majority of the Board is involved, and whether the discussion occurs in person, by phone or by any other means. During a duly noticed public site walk, individual Board members may not hold private discussions among themselves, or with others, concerning substantive details of the site or plan. Private discussion of business before the Board could constitute illegal ex parte communication and jeopardize the due process rights of those excluded from such a discussion.

Section 12 . The Chair shall preserve order, may speak to points of order in preference to other members,

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and shall decide all questions of order, subject to appeal to the Board by motion, regularly seconded, and no other business may be transacted until the question on appeal is decided.

Section 13. The Chair shall declare all votes, but if any member doubts a vote, the Chair must cause a recount of the vote without debate.

Section 14. When a question is under debate, the Chair may receive no motion but to adjourn, or to move the previous question, or to lay on the table, or to postpone to a specified date, or to refer to a committee or some administrative official, or to amend, or to postpone indefinitely: which several motions have precedence in the order in which they stand arranged.

Section 15. The Chair shall consider a motion to adjourn as always in order except on immediate repetition; and that motion, and the motion to lay on the table, or to take from the table, must be decided without debate.

Section 16. When a vote is passed, it is in order for any member who voted on the prevailing side to move reconsideration thereof at the same meeting, or at the next succeeding meeting. When a motion of reconsideration is made and seconded, the subsequent vote is final.

Section 17. During a public hearing, at the time appointed on the agenda for a particular matter before the Board, any other person in attendance at the meeting wishing to address the Planning Board, must so signify by raising a hand. When recognized by the Chair, and before addressing the subject matter of the hearing, such person must state his or her name and address for the record and enter this same data in writing where and when requested. At any other time during a meeting, the Chair retains the discretion to invite further public comment. In all cases, the Chair, with consent of the Board, may set reasonable time limits on members of the public who choose to address the Board. Likewise, the Chair may limit public testimony to

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that deemed relevant and material to the subject matter of the hearing, or other Board concern.

Section 18. All meetings of the Board are public. However, the Board may recess for executive session, upon majority vote, consistent with the Maine Right to Know Law (MRSA Title 1, Sections 401-410), provided the motion to recess for executive session indicates the precise nature of the business to be conducted in such closed session, including any and all relevant statutory reference(s) to such power to recess, and that final action not be taken by the Board except in public session.

Section 19. Subcommittees are established by the Chair and may consist of no more than three (3) Board members. Planning Board subcommittee meetings are public meetings, and the date, time and location of such meetings must be posted in Town Hall and on the Kittery Town website.

Section 20. The Chair may, with the affirmative vote of a minimum of four (4) members, call special workshops for the purpose of updating regulations, ordinances, bylaws or addressing other work items. These workshops are open to the public but are not public hearings. Input from interested citizens may be allowed at the Chair's discretion or may be heard at a regular Board meeting.

Section 21 . These bylaws may be revised by submission of a proposed change in writing to the Board, and consideration in at least two meetings of the Board. The change is effective upon adoption by the Board.

Section 22. Planning Board meetings are conducted according to Robert's Rules of Order. Conflicts are resolved in favor of the bylaws.

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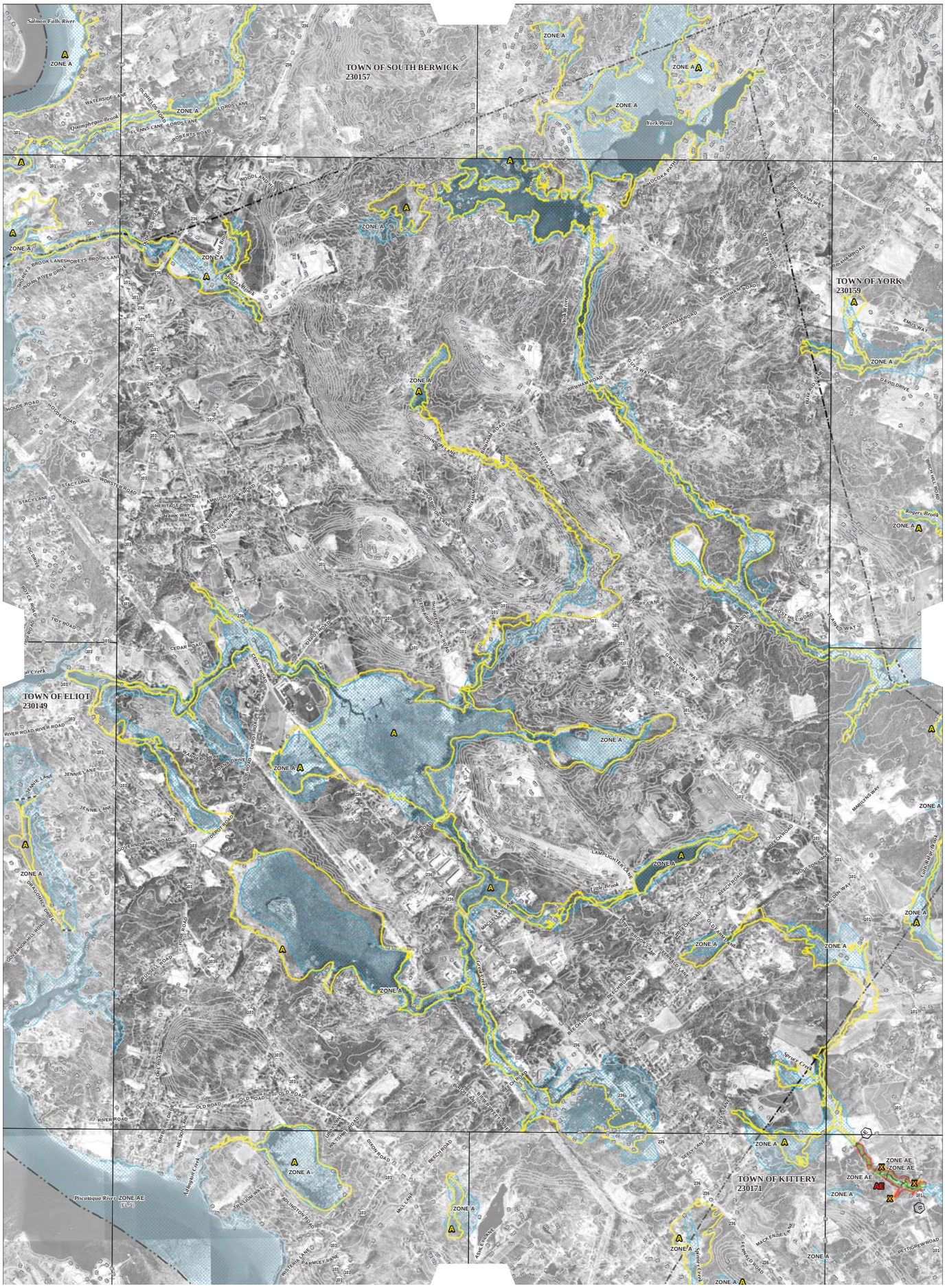


LEGEND

Proposed Study

- 1 % Annual Chance Floodplain Boundary
- 0.2 % Annual Chance Floodplain Boundary
- Floodway
- 2015 Study Limit
- Zone Break
- New Zone A Analysis

Preliminary Study (2013)

- 513 — Base Flood Elevation
- A — A, 23 — 23 — Cross section line
- Transect line
- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway Boundary
- Zone Break
- Profile Baseline
- ZONE AE/A (AREAS SUBJECT TO 1% ANNUAL CHANCE FLOOD)
- FLOODWAY AREAS IN ZONE AE
- ZONE X (AREAS SUBJECT TO 0.2% ANNUAL CHANCE FLOOD)

PANEL LOCATOR

COMMENTS

The new AE and A Zones are delineated based on the 2011 and 2013 LiDAR data. The new AE and A Zones and associated elevations shown are for informational purposes only.
This version of workmaps do not show the results of the revised coastal analysis. Minor floodplain boundary modifications may occur at riverine-coastal tie-in areas.

Map Projection:
NAD 1983 StatePlane Maine West FIPS 1802 Feet

N

1 inch = 1,000 feet — 1:12,000

0 500 1,000 2,000 3,000 4,000 Feet

0 250 500 1,000 Meters

YORK COUNTY WORKMAP

Panel Contains:

COMMUNITY	NUMBER
ELIOT, TOWN OF	230149
KITTERY, TOWN OF	230171
SOUTH BERWICK, TOWN OF	230157
YORK, TOWN OF	230159

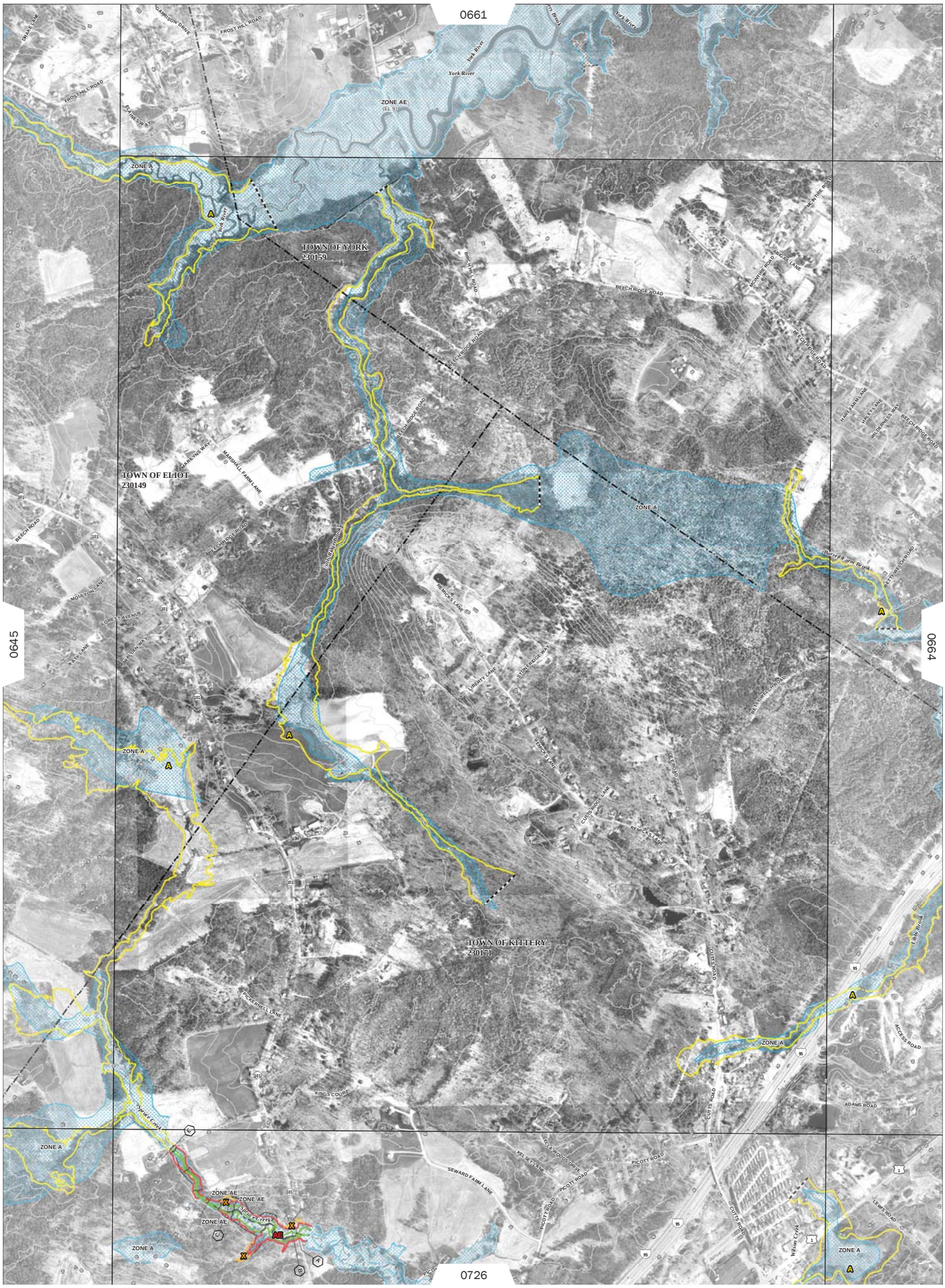
YORK COUNTY, ME
(ALL JURISDICTIONS)

PANEL 0645 of 0825

DRAFT

STARR

SCALE
1:12,000
MAP NUMBER
0645G
RELEASE DATE



LEGEND

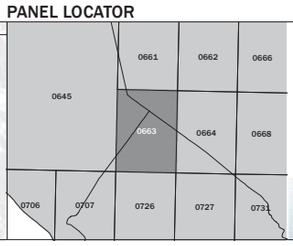
Proposed Study

- 1 % Annual Chance Floodplain Boundary
- 0.2 % Annual Chance Floodplain Boundary
- Floodway
- 2015 Study Limit
- Zone Break
- New Zone A Analysis

Preliminary Study (2013)

- 513 — Base Flood Elevation
- A — A — Cross section line
- 23 - - - 23 — Transect line
- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway Boundary
- Zone Break
- Profile Baseline
- ZONE AE/A (AREAS SUBJECT TO 1% ANNUAL CHANCE FLOOD)
- FLOODWAY AREAS IN ZONE AE
- ZONE X (AREAS SUBJECT TO 0.2% ANNUAL CHANCE FLOOD)

PANEL LOCATOR



COMMENTS

The new AE and A Zones are delineated based on the 2011 and 2013 LiDAR data. The new AE and A Zones and associated elevations shown are for informational purposes only.
This version of workmaps do not show the results of the revised coastal analysis. Minor floodplain boundary modifications may occur at riverine-coastal tie-in areas.

Map Projection:
NAD 1983 StatePlane Maine West FIPS 1802 Feet

N

1 inch = 500 feet — 1:6,000

0 250 500 1,000 1,500 2,000 Feet

0 125 250 500 Meters

YORK COUNTY WORKMAP

Panel Contains:

COMMUNITY	NUMBER
ELIOT, TOWN OF	230149
KITTERY, TOWN OF	230171
YORK, TOWN OF	230159

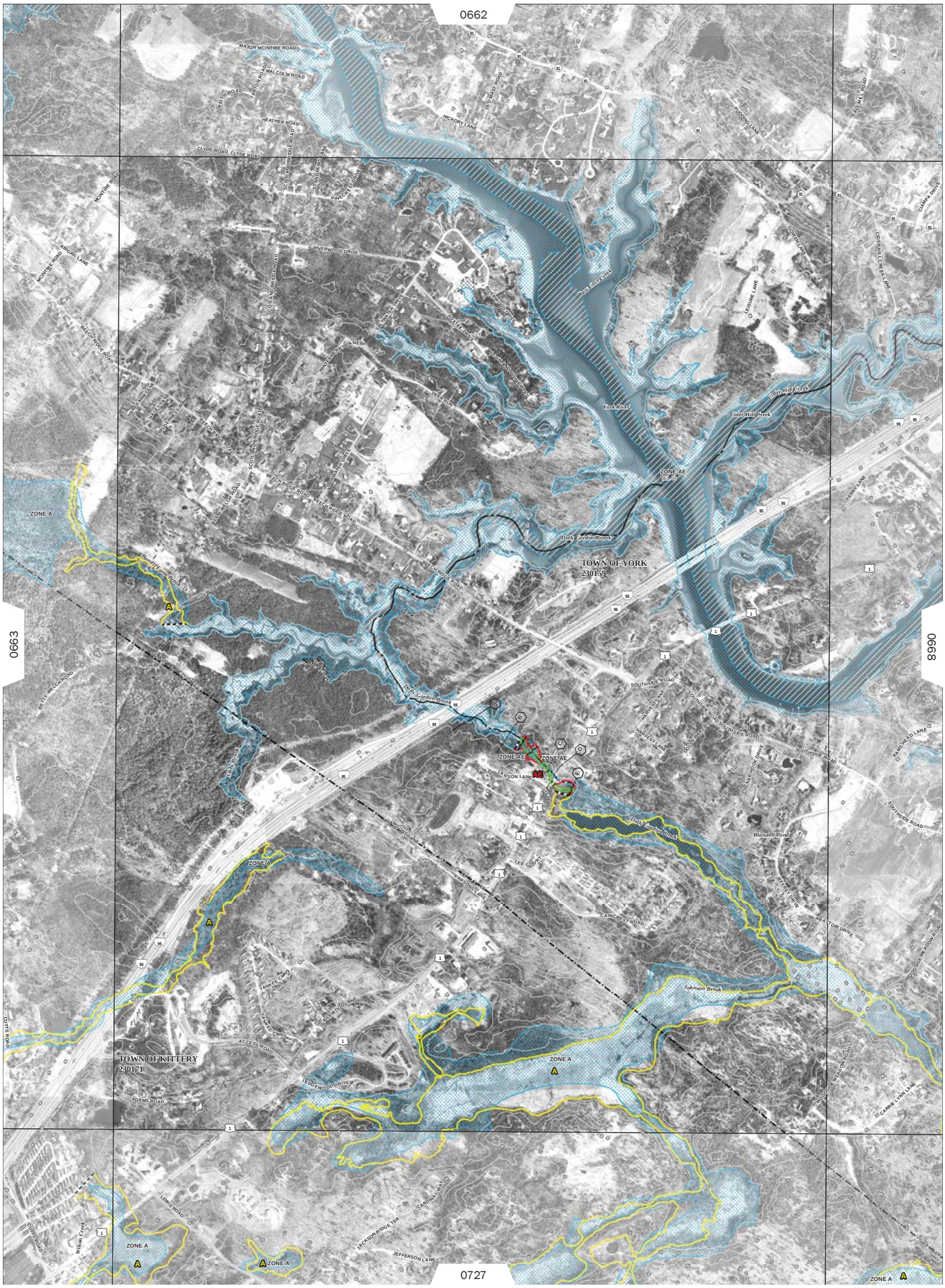
YORK COUNTY, ME
(ALL JURISDICTIONS)

PANEL 0663 of 0825

DRAFT

STARR

SCALE
1:6,000
MAP NUMBER
0663G
RELEASE DATE



LEGEND

Proposed Study

- 1 % Annual Chance Floodplain Boundary
- 0.2 % Annual Chance Floodplain Boundary
- Floodway
- 2015 Study Limit
- Zone Break
- New Zone A Analysis

Preliminary Study (2013)

- 513 — Base Flood Elevation
- A — A — Cross section line
- 23 - - - 23 — Transect line
- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway Boundary
- Zone Break
- Profile Baseline
- ZONE AE/A (AREAS SUBJECT TO 1% ANNUAL CHANCE FLOOD)
- FLOODWAY AREAS IN ZONE AE
- ZONE X (AREAS SUBJECT TO 0.2% ANNUAL CHANCE FLOOD)

PANEL LOCATOR

	0661	0662	0666	0667
0645	0663	0664	0668	0669
0707	0726	0727	0731	0732

COMMENTS

The new AE and A Zones are delineated based on the 2011 and 2013 LiDAR data. The new AE and A Zones and associated elevations shown are for informational purposes only.
This version of workmaps do not show the results of the revised coastal analysis. Minor floodplain boundary modifications may occur at riverine-coastal tie-in areas.

Map Projection:
NAD 1983 StatePlane Maine West FIPS 1802 Feet

1 inch = 500 feet — 1:6,000

0 250 500 1,000 1,500 2,000 Feet

0 125 250 500 Meters

YORK COUNTY WORKMAP

Panel Contains:

COMMUNITY	NUMBER
KITTERY, TOWN OF	230171
YORK, TOWN OF	230159

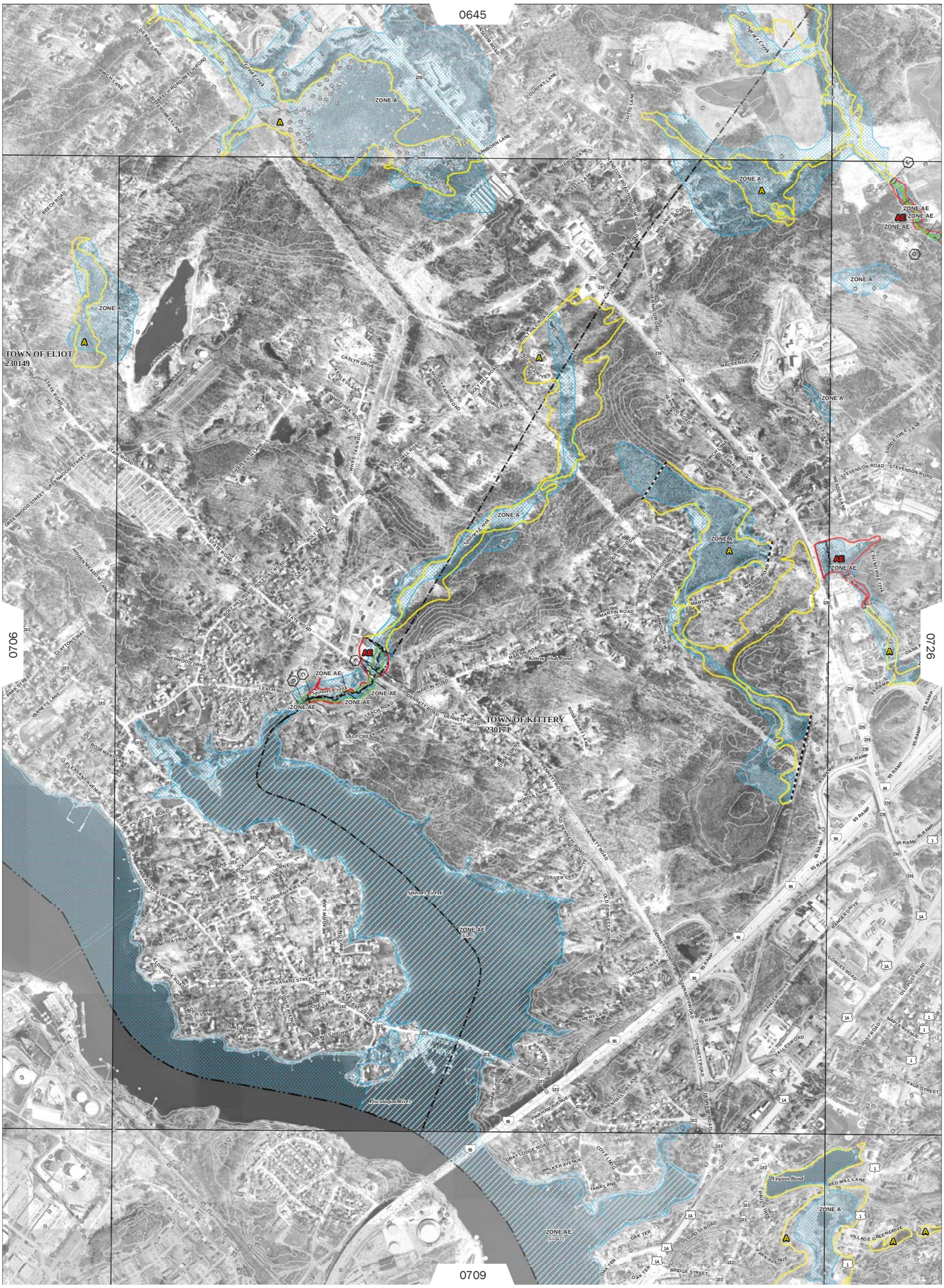
YORK COUNTY, ME
(ALL JURISDICTIONS)

PANEL 0664 of 0825

DRAFT

STARR

SCALE
1:6,000
MAP NUMBER
0664G
RELEASE DATE



LEGEND

Proposed Study

- 1 % Annual Chance Floodplain Boundary
- 0.2 % Annual Chance Floodplain Boundary
- Floodway
- 2015 Study Limit
- Zone Break
- New Zone A Analysis

Preliminary Study (2013)

- 513 — Base Flood Elevation
- A — A — Cross section line
- 23 — 23 — Transect line
- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway Boundary
- Zone Break
- Profile Baseline
- ZONE AE/A (AREAS SUBJECT TO 1% ANNUAL CHANCE FLOOD)
- FLOODWAY AREAS IN ZONE AE
- ZONE X (AREAS SUBJECT TO 0.2% ANNUAL CHANCE FLOOD)

PANEL LOCATOR

0639	0645		0663	0664
0702	0706	0707	0726	0727
0705	0708	0709	0728	0729

COMMENTS

The new AE and A Zones are delineated based on the 2011 and 2013 LiDAR data. The new AE and A Zones and associated elevations shown are for informational purposes only.
This version of workmaps do not show the results of the revised coastal analysis. Minor floodplain boundary modifications may occur at riverine-coastal tie-in areas.

Map Projection:
NAD 1983 StatePlane Maine West FIPS 1802 Feet

N

1 inch = 500 feet — 1:6,000

0 250 500 1,000 1,500 2,000 Feet

0 125 250 500 Meters

YORK COUNTY WORKMAP

Panel Contains:

COMMUNITY	NUMBER
ELIOT, TOWN OF	230149
KITTERY, TOWN OF	230171

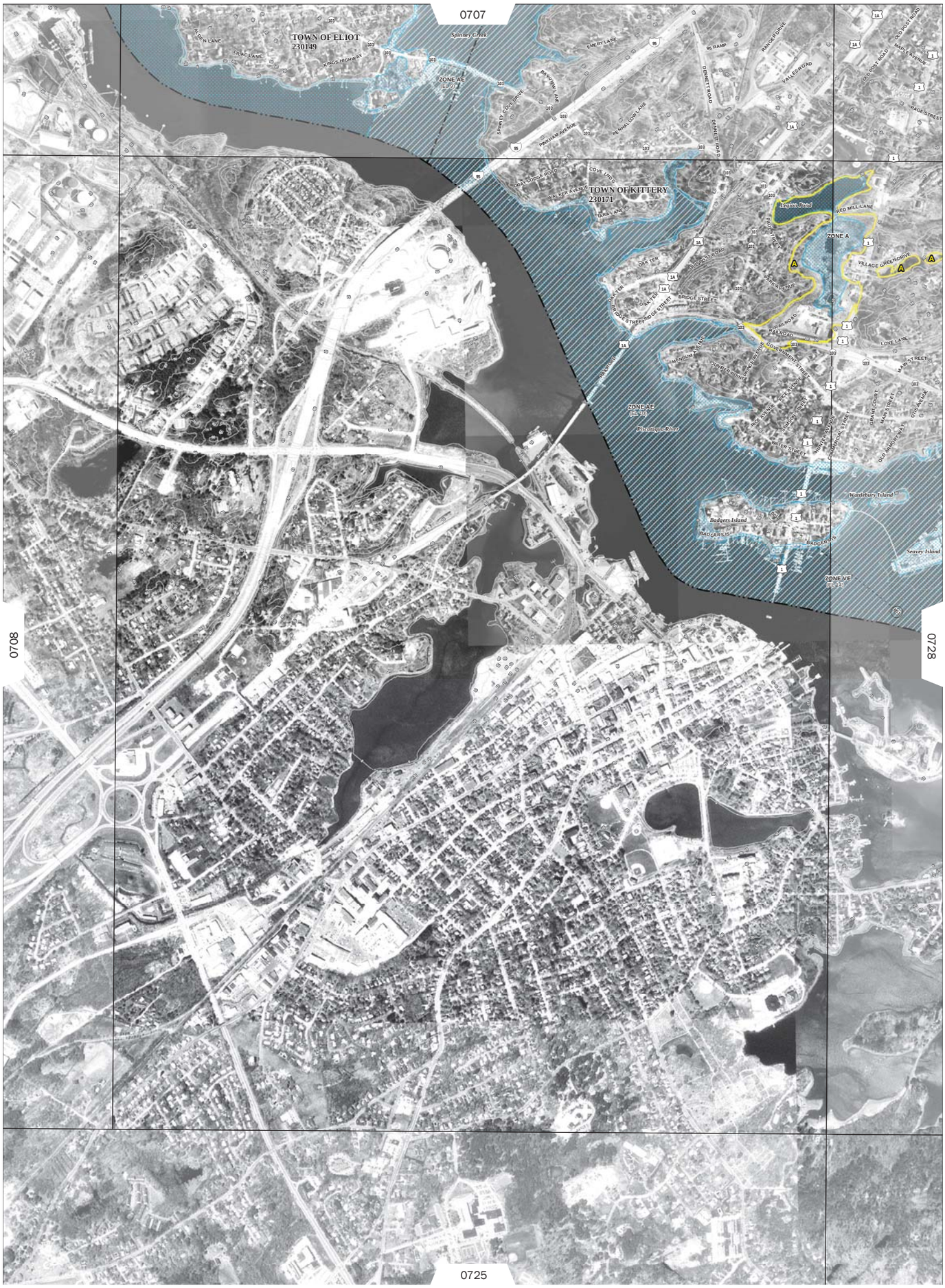
YORK COUNTY, ME
(ALL JURISDICTIONS)

PANEL 0707 of 0825

DRAFT

STARR

SCALE
1:6,000
MAP NUMBER
0707G
RELEASE DATE



LEGEND

Proposed Study

- 1 % Annual Chance Floodplain Boundary
- 0.2 % Annual Chance Floodplain Boundary
- Floodway
- 2015 Study Limit
- Zone Break
- New Zone A Analysis

Preliminary Study (2013)

- 513 — Base Flood Elevation
- A — A — Cross section line
- 23 - - - 23 — Transect line
- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway Boundary
- Zone Break
- Profile Baseline
- ZONE AE/A (AREAS SUBJECT TO 1% ANNUAL CHANCE FLOOD)
- FLOODWAY AREAS IN ZONE AE
- ZONE X (AREAS SUBJECT TO 0.2% ANNUAL CHANCE FLOOD)

PANEL LOCATOR

0702	0706	0707	0726	0727
0705	0708	0709	0728	0729
0725			0740	0737

COMMENTS

The new AE and A Zones are delineated based on the 2011 and 2013 LiDAR data. The new AE and A Zones and associated elevations shown are for informational purposes only.
This version of workmaps do not show the results of the revised coastal analysis. Minor floodplain boundary modifications may occur at riverine-coastal tie-in areas.

Map Projection:
NAD 1983 StatePlane Maine West FIPS 1802 Feet

1 inch = 500 feet — 1:6,000

0 250 500 1,000 1,500 2,000 Feet

0 125 250 500 Meters

YORK COUNTY WORKMAP

Panel Contains:

COMMUNITY	NUMBER
ELIOT, TOWN OF	230149
KITTERY, TOWN OF	230171

YORK COUNTY, ME
(ALL JURISDICTIONS)

PANEL 0709 of 0825

DRAFT

STARR

SCALE
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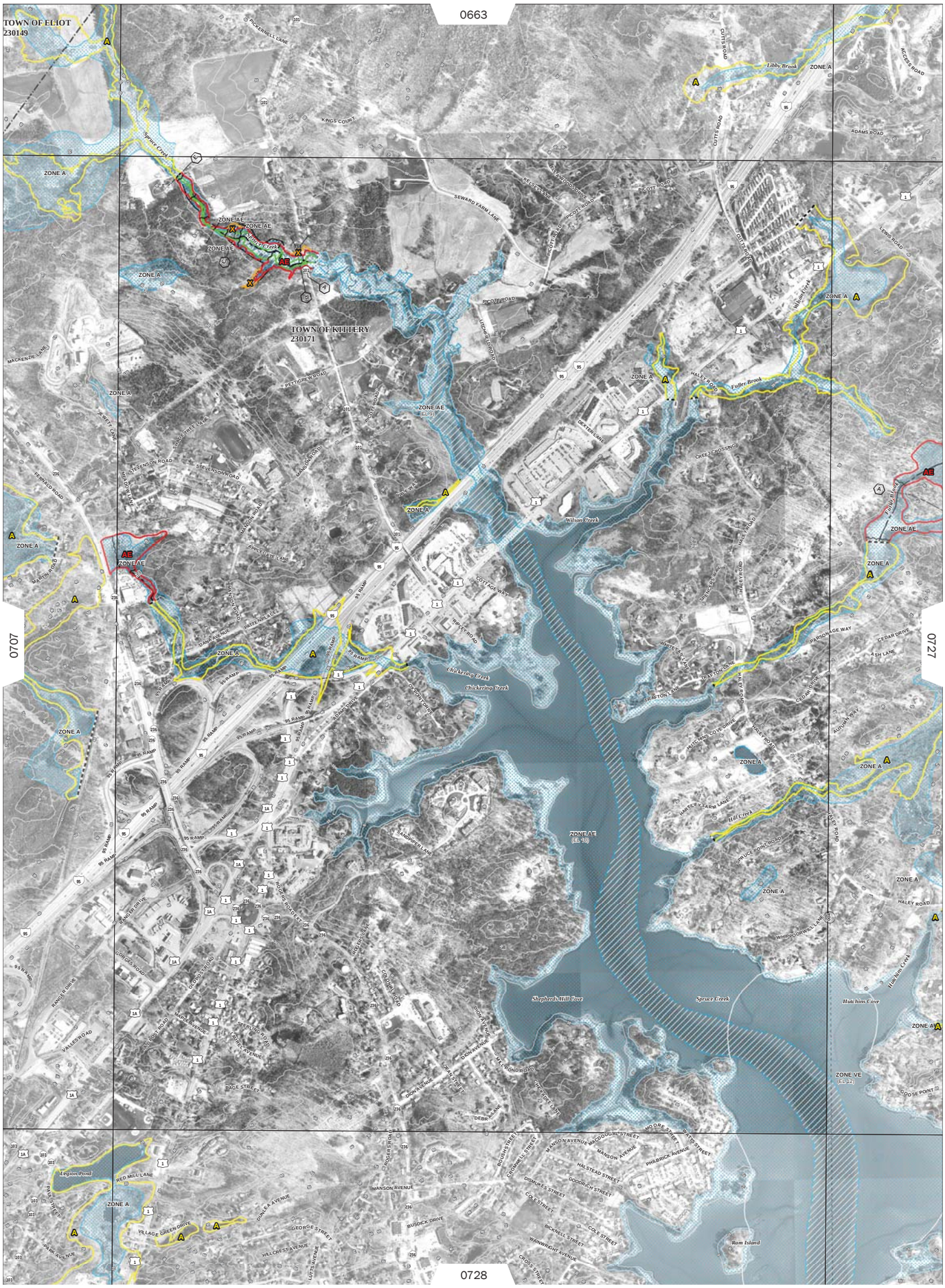
MAP NUMBER
0709G
RELEASE DATE



LEGEND

Proposed Study

- 1 % Annual Chance Floodplain Boundary
- 0.2 % Annual Chance Floodplain Boundary
- Floodway
- 2015 Study Limit
- Zone Break
- New Zone A Analysis

Preliminary Study (2013)

- 513 — Base Flood Elevation
- A — A — Cross section line
- 23 - - - 23 — Transect line
- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway Boundary
- Zone Break
- Profile Baseline
- ZONE AE/A (AREAS SUBJECT TO 1% ANNUAL CHANCE FLOOD)
- FLOODWAY AREAS IN ZONE AE
- ZONE X (AREAS SUBJECT TO 0.2% ANNUAL CHANCE FLOOD)

PANEL LOCATOR

	0645	0663	0664	0668
0706	0707	0726	0727	0732
0708	0709	0728	0729	0733

COMMENTS

The new AE and A Zones are delineated based on the 2011 and 2013 LiDAR data. The new AE and A Zones and associated elevations shown are for informational purposes only.
This version of workmaps do not show the results of the revised coastal analysis. Minor floodplain boundary modifications may occur at riverine-coastal tie-in areas.

Map Projection:
NAD 1983 StatePlane Maine West FIPS 1802 Feet

1 inch = 500 feet — 1:6,000

0 250 500 1,000 1,500 2,000 Feet

0 125 250 500 Meters

YORK COUNTY WORKMAP

Panel Contains:

COMMUNITY	NUMBER
KITTERY, TOWN OF	230171

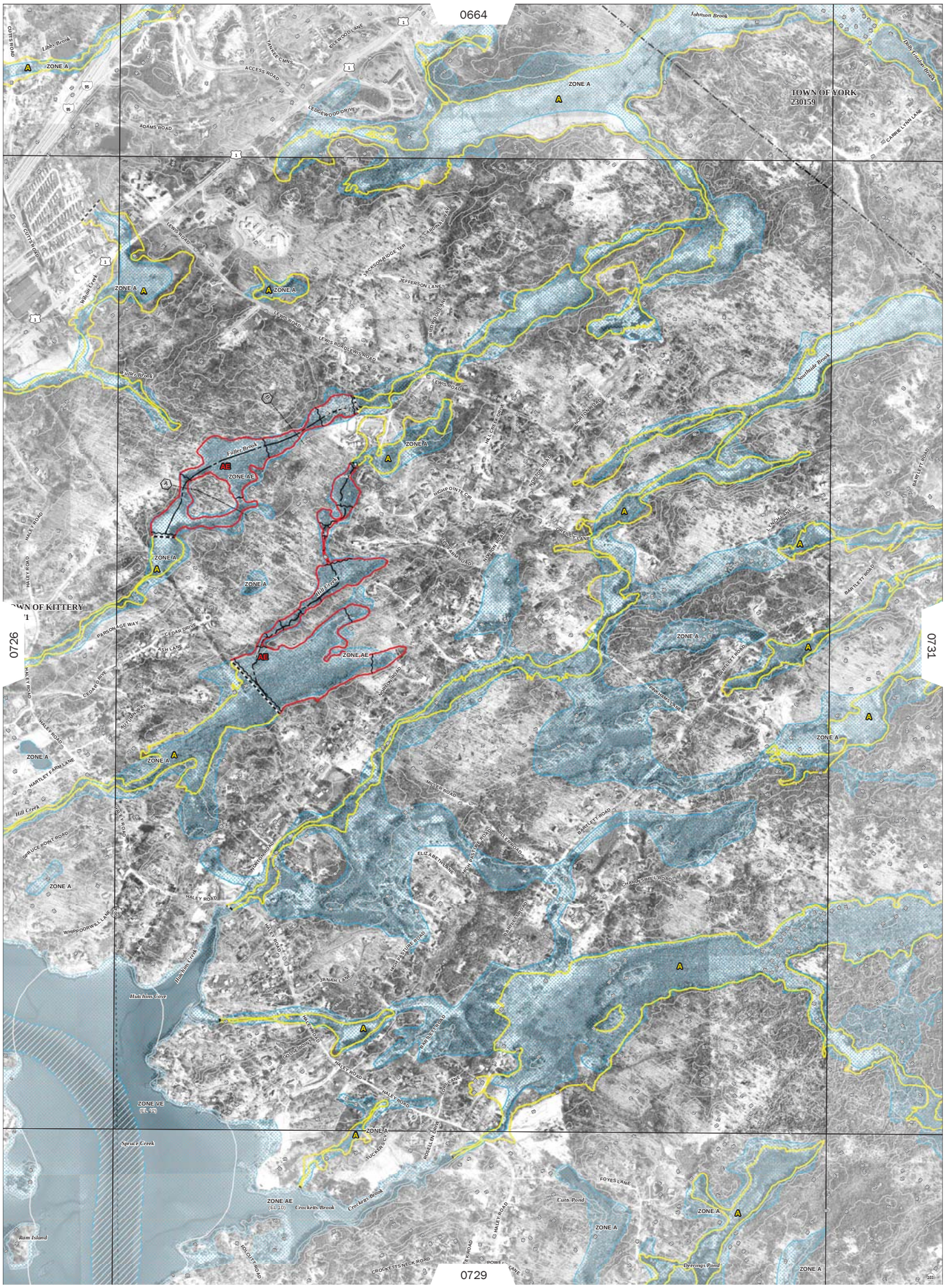
YORK COUNTY, ME
(ALL JURISDICTIONS)

PANEL 0726 of 0825

DRAFT

STARR

SCALE 1:6,000
MAP NUMBER 0726G
RELEASE DATE



LEGEND

Proposed Study

- 1 % Annual Chance Floodplain Boundary
- 0.2 % Annual Chance Floodplain Boundary
- Floodway
- 2015 Study Limit
- Zone Break
- New Zone A Analysis

Preliminary Study (2013)

- 513 — Base Flood Elevation
- A — A — Cross section line
- 23 - - - 23 — Transect line
- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway Boundary
- Zone Break
- Profile Baseline
- ZONE AE/A (AREAS SUBJECT TO 1% ANNUAL CHANCE FLOOD)
- FLOODWAY AREAS IN ZONE AE
- ZONE X (AREAS SUBJECT TO 0.2% ANNUAL CHANCE FLOOD)

PANEL LOCATOR

0645	0663	0664	0668	0669
0707	0726	0727	0731	0732
0709	0728	0729	0733	0734

COMMENTS

The new AE and A Zones are delineated based on the 2011 and 2013 LiDAR data. The new AE and A Zones and associated elevations shown are for informational purposes only.
This version of workmaps do not show the results of the revised coastal analysis. Minor floodplain boundary modifications may occur at riverine-coastal tie-in areas.

Map Projection:
NAD 1983 StatePlane Maine West FIPS 1802 Feet

1 inch = 500 feet — 1:6,000

0 250 500 1,000 1,500 2,000 Feet

0 125 250 500 Meters

YORK COUNTY WORKMAP

Panel Contains:

COMMUNITY	NUMBER
KITTERY, TOWN OF	230171
YORK, TOWN OF	230159

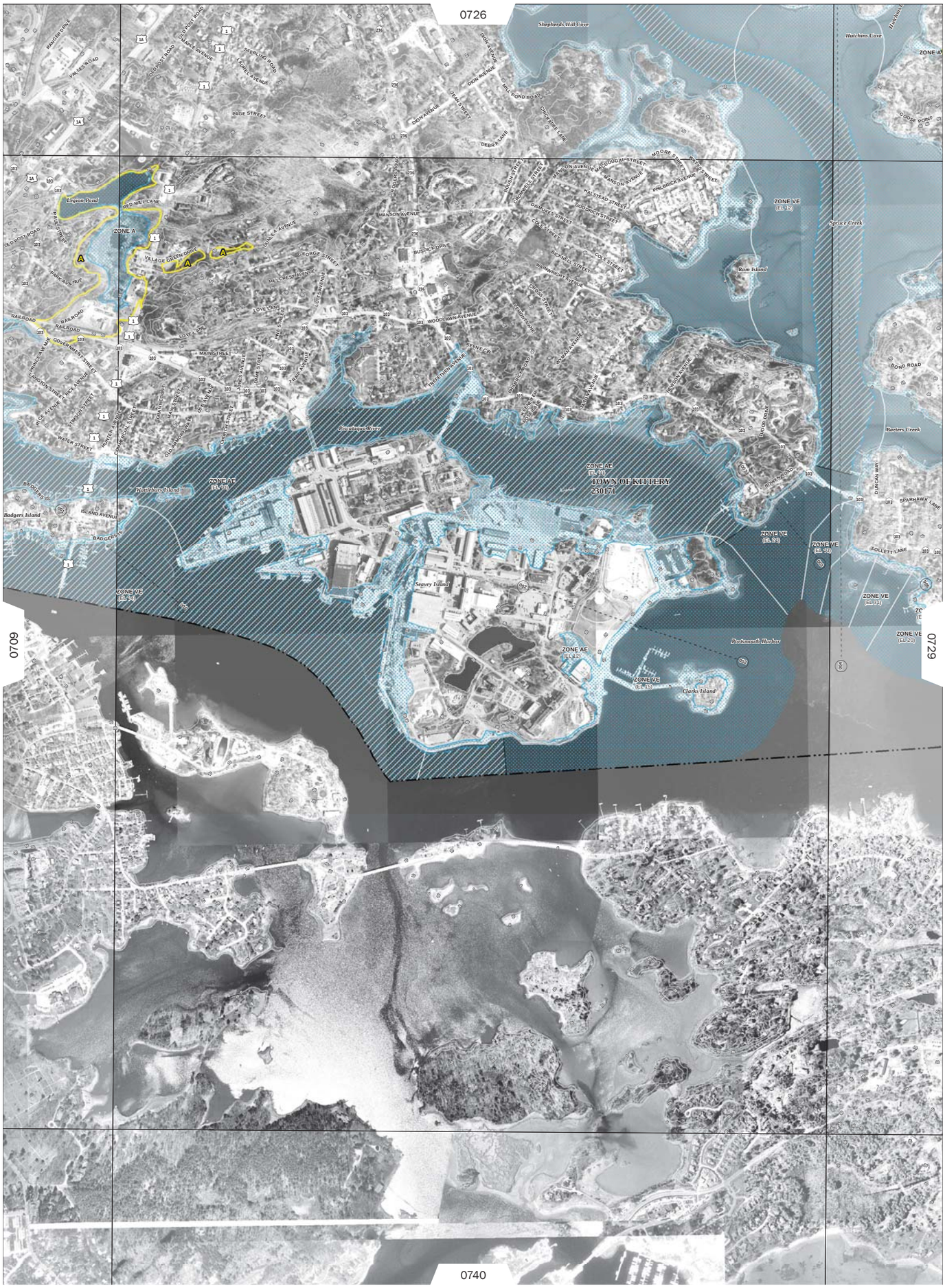
YORK COUNTY, ME
(ALL JURISDICTIONS)

PANEL 0727 of 0825

DRAFT

STARR

SCALE
1:6,000
MAP NUMBER
0727G
RELEASE DATE



LEGEND

Proposed Study

- 1 % Annual Chance Floodplain Boundary
- 0.2 % Annual Chance Floodplain Boundary
- Floodway
- 2015 Study Limit
- Zone Break
- New Zone A Analysis

Preliminary Study (2013)

- 513 — Base Flood Elevation
- A — A — Cross section line
- 23 - - - 23 — Transect line
- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway Boundary
- Zone Break
- Profile Baseline
- ZONE AE/A (AREAS SUBJECT TO 1% ANNUAL CHANCE FLOOD)
- FLOODWAY AREAS IN ZONE AE
- ZONE X (AREAS SUBJECT TO 0.2% ANNUAL CHANCE FLOOD)

PANEL LOCATOR

0706	0707	0726	0727	0731
0708	0709	0728	0729	0733
0725	0740	0737	0741	

COMMENTS

The new AE and A Zones are delineated based on the 2011 and 2013 LiDAR data. The new AE and A Zones and associated elevations shown are for informational purposes only.
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Map Projection:
NAD 1983 StatePlane Maine West FIPS 1802 Feet

1 inch = 500 feet — 1:6,000

0 250 500 1,000 1,500 2,000 Feet

0 125 250 500 Meters

YORK COUNTY WORKMAP

Panel Contains:

COMMUNITY
KITTERY, TOWN OF

NUMBER
230171

YORK COUNTY, ME
(ALL JURISDICTIONS)

PANEL 0728 of 0825

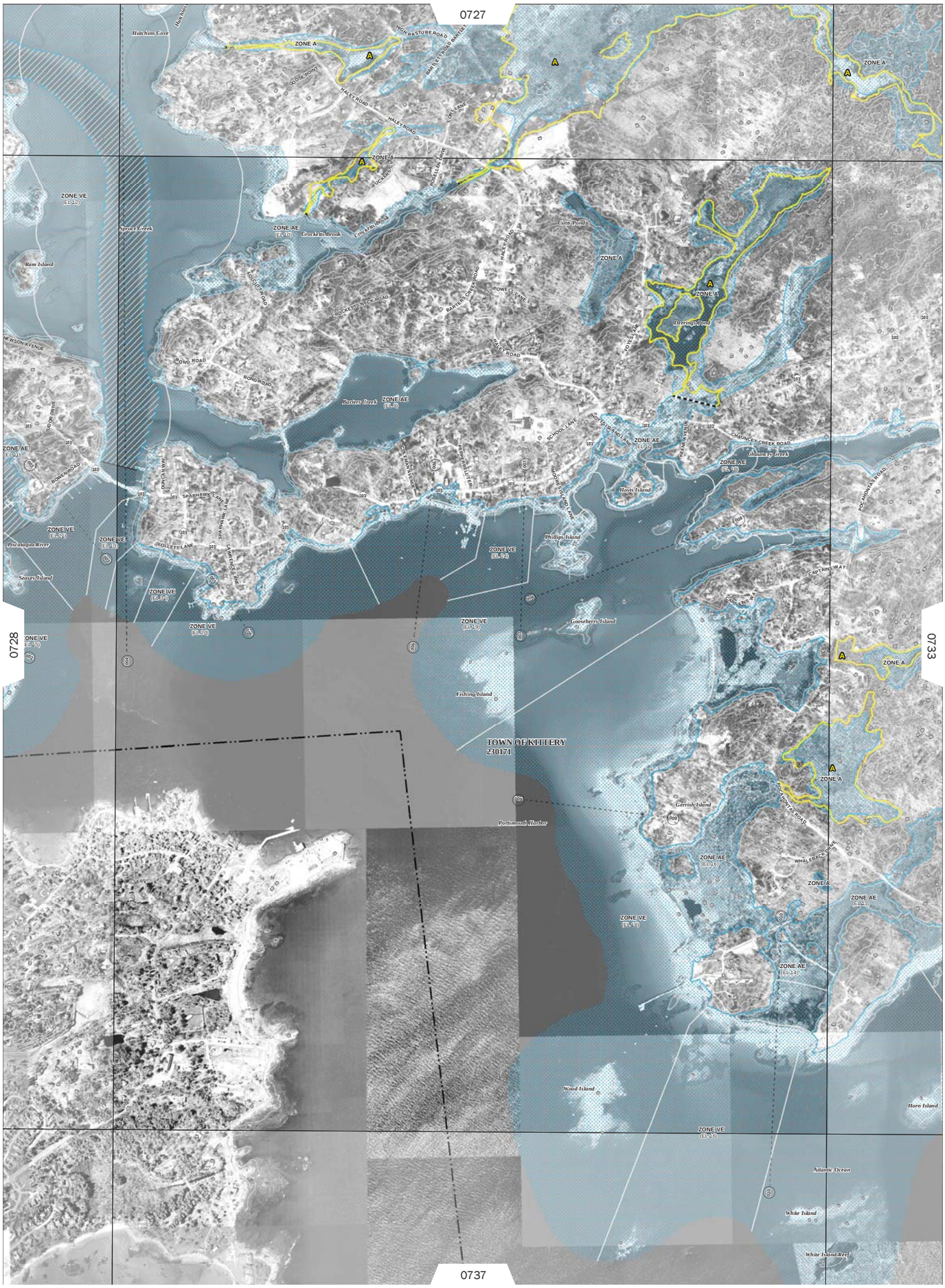
DRAFT

STARR

SCALE
1:6,000

MAP NUMBER
0728G

RELEASE DATE



LEGEND

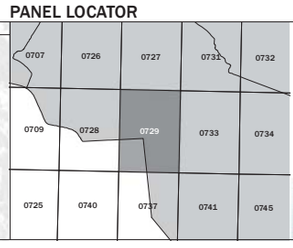
Proposed Study

- 1 % Annual Chance Floodplain Boundary
- 0.2 % Annual Chance Floodplain Boundary
- Floodway
- 2015 Study Limit
- Zone Break
- New Zone A Analysis

Preliminary Study (2013)

- 513 — Base Flood Elevation
- A — A — Cross section line
- 23 - - - 23 — Transect line
- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway Boundary
- Zone Break
- Profile Baseline
- ZONE AE/A (AREAS SUBJECT TO 1% ANNUAL CHANCE FLOOD)
- FLOODWAY AREAS IN ZONE AE
- ZONE X (AREAS SUBJECT TO 0.2% ANNUAL CHANCE FLOOD)

PANEL LOCATOR



COMMENTS

The new AE and A Zones are delineated based on the 2011 and 2013 LiDAR data. The new AE and A Zones and associated elevations shown are for informational purposes only.
This version of workmaps do not show the results of the revised coastal analysis. Minor floodplain boundary modifications may occur at riverine-coastal tie-in areas.

Map Projection:
NAD 1983 StatePlane Maine West FIPS 1802 Feet

N

1 inch = 500 feet — 1:6,000

0 250 500 1,000 1,500 2,000 Feet

0 125 250 500 Meters

YORK COUNTY WORKMAP

Panel Contains:

COMMUNITY	NUMBER
KITTERY, TOWN OF	230171

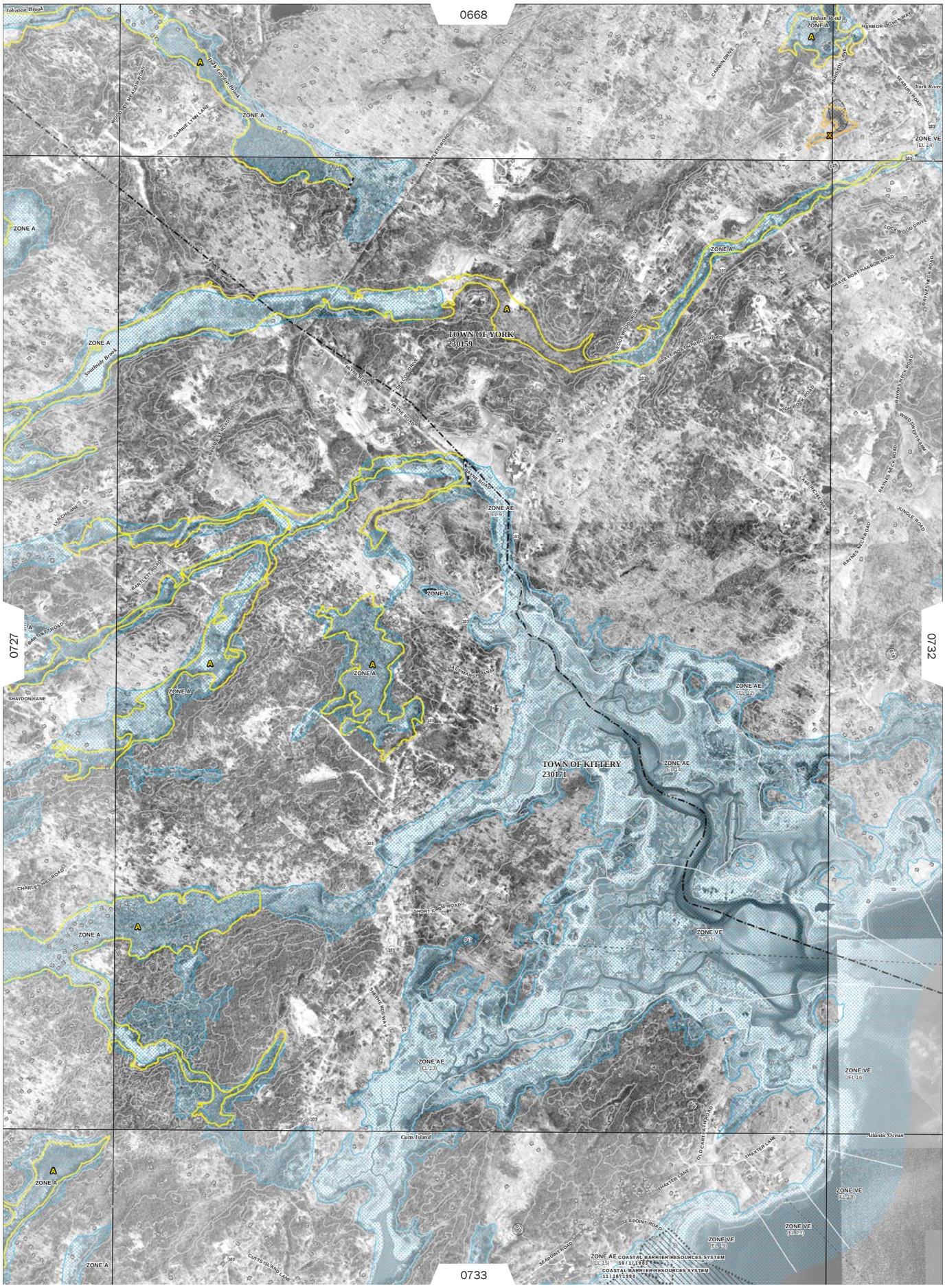
YORK COUNTY, ME
(ALL JURISDICTIONS)

PANEL 0729 of 0825

DRAFT

STARR

SCALE
1:6,000
MAP NUMBER
0729G
RELEASE DATE



LEGEND

Proposed Study

- 1 % Annual Chance Floodplain Boundary
- 0.2 % Annual Chance Floodplain Boundary
- Floodway
- 2015 Study Limit
- Zone Break
- New Zone A Analysis

Preliminary Study (2013)

- 513 — Base Flood Elevation
- A — A: Cross section line
- 23 — 23: Transect line
- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway Boundary
- Zone Break
- Profile Baseline
- ZONE AE/A (AREAS SUBJECT TO 1% ANNUAL CHANCE FLOOD)
- FLOODWAY AREAS IN ZONE AE
- ZONE X (AREAS SUBJECT TO 0.2% ANNUAL CHANCE FLOOD)

PANEL LOCATOR

0663	0664	0668	0669	0688
0726	0727	0731	0732	0775
0728	0729	0733	0734	

COMMENTS

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Map Projection:
NAD 1983 StatePlane Maine West FIPS 1802 Feet

1 inch = 500 feet — 1:6,000

0 250 500 1,000 1,500 2,000 Feet

0 125 250 500 Meters

YORK COUNTY WORKMAP

Panel Contains:

COMMUNITY	NUMBER
KITTERY, TOWN OF	230171
YORK, TOWN OF	230159

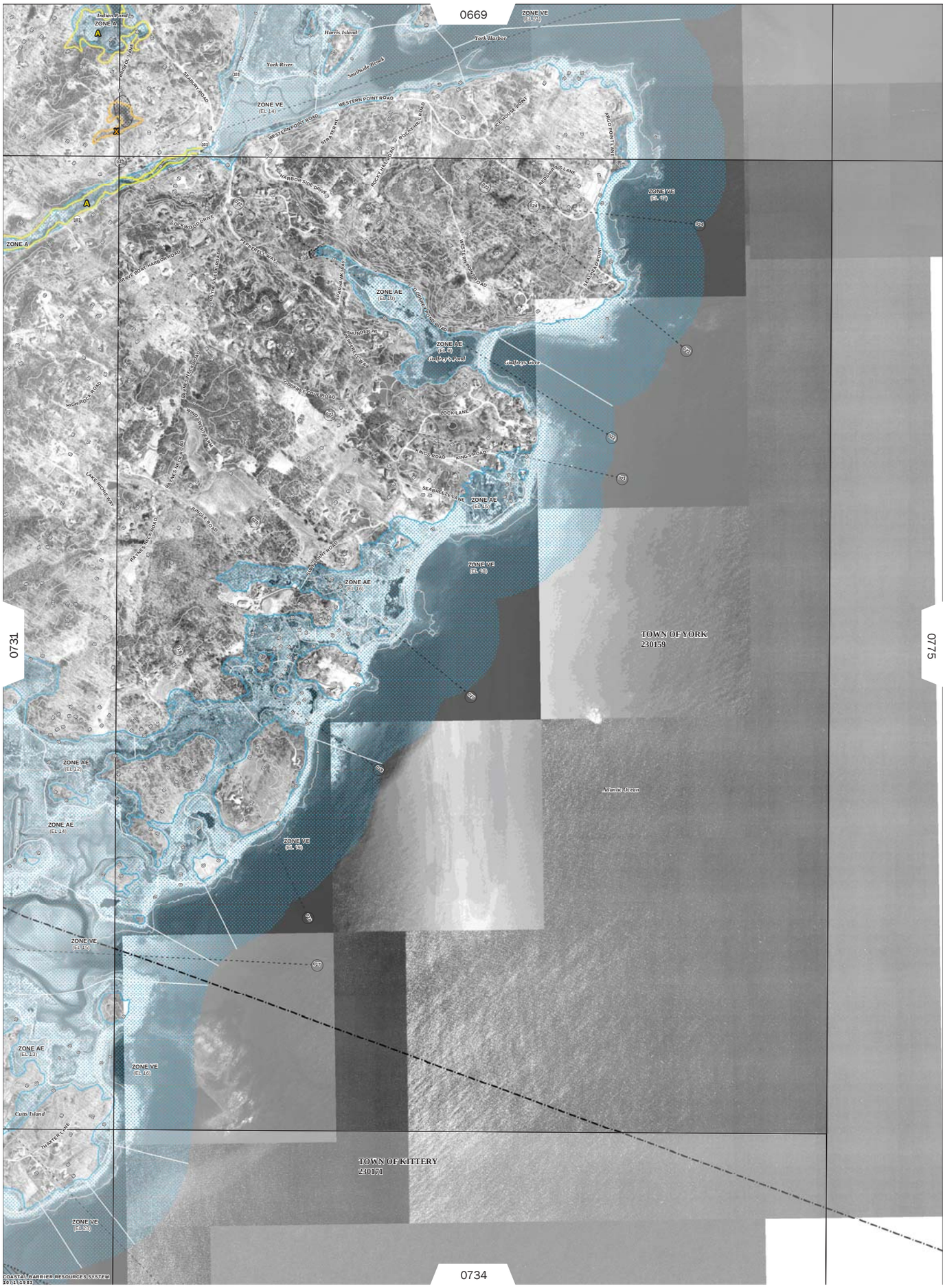
YORK COUNTY, ME
(ALL JURISDICTIONS)

PANEL 0731 of 0825

DRAFT

STARR

SCALE
1:6,000
MAP NUMBER
0731G
RELEASE DATE



LEGEND

Proposed Study

- 1 % Annual Chance Floodplain Boundary
- 0.2 % Annual Chance Floodplain Boundary
- Floodway
- 2015 Study Limit
- Zone Break
- New Zone A Analysis

Preliminary Study (2013)

- 513 — Base Flood Elevation
- A — A — Cross section line
- 23 - - - 23 — Transect line
- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway Boundary
- Zone Break
- Profile Baseline
- ZONE AE/A (AREAS SUBJECT TO 1% ANNUAL CHANCE FLOOD)
- FLOODWAY AREAS IN ZONE AE
- ZONE X (AREAS SUBJECT TO 0.2% ANNUAL CHANCE FLOOD)

PANEL LOCATOR

0664	0668	0669	0688	0689
0727	0731	0732	0775	
0729	0733	0734		

COMMENTS

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Map Projection:
NAD 1983 StatePlane Maine West FIPS 1802 Feet

N

1 inch = 500 feet — 1:6,000

0 250 500 1,000 1,500 2,000 Feet

0 125 250 500 Meters

YORK COUNTY WORKMAP

Panel Contains:

COMMUNITY	NUMBER
KITTERY, TOWN OF	230171
YORK, TOWN OF	230159

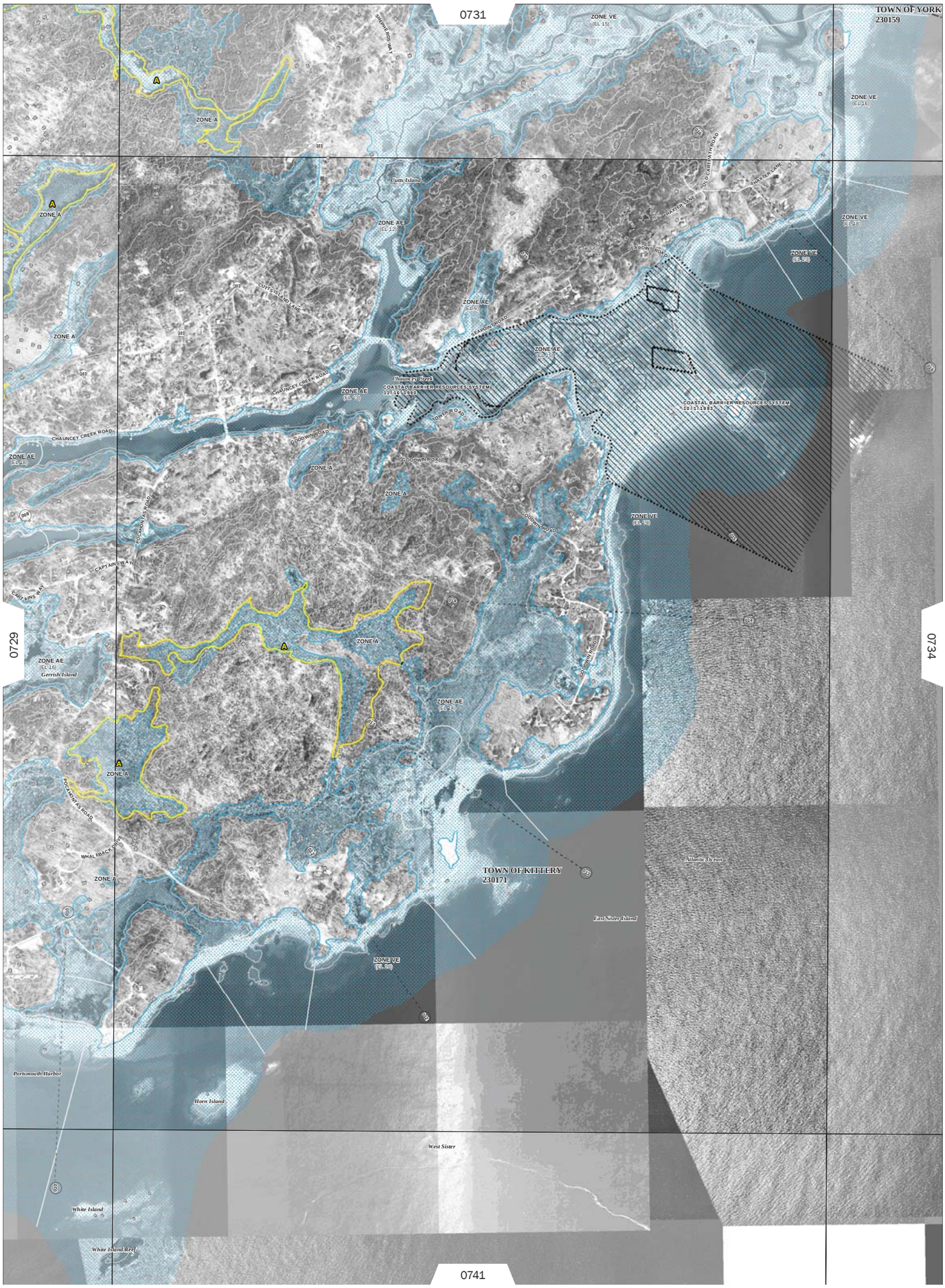
YORK COUNTY, ME
(ALL JURISDICTIONS)

PANEL 0732 of 0825

DRAFT

STARR

SCALE
1:6,000
MAP NUMBER
0732G
RELEASE DATE



LEGEND

Proposed Study

- 1 % Annual Chance Floodplain Boundary
- 0.2 % Annual Chance Floodplain Boundary
- Floodway
- 2015 Study Limit
- Zone Break
- New Zone A Analysis

Preliminary Study (2013)

- 513 — Base Flood Elevation
- A — A — Cross section line
- 23 - - - 23 — Transect line
- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway Boundary
- Zone Break
- Profile Baseline
- ZONE AE/A (AREAS SUBJECT TO 1% ANNUAL CHANCE FLOOD)
- FLOODWAY AREAS IN ZONE AE
- ZONE X (AREAS SUBJECT TO 0.2% ANNUAL CHANCE FLOOD)

PANEL LOCATOR

0726	0727	0731	0732	
0728	0729	0733	0734	0775
0740	0737	0741	0745	

COMMENTS

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0 250 500 1,000 1,500 2,000 Feet

0 125 250 500 Meters

YORK COUNTY WORKMAP

Panel Contains:

COMMUNITY	NUMBER
KITTERY, TOWN OF	230171

YORK COUNTY, ME
(ALL JURISDICTIONS)

PANEL 0733 of 0825

DRAFT

STARR

SCALE
1:6,000
MAP NUMBER
0733G
RELEASE DATE

STARR

October 1, 2015

Chris DiMatteo
Town Planner
Town of Kittery
Town Hall, 200 Rogers Road
Kittery, ME 03904

Dear Mr. DiMatteo:

On December 10, 2014 and January 7, 2015, STARR, the mapping contractor for the Federal Emergency Management Agency (FEMA), discussed the model-backed Zone A development and redelineation of inland riverine flooding sources via webinars. The results of these analysis were provided on August 12 and 13, 2015 during 30-minute community specific Flood Risk Review meetings wherein a set of work maps was provided to the community for review and comment. These work maps are the basis for the Preliminary Flood Insurance Rate Map (FIRM) for your community. Revised FIRMs are expected to be delivered to your community in late winter/early spring of 2016, with the goal of having an Appeal Period in summer 2016 and issue Letters of Final Determination in January 2017, making the maps effective in July 2017.

We are sending your community 2 copies of a DVD that contain work maps so you can review them and provide us your feedback within 60 days with regard to the flood risk information shown on the maps as well as other information (i.e., road names, bridges, etc.) shown on the maps. FEMA values your input with regard to these maps. Please contact me, Brian Caufield, STARR Project Manager, by e-mail at CaufieldBA@cdmsmith.com or by phone at (617) 452-6658, if you have any questions regarding these work maps. Sue Baker, the Maine State NFIP Coordinator, is also available to answer questions about the maps.

Sincerely,

Brian A. Caufield

Brian Caufield, P.E., CFM
Project Manager
STARR

Enclosures:
Work Maps DVD (2 copies)

cc: Jeffrey D. Thomson, Chairperson, Town Council, Town of Kittery (w/o enclosure)
Robert Marchi, Code Enforcement Officer, Town of Kittery (w/o enclosure)
Earldean Wells, Chairperson, Conservation Commission, Town of Kittery (w/o enclosure)
Ann Grinnell, Chairperson, Planning Board, Town of Kittery (w/o enclosure)
Brett Costa, Chairperson, Board of Appeals, Town of Kittery (w/o enclosure)
Norman Albert, Commissioner of Public Works, Town of Kittery (w/o enclosure)
Sgt. Gary P. Eaton, Director, Emergency Preparedness, Town of Kittery (w/o enclosure)
Nancy Colbert Puff, Town Manager, Town of Kittery (w/o enclosure)
Maryann Place, Town Clerk, Town of Kittery (w/o enclosure)
Kerry Bogdan, Senior Engineer, FEMA Region I (w/o enclosure)
Sue Baker, CFM, Conservation and Forestry, Floodplain Management Program (w/o enclosure)
Alex Sirotek, Regional Service Center, Region I (w/o enclosure)

Article XI. Cluster Residential and Cluster Mixed-Use Development. (Ordained 9/24/12; effective 10/25/12)

16.8.11.1 Purpose.

To implement adopted Comprehensive Plan policies regarding the Town's natural, scenic, marine, cultural and historic resources, land use patterns and recreation and open space, this Article is intended to encourage and allow new concepts and innovative approaches to housing/commercial development and environmental design so development will be a permanent and long-term asset to the Town, while in harmony with the natural features of the land, water and surrounding development. Objectives include:

A. efficient use of the land and water, with small networks of utilities and streets;
B. preservation of contiguous, unfragmented open space and creation of recreation areas;
C. maintenance of rural character~~,~~ by means of preserving farmland, forests and rural viewscapes, preserving backlots beyond **(X)** feet from the public roadway, and buffering scenic roads;
D. preservation of areas with the highest ecological value as identified by (Beginning with Habitat/MDEP/the Kittery Open Space Committee;etc);
E. location of buildings and structures on those portions of the site most appropriate for development;
F. creation of a network of contiguous open spaces or 'greenways' by linking the common open spaces within the site and to open space on adjoining lands wherever possible;
G. reduction of impacts on water resources by minimizing land disturbance and the creation of impervious surfaces and stormwater runoff;
H. preservation of historic, archaeological, and cultural features; and
I. minimization of residential development impact on the municipality, neighboring properties, and the natural environment.

16.8.11.2 Permitted Zones.

A. Cluster residential development is permitted in various zones as indicated in Chapter 16.3.

B. Cluster mixed-use development is permitted only in the Business Park (B-P) zone.

16.8.11.3 Dimension Standards Modifications.

Notwithstanding other provisions of this Code relating to dimensional standards, the Planning Board, in reviewing and approving proposed residential or mixed-use development under this Article, may modify said dimensional standards to permit flexibility in approaches to site design in accordance with the Code standards. The Board may allow subdivision or site development with modified dimensional standards where the Board determines the benefit of a cluster development is consistent with the Code. Dimensional standards means and is limited to lot size, lot coverage, frontage and setback requirements. Such modifications may not be construed as granting variances to relieve hardship.

16.8.11.4 Property Ownership.

Tracts or parcels of land involved in a development proposed under this Article must be in single ownership; or, must be the subject of an application filed jointly by the owners of all properties included; or, must have an applicant with vested interest in all property included. Pursuant to the requirements of this Article, mobile home parks or mobile homes on individual lots are not eligible for cluster residential development.

16.8.11.5 Application Procedure.

All development reviewed under this Article is subject to the application procedures in Chapter 16.10, Development Plan Application and Review, and the following:

A. In addition to the requirements of Chapter 16.10, the following are required at submittal of the Sketch Plan:

1. Calculations and maps to illustrate:
   a. proposed dimensional modifications and the dimensional standards required in the zone in which the development will be located;
   b. All land area identified in Title 16.7.8 Net Residential Acreage; and (Ordained 9-28-15)
   c. Net Residential Density; and
   d. open space as defined in Section 16.8.11.6.~~D.2~~E of this Article.

2. A map showing constraints to development, such as, but not limited to, wetlands, resource protection zones, shoreland zones, deer wintering areas, side slopes in excess of thirty-three percent (33%), easements, rights-of-way, existing roads, driveway entrances and intersections, existing structures, and existing utilities.

3. A written statement describing the ways the proposed development furthers the purpose and objectives of this Article, including natural features which will be preserved or enhanced. Natural features include, but are not limited to, moderate-to-high value wildlife and waterfowl habitats, important agricultural soils, moderate-to-high yield aquifers and important natural or historic sites worthy of preservation.

4. The location of each of the proposed building envelopes. Only developments having a total subdivision or site plan with building envelopes will be considered.

5. The Planning Board may require a sketch plan showing a conventional nonclustered subdivision layout to determine the maximum number of lots/dwelling units to be permitted. The lots shown in the conventional subdivision sketch plan must be achieved without modifications to dimensional standards and shall not require a variance or waiver from the existing ordinances.

B. An applicant with a project that includes proposed public open space must obtain Town Council acceptance for the public land or easement following Preliminary Plan approval. Town Council acceptance is contingent upon receipt of Final Plan approval by the Planning Board.

16.8.11.6 Standards.

A. The purpose and intent of this Code must be upheld for any reviews conducted under this Article.

B. A cluster mixed-use and cluster residential development must meet all requirements for a subdivision (and site plan where applicable), and all other applicable federal, state and local ordinances, except as modified by action of the Planning Board, where authorized.

C. Public or privately shared sewer and water must be provided unless it is demonstrated to the Planning Board's satisfaction that alternative methods used result in a development that is compatible with Section 16.8.11.

D. Unless a public or shared sewer collection and treatment system is provided, no lot may be smaller than twenty thousand (20,000) square feet per single family residence and eight thousand (8,000) square feet per bedroom per multifamily residence as outlined in the Maine Minimum Lot Size Law, Title 12 MRS § 4807-A.

E. Open Space Requirements:

1. Open space must ~~contain~~ equal at least 50% of the total area of the property. ~~and no less than 30% of the total net residential acreage, as defined.~~ and be comprised of no less than 50% of the property's total net residential acreage.

2. Total calculated open space must be designated as follows (See Open Space definitions Section 16.2): a. Open Space, Reserved; b. Open Space, Common; and/or c. Open Space, Public.

3. The use of any open space may be further limited or controlled by the Planning Board at the time of final approval, where necessary, to protect adjacent properties or uses.

4. Open space must be deeded in perpetuity for the recreational amenity and environmental enhancement of the development and be recorded as such. Such deed provisions may include deed/plan restrictions, private covenants, or arrangements to preserve the integrity of open spaces and their use as approved by the Planning Board.

5. Open space must also be for preserving large trees, tree groves, woods, ponds, streams, glens, rock outcrops, native plant life, and wildlife cover as identified in applicant's written statement. In the Business Park (BP) zone, open space may be both man-made and natural. Man-made open space must be for the development of recreational areas, pedestrian ways and aesthetics that serve to interconnect and unify the built and natural environments.

6. Open space should be in a contiguous form of unfragmented land to protect natural resources, including plant and wildlife habitats.

7. A portion of the open space should be in close proximity to other open spaces used for recreation (e.g. a common green, multi-purpose athletic field, gardens, and playgrounds).

F. In the Business Park (BP) zone, the maximum building height is forty (40) feet. If the Planning Board finds that provisions for fire safety are adequate to allow buildings of greater height, then the Board may allow a building height of up to sixty (60) feet as a part of the development plan review and approval process.

G. In cluster residential developments, no individual lot or dwelling unit may have direct vehicular access onto a public road existing at the time of development.

H. Where cluster residential development abuts a body of water, stream, or a significant wetland, then a usable portion of the shoreline, as well as reasonable access to such body, stream or wetland must be a part of the commonly held land.

I. The developer must take into consideration the following points, and illustrate the treatment of buildings, structures, spaces, paths, roads, service and parking areas, recreational facilities, and any other features

determined by the Planning Board to be a part of the proposed development.

1. Orientation. Buildings, view corridors and other improvements are to be designed so scenic vistas and natural features are integrated into the development. Buildings should be sited to consider natural light and ventilation.

2. Utility Installation. All utilities are to be installed underground, wherever possible. The Planning Board must require the developer to adopt a prudent avoidance approach when permitting above ground electrical service installations. Transformer boxes, pumping stations and meters must be located so as not to be unsightly or hazardous to the public.

3. Recreation. Facilities must be provided consistent with the development proposal. Active recreation requiring permanent equipment and/or modification of the site may not be located within the wetland setback areas or contiguous reserved open space areas.

4. Buffering. Planting, landscaping, form and siting of building and other improvements, or fencing and screening must be used to integrate the proposed development with the landscape and the character of any surrounding development.

5. Development Setbacks.
Setbacks from wetlands and water bodies, must demonstrate compliance to Table 16.9 of Chapter 16.9.4.3. These setbacks must be permanently maintained as no cut, no disturb buffer areas. If the setback areas are not of substantial vegetation to provide a sufficient buffer, the Planning Board may require additional plantings. Wherever cluster development is subject to conflicting setback requirements, the most restrictive requirement(s) shall apply.

J. The location of subsurface wastewater disposal systems and a reserve area, if required, must be shown on the plan. The reserve areas must be restricted so as not to be built upon. The report of a site evaluator, licensed by the state of Maine, must accompany the plan. If the subsurface disposal system is an engineered system, approval from the Maine Department of Human Services, Division of Health Engineering and the municipal plumbing inspector must be obtained prior to Planning Board approval.

16.8.11.7 Open Space Dedication and Maintenance.

A. Prior to approval of the final plan by the Planning Board, documents for open space must be submitted to the Town for review by legal counsel. Subsequent to approval, there may be no further division of the open space; however, tracts or easements dedicated for public utilities, public access or structures accessory to noncommercial recreation, agriculture or conservation may be permitted within the open space.

B. The open space(s) must be shown on the development plan with appropriate notation on the face thereof to indicate that:

1. The open space must not be used for future building lots; and

2. A part or all of the open space may be dedicated for acceptance by the Town.

C. If any, or all, of the open space is to be reserved for ownership by the residents and/or by commercial

16.8.20.1 Green Strip.
Subdivision design must minimize the possibility of noise pollution either from within or without the development (from highway or industrial sources) by providing and maintaining a green strip at least twenty (20) feet wide between ~~the abutting properties that are so endangered~~ the abutting properties and any propery peremiteters with frontage along scenic roads.

Article XXI. Temporary, Intra-Family Dwelling Unit

16.8.21.1 Purpose.
Allowing by special exception a "temporary, intra-family dwelling unit" is intended to relax density requirements per dwelling unit in this Code that have the effect of prohibiting persons from establishing temporary living quarters accessory to a residence expressly for a relative(s), a care provider or a care receiver. This Section is not intended to allow a property owner to circumvent the general density standards to create an additional apartment for financial gain.

16.8.21.2 Standards.
The following standards must be satisfied to approve a proposed temporary, intra-family dwelling unit:

A. The temporary, intra-family dwelling unit must be an accessory use to a residential structure.

B. The owner of the property must reside on the premises unless the BOA finds that other ownership or tenancy characteristics are consistent with the intent of this section.

C. No more than one temporary, intra-family dwelling unit per dwelling unit is allowed.

D. Additional off-street parking must be provided if the BOA finds that the proposed use will generate more parking demand than is currently available. Such additional parking must not be located within the required front yard unless the BOA finds that the proposed design and location of such a parking area would not detract from the character of the residential neighborhood.

E. Floor plans must be submitted showing:

1. The floor plan of the existing dwelling;

2. The proposed floor plan to create the temporary, intra-family dwelling unit; and

3. A plan to convert the use of the property to its original dwelling status or another conforming permanent use.

4. The above submission requirements may be waived or modified by the BOA provided the intent of this section is satisfied.

F. To assure that a proposed temporary, intra-family dwelling unit does not become an apartment yielding a financial gain, at least one internal accessible connection between the two units must be shown in the floor plan for creation of the temporary intra-family dwelling unit unless the BOA determines such a connection is

Table 1 - Chapter 16.8, Article IV

DESIGN AND CONSTRUCTION STANDARDS FOR STREETS and PEDESTRIAN WAYS

Page ONE	**PUBLIC STREETS**						**PRIVATE STREETS**		
Design and Construction Standards	Arterial Highways	Secondary Highways	Commercial Light Industrial Mixed Use Developments	Primary Collectors	Secondary Collectors	Minor Streets	Class III	Class II	Class I
Average Daily Trips (ADT)	**9,001 or more**	**3,001 to 9,000**	**ADT and Peak**	**801 to 3,000**	**201 to 800**	**35 to 200**	**72 to 800**	**35 to 71**	**12 to 35**
Street Width Design:	Streets in this classification will generally be affected by development rather than constructed, and may require drainage, soil, use, traffic safety, and impact studies beyond the scope of this title for required improvements and/or construction.		Commercial, light industrial and mixed use development(s) streets shall be constructed to no less than secondary collector standards and may be subject to higher standards depending upon the traffic generation and use(s) intended.				Same standards as public streets (Primary collectors, secondary collectors, and minor streets) based on average daily trips count (ADT) calculated from the latest edition of the ITE Codes.		
a. Right-of-way				60'	60'	60'		40'	40'
b. Travel Pavement				22'	22'	20'		20'	18' gravel
c. Sidewalk/Pedestrian way				6'	6'	5'		5'	5'
d. Paved Shoulder				2' walk side 8' opp. Side	2' walk side 8' opp. Side	2' walk side 8' opp. Side		N/A	N/A
e. Gravel Shoulder				2' opp. Side	2' opp. Side	2' opp. Side		both sides	N/A
f. Enclosed Drainage				sidewalk side	sidewalk side	Not required		N/A	N/A
g. Parking				one side	emergency	emergency		emergency	No
Street Gradients:									
a. Longitudinal (Min. to Max)				.05% to 6%	.05% to 7%	.05% to 8%		.05% to 9%	1.0% to 10%
b. Slide Slope (horiz. to vert.)				3 to 1	3 to 1	3 to 1		2 to 1	2 to 1
c. Road Crown				1/4"per ft	1/4" per ft	1/4"per ft		¼" to ½" per ft	¼" to ½" per ft
Cul-de-sac:									
a. Street Length to Radius				N/A	1,500'	1,200'		600'	400'
b. Boundary Radius				N/A	65'	60'		50'	50' or 40 X 40 turn tee
c. Paved Radius				N/A	50'	50'		40'	gravel 40' or 18' X 18'
d. Second Access				Yes	Yes~~; can be emergency only~~	Not desirable		Not Allowed	Not Allowed

TOWN OF KITTERY

Office of the Town Manager

200 Rogers Road, Kittery, ME 03904

Telephone: 207-475-1329 Fax: 207-439-6806

ncolbertpuff@kitteryme.org

Nancy Colbert Puff
Town Manager

Town Manager's Report to the Town Council
November 23, 2015

1. **Land and Water Conservation Fund Grant** – As discussed at Council's last session, I submitted a grant request to fund improvements to Emery Field on November 19th. The final application was for $187,000.

2. **Fall Paving Program** – Residents have inquired about paving on South Eliot and Cutts Road, wondering why the "breakdown lanes" have not been included as part of the work. A final "curb to curb" overlay is planned to occur in the spring.

3. **Sewer Extension Project** – A few trenches on Route 236 have settled, and are targeted to be filled in the next couple of weeks

4. **Wood Island** – I am working with Sam Reid of WILSSA to prepare a concession agreement and revised repair agreement for Council's consideration in December. I have strong received letters of support for WILSSA's plans from potential partners which include the Gundalow Company and Portsmouth Harbor Cruises. Key items we are discussing are the term of the agreement (WILSSA has proposed 30 years), allowed uses, and conditions in the event of non-performance.

5. **Surplus Property** – The Town has several surplus items for which it seeks sealed bids. A list of these items can be seen on our web site under "News and Announcements."

6. **Portsmouth Naval Shipyard (PSNY) Bridge 1 project** – PSNY is at a key juncture in this project which required closure of Gate 1 on 2 successive Fridays. Traffic backups were serious, and PSNY has been in communication with the Town and is taking several measures to mitigate the issue.

7. **Personnel** – We are hiring for several positions which can all be found under our Employment Opportunities section of our web site.

As always, if you have any questions or concerns prior to the meeting, please do not hesitate to contact me. Thank you.

Respectfully Submitted,

Nancy Colbert Puff

NOV 2015	BUILDING PERMIT REPORT		
	# of Building Permits Issued		26
	Value of Building Permits	$	730,614.00
	Permit Fees Collected	$	9,287.90
	Impact Fees Paid	$	-
	Residential Fees Collected	$	8,657.90
	Commercial Fees Collected	$	630.00

Date Issued	Permit #	Property Owner	Address	Map	Lot	C/R	Work	Description	Value	Fee	Impact Fee
11/3/2015	15-350	George Shea	6 Commercial Street	4	10	R	Repl	Replace existing deck and stairs, 15'6" x 6'6" same size and location	$ 2,700.00	$ 25.00	-
11/3/2015	15-351	Charles & Rachel Dellea	1 Idlewood Lane #26	66	20-26	R	New	Construct 8' x 10' shed	$ 2,000.00	$ 49.00	-
11/3/2015	15-352	Debbie Driscoll	9 Pepperrell Terrace	26	25	R	Maint/New	Replace windows & siding, construct 14' x 40' deck	$ 138,154.00	$ 1,681.00	-
11/3/2015	15-353	Charles Ward & Pamela Wright	63 Whipple Road	10	50	R	Maint	Interior renovations-upgrade electrical, heat & plumbing	$ 100,000.00	$ 1,225.00	-
11/3/2015	15-354	Don & Chris Merrigan	6 Lawrence Lane	18	35B	R	New	Construct dormer per plans submitted	$ 22,000.00	$ 289.00	-
11/3/2015	15-355	David Plourde	1 Ford Lane	9	125B	R	Maint	Replace roof shingles, drip edge, & flashing	$ 5,244.00	$ 25.00	-
11/3/2015	15-356	David Flamand	35 Cedar Drive	39	17B-12	R	Maint/New	Remove existing shingles, replace with metal roofing	$ 17,823.00	$ 238.60	-
11/5/2015	15-357	Robert Byrne	16 Stevenson Road	29	33	R	Repl	Replace oil boiler with gas boiler & gas piping	$ 7,900.00	$ 119.80	-
11/16/2015	15-358	Derek Dunn	6 Cutts Road # 68	60	21-68	R	New	Construct 8' x 10' shed	$ 1,700.00	$ 43.00	-
11/16/2015	15-359	James & Tudor Austin	8 Lawrence Lane	18	34	R	Maint	Replace roof shingles, windows, dormer & extend to existing dormer, some interior studs, sheetrock, update wiring & plumbing, install elevator, reconstruct porch-same size	$ 187,000.00	$ 2,149.00	-
11/16/2015	15-360	Paul Leblanc	50 Old Post Road	8	20	R	New	Contruct 11' x 20' deck	$ 700.00	$ 107.50	-
11/16/2015	15-361	John Jelich	15 Old Post Road	3	82	R	Maint	Finish interior work - bathroom & sheetrock	$ 1,000.00	$ 37.00	-
11/16/2015	15-362	Jeremy Leclair & Kimberly Burke	129 Brave Boat Harbor Road	63	14	R	New	Install pellet stove	$ 3,800.00	$ 67.00	-
11/16/2015	15-363	James & Kimberly Gailey	8 Gailey Farm Lane	69	2B	R	New	Construct 30' x 40 post & beam barn	$ 34,000.00	$ 433.00	-

Pending Preliminary Approval

Map	Lot	Zone	Address	Owner	Project Description	Last PB review date	Notes
34	2B	R-RL, OZ-SL-250'	34 Goose Point Rd	Kevin Fickensher & Suzanne Olbricht	Screened porch & patio		On 12/10/15 agenda
4	70	MU-KF, OZ-SL-250'	3 Knight Ave	Christopher Eckel	Garage reconstruction & car port		per applicant request - moved to 1/14/16 meeting
33	3	R-RL, OZ-SL-250'	20 Whippoorwill Ln	Christopher Moran	Expansion to single-family dwelling		On 12/10/15 agenda
66	2A, 8	R-R, OZ-SL-250'	Betty Welch Rd	Landmark Properties. LTD	24-lot single-family cluster subdivision	11/12/2015	Sketch Plan accepted
4	51	MU-KF, OZ-SL-250', OZ-CFMU	15 Old Armory Way	Ken McDavitt	Old Armory Way, 2 condominiums (3 units), 8 boat slips	5/14/2015	Continuance request of site plan application denied; Reapplication anticipated
1	31	MU-BI, OZ-SL, OZ-CMFU	31 Badgers Island West	Gagner Family Limited & Stephen Kelm	7-dwelling subdivision	9/10/2015	90-day continance on sketch plan granted
3	77A	R-U	9 Cook Street, Old Post Rd	Spruce Creek Ventures II	3 lot subdivision	9/10/2015	90-day continance on sketch plan granted

Preliminary Plan - Approved

Map	Lot	Zone	Address	Owner	Project Description	Last PB review date	Notes
28	14-2	C-2	89 Route 236	Rockwell Homes, LLC	business offices and drive-through restaurant	9/10/2015	
66	24	MU, R-RL	US Route 1	Stephen Hynes; Real Prop Trust	78-lot expansion	9/10/2015	On 12/10/15 Agenda
61	9	R-RL	Highpointe Circle/Kittree Ln	Operation Belssing	Beatrice Way Conventional Subdivision	4/23/2015	Applicant working on resbumission for final review

Public Hearing

Map	Lot	Zone	Address	Owner	Project Description	Last PB review date	Notes
3	144	BL-1	78 Government St	Jeff Apsey	Addition of forth floor and 4 1-bedroom apts	11/12/2015	Per applicant request, PH moved to 1/14/16 meeting

Final Plan - Approved

Map	Lot	Zone	Address	Owner	Project Description	Last PB review date	Notes
18	31	R-KPV, OZ-SL-250'	13 Lawrence Ln	Rose Marie Howells	Driveway expansion	11/12/2015	
10	19	R-U, OZ-SL-250'	92 Whipple Rd	Jeffrey & Deborah Kolad	replace seawall and expand shed; shed removed from plan	11/12/2015	
9	16	R-U, OZ-SL-250'	24 Williams Ave	Karen & David Beane	Construct garage & house addition; reconstruct deck w/ pergola	10/22/2015	Mylar received, scanned & filed 11/24
58	42	R-RLC, OZ-SL-250', OZ-RP	73 Tower Rd	Robert & Megan Ramos	single-family dwelling	9/24/2015	
17	10	R-U, OZ-SL, OZ-CMFU	48 Bowen Rd	MBX, LLC - Kittery Pt. Yacht Yard	boat ramp renovation	9/10/2015	Mylar received, scanned & filed 11/23
30	41	C-1, OZ-RP	275 US Route 1	Kittery Trading Post Shops/275 US Rte 1, LLC	Hampton Inn Development - 83 room hotel	8/20/2015	
28	14	R-S, C-2, OZ-RP	Fernald Rd and Rte 236	Peter Paul, AMP Realty Holdings	"Morgan Court" 4 lots with 9 multifamily units	8/20/2015	Mylar received, scanned & filed 10/13
67	9	MU, OZ-SL-250'	484 US Route 1	Cape House Mgt, LLC	addition to existing nonconforming MU structure w comm kitchen	8/20/2015	
18	27	R-KPV, OZ-SL-250'	42 Pepperrell Rd	Brian & Jan Rodonets	replace porch and walkway with mudroom	7/9/2015	
3	5, 6, 7	B-L1	42 State Rd	Aaron Henderson, HGC, LLC	3 office units, 5 dwelling units	7/9/2015	
58	34	R-RLC, OZ-SL-250', OZ-RP	43 Tower Rd	Theodore H. Curtis Trust	garage addition	7/9/2015	
1	9	R-U, OZ-SL-250'	28 Island Ave	Diane Knight	second story expansion	6/11/2015	
23	6A	R-U, OZ-SL-250'	9 Mill Pond Road	Eric Stites & Katherine Peternell	addition and second story expansion	6/11/2015	
27	45	R-KPV, OZ-SL-250'	100 Pepperrell Rd	Jonathan King & James Stott	addition to existing structure	5/14/2015	Mylar received, scanned & filed 10/13
58	46	R-RLC, OZ-SL-250'	81 Tower Rd	Frederick Nominee Trust	addition and second story expansion	5/14/2015	
61	25, 29	R-RL	Haley Rd & Lewis Rd	Lewis Farm, LLC	revise lot lines and wooded buffers	5/14/2015	
36	63	R-KPV, OZ-SL-250'	2 Chauncey Creek Rd	Daniel O. & Linda P. Seaward	addition to existing structure	4/9/2015	
58	42, 42A	R-RLC, OZ-SL-250', OZ-RP	71, 73 Tower Rd	Mary Thron & Raymond Arris	Request for Adjustment - Nonconforming Lots	3/26/2015	
50	8	MU	435 US Route 1	Kenneth Lemont/Harrison E. Lemont	Pine Tree Plaza Mixed Use	3/12/2015	

Denied/Withdrawn

Map	Lot	Zone	Address	Owner	Project Description	Last PB review date	Notes
64	27	R-RLC, OZ-SL-250'	32 Seapoint Rd	Jerry Held	Vacation home second bedroom expansion		Did not meet building coverage standards
4	168	B-L1, MU-KF	35 Walker St	York Hospital	Additional sinage to existing plan	10/8/2015	Application not subject to PB review