

Town of Kittery Planning Board Meeting April 8, 2021

459 U.S. Route 1—Major Modification Review to a Master Site Development Plan and Subdivision / Site Plan

Action: Accept or deny plan as complete; continue to a subsequent meeting; approve or deny plan; Pursuant to §16.10.9.3 *Modifications to approved plan* of the Town of Kittery Land and Use Development Code, owner/applicant Middlesex Land Holdings, LLC requests the review and consideration of a major modification to both an approved Master Site Development and Subdivision plan proposing to reduce the residential dwelling unit count from 44 (32 age-restricted; 12 non-age-restricted) to 32 (16 age-restricted; 16 non-age-restricted) dwelling units within 8 buildings and make associated improvements on real property with an address of 459 U.S. Route 1, Tax Map 60, Lot 24, in the Mixed-Use (MU) Zone.

PROJECT TRACKING

REQ'D	ACTION	COMMENTS	STATUS
YES	Final Plan Review and Decision	February 14, 2019	APPROVED
YES	Minor Modification and Hotel Design Review (condition of approval)	December 19, 2019	APPROVED
NO	Major Modification	Set for February 27, 2020	APPROVED
NO	Sketch Plan Acceptance/Approval	October 22, 2020; December 10, 2020	APPROVED
NO	Major Modification	Set for April, 8 2021	PENDING
<p>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. <u>As per Section 16.4.4.L - 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.</u></p>			

Project Introduction

Before the Planning Board (“Board”) is a major modification application to the master site development and subdivision/site plan stemming from a sketch review approval from the Planning Board at their December 10, 2020 meeting prior thereto, the Planning Board approved a modified plan on February 27, 2020. The original approval comprised a 112 room hotel parallel to U.S. Route 1 and 44 dwelling units (32 age-restricted; 12 non-age-restricted) located in the lot’s rear section along with shared access ways, utilities, open space, stormwater and pedestrian infrastructure. Given recent market changes, demand shifts and the cost of construction materials, the applicant developing the residential lot is proposing to amend the approved plans to reduce the number of dwelling units and reconfigure stormwater infrastructure and other site elements that accommodate the new design and use. Moreover, considering the number of buildings are expanding from four (4) to eight (8), the applicant has submitted new architectural plans for the Board to review. The current modification plan appears to make slight changes within the lot containing the hotel as described herein.

Staff Commentary and Analysis

The significant elements changing in this current plan rendition are the quantity and design of the residential units and buildings as well as some minor stormwater, vehicular and communal infrastructure. It appears the dwelling unit count will reduce from 44 to 32 dwelling units, yet still maintaining its mixed-use residential characteristics by remaining both elderly and non-age-restricted housing. While the total unit count is reducing, the non-age-restricted dwelling units is increase by four (4) units. The density

calculations appear to comply with §16.3.2.13 D. Note 2 & 3 *Standards*¹. Other improvements incorporated into the plan are a 448-sf community center along the entrance way into the residential development and a community garden next to the grilling pick nick area abutting the hotel parking lot. As for the utilities and road infrastructure, they have change slightly in configuration to accommodate the new type of buildings being proposed. There appears to be no issues with their current arrangement or architectural elements, but concerning the site's water infrastructure, the Board should inquire whether the unit owners on the northern side of the middle buildings will have access to their water meters as it appears the water pipes enter into the southernmost units only.

As stated previously, the architecture of the buildings is changing. It is unclear who will have access to the ground floor space of the perimeter buildings. The Board should have the applicant explain the layout of the new buildings to understand more precisely the areas of ownership. As for traffic volume, it appears the reduction of units corresponds with a decrease in vehicular volume, totaling 162 trips (dwelling units only) per day. This is a 28 trip reduction from the originally approved plan. A major element that appears to be missing from the plan are areas dedicated for snow storage, albeit Note 10 on sheet one states that all snow that cannot be stored in their designated locations will be trucked off site. The Board should have the applicant demonstrate their intended locations to determine adequacy of storage space.

As for community amenities, it appears that the volleyball/badminton court and pavilion abutting the hotel parking lot were deleted from the proposed plan and replaced with an expanded grill space and a new community garden. The Board should inquire the reasons for their removal and in what way the proposed layout will achieve better community interaction and placemaking than from what was previously approved. There appears to be an addition of a storage unit off the hotel parking lot as well. The Board should inquire why it was added, who will benefit from it use, and determine if it's appropriate for that location and the site in general. Moreover, it appears a patio was added to the pool area of the hotel.

As regards landscaping, the residential area of the plan has change. It appears the landscaping satisfies the requirements of the ordinance, but the Board should inquire into the intended species designated as "small flowering trees" and determine if the proposed trees will be appropriate for the site. As for stormwater, it appears to satisfy the local and state requirements. That being said, the Board is still waiting on CMA's report to confirm this.

The Technical Review Committee reviewed this project and had no major issues with the proposed amendments. The one issue that did arise during the review was the timing on the infrastructure installation. The Town recently has been made aware that MaineDOT will be paving US Route 1 starting in 2022. Given the situation, it is imperative that all utility and infrastructure work be installed prior to the repaving of US Route 1 as a 5-year no disturbance moratorium will be placed onto US Route 1. Given the situation, the Technical Review Committee has recommended that all infrastructure that will affect US Route 1 shall be installed prior to the issuance of a Certificate of Occupancy of any of the dwelling units.

Another issue that has emerged is the current permit's status. The Board should inquire when the applicants intend on finishing all the site work, as there is a two-year time requirement to finish all work after the

¹ **NOTE 2:** For dwelling units that are part of a mixed-use building and are connected to the public sewerage system, one dwelling unit is allowed for each 10,000 square feet of buildable land area. Within the Resource Protection and Shoreland Overlay Zones, one dwelling unit is allowed for each 40,000 square feet of land area within these zones. If the parking for the residential units is encompassed within the building, the minimum required buildable land area per dwelling unit is reduced to 7,500 square feet, except in the Resource Protection and Shoreland Overlay Zones where the area per dwelling unit remains 40,000 square feet.

NOTE 3: For elderly housing dwelling units that are connected to the public sewerage system, one dwelling unit is allowed for each 15,000 square feet of buildable land area. Within the Resource Protection and Shoreland Overlay Zones, one dwelling unit is allowed for each 40,000 square feet of land within these zones. If the parking for the elderly units is encompassed within the building, the minimum required buildable land area per dwelling unit is reduced to 10,000 square feet, except in the Resource Protection and Shoreland Overlay Zones where the area per dwelling unit remains 40,000 square feet.

demolishing activity has commenced. The Board should consider extending the permit so that the applicant does not have to come back for an extension request.

Overall, the density and use intensity appears to have decreased with the proposed application and the net residential calculations appear to be in compliance. After the Board receives clarification and satisfactory answers on the above-mentioned issues, or any other issues that may arise during the course of this review, the Board should consider motion to vote on the application.

Planning Board Procedural Steps and Considerations

After the applicant has presented the proposed amendments, the Planning Board should ask the applicant any questions they may have and should considering have a discussion on the comments staff has provided with the applicant and determine what additional information, if any, they need before considering a vote. If that is the case, a motion to continue to a subsequent meeting should be made, or if the Board is comfortable moving forward, a motion s to approve put forth.

Recommended Motions

Below are recommended motions based on how the Board would like to proceed.

Continuing the modification plan application

Move to continue the Modification Plan application for a Master Site Development and Subdivision plan to the April 22, 2021 meeting that proposes from owner/applicant Middlesex Land Holdings, LLC to reduce the residential dwelling unit count from 44 (32 age-restricted; 12 non-age-restricted) to 32 (16 age-restricted; 16 non-age-restricted) dwelling units within 8 buildings and make associated improvements on real property with an address of 459 U.S. Route 1, Tax Map 60, Lot 24, in the Mixed-Use (MU) Zone.

Vote to approve modification plans

Move to approve the Modification Plan application for a Master Site Development and Subdivision plan from owner/applicant Middlesex Land Holdings, LLC proposing to reduce the residential dwelling unit count from 44 (32 age-restricted; 12 non-age-restricted) to 32 (16 age-restricted; 16 non-age-restricted) dwelling units within 8 buildings and make associated improvements on real property with an address of 459 U.S. Route 1, Tax Map 60, Lot 24, in the Mixed-Use (MU) Zone.

- 1. Applicant shall submit a revised master site development plan plat and subdivision plan set that incorporates all of the revisions requested by the Planning Board at their April 8, 2021 meeting and any revisions recommended by CMA Engineers in their most recent review letter.*
- 2. Prior to the issuance of any certification of occupancies for any of the proposed buildings, all infrastructure that affects US Route 1 must be installed.*

FINDINGS OF FACT

UNAPPROVED

For 459 Route 1

Subdivision / Site Plan Review Major Modification

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: Owner/applicant Middlesex Land Holdings, LLC proposes a plan amendment to an approved Master Site Development and Subdivision plan by reducing the residential dwelling unit count from 44 (32 age-restricted; 12 non-age-restricted) dwelling units to 32 (16 age-restricted; 16 non-age-restricted) dwelling units within 8 buildings and make associated improvements on real property with an address of 459 U.S. Route 1, Tax Map 60, Lot 24, in the Mixed-Use (MU) Zone.

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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.L - 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.

Hereinafter the "Development,"

And pursuant to the Plan Review meetings conducted by the Planning Board as duly noted in the Plan Review Notes dated 4/8/2021;

And pursuant to the application, plans and other documents considered to be a part of the plan approval by the Planning Board in this finding consist of the following { *as noted in the Plan Review Notes prepared for 4/8/2021* } (hereinafter the "Plan"):

1. Major Plan Modification Application with Municipal Impact Statement, Attar Engineering, Inc., dated March 12, 2021
2. Overall Site Plan and associated plan set, Sheets 1.1 – 1.5; Sheets 2.1, 3.1 & 3.2, 4.1; Attar Engineering, dated 1/18/2018; revised 02/21/2021
3. Site Details, Sheets 5.1 – 5.3; Attar Engineering, dated 1/18/2018; revised 02/21/2021; Sheets 6.1, Subdivision Plan, Anderson Livingston Engineers, Inc., dated September 14, 2007 & 6.2 Landscaping Plan, Attar Engineering, dated 02/08/2018; revised 02/21/2021; 8.1 Photometric Plan, Attar Engineering, dated 4/11/2018; revised 01/24/2019
4. Stormwater Management Study and Plans, Sheets 7.1 Stormwater: Existing Conditions & Sheet 7.2 Stormwater: Proposed Conditions, Attar Engineering, Inc., study dated January 24, 2019, plans dated 02/08/2018; last revised 3/16/2021

5. Building Design and Floor Plans – 12 Unit Multi-Family Residential Building, Gavin and Sullivan Architects, Inc., dated March 16, 2021
6. Master Site Development Plat, Attar Engineering, Inc., dated 2/21/2021

NOW THEREFORE, based on the entire record before the Planning Board as 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:

<p>FINDINGS OF FACT</p> <p>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:</p>
<p>A. Development Conforms to Local Ordinances.</p> <p><i>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.</i></p> <p><u>Finding:</u> The proposed development conforms to the primary objective of the comprehensive plan for economic development as it seeks to redevelop an abandoned commercial property with mixed use. The site plan and subdivision plans comply with the provisions of Title 16.</p> <p><u>Conclusion:</u> This standard appears to be met.</p> <p style="text-align: right;">Vote of <u> </u> in favor <u> </u> against <u> </u> abstaining</p>
<p>B. Freshwater Wetlands Identified.</p> <p><i>All freshwater wetlands within the project area have been identified on any maps submitted as part of the application, regardless of the size of these wetlands.</i></p> <p><u>Finding:</u> Wetlands have been delineated and are depicted on the overall site plan.</p> <p><u>Conclusion:</u> This standard appears to be met.</p> <p style="text-align: right;">Vote of <u> </u> in favor <u> </u> against <u> </u> abstaining</p>
<p>C. River, Stream or Brook Identified.</p> <p><i>Any river, stream or brook within or abutting the proposed project area has been identified on any maps submitted as part of the application. For purposes of this section, “river, stream or brook” has the same meaning as in 38 M.R.S. §480-B, Subsection 9.</i></p> <p><u>Finding:</u> A small portion of Stream Protection District (Shoreland Overlay) is identified and depicted on the overall site plan.</p> <p><u>Conclusion:</u> This standard appears to be met.</p> <p style="text-align: right;">Vote of <u> </u> in favor <u> </u> against <u> </u> abstaining</p>
<p>D. Water Supply Sufficient.</p> <p><i>The proposed development has sufficient water available for the reasonably foreseeable needs of the development.</i></p>
<p>E. Municipal Water Supply Available.</p> <p><i>The proposed development will not cause an unreasonable burden on an existing water supply, if one is to be used.</i></p>

<p>Finding: The Kittery Water District has the capacity to supply municipal water service for both domestic and fire protection purposes to the proposed development.</p>
<p>Conclusion: This standard appears to be met.</p>
<p style="text-align: right;">Vote of __ in favor __ against __ abstaining</p>
<p>F. Sewage Disposal Adequate.</p>
<p><i>The proposed development will provide for adequate sewage waste disposal and will not cause an unreasonable burden on municipal services if they are utilized.</i></p>
<p>Finding: By letter from the Town’s Superintendent of Wastewater Services, the Town sanitary sewer service is available for the proposed development and the sewer system will have the capacity and ability to handle the discharge flow estimates.</p>
<p>Conclusion: This standard appears to be met.</p>
<p style="text-align: right;">Vote of __ in favor __ against __ abstaining</p>
<p>G. Municipal Solid Waste Disposal Available.</p>
<p><i>The proposed development will not cause an unreasonable burden on the municipality’s ability to dispose of solid waste, if municipal services are to be used.</i></p>
<p>Finding: Solid waste disposal will either be by contracted curb-side pick-up or residents may elect to utilize the Town Resource Recovery Facility. The proposed development will not burden the facility.</p>
<p>Conclusion: This standard appears to be met.</p>
<p style="text-align: right;">Vote of __ in favor __ against __ abstaining</p>
<p>H. Water Body Quality and Shoreline Protected.</p>
<p><i>Whenever situated entirely or partially within two hundred fifty (250) feet of any wetland, the proposed development will not adversely affect the quality of that body of water or unreasonably affect the shoreline of that body of water.</i></p>
<p>Finding: A 100’ setback from the northern wetland will become a no cut, no disturb area and will remain undeveloped and undisturbed in perpetuity, including no mowing or removal of any vegetation without a permit from the Code Enforcement Officer.</p>
<p>Conclusion: This standard appears to be met.</p>
<p style="text-align: right;">Vote of __ in favor __ against __ abstaining</p>
<p>I. Groundwater Protected.</p>
<p><i>The proposed development will not, alone or in conjunction with existing activities, adversely affect the quality or quantity of groundwater.</i></p>
<p>Finding: The proposed development will be serviced by Town sewer. The runoff from developed areas on site will receive treatment in USF ponds prior to being discharged into on-site wetlands.</p>
<p>Conclusion: This standard appears to be met.</p>
<p style="text-align: right;">Vote of __ in favor __ against __ abstaining</p>
<p>J. Flood Areas Identified and Development Conditioned.</p>

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.

Finding: There is no proposed development located within a flood prone area.

Conclusion: This standard appears to be met.

Vote of __ in favor __ against __ abstaining

K. Stormwater Managed.

The proposed development will provide for adequate stormwater management.

Finding: The use of Underdrained Soil Filter (USF) ponds to attenuate peak flows will result in no increases in peak runoff quantity from the proposed development. No adverse effects are anticipated on any downstream properties or drainage structures for the analyzed storm events. Runoff quality is addressed by use of USF ponds.

Conclusion: This standard appears to be 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.

Finding: Best management practices will be employed as required by the Erosion & Sedimentation Control Plan.

Conclusion: This standard appears to be 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 off-site.*

Finding: The applicant has provided a traffic analysis.

1. A traffic movement permit was previously issued by Maine Department of Transportation (MDOT) for 1,190 peak hour trips. The proposed amendment to the mixed-use development will reduce the traffic count further than was originally approved to 1,161
2. The project roadways and drives are designed to accommodate the projected traffic numbers and provide adequate traffic circulation.

Conclusion: This standard appears to be 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.*

Finding:

1. The proposed development is located outside of a floodplain.
- 2-4. The proposed development will be serviced by Town sewer.
5. The proposed development will adhere to all applicable State regulations.
6. Not applicable to the proposed development.

Conclusion: This standard appears to be 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.

Finding: The property does not include any significant aesthetic, cultural or natural values that require protection.

Conclusion: The requirement appears to be 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.

Finding: The developer has been involved with large-scale construction projects through completion. The developer will provide an inspection escrow in an amount suitable to cover the costs of on-site inspection by the Peer Review Engineer to ensure the proposed development is constructed according to the approved plan.

Conclusion: This standard appears to be met.

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 that the proposed development will have no significant detrimental impact. The Kittery Planning Board hereby grants final approval, including approval for a special exception use request for the development at the above referenced property, including any waivers granted or conditions as noted.

Waivers:

1. None.

Conditions of Approval (to be added onto the final plan):

1. Prior to the issuance of any certification of occupancies for any of the proposed buildings, all infrastructure that affects US Route 1 must be installed.

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

1. All of CMA Engineers' review comments are addressed to their satisfaction.
2. All Notices to Applicant contained in the Findings of Fact (dated: April 8, 2021).
3. 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 plan. The amended subdivision plan must be submitted to Staff for review prior to recording with the York County Registry of Deeds within 90-days of approval.
4. Three (3) 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.
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. All other prior approvals and conditions unless otherwise amended herein remain in effect.

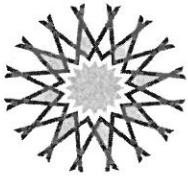
The Planning Board authorizes the Planning Board Chairperson, or Vice Chair, to sign the Final Plan and the Findings of Fact upon confirmation of compliance with any conditions of approval.

Vote of in favor against abstaining

APPROVED BY THE KITTERY PLANNING BOARD ON April 8, 2021

Dutch Dunkelberger, Planning Board Chair

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.



ATTAR

ENGINEERING, INC

CIVIL • STRUCTURAL • MARINE

Bart McDonough, Town Planner
Town of Kittery
P.O. Box 808
Kittery, Maine 03904

March 16, 2021
Project No.: C091-21

**Re: 459 US Route 1 - Kittery
Major Modification**

Dear Mr. McDonough:

We respectfully request the Planning Board review our Application for Major Modification in regard to The Homestead property.

The owner of portion of the property with the apartments at The Homestead has revised the layout and design of the apartments on lot 1 to 16 single family units (elderly) and 16 single family units (non-age-restricted) in 8 buildings. The location and design of ponds 1 and 2 have also been modified to provide a flatter grade for a yard behind the adjacent apartments.

Thank you for taking the time to review our application and we look forward to discussing the project with you at the next available Planning Board Meeting.

Sincerely,

Liam Cullinane
Staff Engineer

cc: Middlesex Land Holdings, LLC
David Trahan
Jayesh Patel

2021-03-16 - C091-21 The Homestead Major Modification

TOWN OF KITTERY, MAINE

TOWN PLANNING AND DEVELOPMENT DEPARTMENT

200 Rogers Road, Kittery, Maine 03904

PHONE: (207) 475-1323 FAX: (207) 439-6806

www.kittery.org

APPLICATION:

MAJOR MODIFICATION TO AN APPROVED PLAN- SITE PLAN



FEE FOR SITE PLAN AMENDMENT REVIEW: (TITLE 16.10.9.3)	<input type="checkbox"/> \$300.00 PLUS THE GREATER OF	<input type="checkbox"/> \$50/ADDITIONAL USE OF UNIT; OR	<input type="checkbox"/> \$5.00/100 SQ FT OF ADDITIONAL GROSS FLOOR AREA	Application Fee Paid: \$ _____ Date: _____ ASA Fee Paid: (TITLE 3.3 TOWN CODE) \$ _____ Date: _____
		<input type="checkbox"/> \$0.50/LINEAR FOOT OF ADDITIONAL DOCK, SLIP & FLOAT; OR	<input type="checkbox"/> \$20.00/ADDITIONAL UNIT INTENDED TO PROVIDE OVERNIGHT SLEEPING ACCOMODATIONS	

PROPERTY DESCRIPTION	Parcel ID	Map	60	Lot	24	Zone(s):	MU, R-RL Shoreland <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Total Land Area (Square Feet)	876,427.2
	Physical Address	459 US Route 1							

PROPERTY OWNER'S INFORMATION	Name	MIDDLESEX LAND HOLDINGS, LLC	Mailing Address	1 BRIDGEVIEW CIRCLE TYNGSBORO, MA 01879
	Phone			
	Fax			
	Email	davidtrahan@comcast.net dpremax@tiac.net		

APPLICANT'S AGENT INFORMATION	Name	Kenneth Wood, P.E.	Mailing Address	Attar Engineering 1284 State Road Eliot, ME 03903
	Phone	207-439-6023		
	Fax	207-439-2128		
	Email	Ken@attarengineering.com		

PROJECT DESCRIPTION	Project Name: The Homestead
	Existing Use: Vacant, previously used as nursing home.
	Proposed Amendment Please describe how the approved plan is proposed to be amended. State any known areas of non-compliance to the Town Code and how this amendment will decrease or remove non-compliance, if applicable.
	Propose to change the apartments on Lot 1 to 16 single family units (elderly) and 16 single family units (non-age restricted) in 8 buildings. The location and design of Pond 1 has changed and Pond 2 has been split into 2 separate ponds, Pond 2A and Pond 2B.

I certify, to the best of my knowledge, this application information is true and correct and I will not deviate from the plan submitted without notifying the Kittery Town Planning Department of any changes.

Applicant's Signature:		Owner's Signature:	
Date:	3/16/2021	Date:	3/16/2021

Minimum Plan Submittal Requirements

- 15 COPIES OF THIS APPLICATION
- 15 COPIES OF THE APPROVED SITE PLAN – 12 REDUCED SIZE AT 11"X17"AND 3 FULL SIZE AT 24"X 36"
- 15 COPIES OF THE PROPOSED AMENDED SITE PLAN– 12 REDUCED SIZE AT 11"X17"AND 3 FULL SIZE AT 24"X 36"
- 1 PDF OF THE SITE PLAN SHOWING GPS COORDINATES

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

THE APPLICANT IS RESPONSIBLE TO PRESENT A CLEAR UNDERSTANDING OF THE PROPOSED AMENDMENT.

- 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
 - Date of plan preparation
 - PARCEL'S TAX MAP ID (MAP/LOT) 1/4" TALL IN LOWER RIGHT
 - 'SITE PLAN AMENDMENT' CLEARLY PART OF TITLE
- D) Clearly show how the approved plan will be amended.
- E) Provide signature blocks for amended approval.
- F) Provide all associated reference material and or documentation that clarifies and or supports the purpose of the proposed amendment.
- G) Revisions to the boundary, internal lots and or parcels must be signed and sealed by a surveyor licensed in the State of Maine.
- H) Revisions to the proposed site must be signed and sealed by a professional engineer licensed in the State of Maine.

SEE TITLE 16.10.5.2 FOR COMPLETE LIST OF SUBMITTAL INFORMATION

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.

Waiver Request

	Ordinance Section	Describe why this request is being made.
DESCRIPTION	***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.

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.

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

COMPLETED BY OFFICE STAFF

ASA CHARGE	AMOUNT	ASA CHARGE	AMOUNT
REVIEW		SERVICES	
LEGAL FEES (TBD)		RECORDER	\$35
ENGINEERS REVIEW (TBD)		FACT FINDING (TBD)	
ABUTTER NOTICES		3 RD PARTY INSPECTIONS (TBD)	
POSTAGE	\$20	OTHER PROFESSIONAL SERVICES	\$50
LEGAL NOTICES		PERSONNEL	
ADVERTISING	\$300	SALARY CHARGES IN EXCESS OF 20 HOURS	
SUPPLIES			
OFFICE	\$5		
SUB TOTAL		SUB TOTAL	
		TOTAL ASA REVIEW FEES	

David Trahan
One Bridgeview Circle
Tyngsboro, MA 01879
(978)815-3662

February 6, 2020

Kathy Connor, Project Planner
Town of Kittery
PO BOX 808
Kittery, ME 03904

Dear Ms. Connor:

Please be informed that Kenneth A. Wood P.E. and Brian Nielsen E.I.T. of Attar Engineering, Inc. will be acting as my agents for the applications for 459 US Route One, Kittery, Maine.

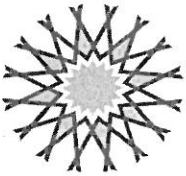
Please contact me if I can provide any additional information.

Sincerely;

A handwritten signature in black ink, appearing to be 'DT', written in a cursive style.

David Trahan

cc: Kenneth A. Wood, P.E. Attar Engineering, Inc.



ATTAR

ENGINEERING, INC

CIVIL • STRUCTURAL • MARINE

MUNICIPAL IMPACT STATEMENT – THE HOMESTEAD SUBDIVISION March 12, 2021

The following "Impact Statements" are provided for the municipal impact analysis:

- The Homestead Subdivision consists of 16 Elderly (Over-55) and 16 single family apartments and a 112 room hotel. The single family units may have school-aged children which will utilize the municipal bus transportation service currently provided to residences in the area. However, a significant impact is not anticipated considering the relatively small (up to 8 families assuming 50% have school aged children) addition to the surrounding residential uses.
- Road maintenance will be the responsibility of the Homeowners Association; as noted on the plan the road will remain private.
- Solid waste disposal will either be by contracted curb-side pick up or residents may elect to use the municipal Transfer Station.
- Wastewater disposal shall be by the municipal system; a letter of capacity from the Sewer Department has been issued.
- Domestic water supply will be supplied by the Kittery Water District; a Letter of Capacity has been issued.
- Police, Fire, and Ambulance services will be required to in the event of any medical or fire emergencies. The Kittery Fire Chief has reviewed the plan.
- Stormwater Management will be accomplished with various stormwater quality and quantity control Best Management Practices. Maintenance will be provided by the Owners of the Apartments and the Hotel.
- No active recreation is proposed; passive recreation is allowed on site and a recreational area is designated on the plans.
- Investment costs for construction of the apartments is approximately \$8mil; the Hotel is approximately \$12.5mil for a total construction cost (structures) of \$20.5mil. Assuming these costs are comparable to the eventual assessed value tax revenue (at the current rate of \$16.80/thousand). The anticipated tax revenue of approximately \$344,400/Year will exceed the cost of any municipal services.

Please contact me for any additional information or clarifications required.

Sincerely,

Kenneth A. Wood, P.E.
President



Google

43°07'40.88" N 70°43'17.41" W elev 41

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392

TeleWood Ln

Legebwa

Jaksen Rd

Lewis Rd

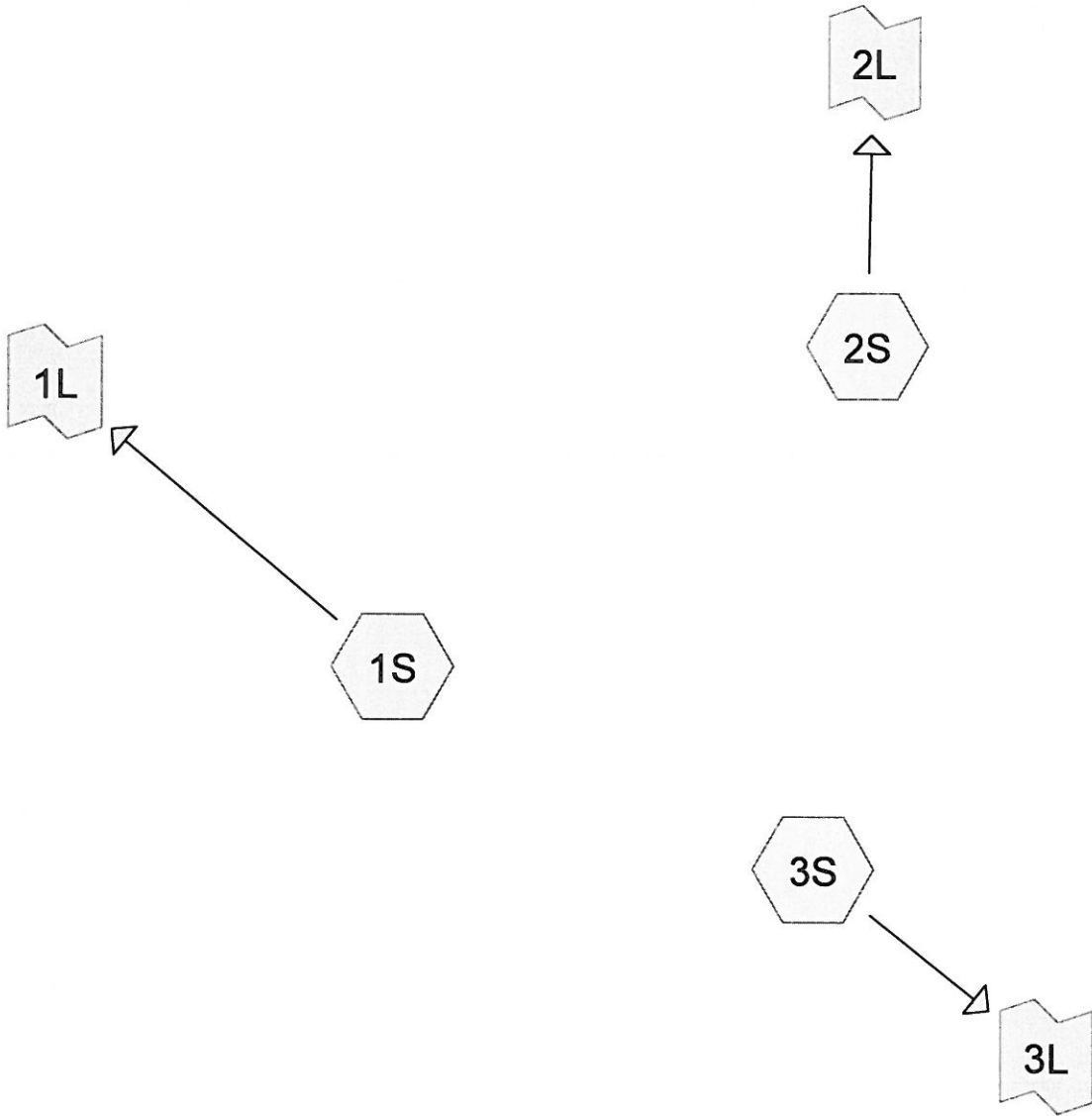
Zakayla Ln

Adams Rd

Cutts Rd

Old Cutts Rd

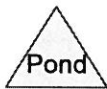
95



Subcat



Reach



Pond



Link

Routing Diagram for The Homestead EXT

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The Homestead EXT

Type III 24-hr 2 YEAR STORM Rainfall=3.33"

Prepared by {enter your company name here}

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Time span=1.00-20.00 hrs, dt=0.01 hrs, 1901 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Runoff Area=772,874 sf 11.41% Impervious Runoff Depth>1.18"
Flow Length=1,580' Tc=36.4 min CN=77 Runoff=13.65 cfs 76,291 cf

Subcatchment 2S: Runoff Area=434,052 sf 5.33% Impervious Runoff Depth>1.07"
Flow Length=931' Tc=41.7 min CN=75 Runoff=6.39 cfs 38,541 cf

Subcatchment 3S: Runoff Area=223,297 sf 7.12% Impervious Runoff Depth>1.20"
Flow Length=629' Tc=11.2 min CN=77 Runoff=6.43 cfs 22,277 cf

Link 1L: Inflow=13.65 cfs 76,291 cf
Primary=13.65 cfs 76,291 cf

Link 2L: Inflow=6.39 cfs 38,541 cf
Primary=6.39 cfs 38,541 cf

Link 3L: Inflow=6.43 cfs 22,277 cf
Primary=6.43 cfs 22,277 cf

Total Runoff Area = 32.833 ac Runoff Volume = 137,109 cf Average Runoff Depth = 1.15"
91.11% Pervious = 29.914 ac 8.89% Impervious = 2.920 ac

Summary for Subcatchment 1S:

Runoff = 13.65 cfs @ 12.54 hrs, Volume= 76,291 cf, Depth> 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-20.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 YEAR STORM Rainfall=3.33"

Area (sf)	CN	Description
88,161	98	Paved parking & roofs
316,563	70	Woods, Good, HSG C
368,150	77	Woods, Good, HSG D
772,874	77	Weighted Average
684,713		88.59% Pervious Area
88,161		11.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	50	0.0200	0.07		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.00"
4.7	257	0.0330	0.91		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.1	32	0.0310	3.92	2.74	Pipe Channel, Culvert 12.0" Round w/ 2.0" inside fill Area= 0.7 sf Perim= 3.0' r= 0.23' n= 0.025 Corrugated metal
2.6	145	0.0340	0.92		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.1	18	0.0310	3.92	2.74	Pipe Channel, Culvert 12.0" Round w/ 2.0" inside fill Area= 0.7 sf Perim= 3.0' r= 0.23' n= 0.025 Corrugated metal
15.9	1,038	0.0150	1.09	119.37	Trap/Vee/Rect Channel Flow, Wetland Bot.W=90.00' D=1.00' Z= 20.0 ' / Top.W=130.00' n= 0.150
0.3	40	0.0050	1.97	1.38	Pipe Channel, 12.0" Round w/ 2.0" inside fill Area= 0.7 sf Perim= 3.0' r= 0.23' n= 0.020 Corrugated PE, corrugated interior
36.4	1,580	Total			

Summary for Subcatchment 2S:

Runoff = 6.39 cfs @ 12.61 hrs, Volume= 38,541 cf, Depth> 1.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-20.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 YEAR STORM Rainfall=3.33"

Area (sf)	CN	Description
23,128	98	Paved parking & roofs
194,475	70	Woods, Good, HSG C
216,449	77	Woods, Good, HSG D
434,052	75	Weighted Average
410,924		94.67% Pervious Area
23,128		5.33% Impervious Area

The Homestead EXT

Type III 24-hr 2 YEAR STORM Rainfall=3.33"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.7	74	0.0230	0.04		Sheet Flow,
					Woods: Dense underbrush n= 0.800 P2= 3.00"
6.1	326	0.0320	0.89		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
6.9	531	0.0260	1.28	63.79	Trap/Vee/Rect Channel Flow, Wetland
					Bot.W=30.00' D=1.00' Z= 20.0 '/' Top.W=70.00'
					n= 0.150
41.7	931	Total			

Summary for Subcatchment 3S:

Runoff = 6.43 cfs @ 12.16 hrs, Volume= 22,277 cf, Depth> 1.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-20.00 hrs, dt= 0.01 hrs
Type III 24-hr 2 YEAR STORM Rainfall=3.33"

Area (sf)	CN	Description
15,896	98	Paved parking & roofs
* 151,978	77	Woods, Good, HSG D
55,423	70	Woods, Good, HSG C
223,297	77	Weighted Average
207,401		92.88% Pervious Area
15,896		7.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	27	0.0200	1.03		Sheet Flow,
					Smooth surfaces n= 0.011 P2= 3.00"
2.2	153	0.0536	1.16		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
8.6	449	0.0110	0.87	56.45	Trap/Vee/Rect Channel Flow, Wetland
					Bot.W=45.00' D=1.00' Z= 20.0 '/' Top.W=85.00'
					n= 0.150
11.2	629	Total			

Summary for Link 1L:

Inflow Area = 17.743 ac, 11.41% Impervious, Inflow Depth > 1.18" for 2 YEAR STORM event
 Inflow = 13.65 cfs @ 12.54 hrs, Volume= 76,291 cf
 Primary = 13.65 cfs @ 12.54 hrs, Volume= 76,291 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-20.00 hrs, dt= 0.01 hrs

Summary for Link 2L:

Inflow Area = 9.964 ac, 5.33% Impervious, Inflow Depth > 1.07" for 2 YEAR STORM event
Inflow = 6.39 cfs @ 12.61 hrs, Volume= 38,541 cf
Primary = 6.39 cfs @ 12.61 hrs, Volume= 38,541 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-20.00 hrs, dt= 0.01 hrs

Summary for Link 3L:

Inflow Area = 5.126 ac, 7.12% Impervious, Inflow Depth > 1.20" for 2 YEAR STORM event
Inflow = 6.43 cfs @ 12.16 hrs, Volume= 22,277 cf
Primary = 6.43 cfs @ 12.16 hrs, Volume= 22,277 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-20.00 hrs, dt= 0.01 hrs

The Homestead EXT

Type III 24-hr 10 YEAR STORM Rainfall=5.34"

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Time span=1.00-20.00 hrs, dt=0.01 hrs, 1901 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Runoff Area=772,874 sf 11.41% Impervious Runoff Depth>2.68"
Flow Length=1,580' Tc=36.4 min CN=77 Runoff=31.29 cfs 172,723 cf

Subcatchment 2S: Runoff Area=434,052 sf 5.33% Impervious Runoff Depth>2.50"
Flow Length=931' Tc=41.7 min CN=75 Runoff=15.32 cfs 90,473 cf

Subcatchment 3S: Runoff Area=223,297 sf 7.12% Impervious Runoff Depth>2.71"
Flow Length=629' Tc=11.2 min CN=77 Runoff=14.73 cfs 50,347 cf

Link 1L: Inflow=31.29 cfs 172,723 cf
Primary=31.29 cfs 172,723 cf

Link 2L: Inflow=15.32 cfs 90,473 cf
Primary=15.32 cfs 90,473 cf

Link 3L: Inflow=14.73 cfs 50,347 cf
Primary=14.73 cfs 50,347 cf

Total Runoff Area = 32.833 ac Runoff Volume = 313,544 cf Average Runoff Depth = 2.63"
91.11% Pervious = 29.914 ac 8.89% Impervious = 2.920 ac

The Homestead EXT

Type III 24-hr 10 YEAR STORM Rainfall=5.34"

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Summary for Subcatchment 1S:

Runoff = 31.29 cfs @ 12.50 hrs, Volume= 172,723 cf, Depth> 2.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-20.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 YEAR STORM Rainfall=5.34"

Area (sf)	CN	Description
88,161	98	Paved parking & roofs
316,563	70	Woods, Good, HSG C
368,150	77	Woods, Good, HSG D
772,874	77	Weighted Average
684,713		88.59% Pervious Area
88,161		11.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	50	0.0200	0.07		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.00"
4.7	257	0.0330	0.91		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.1	32	0.0310	3.92	2.74	Pipe Channel, Culvert 12.0" Round w/ 2.0" inside fill Area= 0.7 sf Perim= 3.0' r= 0.23' n= 0.025 Corrugated metal
2.6	145	0.0340	0.92		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.1	18	0.0310	3.92	2.74	Pipe Channel, Culvert 12.0" Round w/ 2.0" inside fill Area= 0.7 sf Perim= 3.0' r= 0.23' n= 0.025 Corrugated metal
15.9	1,038	0.0150	1.09	119.37	Trap/Vee/Rect Channel Flow, Wetland Bot.W=90.00' D=1.00' Z= 20.0 ' Top.W=130.00' n= 0.150
0.3	40	0.0050	1.97	1.38	Pipe Channel, 12.0" Round w/ 2.0" inside fill Area= 0.7 sf Perim= 3.0' r= 0.23' n= 0.020 Corrugated PE, corrugated interior
36.4	1,580	Total			

Summary for Subcatchment 2S:

Runoff = 15.32 cfs @ 12.56 hrs, Volume= 90,473 cf, Depth> 2.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-20.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 YEAR STORM Rainfall=5.34"

Area (sf)	CN	Description
23,128	98	Paved parking & roofs
194,475	70	Woods, Good, HSG C
216,449	77	Woods, Good, HSG D
434,052	75	Weighted Average
410,924		94.67% Pervious Area
23,128		5.33% Impervious Area

The Homestead EXT

Type III 24-hr 10 YEAR STORM Rainfall=5.34"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.7	74	0.0230	0.04		Sheet Flow, Woods: Dense underbrush n= 0.800 P2= 3.00"
6.1	326	0.0320	0.89		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
6.9	531	0.0260	1.28	63.79	Trap/Vee/Rect Channel Flow, Wetland Bot.W=30.00' D=1.00' Z= 20.0 '/' Top.W=70.00' n= 0.150
41.7	931	Total			

Summary for Subcatchment 3S:

Runoff = 14.73 cfs @ 12.16 hrs, Volume= 50,347 cf, Depth> 2.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-20.00 hrs, dt= 0.01 hrs
Type III 24-hr 10 YEAR STORM Rainfall=5.34"

Area (sf)	CN	Description
15,896	98	Paved parking & roofs
* 151,978	77	Woods, Good, HSG D
55,423	70	Woods, Good, HSG C
223,297	77	Weighted Average
207,401		92.88% Pervious Area
15,896		7.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	27	0.0200	1.03		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.00"
2.2	153	0.0536	1.16		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
8.6	449	0.0110	0.87	56.45	Trap/Vee/Rect Channel Flow, Wetland Bot.W=45.00' D=1.00' Z= 20.0 '/' Top.W=85.00' n= 0.150
11.2	629	Total			

Summary for Link 1L:

Inflow Area = 17.743 ac, 11.41% Impervious, Inflow Depth > 2.68" for 10 YEAR STORM event

Inflow = 31.29 cfs @ 12.50 hrs, Volume= 172,723 cf

Primary = 31.29 cfs @ 12.50 hrs, Volume= 172,723 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-20.00 hrs, dt= 0.01 hrs

Summary for Link 2L:

Inflow Area = 9.964 ac, 5.33% Impervious, Inflow Depth > 2.50" for 10 YEAR STORM event
Inflow = 15.32 cfs @ 12.56 hrs, Volume= 90,473 cf
Primary = 15.32 cfs @ 12.56 hrs, Volume= 90,473 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-20.00 hrs, dt= 0.01 hrs

Summary for Link 3L:

Inflow Area = 5.126 ac, 7.12% Impervious, Inflow Depth > 2.71" for 10 YEAR STORM event
Inflow = 14.73 cfs @ 12.16 hrs, Volume= 50,347 cf
Primary = 14.73 cfs @ 12.16 hrs, Volume= 50,347 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-20.00 hrs, dt= 0.01 hrs

The Homestead EXT

Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Time span=1.00-20.00 hrs, dt=0.01 hrs, 1901 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Runoff Area=772,874 sf 11.41% Impervious Runoff Depth>3.71"
Flow Length=1,580' Tc=36.4 min CN=77 Runoff=43.10 cfs 239,127 cf

Subcatchment 2S: Runoff Area=434,052 sf 5.33% Impervious Runoff Depth>3.50"
Flow Length=931' Tc=41.7 min CN=75 Runoff=21.43 cfs 126,733 cf

Subcatchment 3S: Runoff Area=223,297 sf 7.12% Impervious Runoff Depth>3.74"
Flow Length=629' Tc=11.2 min CN=77 Runoff=20.26 cfs 69,664 cf

Link 1L: Inflow=43.10 cfs 239,127 cf
Primary=43.10 cfs 239,127 cf

Link 2L: Inflow=21.43 cfs 126,733 cf
Primary=21.43 cfs 126,733 cf

Link 3L: Inflow=20.26 cfs 69,664 cf
Primary=20.26 cfs 69,664 cf

Total Runoff Area = 32.833 ac Runoff Volume = 435,525 cf Average Runoff Depth = 3.65"
91.11% Pervious = 29.914 ac 8.89% Impervious = 2.920 ac

Summary for Subcatchment 1S:

Runoff = 43.10 cfs @ 12.50 hrs, Volume= 239,127 cf, Depth> 3.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-20.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
88,161	98	Paved parking & roofs
316,563	70	Woods, Good, HSG C
368,150	77	Woods, Good, HSG D
772,874	77	Weighted Average
684,713		88.59% Pervious Area
88,161		11.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	50	0.0200	0.07		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.00"
4.7	257	0.0330	0.91		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.1	32	0.0310	3.92	2.74	Pipe Channel, Culvert 12.0" Round w/ 2.0" inside fill Area= 0.7 sf Perim= 3.0' r= 0.23' n= 0.025 Corrugated metal
2.6	145	0.0340	0.92		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
0.1	18	0.0310	3.92	2.74	Pipe Channel, Culvert 12.0" Round w/ 2.0" inside fill Area= 0.7 sf Perim= 3.0' r= 0.23' n= 0.025 Corrugated metal
15.9	1,038	0.0150	1.09	119.37	Trap/Vee/Rect Channel Flow, Wetland Bot.W=90.00' D=1.00' Z= 20.0 ' /' Top.W=130.00' n= 0.150
0.3	40	0.0050	1.97	1.38	Pipe Channel, 12.0" Round w/ 2.0" inside fill Area= 0.7 sf Perim= 3.0' r= 0.23' n= 0.020 Corrugated PE, corrugated interior
36.4	1,580	Total			

Summary for Subcatchment 2S:

Runoff = 21.43 cfs @ 12.56 hrs, Volume= 126,733 cf, Depth> 3.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-20.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
23,128	98	Paved parking & roofs
194,475	70	Woods, Good, HSG C
216,449	77	Woods, Good, HSG D
434,052	75	Weighted Average
410,924		94.67% Pervious Area
23,128		5.33% Impervious Area

The Homestead EXT

Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.7	74	0.0230	0.04		Sheet Flow, Woods: Dense underbrush n= 0.800 P2= 3.00"
6.1	326	0.0320	0.89		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
6.9	531	0.0260	1.28	63.79	Trap/Vee/Rect Channel Flow, Wetland Bot.W=30.00' D=1.00' Z= 20.0 ' /' Top.W=70.00' n= 0.150
41.7	931	Total			

Summary for Subcatchment 3S:

Runoff = 20.26 cfs @ 12.16 hrs, Volume= 69,664 cf, Depth> 3.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-20.00 hrs, dt= 0.01 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
15,896	98	Paved parking & roofs
* 151,978	77	Woods, Good, HSG D
55,423	70	Woods, Good, HSG C
223,297	77	Weighted Average
207,401		92.88% Pervious Area
15,896		7.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
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2.2	153	0.0536	1.16		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
8.6	449	0.0110	0.87	56.45	Trap/Vee/Rect Channel Flow, Wetland Bot.W=45.00' D=1.00' Z= 20.0 ' /' Top.W=85.00' n= 0.150
11.2	629	Total			

Summary for Link 1L:

Inflow Area = 17.743 ac, 11.41% Impervious, Inflow Depth > 3.71" for 25 YEAR STORM event

Inflow = 43.10 cfs @ 12.50 hrs, Volume= 239,127 cf

Primary = 43.10 cfs @ 12.50 hrs, Volume= 239,127 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-20.00 hrs, dt= 0.01 hrs

Summary for Link 2L:

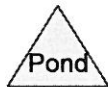
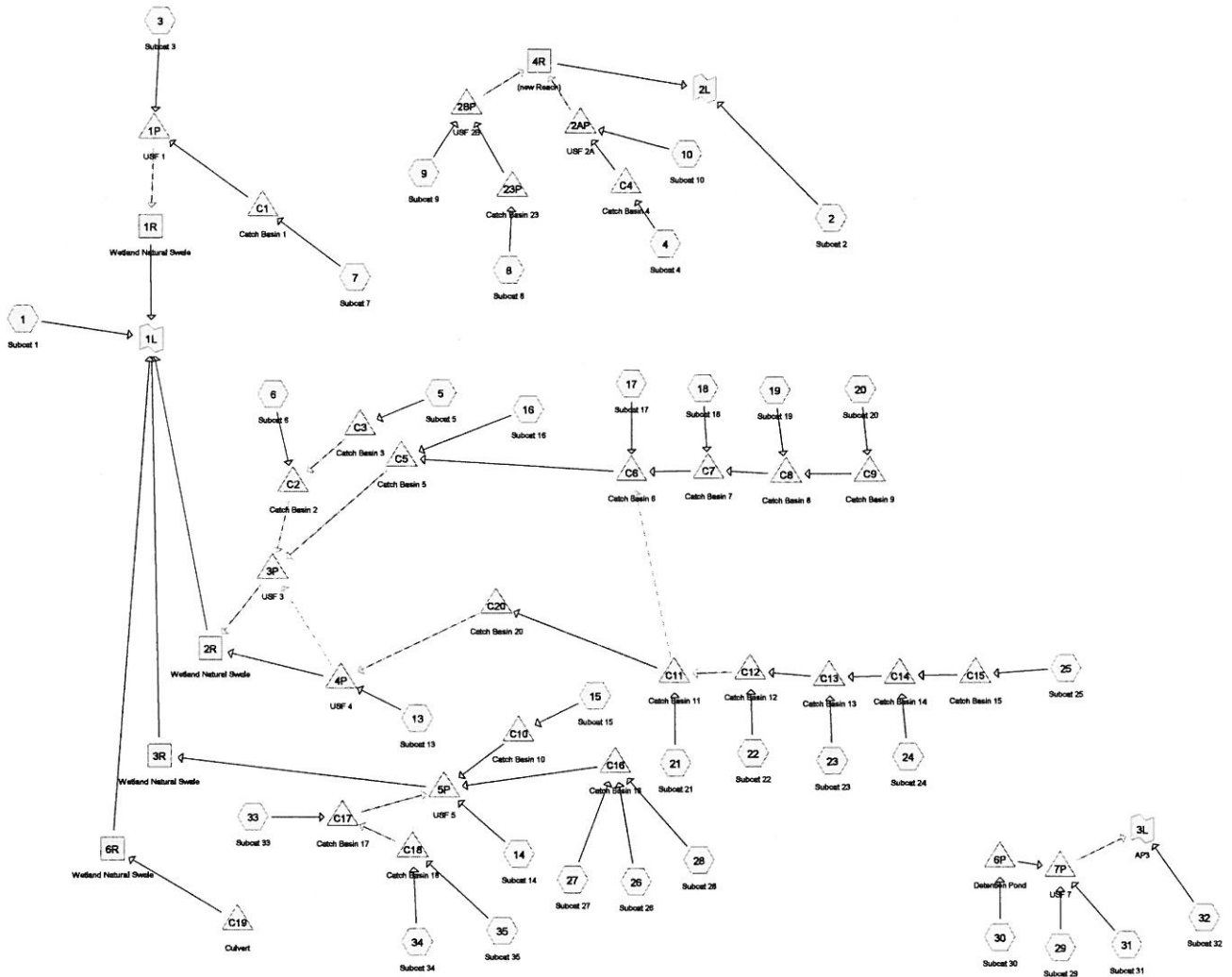
Inflow Area = 9.964 ac, 5.33% Impervious, Inflow Depth > 3.50" for 25 YEAR STORM event
Inflow = 21.43 cfs @ 12.56 hrs, Volume= 126,733 cf
Primary = 21.43 cfs @ 12.56 hrs, Volume= 126,733 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-20.00 hrs, dt= 0.01 hrs

Summary for Link 3L:

Inflow Area = 5.126 ac, 7.12% Impervious, Inflow Depth > 3.74" for 25 YEAR STORM event
Inflow = 20.26 cfs @ 12.16 hrs, Volume= 69,664 cf
Primary = 20.26 cfs @ 12.16 hrs, Volume= 69,664 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-20.00 hrs, dt= 0.01 hrs



Routing Diagram for The Homestead PRP BASE
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
4.138	74	>75% Grass cover, Good, HSG C (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 28, 30, 31, 34, 35)
0.058	80	>75% Grass cover, Good, HSG D (1, 6, 14)
2.453	98	Paved parking, HSG C (1, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 30, 31, 32, 33, 34, 35)
0.131	98	Paved parking, HSG D (1, 14, 26, 31, 32, 33, 35)
1.562	98	Roofs, HSG C (3, 4, 5, 6, 7, 8, 9, 10, 13, 16, 22, 23, 24, 26, 27, 28, 29, 30)
5.611	70	Woods, Good, HSG C (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 16, 21, 22, 23, 24, 25, 26, 27, 28, 30, 31, 32, 33, 34, 35)
18.205	77	Woods, Good, HSG D (1, 2, 31, 32, 33, 35)
32.158	78	TOTAL AREA

The Homestead PRP BASE

Type III 24-hr 2 YEAR STORM Rainfall=3.33"

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Time span=5.00-72.00 hrs, dt=0.05 hrs, 1341 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1	Runoff Area=437,707 sf 0.53% Impervious Runoff Depth=1.24" Flow Length=1,218' Tc=60.4 min CN=76 Runoff=5.53 cfs 45,352 cf
Subcatchment 2: Subcat 2	Runoff Area=339,935 sf 0.00% Impervious Runoff Depth=1.18" Flow Length=931' Tc=39.0 min CN=75 Runoff=5.18 cfs 33,509 cf
Subcatchment 3: Subcat 3	Runoff Area=18,390 sf 27.02% Impervious Runoff Depth=1.50" Flow Length=145' Tc=1.1 min CN=80 Runoff=0.82 cfs 2,303 cf
Subcatchment 4: Subcat 4	Runoff Area=7,776 sf 63.03% Impervious Runoff Depth=2.20" Flow Length=100' Tc=0.9 min CN=89 Runoff=0.51 cfs 1,426 cf
Subcatchment 5: Subcat 5	Runoff Area=12,124 sf 53.19% Impervious Runoff Depth=2.03" Flow Length=168' Tc=3.9 min CN=87 Runoff=0.70 cfs 2,051 cf
Subcatchment 6: Subcat 6	Runoff Area=42,157 sf 31.02% Impervious Runoff Depth=1.57" Flow Length=288' Tc=5.1 min CN=81 Runoff=1.78 cfs 5,522 cf
Subcatchment 7: Subcat 7	Runoff Area=12,226 sf 59.44% Impervious Runoff Depth=2.11" Flow Length=175' Tc=4.0 min CN=88 Runoff=0.73 cfs 2,154 cf
Subcatchment 8: Subcat 8	Runoff Area=10,015 sf 73.04% Impervious Runoff Depth=2.38" Flow Length=244' Tc=1.4 min CN=91 Runoff=0.69 cfs 1,987 cf
Subcatchment 9: Subcat 9	Runoff Area=23,230 sf 33.73% Impervious Runoff Depth=1.64" Flow Length=158' Tc=2.5 min CN=82 Runoff=1.13 cfs 3,181 cf
Subcatchment 10: Subcat 10	Runoff Area=41,347 sf 21.80% Impervious Runoff Depth=1.44" Flow Length=260' Slope=0.0180 '/ Tc=2.4 min CN=79 Runoff=1.74 cfs 4,945 cf
Subcatchment 13: Subcat 13	Runoff Area=17,551 sf 20.47% Impervious Runoff Depth=1.44" Flow Length=111' Tc=0.7 min CN=79 Runoff=0.75 cfs 2,099 cf
Subcatchment 14: Subcat 14	Runoff Area=18,505 sf 16.05% Impervious Runoff Depth=1.37" Flow Length=118' Tc=1.2 min CN=78 Runoff=0.73 cfs 2,112 cf
Subcatchment 15: Subcat 15	Runoff Area=0.094 ac 82.38% Impervious Runoff Depth>2.57" Flow Length=135' Slope=0.0200 '/ Tc=2.3 min CN=93 Runoff=0.30 cfs 879 cf
Subcatchment 16: Subcat 16	Runoff Area=12,591 sf 11.51% Impervious Runoff Depth=1.12" Flow Length=273' Tc=14.0 min CN=74 Runoff=0.28 cfs 1,179 cf
Subcatchment 17: Subcat 17	Runoff Area=4,641 sf 97.61% Impervious Runoff Depth>2.95" Flow Length=50' Slope=0.0205 '/ Tc=0.7 min CN=97 Runoff=0.38 cfs 1,141 cf
Subcatchment 18: Subcat 18	Runoff Area=4,781 sf 96.10% Impervious Runoff Depth>2.95" Flow Length=50' Slope=0.0140 '/ Tc=0.8 min CN=97 Runoff=0.39 cfs 1,175 cf

The Homestead PRP BASE

Type III 24-hr 2 YEAR STORM Rainfall=3.33"

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Subcatchment 19: Subcat 19	Runoff Area=4,903 sf 95.78% Impervious Runoff Depth>2.95"
Flow Length=50'	Slope=0.0140 '/ Tc=0.8 min CN=97 Runoff=0.40 cfs 1,205 cf
Subcatchment 20: Subcat 20	Runoff Area=5,929 sf 98.01% Impervious Runoff Depth>3.04"
Flow Length=50'	Slope=0.0120 '/ Tc=0.9 min CN=98 Runoff=0.49 cfs 1,500 cf
Subcatchment 21: Subcat 21	Runoff Area=5,486 sf 95.70% Impervious Runoff Depth>2.95"
Flow Length=50'	Slope=0.0205 '/ Tc=0.7 min CN=97 Runoff=0.45 cfs 1,348 cf
Subcatchment 22: Subcat 22	Runoff Area=8,401 sf 96.51% Impervious Runoff Depth>2.95"
Flow Length=60'	Slope=0.0104 '/ Tc=1.1 min CN=97 Runoff=0.68 cfs 2,065 cf
Subcatchment 23: Subcat 23	Runoff Area=7,920 sf 95.70% Impervious Runoff Depth>2.95"
Flow Length=60'	Slope=0.0140 '/ Tc=1.0 min CN=97 Runoff=0.65 cfs 1,947 cf
Subcatchment 24: Subcat 24	Runoff Area=0.296 ac 96.53% Impervious Runoff Depth>2.95"
Flow Length=113'	Slope=0.0120 '/ Tc=1.4 min CN=97 Runoff=1.03 cfs 3,169 cf
Subcatchment 25: Subcat 25	Runoff Area=15,031 sf 0.54% Impervious Runoff Depth=1.07"
Flow Length=156'	Tc=12.2 min CN=73 Runoff=0.33 cfs 1,336 cf
Subcatchment 26: Subcat 26	Runoff Area=14,414 sf 47.19% Impervious Runoff Depth=1.72"
Flow Length=218'	Tc=2.9 min CN=83 Runoff=0.73 cfs 2,062 cf
Subcatchment 27: Subcat 27	Runoff Area=5,987 sf 99.94% Impervious Runoff Depth>3.04"
	Tc=0.0 min CN=98 Runoff=0.51 cfs 1,515 cf
Subcatchment 28: Subcat 28	Runoff Area=8,922 sf 98.11% Impervious Runoff Depth>2.95"
	Tc=0.0 min CN=97 Runoff=0.75 cfs 2,193 cf
Subcatchment 29: Subcat 29	Runoff Area=0.116 ac 100.00% Impervious Runoff Depth>3.04"
	Tc=0.0 min CN=98 Runoff=0.43 cfs 1,276 cf
Subcatchment 30: Subcat 30	Runoff Area=0.375 ac 68.26% Impervious Runoff Depth=2.29"
Flow Length=153'	Slope=0.0120 '/ Tc=3.1 min CN=90 Runoff=1.07 cfs 3,114 cf
Subcatchment 31: Subcat 31	Runoff Area=0.336 ac 25.38% Impervious Runoff Depth=1.37"
Flow Length=200'	Tc=5.8 min CN=78 Runoff=0.52 cfs 1,668 cf
Subcatchment 32: Subcat 32	Runoff Area=190,972 sf 0.03% Impervious Runoff Depth=1.24"
Flow Length=615'	Tc=9.9 min CN=76 Runoff=5.37 cfs 19,787 cf
Subcatchment 33: Subcat 33	Runoff Area=11,522 sf 42.74% Impervious Runoff Depth=1.95"
Flow Length=124'	Tc=12.4 min CN=86 Runoff=0.49 cfs 1,871 cf
Subcatchment 34: Subcat 34	Runoff Area=4,123 sf 50.81% Impervious Runoff Depth=1.79"
Flow Length=68'	Tc=0.8 min CN=84 Runoff=0.22 cfs 616 cf
Subcatchment 35: Subcat 35	Runoff Area=61,230 sf 7.19% Impervious Runoff Depth=1.07"
Flow Length=361'	Tc=18.7 min CN=73 Runoff=1.14 cfs 5,444 cf

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Reach 1R: Wetland Natural Swale Avg. Flow Depth=0.04' Max Vel=0.32 fps Inflow=0.12 cfs 4,236 cf
n=0.100 L=300.0' S=0.0400 '/' Capacity=11.57 cfs Outflow=0.12 cfs 4,201 cf

Reach 2R: Wetland Natural Swale Avg. Flow Depth=0.05' Max Vel=0.15 fps Inflow=1.35 cfs 25,378 cf
n=0.150 L=700.0' S=0.0114 '/' Capacity=104.19 cfs Outflow=0.68 cfs 25,268 cf

Reach 3R: Wetland Natural Swale Avg. Flow Depth=0.04' Max Vel=0.11 fps Inflow=0.89 cfs 16,664 cf
n=0.150 L=850.0' S=0.0094 '/' Capacity=94.55 cfs Outflow=0.36 cfs 16,420 cf

Reach 4R: (new Reach) Avg. Flow Depth=0.04' Max Vel=0.81 fps Inflow=0.31 cfs 11,513 cf
n=0.030 L=130.0' S=0.0231 '/' Capacity=29.30 cfs Outflow=0.31 cfs 11,513 cf

Reach 6R: Wetland Natural Swale Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0 cf
n=0.150 L=1,128.0' S=0.0160 '/' Capacity=123.12 cfs Outflow=0.00 cfs 0 cf

Pond 1P: USF 1 Peak Elev=47.66' Storage=2,485 cf Inflow=1.49 cfs 4,418 cf
Primary=0.12 cfs 4,236 cf Secondary=0.00 cfs 0 cf Outflow=0.12 cfs 4,236 cf

Pond 2AP: USF 2A Peak Elev=47.67' Storage=3,380 cf Inflow=2.21 cfs 6,358 cf
Primary=0.16 cfs 6,358 cf Secondary=0.00 cfs 0 cf Outflow=0.16 cfs 6,358 cf

Pond 2BP: USF 2B Peak Elev=46.57' Storage=2,520 cf Inflow=1.80 cfs 5,155 cf
Primary=0.19 cfs 5,155 cf Secondary=0.00 cfs 0 cf Outflow=0.19 cfs 5,155 cf

Pond 3P: USF 3 Peak Elev=46.89' Storage=6,953 cf Inflow=3.95 cfs 13,593 cf
Primary=0.50 cfs 13,593 cf Secondary=0.00 cfs 0 cf Outflow=0.50 cfs 13,593 cf

Pond 4P: USF 4 Peak Elev=46.77' Storage=5,356 cf Inflow=3.59 cfs 11,785 cf
Primary=0.99 cfs 11,785 cf Secondary=0.00 cfs 0 cf Outflow=0.99 cfs 11,785 cf

Pond 5P: USF 5 Peak Elev=47.75' Storage=7,708 cf Inflow=3.67 cfs 16,665 cf
Outflow=0.89 cfs 16,664 cf

Pond 6P: Detention Pond Peak Elev=59.37' Storage=1,342 cf Inflow=1.07 cfs 3,114 cf
12.0" Round Culvert n=0.013 L=70.0' S=0.0057 '/' Outflow=0.42 cfs 2,214 cf

Pond 7P: USF 7 Peak Elev=57.67' Storage=2,891 cf Inflow=1.00 cfs 5,159 cf
Primary=0.11 cfs 5,159 cf Secondary=0.00 cfs 0 cf Outflow=0.11 cfs 5,159 cf

Pond 23P: Catch Basin 23 Peak Elev=58.49' Storage=19 cf Inflow=0.69 cfs 1,987 cf
12.0" Round Culvert n=0.020 L=224.0' S=0.0112 '/' Outflow=0.69 cfs 1,974 cf

Pond C1: Catch Basin 1 Peak Elev=54.43' Storage=45 cf Inflow=0.73 cfs 2,154 cf
12.0" Round Culvert n=0.020 L=63.0' S=0.0317 '/' Outflow=0.73 cfs 2,115 cf

Pond C10: Catch Basin 10 Peak Elev=51.01' Storage=0 cf Inflow=0.30 cfs 879 cf
12.0" Round Culvert n=0.020 L=50.0' S=0.0100 '/' Outflow=0.30 cfs 879 cf

Pond C11: Catch Basin 11 Peak Elev=53.79' Storage=17 cf Inflow=2.93 cfs 9,751 cf
Primary=2.92 cfs 9,748 cf Secondary=0.00 cfs 0 cf Outflow=2.92 cfs 9,748 cf

The Homestead PRP BASE

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Pond C12: Catch Basin 12	Peak Elev=55.13' Storage=15 cf Inflow=2.49 cfs 8,405 cf Primary=2.48 cfs 8,403 cf Secondary=0.00 cfs 0 cf Outflow=2.48 cfs 8,403 cf
Pond C13: Catch Basin 13	Peak Elev=55.90' Storage=44 cf Inflow=1.82 cfs 6,373 cf 12.0" Round Culvert n=0.020 L=70.0' S=0.0100 '/ Outflow=1.81 cfs 6,340 cf
Pond C14: Catch Basin 14	Peak Elev=58.06' Storage=46 cf Inflow=1.18 cfs 4,463 cf 12.0" Round Culvert n=0.020 L=70.0' S=0.0114 '/ Outflow=1.18 cfs 4,426 cf
Pond C15: Catch Basin 15	Peak Elev=57.04' Storage=46 cf Inflow=0.33 cfs 1,336 cf 12.0" Round Culvert n=0.020 L=150.0' S=0.0107 '/ Outflow=0.33 cfs 1,295 cf
Pond C16: Catch Basin 16	Peak Elev=51.19' Storage=2 cf Inflow=1.85 cfs 5,769 cf 14.0" Round Culvert n=0.020 L=60.0' S=0.0250 '/ Outflow=1.85 cfs 5,769 cf
Pond C17: Catch Basin 17	Peak Elev=52.01' Storage=3 cf Inflow=1.62 cfs 7,905 cf Primary=1.62 cfs 7,905 cf Secondary=0.00 cfs 0 cf Outflow=1.62 cfs 7,905 cf
Pond C18: Catch Basin 18	Peak Elev=51.67' Storage=35 cf Inflow=1.22 cfs 6,059 cf Primary=1.21 cfs 6,034 cf Secondary=0.00 cfs 0 cf Outflow=1.21 cfs 6,034 cf
Pond C19: Culvert	Peak Elev=0.00' Storage=0 cf 15.0" Round Culvert n=0.020 L=60.0' S=0.0333 '/ Primary=0.00 cfs 0 cf
Pond C2: Catch Basin 2	Peak Elev=51.38' Storage=57 cf Inflow=2.46 cfs 7,535 cf Primary=2.43 cfs 7,488 cf Secondary=0.00 cfs 0 cf Outflow=2.43 cfs 7,488 cf
Pond C20: Catch Basin 20	Peak Elev=51.17' Storage=67 cf Inflow=2.92 cfs 9,748 cf Primary=2.86 cfs 9,686 cf Secondary=0.00 cfs 0 cf Outflow=2.86 cfs 9,686 cf
Pond C3: Catch Basin 3	Peak Elev=53.42' Storage=44 cf Inflow=0.70 cfs 2,051 cf 12.0" Round Culvert n=0.020 L=50.0' S=0.0540 '/ Outflow=0.70 cfs 2,012 cf
Pond C4: Catch Basin 4	Peak Elev=59.51' Storage=20 cf Inflow=0.51 cfs 1,426 cf 12.0" Round Culvert n=0.020 L=224.0' S=0.0049 '/ Outflow=0.51 cfs 1,413 cf
Pond C5: Catch Basin 5	Peak Elev=51.75' Storage=55 cf Inflow=1.76 cfs 6,148 cf 12.0" Round Culvert n=0.020 L=229.0' S=0.0079 '/ Outflow=1.75 cfs 6,105 cf
Pond C6: Catch Basin 6	Peak Elev=54.97' Storage=52 cf Inflow=1.66 cfs 5,008 cf 12.0" Round Culvert n=0.020 L=70.0' S=0.0057 '/ Outflow=1.65 cfs 4,969 cf
Pond C7: Catch Basin 7	Peak Elev=55.62' Storage=8 cf Inflow=1.28 cfs 3,867 cf 12.0" Round Culvert n=0.020 L=60.0' S=0.0100 '/ Outflow=1.28 cfs 3,867 cf
Pond C8: Catch Basin 8	Peak Elev=56.18' Storage=2 cf Inflow=0.90 cfs 2,699 cf 12.0" Round Culvert n=0.020 L=60.0' S=0.0100 '/ Outflow=0.89 cfs 2,692 cf
Pond C9: Catch Basin 9	Peak Elev=56.92' Storage=12 cf Inflow=0.49 cfs 1,500 cf 12.0" Round Culvert n=0.020 L=80.0' S=0.0100 '/ Outflow=0.49 cfs 1,494 cf

The Homestead PRP BASE

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Link 1L:

Inflow=5.62 cfs 91,241 cf
Primary=5.62 cfs 91,241 cf

Link 2L:

Inflow=5.39 cfs 45,021 cf
Primary=5.39 cfs 45,021 cf

Link 3L: AP3

Inflow=5.38 cfs 24,946 cf
Primary=5.38 cfs 24,946 cf

Total Runoff Area = 32.158 ac Runoff Volume = 163,130 cf Average Runoff Depth = 1.40"
87.11% Pervious = 28.013 ac 12.89% Impervious = 4.145 ac

Time span=5.00-72.00 hrs, dt=0.05 hrs, 1341 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1	Runoff Area=437,707 sf 0.53% Impervious Runoff Depth=2.82" Flow Length=1,218' Tc=60.4 min CN=76 Runoff=13.00 cfs 102,797 cf
Subcatchment 2: Subcat 2	Runoff Area=339,935 sf 0.00% Impervious Runoff Depth=2.73" Flow Length=931' Tc=39.0 min CN=75 Runoff=12.40 cfs 77,271 cf
Subcatchment 3: Subcat 3	Runoff Area=18,390 sf 27.02% Impervious Runoff Depth=3.19" Flow Length=145' Tc=1.1 min CN=80 Runoff=1.75 cfs 4,891 cf
Subcatchment 4: Subcat 4	Runoff Area=7,776 sf 63.03% Impervious Runoff Depth>4.10" Flow Length=100' Tc=0.9 min CN=89 Runoff=0.93 cfs 2,654 cf
Subcatchment 5: Subcat 5	Runoff Area=12,124 sf 53.19% Impervious Runoff Depth>3.89" Flow Length=168' Tc=3.9 min CN=87 Runoff=1.31 cfs 3,929 cf
Subcatchment 6: Subcat 6	Runoff Area=42,157 sf 31.02% Impervious Runoff Depth=3.29" Flow Length=288' Tc=5.1 min CN=81 Runoff=3.71 cfs 11,550 cf
Subcatchment 7: Subcat 7	Runoff Area=12,226 sf 59.44% Impervious Runoff Depth>3.99" Flow Length=175' Tc=4.0 min CN=88 Runoff=1.34 cfs 4,068 cf
Subcatchment 8: Subcat 8	Runoff Area=10,015 sf 73.04% Impervious Runoff Depth>4.30" Flow Length=244' Tc=1.4 min CN=91 Runoff=1.21 cfs 3,591 cf
Subcatchment 9: Subcat 9	Runoff Area=23,230 sf 33.73% Impervious Runoff Depth=3.38" Flow Length=158' Tc=2.5 min CN=82 Runoff=2.30 cfs 6,553 cf
Subcatchment 10: Subcat 10	Runoff Area=41,347 sf 21.80% Impervious Runoff Depth=3.10" Flow Length=260' Slope=0.0180 '/ Tc=2.4 min CN=79 Runoff=3.78 cfs 10,669 cf
Subcatchment 13: Subcat 13	Runoff Area=17,551 sf 20.47% Impervious Runoff Depth=3.10" Flow Length=111' Tc=0.7 min CN=79 Runoff=1.65 cfs 4,529 cf
Subcatchment 14: Subcat 14	Runoff Area=18,505 sf 16.05% Impervious Runoff Depth=3.00" Flow Length=118' Tc=1.2 min CN=78 Runoff=1.65 cfs 4,630 cf
Subcatchment 15: Subcat 15	Runoff Area=0.094 ac 82.38% Impervious Runoff Depth>4.51" Flow Length=135' Slope=0.0200 '/ Tc=2.3 min CN=93 Runoff=0.51 cfs 1,542 cf
Subcatchment 16: Subcat 16	Runoff Area=12,591 sf 11.51% Impervious Runoff Depth=2.64" Flow Length=273' Tc=14.0 min CN=74 Runoff=0.69 cfs 2,768 cf
Subcatchment 17: Subcat 17	Runoff Area=4,641 sf 97.61% Impervious Runoff Depth>4.88" Flow Length=50' Slope=0.0205 '/ Tc=0.7 min CN=97 Runoff=0.62 cfs 1,888 cf
Subcatchment 18: Subcat 18	Runoff Area=4,781 sf 96.10% Impervious Runoff Depth>4.88" Flow Length=50' Slope=0.0140 '/ Tc=0.8 min CN=97 Runoff=0.64 cfs 1,945 cf

The Homestead PRP BASE

Type III 24-hr 10 YEAR STORM Rainfall=5.34"

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Subcatchment 19: Subcat 19	Runoff Area=4,903 sf 95.78% Impervious Runoff Depth>4.88" Flow Length=50' Slope=0.0140 '/' Tc=0.8 min CN=97 Runoff=0.66 cfs 1,995 cf
Subcatchment 20: Subcat 20	Runoff Area=5,929 sf 98.01% Impervious Runoff Depth>4.96" Flow Length=50' Slope=0.0120 '/' Tc=0.9 min CN=98 Runoff=0.80 cfs 2,449 cf
Subcatchment 21: Subcat 21	Runoff Area=5,486 sf 95.70% Impervious Runoff Depth>4.88" Flow Length=50' Slope=0.0205 '/' Tc=0.7 min CN=97 Runoff=0.74 cfs 2,232 cf
Subcatchment 22: Subcat 22	Runoff Area=8,401 sf 96.51% Impervious Runoff Depth>4.88" Flow Length=60' Slope=0.0104 '/' Tc=1.1 min CN=97 Runoff=1.11 cfs 3,418 cf
Subcatchment 23: Subcat 23	Runoff Area=7,920 sf 95.70% Impervious Runoff Depth>4.88" Flow Length=60' Slope=0.0140 '/' Tc=1.0 min CN=97 Runoff=1.05 cfs 3,222 cf
Subcatchment 24: Subcat 24	Runoff Area=0.296 ac 96.53% Impervious Runoff Depth>4.88" Flow Length=113' Slope=0.0120 '/' Tc=1.4 min CN=97 Runoff=1.68 cfs 5,245 cf
Subcatchment 25: Subcat 25	Runoff Area=15,031 sf 0.54% Impervious Runoff Depth=2.55" Flow Length=156' Tc=12.2 min CN=73 Runoff=0.83 cfs 3,194 cf
Subcatchment 26: Subcat 26	Runoff Area=14,414 sf 47.19% Impervious Runoff Depth=3.48" Flow Length=218' Tc=2.9 min CN=83 Runoff=1.46 cfs 4,184 cf
Subcatchment 27: Subcat 27	Runoff Area=5,987 sf 99.94% Impervious Runoff Depth>4.96" Tc=0.0 min CN=98 Runoff=0.82 cfs 2,473 cf
Subcatchment 28: Subcat 28	Runoff Area=8,922 sf 98.11% Impervious Runoff Depth>4.88" Tc=0.0 min CN=97 Runoff=1.22 cfs 3,629 cf
Subcatchment 29: Subcat 29	Runoff Area=0.116 ac 100.00% Impervious Runoff Depth>4.96" Tc=0.0 min CN=98 Runoff=0.69 cfs 2,084 cf
Subcatchment 30: Subcat 30	Runoff Area=0.375 ac 68.26% Impervious Runoff Depth>4.20" Flow Length=153' Slope=0.0120 '/' Tc=3.1 min CN=90 Runoff=1.92 cfs 5,713 cf
Subcatchment 31: Subcat 31	Runoff Area=0.336 ac 25.38% Impervious Runoff Depth=3.00" Flow Length=200' Tc=5.8 min CN=78 Runoff=1.16 cfs 3,658 cf
Subcatchment 32: Subcat 32	Runoff Area=190,972 sf 0.03% Impervious Runoff Depth=2.82" Flow Length=615' Tc=9.9 min CN=76 Runoff=12.53 cfs 44,850 cf
Subcatchment 33: Subcat 33	Runoff Area=11,522 sf 42.74% Impervious Runoff Depth=3.79" Flow Length=124' Tc=12.4 min CN=86 Runoff=0.93 cfs 3,635 cf
Subcatchment 34: Subcat 34	Runoff Area=4,123 sf 50.81% Impervious Runoff Depth=3.58" Flow Length=68' Tc=0.8 min CN=84 Runoff=0.44 cfs 1,231 cf
Subcatchment 35: Subcat 35	Runoff Area=61,230 sf 7.19% Impervious Runoff Depth=2.55" Flow Length=361' Tc=18.7 min CN=73 Runoff=2.89 cfs 13,012 cf

The Homestead PRP BASE

Type III 24-hr 10 YEAR STORM Rainfall=5.34"

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Reach 1R: Wetland Natural Swale	Avg. Flow Depth=0.13'	Max Vel=0.70 fps	Inflow=1.06 cfs	8,707 cf
	n=0.100 L=300.0'	S=0.0400 '/	Capacity=11.57 cfs	Outflow=1.02 cfs 8,678 cf
Reach 2R: Wetland Natural Swale	Avg. Flow Depth=0.12'	Max Vel=0.25 fps	Inflow=5.45 cfs	47,954 cf
	n=0.150 L=700.0'	S=0.0114 '/	Capacity=104.19 cfs	Outflow=2.78 cfs 47,835 cf
Reach 3R: Wetland Natural Swale	Avg. Flow Depth=0.11'	Max Vel=0.22 fps	Inflow=4.64 cfs	34,280 cf
	n=0.150 L=850.0'	S=0.0094 '/	Capacity=94.55 cfs	Outflow=2.15 cfs 34,058 cf
Reach 4R: (new Reach)	Avg. Flow Depth=0.15'	Max Vel=1.94 fps	Inflow=3.25 cfs	23,442 cf
	n=0.030 L=130.0'	S=0.0231 '/	Capacity=29.30 cfs	Outflow=3.19 cfs 23,442 cf
Reach 6R: Wetland Natural Swale	Avg. Flow Depth=0.00'	Max Vel=0.00 fps	Inflow=0.00 cfs	0 cf
	n=0.150 L=1,128.0'	S=0.0160 '/	Capacity=123.12 cfs	Outflow=0.00 cfs 0 cf
Pond 1P: USF 1	Peak Elev=48.22'	Storage=3,645 cf	Inflow=2.96 cfs	8,920 cf
	Primary=1.06 cfs 8,707 cf	Secondary=0.00 cfs 0 cf	Outflow=1.06 cfs	8,707 cf
Pond 2AP: USF 2A	Peak Elev=48.38'	Storage=5,305 cf	Inflow=4.63 cfs	13,311 cf
	Primary=1.30 cfs 13,311 cf	Secondary=0.00 cfs 0 cf	Outflow=1.30 cfs	13,311 cf
Pond 2BP: USF 2B	Peak Elev=46.94'	Storage=3,306 cf	Inflow=3.48 cfs	10,131 cf
	Primary=2.24 cfs 10,131 cf	Secondary=0.00 cfs 0 cf	Outflow=2.24 cfs	10,131 cf
Pond 3P: USF 3	Peak Elev=47.77'	Storage=12,215 cf	Inflow=7.61 cfs	26,340 cf
	Primary=1.67 cfs 26,339 cf	Secondary=0.00 cfs 0 cf	Outflow=1.67 cfs	26,339 cf
Pond 4P: USF 4	Peak Elev=47.19'	Storage=6,916 cf	Inflow=5.86 cfs	21,615 cf
	Primary=4.08 cfs 21,615 cf	Secondary=0.00 cfs 0 cf	Outflow=4.08 cfs	21,615 cf
Pond 5P: USF 5	Peak Elev=48.30'	Storage=10,750 cf	Inflow=7.43 cfs	34,281 cf
			Outflow=4.64 cfs	34,280 cf
Pond 6P: Detention Pond	Peak Elev=59.70'	Storage=1,791 cf	Inflow=1.92 cfs	5,713 cf
	12.0" Round Culvert n=0.013 L=70.0'	S=0.0057 '/	Outflow=1.28 cfs	4,814 cf
Pond 7P: USF 7	Peak Elev=58.25'	Storage=4,551 cf	Inflow=2.74 cfs	10,555 cf
	Primary=0.69 cfs 10,555 cf	Secondary=0.00 cfs 0 cf	Outflow=0.69 cfs	10,555 cf
Pond 23P: Catch Basin 23	Peak Elev=58.67'	Storage=22 cf	Inflow=1.21 cfs	3,591 cf
	12.0" Round Culvert n=0.020 L=224.0'	S=0.0112 '/	Outflow=1.21 cfs	3,578 cf
Pond C1: Catch Basin 1	Peak Elev=54.61'	Storage=47 cf	Inflow=1.34 cfs	4,068 cf
	12.0" Round Culvert n=0.020 L=63.0'	S=0.0317 '/	Outflow=1.34 cfs	4,029 cf
Pond C10: Catch Basin 10	Peak Elev=51.02'	Storage=0 cf	Inflow=0.51 cfs	1,542 cf
	12.0" Round Culvert n=0.020 L=50.0'	S=0.0100 '/	Outflow=0.51 cfs	1,542 cf
Pond C11: Catch Basin 11	Peak Elev=56.20'	Storage=90 cf	Inflow=4.87 cfs	17,197 cf
	Primary=4.55 cfs 17,194 cf	Secondary=0.00 cfs 0 cf	Outflow=4.55 cfs	17,194 cf

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Type III 24-hr 10 YEAR STORM Rainfall=5.34"

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Pond C12: Catch Basin 12	Peak Elev=56.85' Storage=37 cf Inflow=4.17 cfs 14,967 cf Primary=4.19 cfs 14,965 cf Secondary=0.00 cfs 0 cf Outflow=4.19 cfs 14,965 cf
Pond C13: Catch Basin 13	Peak Elev=56.92' Storage=58 cf Inflow=3.12 cfs 11,582 cf 12.0" Round Culvert n=0.020 L=70.0' S=0.0100 ' / ' Outflow=3.10 cfs 11,549 cf
Pond C14: Catch Basin 14	Peak Elev=58.35' Storage=50 cf Inflow=2.08 cfs 8,398 cf 12.0" Round Culvert n=0.020 L=70.0' S=0.0114 ' / ' Outflow=2.07 cfs 8,360 cf
Pond C15: Catch Basin 15	Peak Elev=57.25' Storage=49 cf Inflow=0.83 cfs 3,194 cf 12.0" Round Culvert n=0.020 L=150.0' S=0.0107 ' / ' Outflow=0.83 cfs 3,153 cf
Pond C16: Catch Basin 16	Peak Elev=51.49' Storage=6 cf Inflow=3.27 cfs 10,287 cf 14.0" Round Culvert n=0.020 L=60.0' S=0.0250 ' / ' Outflow=3.27 cfs 10,287 cf
Pond C17: Catch Basin 17	Peak Elev=52.03' Storage=6 cf Inflow=3.79 cfs 17,822 cf Primary=3.79 cfs 17,822 cf Secondary=0.00 cfs 0 cf Outflow=3.79 cfs 17,822 cf
Pond C18: Catch Basin 18	Peak Elev=52.64' Storage=47 cf Inflow=3.03 cfs 14,243 cf Primary=3.01 cfs 14,188 cf Secondary=0.00 cfs 0 cf Outflow=3.01 cfs 14,188 cf
Pond C19: Culvert	Peak Elev=0.00' Storage=0 cf 15.0" Round Culvert n=0.020 L=60.0' S=0.0333 ' / ' Primary=0.00 cfs 0 cf
Pond C2: Catch Basin 2	Peak Elev=54.75' Storage=101 cf Inflow=5.01 cfs 15,440 cf Primary=4.88 cfs 15,395 cf Secondary=0.00 cfs 0 cf Outflow=4.88 cfs 15,395 cf
Pond C20: Catch Basin 20	Peak Elev=53.09' Storage=136 cf Inflow=4.55 cfs 17,194 cf Primary=4.42 cfs 17,086 cf Secondary=0.00 cfs 0 cf Outflow=4.42 cfs 17,086 cf
Pond C3: Catch Basin 3	Peak Elev=53.60' Storage=47 cf Inflow=1.31 cfs 3,929 cf 12.0" Round Culvert n=0.020 L=50.0' S=0.0540 ' / ' Outflow=1.31 cfs 3,890 cf
Pond C4: Catch Basin 4	Peak Elev=59.71' Storage=22 cf Inflow=0.93 cfs 2,654 cf 12.0" Round Culvert n=0.020 L=224.0' S=0.0049 ' / ' Outflow=0.93 cfs 2,641 cf
Pond C5: Catch Basin 5	Peak Elev=54.07' Storage=86 cf Inflow=2.99 cfs 10,987 cf 12.0" Round Culvert n=0.020 L=229.0' S=0.0079 ' / ' Outflow=2.93 cfs 10,944 cf
Pond C6: Catch Basin 6	Peak Elev=55.82' Storage=63 cf Inflow=2.71 cfs 8,278 cf 12.0" Round Culvert n=0.020 L=70.0' S=0.0057 ' / ' Outflow=2.68 cfs 8,219 cf
Pond C7: Catch Basin 7	Peak Elev=55.89' Storage=12 cf Inflow=2.09 cfs 6,390 cf 12.0" Round Culvert n=0.020 L=60.0' S=0.0100 ' / ' Outflow=2.08 cfs 6,390 cf
Pond C8: Catch Basin 8	Peak Elev=56.37' Storage=5 cf Inflow=1.45 cfs 4,438 cf 12.0" Round Culvert n=0.020 L=60.0' S=0.0100 ' / ' Outflow=1.45 cfs 4,445 cf
Pond C9: Catch Basin 9	Peak Elev=57.04' Storage=14 cf Inflow=0.80 cfs 2,449 cf 12.0" Round Culvert n=0.020 L=80.0' S=0.0100 ' / ' Outflow=0.80 cfs 2,443 cf

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Type III 24-hr 10 YEAR STORM Rainfall=5.34"

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Link 1L:

Inflow=14.26 cfs 193,368 cf
Primary=14.26 cfs 193,368 cf

Link 2L:

Inflow=14.49 cfs 100,713 cf
Primary=14.49 cfs 100,713 cf

Link 3L: AP3

Inflow=12.79 cfs 55,406 cf
Primary=12.79 cfs 55,406 cf

Total Runoff Area = 32.158 ac Runoff Volume = 351,501 cf Average Runoff Depth = 3.01"
87.11% Pervious = 28.013 ac 12.89% Impervious = 4.145 ac

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
4.138	74	>75% Grass cover, Good, HSG C (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 28, 30, 31, 34, 35)
0.058	80	>75% Grass cover, Good, HSG D (1, 6, 14)
2.453	98	Paved parking, HSG C (1, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 30, 31, 32, 33, 34, 35)
0.131	98	Paved parking, HSG D (1, 14, 26, 31, 32, 33, 35)
1.562	98	Roofs, HSG C (3, 4, 5, 6, 7, 8, 9, 10, 13, 16, 22, 23, 24, 26, 27, 28, 29, 30)
5.611	70	Woods, Good, HSG C (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 16, 21, 22, 23, 24, 25, 26, 27, 28, 30, 31, 32, 33, 34, 35)
18.205	77	Woods, Good, HSG D (1, 2, 31, 32, 33, 35)

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Time span=5.00-72.00 hrs, dt=0.05 hrs, 1341 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1: Subcat 1	Runoff Area=437,707 sf 0.53% Impervious Runoff Depth=3.90" Flow Length=1,218' Tc=60.4 min CN=76 Runoff=18.05 cfs 142,372 cf
Subcatchment 2: Subcat 2	Runoff Area=339,935 sf 0.00% Impervious Runoff Depth=3.80" Flow Length=931' Tc=39.0 min CN=75 Runoff=17.32 cfs 107,619 cf
Subcatchment 3: Subcat 3	Runoff Area=18,390 sf 27.02% Impervious Runoff Depth=4.33" Flow Length=145' Tc=1.1 min CN=80 Runoff=2.36 cfs 6,631 cf
Subcatchment 4: Subcat 4	Runoff Area=7,776 sf 63.03% Impervious Runoff Depth>5.31" Flow Length=100' Tc=0.9 min CN=89 Runoff=1.19 cfs 3,439 cf
Subcatchment 5: Subcat 5	Runoff Area=12,124 sf 53.19% Impervious Runoff Depth>5.09" Flow Length=168' Tc=3.9 min CN=87 Runoff=1.69 cfs 5,143 cf
Subcatchment 6: Subcat 6	Runoff Area=42,157 sf 31.02% Impervious Runoff Depth=4.43" Flow Length=288' Tc=5.1 min CN=81 Runoff=4.97 cfs 15,578 cf
Subcatchment 7: Subcat 7	Runoff Area=12,226 sf 59.44% Impervious Runoff Depth>5.20" Flow Length=175' Tc=4.0 min CN=88 Runoff=1.73 cfs 5,297 cf
Subcatchment 8: Subcat 8	Runoff Area=10,015 sf 73.04% Impervious Runoff Depth>5.52" Flow Length=244' Tc=1.4 min CN=91 Runoff=1.54 cfs 4,607 cf
Subcatchment 9: Subcat 9	Runoff Area=23,230 sf 33.73% Impervious Runoff Depth=4.54" Flow Length=158' Tc=2.5 min CN=82 Runoff=3.06 cfs 8,794 cf
Subcatchment 10: Subcat 10	Runoff Area=41,347 sf 21.80% Impervious Runoff Depth=4.22" Flow Length=260' Slope=0.0180 '/ Tc=2.4 min CN=79 Runoff=5.11 cfs 14,540 cf
Subcatchment 13: Subcat 13	Runoff Area=17,551 sf 20.47% Impervious Runoff Depth=4.22" Flow Length=111' Tc=0.7 min CN=79 Runoff=2.24 cfs 6,172 cf
Subcatchment 14: Subcat 14	Runoff Area=18,505 sf 16.05% Impervious Runoff Depth=4.11" Flow Length=118' Tc=1.2 min CN=78 Runoff=2.25 cfs 6,344 cf
Subcatchment 15: Subcat 15	Runoff Area=0.094 ac 82.38% Impervious Runoff Depth>5.73" Flow Length=135' Slope=0.0200 '/ Tc=2.3 min CN=93 Runoff=0.64 cfs 1,958 cf
Subcatchment 16: Subcat 16	Runoff Area=12,591 sf 11.51% Impervious Runoff Depth=3.70" Flow Length=273' Tc=14.0 min CN=74 Runoff=0.97 cfs 3,878 cf
Subcatchment 17: Subcat 17	Runoff Area=4,641 sf 97.61% Impervious Runoff Depth>6.09" Flow Length=50' Slope=0.0205 '/ Tc=0.7 min CN=97 Runoff=0.78 cfs 2,355 cf
Subcatchment 18: Subcat 18	Runoff Area=4,781 sf 96.10% Impervious Runoff Depth>6.09" Flow Length=50' Slope=0.0140 '/ Tc=0.8 min CN=97 Runoff=0.80 cfs 2,426 cf

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Subcatchment 19: Subcat 19	Runoff Area=4,903 sf 95.78% Impervious Runoff Depth>6.09" Flow Length=50' Slope=0.0140 '/ Tc=0.8 min CN=97 Runoff=0.82 cfs 2,488 cf
Subcatchment 20: Subcat 20	Runoff Area=5,929 sf 98.01% Impervious Runoff Depth>6.16" Flow Length=50' Slope=0.0120 '/ Tc=0.9 min CN=98 Runoff=0.99 cfs 3,042 cf
Subcatchment 21: Subcat 21	Runoff Area=5,486 sf 95.70% Impervious Runoff Depth>6.09" Flow Length=50' Slope=0.0205 '/ Tc=0.7 min CN=97 Runoff=0.92 cfs 2,783 cf
Subcatchment 22: Subcat 22	Runoff Area=8,401 sf 96.51% Impervious Runoff Depth>6.09" Flow Length=60' Slope=0.0104 '/ Tc=1.1 min CN=97 Runoff=1.38 cfs 4,262 cf
Subcatchment 23: Subcat 23	Runoff Area=7,920 sf 95.70% Impervious Runoff Depth>6.09" Flow Length=60' Slope=0.0140 '/ Tc=1.0 min CN=97 Runoff=1.31 cfs 4,018 cf
Subcatchment 24: Subcat 24	Runoff Area=0.296 ac 96.53% Impervious Runoff Depth>6.09" Flow Length=113' Slope=0.0120 '/ Tc=1.4 min CN=97 Runoff=2.09 cfs 6,541 cf
Subcatchment 25: Subcat 25	Runoff Area=15,031 sf 0.54% Impervious Runoff Depth=3.59" Flow Length=156' Tc=12.2 min CN=73 Runoff=1.18 cfs 4,500 cf
Subcatchment 26: Subcat 26	Runoff Area=14,414 sf 47.19% Impervious Runoff Depth=4.65" Flow Length=218' Tc=2.9 min CN=83 Runoff=1.93 cfs 5,587 cf
Subcatchment 27: Subcat 27	Runoff Area=5,987 sf 99.94% Impervious Runoff Depth>6.16" Tc=0.0 min CN=98 Runoff=1.02 cfs 3,072 cf
Subcatchment 28: Subcat 28	Runoff Area=8,922 sf 98.11% Impervious Runoff Depth>6.09" Tc=0.0 min CN=97 Runoff=1.51 cfs 4,526 cf
Subcatchment 29: Subcat 29	Runoff Area=0.116 ac 100.00% Impervious Runoff Depth>6.16" Tc=0.0 min CN=98 Runoff=0.86 cfs 2,588 cf
Subcatchment 30: Subcat 30	Runoff Area=0.375 ac 68.26% Impervious Runoff Depth>5.41" Flow Length=153' Slope=0.0120 '/ Tc=3.1 min CN=90 Runoff=2.44 cfs 7,365 cf
Subcatchment 31: Subcat 31	Runoff Area=0.336 ac 25.38% Impervious Runoff Depth=4.11" Flow Length=200' Tc=5.8 min CN=78 Runoff=1.59 cfs 5,011 cf
Subcatchment 32: Subcat 32	Runoff Area=190,972 sf 0.03% Impervious Runoff Depth=3.90" Flow Length=615' Tc=9.9 min CN=76 Runoff=17.35 cfs 62,117 cf
Subcatchment 33: Subcat 33	Runoff Area=11,522 sf 42.74% Impervious Runoff Depth>4.98" Flow Length=124' Tc=12.4 min CN=86 Runoff=1.22 cfs 4,783 cf
Subcatchment 34: Subcat 34	Runoff Area=4,123 sf 50.81% Impervious Runoff Depth=4.76" Flow Length=68' Tc=0.8 min CN=84 Runoff=0.58 cfs 1,636 cf
Subcatchment 35: Subcat 35	Runoff Area=61,230 sf 7.19% Impervious Runoff Depth=3.59" Flow Length=361' Tc=18.7 min CN=73 Runoff=4.09 cfs 18,332 cf

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Reach 1R: Wetland Natural Swale	Avg. Flow Depth=0.16'	Max Vel=0.80 fps	Inflow=1.50 cfs	11,665 cf
	n=0.100 L=300.0'	S=0.0400 '/	Capacity=11.57 cfs	Outflow=1.48 cfs 11,636 cf
Reach 2R: Wetland Natural Swale	Avg. Flow Depth=0.16'	Max Vel=0.30 fps	Inflow=7.02 cfs	62,821 cf
	n=0.150 L=700.0'	S=0.0114 '/	Capacity=104.19 cfs	Outflow=4.34 cfs 62,697 cf
Reach 3R: Wetland Natural Swale	Avg. Flow Depth=0.15'	Max Vel=0.27 fps	Inflow=6.16 cfs	46,828 cf
	n=0.150 L=850.0'	S=0.0094 '/	Capacity=94.55 cfs	Outflow=3.82 cfs 46,609 cf
Reach 4R: (new Reach)	Avg. Flow Depth=0.20'	Max Vel=2.31 fps	Inflow=5.47 cfs	31,353 cf
	n=0.030 L=130.0'	S=0.0231 '/	Capacity=29.30 cfs	Outflow=5.30 cfs 31,353 cf
Reach 6R: Wetland Natural Swale	Avg. Flow Depth=0.00'	Max Vel=0.00 fps	Inflow=0.00 cfs	0 cf
	n=0.150 L=1,128.0'	S=0.0160 '/	Capacity=123.12 cfs	Outflow=0.00 cfs 0 cf
Pond 1P: USF 1	Peak Elev=48.62'	Storage=4,575 cf	Inflow=3.91 cfs	11,889 cf
	Primary=1.50 cfs 11,665 cf	Secondary=0.00 cfs 0 cf	Outflow=1.50 cfs	11,665 cf
Pond 2AP: USF 2A	Peak Elev=48.92'	Storage=6,990 cf	Inflow=6.21 cfs	17,966 cf
	Primary=1.81 cfs 17,966 cf	Secondary=0.00 cfs 0 cf	Outflow=1.81 cfs	17,966 cf
Pond 2BP: USF 2B	Peak Elev=47.05'	Storage=3,568 cf	Inflow=4.56 cfs	13,388 cf
	Primary=3.16 cfs 13,154 cf	Secondary=0.75 cfs 234 cf	Outflow=3.92 cfs	13,388 cf
Pond 3P: USF 3	Peak Elev=48.24'	Storage=16,255 cf	Inflow=9.25 cfs	34,817 cf
	Primary=2.25 cfs 34,817 cf	Secondary=0.00 cfs 0 cf	Outflow=2.25 cfs	34,817 cf
Pond 4P: USF 4	Peak Elev=47.41'	Storage=7,764 cf	Inflow=6.60 cfs	28,005 cf
	Primary=5.15 cfs 28,005 cf	Secondary=0.00 cfs 0 cf	Outflow=5.15 cfs	28,005 cf
Pond 5P: USF 5	Peak Elev=48.66'	Storage=13,045 cf	Inflow=9.93 cfs	46,829 cf
			Outflow=6.16 cfs	46,828 cf
Pond 6P: Detention Pond	Peak Elev=59.83'	Storage=1,978 cf	Inflow=2.44 cfs	7,365 cf
	12.0" Round Culvert n=0.013 L=70.0'	S=0.0057 '/	Outflow=1.66 cfs	6,466 cf
Pond 7P: USF 7	Peak Elev=58.68'	Storage=6,131 cf	Inflow=3.63 cfs	14,065 cf
	Primary=0.93 cfs 14,065 cf	Secondary=0.00 cfs 0 cf	Outflow=0.93 cfs	14,065 cf
Pond 23P: Catch Basin 23	Peak Elev=58.77'	Storage=23 cf	Inflow=1.54 cfs	4,607 cf
	12.0" Round Culvert n=0.020 L=224.0'	S=0.0112 '/	Outflow=1.53 cfs	4,594 cf
Pond C1: Catch Basin 1	Peak Elev=54.71'	Storage=48 cf	Inflow=1.73 cfs	5,297 cf
	12.0" Round Culvert n=0.020 L=63.0'	S=0.0317 '/	Outflow=1.73 cfs	5,258 cf
Pond C10: Catch Basin 10	Peak Elev=51.03'	Storage=0 cf	Inflow=0.64 cfs	1,958 cf
	12.0" Round Culvert n=0.020 L=50.0'	S=0.0100 '/	Outflow=0.64 cfs	1,958 cf
Pond C11: Catch Basin 11	Peak Elev=57.23'	Storage=322 cf	Inflow=5.53 cfs	21,985 cf
	Primary=4.94 cfs 21,982 cf	Secondary=0.00 cfs 0 cf	Outflow=4.94 cfs	21,982 cf

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- Pond C12: Catch Basin 12** Peak Elev=57.71' Storage=159 cf Inflow=5.26 cfs 19,204 cf
Primary=4.74 cfs 19,201 cf Secondary=0.00 cfs 0 cf Outflow=4.74 cfs 19,201 cf
- Pond C13: Catch Basin 13** Peak Elev=57.91' Storage=70 cf Inflow=3.96 cfs 14,974 cf
12.0" Round Culvert n=0.020 L=70.0' S=0.0100 '/ Outflow=3.95 cfs 14,942 cf
- Pond C14: Catch Basin 14** Peak Elev=58.61' Storage=53 cf Inflow=2.68 cfs 11,000 cf
12.0" Round Culvert n=0.020 L=70.0' S=0.0114 '/ Outflow=2.67 cfs 10,956 cf
- Pond C15: Catch Basin 15** Peak Elev=57.37' Storage=50 cf Inflow=1.18 cfs 4,500 cf
12.0" Round Culvert n=0.020 L=150.0' S=0.0107 '/ Outflow=1.18 cfs 4,459 cf
- Pond C16: Catch Basin 16** Peak Elev=51.73' Storage=9 cf Inflow=4.17 cfs 13,185 cf
14.0" Round Culvert n=0.020 L=60.0' S=0.0250 '/ Outflow=4.16 cfs 13,185 cf
- Pond C17: Catch Basin 17** Peak Elev=53.65' Storage=330 cf Inflow=5.28 cfs 24,696 cf
Primary=4.97 cfs 25,342 cf Secondary=0.00 cfs 0 cf Outflow=4.97 cfs 25,342 cf
- Pond C18: Catch Basin 18** Peak Elev=54.00' Storage=65 cf Inflow=4.28 cfs 19,968 cf
Primary=4.26 cfs 19,914 cf Secondary=0.00 cfs 0 cf Outflow=4.26 cfs 19,914 cf
- Pond C19: Culvert** Peak Elev=0.00' Storage=0 cf
15.0" Round Culvert n=0.020 L=60.0' S=0.0333 '/ Primary=0.00 cfs 0 cf
- Pond C2: Catch Basin 2** Peak Elev=56.14' Storage=336 cf Inflow=6.65 cfs 20,682 cf
Primary=5.60 cfs 20,649 cf Secondary=0.40 cfs 72 cf Outflow=6.00 cfs 20,721 cf
- Pond C20: Catch Basin 20** Peak Elev=53.77' Storage=215 cf Inflow=4.94 cfs 21,982 cf
Primary=4.85 cfs 21,833 cf Secondary=0.00 cfs 0 cf Outflow=4.85 cfs 21,833 cf
- Pond C3: Catch Basin 3** Peak Elev=53.70' Storage=48 cf Inflow=1.69 cfs 5,143 cf
12.0" Round Culvert n=0.020 L=50.0' S=0.0540 '/ Outflow=1.69 cfs 5,104 cf
- Pond C4: Catch Basin 4** Peak Elev=59.83' Storage=24 cf Inflow=1.19 cfs 3,439 cf
12.0" Round Culvert n=0.020 L=224.0' S=0.0049 '/ Outflow=1.18 cfs 3,426 cf
- Pond C5: Catch Basin 5** Peak Elev=55.37' Storage=172 cf Inflow=3.73 cfs 14,139 cf
12.0" Round Culvert n=0.020 L=229.0' S=0.0079 '/ Outflow=3.36 cfs 14,096 cf
- Pond C6: Catch Basin 6** Peak Elev=56.39' Storage=70 cf Inflow=3.35 cfs 10,306 cf
12.0" Round Culvert n=0.020 L=70.0' S=0.0057 '/ Outflow=3.27 cfs 10,262 cf
- Pond C7: Catch Basin 7** Peak Elev=56.12' Storage=15 cf Inflow=2.59 cfs 7,951 cf
12.0" Round Culvert n=0.020 L=60.0' S=0.0100 '/ Outflow=2.57 cfs 7,951 cf
- Pond C8: Catch Basin 8** Peak Elev=56.49' Storage=6 cf Inflow=1.80 cfs 5,523 cf
12.0" Round Culvert n=0.020 L=60.0' S=0.0100 '/ Outflow=1.79 cfs 5,525 cf
- Pond C9: Catch Basin 9** Peak Elev=57.11' Storage=14 cf Inflow=0.99 cfs 3,042 cf
12.0" Round Culvert n=0.020 L=80.0' S=0.0100 '/ Outflow=0.98 cfs 3,036 cf

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Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Link 1L:

Inflow=21.92 cfs 263,315 cf
Primary=21.92 cfs 263,315 cf

Link 2L:

Inflow=20.12 cfs 138,972 cf
Primary=20.12 cfs 138,972 cf

Link 3L: AP3

Inflow=18.05 cfs 76,182 cf
Primary=18.05 cfs 76,182 cf

Summary for Subcatchment 1: Subcat 1

Runoff = 18.05 cfs @ 12.81 hrs, Volume= 142,372 cf, Depth= 3.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
1,322	98	Paved parking, HSG D
376	98	Paved parking, HSG D
10,845	77	Woods, Good, HSG D
17	77	Woods, Good, HSG D
0	77	Woods, Good, HSG D
79	77	Woods, Good, HSG D
79	77	Woods, Good, HSG D
19	77	Woods, Good, HSG D
0	77	Woods, Good, HSG D
62	77	Woods, Good, HSG D
82	77	Woods, Good, HSG D
13	77	Woods, Good, HSG D
2	77	Woods, Good, HSG D
1	77	Woods, Good, HSG D
1	77	Woods, Good, HSG D
60	77	Woods, Good, HSG D
0	77	Woods, Good, HSG D
0	77	Woods, Good, HSG D
12	77	Woods, Good, HSG D
11	77	Woods, Good, HSG D
7	77	Woods, Good, HSG D
342,653	77	Woods, Good, HSG D
35,600	70	Woods, Good, HSG C
31,156	70	Woods, Good, HSG C
33	80	>75% Grass cover, Good, HSG D
618	80	>75% Grass cover, Good, HSG D
1	80	>75% Grass cover, Good, HSG D
4,936	74	>75% Grass cover, Good, HSG C
20	74	>75% Grass cover, Good, HSG C
84	74	>75% Grass cover, Good, HSG C
515	98	Paved parking, HSG C
8,983	74	>75% Grass cover, Good, HSG C
0	70	Woods, Good, HSG C
67	98	Paved parking, HSG D
49	98	Paved parking, HSG D
437,707	76	Weighted Average
435,377		99.47% Pervious Area
2,330		0.53% Impervious Area

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Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	50	0.0380	0.08		Sheet Flow, SHEET FLOW Woods: Light underbrush n= 0.400 P2= 3.00"
47.4	1,128	0.0140	0.40	47.58	Trap/Vee/Rect Channel Flow, WETLAND Bot.W=100.00' D=1.00' Z= 20.0 ' Top.W=140.00' n= 0.400 Sheet flow: Woods+light brush
3.1	40	0.0050	0.22	3.23	Trap/Vee/Rect Channel Flow, CF Bot.W=10.00' D=1.00' Z= 5.0 ' Top.W=20.00' n= 0.400 Sheet flow: Woods+light brush
60.4	1,218	Total			

Summary for Subcatchment 2: Subcat 2

Runoff = 17.32 cfs @ 12.54 hrs, Volume= 107,619 cf, Depth= 3.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
1,526	77	Woods, Good, HSG D
51	77	Woods, Good, HSG D
0	77	Woods, Good, HSG D
12	77	Woods, Good, HSG D
74,212	70	Woods, Good, HSG C
8,939	74	>75% Grass cover, Good, HSG C
255,195	77	Woods, Good, HSG D
339,935	75	Weighted Average
339,935		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.5	74	0.0230	0.07		Sheet Flow, SHEET FLOW Woods: Light underbrush n= 0.400 P2= 3.00"
6.1	326	0.0320	0.89		Shallow Concentrated Flow, SCF Woodland Kv= 5.0 fps
16.4	531	0.0260	0.54	32.40	Trap/Vee/Rect Channel Flow, WETLAND Bot.W=50.00' D=1.00' Z= 10.0 ' Top.W=70.00' n= 0.400 Sheet flow: Woods+light brush
39.0	931	Total			

Summary for Subcatchment 3: Subcat 3

Runoff = 2.36 cfs @ 12.02 hrs, Volume= 6,631 cf, Depth= 4.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Area (sf)	CN	Description
0	70	Woods, Good, HSG C
1,575	98	Paved parking, HSG C
12,877	74	>75% Grass cover, Good, HSG C
3,395	98	Roofs, HSG C
543	74	>75% Grass cover, Good, HSG C
18,390	80	Weighted Average
13,421		72.98% Pervious Area
4,970		27.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	62	0.0320	1.46		Sheet Flow, PAVEMENT Smooth surfaces n= 0.011 P2= 3.00"
0.4	83	0.0620	3.73		Shallow Concentrated Flow, SCF Grassed Waterway Kv= 15.0 fps
1.1	145	Total			

Summary for Subcatchment 4: Subcat 4

Runoff = 1.19 cfs @ 12.01 hrs, Volume= 3,439 cf, Depth> 5.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
305	74	>75% Grass cover, Good, HSG C
2,029	74	>75% Grass cover, Good, HSG C
2,486	98	Roofs, HSG C
2,415	98	Paved parking, HSG C
541	74	>75% Grass cover, Good, HSG C
0	70	Woods, Good, HSG C
0	70	Woods, Good, HSG C
0	70	Woods, Good, HSG C
7,776	89	Weighted Average
2,875		36.97% Pervious Area
4,901		63.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.16		Sheet Flow, SHEET FLOW Smooth surfaces n= 0.011 P2= 3.00"
0.2	50	0.0800	4.24		Shallow Concentrated Flow, SWALE Grassed Waterway Kv= 15.0 fps
0.9	100	Total			

Summary for Subcatchment 5: Subcat 5

Runoff = 1.69 cfs @ 12.06 hrs, Volume= 5,143 cf, Depth> 5.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
3,376	98	Paved parking, HSG C
515	98	Paved parking, HSG C
1,808	98	Roofs, HSG C
618	98	Roofs, HSG C
132	98	Roofs, HSG C
4,787	74	>75% Grass cover, Good, HSG C
327	74	>75% Grass cover, Good, HSG C
0	70	Woods, Good, HSG C
0	70	Woods, Good, HSG C
197	70	Woods, Good, HSG C
364	70	Woods, Good, HSG C
12,124	87	Weighted Average
5,675		46.81% Pervious Area
6,449		53.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	41	0.0700	0.23		Sheet Flow, SHEET FLOW Grass: Short n= 0.150 P2= 3.00"
0.9	127	0.0240	2.32		Shallow Concentrated Flow, SWALE Grassed Waterway Kv= 15.0 fps
3.9	168	Total			

Summary for Subcatchment 6: Subcat 6

Runoff = 4.97 cfs @ 12.08 hrs, Volume= 15,578 cf, Depth= 4.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Area (sf)	CN	Description
1,600	80	>75% Grass cover, Good, HSG D
4,163	98	Paved parking, HSG C
7,254	74	>75% Grass cover, Good, HSG C
4,456	98	Roofs, HSG C
4,456	98	Roofs, HSG C
541	74	>75% Grass cover, Good, HSG C
15,720	74	>75% Grass cover, Good, HSG C
541	74	>75% Grass cover, Good, HSG C
0	70	Woods, Good, HSG C
0	70	Woods, Good, HSG C
3,425	70	Woods, Good, HSG C
42,157	81	Weighted Average
29,082		68.98% Pervious Area
13,075		31.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.8	54	0.1500	0.33		Sheet Flow, SF Grass: Short n= 0.150 P2= 3.00"
2.3	234	0.0130	1.71		Shallow Concentrated Flow, SCF Grassed Waterway Kv= 15.0 fps
5.1	288	Total			

Summary for Subcatchment 7: Subcat 7

Runoff = 1.73 cfs @ 12.06 hrs, Volume= 5,297 cf, Depth> 5.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
5,265	98	Paved parking, HSG C
1,480	98	Roofs, HSG C
522	98	Roofs, HSG C
4,108	74	>75% Grass cover, Good, HSG C
364	74	>75% Grass cover, Good, HSG C
173	70	Woods, Good, HSG C
314	70	Woods, Good, HSG C
0	70	Woods, Good, HSG C
0	70	Woods, Good, HSG C
12,226	88	Weighted Average
4,959		40.56% Pervious Area
7,267		59.44% Impervious Area

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Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	41	0.0700	0.23		Sheet Flow, SHEET FLOW Grass: Short n= 0.150 P2= 3.00"
1.0	134	0.0220	2.22		Shallow Concentrated Flow, SWALE Grassed Waterway Kv= 15.0 fps
4.0	175	Total			

Summary for Subcatchment 8: Subcat 8

Runoff = 1.54 cfs @ 12.02 hrs, Volume= 4,607 cf, Depth> 5.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
857	98	Roofs, HSG C
1,160	98	Roofs, HSG C
5,298	98	Paved parking, HSG C
377	74	>75% Grass cover, Good, HSG C
1,642	74	>75% Grass cover, Good, HSG C
341	74	>75% Grass cover, Good, HSG C
0	70	Woods, Good, HSG C
140	70	Woods, Good, HSG C
25	70	Woods, Good, HSG C
175	70	Woods, Good, HSG C
10,015	91	Weighted Average
2,700		26.96% Pervious Area
7,315		73.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	84	0.0180	1.23		Sheet Flow, SF Smooth surfaces n= 0.011 P2= 3.00"
0.3	160	0.0200	8.21	13.95	Channel Flow, Area= 1.7 sf Perim= 4.7' r= 0.36' n= 0.013 Corrugated PE, smooth interior
1.4	244	Total			

Summary for Subcatchment 9: Subcat 9

Runoff = 3.06 cfs @ 12.04 hrs, Volume= 8,794 cf, Depth= 4.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Area (sf)	CN	Description
14	74	>75% Grass cover, Good, HSG C
14,497	74	>75% Grass cover, Good, HSG C
4,311	98	Roofs, HSG C
1,061	98	Roofs, HSG C
2,464	98	Paved parking, HSG C
542	74	>75% Grass cover, Good, HSG C
0	70	Woods, Good, HSG C
0	70	Woods, Good, HSG C
342	70	Woods, Good, HSG C
23,230	82	Weighted Average
15,395		66.27% Pervious Area
7,836		33.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.16		Sheet Flow, SF Smooth surfaces n= 0.011 P2= 3.00"
1.8	108	0.0210	1.01		Shallow Concentrated Flow, SCF Short Grass Pasture Kv= 7.0 fps
2.5	158	Total			

Summary for Subcatchment 10: Subcat 10

Runoff = 5.11 cfs @ 12.04 hrs, Volume= 14,540 cf, Depth= 4.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
4,456	98	Roofs, HSG C
1,970	98	Roofs, HSG C
146	98	Roofs, HSG C
2,442	98	Paved parking, HSG C
30,582	74	>75% Grass cover, Good, HSG C
542	74	>75% Grass cover, Good, HSG C
0	70	Woods, Good, HSG C
0	70	Woods, Good, HSG C
0	70	Woods, Good, HSG C
0	70	Woods, Good, HSG C
1,182	70	Woods, Good, HSG C
28	70	Woods, Good, HSG C
41,347	79	Weighted Average
32,333		78.20% Pervious Area
9,014		21.80% Impervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	30	0.0180	1.00		Sheet Flow, SHEET FLOW Smooth surfaces n= 0.011 P2= 3.00"
1.9	230	0.0180	2.01		Shallow Concentrated Flow, SWALE Grassed Waterway Kv= 15.0 fps
2.4	260	Total			

Summary for Subcatchment 13: Subcat 13

Runoff = 2.24 cfs @ 12.01 hrs, Volume= 6,172 cf, Depth= 4.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
13,795	74	>75% Grass cover, Good, HSG C
922	98	Paved parking, HSG C
2,201	98	Paved parking, HSG C
469	98	Roofs, HSG C
0	70	Woods, Good, HSG C
23	70	Woods, Good, HSG C
0	70	Woods, Good, HSG C
140	70	Woods, Good, HSG C
17,551	79	Weighted Average
13,958		79.53% Pervious Area
3,593		20.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0800	2.02		Sheet Flow, SF Smooth surfaces n= 0.011 P2= 3.00"
0.3	61	0.0650	3.82		Shallow Concentrated Flow, SCF Grassed Waterway Kv= 15.0 fps
0.7	111	Total			

Summary for Subcatchment 14: Subcat 14

Runoff = 2.25 cfs @ 12.02 hrs, Volume= 6,344 cf, Depth= 4.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Area (sf)	CN	Description
893	98	Paved parking, HSG D
256	80	>75% Grass cover, Good, HSG D
2,073	98	Paved parking, HSG C
15,246	74	>75% Grass cover, Good, HSG C
34	80	>75% Grass cover, Good, HSG D
3	98	Paved parking, HSG D
18,505	78	Weighted Average
15,535		83.95% Pervious Area
2,970		16.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0690	1.90		Sheet Flow, SHEET FLOW Smooth surfaces n= 0.011 P2= 3.00"
0.8	68	0.0370	1.35		Shallow Concentrated Flow, SCF Short Grass Pasture Kv= 7.0 fps
1.2	118	Total			

Summary for Subcatchment 15: Subcat 15

Runoff = 0.64 cfs @ 12.04 hrs, Volume= 1,958 cf, Depth> 5.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (ac)	CN	Description
0.070	98	Paved parking, HSG C
0.008	98	Paved parking, HSG C
0.000	70	Woods, Good, HSG C
0.017	70	Woods, Good, HSG C
0.094	93	Weighted Average
0.017		17.62% Pervious Area
0.078		82.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	25	0.0200	1.01		Sheet Flow, SHEET FLOW Smooth surfaces n= 0.011 P2= 3.00"
1.9	110	0.0200	0.99		Shallow Concentrated Flow, SCF Short Grass Pasture Kv= 7.0 fps
2.3	135	Total			

Summary for Subcatchment 16: Subcat 16

Runoff = 0.97 cfs @ 12.20 hrs, Volume= 3,878 cf, Depth= 3.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Area (sf)	CN	Description
7,578	70	Woods, Good, HSG C
33	98	Paved parking, HSG C
6	98	Paved parking, HSG C
629	98	Paved parking, HSG C
3,564	74	>75% Grass cover, Good, HSG C
288	98	Roofs, HSG C
385	98	Paved parking, HSG C
34	98	Paved parking, HSG C
41	98	Paved parking, HSG C
33	98	Paved parking, HSG C
12,591	74	Weighted Average
11,142		88.49% Pervious Area
1,449		11.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.8	50	0.0300	0.08		Sheet Flow, SHEET FLOW Woods: Light underbrush n= 0.400 P2= 3.00"
3.2	223	0.0270	1.15		Shallow Concentrated Flow, SCF Short Grass Pasture Kv= 7.0 fps
14.0	273	Total			

Summary for Subcatchment 17: Subcat 17

Runoff = 0.78 cfs @ 12.01 hrs, Volume= 2,355 cf, Depth> 6.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
4,531	98	Paved parking, HSG C
111	74	>75% Grass cover, Good, HSG C
4,641	97	Weighted Average
111		2.39% Pervious Area
4,531		97.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0205	1.17		Sheet Flow, SHEET FLOW Smooth surfaces n= 0.011 P2= 3.00"

Summary for Subcatchment 18: Subcat 18

Runoff = 0.80 cfs @ 12.01 hrs, Volume= 2,426 cf, Depth> 6.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Area (sf)	CN	Description
33	98	Paved parking, HSG C
4,562	98	Paved parking, HSG C
90	74	>75% Grass cover, Good, HSG C
97	74	>75% Grass cover, Good, HSG C
4,781	97	Weighted Average
187		3.90% Pervious Area
4,595		96.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	50	0.0140	1.01		Sheet Flow, SHEET FLOW Smooth surfaces n= 0.011 P2= 3.00"

Summary for Subcatchment 19: Subcat 19

Runoff = 0.82 cfs @ 12.01 hrs, Volume= 2,488 cf, Depth> 6.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
83	98	Paved parking, HSG C
8	98	Paved parking, HSG C
4,605	98	Paved parking, HSG C
89	74	>75% Grass cover, Good, HSG C
118	74	>75% Grass cover, Good, HSG C
4,903	97	Weighted Average
207		4.22% Pervious Area
4,696		95.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	50	0.0140	1.01		Sheet Flow, SHEET FLOW Smooth surfaces n= 0.011 P2= 3.00"

Summary for Subcatchment 20: Subcat 20

Runoff = 0.99 cfs @ 12.01 hrs, Volume= 3,042 cf, Depth> 6.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
5,811	98	Paved parking, HSG C
118	74	>75% Grass cover, Good, HSG C
5,929	98	Weighted Average
118		1.99% Pervious Area
5,811		98.01% Impervious Area

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Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0120	0.95		Sheet Flow, SHEET FLOW Smooth surfaces n= 0.011 P2= 3.00"

Summary for Subcatchment 21: Subcat 21

Runoff = 0.92 cfs @ 12.01 hrs, Volume= 2,783 cf, Depth> 6.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
11	98	Paved parking, HSG C
5,239	98	Paved parking, HSG C
185	74	>75% Grass cover, Good, HSG C
0	70	Woods, Good, HSG C
51	70	Woods, Good, HSG C
5,486	97	Weighted Average
236		4.30% Pervious Area
5,250		95.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0205	1.17		Sheet Flow, SHEET FLOW Smooth surfaces n= 0.011 P2= 3.00"

Summary for Subcatchment 22: Subcat 22

Runoff = 1.38 cfs @ 12.01 hrs, Volume= 4,262 cf, Depth> 6.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
0	70	Woods, Good, HSG C
1,171	98	Roofs, HSG C
10	98	Paved parking, HSG C
6,926	98	Paved parking, HSG C
137	74	>75% Grass cover, Good, HSG C
156	74	>75% Grass cover, Good, HSG C
8,401	97	Weighted Average
293		3.49% Pervious Area
8,108		96.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	60	0.0104	0.93		Sheet Flow, SHEET FLOW Smooth surfaces n= 0.011 P2= 3.00"

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Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Summary for Subcatchment 23: Subcat 23

Runoff = 1.31 cfs @ 12.01 hrs, Volume= 4,018 cf, Depth> 6.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
204	74	>75% Grass cover, Good, HSG C
136	74	>75% Grass cover, Good, HSG C
5,280	98	Paved parking, HSG C
8	98	Paved parking, HSG C
2,291	98	Roofs, HSG C
0	70	Woods, Good, HSG C
7,920	97	Weighted Average
340		4.30% Pervious Area
7,579		95.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	60	0.0140	1.04		Sheet Flow, SHEET FLOW Smooth surfaces n= 0.011 P2= 3.00"

Summary for Subcatchment 24: Subcat 24

Runoff = 2.09 cfs @ 12.02 hrs, Volume= 6,541 cf, Depth> 6.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (ac)	CN	Description
0.045	98	Roofs, HSG C
0.010	98	Paved parking, HSG C
0.230	98	Paved parking, HSG C
0.001	98	Paved parking, HSG C
0.005	74	>75% Grass cover, Good, HSG C
0.006	70	Woods, Good, HSG C
0.000	70	Woods, Good, HSG C
0.296	97	Weighted Average
0.010		3.47% Pervious Area
0.286		96.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0120	0.95		Sheet Flow, SHEET FLOW Smooth surfaces n= 0.011 P2= 3.00"
0.5	63	0.0120	2.22		Shallow Concentrated Flow, SCF Paved Kv= 20.3 fps
1.4	113	Total			

Summary for Subcatchment 25: Subcat 25

Runoff = 1.18 cfs @ 12.17 hrs, Volume= 4,500 cf, Depth= 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
5,218	70	Woods, Good, HSG C
81	98	Paved parking, HSG C
9,732	74	>75% Grass cover, Good, HSG C
15,031	73	Weighted Average
14,950		99.46% Pervious Area
81		0.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.1	50	0.0360	0.08		Sheet Flow, SHEET FLOW Woods: Light underbrush n= 0.400 P2= 3.00"
2.1	106	0.0140	0.83		Shallow Concentrated Flow, SCF Short Grass Pasture Kv= 7.0 fps
12.2	156	Total			

Summary for Subcatchment 26: Subcat 26

Runoff = 1.93 cfs @ 12.05 hrs, Volume= 5,587 cf, Depth= 4.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
25	98	Paved parking, HSG D
0	98	Paved parking, HSG D
63	98	Paved parking, HSG D
2,621	98	Paved parking, HSG C
393	98	Paved parking, HSG C
1	98	Paved parking, HSG C
3,691	98	Roofs, HSG C
1	98	Roofs, HSG C
8	98	Paved parking, HSG C
25	74	>75% Grass cover, Good, HSG C
7,587	70	Woods, Good, HSG C
0	70	Woods, Good, HSG C
14,414	83	Weighted Average
7,612		52.81% Pervious Area
6,803		47.19% Impervious Area

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Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	50	0.0320	1.40		Sheet Flow, SHEET FLOW Smooth surfaces n= 0.011 P2= 3.00"
1.0	75	0.0320	1.25		Shallow Concentrated Flow, SCF Short Grass Pasture Kv= 7.0 fps
1.3	93	0.0300	1.21		Shallow Concentrated Flow, SCF Short Grass Pasture Kv= 7.0 fps
2.9	218	Total			

Summary for Subcatchment 27: Subcat 27

Runoff = 1.02 cfs @ 12.00 hrs, Volume= 3,072 cf, Depth> 6.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
3	70	Woods, Good, HSG C
5,984	98	Roofs, HSG C
5,987	98	Weighted Average
3		0.06% Pervious Area
5,984		99.94% Impervious Area

Summary for Subcatchment 28: Subcat 28

Runoff = 1.51 cfs @ 12.00 hrs, Volume= 4,526 cf, Depth> 6.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
168	70	Woods, Good, HSG C
8,753	98	Roofs, HSG C
0	74	>75% Grass cover, Good, HSG C
8,922	97	Weighted Average
168		1.89% Pervious Area
8,753		98.11% Impervious Area

Summary for Subcatchment 29: Subcat 29

Runoff = 0.86 cfs @ 12.00 hrs, Volume= 2,588 cf, Depth> 6.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Area (ac)	CN	Description
0.116	98	Roofs, HSG C
0.116		100.00% Impervious Area

Summary for Subcatchment 30: Subcat 30

Runoff = 2.44 cfs @ 12.05 hrs, Volume= 7,365 cf, Depth> 5.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (ac)	CN	Description
0.066	70	Woods, Good, HSG C
0.000	98	Paved parking, HSG C
0.116	98	Roofs, HSG C
0.139	98	Paved parking, HSG C
0.053	74	>75% Grass cover, Good, HSG C
0.375	90	Weighted Average
0.119		31.74% Pervious Area
0.256		68.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0120	0.95		Sheet Flow, SHEET FLOW Smooth surfaces n= 0.011 P2= 3.00"
2.2	103	0.0120	0.77		Shallow Concentrated Flow, SCF Short Grass Pasture Kv= 7.0 fps
3.1	153	Total			

Summary for Subcatchment 31: Subcat 31

Runoff = 1.59 cfs @ 12.09 hrs, Volume= 5,011 cf, Depth= 4.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (ac)	CN	Description
0.085	98	Paved parking, HSG C
0.049	74	>75% Grass cover, Good, HSG C
0.197	70	Woods, Good, HSG C
0.000	77	Woods, Good, HSG D
0.000	77	Woods, Good, HSG D
0.004	77	Woods, Good, HSG D
0.000	98	Paved parking, HSG D
0.336	78	Weighted Average
0.250		74.62% Pervious Area
0.085		25.38% Impervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	40	0.1250	0.20		Sheet Flow, SHEET FLOW Grass: Dense n= 0.240 P2= 3.00"
2.4	160	0.0250	1.11		Shallow Concentrated Flow, SCF Short Grass Pasture Kv= 7.0 fps
5.8	200	Total			

Summary for Subcatchment 32: Subcat 32

Runoff = 17.35 cfs @ 12.14 hrs, Volume= 62,117 cf, Depth= 3.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
47	98	Paved parking, HSG C
0	77	Woods, Good, HSG D
27	77	Woods, Good, HSG D
17,463	70	Woods, Good, HSG C
16	77	Woods, Good, HSG D
0	77	Woods, Good, HSG D
63	77	Woods, Good, HSG D
173,345	77	Woods, Good, HSG D
11	98	Paved parking, HSG D
190,972	76	Weighted Average
190,914		99.97% Pervious Area
58		0.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	33	0.0200	1.07		Sheet Flow, SF Smooth surfaces n= 0.011 P2= 3.00"
2.8	100	0.0570	0.60		Shallow Concentrated Flow, SCF Forest w/Heavy Litter Kv= 2.5 fps
6.6	482	0.0110	1.21	24.24	Trap/Vee/Rect Channel Flow, CHANNEL FLOW Bot.W=40.00' D=0.50' Z= 0.2 ' /' Top.W=40.20' n= 0.080 Earth, long dense weeds
9.9	615	Total			

Summary for Subcatchment 33: Subcat 33

Runoff = 1.22 cfs @ 12.17 hrs, Volume= 4,783 cf, Depth> 4.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Area (sf)	CN	Description
2	98	Paved parking, HSG D
6	98	Paved parking, HSG D
38	98	Paved parking, HSG D
2,807	98	Paved parking, HSG D
2	77	Woods, Good, HSG D
5,298	77	Woods, Good, HSG D
2,070	98	Paved parking, HSG C
412	70	Woods, Good, HSG C
885	77	Woods, Good, HSG D
11,522	86	Weighted Average
6,597		57.26% Pervious Area
4,925		42.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.6	50	0.0350	0.18		Sheet Flow, SHEET FLOW Grass: Short n= 0.150 P2= 3.00"
7.8	74	0.0540	0.16		Sheet Flow, SHEET FLOW Grass: Dense n= 0.240 P2= 3.00"
12.4	124	Total			

Summary for Subcatchment 34: Subcat 34

Runoff = 0.58 cfs @ 12.01 hrs, Volume= 1,636 cf, Depth= 4.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
1,961	70	Woods, Good, HSG C
146	98	Paved parking, HSG C
1,949	98	Paved parking, HSG C
68	74	>75% Grass cover, Good, HSG C
4,123	84	Weighted Average
2,028		49.19% Pervious Area
2,095		50.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	50	0.0350	1.45		Sheet Flow, SHEET FLOW Smooth surfaces n= 0.011 P2= 3.00"
0.2	18	0.0340	1.29		Shallow Concentrated Flow, SCF Short Grass Pasture Kv= 7.0 fps
0.8	68	Total			

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Summary for Subcatchment 35: Subcat 35

Runoff = 4.09 cfs @ 12.26 hrs, Volume= 18,332 cf, Depth= 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YEAR STORM Rainfall=6.60"

Area (sf)	CN	Description
786	98	Paved parking, HSG C
1,745	98	Paved parking, HSG C
1,853	98	Paved parking, HSG C
10,284	74	>75% Grass cover, Good, HSG C
30	70	Woods, Good, HSG C
44,057	70	Woods, Good, HSG C
8	77	Woods, Good, HSG D
2,451	77	Woods, Good, HSG D
16	98	Paved parking, HSG D
61,230	73	Weighted Average
56,829		92.81% Pervious Area
4,401		7.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	50	0.0200	0.07		Sheet Flow, SHEET FLOW Woods: Light underbrush n= 0.400 P2= 3.00"
6.0	311	0.0300	0.87		Shallow Concentrated Flow, SCF Woodland Kv= 5.0 fps
18.7	361	Total			

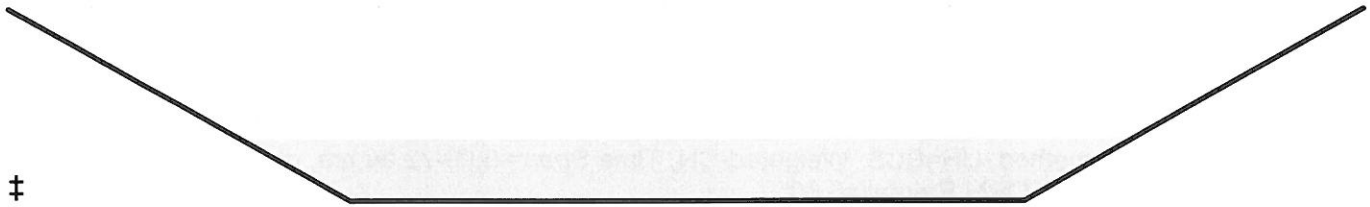
Summary for Reach 1R: Wetland Natural Swale

Inflow Area = 0.703 ac, 39.97% Impervious, Inflow Depth > 4.57" for 25 YEAR STORM event
Inflow = 1.50 cfs @ 12.26 hrs, Volume= 11,665 cf
Outflow = 1.48 cfs @ 12.47 hrs, Volume= 11,636 cf, Atten= 2%, Lag= 12.5 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.80 fps, Min. Travel Time= 6.2 min
Avg. Velocity= 0.17 fps, Avg. Travel Time= 29.5 min

Peak Storage= 554 cf @ 12.36 hrs
Average Depth at Peak Storage= 0.16'
Bank-Full Depth= 0.50' Flow Area= 7.5 sf, Capacity= 11.57 cfs

10.00' x 0.50' deep channel, n= 0.100 Very weedy reaches w/pools
Side Slope Z-value= 10.0 '1' Top Width= 20.00'
Length= 300.0' Slope= 0.0400 '1'
Inlet Invert= 46.00', Outlet Invert= 34.00'



Summary for Reach 2R: Wetland Natural Swale

Inflow Area = 3.545 ac, 50.30% Impervious, Inflow Depth = 4.88" for 25 YEAR STORM event
 Inflow = 7.02 cfs @ 12.21 hrs, Volume= 62,821 cf
 Outflow = 4.34 cfs @ 13.24 hrs, Volume= 62,697 cf, Atten= 38%, Lag= 61.8 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Max. Velocity= 0.30 fps, Min. Travel Time= 38.9 min
 Avg. Velocity = 0.08 fps, Avg. Travel Time= 149.1 min

Peak Storage= 10,134 cf @ 12.59 hrs
 Average Depth at Peak Storage= 0.16'
 Bank-Full Depth= 1.00' Flow Area= 110.0 sf, Capacity= 104.19 cfs

90.00' x 1.00' deep channel, n= 0.150
 Side Slope Z-value= 20.0 ' / ' Top Width= 130.00'
 Length= 700.0' Slope= 0.0114 ' / '
 Inlet Invert= 40.00', Outlet Invert= 32.00'



Summary for Reach 3R: Wetland Natural Swale

Inflow Area = 2.957 ac, 30.52% Impervious, Inflow Depth > 4.36" for 25 YEAR STORM event
 Inflow = 6.16 cfs @ 12.41 hrs, Volume= 46,828 cf
 Outflow = 3.82 cfs @ 13.77 hrs, Volume= 46,609 cf, Atten= 38%, Lag= 82.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Max. Velocity= 0.27 fps, Min. Travel Time= 52.7 min
 Avg. Velocity = 0.06 fps, Avg. Travel Time= 218.5 min

Peak Storage= 12,085 cf @ 12.90 hrs
 Average Depth at Peak Storage= 0.15'
 Bank-Full Depth= 1.00' Flow Area= 110.0 sf, Capacity= 94.55 cfs

90.00' x 1.00' deep channel, n= 0.150
 Side Slope Z-value= 20.0 ' / ' Top Width= 130.00'
 Length= 850.0' Slope= 0.0094 ' / '
 Inlet Invert= 40.00', Outlet Invert= 32.00'



Summary for Reach 4R: (new Reach)

Inflow Area = 1.891 ac, 35.29% Impervious, Inflow Depth = 4.57" for 25 YEAR STORM event
 Inflow = 5.47 cfs @ 12.09 hrs, Volume= 31,353 cf
 Outflow = 5.30 cfs @ 12.12 hrs, Volume= 31,353 cf, Atten= 3%, Lag= 1.6 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Max. Velocity= 2.31 fps, Min. Travel Time= 0.9 min
 Avg. Velocity = 0.51 fps, Avg. Travel Time= 4.2 min

Peak Storage= 309 cf @ 12.10 hrs
 Average Depth at Peak Storage= 0.20'
 Bank-Full Depth= 0.50' Flow Area= 7.5 sf, Capacity= 29.30 cfs

10.00' x 0.50' deep channel, n= 0.030 Earth, grassed & winding
 Side Slope Z-value= 10.0 'l' Top Width= 20.00'
 Length= 130.0' Slope= 0.0231 'l'
 Inlet Invert= 41.00', Outlet Invert= 38.00'



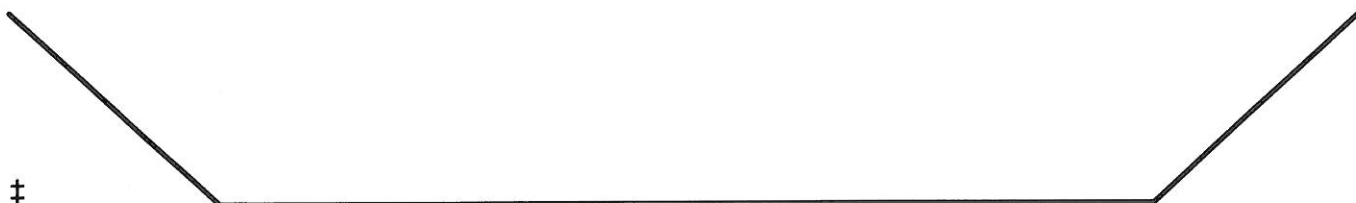
Summary for Reach 6R: Wetland Natural Swale

Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0 cf
 Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 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 @ 5.00 hrs
 Average Depth at Peak Storage= 0.00'
 Bank-Full Depth= 1.00' Flow Area= 110.0 sf, Capacity= 123.12 cfs

90.00' x 1.00' deep channel, n= 0.150
 Side Slope Z-value= 20.0 'l' Top Width= 130.00'
 Length= 1,128.0' Slope= 0.0160 'l'
 Inlet Invert= 50.00', Outlet Invert= 32.00'



Summary for Pond 1P: USF 1

Inflow Area = 0.703 ac, 39.97% Impervious, Inflow Depth = 4.66" for 25 YEAR STORM event
 Inflow = 3.91 cfs @ 12.04 hrs, Volume= 11,889 cf
 Outflow = 1.50 cfs @ 12.26 hrs, Volume= 11,665 cf, Atten= 62%, Lag= 13.3 min
 Primary = 1.50 cfs @ 12.26 hrs, Volume= 11,665 cf
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Peak Elev= 48.62' @ 12.26 hrs Surf.Area= 2,466 sf Storage= 4,575 cf
 Flood Elev= 62.00' Surf.Area= 3,358 sf Storage= 8,586 cf

Plug-Flow detention time= 419.4 min calculated for 11,665 cf (98% of inflow)
 Center-of-Mass det. time= 408.0 min (1,207.0 - 799.0)

Volume	Invert	Avail.Storage	Storage Description
#1	46.00'	8,586 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
46.00	1,094	0	0
47.00	1,570	1,332	1,332
47.50	1,829	850	2,182
48.00	2,102	983	3,165
49.00	2,691	2,397	5,561
50.00	3,358	3,025	8,586

Device	Routing	Invert	Outlet Devices
#1	Primary	43.53'	12.0" Round Culvert L= 26.6' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 43.53' / 43.40' S= 0.0049 ' /' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	43.63'	0.5" Vert. Orifice/Grate C= 0.600
#3	Device 2	43.73'	6.0" Round Culvert L= 20.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 43.73' / 43.63' S= 0.0050 ' /' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#4	Device 3	46.00'	2.400 in/hr Exfiltration over Surface area
#5	Device 1	47.50'	8.0" Vert. Orifice/Grate C= 0.600
#6	Device 1	49.17'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#7	Secondary	49.00'	20.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00

	2.50	3.00	3.50	4.00	4.50	5.00	5.50			
Coef. (English)	2.34	2.50	2.70	2.68	2.68	2.66	2.65	2.65	2.65	2.65
	2.65	2.67	2.66	2.68	2.70	2.74	2.79	2.88		

Primary OutFlow Max=1.50 cfs @ 12.26 hrs HW=48.62' (Free Discharge)

- 1=Culvert (Passes 1.50 cfs of 8.10 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.01 cfs @ 10.73 fps)
- 3=Culvert (Passes 0.01 cfs of 1.90 cfs potential flow)
- 4=Exfiltration (Passes 0.01 cfs of 0.14 cfs potential flow)
- 5=Orifice/Grate (Orifice Controls 1.49 cfs @ 4.26 fps)
- 6=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=46.00' (Free Discharge)

- 7=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 2AP: USF 2A

Inflow Area = 1.128 ac, 28.33% Impervious, Inflow Depth = 4.39" for 25 YEAR STORM event
 Inflow = 6.21 cfs @ 12.04 hrs, Volume= 17,966 cf
 Outflow = 1.81 cfs @ 12.35 hrs, Volume= 17,966 cf, Atten= 71%, Lag= 18.5 min
 Primary = 1.81 cfs @ 12.35 hrs, Volume= 17,966 cf
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Peak Elev= 48.92' @ 12.35 hrs Surf.Area= 3,287 sf Storage= 6,990 cf
 Flood Elev= 61.00' Surf.Area= 3,798 sf Storage= 10,815 cf

Plug-Flow detention time= 247.2 min calculated for 17,966 cf (100% of inflow)
 Center-of-Mass det. time= 246.9 min (1,051.4 - 804.5)

Volume	Invert	Avail.Storage	Storage Description
#1	46.00'	10,815 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
46.00	1,570	0	0
47.00	2,108	1,839	1,839
47.50	2,390	1,125	2,964
48.00	2,691	1,270	4,234
49.00	3,337	3,014	7,248
50.00	3,798	3,568	10,815

Device	Routing	Invert	Outlet Devices
#1	Primary	43.53'	12.0" Round Culvert L= 118.9' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 43.53' / 43.00' S= 0.0045 ' / Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	43.63'	1.0" Vert. Orifice/Grate C= 0.600
#3	Device 2	43.73'	6.0" Round Culvert L= 20.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 43.73' / 43.63' S= 0.0050 ' / Cc= 0.900

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			n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#4	Device 3	46.00'	2.40 cfs Exfiltration at all elevations
#5	Device 1	47.50'	8.0" Vert. Orifice/Grate C= 0.600
#6	Device 1	49.17'	12.0" Vert. Orifice/Grate C= 0.600
#7	Secondary	49.00'	20.0' long x 5.0' breadth Broad-Crested Rectangular Weir
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00
			2.50 3.00 3.50 4.00 4.50 5.00 5.50
			Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65
			2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=1.81 cfs @ 12.35 hrs HW=48.92' (Free Discharge)

- ↑ 1=Culvert (Passes 1.81 cfs of 6.11 cfs potential flow)
- ↑ 2=Orifice/Grate (Orifice Controls 0.06 cfs @ 11.03 fps)
- ↑ 3=Culvert (Passes 0.06 cfs of 1.96 cfs potential flow)
- ↑ 4=Exfiltration (Passes 0.06 cfs of 2.40 cfs potential flow)
- 5=Orifice/Grate (Orifice Controls 1.75 cfs @ 5.02 fps)
- 6=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=46.00' (Free Discharge)

- ↑ 7=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 2BP: USF 2B

Inflow Area = 0.763 ac, 45.57% Impervious, Inflow Depth = 4.83" for 25 YEAR STORM event
 Inflow = 4.56 cfs @ 12.04 hrs, Volume= 13,388 cf
 Outflow = 3.92 cfs @ 12.08 hrs, Volume= 13,388 cf, Atten= 14%, Lag= 2.6 min
 Primary = 3.16 cfs @ 12.08 hrs, Volume= 13,154 cf
 Secondary = 0.75 cfs @ 12.08 hrs, Volume= 234 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Peak Elev= 47.05' @ 12.08 hrs Surf.Area= 2,308 sf Storage= 3,568 cf
 Flood Elev= 60.00' Surf.Area= 2,867 sf Storage= 6,023 cf

Plug-Flow detention time= 219.2 min calculated for 13,378 cf (100% of inflow)
 Center-of-Mass det. time= 219.9 min (1,013.6 - 793.8)

Volume	Invert	Avail.Storage	Storage Description
#1	45.00'	6,023 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
45.00	1,205	0	0
46.00	1,713	1,459	1,459
46.50	1,988	925	2,384
47.00	2,278	1,067	3,451
48.00	2,867	2,573	6,023

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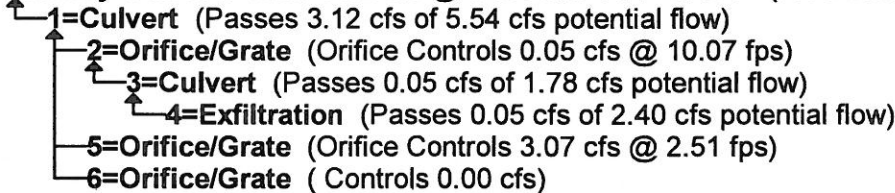
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Device	Routing	Invert	Outlet Devices
#1	Primary	42.53'	12.0" Round Culvert L= 118.9' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 42.53' / 42.00' S= 0.0045 ' /' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	42.63'	1.0" Vert. Orifice/Grate C= 0.600
#3	Device 2	42.73'	6.0" Round Culvert L= 20.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 42.73' / 42.63' S= 0.0050 ' /' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#4	Device 3	45.00'	2.40 cfs Exfiltration at all elevations
#5	Device 1	46.50'	8.0" Vert. Orifice/Grate X 4.00 C= 0.600
#6	Device 1	47.17'	12.0" Vert. Orifice/Grate C= 0.600
#7	Secondary	47.00'	20.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=3.12 cfs @ 12.08 hrs HW=47.04' (Free Discharge)



Secondary OutFlow Max=0.44 cfs @ 12.08 hrs HW=47.04' (Free Discharge)



Summary for Pond 3P: USF 3

Inflow Area =	2.000 ac, 46.61% Impervious, Inflow Depth = 4.80" for 25 YEAR STORM event
Inflow =	9.25 cfs @ 12.09 hrs, Volume= 34,817 cf
Outflow =	2.25 cfs @ 12.50 hrs, Volume= 34,817 cf, Atten= 76%, Lag= 24.8 min
Primary =	2.25 cfs @ 12.50 hrs, Volume= 34,817 cf
Secondary =	0.00 cfs @ 5.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Peak Elev= 48.24' @ 12.50 hrs Surf.Area= 9,208 sf Storage= 16,255 cf
 Flood Elev= 49.00' Surf.Area= 11,391 sf Storage= 24,054 cf

Plug-Flow detention time= 375.1 min calculated for 34,791 cf (100% of inflow)
 Center-of-Mass det. time= 376.8 min (1,172.2 - 795.4)

Volume	Invert	Avail.Storage	Storage Description
#1	45.00'	37,844 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
45.00	2,818	0	0
46.00	3,701	3,260	3,260
46.50	4,165	1,967	5,226
47.00	4,777	2,236	7,462
48.00	8,508	6,643	14,104
49.00	11,391	9,950	24,054
50.00	16,190	13,791	37,844

Device	Routing	Invert	Outlet Devices
#1	Primary	42.53'	12.0" Round Culvert L= 37.6' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 42.53' / 42.00' S= 0.0141 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	42.63'	0.9" Vert. Orifice/Grate C= 0.600
#3	Device 2	42.73'	6.0" Round Culvert L= 20.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 42.73' / 42.63' S= 0.0050 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#4	Device 3	45.00'	2.400 in/hr Exfiltration over Surface area
#5	Device 1	46.50'	8.0" Vert. Orifice/Grate C= 0.600
#6	Device 1	48.17'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#7	Secondary	49.00'	20.0' long x 4.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=2.25 cfs @ 12.50 hrs HW=48.24' (Free Discharge)

- 1=Culvert (Passes 2.25 cfs of 8.63 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.05 cfs @ 11.37 fps)
- 3=Culvert (Passes 0.05 cfs of 2.03 cfs potential flow)
- 4=Exfiltration (Passes 0.05 cfs of 0.51 cfs potential flow)
- 5=Orifice/Grate (Orifice Controls 2.00 cfs @ 5.72 fps)
- 6=Orifice/Grate (Weir Controls 0.20 cfs @ 0.88 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=45.00' (Free Discharge)

- 7=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond 4P: USF 4

Inflow Area = 1.545 ac, 55.08% Impervious, Inflow Depth = 4.99" for 25 YEAR STORM event
 Inflow = 6.60 cfs @ 12.03 hrs, Volume= 28,005 cf
 Outflow = 5.15 cfs @ 12.19 hrs, Volume= 28,005 cf, Atten= 22%, Lag= 10.0 min
 Primary = 5.15 cfs @ 12.19 hrs, Volume= 28,005 cf
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs

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Peak Elev= 47.41' @ 12.19 hrs Surf.Area= 3,999 sf Storage= 7,764 cf
 Flood Elev= 49.00' Surf.Area= 4,409 sf Storage= 10,259 cf

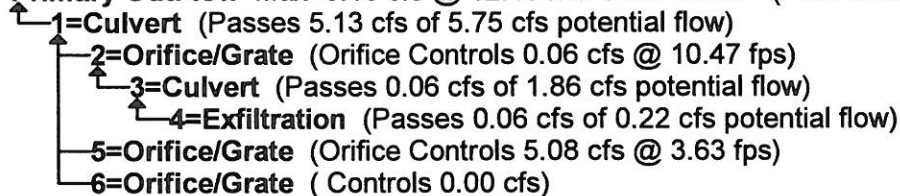
Plug-Flow detention time= 274.1 min calculated for 27,984 cf (100% of inflow)
 Center-of-Mass det. time= 275.2 min (1,060.2 - 785.0)

Volume	Invert	Avail.Storage	Storage Description
#1	45.00'	10,259 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

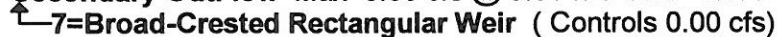
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
45.00	2,508	0	0
46.00	3,085	2,797	2,797
46.50	3,395	1,620	4,417
47.00	3,719	1,779	6,195
48.00	4,409	4,064	10,259

Device	Routing	Invert	Outlet Devices
#1	Primary	42.53'	12.0" Round Culvert L= 124.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 42.53' / 41.91' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	42.63'	1.0" Vert. Orifice/Grate C= 0.600
#3	Device 2	42.73'	6.0" Round Culvert L= 20.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 42.73' / 42.63' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#4	Device 3	45.00'	2.400 in/hr Exfiltration over Surface area
#5	Device 1	46.50'	8.0" Vert. Orifice/Grate X 4.00 C= 0.600
#6	Device 1	48.17'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#7	Secondary	47.50'	20.0' long x 4.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=5.13 cfs @ 12.19 hrs HW=47.40' (Free Discharge)



Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=45.00' (Free Discharge)



Summary for Pond 5P: USF 5

Inflow Area = 2.957 ac, 30.52% Impervious, Inflow Depth > 4.36" for 25 YEAR STORM event
 Inflow = 9.93 cfs @ 12.03 hrs, Volume= 46,829 cf
 Outflow = 6.16 cfs @ 12.41 hrs, Volume= 46,828 cf, Atten= 38%, Lag= 22.4 min
 Primary = 6.16 cfs @ 12.41 hrs, Volume= 46,828 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Peak Elev= 48.66' @ 12.41 hrs Surf.Area= 6,540 sf Storage= 13,045 cf
 Flood Elev= 50.00' Surf.Area= 8,599 sf Storage= 23,152 cf

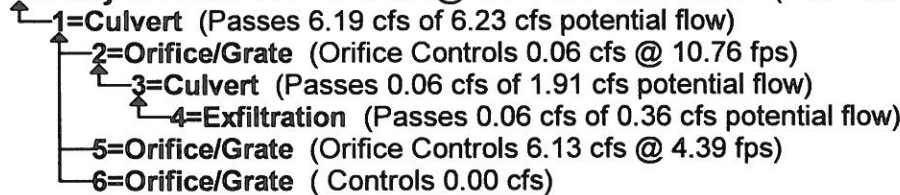
Plug-Flow detention time= 293.9 min calculated for 46,791 cf (100% of inflow)
 Center-of-Mass det. time= 295.5 min (1,103.8 - 808.3)

Volume	Invert	Avail.Storage	Storage Description
#1	46.00'	41,986 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
46.00	3,544	0	0
47.50	5,001	6,409	6,409
48.00	5,515	2,629	9,038
50.00	8,599	14,114	23,152
52.00	10,235	18,834	41,986

Device	Routing	Invert	Outlet Devices
#1	Primary	43.53'	12.0" Round Culvert L= 107.7' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 43.53' / 42.90' S= 0.0058 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	43.63'	1.0" Vert. Orifice/Grate C= 0.600
#3	Device 2	43.73'	6.0" Round Culvert L= 20.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 43.73' / 43.63' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#4	Device 3	46.00'	2.400 in/hr Exfiltration over Surface area
#5	Device 1	47.50'	8.0" Vert. Orifice/Grate X 4.00 C= 0.600
#6	Device 1	49.17'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=6.19 cfs @ 12.41 hrs HW=48.66' (Free Discharge)



Summary for Pond 6P: Detention Pond

Inflow Area = 0.375 ac, 68.26% Impervious, Inflow Depth > 5.41" for 25 YEAR STORM event
 Inflow = 2.44 cfs @ 12.05 hrs, Volume= 7,365 cf
 Outflow = 1.66 cfs @ 12.12 hrs, Volume= 6,466 cf, Atten= 32%, Lag= 4.4 min
 Primary = 1.66 cfs @ 12.12 hrs, Volume= 6,466 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Peak Elev= 59.83' @ 12.12 hrs Surf.Area= 1,488 sf Storage= 1,978 cf
 Flood Elev= 60.00' Surf.Area= 1,566 sf Storage= 2,235 cf

Plug-Flow detention time= 115.9 min calculated for 6,460 cf (88% of inflow)
 Center-of-Mass det. time= 61.1 min (841.7 - 780.6)

Volume	Invert	Avail.Storage	Storage Description
#1	58.00'	4,061 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.00	695	0	0
59.00	1,104	900	900
60.00	1,566	1,335	2,235
61.00	2,087	1,827	4,061

Device	Routing	Invert	Outlet Devices
#1	Primary	59.00'	12.0" Round Culvert L= 70.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 59.00' / 58.60' S= 0.0057 ' /' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.63 cfs @ 12.12 hrs HW=59.82' (Free Discharge)
 1=Culvert (Barrel Controls 1.63 cfs @ 3.21 fps)

Summary for Pond 7P: USF 7

Inflow Area = 0.826 ac, 55.29% Impervious, Inflow Depth > 4.69" for 25 YEAR STORM event
 Inflow = 3.63 cfs @ 12.09 hrs, Volume= 14,065 cf
 Outflow = 0.93 cfs @ 12.57 hrs, Volume= 14,065 cf, Atten= 74%, Lag= 28.8 min
 Primary = 0.93 cfs @ 12.57 hrs, Volume= 14,065 cf
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Peak Elev= 58.68' @ 12.57 hrs Surf.Area= 3,961 sf Storage= 6,131 cf
 Flood Elev= 60.00' Surf.Area= 5,910 sf Storage= 12,634 cf

Plug-Flow detention time= 428.1 min calculated for 14,064 cf (100% of inflow)
 Center-of-Mass det. time= 428.0 min (1,244.4 - 816.4)

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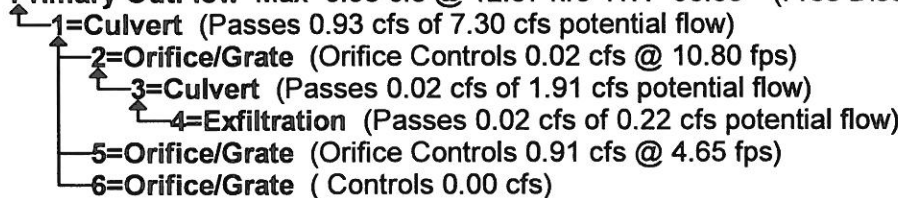
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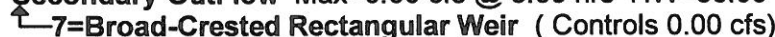
Volume #1	Invert 56.00'	Avail.Storage 12,634 cf	Storage Description Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
56.00	1,126	0	0
57.50	2,191	2,488	2,488
58.00	2,951	1,286	3,773
60.00	5,910	8,861	12,634

Device	Routing	Invert	Outlet Devices
#1	Primary	53.53'	12.0" Round Culvert L= 87.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 53.53' / 52.00' S= 0.0176 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	53.63'	0.6" Vert. Orifice/Grate C= 0.600
#3	Device 2	53.73'	6.0" Round Culvert L= 20.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 53.73' / 53.63' S= 0.0050 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#4	Device 3	56.00'	2.400 in/hr Exfiltration over Surface area
#5	Device 1	57.50'	6.0" Vert. Orifice/Grate C= 0.600
#6	Device 1	59.17'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#7	Secondary	59.00'	20.0' long x 4.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=0.93 cfs @ 12.57 hrs HW=58.68' (Free Discharge)



Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=56.00' (Free Discharge)



Summary for Pond 23P: Catch Basin 23

Inflow Area = 0.230 ac, 73.04% Impervious, Inflow Depth > 5.52" for 25 YEAR STORM event
 Inflow = 1.54 cfs @ 12.02 hrs, Volume= 4,607 cf
 Outflow = 1.53 cfs @ 12.02 hrs, Volume= 4,594 cf, Atten= 0%, Lag= 0.1 min
 Primary = 1.53 cfs @ 12.02 hrs, Volume= 4,594 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs

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Peak Elev= 58.77' @ 12.02 hrs Surf.Area= 13 sf Storage= 23 cf
 Flood Elev= 63.90' Surf.Area= 13 sf Storage= 39 cf

Plug-Flow detention time= 3.7 min calculated for 4,593 cf (100% of inflow)
 Center-of-Mass det. time= 1.7 min (778.0 - 776.3)

Volume	Invert	Avail.Storage	Storage Description
#1	57.00'	39 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
57.00	13	0	0
60.00	13	39	39

Device	Routing	Invert	Outlet Devices
#1	Primary	58.00'	12.0" Round Culvert L= 224.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 58.00' / 55.50' S= 0.0112 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.47 cfs @ 12.02 hrs HW=58.75' (Free Discharge)
 ←1=Culvert (Barrel Controls 1.47 cfs @ 3.22 fps)

Summary for Pond C1: Catch Basin 1

Inflow Area = 0.281 ac, 59.44% Impervious, Inflow Depth > 5.20" for 25 YEAR STORM event
 Inflow = 1.73 cfs @ 12.06 hrs, Volume= 5,297 cf
 Outflow = 1.73 cfs @ 12.06 hrs, Volume= 5,258 cf, Atten= 0%, Lag= 0.1 min
 Primary = 1.73 cfs @ 12.06 hrs, Volume= 5,258 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Peak Elev= 54.71' @ 12.06 hrs Surf.Area= 13 sf Storage= 48 cf
 Flood Elev= 59.00' Surf.Area= 13 sf Storage= 78 cf

Plug-Flow detention time= 8.2 min calculated for 5,254 cf (99% of inflow)
 Center-of-Mass det. time= 3.5 min (790.5 - 787.0)

Volume	Invert	Avail.Storage	Storage Description
#1	51.00'	78 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.00	13	0	0
54.00	13	39	39
57.00	13	39	78

Device	Routing	Invert	Outlet Devices
#1	Primary	54.00'	12.0" Round Culvert L= 63.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 54.00' / 52.00' S= 0.0317 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.67 cfs @ 12.06 hrs HW=54.70' (Free Discharge)

↑1=Culvert (Inlet Controls 1.67 cfs @ 2.85 fps)

Summary for Pond C10: Catch Basin 10

Inflow Area = 0.094 ac, 82.38% Impervious, Inflow Depth > 5.73" for 25 YEAR STORM event
 Inflow = 0.64 cfs @ 12.04 hrs, Volume= 1,958 cf
 Outflow = 0.64 cfs @ 12.04 hrs, Volume= 1,958 cf, Atten= 0%, Lag= 0.0 min
 Primary = 0.64 cfs @ 12.04 hrs, Volume= 1,958 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Peak Elev= 51.03' @ 12.04 hrs Surf.Area= 13 sf Storage= 0 cf
 Flood Elev= 54.00' Surf.Area= 13 sf Storage= 39 cf

Plug-Flow detention time= 0.0 min calculated for 1,958 cf (100% of inflow)
 Center-of-Mass det. time= 0.0 min (771.4 - 771.4)

Volume	Invert	Avail.Storage	Storage Description
#1	51.00'	39 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.00	13	0	0
54.00	13	39	39

Device	Routing	Invert	Outlet Devices
#1	Primary	50.50'	12.0" Round Culvert L= 50.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 50.50' / 50.00' S= 0.0100 ' / Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.72 cfs @ 12.04 hrs HW=51.03' (Free Discharge)

↑1=Culvert (Barrel Controls 0.72 cfs @ 2.49 fps)

Summary for Pond C11: Catch Basin 11

Inflow Area = 1.142 ac, 67.29% Impervious, Inflow Depth > 5.31" for 25 YEAR STORM event
 Inflow = 5.53 cfs @ 12.03 hrs, Volume= 21,985 cf
 Outflow = 4.94 cfs @ 12.10 hrs, Volume= 21,982 cf, Atten= 11%, Lag= 4.0 min
 Primary = 4.94 cfs @ 12.10 hrs, Volume= 21,982 cf
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Peak Elev= 57.23' @ 12.10 hrs Surf.Area= 315 sf Storage= 322 cf
 Flood Elev= 55.80' Surf.Area= 65 sf Storage= 51 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 0.3 min (777.1 - 776.8)

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Volume	Invert	Avail.Storage	Storage Description
#1	52.50'	618 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
52.50	13	0	0
55.50	13	39	39
58.00	450	579	618

Device	Routing	Invert	Outlet Devices
#1	Primary	52.70'	12.0" Round Culvert L= 127.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 52.70' / 49.50' S= 0.0252 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf
#2	Secondary	57.50'	3.0' long x 1.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=4.94 cfs @ 12.10 hrs HW=57.21' (Free Discharge)

↳1=Culvert (Barrel Controls 4.94 cfs @ 6.29 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=52.56' (Free Discharge)

↳2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond C12: Catch Basin 12

Inflow Area = 1.016 ac, 63.77% Impervious, Inflow Depth > 5.21" for 25 YEAR STORM event
 Inflow = 5.26 cfs @ 12.03 hrs, Volume= 19,204 cf
 Outflow = 4.74 cfs @ 12.06 hrs, Volume= 19,201 cf, Atten= 10%, Lag= 1.8 min
 Primary = 4.74 cfs @ 12.06 hrs, Volume= 19,201 cf
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs

Peak Elev= 57.71' @ 12.06 hrs Surf.Area= 325 sf Storage= 159 cf

Flood Elev= 57.30' Surf.Area= 144 sf Storage= 63 cf

Plug-Flow detention time= 0.5 min calculated for 19,186 cf (100% of inflow)

Center-of-Mass det. time= 0.3 min (779.4 - 779.1)

Volume	Invert	Avail.Storage	Storage Description
#1	54.00'	271 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
54.00	13	0	0
57.00	13	39	39
58.00	450	232	271

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Device	Routing	Invert	Outlet Devices
#1	Primary	54.20'	12.0" Round Culvert L= 73.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 54.20' / 52.80' S= 0.0192 ' S= 0.0192 ' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf
#2	Secondary	58.00'	3.0' long x 1.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=4.72 cfs @ 12.06 hrs HW=57.68' (Free Discharge)

↑1=Culvert (Barrel Controls 4.72 cfs @ 6.01 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=54.10' (Free Discharge)

↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond C13: Catch Basin 13

Inflow Area = 0.823 ac, 56.09% Impervious, Inflow Depth > 5.01" for 25 YEAR STORM event
 Inflow = 3.96 cfs @ 12.02 hrs, Volume= 14,974 cf
 Outflow = 3.95 cfs @ 12.03 hrs, Volume= 14,942 cf, Atten= 0%, Lag= 0.6 min
 Primary = 3.95 cfs @ 12.03 hrs, Volume= 14,942 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Peak Elev= 57.91' @ 12.03 hrs Surf.Area= 13 sf Storage= 70 cf
 Flood Elev= 58.00' Surf.Area= 13 sf Storage= 72 cf

Plug-Flow detention time= 2.8 min calculated for 14,929 cf (100% of inflow)
 Center-of-Mass det. time= 1.3 min (784.7 - 783.5)

Volume	Invert	Avail.Storage	Storage Description
#1	52.50'	72 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
52.50	13	0	0
55.50	13	39	39
58.00	13	33	72

Device	Routing	Invert	Outlet Devices
#1	Primary	55.00'	12.0" Round Culvert L= 70.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 55.00' / 54.30' S= 0.0100 ' S= 0.0100 ' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf

Primary OutFlow Max=3.83 cfs @ 12.03 hrs HW=57.77' (Free Discharge)

↑1=Culvert (Barrel Controls 3.83 cfs @ 4.87 fps)

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Summary for Pond C14: Catch Basin 14

Inflow Area = 0.641 ac, 44.86% Impervious, Inflow Depth > 4.73" for 25 YEAR STORM event
 Inflow = 2.68 cfs @ 12.03 hrs, Volume= 11,000 cf
 Outflow = 2.67 cfs @ 12.03 hrs, Volume= 10,956 cf, Atten= 0%, Lag= 0.0 min
 Primary = 2.67 cfs @ 12.03 hrs, Volume= 10,956 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 58.61' @ 12.04 hrs Surf.Area= 13 sf Storage= 53 cf
 Flood Elev= 61.60' Surf.Area= 13 sf Storage= 72 cf

Plug-Flow detention time= 4.6 min calculated for 10,947 cf (100% of inflow)
 Center-of-Mass det. time= 2.0 min (792.3 - 790.4)

Volume	Invert	Avail.Storage	Storage Description
#1	54.50'	72 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
54.50	13	0	0
57.50	13	39	39
60.00	13	33	72

Device	Routing	Invert	Outlet Devices
#1	Primary	57.40'	12.0" Round Culvert L= 70.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 57.40' / 56.60' S= 0.0114 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.62 cfs @ 12.03 hrs HW=58.58' (Free Discharge)
 1=Culvert (Barrel Controls 2.62 cfs @ 3.56 fps)

Summary for Pond C15: Catch Basin 15

Inflow Area = 0.345 ac, 0.54% Impervious, Inflow Depth = 3.59" for 25 YEAR STORM event
 Inflow = 1.18 cfs @ 12.17 hrs, Volume= 4,500 cf
 Outflow = 1.18 cfs @ 12.17 hrs, Volume= 4,459 cf, Atten= 0%, Lag= 0.1 min
 Primary = 1.18 cfs @ 12.17 hrs, Volume= 4,459 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Peak Elev= 57.37' @ 12.17 hrs Surf.Area= 13 sf Storage= 50 cf
 Flood Elev= 59.80' Surf.Area= 13 sf Storage= 78 cf

Plug-Flow detention time= 8.5 min calculated for 4,455 cf (99% of inflow)
 Center-of-Mass det. time= 3.0 min (835.5 - 832.6)

Volume	Invert	Avail.Storage	Storage Description
#1	53.50'	78 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
53.50	13	0	0
56.50	13	39	39
59.50	13	39	78

Device	Routing	Invert	Outlet Devices
#1	Primary	56.70'	12.0" Round Culvert L= 150.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 56.70' / 55.10' S= 0.0107 ' S= 0.0107 ' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.16 cfs @ 12.17 hrs HW=57.36' (Free Discharge)
 ↳1=Culvert (Barrel Controls 1.16 cfs @ 2.98 fps)

Summary for Pond C16: Catch Basin 16

Inflow Area = 0.673 ac, 73.46% Impervious, Inflow Depth > 5.40" for 25 YEAR STORM event
 Inflow = 4.17 cfs @ 12.02 hrs, Volume= 13,185 cf
 Outflow = 4.16 cfs @ 12.02 hrs, Volume= 13,185 cf, Atten= 0%, Lag= 0.1 min
 Primary = 4.16 cfs @ 12.02 hrs, Volume= 13,185 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Peak Elev= 51.73' @ 12.02 hrs Surf.Area= 13 sf Storage= 9 cf
 Flood Elev= 53.50' Surf.Area= 13 sf Storage= 33 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 0.0 min (775.4 - 775.4)

Volume	Invert	Avail.Storage	Storage Description
#1	51.00'	33 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.00	13	0	0
53.50	13	33	33

Device	Routing	Invert	Outlet Devices
#1	Primary	50.50'	14.0" Round Culvert L= 60.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 50.50' / 49.00' S= 0.0250 ' S= 0.0250 ' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 1.07 sf

Primary OutFlow Max=3.99 cfs @ 12.02 hrs HW=51.69' (Free Discharge)
 ↳1=Culvert (Inlet Controls 3.99 cfs @ 3.73 fps)

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Summary for Pond C17: Catch Basin 17

Inflow Area = 1.765 ac, 14.86% Impervious, Inflow Depth > 3.86" for 25 YEAR STORM event
 Inflow = 5.28 cfs @ 12.24 hrs, Volume= 24,696 cf
 Outflow = 4.97 cfs @ 12.31 hrs, Volume= 25,342 cf, Atten= 6%, Lag= 4.2 min
 Primary = 4.97 cfs @ 12.31 hrs, Volume= 25,342 cf
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 53.65' @ 12.31 hrs Surf.Area= 200 sf Storage= 330 cf
 Flood Elev= 52.00' Surf.Area= 200 sf Storage= 0 cf

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

Volume	Invert	Avail.Storage	Storage Description
#1	52.00'	725 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
52.00	200	0	0
54.00	200	400	400
55.00	450	325	725

Device	Routing	Invert	Outlet Devices
#1	Primary	49.00'	12.0" Round Culvert L= 60.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 49.00' / 48.70' S= 0.0050 ' / ' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf
#2	Secondary	55.00'	3.0' long x 1.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=4.95 cfs @ 12.31 hrs HW=53.63' (Free Discharge)

↑1=Culvert (Barrel Controls 4.95 cfs @ 6.31 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=52.00' (Free Discharge)

↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond C18: Catch Basin 18

Inflow Area = 1.500 ac, 9.94% Impervious, Inflow Depth = 3.67" for 25 YEAR STORM event
 Inflow = 4.28 cfs @ 12.26 hrs, Volume= 19,968 cf
 Outflow = 4.26 cfs @ 12.26 hrs, Volume= 19,914 cf, Atten= 1%, Lag= 0.3 min
 Primary = 4.26 cfs @ 12.26 hrs, Volume= 19,914 cf
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs / 2

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Peak Elev= 54.00' @ 12.26 hrs Surf.Area= 13 sf Storage= 65 cf
 Flood Elev= 55.50' Surf.Area= 13 sf Storage= 85 cf

Plug-Flow detention time= 2.5 min calculated for 19,914 cf (100% of inflow)
 Center-of-Mass det. time= 0.8 min (835.9 - 835.0)

Volume #1	Invert 49.00'	Avail.Storage 200 cf	Storage Description
Custom Stage Data (Prismatic) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
49.00	13	0	0
52.00	13	39	39
55.50	13	46	85
56.00	450	116	200

Device #1	Routing Primary	Invert 51.00'	Outlet Devices
12.0" Round Culvert			
L= 140.0' CMP, square edge headwall, Ke= 0.500			
Inlet / Outlet Invert= 51.00' / 50.30' S= 0.0050 '/ Cc= 0.900			
n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf			
#2	Secondary	55.50'	3.0' long x 1.0' breadth Broad-Crested Rectangular Weir
Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00			
2.50 3.00			
Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31			
3.30 3.31 3.32			

Primary OutFlow Max=4.23 cfs @ 12.26 hrs HW=53.96' (Free Discharge)

↑1=Culvert (Barrel Controls 4.23 cfs @ 5.39 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=49.00' (Free Discharge)

↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond C19: Culvert

Volume #1	Invert 52.00'	Avail.Storage 400 cf	Storage Description
Custom Stage Data (Prismatic) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
52.00	200	0	0
54.00	200	400	400

Device #1	Routing Primary	Invert 52.00'	Outlet Devices
15.0" Round Culvert			
L= 60.0' CMP, projecting, no headwall, Ke= 0.900			
Inlet / Outlet Invert= 52.00' / 50.00' S= 0.0333 '/ Cc= 0.900			
n= 0.020 Corrugated PE, corrugated interior, Flow Area= 1.23 sf			

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=0.00' (Free Discharge)

↑1=Culvert (Controls 0.00 cfs)

Summary for Pond C2: Catch Basin 2

Inflow Area = 1.246 ac, 35.97% Impervious, Inflow Depth = 4.57" for 25 YEAR STORM event
 Inflow = 6.65 cfs @ 12.07 hrs, Volume= 20,682 cf
 Outflow = 6.00 cfs @ 12.10 hrs, Volume= 20,721 cf, Atten= 10%, Lag= 1.9 min
 Primary = 5.60 cfs @ 12.11 hrs, Volume= 20,649 cf
 Secondary = 0.40 cfs @ 12.10 hrs, Volume= 72 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 56.14' @ 12.11 hrs Surf.Area= 450 sf Storage= 336 cf
 Flood Elev= 55.90' Surf.Area= 406 sf Storage= 293 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 0.8 min (804.4 - 803.6)

Volume	Invert	Avail.Storage	Storage Description
#1	47.00'	336 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.00	13	0	0
50.00	13	39	39
53.00	13	39	78
55.00	13	26	104
56.00	450	232	336

Device	Routing	Invert	Outlet Devices
#1	Primary	50.20'	12.0" Round Culvert L= 76.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 50.20' / 49.50' S= 0.0092 ' / Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf
#2	Secondary	56.00'	3.0' long x 1.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=5.57 cfs @ 12.11 hrs HW=56.08' (Free Discharge)

↑1=Culvert (Barrel Controls 5.57 cfs @ 7.09 fps)

Secondary OutFlow Max=0.38 cfs @ 12.10 hrs HW=56.13' (Free Discharge)

↑2=Broad-Crested Rectangular Weir (Weir Controls 0.38 cfs @ 0.97 fps)

The Homestead PRP BASE

Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Summary for Pond C20: Catch Basin 20

Inflow Area = 1.142 ac, 67.29% Impervious, Inflow Depth > 5.30" for 25 YEAR STORM event
 Inflow = 4.94 cfs @ 12.10 hrs, Volume= 21,982 cf
 Outflow = 4.85 cfs @ 12.13 hrs, Volume= 21,833 cf, Atten= 2%, Lag= 2.2 min
 Primary = 4.85 cfs @ 12.13 hrs, Volume= 21,833 cf
 Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs / 3
 Peak Elev= 53.77' @ 12.13 hrs Surf.Area= 142 sf Storage= 215 cf
 Flood Elev= 54.00' Surf.Area= 159 sf Storage= 250 cf

Plug-Flow detention time= 5.9 min calculated for 21,816 cf (99% of inflow)
 Center-of-Mass det. time= 1.5 min (778.6 - 777.1)

Volume #1	Invert 46.00'	Avail.Storage 1,467 cf	Storage Description
Custom Stage Data (Prismatic) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
46.00	13	0	0
49.00	13	39	39
52.00	13	39	78
58.00	450	1,389	1,467

Device	Routing	Invert	Outlet Devices
#1	Primary	49.40'	12.0" Round Culvert L= 70.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 49.40' / 48.80' S= 0.0086 ' / Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf
#2	Secondary	57.50'	3.0' long x 1.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Primary OutFlow Max=4.82 cfs @ 12.13 hrs HW=53.72' (Free Discharge)
 ↑1=Culvert (Barrel Controls 4.82 cfs @ 6.14 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=46.00' (Free Discharge)
 ↑2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Summary for Pond C3: Catch Basin 3

Inflow Area = 0.278 ac, 53.19% Impervious, Inflow Depth > 5.09" for 25 YEAR STORM event
 Inflow = 1.69 cfs @ 12.06 hrs, Volume= 5,143 cf
 Outflow = 1.69 cfs @ 12.06 hrs, Volume= 5,104 cf, Atten= 0%, Lag= 0.1 min
 Primary = 1.69 cfs @ 12.06 hrs, Volume= 5,104 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs

The Homestead PRP BASE

Type III 24-hr 25 YEAR STORM Rainfall=6.60"

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Peak Elev= 53.70' @ 12.06 hrs Surf.Area= 13 sf Storage= 48 cf

Flood Elev= 55.80' Surf.Area= 13 sf Storage= 75 cf

Plug-Flow detention time= 8.4 min calculated for 5,104 cf (99% of inflow)

Center-of-Mass det. time= 3.5 min (793.2 - 789.7)

Volume	Invert	Avail.Storage	Storage Description
#1	50.00'	91 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
50.00	13	0	0
53.00	13	39	39
57.00	13	52	91

Device	Routing	Invert	Outlet Devices
#1	Primary	53.00'	12.0" Round Culvert L= 50.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 53.00' / 50.30' S= 0.0540 '/ Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.64 cfs @ 12.06 hrs HW=53.69' (Free Discharge)

←1=Culvert (Inlet Controls 1.64 cfs @ 2.83 fps)

Summary for Pond C4: Catch Basin 4

Inflow Area = 0.179 ac, 63.03% Impervious, Inflow Depth > 5.31" for 25 YEAR STORM event
 Inflow = 1.19 cfs @ 12.01 hrs, Volume= 3,439 cf
 Outflow = 1.18 cfs @ 12.01 hrs, Volume= 3,426 cf, Atten= 0%, Lag= 0.1 min
 Primary = 1.18 cfs @ 12.01 hrs, Volume= 3,426 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs

Peak Elev= 59.83' @ 12.01 hrs Surf.Area= 13 sf Storage= 24 cf

Flood Elev= 63.90' Surf.Area= 13 sf Storage= 52 cf

Plug-Flow detention time= 4.8 min calculated for 3,423 cf (100% of inflow)

Center-of-Mass det. time= 2.3 min (783.7 - 781.4)

Volume	Invert	Avail.Storage	Storage Description
#1	58.00'	52 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
58.00	13	0	0
62.00	13	52	52

Device	Routing	Invert	Outlet Devices
#1	Primary	59.00'	12.0" Round Culvert L= 224.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 59.00' / 57.90' S= 0.0049 '/ Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.13 cfs @ 12.01 hrs HW=59.80' (Free Discharge)

↳1=Culvert (Barrel Controls 1.13 cfs @ 2.29 fps)

Summary for Pond C5: Catch Basin 5

Inflow Area = 0.754 ac, 64.18% Impervious, Inflow Depth = 5.17" for 25 YEAR STORM event
 Inflow = 3.73 cfs @ 12.02 hrs, Volume= 14,139 cf
 Outflow = 3.36 cfs @ 12.05 hrs, Volume= 14,096 cf, Atten= 10%, Lag= 2.0 min
 Primary = 3.36 cfs @ 12.05 hrs, Volume= 14,096 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Peak Elev= 55.37' @ 12.05 hrs Surf.Area= 115 sf Storage= 172 cf
 Flood Elev= 53.90' Surf.Area= 13 sf Storage= 83 cf

Plug-Flow detention time= 3.7 min calculated for 14,096 cf (100% of inflow)
 Center-of-Mass det. time= 1.7 min (782.2 - 780.5)

Volume	Invert	Avail.Storage	Storage Description
#1	47.50'	2,180 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
47.50	13	0	0
50.50	13	39	39
54.00	13	46	85
56.00	162	175	260
58.00	1,758	1,920	2,180

Device	Routing	Invert	Outlet Devices
#1	Primary	50.80'	12.0" Round Culvert L= 229.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 50.80' / 49.00' S= 0.0079 ' / Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf

Primary OutFlow Max=3.35 cfs @ 12.05 hrs HW=55.35' (Free Discharge)

↳1=Culvert (Barrel Controls 3.35 cfs @ 4.27 fps)

Summary for Pond C6: Catch Basin 6

Inflow Area = 0.465 ac, 96.93% Impervious, Inflow Depth > 6.11" for 25 YEAR STORM event
 Inflow = 3.35 cfs @ 12.01 hrs, Volume= 10,306 cf
 Outflow = 3.27 cfs @ 12.01 hrs, Volume= 10,262 cf, Atten= 2%, Lag= 0.1 min
 Primary = 3.27 cfs @ 12.01 hrs, Volume= 10,262 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 56.39' @ 12.01 hrs Surf.Area= 13 sf Storage= 70 cf
 Flood Elev= 58.50' Surf.Area= 13 sf Storage= 78 cf

Plug-Flow detention time= 5.2 min calculated for 10,261 cf (100% of inflow)
 Center-of-Mass det. time= 2.2 min (761.1 - 759.0)

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Volume	Invert	Avail.Storage	Storage Description
#1	51.00'	78 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
51.00	13	0	0
57.00	13	78	78

Device	Routing	Invert	Outlet Devices
#1	Primary	54.00'	12.0" Round Culvert L= 70.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 54.00' / 53.60' S= 0.0057 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf

Primary OutFlow Max=3.14 cfs @ 12.01 hrs HW=56.27' (Free Discharge)

↑1=Culvert (Barrel Controls 3.14 cfs @ 4.00 fps)

Summary for Pond C7: Catch Basin 7

Inflow Area = 0.358 ac, 96.72% Impervious, Inflow Depth > 6.11" for 25 YEAR STORM event
 Inflow = 2.59 cfs @ 12.01 hrs, Volume= 7,951 cf
 Outflow = 2.57 cfs @ 12.01 hrs, Volume= 7,951 cf, Atten= 1%, Lag= 0.1 min
 Primary = 2.57 cfs @ 12.01 hrs, Volume= 7,951 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Peak Elev= 56.12' @ 12.01 hrs Surf.Area= 13 sf Storage= 15 cf
 Flood Elev= 59.40' Surf.Area= 13 sf Storage= 46 cf

Plug-Flow detention time= 0.2 min calculated for 7,945 cf (100% of inflow)
 Center-of-Mass det. time= 0.2 min (759.0 - 758.8)

Volume	Invert	Avail.Storage	Storage Description
#1	55.00'	46 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
55.00	13	0	0
58.50	13	46	46

Device	Routing	Invert	Outlet Devices
#1	Primary	54.90'	12.0" Round Culvert L= 60.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 54.90' / 54.30' S= 0.0100 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.49 cfs @ 12.01 hrs HW=56.07' (Free Discharge)

↑1=Culvert (Barrel Controls 2.49 cfs @ 3.40 fps)

Summary for Pond C8: Catch Basin 8

Inflow Area = 0.249 ac, 97.00% Impervious, Inflow Depth > 6.12" for 25 YEAR STORM event
 Inflow = 1.80 cfs @ 12.01 hrs, Volume= 5,523 cf
 Outflow = 1.79 cfs @ 12.01 hrs, Volume= 5,525 cf, Atten= 0%, Lag= 0.0 min
 Primary = 1.79 cfs @ 12.01 hrs, Volume= 5,525 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 56.49' @ 12.01 hrs Surf.Area= 13 sf Storage= 6 cf
 Flood Elev= 59.80' Surf.Area= 13 sf Storage= 39 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 0.1 min (758.7 - 758.6)

Volume	Invert	Avail.Storage	Storage Description
#1	56.00'	39 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
56.00	13	0	0
59.00	13	39	39

Device	Routing	Invert	Outlet Devices
#1	Primary	55.60'	12.0" Round Culvert L= 60.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 55.60' / 55.00' S= 0.0100 ' / Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.73 cfs @ 12.01 hrs HW=56.47' (Free Discharge)
 1=Culvert (Barrel Controls 1.73 cfs @ 3.19 fps)

Summary for Pond C9: Catch Basin 9

Inflow Area = 0.136 ac, 98.01% Impervious, Inflow Depth > 6.16" for 25 YEAR STORM event
 Inflow = 0.99 cfs @ 12.01 hrs, Volume= 3,042 cf
 Outflow = 0.98 cfs @ 12.01 hrs, Volume= 3,036 cf, Atten= 0%, Lag= 0.1 min
 Primary = 0.98 cfs @ 12.01 hrs, Volume= 3,036 cf

Routing by Stor-Ind method, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs
 Peak Elev= 57.11' @ 12.01 hrs Surf.Area= 13 sf Storage= 14 cf
 Flood Elev= 60.70' Surf.Area= 13 sf Storage= 52 cf

Plug-Flow detention time= 3.4 min calculated for 3,035 cf (100% of inflow)
 Center-of-Mass det. time= 1.5 min (758.3 - 756.8)

Volume	Invert	Avail.Storage	Storage Description
#1	56.00'	52 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
56.00	13	0	0
60.00	13	52	52

Device	Routing	Invert	Outlet Devices
#1	Primary	56.50'	12.0" Round Culvert L= 80.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 56.50' / 55.70' S= 0.0100 '/' Cc= 0.900 n= 0.020 Corrugated PE, corrugated interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.94 cfs @ 12.01 hrs HW=57.10' (Free Discharge)

↑1=Culvert (Barrel Controls 0.94 cfs @ 2.76 fps)

Summary for Link 1L:

Inflow Area = 17.253 ac, 17.50% Impervious, Inflow Depth > 4.20" for 25 YEAR STORM event
 Inflow = 21.92 cfs @ 12.95 hrs, Volume= 263,315 cf
 Primary = 21.92 cfs @ 12.95 hrs, Volume= 263,315 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs

Summary for Link 2L:

Inflow Area = 9.695 ac, 6.88% Impervious, Inflow Depth = 3.95" for 25 YEAR STORM event
 Inflow = 20.12 cfs @ 12.52 hrs, Volume= 138,972 cf
 Primary = 20.12 cfs @ 12.52 hrs, Volume= 138,972 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs

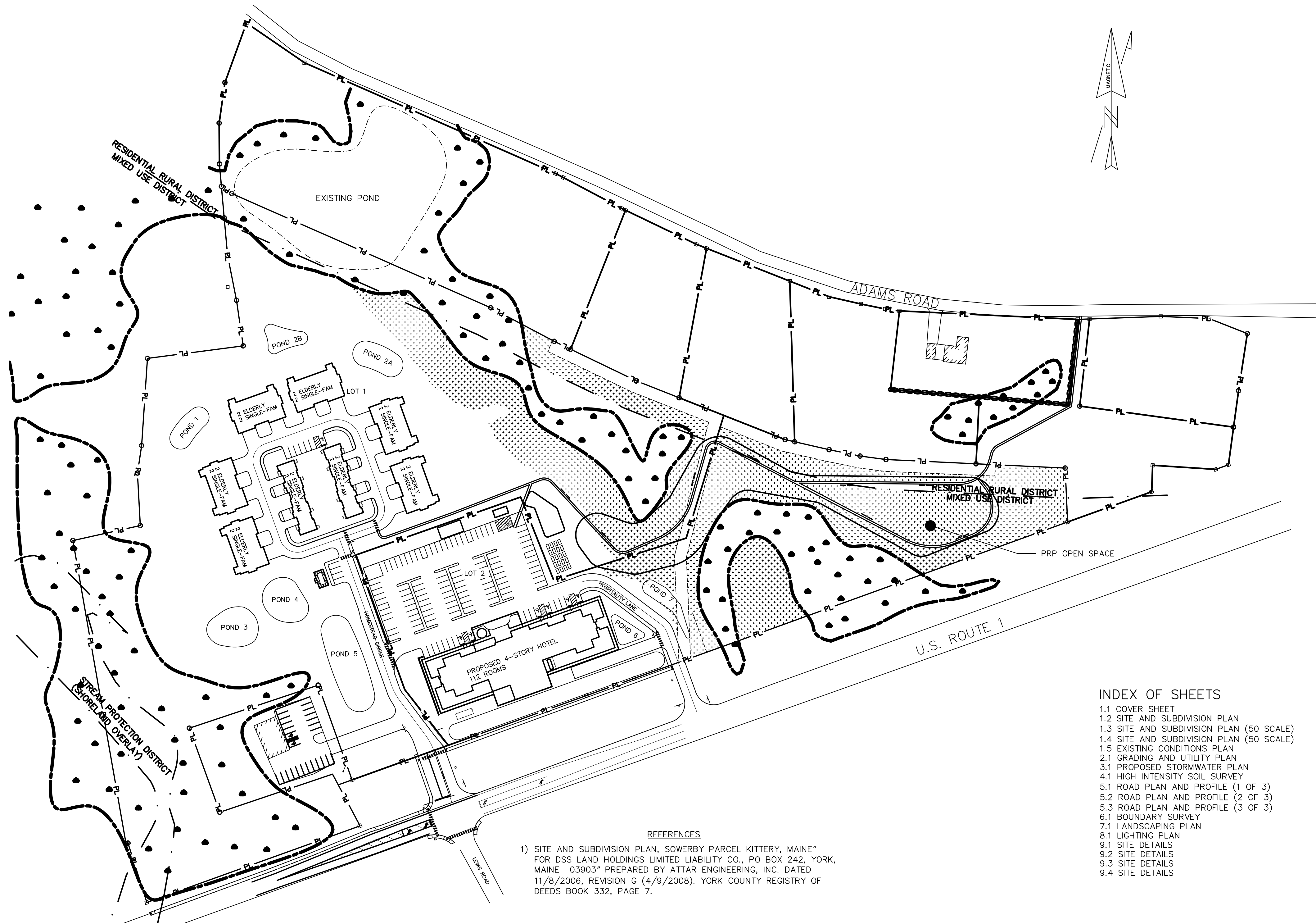
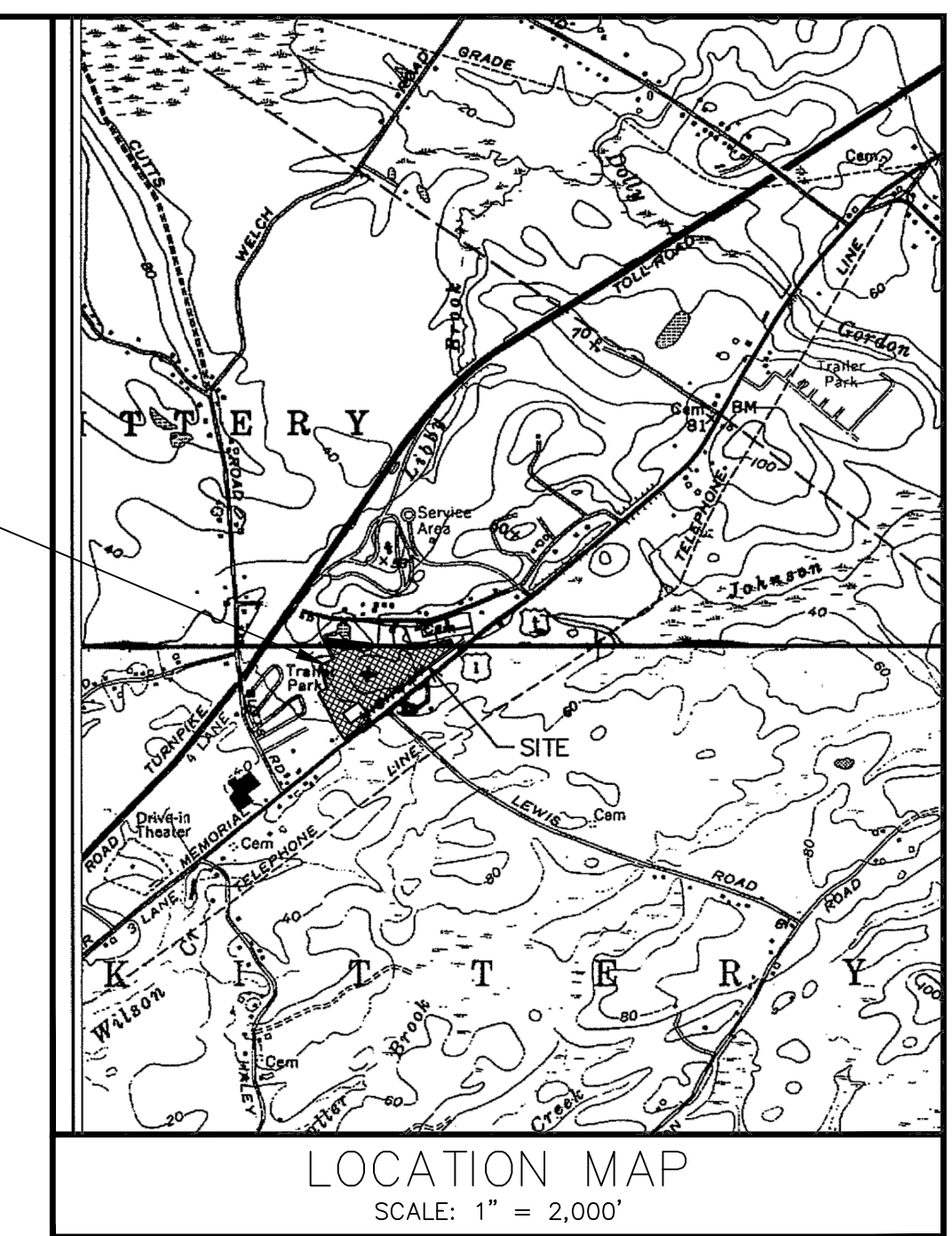
Summary for Link 3L: AP3

Inflow Area = 5.210 ac, 8.79% Impervious, Inflow Depth = 4.03" for 25 YEAR STORM event
 Inflow = 18.05 cfs @ 12.14 hrs, Volume= 76,182 cf
 Primary = 18.05 cfs @ 12.14 hrs, Volume= 76,182 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-72.00 hrs, dt= 0.05 hrs

THE HOMESTEAD SUBDIVISION

U.S. ROUTE 1, KITTERY, MAINE



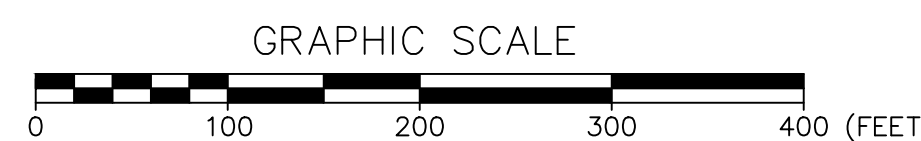
- INDEX OF SHEETS**
- 1.1 COVER SHEET
 - 1.2 SITE AND SUBDIVISION PLAN
 - 1.3 SITE AND SUBDIVISION PLAN (50 SCALE)
 - 1.4 SITE AND SUBDIVISION PLAN (50 SCALE)
 - 1.5 EXISTING CONDITIONS PLAN
 - 2.1 GRADING AND UTILITY PLAN
 - 3.1 PROPOSED STORMWATER PLAN
 - 4.1 HIGH INTENSITY SOIL SURVEY
 - 5.1 ROAD PLAN AND PROFILE (1 OF 3)
 - 5.2 ROAD PLAN AND PROFILE (2 OF 3)
 - 5.3 ROAD PLAN AND PROFILE (3 OF 3)
 - 6.1 BOUNDARY SURVEY
 - 7.1 LANDSCAPING PLAN
 - 8.1 LIGHTING PLAN
 - 9.1 SITE DETAILS
 - 9.2 SITE DETAILS
 - 9.3 SITE DETAILS
 - 9.4 SITE DETAILS

REFERENCES

1) SITE AND SUBDIVISION PLAN, SOWERBY PARCEL KITTERY, MAINE* FOR DSS LAND HOLDINGS LIMITED LIABILITY CO., PO BOX 242, YORK, MAINE 03903* PREPARED BY ATTAR ENGINEERING, INC. DATED 11/8/2006, REVISION G (4/9/2008). YORK COUNTY REGISTRY OF DEEDS BOOK 332, PAGE 7.

STATE OF MAINE
YORK COUNTY ss. REGISTRY OF DEEDS
RECEIVED _____ 20____
AT _____h____m____M., AND RECORDED IN
PLAN BOOK _____, PAGE _____
ATTEST _____ REGISTER

TOWN OF KITTERY PLANNING BOARD	DATE

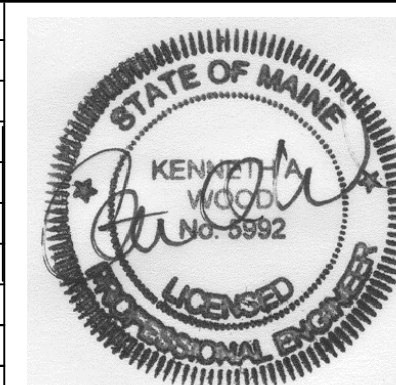


OWNER: DSS LAND HOLDINGS LLC
PO BOX 242
YORK, ME 03909

APPLICANT: LANDMARK HILL, LLC
79 CONGRESS ST.
PORTSMOUTH, NH 03801

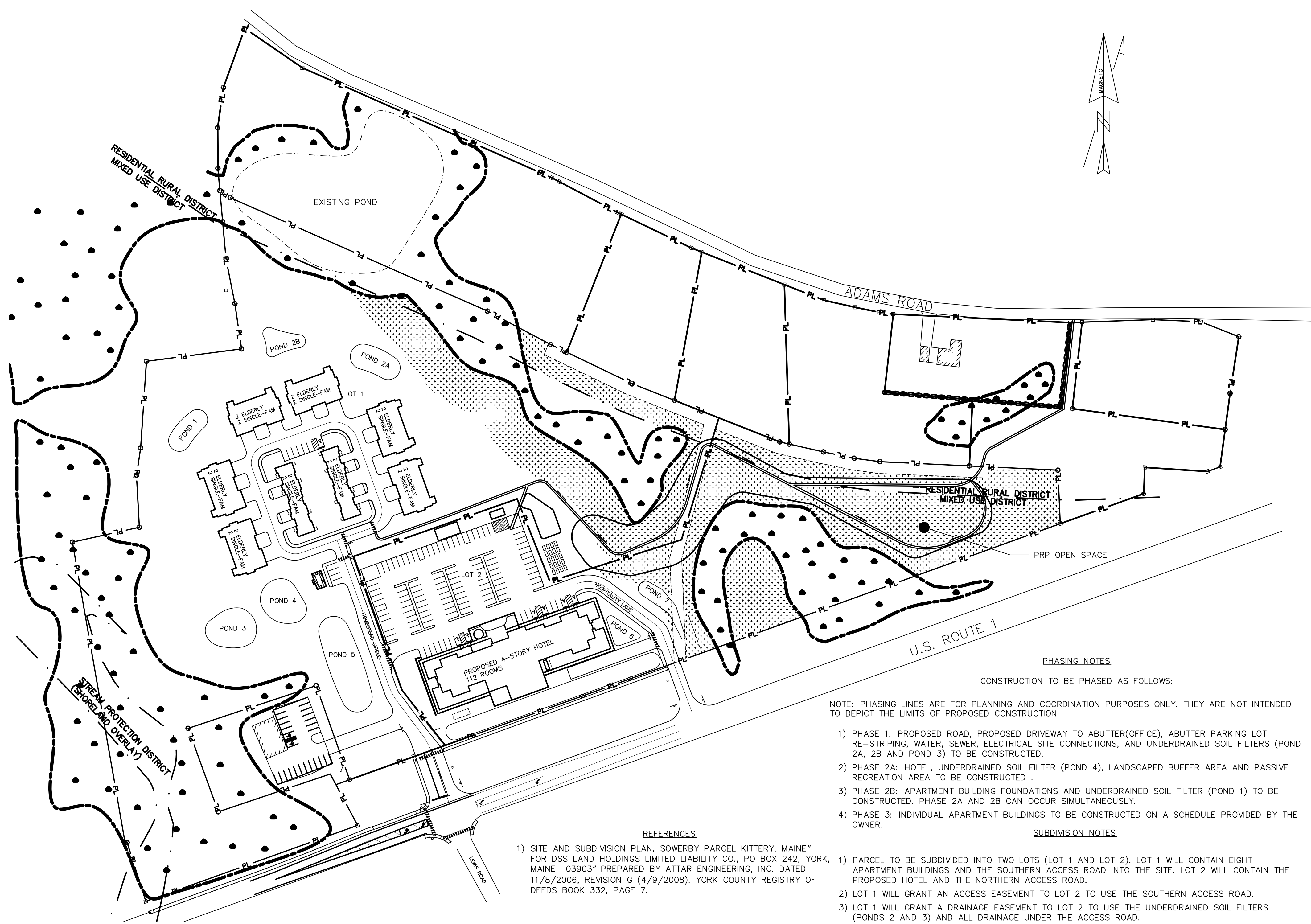
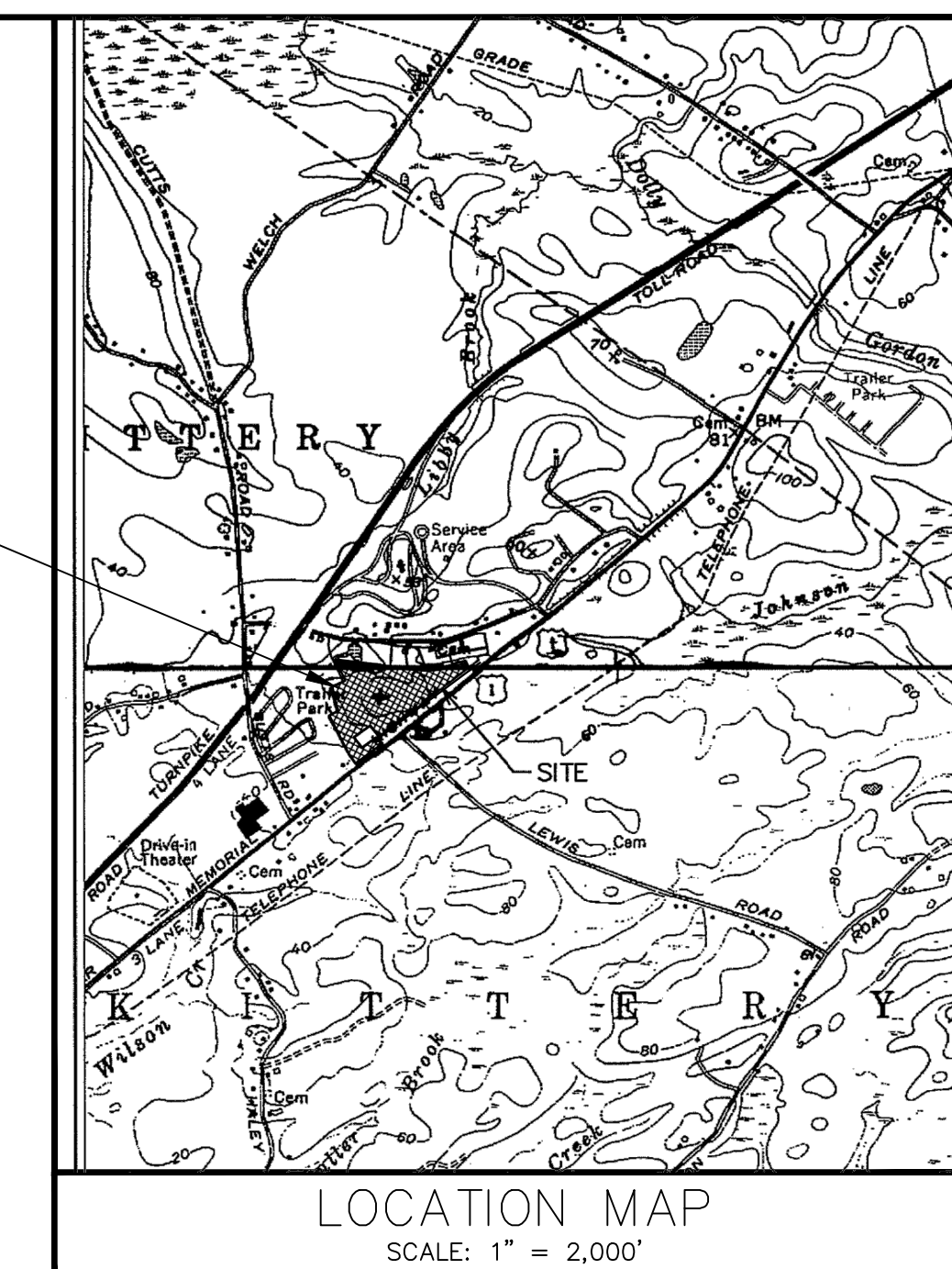
1.1	COVER SHEET THE HOMESTEAD 459 US ROUTE 1 KITTERY, MAINE	
	FOR: MIDDLESEX LAND HOLDINGS, LLC 1 BRIDGEVIEW CIRCLE TYNGSBORO, MA 01879	
ATTAR ENGINEERING, INC. CIVIL • STRUCTURAL • MARINE 1284 STATE ROAD - ELIOT, MAINE 03903 PHONE: (207)439-6023 FAX: (207)439-2128		
SCALE: 1" = 100'	APPROVED BY: 	DRAWN BY: LMC
DATE: 02/08/2018	REVISION : DATE Q:	SHEET 1.1
JOB NO: C091-21	FILE: THE HOMESTEAD BASE	TAX MAP 60, LOT 24

NO.	DESCRIPTION	DATE
Q	MAJOR MODIFICATION	
P	SITE PLAN AMENDMENT	02/12/2021
O	SKETCH PLAN RESUBMISSION	11/16/2020
N	HOTEL REVISION	06/29/2020
M	CURBING CHANGES	05/11/2020
L	MAJOR MODIFICATION - GRADING REVISION	02/06/2020
K	HOTEL REVISION	11/21/2019
J	FINAL PLAN REVISION	03/27/2019
I	FINAL PLAN SUBMISSION	01/24/2019
H	MDEP SUBMISSION	01/23/2019
-	SEE EARLIER PLANS FOR PREVIOUS REVISIONS	-
NO.	DESCRIPTION	DATE
REVISIONS		



THE HOMESTEAD SUBDIVISION

U.S. ROUTE 1, KITTERY, MAINE



- GENERAL NOTES**
- THIS PLAN PROVIDES DETAILS FOR A MIXED USE DEVELOPMENT AT 459 U.S. ROUTE 1 CONSISTING OF 16 SINGLE-FAMILY (ELDERLY) UNITS AND 16 SINGLE-FAMILY (NON-AGE RESTRICTED) UNITS IN 8 BUILDINGS AND A 112 ROOM HOTEL. THE PROPERTY IS TO BE SUBDIVIDED INTO TWO SEPARATE PROPERTIES (SEE PROPOSED PROPERTY LINE ON SITE PLANS). LOT 1 HAS 590,468 SF OF AREA AND 552' OF STREET FRONTAGE. LOT 2 HAS 285,904 SF OF AREA AND 1104' OF STREET FRONTAGE.
 - THE PARCEL, IDENTIFIED AS LOT 24 ON TAX MAP 60, CONTAINS APPROXIMATELY 20.12 ACRES; AND IS LOCATED WITHIN THE MIXED-USE (MU), RESIDENTIAL RURAL (R-RL) AND SHORELAND OVERLAY ZONING DISTRICTS. THE PARCEL IS SERVED BY MUNICIPAL WATER AND SEWER SYSTEMS.
 - SPACE AND BULK REQUIREMENTS FOR THE MIXED USE ZONING DISTRICT ARE AS FOLLOWS:

MIXED USE DISTRICT	
MIN. LOT AREA	200,000 SF
MIN. STREET FRONTAGE	250'
MIN. FRONT SETBACK	30'
MIN. SIDE SETBACK	40'
MIN. REAR SETBACK	40'
MAX BUILDING HEIGHT	40'
 - BUILDABLE AREA/RESIDENTIAL DENSITY

TOTAL PARCEL AREA	=	876,427.2 S.F.	=	20.12 AC.
LESS 50% OF WETLANDS SETBACK	=	137,495.6 S.F.	=	3.16 AC.
LESS UNSUITABLE SOILS*	=	200,630 S.F.	=	4.61 AC.
LESS RIGHTS OF WAY/EASEMENTS**	=	124,314 S.F.	=	2.85 AC.
NET RESIDENTIAL AREA	=	413,987.5 S.F.	=	9.50 AC.

*INCLUDES WETLANDS, POORLY DRAINED AND VERY POORLY DRAINED SOILS
 **INCLUDING TRAVELED WAYS AND PARKING
 NET RESIDENTIAL DENSITY = 413,987.5 - (16 ELD. X 15,000 (PARKING EXTERNAL)) - (16 APARTMENT. X 10,000 (PARKING EXTERNAL)) = 13,987.5 => OK
 - MIXED-USE REQUIREMENT IS CALCULATED AS FOLLOWS:

APARTMENTS(ELD.)	=	2,188 S.F. X 16	=	35,008 S.F. (26.3%)
APARTMENTS	=	2,188 S.F. X 16	=	35,008 S.F. (26.3%)
HOTEL	=	15,712 S.F. X 4 FLOORS	=	62,848 S.F. (47.3%)
35,008/132,864 = 26.3% WHICH IS GREATER THAN 10%(REQUIRED).				
 - TOTAL OPEN SPACE REQUIRED IS 35%; 25% OF OPEN SPACE MUST BE IN FRONT 50% OF THE PARCEL: 20.23 AC X 0.35 = 7.08 AC REQUIRED WITH 7.29 AC PROVIDED; 7.08 AC X 0.25 = 1.77 AC REQUIRED WITH 5.58 AC PROVIDED IN THE FRONT OF THE PARCEL.
 - ALL BUILDINGS WILL BE SPRINKLED FOR FIRE PROTECTION.
 TOTAL AREA TO BE DISTURBED: 8.22 ACRES, TOTAL IMPERVIOUS AREA: 3.79 ACRES, TOTAL LOT STREET FRONTAGE 1655.7 FT.
 - EXPECTED ANNUAL AVERAGE DAILY TRAFFIC(AADT) = 16 X 3.48(ELDERLY, ITE 252) + 16 X 6.59(RESIDENTIAL/APARTMENT, ITE 221) + 112 X 8.92(HOTEL, ITE 310/320) = 1,161 TRIPS/DAY. 162 TRIPS WILL BE GENERATED BY THE RESIDENTIAL AND ELDERLY UNITS ON HOMESTEAD CIRCLE.
 - WITH THE EXCEPTION OF THE PROPOSED CONSTRUCTION IN THIS PLAN THE 100 FT SETBACK FROM THE NORTHERN WETLAND WILL BECOME A NO CUT, NO DISTURB AREA AND MUST REMAIN UNDEVELOPED AND UNDISTURBED IN PERPETUITY, INCLUDING NO MOWING OR REMOVAL OF ANY VEGETATION WITHOUT A PERMIT FROM THE CODE ENFORCEMENT OFFICER.
 - IF ON-SITE SNOW STORAGE AREAS DO NOT HAVE ENOUGH CAPACITY ADDITIONAL SNOW SHALL BE REMOVED FROM THE SITE.
 - A ROAD ACCESS EASEMENT SHALL BE PROVIDED TO LOT 2(HOTEL) FOR THE USE OF HOMESTEAD CIRCLE IN ORDER TO ENTER AND EXIT THE HOTEL PARKING LOT.
 - PARKING REQUIREMENTS ARE 1.5 SPACES/ELDERLY UNIT(2 OR LESS BEDROOMS) AND 2 SPACES/SINGLE UNIT. PARKING IS PROVIDED WITH A GARAGE AND EXTERNAL DRIVEWAY SPACE FOR EACH UNIT. ADDITIONALLY 7 GUEST SPACES ARE PROVIDED.
 - THIS PLAN REVISES THE PREVIOUSLY APPROVED PLAN DATED 2/12/21.

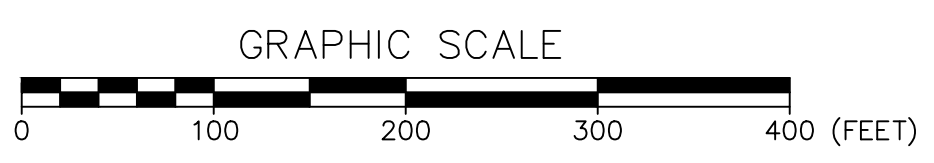
- PHASING NOTES**
 CONSTRUCTION TO BE PHASED AS FOLLOWS:
- NOTE:** PHASING LINES ARE FOR PLANNING AND COORDINATION PURPOSES ONLY. THEY ARE NOT INTENDED TO DEPICT THE LIMITS OF PROPOSED CONSTRUCTION.
- PHASE 1: PROPOSED ROAD, PROPOSED DRIVEWAY TO ABUTTER(OFFICE), ABUTTER PARKING LOT RE-STRIPING, WATER, SEWER, ELECTRICAL SITE CONNECTIONS, AND UNDERDRAINED SOIL FILTERS (POND 2A, 2B AND POND 3) TO BE CONSTRUCTED.
 - PHASE 2A: HOTEL, UNDERDRAINED SOIL FILTER (POND 4), LANDSCAPED BUFFER AREA AND PASSIVE RECREATION AREA TO BE CONSTRUCTED.
 - PHASE 2B: APARTMENT BUILDING FOUNDATIONS AND UNDERDRAINED SOIL FILTER (POND 1) TO BE CONSTRUCTED. PHASE 2A AND 2B CAN OCCUR SIMULTANEOUSLY.
 - PHASE 3: INDIVIDUAL APARTMENT BUILDINGS TO BE CONSTRUCTED ON A SCHEDULE PROVIDED BY THE OWNER.

- REFERENCES**
- SITE AND SUBDIVISION PLAN, SOWERBY PARCEL KITTERY, MAINE* FOR DSS LAND HOLDINGS LIMITED LIABILITY CO., PO BOX 242, YORK, MAINE 03903* PREPARED BY ATTAR ENGINEERING, INC. DATED 11/8/2006, REVISION G (4/9/2008). YORK COUNTY REGISTRY OF DEEDS BOOK 332, PAGE 7.

- SUBDIVISION NOTES**
- PARCEL TO BE SUBDIVIDED INTO TWO LOTS (LOT 1 AND LOT 2). LOT 1 WILL CONTAIN EIGHT APARTMENT BUILDINGS AND THE SOUTHERN ACCESS ROAD INTO THE SITE. LOT 2 WILL CONTAIN THE PROPOSED HOTEL AND THE NORTHERN ACCESS ROAD.
 - LOT 1 WILL GRANT AN ACCESS EASEMENT TO LOT 2 TO USE THE SOUTHERN ACCESS ROAD.
 - LOT 1 WILL GRANT A DRAINAGE EASEMENT TO LOT 2 TO USE THE UNDERDRAINED SOIL FILTERS (PONDS 2 AND 3) AND ALL DRAINAGE UNDER THE ACCESS ROAD.
 - BOTH LOTS SHALL GRANT EASEMENTS TO CONSTRUCT, CONNECT AND MAINTAIN UTILITIES INCLUDING BUT NOT LIMITED TO ELECTRICAL, WATER, SEWER, CABLE AND TELEPHONE THAT SERVE THE DEVELOPMENT.

STATE OF MAINE
 YORK COUNTY ss. REGISTRY OF DEEDS
 RECEIVED _____ 20____
 AT _____h____m____M. AND RECORDED IN
 PLAN BOOK _____, PAGE _____
 ATTEST _____REGISTER

TOWN OF KITTERY PLANNING BOARD	DATE



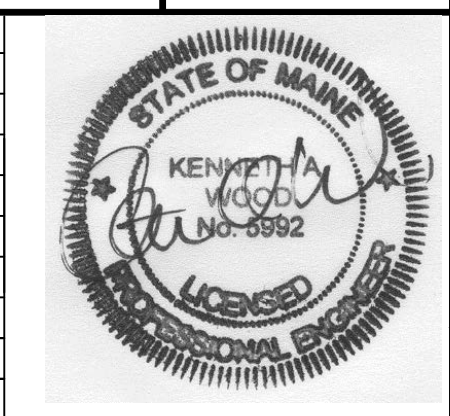
OWNER: DSS LAND HOLDINGS LLC
 PO BOX 242
 YORK, ME 03909

APPLICANT: LANDMARK HILL, LLC
 79 CONGRESS ST.
 PORTSMOUTH, NH 03801

1.2

SITE AND SUBDIVISION PLAN
 THE HOMESTEAD
 459 US ROUTE 1 KITTERY, MAINE

NO.	DESCRIPTION	DATE
Q	MAJOR MODIFICATION	
P	SITE PLAN AMENDMENT	02/12/2021
O	SKETCH PLAN RESUBMISSION	11/16/2020
N	HOTEL REVISION	06/29/2020
M	CURBING CHANGES	05/11/2020
L	MAJOR MODIFICATION - GRADING REVISION	02/06/2020
K	HOTEL REVISION	11/21/2019
J	FINAL PLAN REVISION	03/27/2019
I	FINAL PLAN SUBMISSION	01/24/2019
H	MDEP SUBMISSION	01/23/2019
-	SEE EARLIER PLANS FOR PREVIOUS REVISIONS	-
NO.	DESCRIPTION	DATE
REVISIONS		



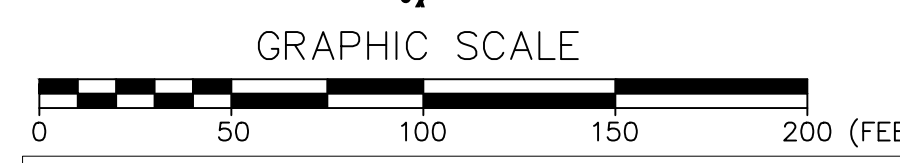
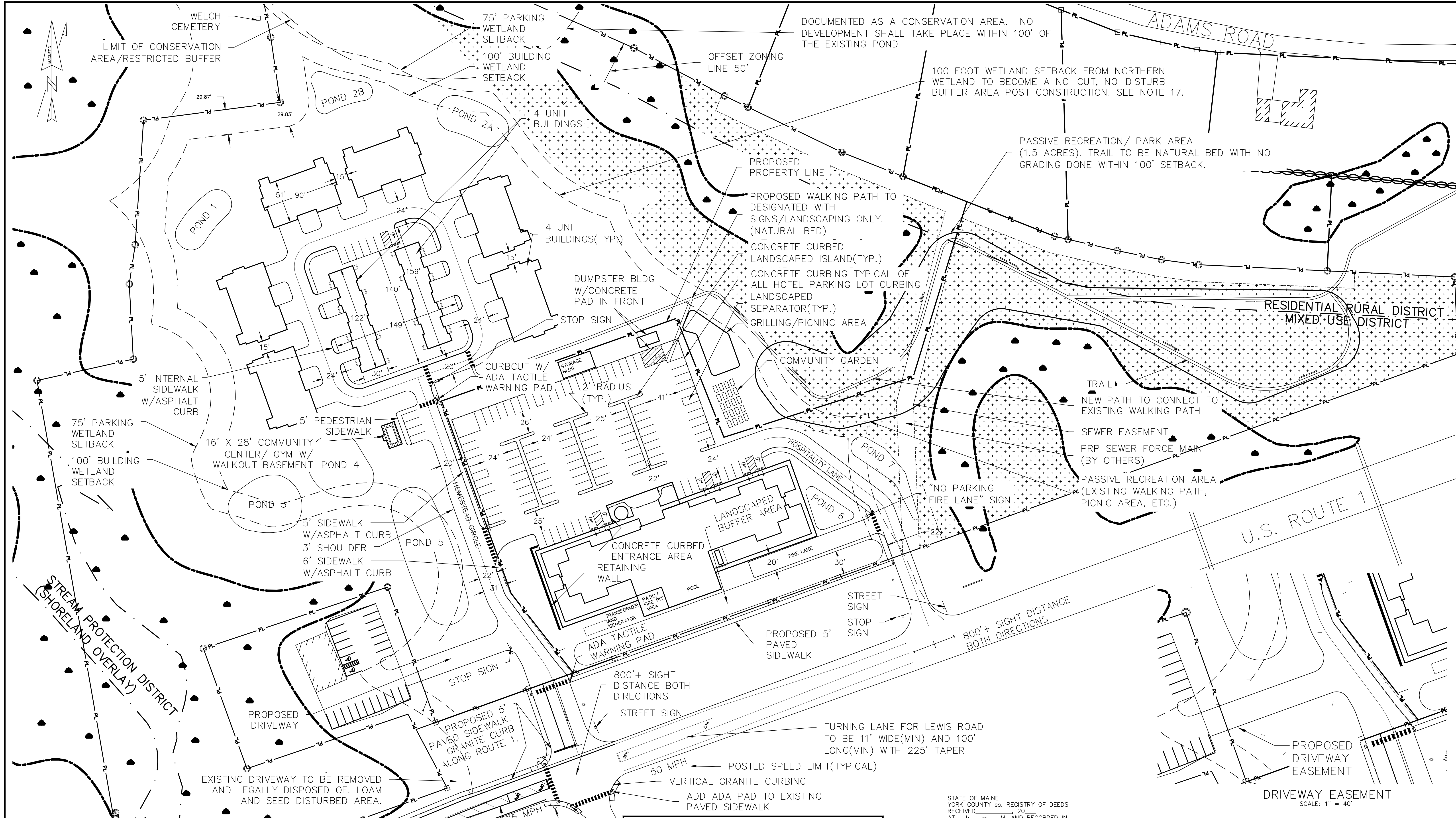
FOR: MIDDLESEX LAND HOLDINGS, LLC
 1 BRIDGEVIEW CIRCLE
 TYNGSBORO, MA 01879

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

SCALE: 1" = 100'
 DATE: 02/08/2018

APPROVED BY: *[Signature]*

DRAWN BY: BRN
 REVISION : DATE Q:
 JOB NO: C091-21 FILE: THE HOMESTEAD BASE SHEET 1.2



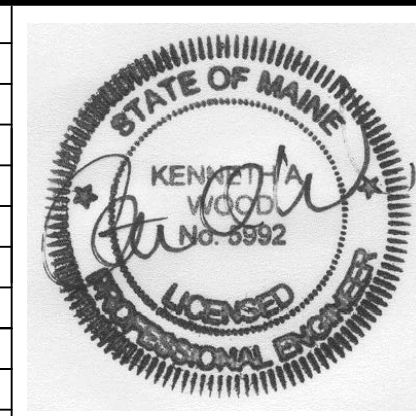
LEGEND

DESIGNATED OPEN SPACE	PROPERTY LINE	EXISTING CONTOUR	PROPOSED CONTOUR	PROPOSED WATER MAIN	PROPOSED WATER SERVICE	PROPOSED SEWER LINE
UNDER GROUND UTILITIES	SEWER MANHOLE	EXISTING WATER LINE	EXISTING SEWER LINE	UTILITY POLE	IRON PIN	STONE MONUMENT
UGU	⊙	EW	ES	○	○	□
DRAINAGE STRUCTURE	WATER VALVE	WATER SHUT OFF	HYDRANT	CURB		
⊙	⊙	⊙	⊙	—		

TOWN OF KITTE DATE	PLANNING BOARD

STATE OF MAINE
 YORK COUNTY ss. REGISTRY OF DEEDS
 RECEIVED _____, 20____
 AT _____, M., AND RECORDED IN
 PLAN BOOK _____, PAGE _____
 ATTEST _____ REGISTER

NO.	DESCRIPTION	DATE
Q	MAJOR MODIFICATION	
P	SITE PLAN AMENDMENT	02/12/2021
O	SKETCH PLAN RESUBMISSION	11/16/2020
N	HOTEL REVISION	06/29/2020
M	CURBING CHANGES	05/11/2020
L	MAJOR MODIFICATION - GRADING REVISION	02/06/2020
K	HOTEL REVISION	11/21/2019
J	FINAL PLAN REVISION	03/27/2019
I	FINAL PLAN SUBMISSION	01/24/2019
H	MDEP SUBMISSION	01/23/2019
-	SEE EARLIER PLANS FOR PREVIOUS REVISIONS	-
NO.	DESCRIPTION	DATE



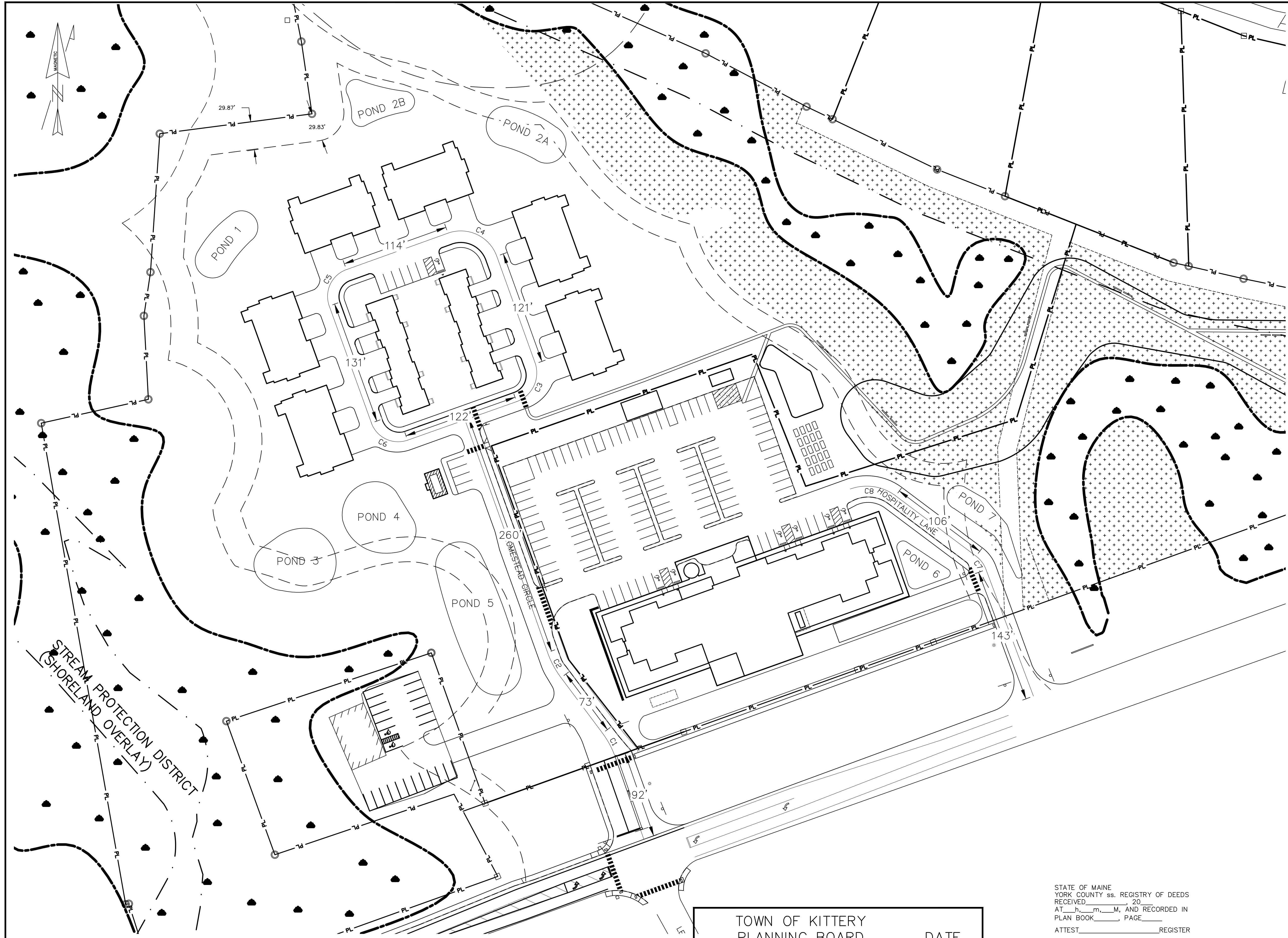
1.3 SITE AND SUBDIVISION PLAN
 THE HOMESTEAD
 459 US ROUTE 1 KITTEDATE

FOR: MIDDLESEX LAND HOLDINGS, LLC
 1 BRIDGEVIEW CIRCLE
 TYNGSBORO, MA 01879

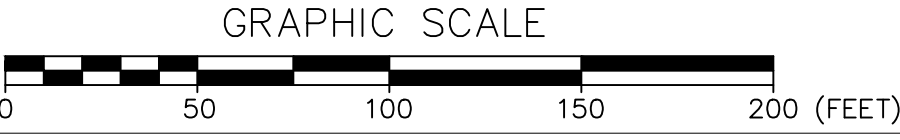
ATTAR ENGINEERING, INC.
 CIVIL • STRUCTURAL • MARINE
 1284 STATE ROAD - ELOT, MAINE 03903
 PHONE: (207)439-6023 FAX: (207)439-2128

SCALE: 1" = 50'
 DATE: 02/08/2018
 JOB NO: C091-21
 FILE: THE HOMESTEAD BASE

APPROVED BY:
 DRAWN BY: BRN
 REVISION: DATE Q:
 SHEET 1.3



Curve Table					
Curve #	Length	Radius	Delta	Chord Length	Chord Dir.
C1	28.740	93.658	17.5816	28.6	S27° 58' 32"E
C2	30.350	100.000	17.3892	30.2	S28° 04' 18"E
C3	49.391	32.219	87.8338	44.7	S26° 22' 35"W
C4	63.221	40.248	90.0000	56.9	S64° 44' 46"E
C5	47.168	29.999	90.0883	42.5	N25° 13' 53"E
C6	46.860	30.000	89.4958	42.2	N64° 33' 39"W
C7	17.896	31.000	33.0756	17.6	N36° 34' 49"W
C8	50.523	51.000	56.7600	48.5	N81° 29' 53"W



LEGEND			
DESIGNATED OPEN SPACE		UNDER GROUND UTILITIES	UGU
PROPERTY LINE		SEWER MANHOLE	
EXISTING CONTOUR		EXISTING WATER LINE	EW
PROPOSED CONTOUR		EXISTING SEWER LINE	ES
PROPOSED WATER MAIN		UTILITY POLE	
PROPOSED WATER SERVICE		IRON PIN	
PROPOSED SEWER LINE		STONE MONUMENT	
		DRAINAGE STRUCTURE	
		WATER VALVE	
		WATER SHUT OFF	
		HYDRANT	
		CURB	

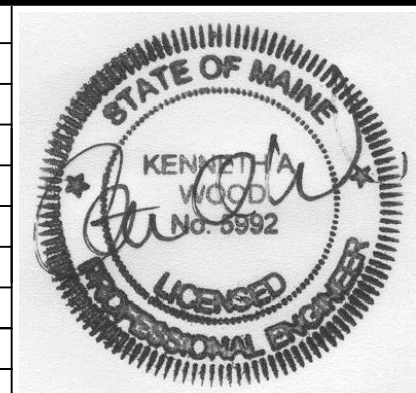
TOWN OF KITTERY PLANNING BOARD _____ DATE _____

STATE OF MAINE
 YORK COUNTY ss. REGISTRY OF DEEDS
 RECEIVED _____ 20____
 AT _____ M, AND RECORDED IN
 PLAN BOOK _____, PAGE _____
 ATTEST _____ REGISTER

DRIVEWAY EASEMENT
 SCALE: 1" = 40'

1.4 SITE AND SUBDIVISION PLAN
 THE HOMESTEAD
 459 US ROUTE 1 KITTERY, MAINE

NO.	DESCRIPTION	DATE
Q	MAJOR MODIFICATION	
P	SITE PLAN AMENDMENT	02/12/2021
O	SKETCH PLAN RESUBMISSION	11/16/2020
N	HOTEL REVISION	06/29/2020
M	CURBING CHANGES	05/11/2020
L	MAJOR MODIFICATION - GRADING REVISION	02/06/2020
K	HOTEL REVISION	11/21/2019
J	FINAL PLAN REVISION	03/27/2019
I	FINAL PLAN SUBMISSION	01/24/2019
H	MDEP SUBMISSION	01/23/2019
-	SEE EARLIER PLANS FOR PREVIOUS REVISIONS	-
	REVISIONS	



FOR: MIDDLESEX LAND HOLDINGS, LLC
 1 BRIDGEVIEW CIRCLE
 TYNGSBORO, MA 01879

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

SCALE: 1" = 50'
 DATE: 02/08/2018
 JOB NO: C091-21 FILE: THE HOMESTEAD BASE SHEET 1.4

APPROVED BY:
 DRAWN BY: LMC
 REVISION : DATE



EXISTING SEWER INFRASTRUCTURE APPROXIMATED. VERIFY IN FIELD PRIOR TO CONSTRUCTION. REMOVE EXISTING MANHOLES AND SEWER PIPE BEYOND THIS POINT. CONNECT PROPOSED SEWER SERVICE(SEE GRADING PLAN).

STREAM PROTECTION DISTRICT (SHORELAND OVERLAY)

EXISTING BUILDING AND LOT TO REMAIN. LOT TO BE RE-STRIPED AND ADJUSTED TO MEET NEW ENTRANCE. SEE SITE PLAN.

EXISTING BUILDING TO BE DEMOLISHED AND REMOVED FROM THE SITE. SEE NOTE 2

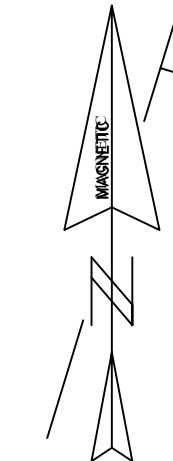
EXISTING ASPHALT TO BE REMOVED

SEE GRADING AND UTILITY PLAN REGARDING THE CHANGE/REMOVAL OF EXISTING OVERHEAD UTILITY
EXISTING ENTRANCE TO BE REBUILT. SEE SITE PLAN

EXISTING 12" SEWER MAIN
EXISTING 12" DI WATER MAIN
EXISTING " WATER MAIN LINE VALVE

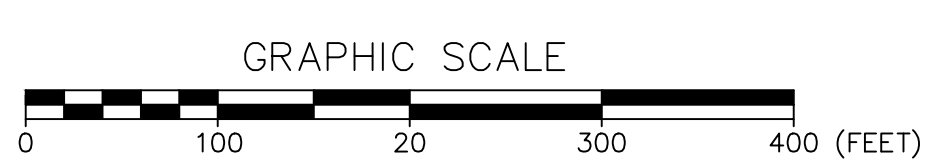
EXISTING HYDRANT TO BE RELOCATED. SEE GRADING AND UTILITY PLAN
TIE INTO EXISTING 6" SDR 35 SEWER LINE. SEE GRADING AND UTILITY PLAN. VERIFY LOCATION AND CONDITION IN FIELD.

REMOVE EXISTING DRIVEWAY PAVEMENT/LOAM AND SEED PER E&S NOTES



GENERAL NOTES

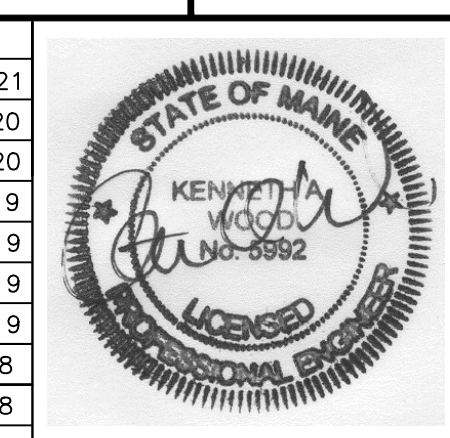
- LEGAL, OFFSITE DISPOSAL OF DEMOLISHED MATERIALS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
- FILLING OF EXISTING EXCAVATED AREAS AFTER DEMOLITION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH PRACTICES RECOMMENDED BY A LICENSE GEOTECHNICAL ENGINEER.



1.5

EXISTING CONDITIONS PLAN
THE HOMESTEAD
459 US ROUTE 1 KITTERY, MAINE

Q	MAJOR MODIFICATION	
P	SITE PLAN AMENDMENT	02/12/2021
O	SKETCH PLAN RESUBMISSION	11/16/2020
N	MAJOR MODIFICATION	02/06/2020
M	HOTEL REVISION	11/21/2019
L	FINAL PLAN REVISION	03/27/2019
K	FINAL PLAN SUBMISSION	01/24/2019
J	MDEP SUBMISSION	01/23/2019
I	PRELIMINARY PLAN SUBMISSION	9/20/2018
H	PRELIMINARY PLAN REVISION	5/08/2018
NO.	DESCRIPTION REVISIONS	DATE



FOR: MIDDLESEX LAND HOLDINGS, LLC
1 BRIDGEVIEW CIRCLE
TYNGSBORO, MA 01879

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

SCALE: 1" = 100'	APPROVED BY: 	DRAWN BY: BRN
DATE: 1/18/2018		REVISION : DATE A: 05/08/2018
JOB NO: C091-21	FILE: THE HOMESTEAD BASE	SHEET 1.5

GENERAL NOTES

- SEWER MAINS TO BE 8" SDR 35 PVC. ALL OTHER APPURTENANCES SHALL MEET KITTERY SEWER DISTRICT STANDARDS. SEE DETAIL FOR TYPICAL INDIVIDUAL SERVICE SIZES.
- ALL PIPES, VALVES, FITTINGS, AND CONNECTIONS SHALL MEET CURRENT KITTERY WATER DISTRICT STANDARDS.
- ALL WATER SERVICES TO BE EQUIPPED WITH CURB STOPS.
- ALL STORM DRAINS TO BE ADS N-12 (PE) OR APPROVED EQUAL.
- A MINIMUM OF 5.0' OF COVER SHALL BE MAINTAINED OVER ALL WATER LINES.
- CENTRAL MAINE POWER COMPANY WILL PREPARE THE ELECTRICAL PLAN FOR CONSTRUCTION. ALL ELECTRICAL, TELEPHONE, AND CABLE SERVICES WILL BE UNDERGROUND.
- NEW WATER AND SEWER LINES SHALL BE TESTED IN ACCORDANCE WITH RESPECTIVE DISTRICT REQUIREMENTS.
- EACH E & S CELL REPRESENTS A LIMITED AREA TO BE CONSTRUCTED WITH ALL EROSION & SEDIMENT CONTROL MEASURES IN PLACE. ALL "CELLS" SHALL BE PROTECTED BY EROSION & SEDIMENT CONTROL. BEST MANAGEMENT PRACTICES AS REQUIRED BY THE E & S PLAN. EROSION & SEDIMENT CONTROL SHALL BE MAINTAINED FOR EACH CELL THROUGH-OUT THE COMPLETION OF THE ENTIRE PROJECT. THE CELLS SHALL BE ESTABLISHED IN THERE NUMERICAL ORDER.

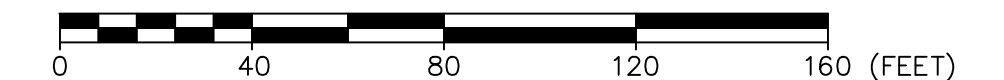
DRAINAGE STRUCTURE SCHEDULE

DESC	RIM ELEV	INV IN	INV OUT	PIPE SIZE(IN.)
CB 1	59.0	-	54.0	12
CB 2	55.9	48.3	50.2	12
CB 3	55.80	-	53.0	12
CB 4	59.9	-	58.0	12
CB 5	53.9	-	50.8	12
CB 6	57.1	50.9	50.8	12
CB 7	61.7	55.0	54.9	12
CB 8	63.4	55.7	55.6	12
CB 9	61.7	56.6	56.5	12
CB 10	53.9	50.6	50.5	12
CB 11	57.4	52.8	52.7	12
CB 12	60.9	54.3	54.2	12
CB 13	60.9	55.1	55.0	12
CB 14	61.5	57.5	57.4	12
CB 15	59.8	-	56.7	12
CB 16	53.5	50.6	50.5	12
CB 17	54.0	48.6	48.5	12
CB 18	55.5	-	51.0	12
CB 19	55.5	-	51.0	12
CB 20	53.0	49.4	48.8	12
CB 21	59	57.0	54.0	12
CB 22	55.5	58.0	56.0	12
CB 23	55.5	58.0	57.0	12

LEGEND

DESIGNATED OPEN SPACE	
PROPERTY LINE	
EXISTING CONTOUR	
PROPOSED CONTOUR	
PROPOSED WATER MAIN	
PROPOSED WATER SERVICE	
PROPOSED SEWER LINE	
UNDER GROUND UTILITIES	
SEWER MANHOLE	
EXISTING WATER LINE	
EXISTING SEWER LINE	
UTILITY POLE	
IRON PIN	
STONE MONUMENT	
DRAINAGE STRUCTURE	
WATER VALVE	
WATER SHUT OFF	
HYDRANT	
CURB	

GRAPHIC SCALE



2.1

GRADING & UTILITY PLAN
THE HOMESTEAD
459 US ROUTE 1 KITTERY, MAINE

FOR: MIDDLESEX LAND HOLDINGS, LLC
1 BRIDGEVIEW CIRCLE
TYNGSBORO, MA 01879

ATTAR ENGINEERING, INC.

CIVIL • STRUCTURAL • MARINE
1284 STATE ROAD - ELOT, MAINE 03903
PHONE: (207)439-6023 FAX: (207)439-2128

SCALE: 1" = 40' APPROVED BY: DRAWN BY: LMC

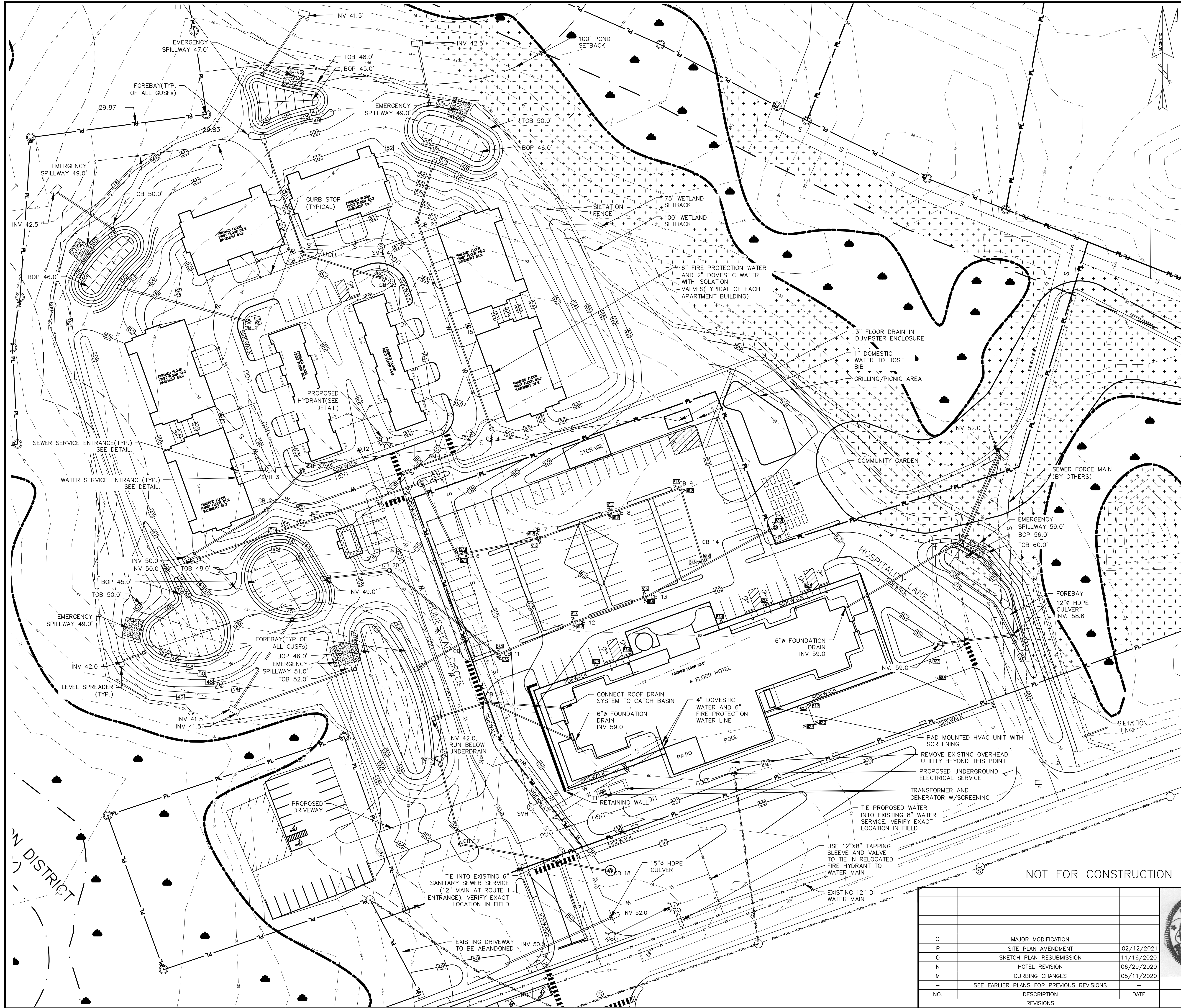
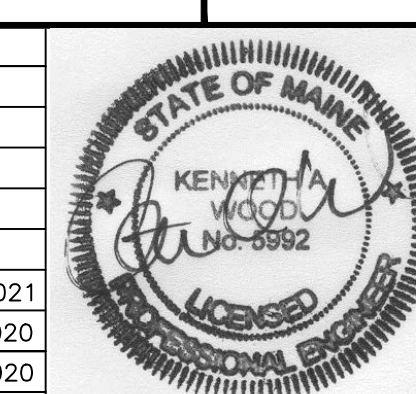
DATE: 3/1/2021 REVISION: DATE

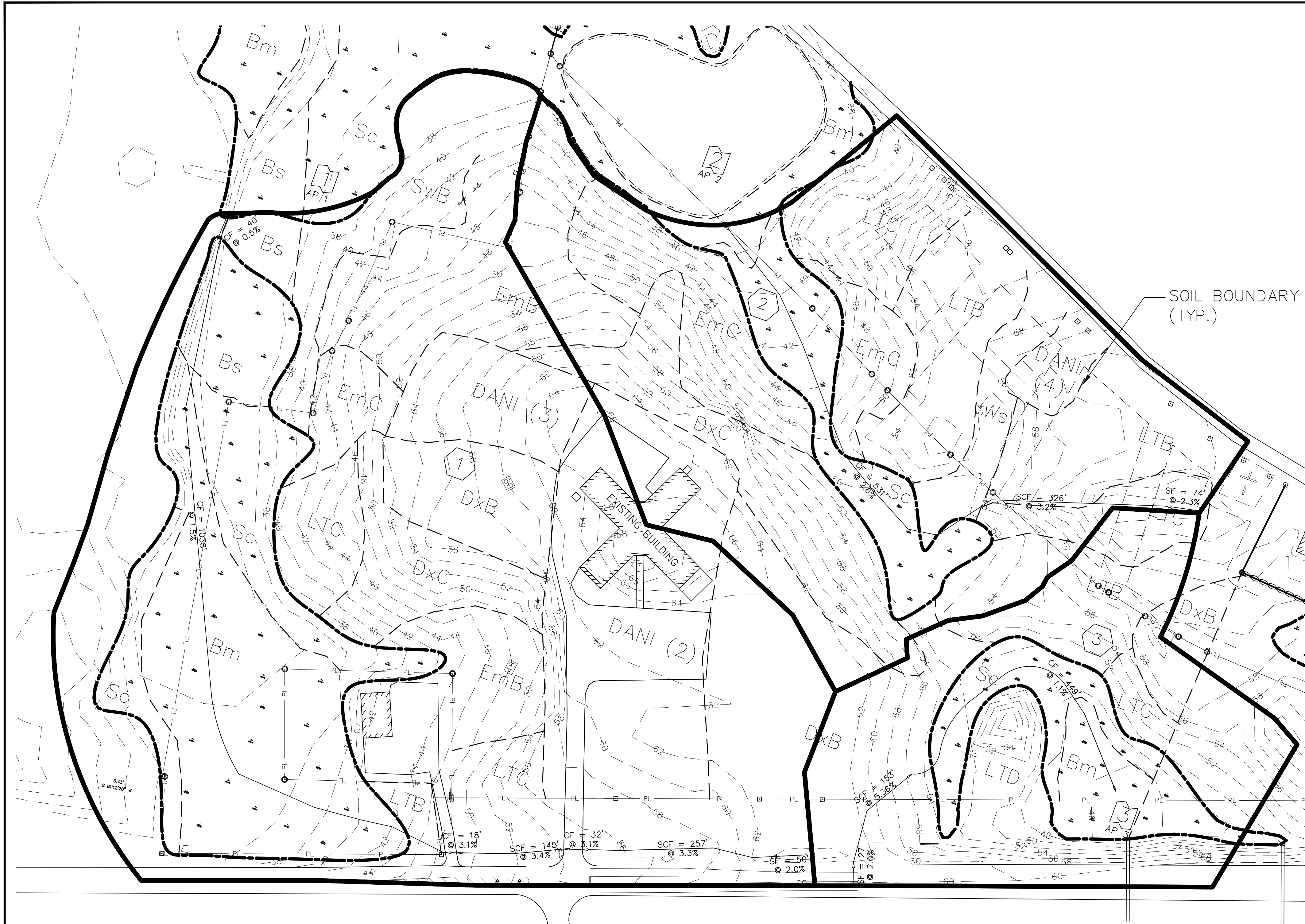
JOB NO: C091-21 FILE: THE HOMESTEAD BASE SHEET 2.1

TAX MAP: 60, LOT 24

NOT FOR CONSTRUCTION

NO.	DESCRIPTION	DATE
Q	MAJOR MODIFICATION	
P	SITE PLAN AMENDMENT	02/12/2021
O	SKETCH PLAN RESUBMISSION	11/16/2020
N	HOTEL REVISION	06/29/2020
M	CURBING CHANGES	05/11/2020
-	SEE EARLIER PLANS FOR PREVIOUS REVISIONS	-
NO.	DESCRIPTION	DATE





SOIL BOUNDARY (TYP.)

LEGEND	
WETLAND/SOIL BNDY.	UPLAND WETLANDS
EXT. CONTOUR	---XXX---
PRP. CONTOUR	---XXX---
SUBCATCHMENT BNDY.	— — — — —
SOIL TYPE BOUNDARY	— — — — —
Tc PATH	→ FLOW TYPE/LENGTH →

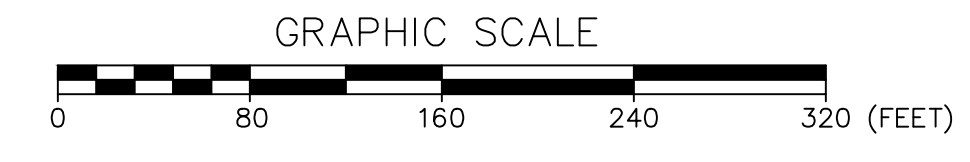
FLOW TYPES	
SF - SHEET FLOW	① SUBCATCHMENT
SCF - SHALLOW CONCENTRATED FLOW	1R REACH
CF - CHANNEL FLOW	① POND
	① ANALYSIS POINT

NOTE: ON-SITE SOILS INFORMATION IS TAKEN FROM CLASS A HIGH INTENSITY SOIL SURVEY PREPARED BY MICHAEL CUOMO, ME CSS #211 (SOIL REPORT DATED OCTOBER 2016). ELSEWHERE, SOILS INFORMATION IS TAKEN FROM THE YORK COUNTY SOIL SURVEY.

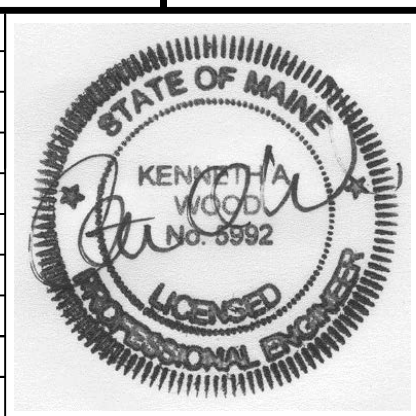
SYMBOL	SOIL SERIES
Bm	BIDDEFORD MUCKY PEAT*
BS	BIDDEFORD-SCANTIC COMPLEX, FILLED AND DITCHED*
DANI	DEVELOPED AREA NOT INVESTIGATED
Dx	DIXFIELD FINE SANDY LOAM
Em	ELMWOOD VERY FINE SANDY LOAM
LT	LYMAN-TUNBRIDGE COMPLEX
Sc	SCANTIC SILT LOAM*
Sw	SWANTON VERY FINE SANDY LOAM
Ws	WESTBURY FINE SANDY LOAM

* WETLAND SOILS

HYDROLOGIC SOIL GROUP	
D	D
D	D
N/A	N/A
C	C
C	C
C/D	C/D
D	D
C/D	C/D
C	C



NO.	DESCRIPTION	DATE
Q	MAJOR MODIFICATION	
P	SITE PLAN AMENDMENT	02/12/2021
O	SKETCH PLAN RESUBMISSION	11/16/2020
N	MAJOR MODIFICATION	02/06/2020
M	HOTEL REVISION	11/21/2019
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J	MDEP SUBMISSION	01/23/2019
I	PRELIMINARY PLAN SUBMISSION	9/20/2018
H	PRELIMINARY PLAN REVISION	5/08/2018



3.1

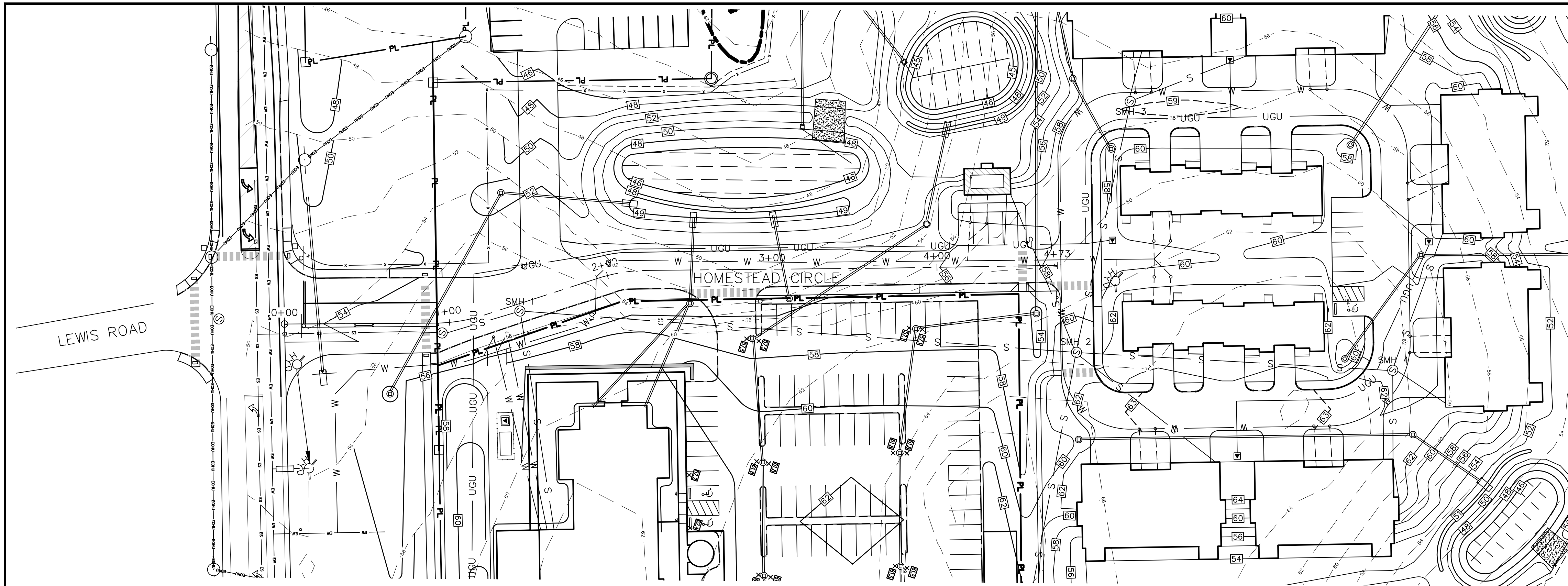
STORMWATER: EXISTING CONDITIONS
THE HOMESTEAD
459 US ROUTE 1 KITTERY, MAINE

FOR: MIDDLESEX LAND HOLDINGS, LLC
 1 BRIDGEVIEW CIRCLE
 TYNGSBORO, MA 01879

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

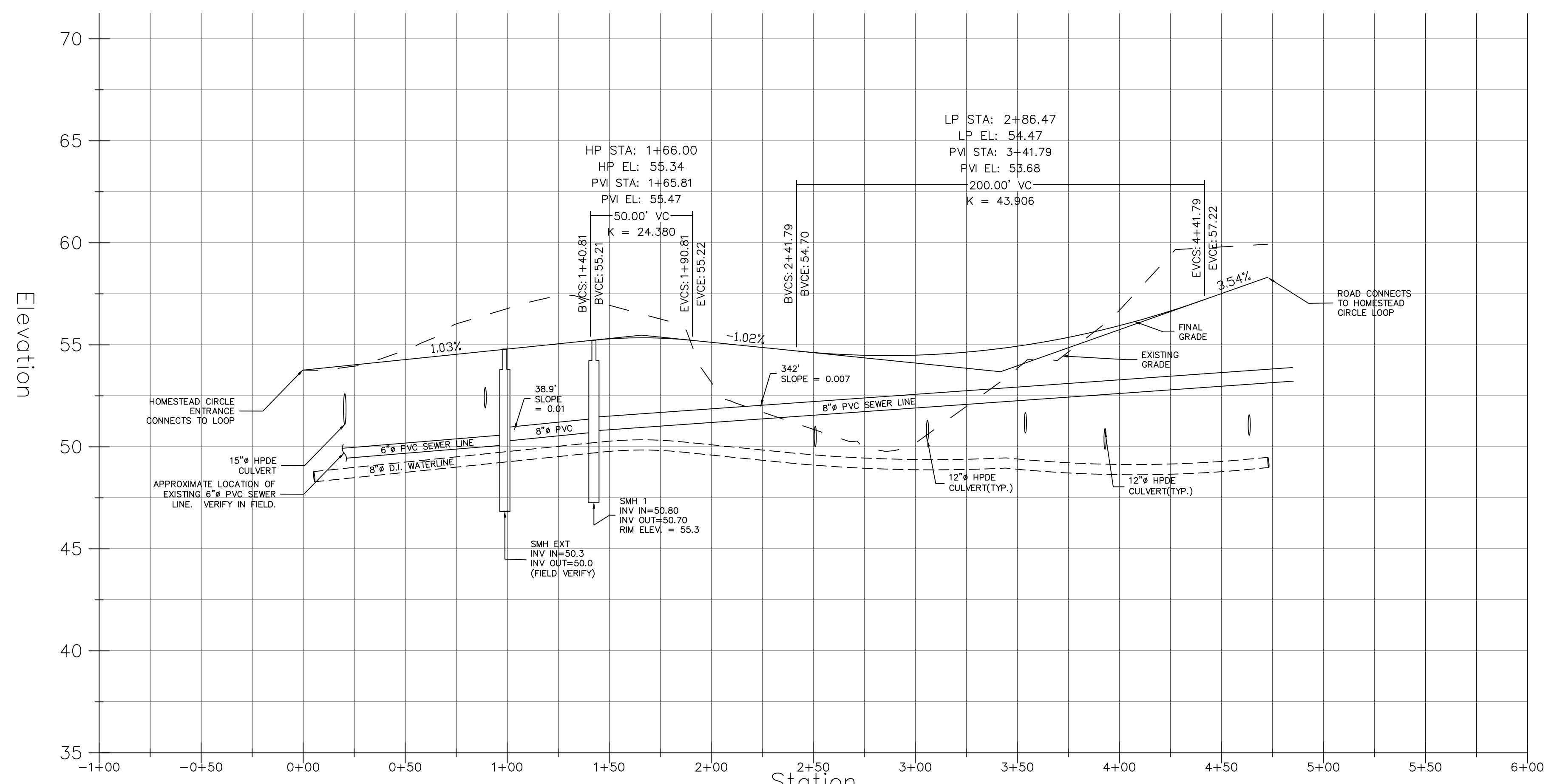
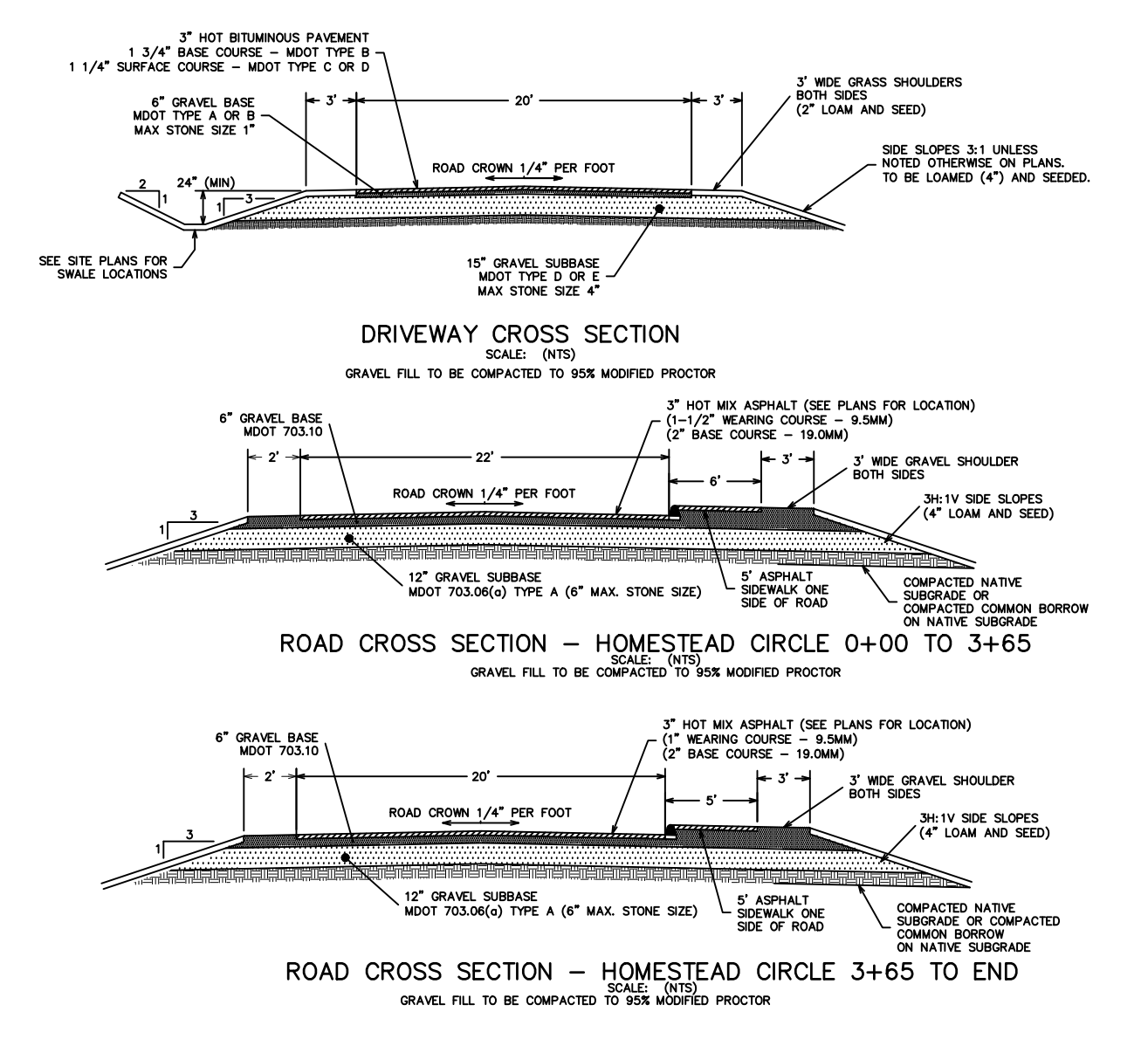
SCALE: 1" = 80'	APPROVED BY: 	DRAWN BY: BRN
DATE: 02/08/2018	REVISION : DATE J: 01/24/2019	JOB NO: C091-21 FILE: THE HOMESTEAD BASE SHEET 3.1

TAX MAP 60, LOT 24



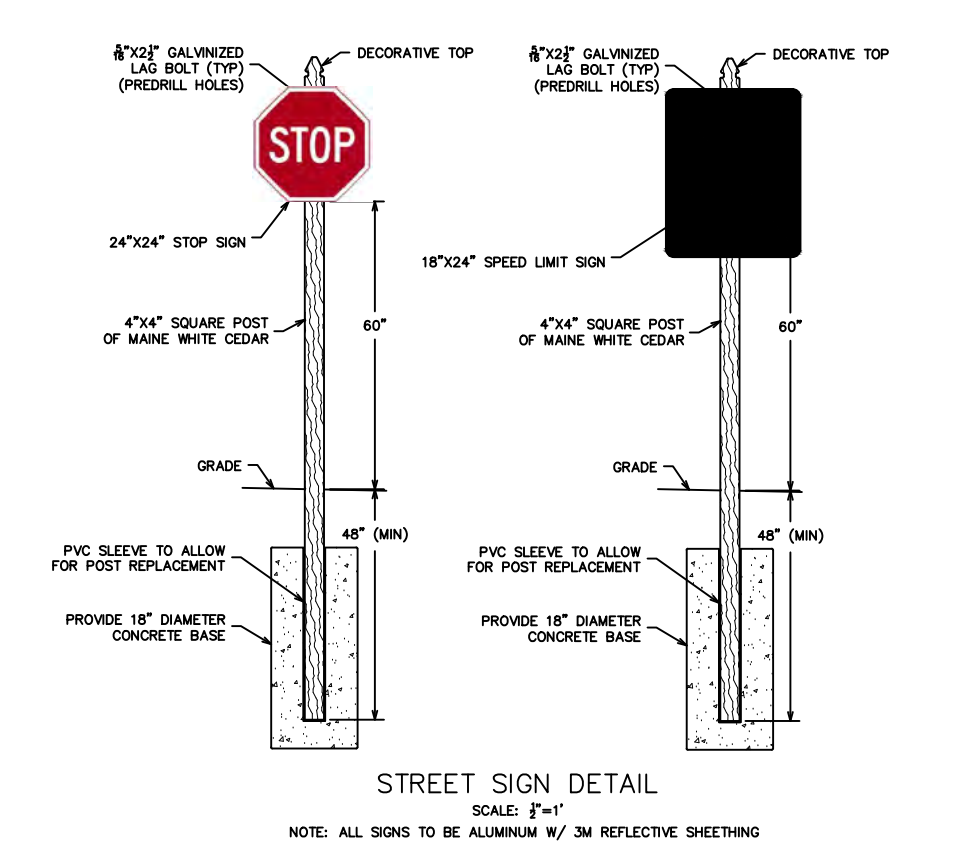
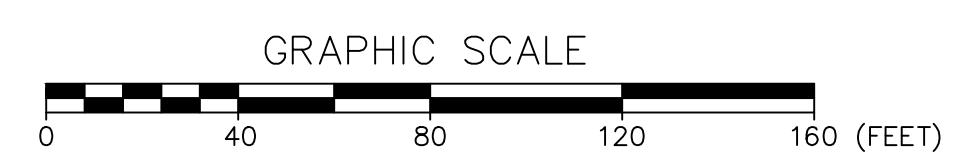
ROAD PLAN - HOMESTEAD CIRCLE

SCALE: 1" = 40'



ROAD PROFILE - HOMESTEAD CIRCLE

H. SCALE: 1" = 40'
V. SCALE: 1" = 4'



STREET SIGN DETAIL

NOTE: ALL SIGNS TO BE ALUMINUM W/ 3M REFLECTIVE SHEETING

Centerline Elevations	53.8	53.76	54.0	53.95	54.3	54.73	54.5	56.03	54.8	56.77	55.0	57.40	55.3	56.94	55.3	56.26	55.1	53.16	54.9	51.70	54.6	50.86	54.5	49.98	54.5	50.17	54.6	51.98	54.9	53.84	55.4	54.65	55.9	56.68	56.7	59.40	57.5	59.80
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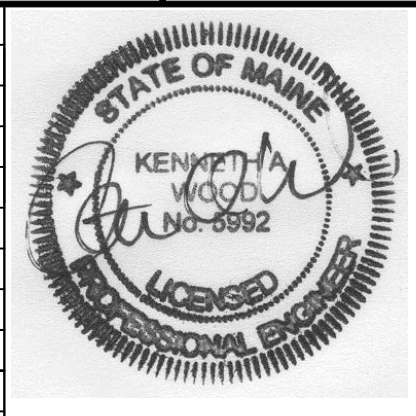
ROAD DESIGN NOTES
1) TOTAL ROAD LENGTH OF HOMESTEAD CIRCLE IS: 473'
2) TOTAL ROAD LENGTH OF HOSPITALITY LANE IS: 317'

NOT FOR CONSTRUCTION

5.1

ROAD PLAN AND PROFILE
THE HOMESTEAD
459 US ROUTE 1 KITTEBY, MAINE

NO.	DESCRIPTION	DATE
Q	MAJOR MODIFICATION	
P	SITE PLAN AMENDMENT	02/12/2021
O	SKETCH PLAN RESUBMISSION	11/16/2020
N	MAJOR MODIFICATION	02/06/2020
M	HOTEL REVISION	11/21/2019
L	FINAL PLAN REVISION	03/27/2019
K	FINAL PLAN SUBMISSION	01/24/2019
J	MDEP SUBMISSION	01/23/2019
I	PRELIMINARY PLAN SUBMISSION	9/20/2018
H	PRELIMINARY PLAN REVISION	5/08/2018
-	SEE EARLIER PLANS FOR PREVIOUS REVISIONS	-



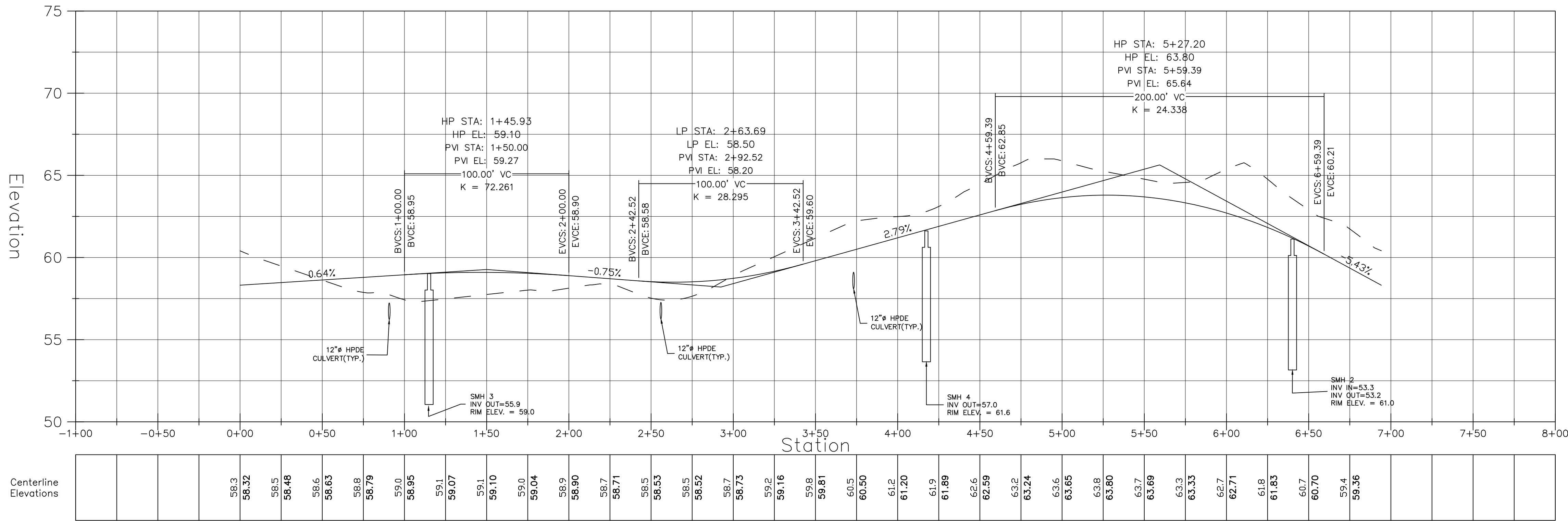
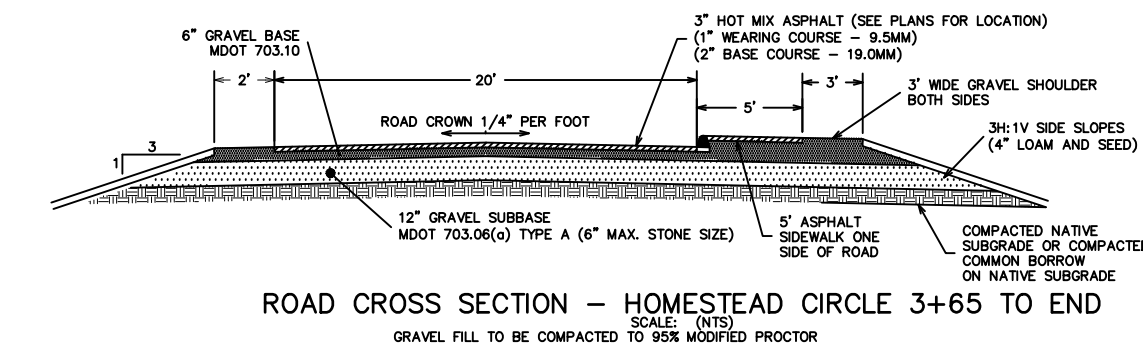
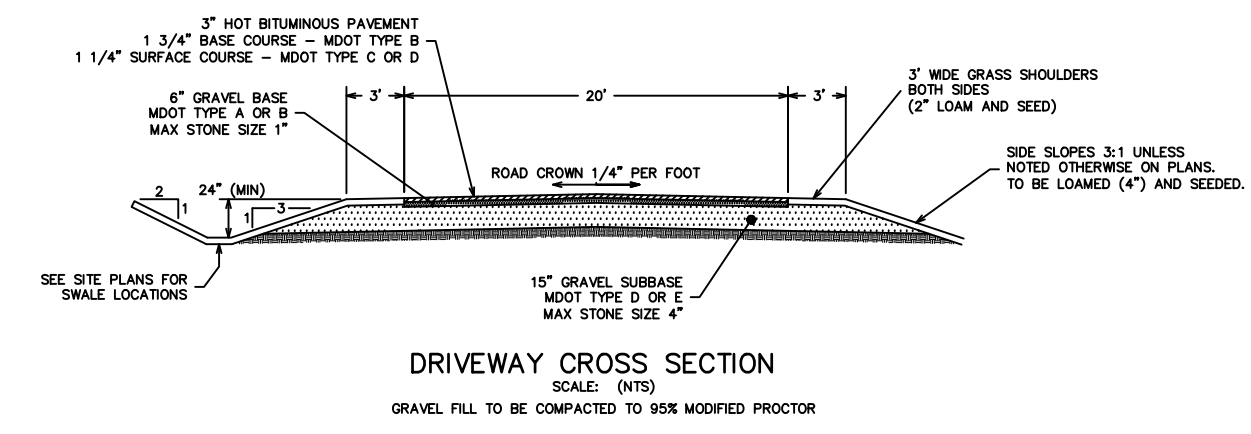
FOR: MIDDLESEX LAND HOLDINGS, LLC
1 BRIDGEVIEW CIRCLE
TYNGSBORO, MA 01879

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

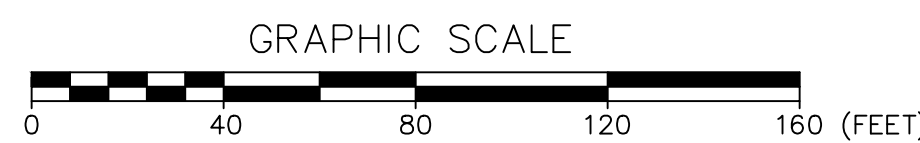
SCALE: 1" = 40' APPROVED BY: *[Signature]* DRAWN BY: LMC
DATE: 02/08/2018 REVISION: DATE Q:
JOB NO: C091-21 FILE: THE HOMESTEAD BASE SHEET 5.1



ROAD PLAN – HOMESTEAD CIRCLE
SCALE: 1" = 40'



ROAD PROFILE – HOMESTEAD CIRCLE
H. SCALE: 1" = 40'
V. SCALE: 1" = 4'



ROAD DESIGN NOTES

- TOTAL ROAD LENGTH OF HOMESTEAD CIRCLE IS: 473'
- TOTAL ROAD LENGTH OF HOSPITALITY LANE IS: 317'

NOT FOR CONSTRUCTION

5.2

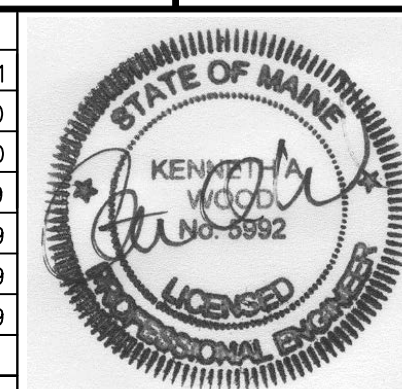
ROAD PLAN AND PROFILE
THE HOMESTEAD
459 US ROUTE 1 KITTEERY, MAINE

FOR: MIDDLESEX LAND HOLDINGS, LLC
1 BRIDGEVIEW CIRCLE
TYNGSBORO, MA 01879

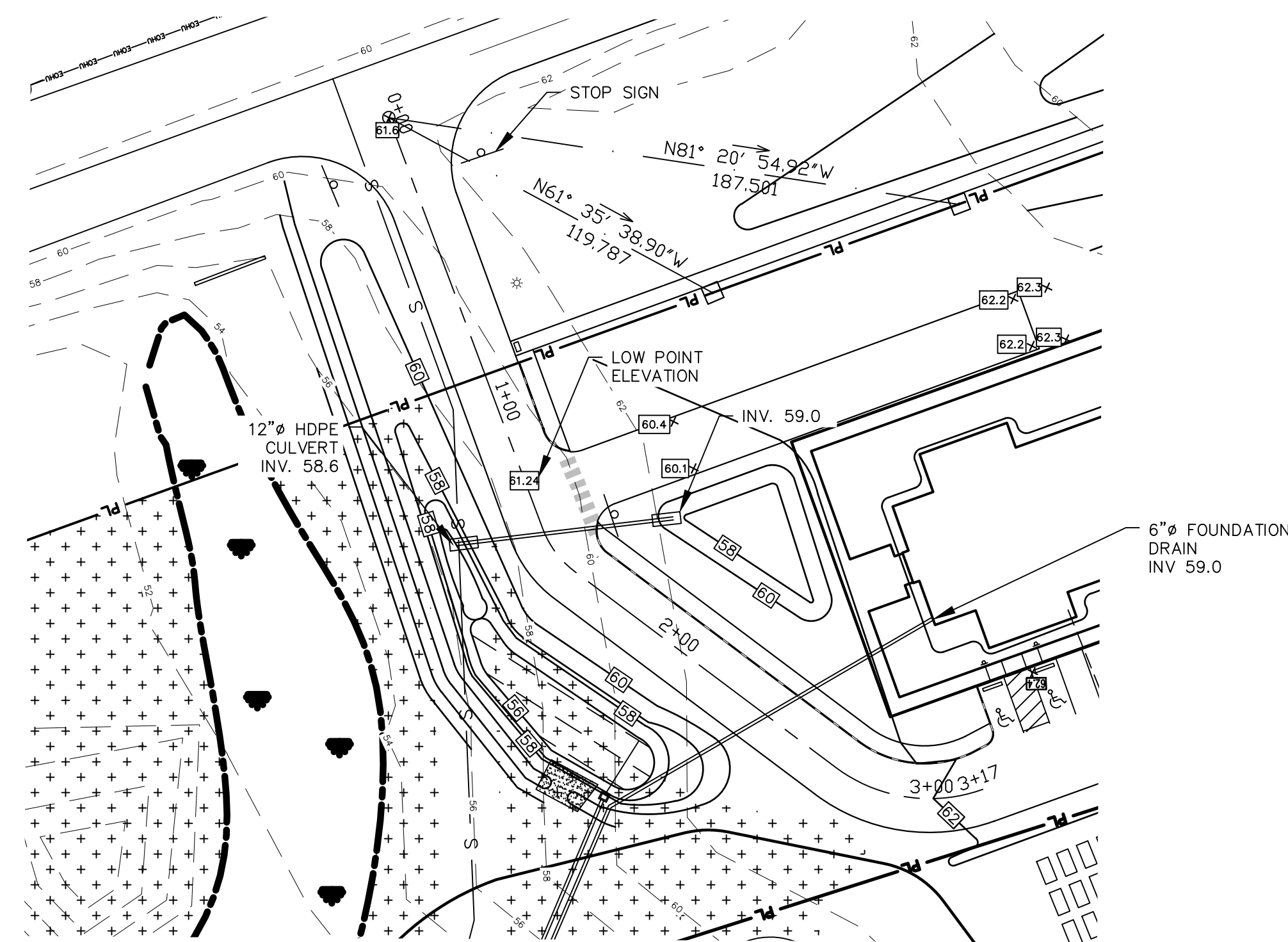
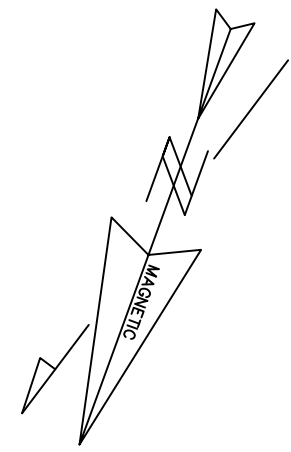
ATTAR ENGINEERING, INC.

CIVIL • STRUCTURAL • MARINE
1284 STATE ROAD – ELIOT, MAINE 03903
PHONE: (207)439-6023 FAX: (207)439-2128

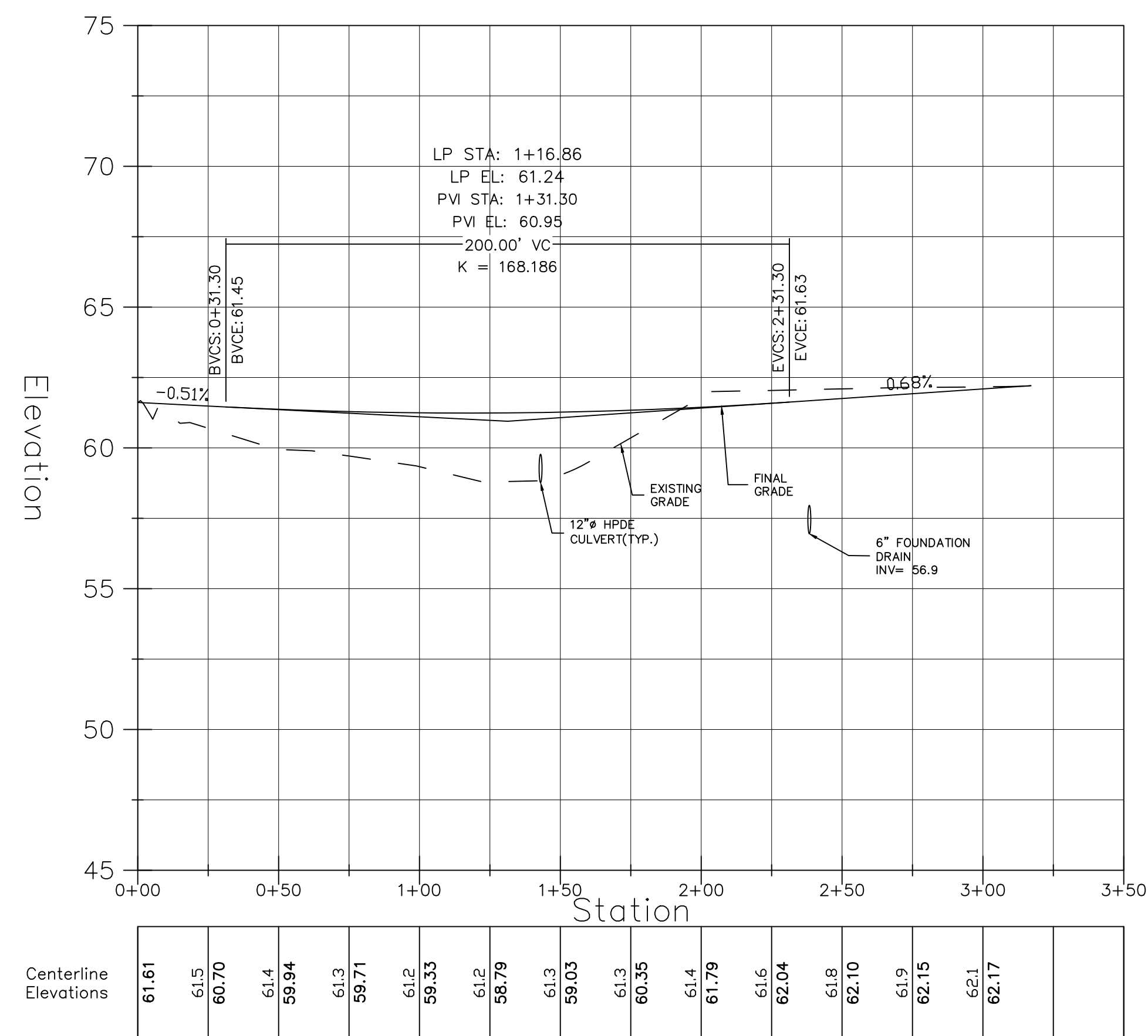
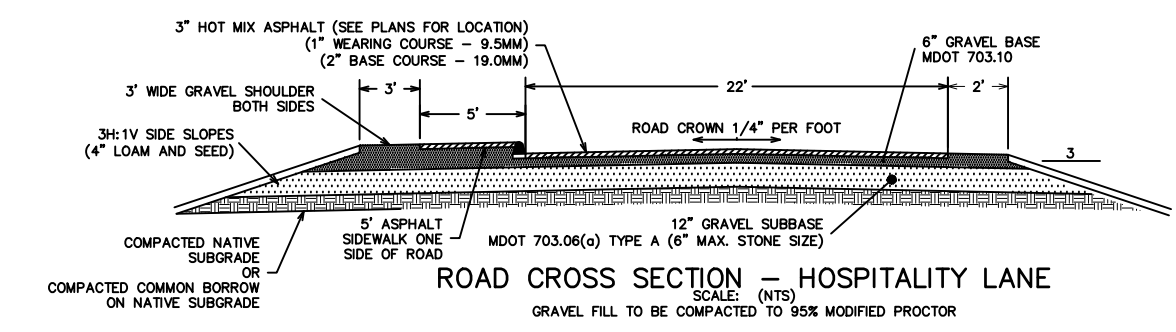
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DATE: 02/08/2018	REVISION : DATE Q:	SHEET 5.2
JOB NO: C091-21	FILE: THE HOMESTEAD BASE	TAX MAP 60, LOT 24



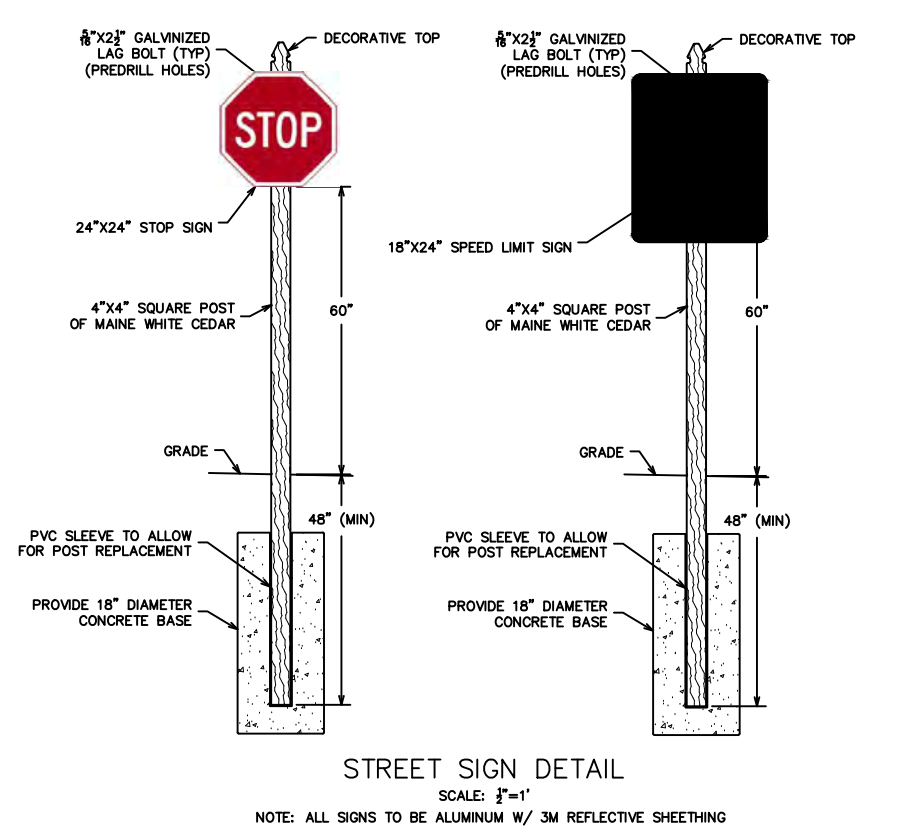
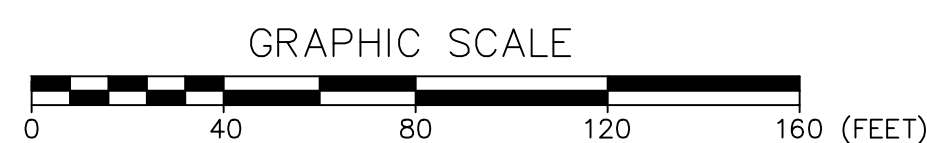
NO.	DESCRIPTION	DATE
Q	MAJOR MODIFICATION	
P	SITE PLAN AMENDMENT	02/12/2021
O	SKETCH PLAN RESUBMISSION	11/16/2020
N	MAJOR MODIFICATION	02/06/2020
M	HOTEL REVISION	11/21/2019
L	FINAL PLAN REVISION	03/27/2019
K	FINAL PLAN SUBMISSION	01/24/2019
J	MDEP SUBMISSION	01/23/2019
I	PRELIMINARY PLAN SUBMISSION	9/20/2018
H	PRELIMINARY PLAN REVISION	5/08/2018
-	SEE EARLIER PLANS FOR PREVIOUS REVISIONS	-



ROAD PLAN - HOSPITALITY WAY
SCALE: 1" = 40'



ROAD PROFILE - HOSPITALITY WAY
H. SCALE: 1" = 40'
V. SCALE: 1" = 4'

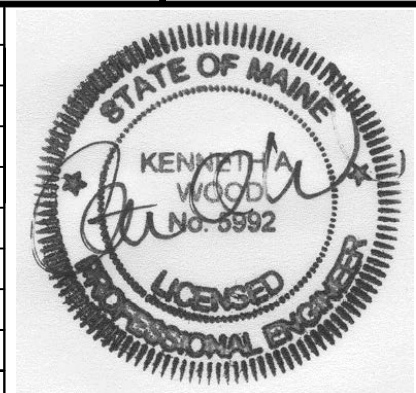


ROAD DESIGN NOTES
1) TOTAL ROAD LENGTH OF HOMESTEAD CIRCLE IS: 473'
2) TOTAL ROAD LENGTH OF HOSPITALITY LANE IS: 317'

NOT FOR CONSTRUCTION

5.3
ROAD PLAN AND PROFILE
THE HOMESTEAD
459 US ROUTE 1 KITTEERY, MAINE

NO.	DESCRIPTION	DATE
Q	MAJOR MODIFICATION	
P	SITE PLAN AMENDMENT	02/12/2021
O	SKETCH PLAN RESUBMISSION	11/16/2020
N	MAJOR MODIFICATION	02/06/2020
M	HOTEL REVISION	11/21/2019
L	FINAL PLAN REVISION	03/27/2019
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J	MDEP SUBMISSION	01/23/2019
I	PRELIMINARY PLAN SUBMISSION	9/20/2018
H	PRELIMINARY PLAN REVISION	5/08/2018
-	SEE EARLIER PLANS FOR PREVIOUS REVISIONS	-
NO.	DESCRIPTION	DATE



FOR: MIDDLESEX LAND HOLDINGS, LLC
1 BRIDGEVIEW CIRCLE
TYNGSBORO, MA 01879

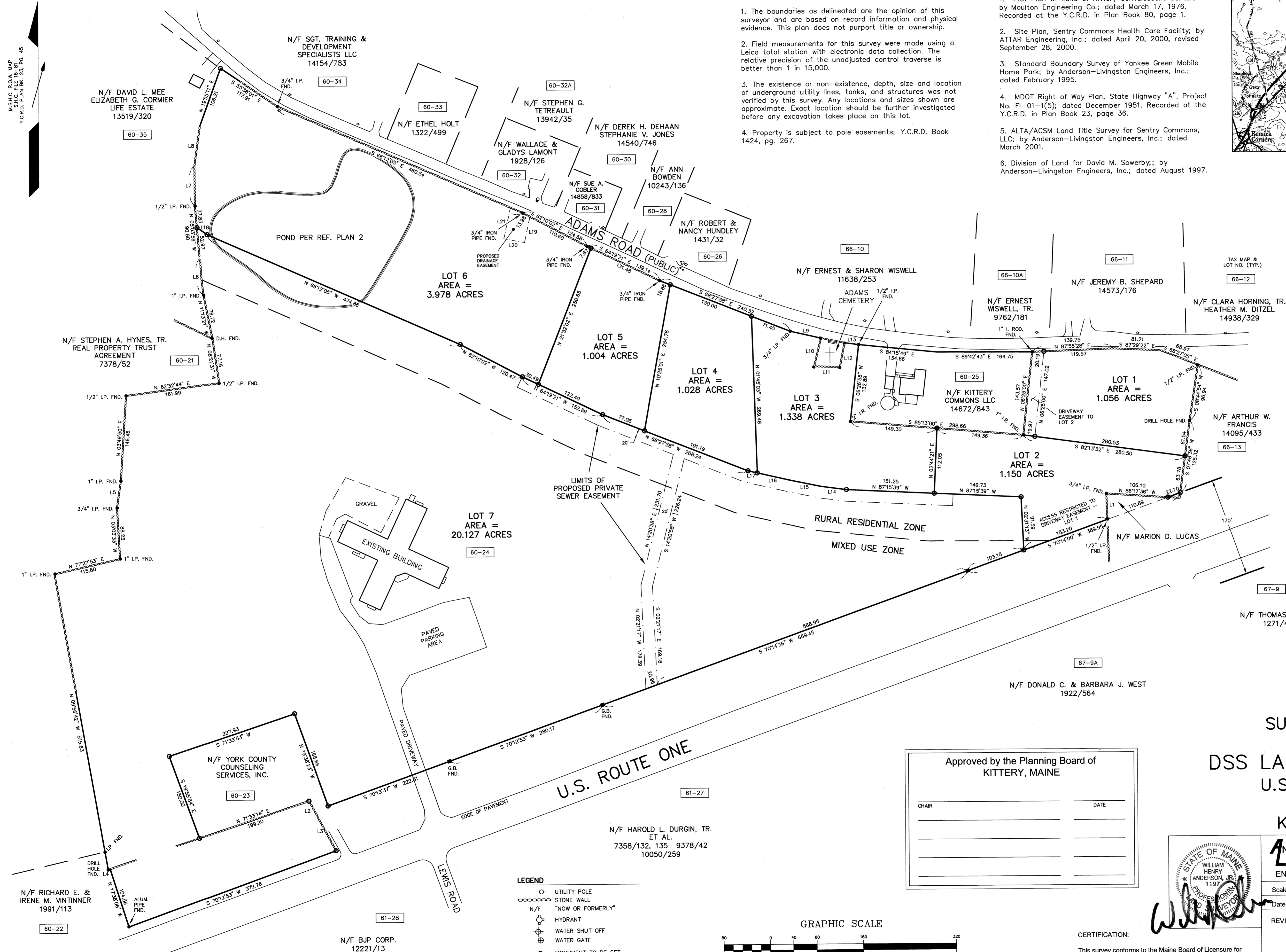
ATTAR ENGINEERING, INC.
CIVIL • STRUCTURAL • MARINE
1284 STATE ROAD - ELLIOT, MAINE 03903
PHONE: (207)439-6023 FAX: (207)439-2128

SCALE: 1" = 40'
DATE: 02/08/2018

APPROVED BY: *[Signature]*

DRAWN BY: LMC
REVISION : DATE Q:
SHEET 5.3

M.S.L.C. R.O.W. MAP
Y.C.R.D. PLAN BK. 23, PG. 49

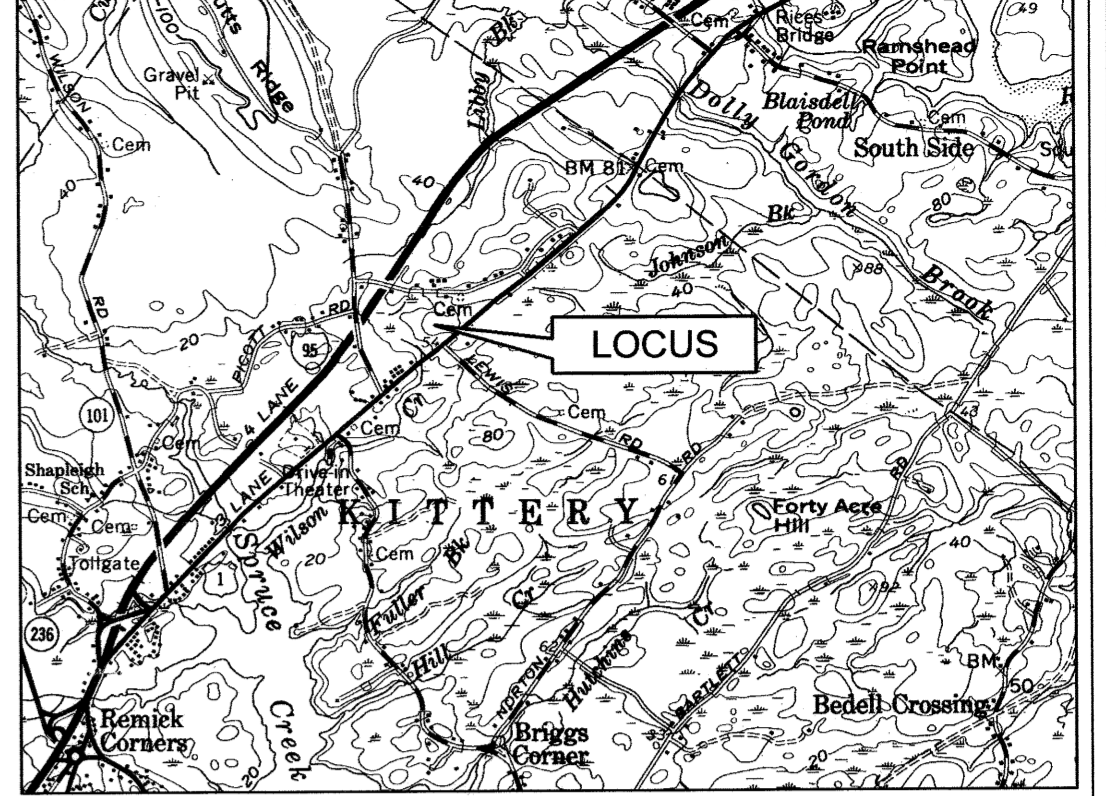


NOTES:

- 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.
- 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.
- 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.
- Property is subject to pole easements; Y.C.R.D. Book 1424, pg. 267.

REFERENCE PLANS:

- Plot Plan of Land of Kittery Convalescent Center; by Moulton Engineering Co.; dated March 17, 1976. Recorded at the Y.C.R.D. in Plan Book 80, page 1.
- Site Plan, Sentry Commons Health Care Facility; by ATTAR Engineering, Inc.; dated April 20, 2000, revised September 28, 2000.
- Standard Boundary Survey of Yankee Green Mobile Home Park; by Anderson-Livingston Engineers, Inc.; dated February 1995.
- MDOT Right of Way Plan, State Highway "A", Project No. FI-01-1(5); dated December 1951. Recorded at the Y.C.R.D. in Plan Book 23, page 36.
- ALTA/ACSM Land Title Survey for Sentry Commons, LLC; by Anderson-Livingston Engineers, Inc.; dated March 2001.
- Division of Land for David M. Sowerby; by Anderson-Livingston Engineers, Inc.; dated August 1997.



BEARING TABLE

LINE	BEARING	DIST
L1	S 01°57'16" E	44.39
L2	S 28°20'00" E	19.58
L3	S 28°07'30" E	77.88
L4	S 81°12'20" W	3.43
L5	N 08°34'48" E	46.62
L6	N 05°11'57" W	63.24
L7	N 00°21'24" W	68.54
L8	N 08°05'53" E	66.69
L9	S 77°06'20" E	54.19
L10	S 13°48'22" W	50.12
L11	S 88°11'01" E	44.40
L12	N 11°00'33" E	42.51
L13	S 82°23'52" E	24.39
L14	N 82°23'52" W	43.83
L15	N 78°21'23" W	52.97
L16	N 77°06'20" W	59.39
L17	N 77°06'20" W	16.40
L18	N 55°38'01" W	21.06
L19	S 12°14'31" W	45.25
L20	N 79°30'24" W	36.02
L21	N 12°14'31" E	54.72

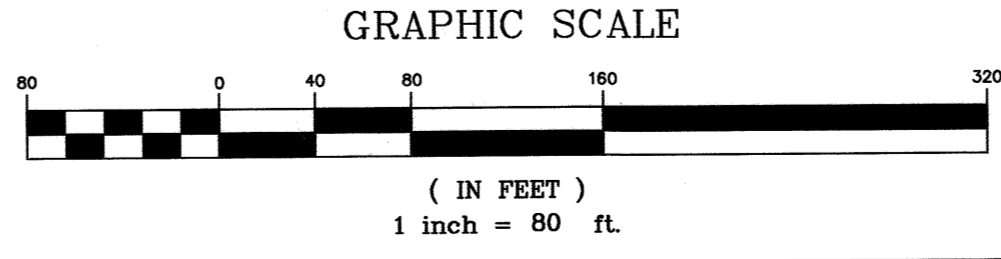
REFERENCE DEEDS:

- David M. Sowerby and Suzanne Sowerby to DSS Land Holdings, LLC; dated March 28, 1996. Recorded at the Y.C.R.D. in Book 7784, page 66.
- Arnold F. & Jean S. Dickinson to Sentry Commons, LLC; dated July 28, 2000. Recorded at the Y.C.R.D. in Book 10147, page 184.
- Marion D. Lucas to the State of Maine; dated April 24, 1952. Recorded at the Y.C.R.D. in Book 1205, page 527.
- Rose E. Adams to the State of Maine; dated March 13, 1952. Recorded at the Y.C.R.D. in Book 1204, page 324.

**SUBDIVISION PLAN
FOR
DSS LAND HOLDINGS, LLC
U.S. ROUTE ONE &
ADAMS ROAD
KITTERY, MAINE**

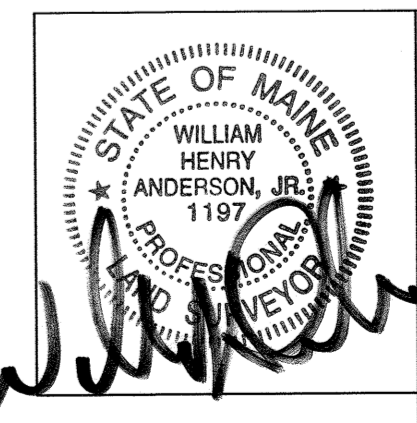
Approved by the Planning Board of
KITTERY, MAINE

CHAIR	DATE



LEGEND

- UTILITY POLE
- STONE WALL
- N/F "NOW OR FORMERLY"
- ⊕ HYDRANT
- ⊖ WATER SHUT OFF
- ⊕ WATER GATE
- MONUMENT TO BE SET
- GRANITE BOUND FOUND



ANDERSON LIVINGSTON ENGINEERS, INC.

Suite 401 Cottage Place
433 II U.S. Route One
York, Maine 03909

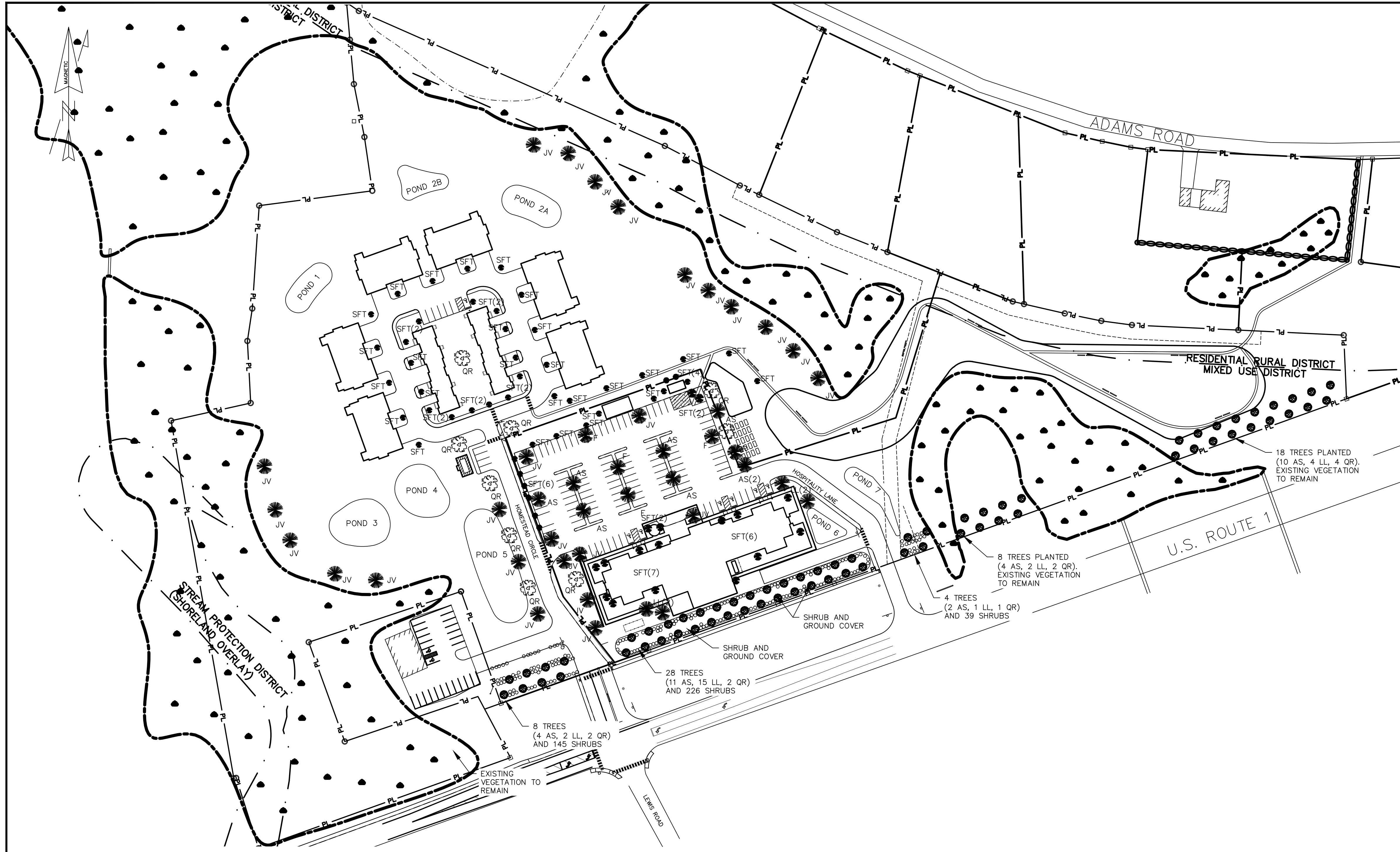
Scale: 1 in = 80 ft.
Date: September 14, 2007

OWNER:
DSS Land Holdings, LLC
P.O. Box 242
York, ME 03909

REVISIONS:

Sheet 1 of 1

FILE NO: 4872.004
PLAN NO: 1516.070901



LANDSCAPING NOTES

- 1) THE CONTRACTOR SHALL FOLLOW BEST MANAGEMENT PRACTICES DURING CONSTRUCTION AND SHALL TAKE ALL MEANS NECESSARY TO STABILIZE AND PROTECT THE SITE FROM EROSION.
- 2) EROSION CONTROL SHALL BE IN PLACE PRIOR TO CONSTRUCTION.
- 3) EROSION CONTROL TO CONSIST OF HAY BALES AND EROSION CONTROL FABRIC SHALL BE STAKED IN PLACE BETWEEN THE WORK AND WATER BODIES, WETLANDS AND/OR DRAINAGE WAYS PRIOR TO ANY CONSTRUCTION.
- 4) THE CONTRACTOR SHALL VERIFY LAYOUT AND GRADES AND INFORM THE LANDSCAPE ARCHITECT OR CLIENT'S REPRESENTATIVE OF ANY DISCREPANCIES OR CHANGES IN LAYOUT AND/OR GRADE RELATIONSHIPS PRIOR TO CONSTRUCTION.
- 5) THE CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF ALL UTILITIES WITH RESPECTIVE UTILITY OWNERS PRIOR TO CONSTRUCTION. CALL DIGSAFE AT 1-888-344-7233.
- 6) THE CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR NOT LESS THAN TWO YEARS FROM THE TIME OF ACCEPTANCE.
- 7) ALL LANDSCAPING SHALL BE PROVIDED WITH EITHER OF THE FOLLOWING:
 - 7)1) AN UNDERGROUND SPRINKLER SYSTEM
 - 7)2) AN OUTSIDE HOSE ATTACHMENT WITHIN 150 FEET
- 8) TREES, GROUND COVER, AND SHRUB BEDS SHALL BE MULCHED TO A DEPTH OF 2" WITH ONE-YEAR-OLD, WELL-COMPOSTED, SHREDDED NATIVE BARK NOT LONGER THAN 4" IN LENGTH AND 1/2" IN WIDTH, FREE OF WOODCHIPS AND SAW DUST. MULCH FOR FERNS AND HERBACEOUS PERENNIALS SHALL BE NO LONGER THAN 1" IN LENGTH. TREES IN LAWN AREAS SHALL BE MULCHED IN A 5' DIAMETER MIN. SAUCER.
- 9) ALL DISTURBED AREAS WILL BE DRESSED WITH 4" OF TOPSOIL AND PLANTED AS NOTED ON THE PLANS OR SEEDED EXCEPT PLANT BEDS. PLANT BEDS SHALL BE PREPARED TO A DEPTH OF 12" WITH 75% LOAM AND 25% COMPOST.
- 10) NUMBER OF TREES AND PLANTS REQUIRED AT FRONTAGE:

	TREES	PLANTS
REQUIRED	60	375
PROPOSED	66	410
- 11) NUMBER OF TREES AND PLANTS REQUIRED AT PARKING:

	TREES
REQUIRED	1 PER 8 SPACES (13)
PROPOSED	38
- 12) LANDSCAPED BUFFER TREES TO BE PLANTED AT 25' CL SPACING.

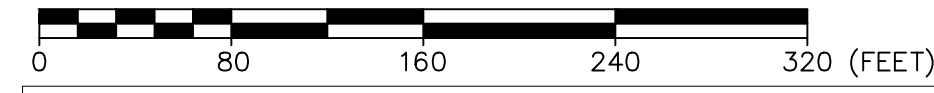
PLANT LIST

SMYBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE
AS	ACER SACCHARUM 'BONFIRE'	BONFIRE SUGAR MAPLE	39	2.5-3" CAL
LL	LARIX LARICINA	AMERICAN LARCH	30	2.5-3" CAL
F	FRAXINUS PENNSYLANICA 'PATMORE'	PATMORE GREEN ASH	4	2.5-3" CAL
JV	JUNIPERUS VIRGINIANA	RED CEDAR	28	8-10' HT BB
QR	QUERCUS RUBRA	RED OAK	20	2.5-3" CAL
SFT	SMALL FLOWERING TREE		61	2.5-3" CAL

DRIVEWAY EASEMENT

SCALE: 1" = 40'

GRAPHIC SCALE



LEGEND

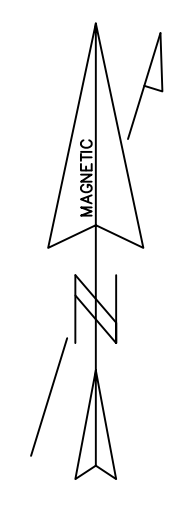
DESIGNATED OPEN SPACE		UNDER GROUND UTILITIES	UGU	DRAINAGE STRUCTURE	
PROPERTY LINE		SEWER MANHOLE		WATER VALVE	
EXISTING CONTOUR		EXISTING WATER LINE	EW	WATER SHUT OFF	
PROPOSED CONTOUR		EXISTING SEWER LINE	ES	HYDRANT	
PROPOSED WATER MAIN		UTILITY POLE		CURB	
PROPOSED WATER SERVICE		IRON PIN			
PROPOSED SEWER LINE		STONE MONUMENT			

TOWN OF KITTEERY PLANNING BOARD	DATE

STATE OF MAINE
YORK COUNTY ss. REGISTRY OF DEEDS
RECEIVED _____ 20____
AT _____ M, AND RECORDED IN
PLAN BOOK _____, PAGE _____
ATTEST _____ REGISTER

7.2	LANDSCAPING PLAN THE HOMESTEAD 459 US ROUTE 1 KITTEERY, MAINE	
	FOR: MIDDLESEX LAND HOLDINGS, LLC 1 BRIDGEVIEW CIRCLE TYNGSBORO, MA 01879	
	ATTAR ENGINEERING, INC. CIVIL • STRUCTURAL • MARINE 1284 STATE ROAD - ELOT, MAINE 03903 PHONE: (207)439-6023 FAX: (207)439-2128	
	SCALE: 1" = 80'	APPROVED BY:
DATE: 02/08/2018	REVISION: DATE Q:	DRAWN BY: LMC
JOB NO: C091-21	FILE: THE HOMESTEAD BASE	SHEET 7.2

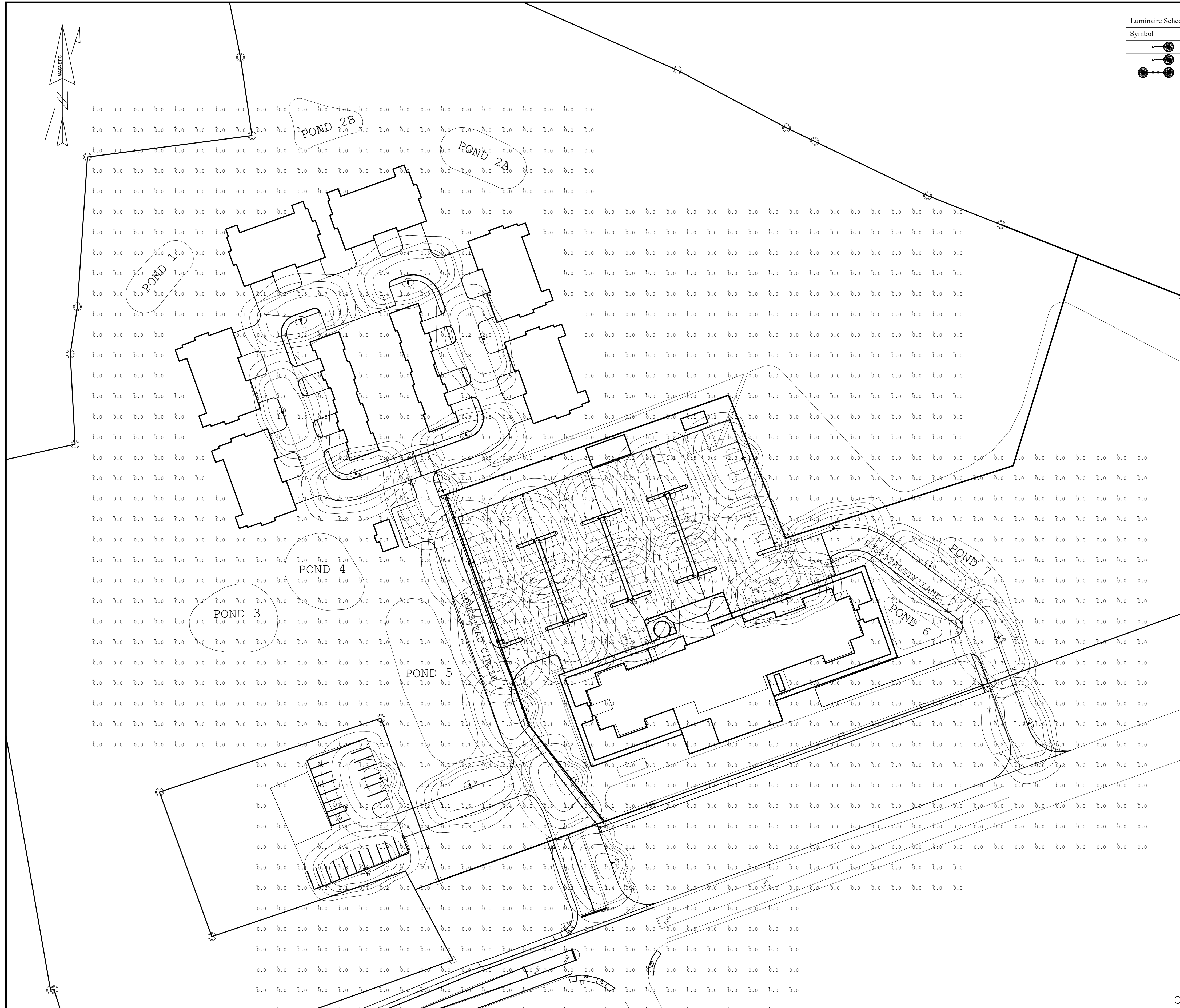
NO.	DESCRIPTION	DATE
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H	PRELIMINARY PLAN REVISION	5/08/2018
-	SEE EARLIER PLANS FOR PREVIOUS REVISIONS	-
NO.	DESCRIPTION	DATE



Symbol	Qty	Label	Arrangement	Description
	13	T3	SINGLE	EMM-F02-LED-E1-T3-SO-SN-XX / VA6105-XX / SRX4A15S (15' AFG)
	7	T4	SINGLE	EMM-F02-LED-E1-T4-SO-SN-XX / VA6105-XX / SRX4A15S (15' AFG)
	8	T2T3	BACK-BACK	EMM-F02-LED-E1-T3-SO-SN-XX / VA6107-XX / SRX4A15S (15' AFG)

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
All Points	Illuminance	Fc	0.24	4.4	0.0	N.A.	N.A.
Existing Building Lot	Illuminance	Fc	0.70	2.6	0.1	7.00	26.00
Homestead Circle Road	Illuminance	Fc	1.13	2.6	0.3	3.77	8.67
Hospitality Lane	Illuminance	Fc	1.22	2.0	0.5	2.44	4.00
Hotel Entry	Illuminance	Fc	1.90	3.0	1.1	1.73	2.73
Hotel Parking Lot	Illuminance	Fc	1.52	4.4	0.4	3.80	11.00
TOWNHOUSE ROADWAY	Illuminance	Fc	0.98	1.6	0.3	3.27	5.33

SPEC / ORDERING INFORMATION									
LUMINAIRE	OPTICS	# of LED's	DRIVE CURRENT	COLOR	VOLTAGE	MOUNTING	FINISH	OPTIONS	
LUMINAIRE	OPTICS	LED	MOUNTING	FINISH	OPTIONS				
<input type="checkbox"/> DSAP1 <input type="checkbox"/> DSAP25	<input checked="" type="checkbox"/> IES DISTRIBUTION TYPE <input type="checkbox"/> VLED - II (Type II) <input type="checkbox"/> VLED - III (Type III) <input type="checkbox"/> VLED - IV (Type IV) <input type="checkbox"/> VLED - VSQ (Type VSQ)	<input type="checkbox"/> DSAP1 <input type="checkbox"/> 80LED' <input type="checkbox"/> 64LED' <input type="checkbox"/> 48LED' <input type="checkbox"/> DSAP25 <input type="checkbox"/> 120LED' <input type="checkbox"/> 80LED' <input type="checkbox"/> 64LED'	<input type="checkbox"/> 700mA <input type="checkbox"/> 525mA <input type="checkbox"/> 350mA	<input type="checkbox"/> NW (4000K) <input type="checkbox"/> CW (5000K) <input type="checkbox"/> WW (3000K) OTHER LED COLORS AVAILABLE CONSULT FACTORY	<input type="checkbox"/> 120 <input type="checkbox"/> 208 <input type="checkbox"/> 240 <input type="checkbox"/> 277 <input type="checkbox"/> 347 <input type="checkbox"/> 480	<input type="checkbox"/> XPD <input type="checkbox"/> XPK <input type="checkbox"/> 1 <input type="checkbox"/> WALLMOUNT <input type="checkbox"/> WM	STANDARD TEXTURED FINISH <input type="checkbox"/> BLACK RAL-9005-T <input type="checkbox"/> WHITE RAL-9003-T <input type="checkbox"/> GREY RAL-7004-T <input type="checkbox"/> DARK BRONZE RAL-8019-T <input type="checkbox"/> GREEN RAL-6005-T FOR SMOOTH FINISH REPLACE SUFFIX "T" WITH SUFFIX "S" (EXAMPLE: RAL-9005S)	<input type="checkbox"/> HOUSE SIDE SHIELDED REFLECTOR PRISMS... HS-VLED <input type="checkbox"/> PHOTO CELL + VOLTAGE (EXAMPLE: PC120V)... PC-V <input type="checkbox"/> TWIST LOCK PHOTO CELL + VOLTAGE (EXAMPLE: TPC120V)... TPC-V <input type="checkbox"/> TWIST LOCK RECEPTACLE ONLY... TPR <input type="checkbox"/> SINGLE FUSE (120V, 277V)... SF <input type="checkbox"/> DOUBLE FUSE (208V, 240V)... DF	



Existing Building Lot Illuminance (Fc) Average = 0.30 Maximum = 2.6 Minimum = 0.1 Avg/Min Ratio = 7.00 Max/Min Ratio = 26.00	Homestead Circle Road Illuminance (Fc) Average = 1.13 Maximum = 2.6 Minimum = 0.3 Avg/Min Ratio = 3.77 Max/Min Ratio = 8.67	Hotel Entry Off of Homestead Circle Illuminance (Fc) Average = 1.90 Maximum = 3.0 Minimum = 1.1 Avg/Min Ratio = 1.73 Max/Min Ratio = 2.73	Hotel Parking Lot Illuminance (Fc) Average = 1.52 Maximum = 4.4 Minimum = 0.4 Avg/Min Ratio = 3.80 Max/Min Ratio = 11.00	Hospitality Lane Illuminance (Fc) Average = 1.22 Maximum = 2.0 Minimum = 0.5 Avg/Min Ratio = 2.44 Max/Min Ratio = 4.00	TOWNHOUSE ROADWAY Illuminance (Fc) Average = 0.98 Maximum = 1.6 Minimum = 0.3 Avg/Min Ratio = 3.27 Max/Min Ratio = 5.33
--	---	--	--	--	---



8.1

LIGHTING PLAN
THE HOMESTEAD
459 US ROUTE 1 KITTEERY, MAINE

FOR: MIDDLESEX LAND HOLDINGS, LLC
1 BRIDGEVIEW CIRCLE
TYNGSBORO, MA 01879

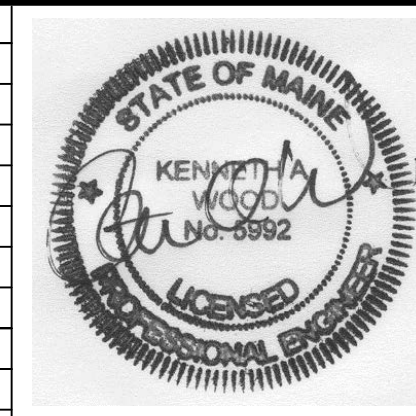
ATTAR ENGINEERING, INC.
CIVIL • STRUCTURAL • MARINE
1284 STATE ROAD - ELOT, MAINE 03903
PHONE: (207)439-6023 FAX: (207)439-2128

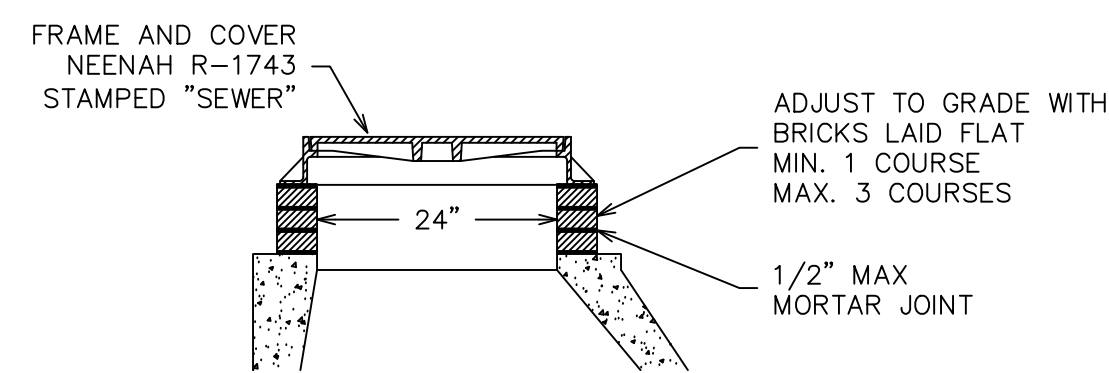
APPROVED BY:

SCALE: 1" = 50'
DATE: 2/22/2021

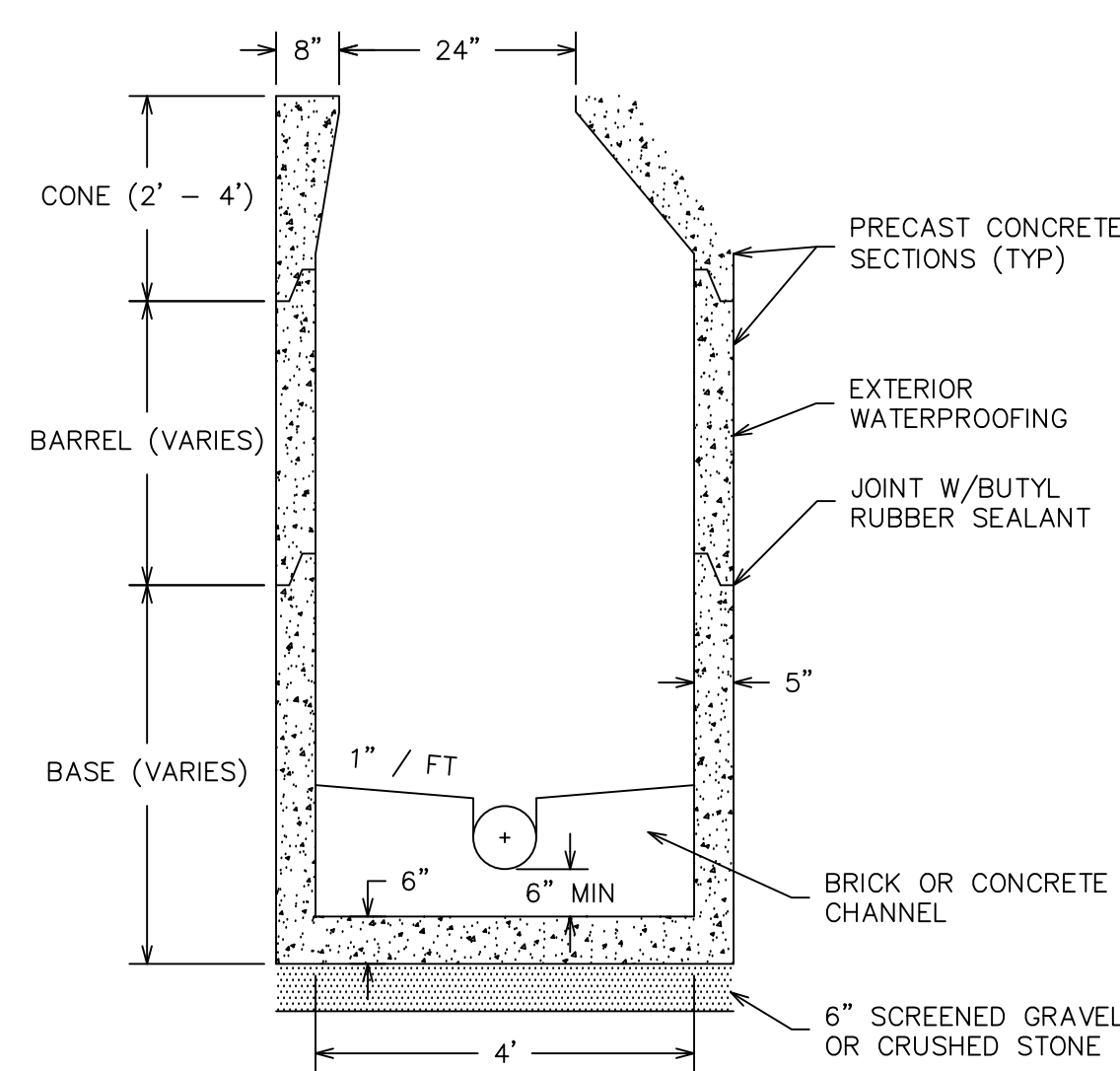
JOB NO: C091-21 FILE: THE HOMESTEAD BASE SHEET 8.1

NO.	DESCRIPTION	DATE
Q	MAJOR MODIFICATION	
P	SITE PLAN AMENDMENT	02/12/2021
O	SKETCH PLAN RESUBMISSION	11/16/2020
N	MAJOR MODIFICATION	02/06/2020
M	HOTEL REVISION	11/21/2019
L	FINAL PLAN REVISION	03/27/2019
K	FINAL PLAN SUBMISSION	01/24/2019
J	MDEP SUBMISSION	01/23/2019
I	PRELIMINARY PLAN SUBMISSION	9/20/2018
H	PRELIMINARY PLAN REVISION	5/08/2018
-	SEE EARLIER PLANS FOR PREVIOUS REVISIONS	-
NO.	DESCRIPTION	DATE

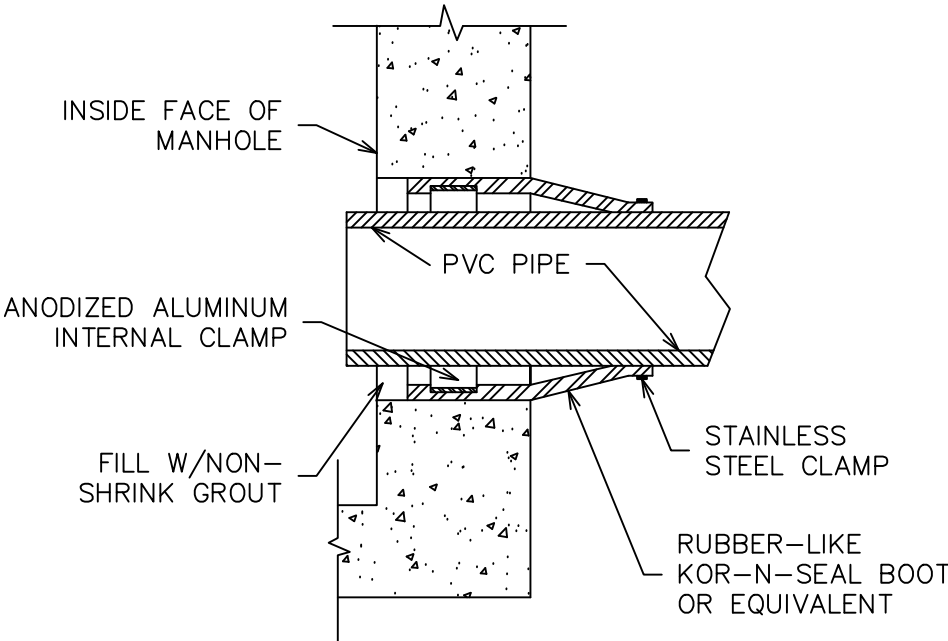




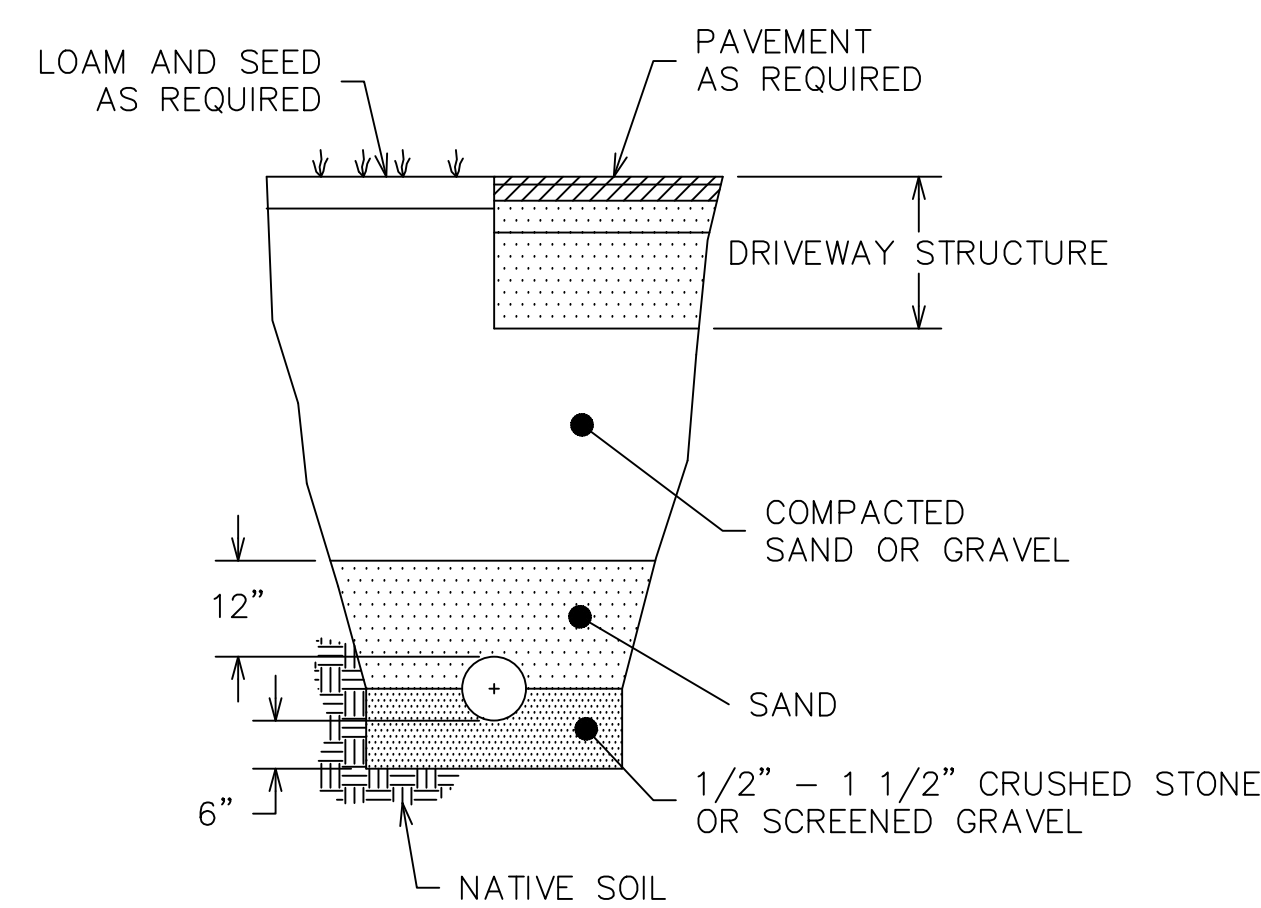
STANDARD COVER AND FRAME
SCALE: NTS



TYPICAL SANITARY MANHOLE
SCALE: NTS

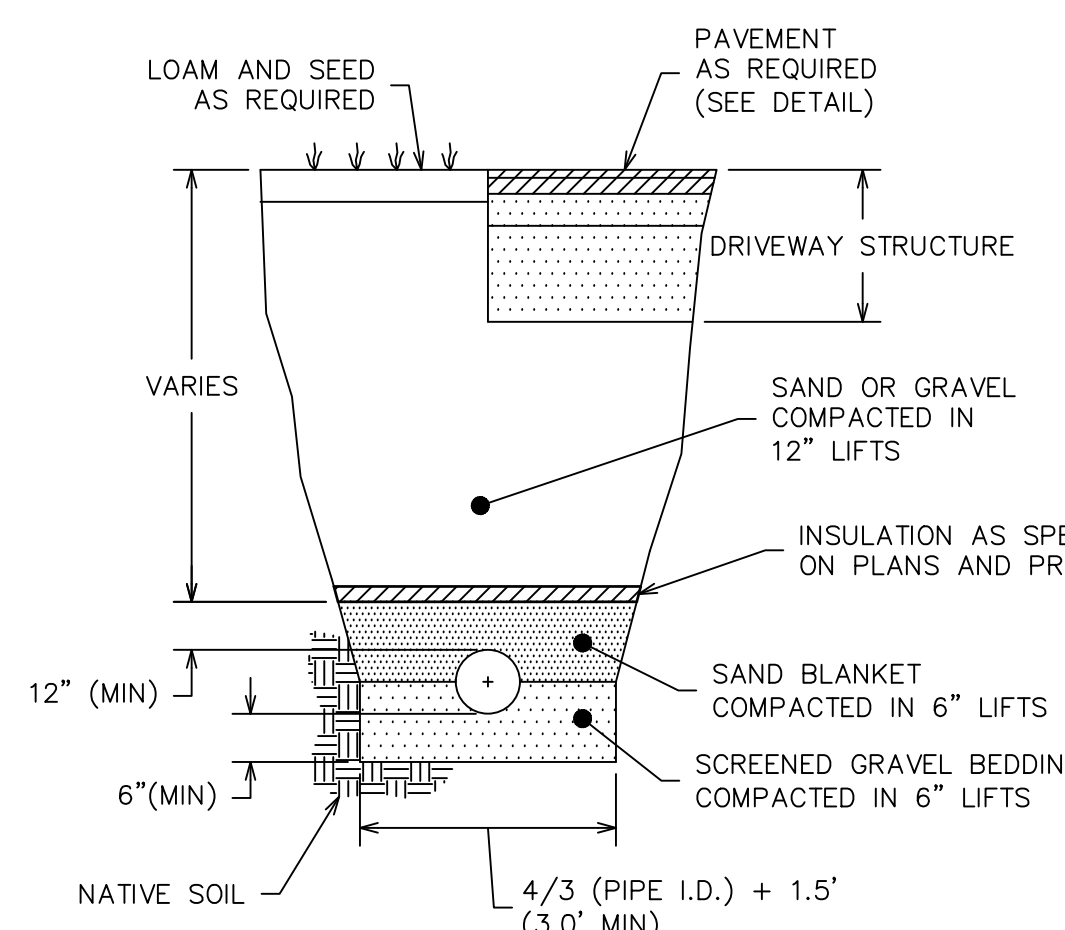


TYPICAL BOOT GASKET
SCALE: NTS



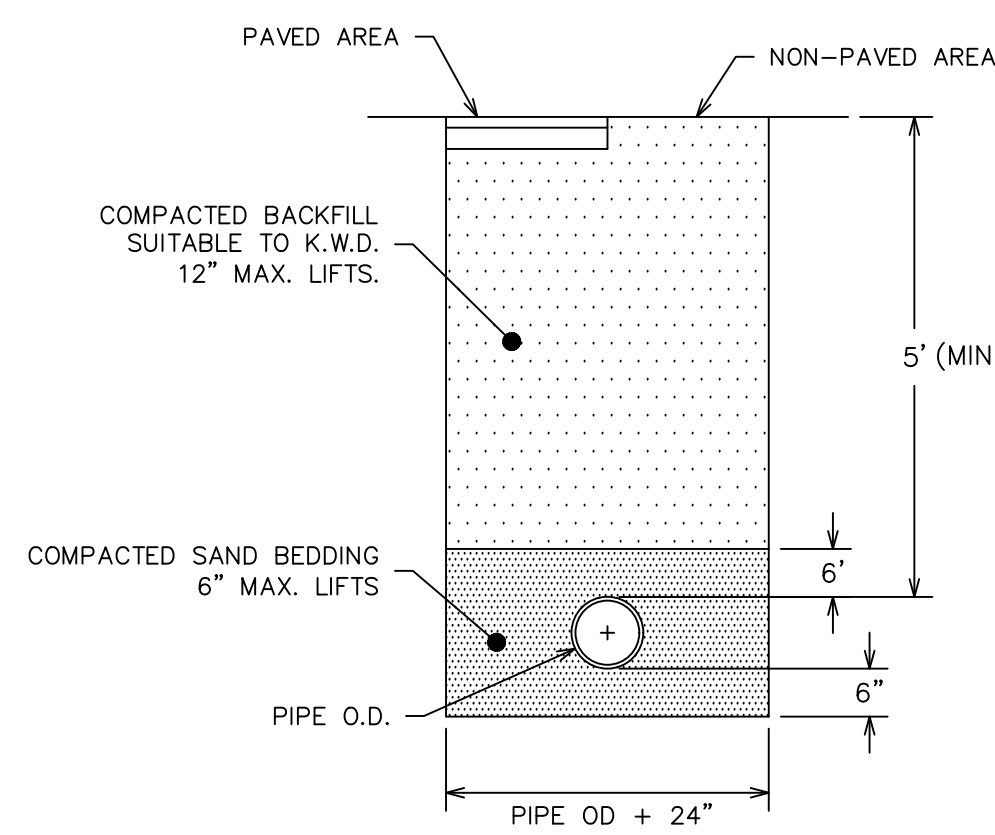
DRAINAGE PIPE TRENCH DETAIL
SCALE: NTS

TRENCH TO BE SUPPORTED BY SLOPING BACK AT 2:1 OR OTHER ACCEPTABLE METHOD.

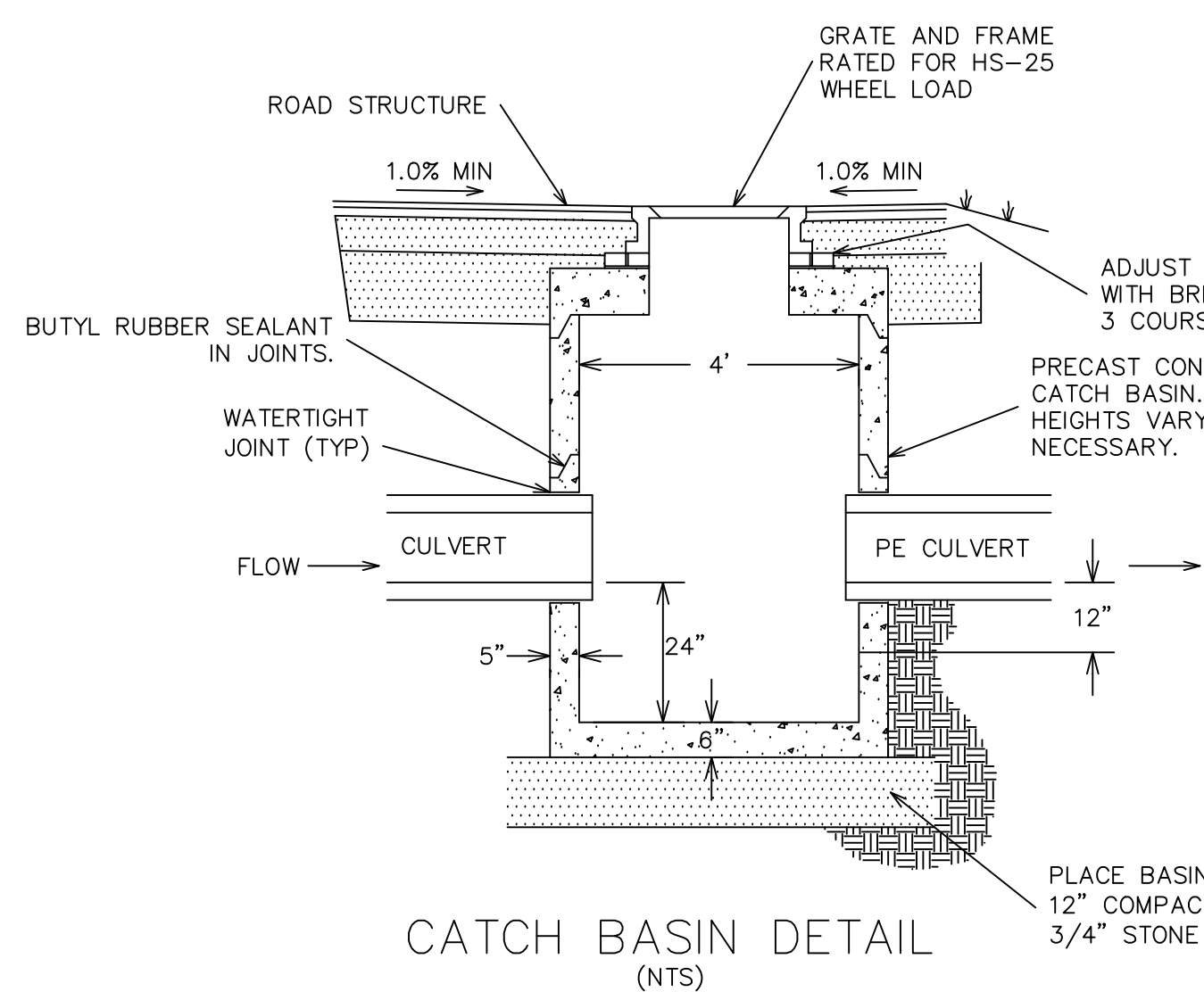


SEWER PIPE TRENCH DETAIL
SCALE: NTS

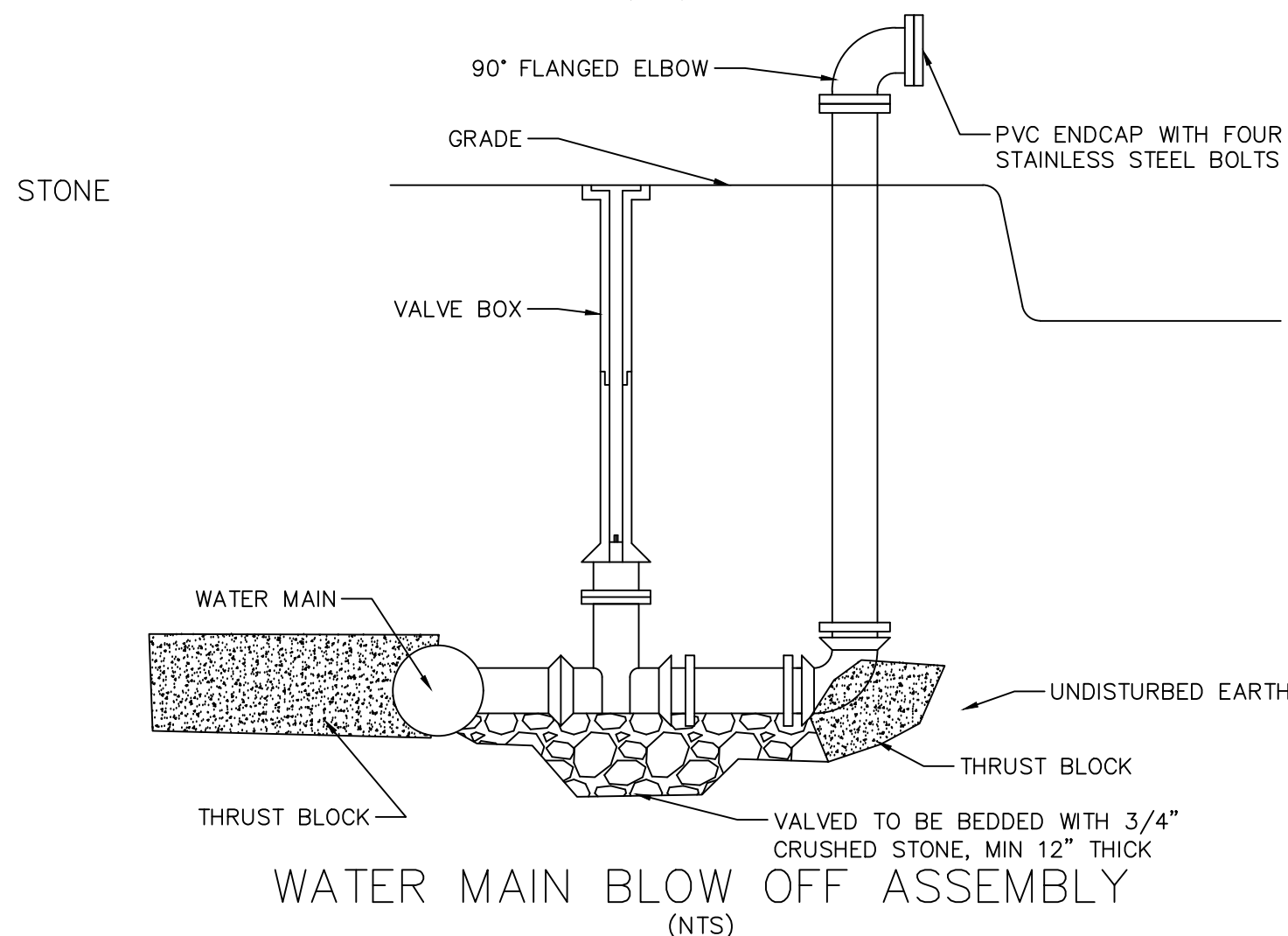
TRENCH TO BE SUPPORTED BY SLOPING BACK AT 2:1 OR OTHER ACCEPTABLE METHOD.



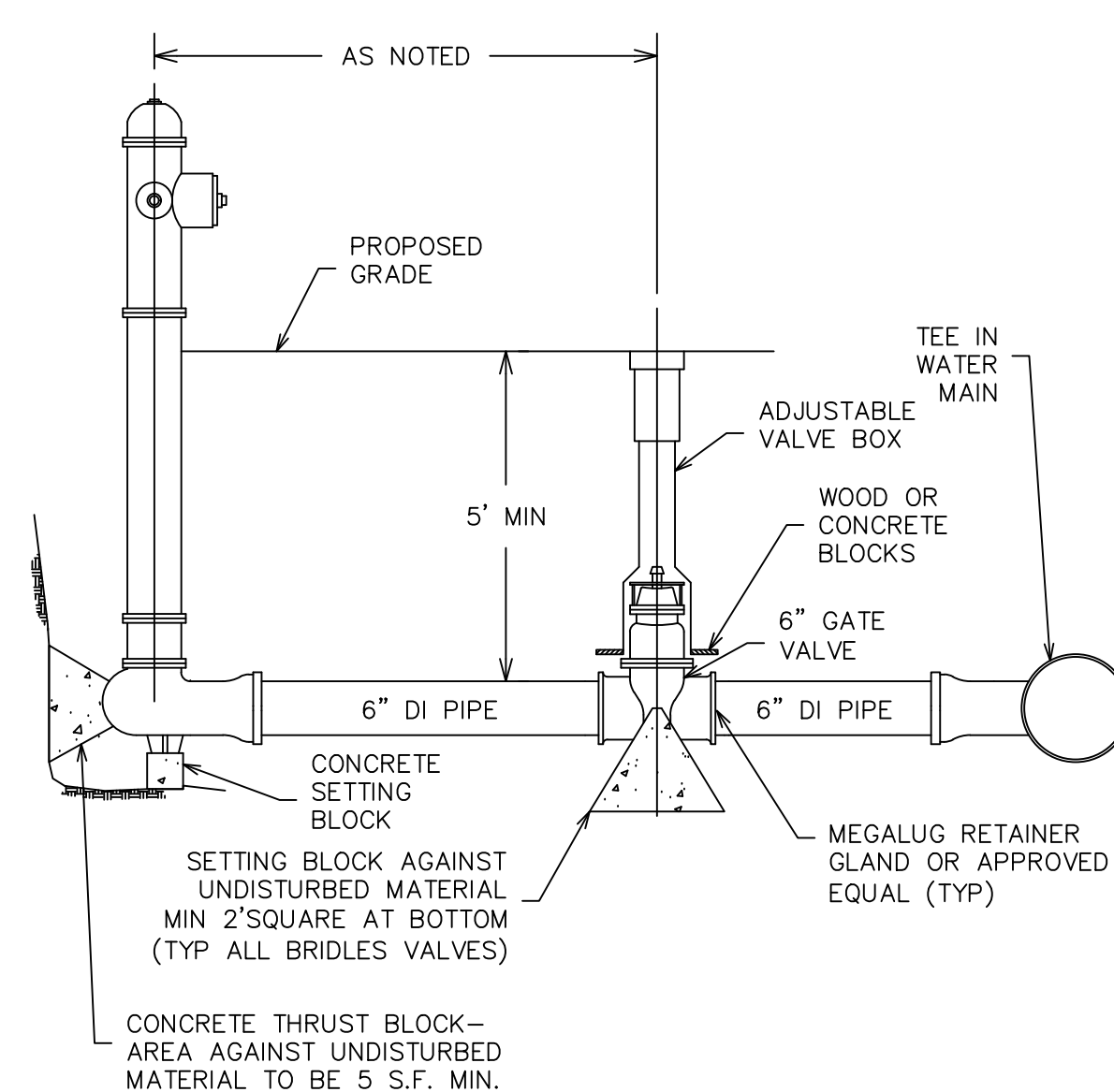
WATER LINE TRENCH DETAIL
(NTS)



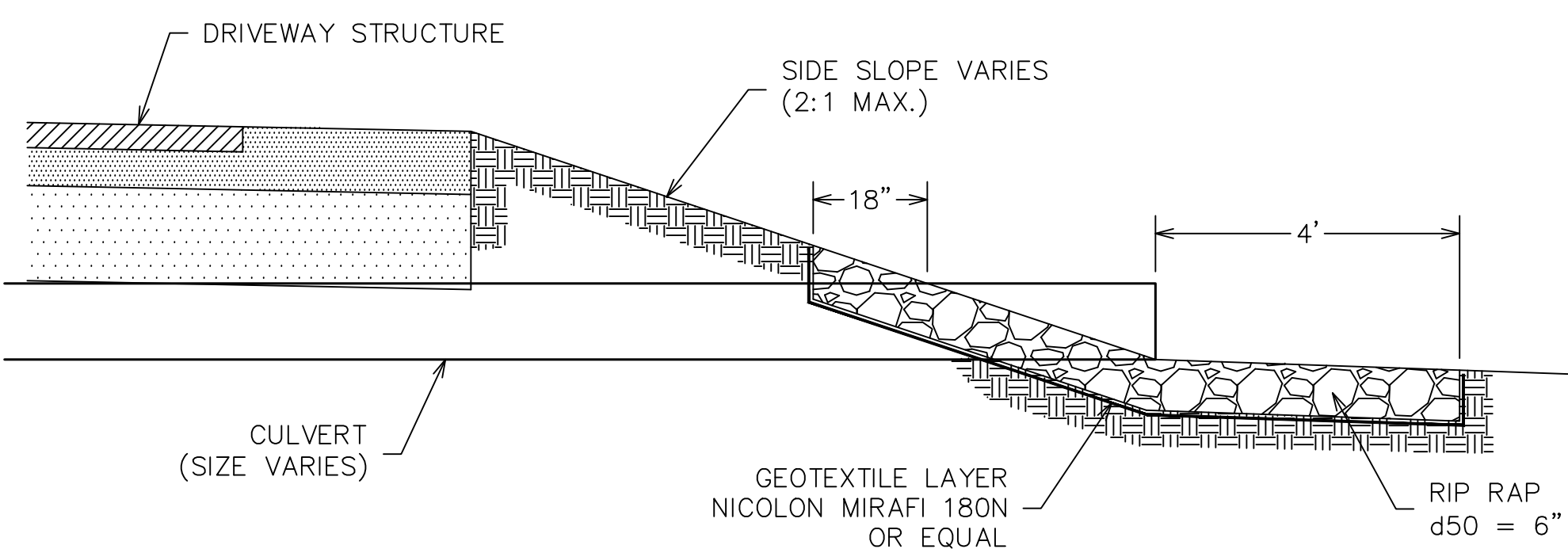
CATCH BASIN DETAIL
(NTS)



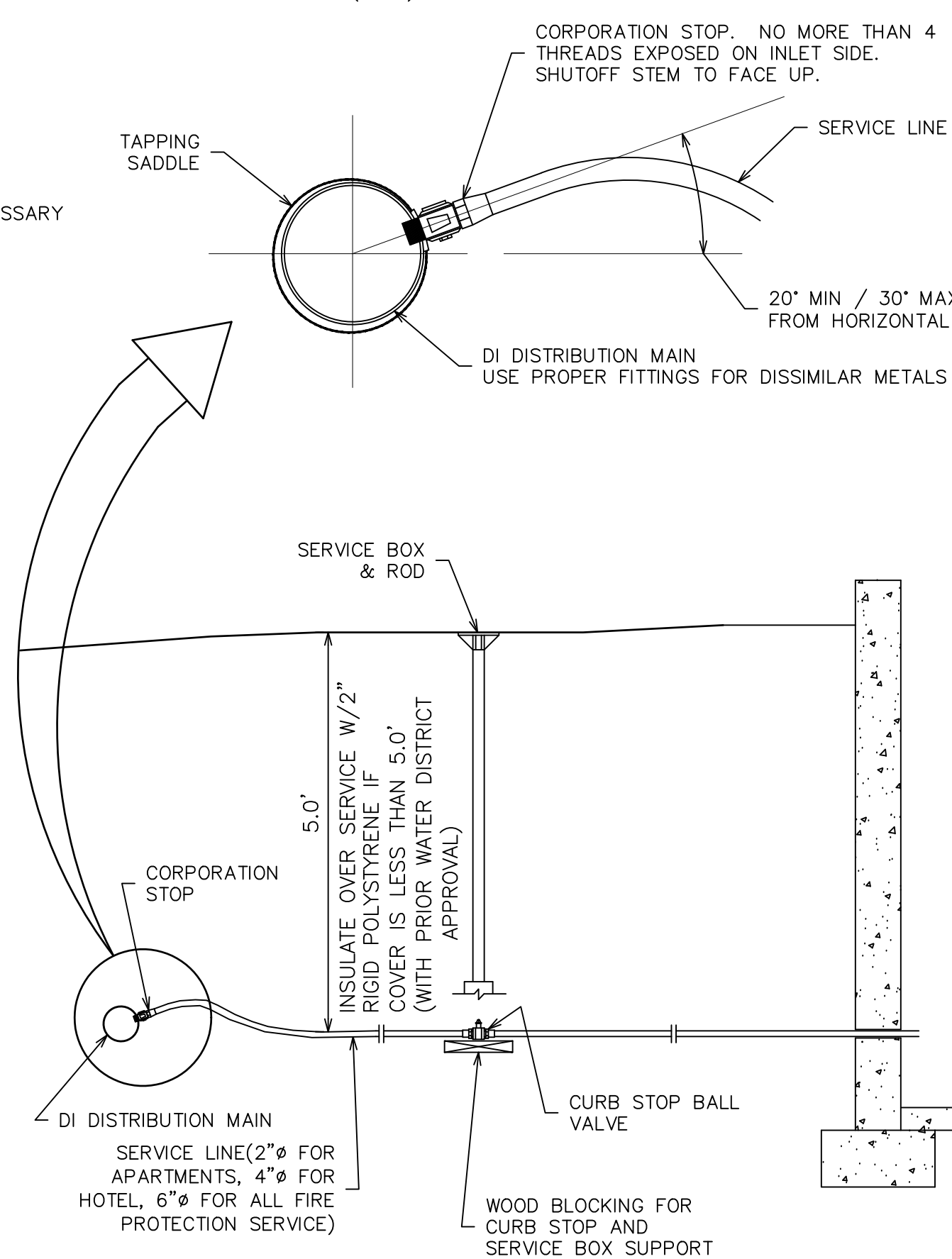
WATER MAIN BLOW OFF ASSEMBLY
(NTS)



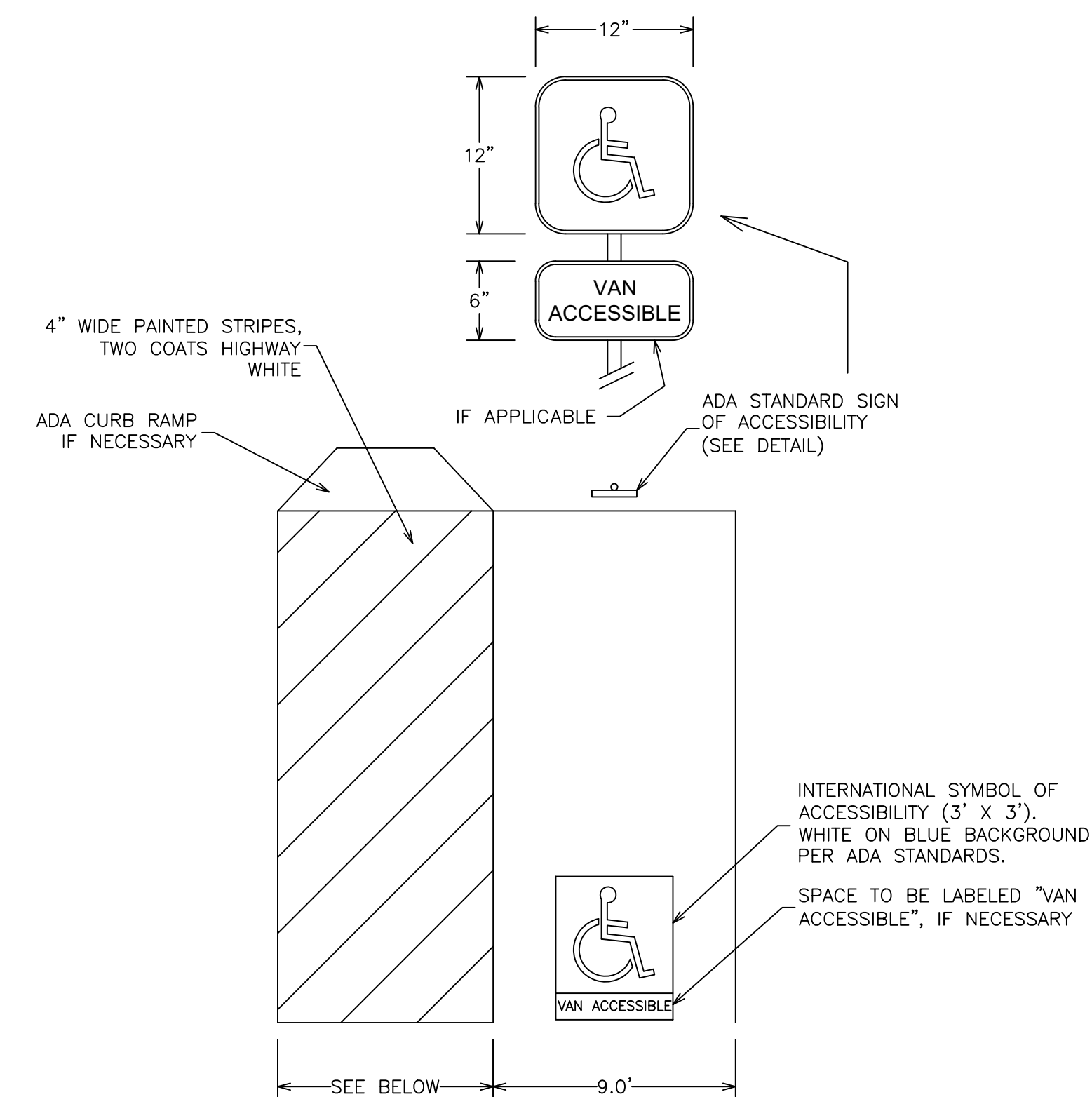
HYDRANT & VALVE DETAIL
NTS



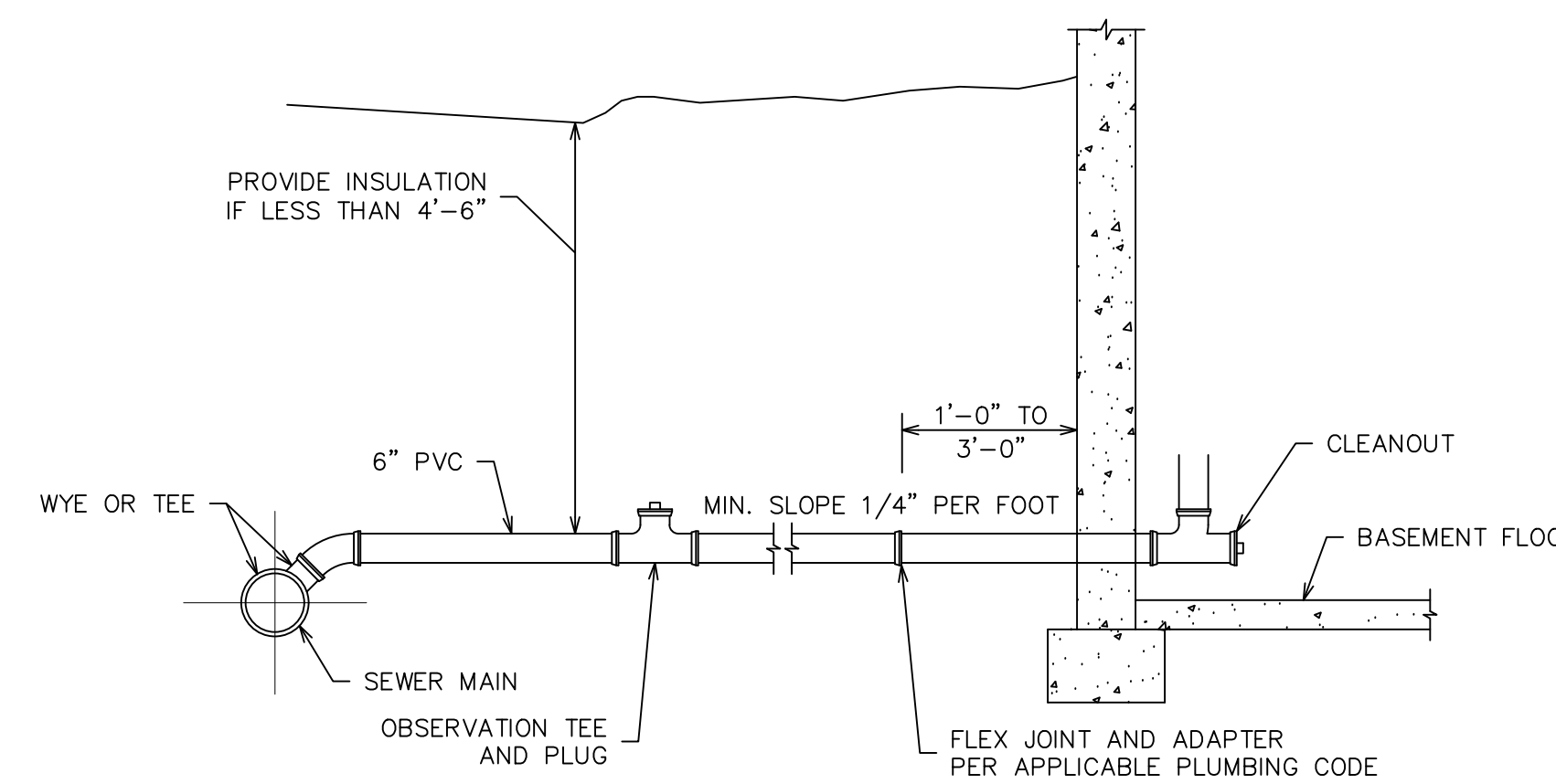
CULVERT INLET/OUTLET PROTECTION DETAIL
(NTS)



WATER SERVICE DETAIL
(NTS)



ACCESSIBLE PARKING SPACE DETAIL
AISLE SHALL BE 5' WIDE FOR AUTOMOBILES OR 8' WIDE FOR VANS (NTS)



TYPICAL SERVICE CONNECTION AND LATERAL DETAIL
SCALE: NTS

NOTE: SEWER MAY BE LOCATED BENEATH BASEMENT FLOOR

9.2

SITE DETAILS
THE HOMESTEAD
459 U.S. ROUTE 1, KITTERY, MAINE

FOR: MIDDLESEX LAND HOLDINGS, LLC
1 BRIDGEVIEW CIRCLE
TYNGSBORO, MA 01879

ATTAR ENGINEERING, INC.

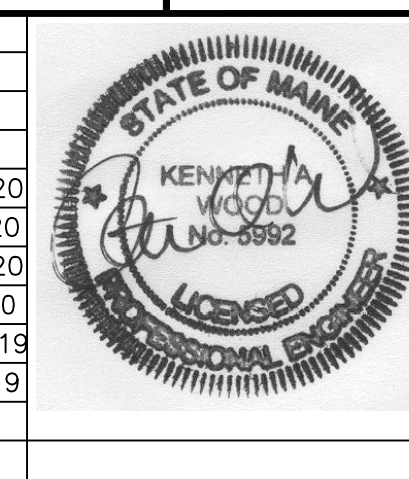
CIVIL • STRUCTURAL • MARINE
1284 STATE ROAD - ELIOT, MAINE 03903
PHONE: (207)439-6023 FAX: (207)439-2128

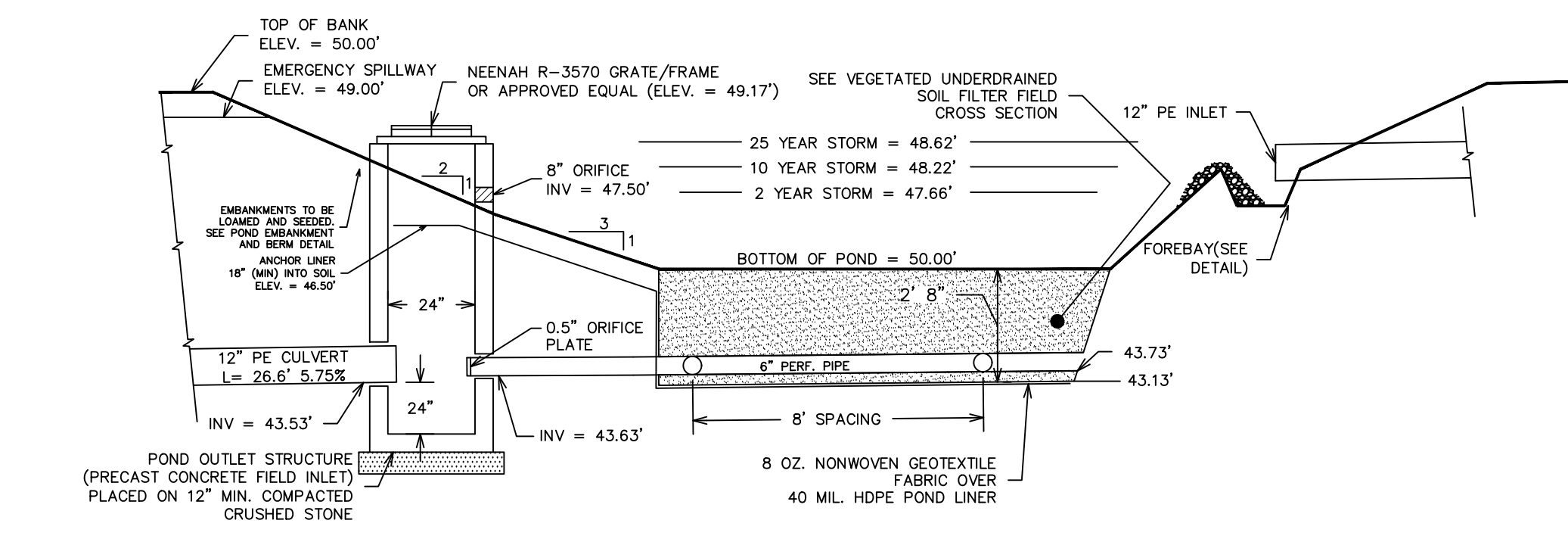
SCALE: AS SHOWN
DATE: 1/18/2018
JOB NO: C052-20

APPROVED BY: [Signature]
FILE: THE HOMESTEAD DET.DWG

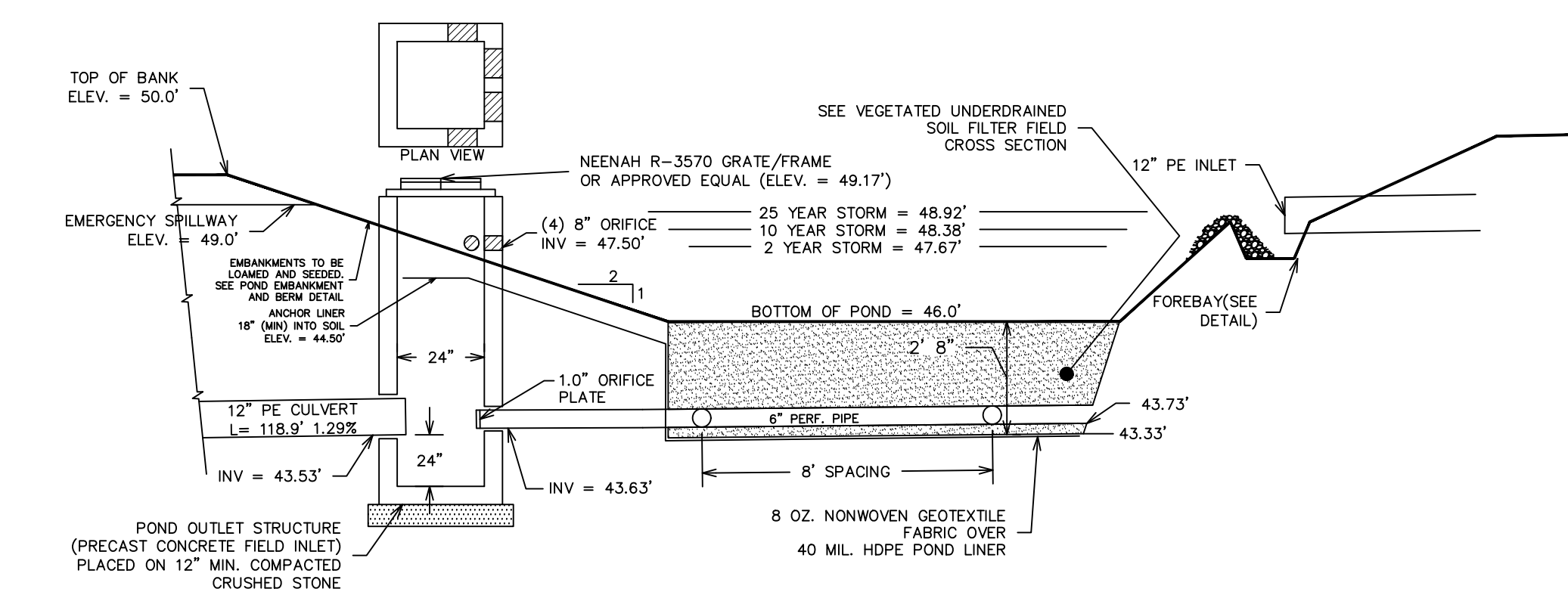
DRAWN BY: MJS
REVISION DATE: M : 6/29/2020
SHEET: 9.2

NO.	DESCRIPTION	DATE
M	HOTEL REVISION	6/29/2020
L	CURBING CHANGES	5/11/2020
K	MAJOR MODIFICATION	2/06/2020
J	FINAL PLAN REVISION	3/27/2020
I	FINAL PLAN SUBMISSION	01/24/2019
H	MDEP SUBMISSION	1/23/2019
-	SEE EARLIER PLANS FOR PREVIOUS REVISIONS	-
NO.	DESCRIPTION	DATE

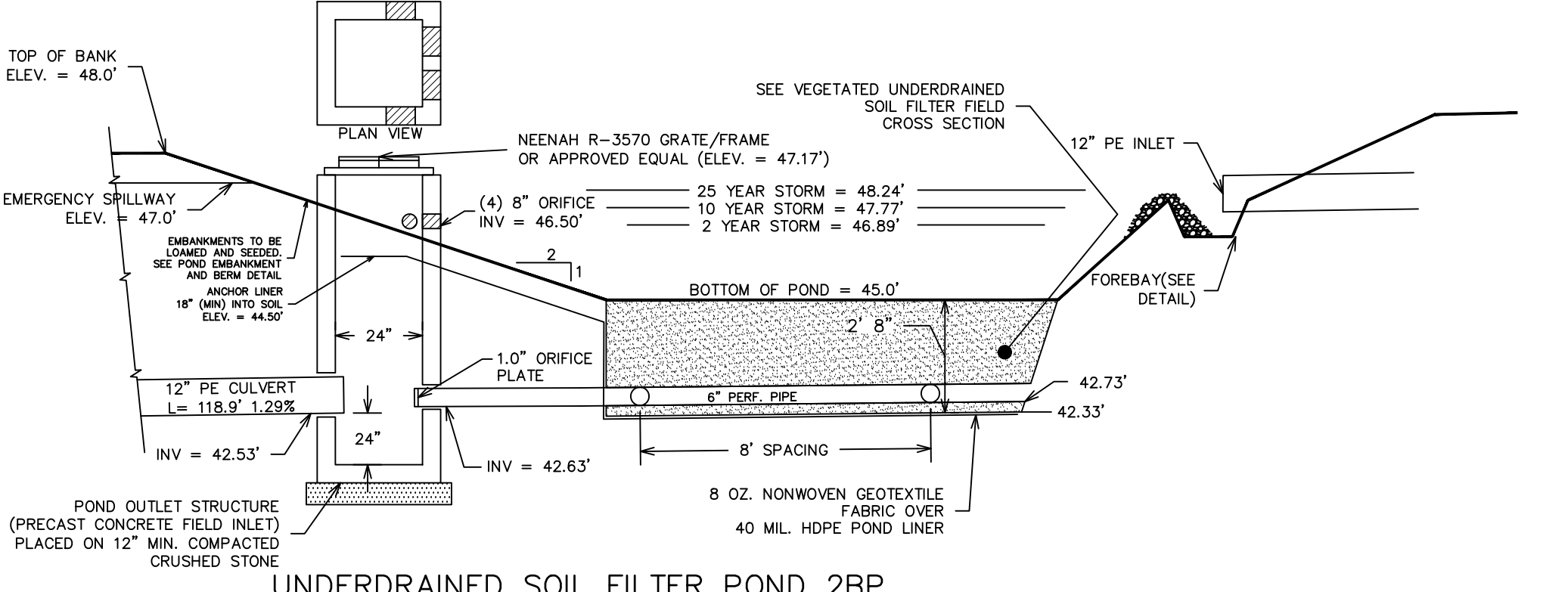




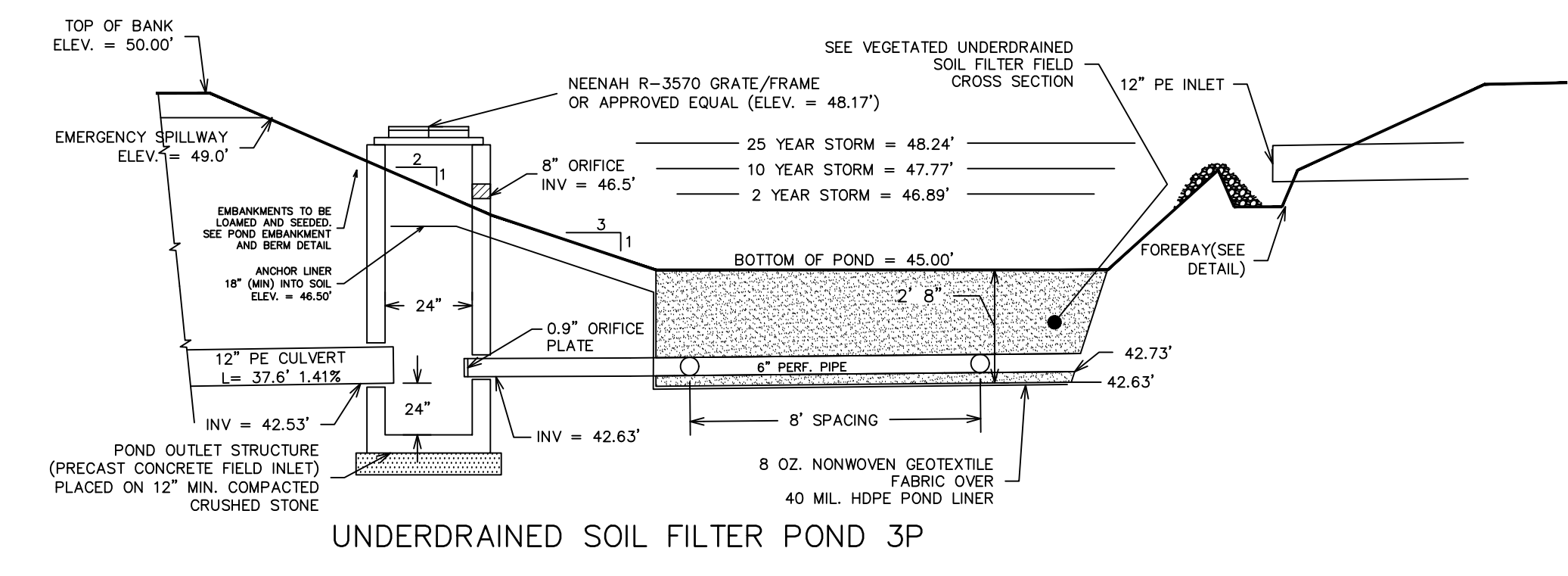
UNDERDRAINED SOIL FILTER POND 1P



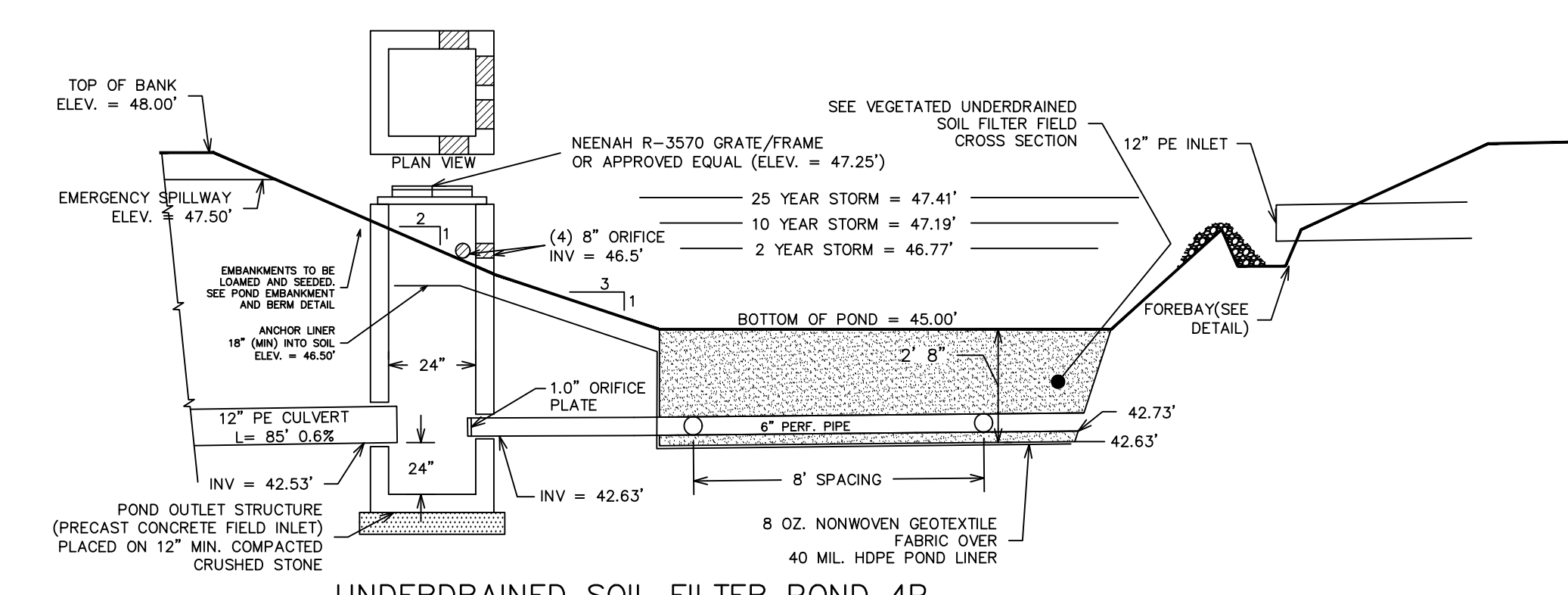
UNDERDRAINED SOIL FILTER POND 2AP



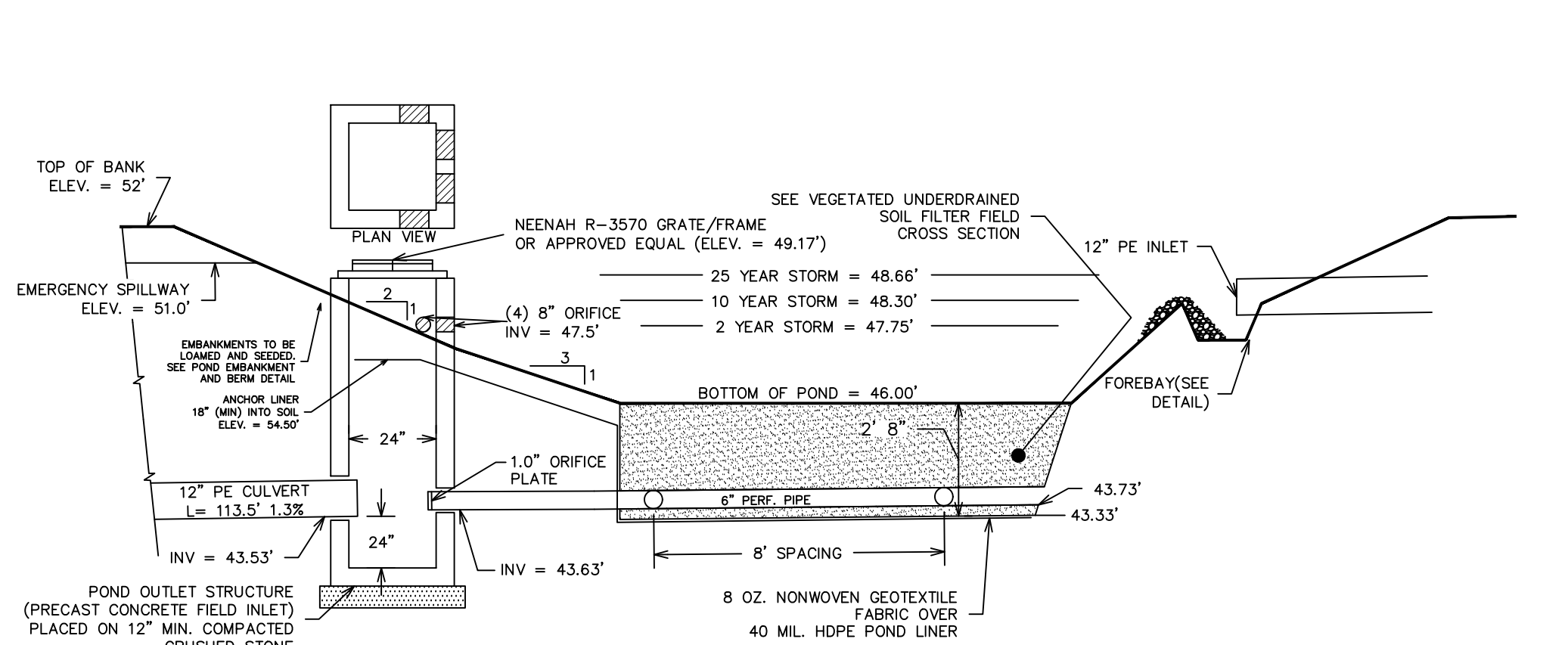
UNDERDRAINED SOIL FILTER POND 2BP



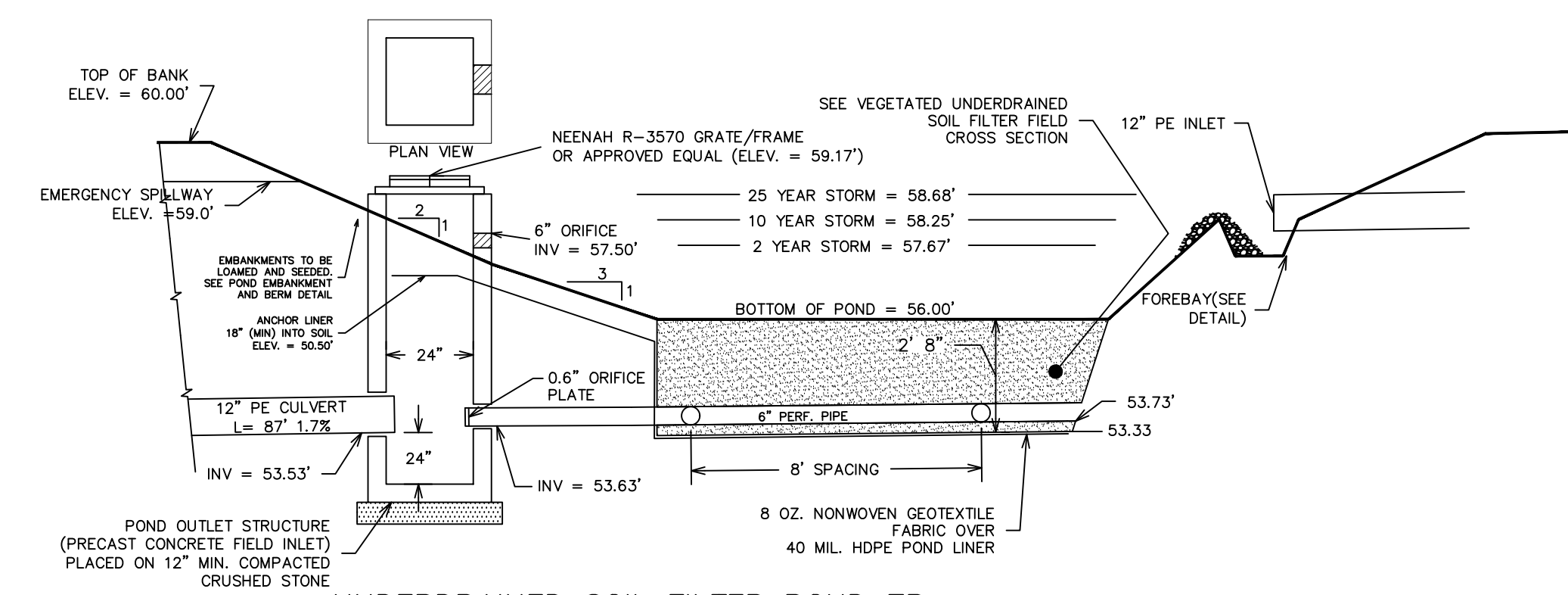
UNDERDRAINED SOIL FILTER POND 3P



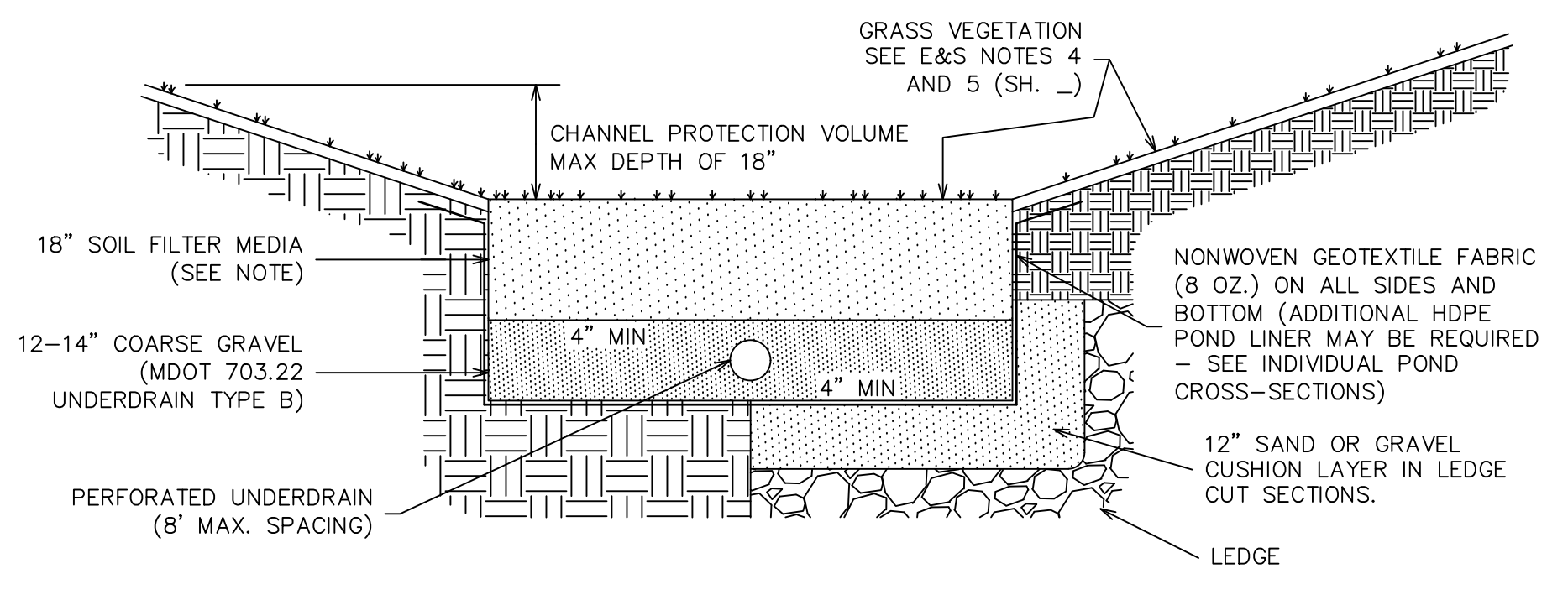
UNDERDRAINED SOIL FILTER POND 4P



UNDERDRAINED SOIL FILTER POND 5P



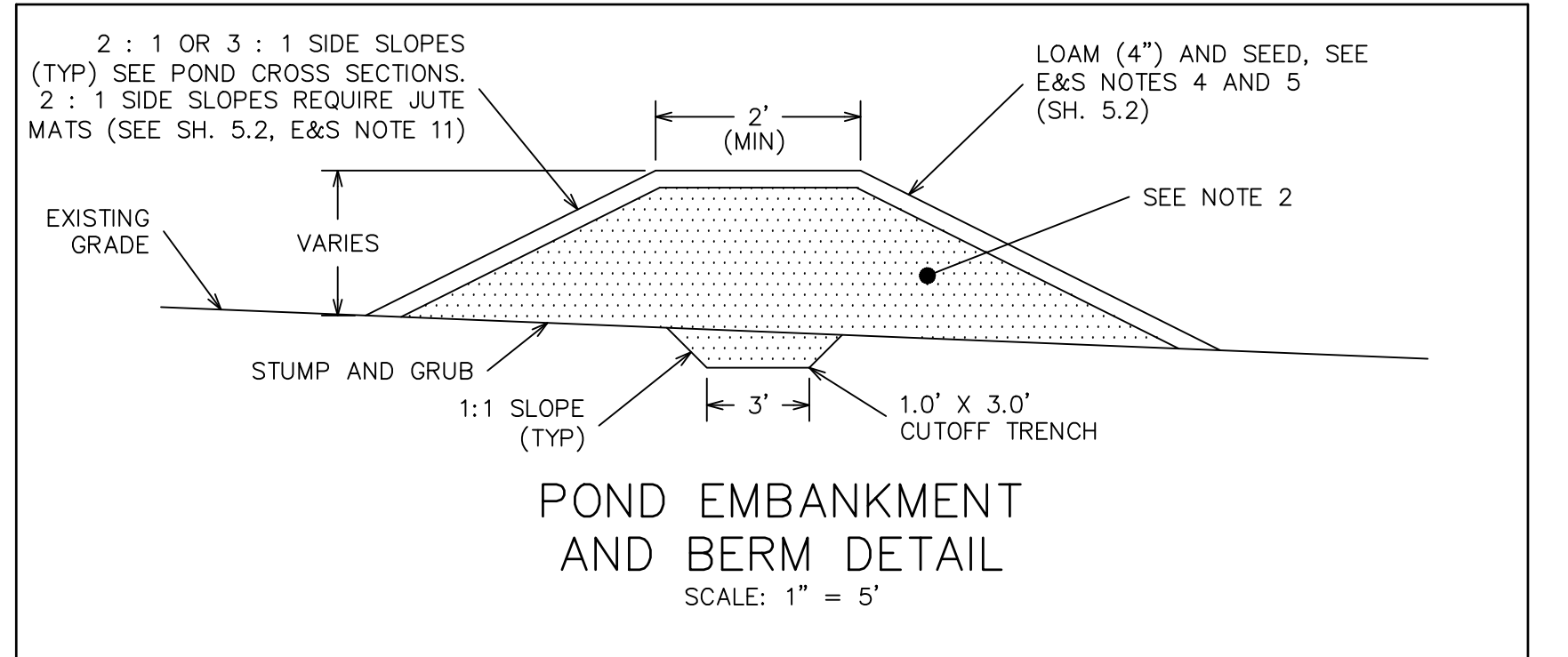
UNDERDRAINED SOIL FILTER POND 7P



VEGETATED UNDERDRAINED SOIL FILTER FIELD CROSS SECTION (APPLIES TO ALL USF PONDS) (NTS)

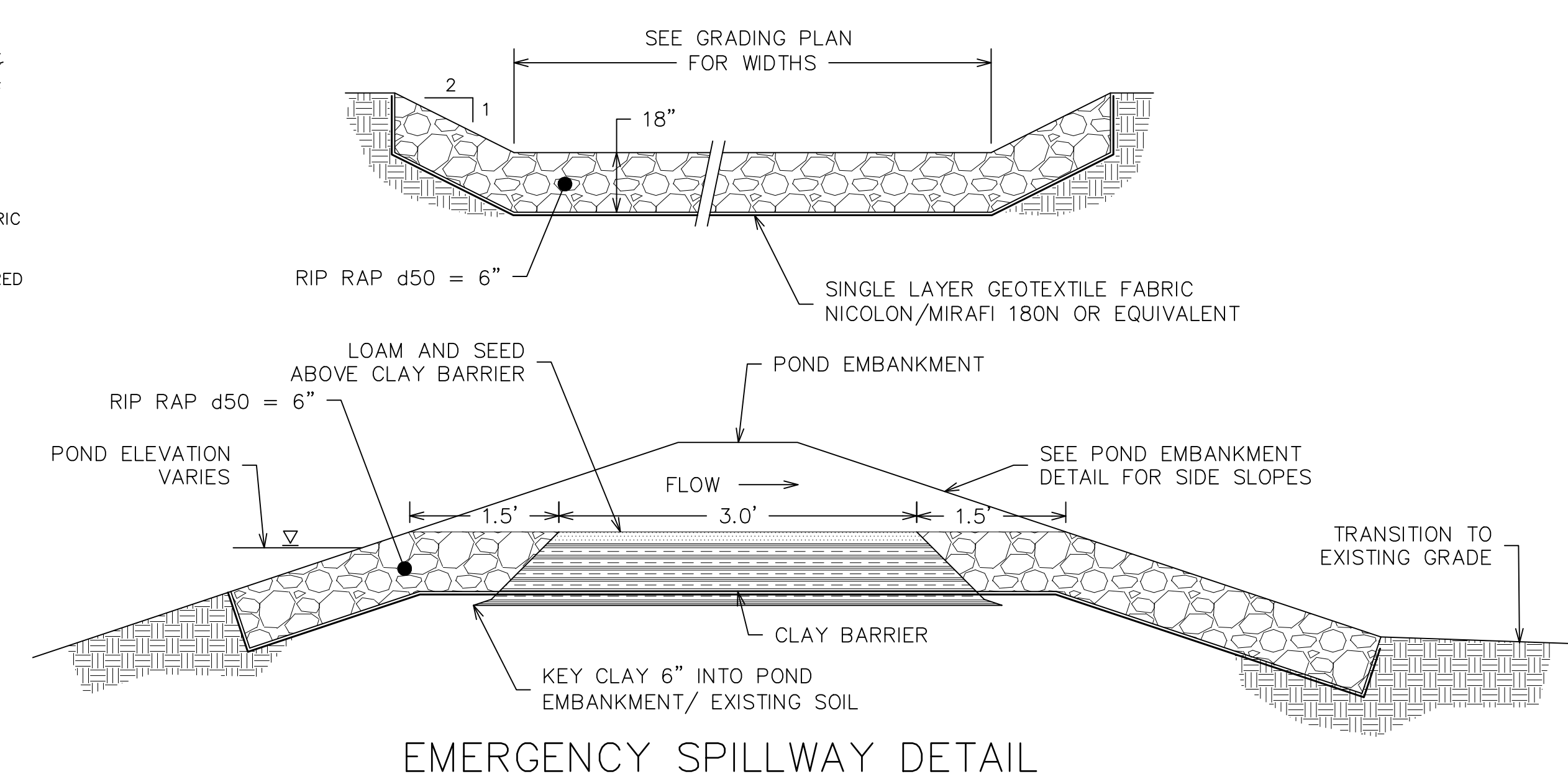
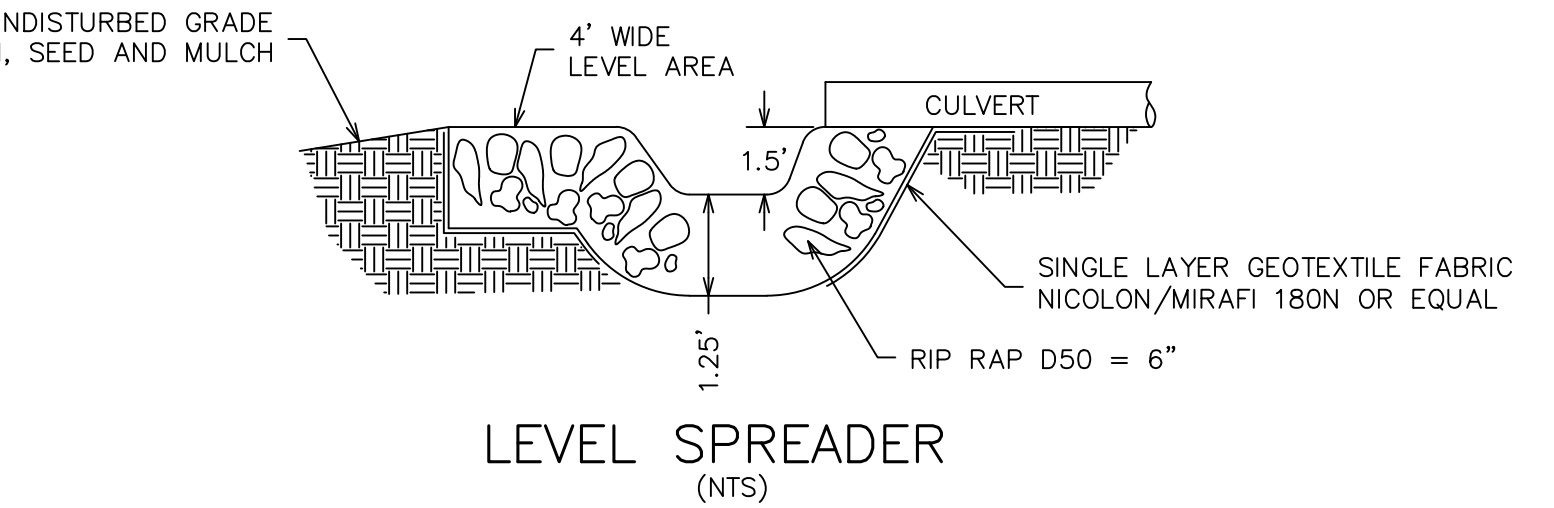
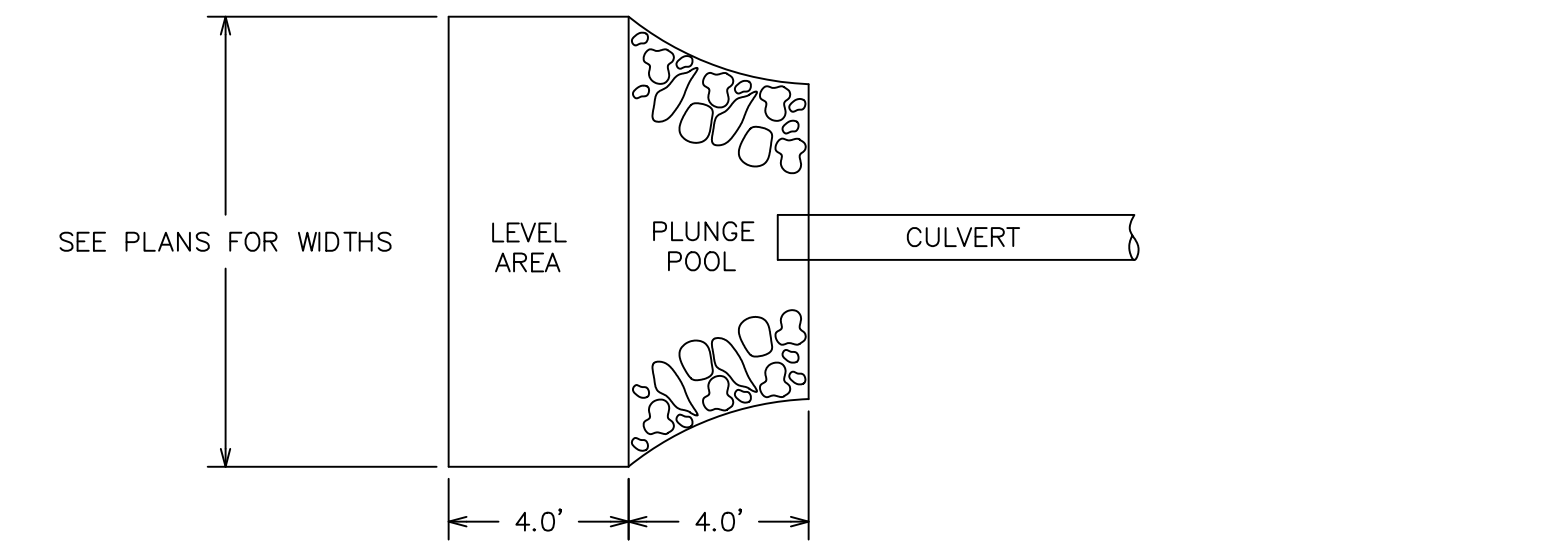
SOIL FILTER MEDIA NOTE:
 THE SOIL FILTER MEDIA SHALL CONSIST OF A SILTY SAND OR SOIL MIXTURE COMBINED WITH 20% - 25% FINE SHREDDED BARK OR WOOD FIBER MULCH. THE MIXTURE MUST HAVE NO LESS THAN 8% PASSING THE 200 SIEVE, AND A CLAY CONTENT OF LESS THAN 2%. PRIOR TO CONSTRUCTION, THE CONTRACTOR MUST CHECK WITH THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION FOR UPDATED SOIL FILTER MEDIA SPECIFICATIONS.

CONSTRUCTION OVERSIGHT REQUIRED:
 INSPECTION OF THE FILTER BASIN SHALL BE PROVIDED FOR EACH PHASE OF CONSTRUCTION BY THE DESIGN ENGINEER WITH REQUIRED REPORTING TO THE DEP. AT A MINIMUM, INSPECTIONS WILL OCCUR:
 - AFTER PRELIMINARY CONSTRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN PIPES ARE INSTALLED BUT NOT BACKFILLED;
 - AFTER THE DRAINAGE LAYER IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE FILTER MEDIA;
 - AFTER THE FILTER MEDIA HAS BEEN INSTALLED AND SEEDDED;
 - AFTER ONE YEAR TO INSPECT HEALTH OF THE VEGETATION AND MAKE CORRECTIONS; AND
 - ALL MATERIAL USED FOR THE CONSTRUCTION OF THE FILTER BASIN WILL BE APPROVED BY THE DESIGN ENGINEER AFTER TESTS BY A CERTIFIED LABORATORY SHOW THAT THEY ARE PASSING DEP SPECIFICATIONS.
 - CONTRACTOR SHALL COORDINATE INSPECTION SCHEDULE WITH INSPECTING ENGINEER PRIOR TO CONSTRUCTION.
 - HEAVY VEHICLES AND EQUIPMENT ARE PROHIBITED FROM DRIVING OVER ANY INFILTRATION BASIN.
 - NO SNOW SHALL BE STORED WITHIN THE AREA OF ANY UNDERDRAINED SOIL FILTER.



EMBANKMENT CONSTRUCTION NOTES

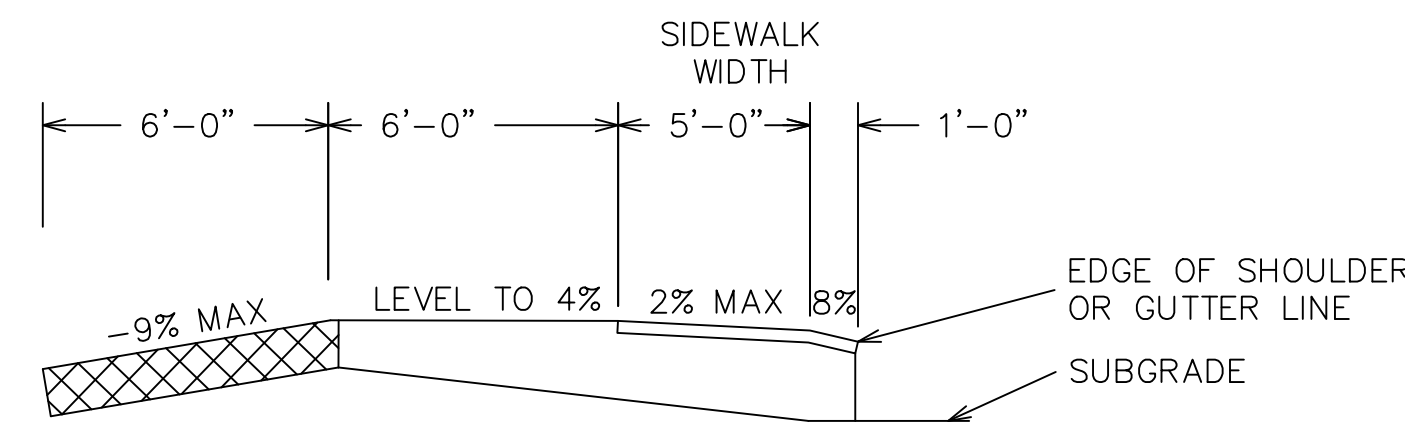
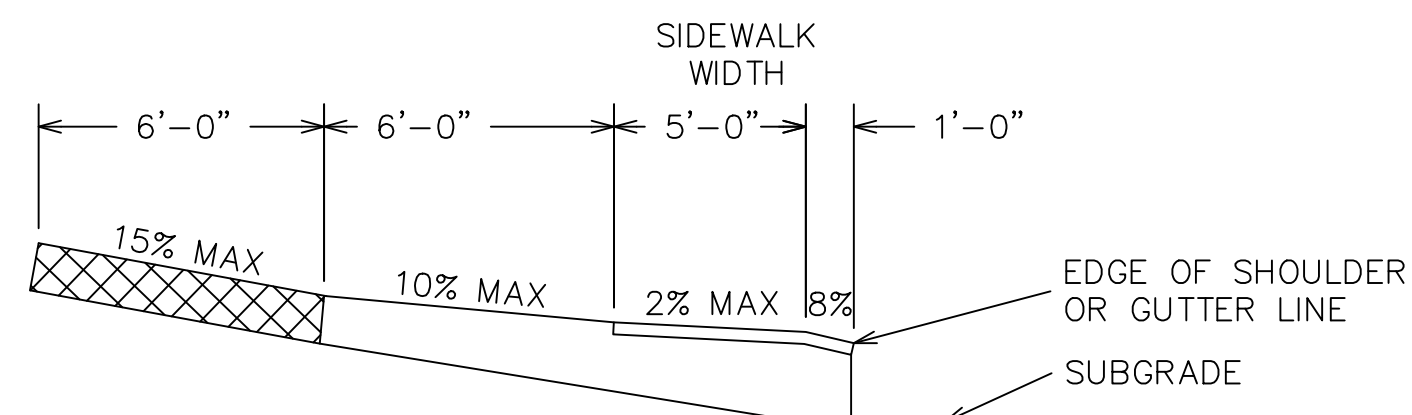
- ALL ORGANIC MATERIAL, STUMPS, ROCKS AND BOULDERS SHALL BE REMOVED TO A MINIMUM DEPTH OF 24" BELOW SUBGRADE OF THE BASIN EMBANKMENT. ALL EXCAVATIONS BELOW THE BASIN EMBANKMENT SHALL HAVE A MINIMUM SLOPE OF 1H : 1V.
- ALL BASIN EMBANKMENT FILL MATERIAL SHALL BE WELL GRADED BORROW WITH A MINIMUM OF 20% FINES CONTENT. EMBANKMENT FILL SHALL BE PLACED IN 12" (MAX.) LIFTS AND BE COMPACTED TO 95% MODIFIED PROCTOR. A CUTOFF TRENCH SHALL BE EXCAVATED AS SHOWN PRIOR TO CONSTRUCTION OF EMBANKMENT.
- DETENTION BASIN AND ALL EXCAVATIONS SHALL BE KEPT FREE OF WATER DURING CONSTRUCTION.



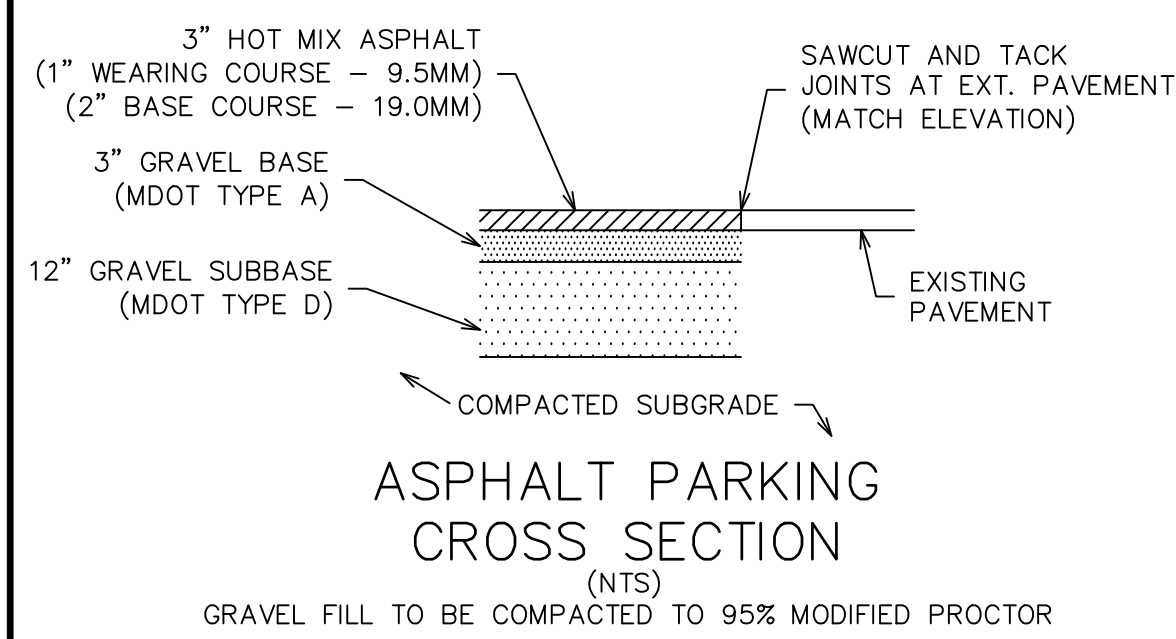
EMERGENCY SPILLWAY DETAIL

<p>9.3</p>		<p>SITE DETAILS THE HOMESTEAD 459 U.S. ROUTE 1, KITTERY, MAINE</p>	
		<p>FOR: MIDDLESEX LAND HOLDINGS, LLC 1 BRIDGEVIEW CIRCLE TYNGSBORO, MA 01879</p>	
<p>ATTAR ENGINEERING, INC. CIVIL • STRUCTURAL • MARINE 1284 STATE ROAD - ELIOT, MAINE 03903 PHONE: (207)439-6023 FAX: (207)439-2128</p>		<p>SCALE: AS SHOWN DATE: 1/18/2018</p>	
<p>APPROVED BY: <i>[Signature]</i></p>		<p>DRAWN BY: BRN REVISION DATE: M : 6/29/2020</p>	
<p>JOB NO: C052-20</p>		<p>FILE: THE HOMESTEAD DET.DWG</p>	
<p>SHEET: 9.3</p>		<p>MAP 60 / LOT 24</p>	

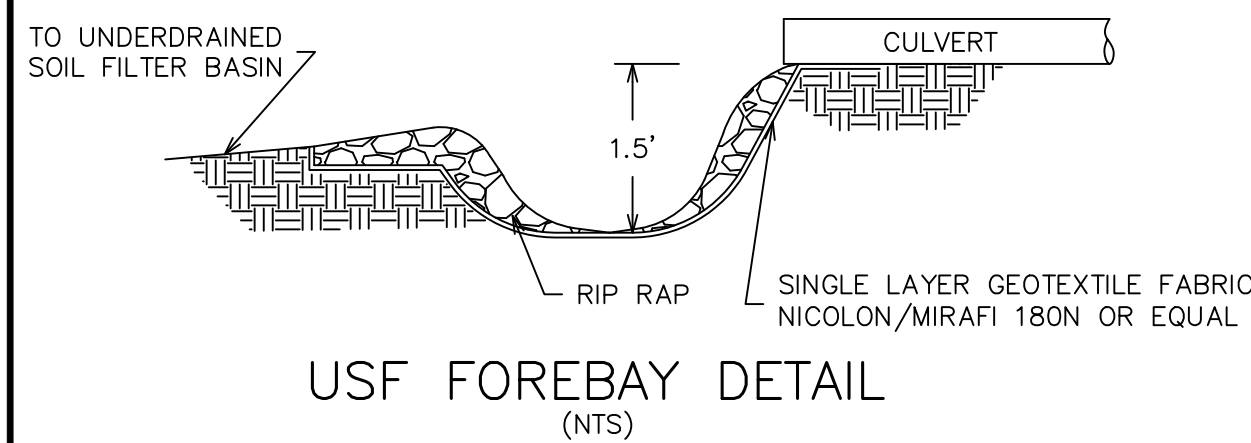
NO.	DESCRIPTION	DATE
M	HOTEL REVISION	6/29/2020
L	CURBING CHANGES	5/11/2020
K	MAJOR MODIFICATION	2/06/2020
J	FINAL PLAN REVISION	3/27/2020
I	FINAL PLAN SUBMISSION	01/24/2019
H	MDEP SUBMISSION	1/23/2019
-	SEE EARLIER PLANS FOR PREVIOUS REVISIONS	-
-	DESCRIPTION	DATE



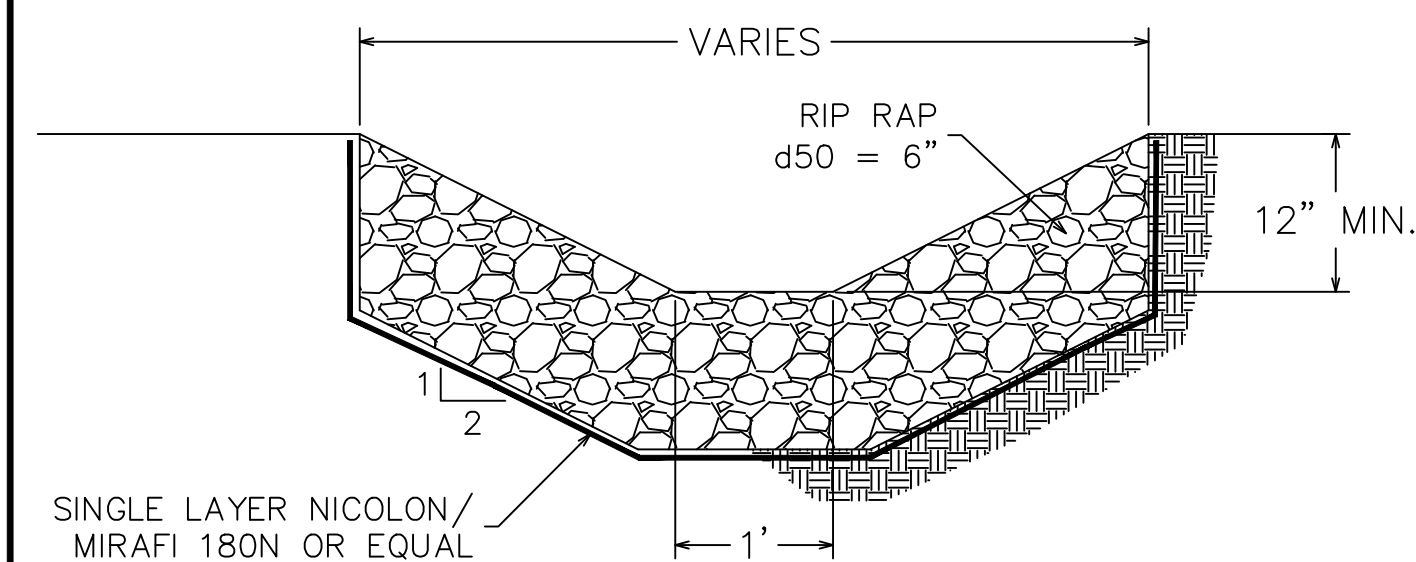
ENTRANCES ON SIDEWALK SECTIONS
SCALE: (NTS)



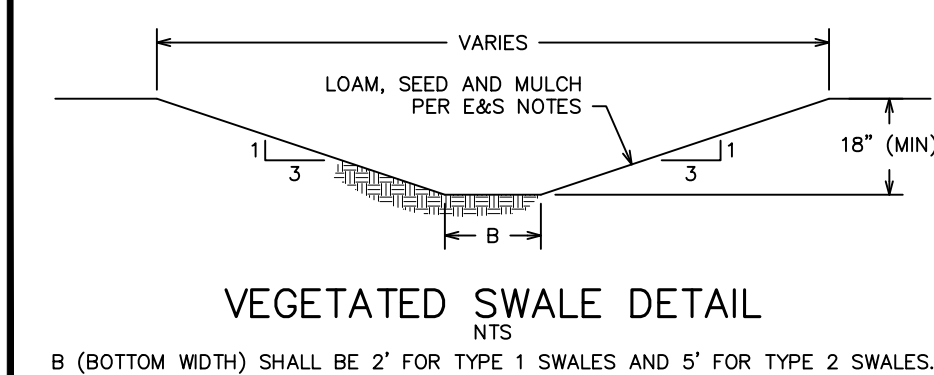
ASPHALT PARKING
CROSS SECTION
SCALE: (NTS)



USF FOREBAY DETAIL
SCALE: (NTS)

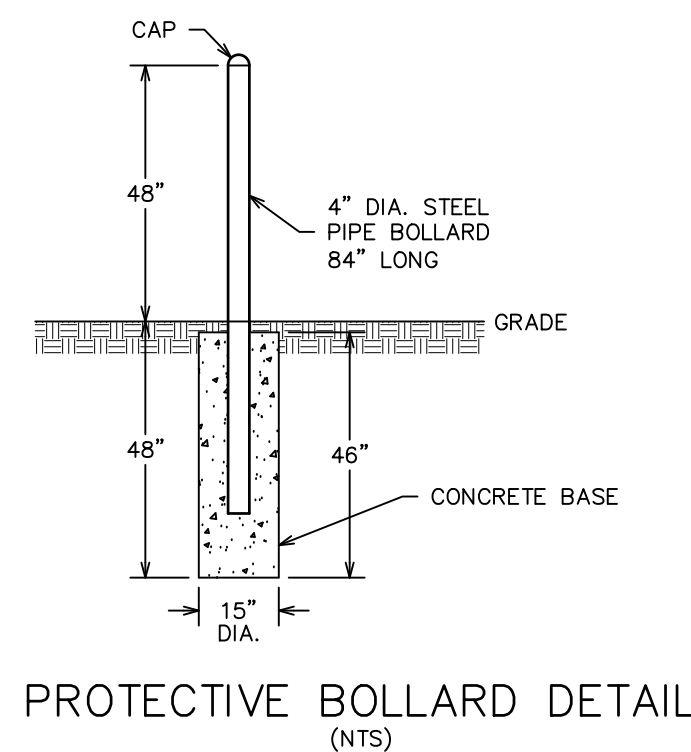


RIP RAP SWALE DETAIL
SCALE: (NTS)

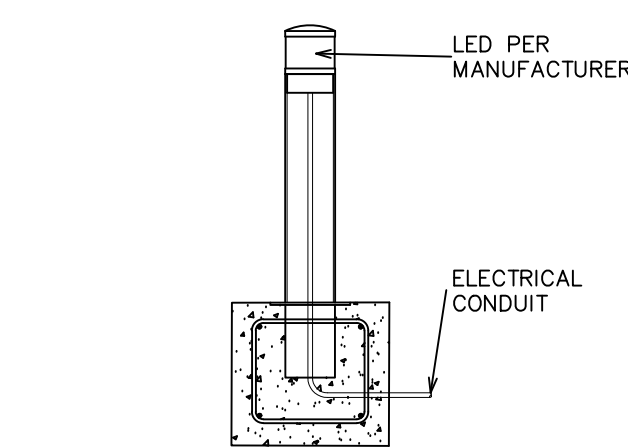


VEGETATED SWALE DETAIL
SCALE: (NTS)

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

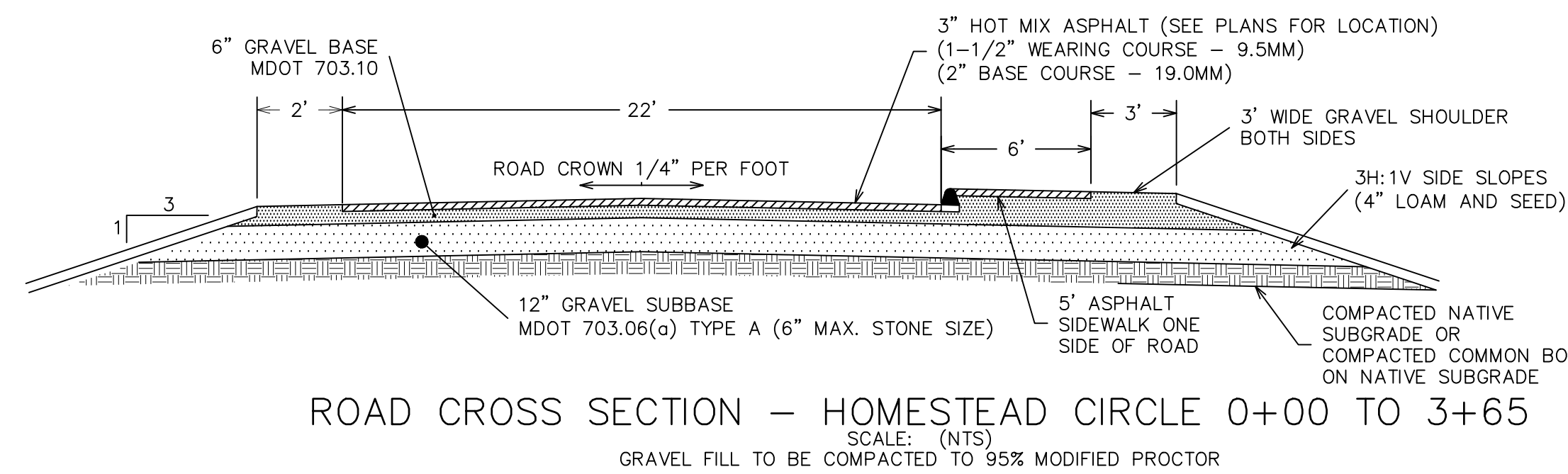


PROTECTIVE BOLLARD DETAIL
SCALE: (NTS)

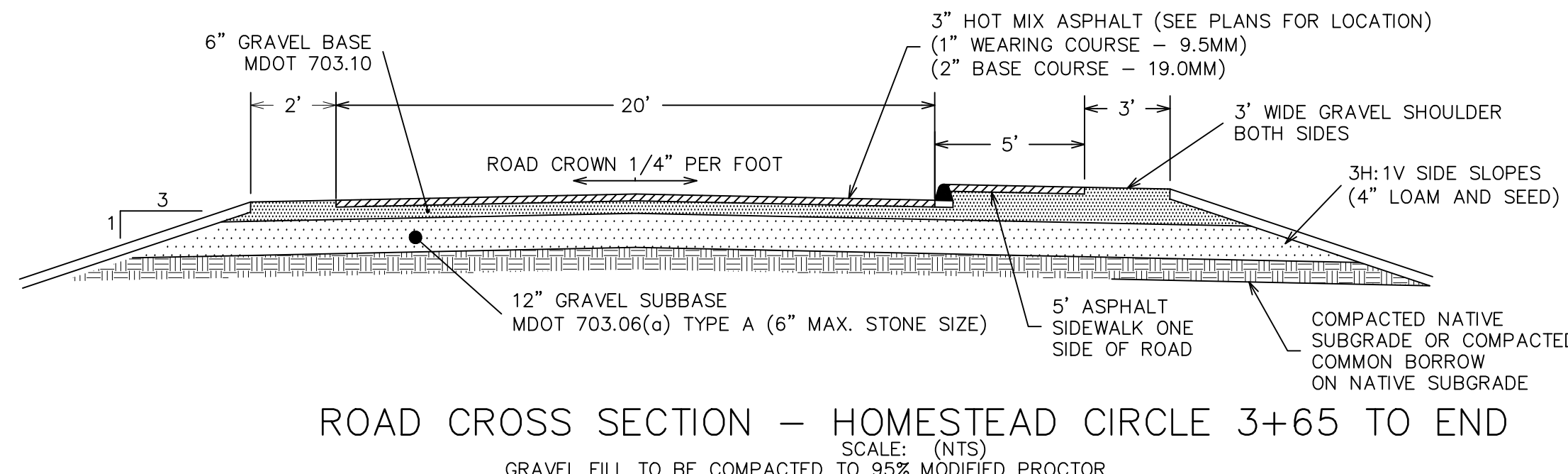


BOLLARD LIGHT DETAIL
SCALE: (NTS)

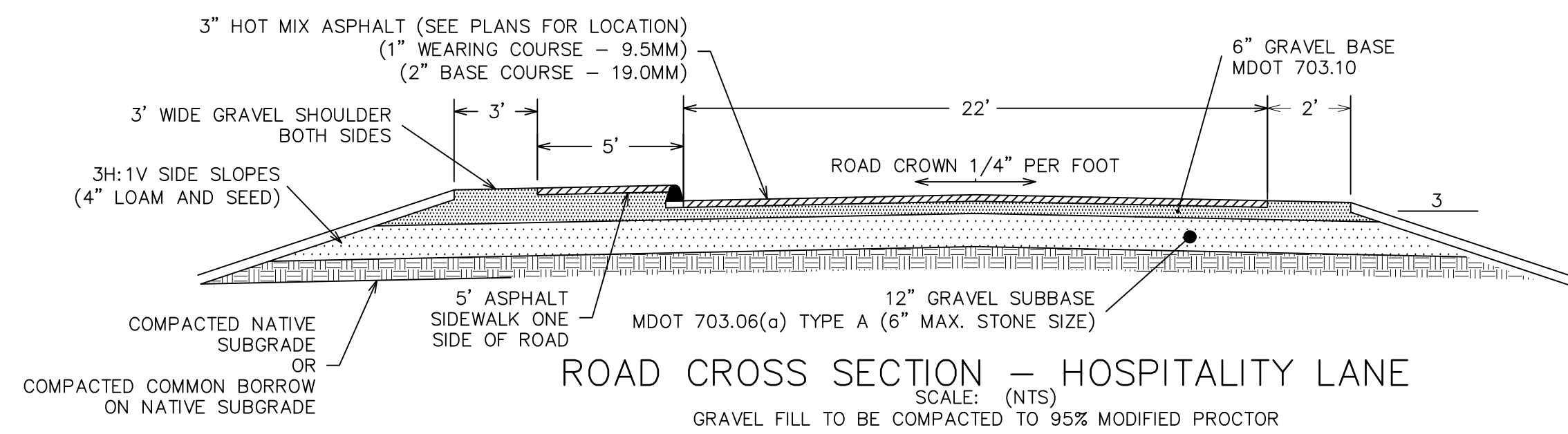
1. INSTALL PER MANUFACTURERS INSTRUCTIONS
2. DO NOT SCALE DRAWING



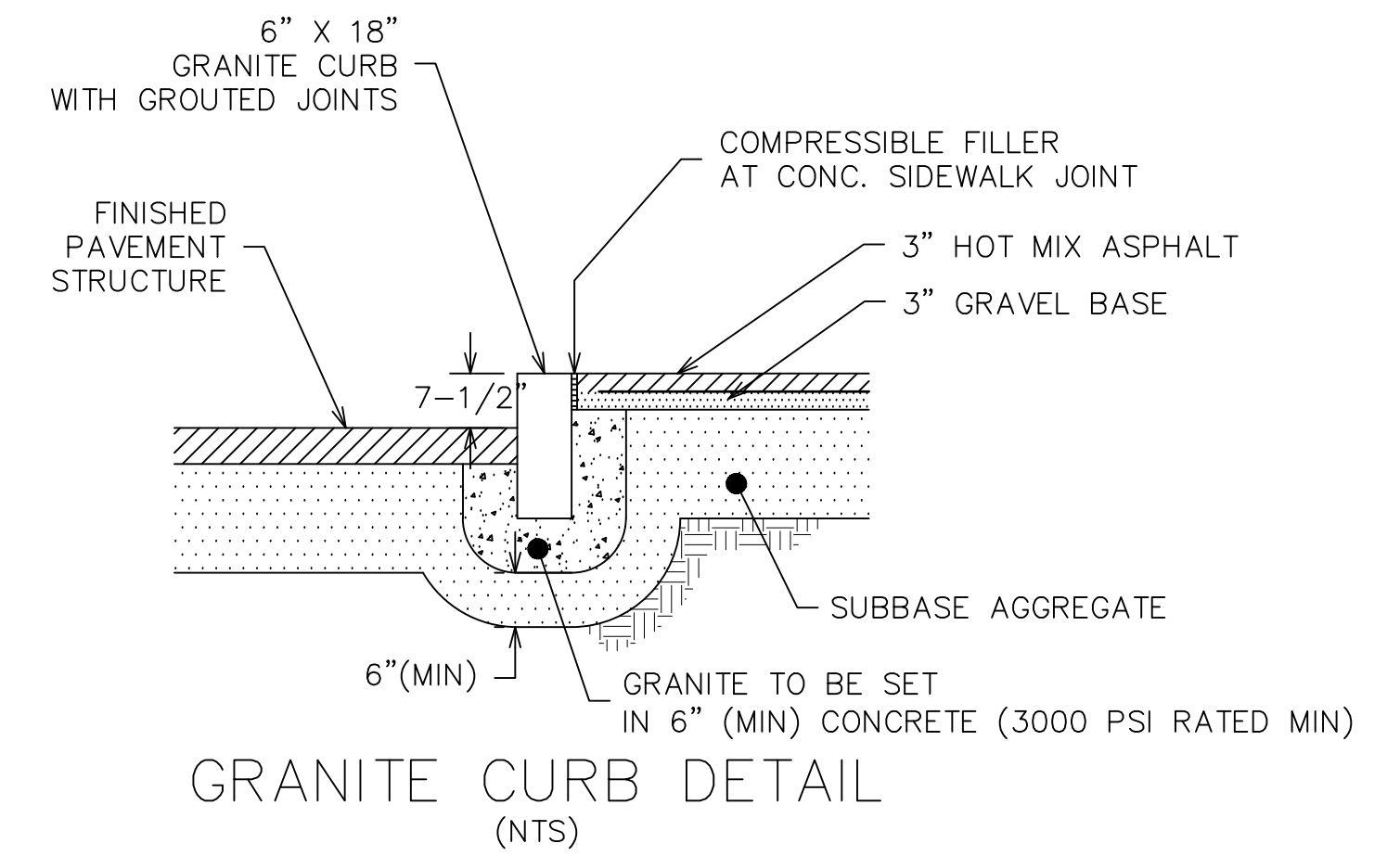
ROAD CROSS SECTION - HOMESTEAD CIRCLE 0+00 TO 3+65
SCALE: (NTS)



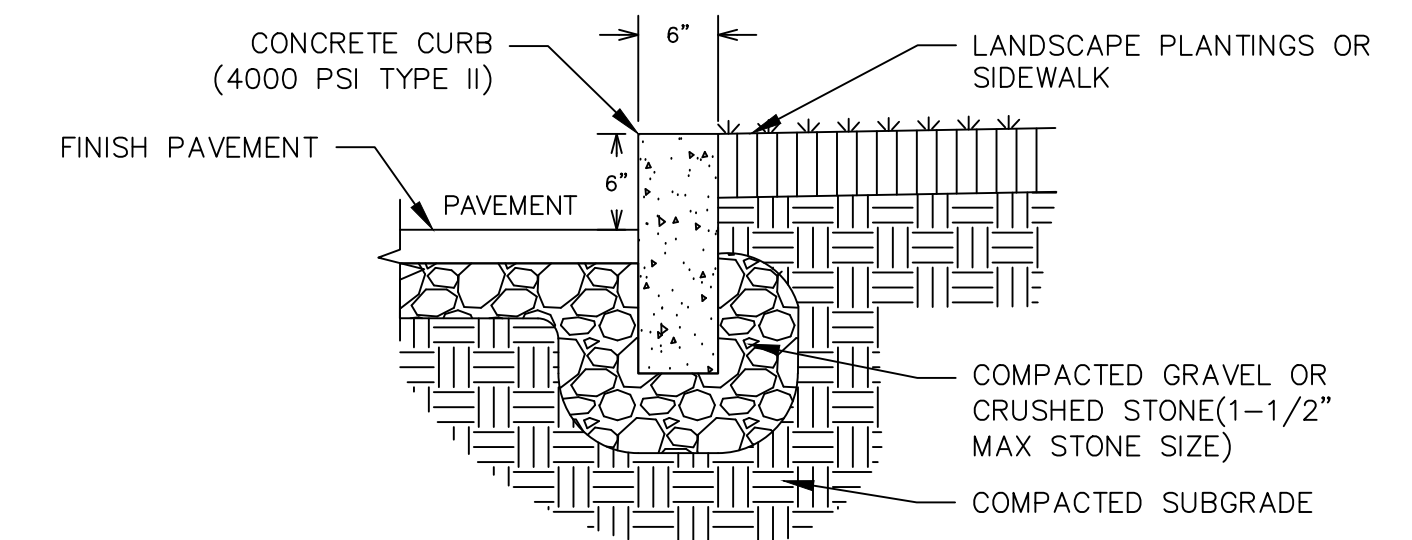
ROAD CROSS SECTION - HOMESTEAD CIRCLE 3+65 TO END
SCALE: (NTS)



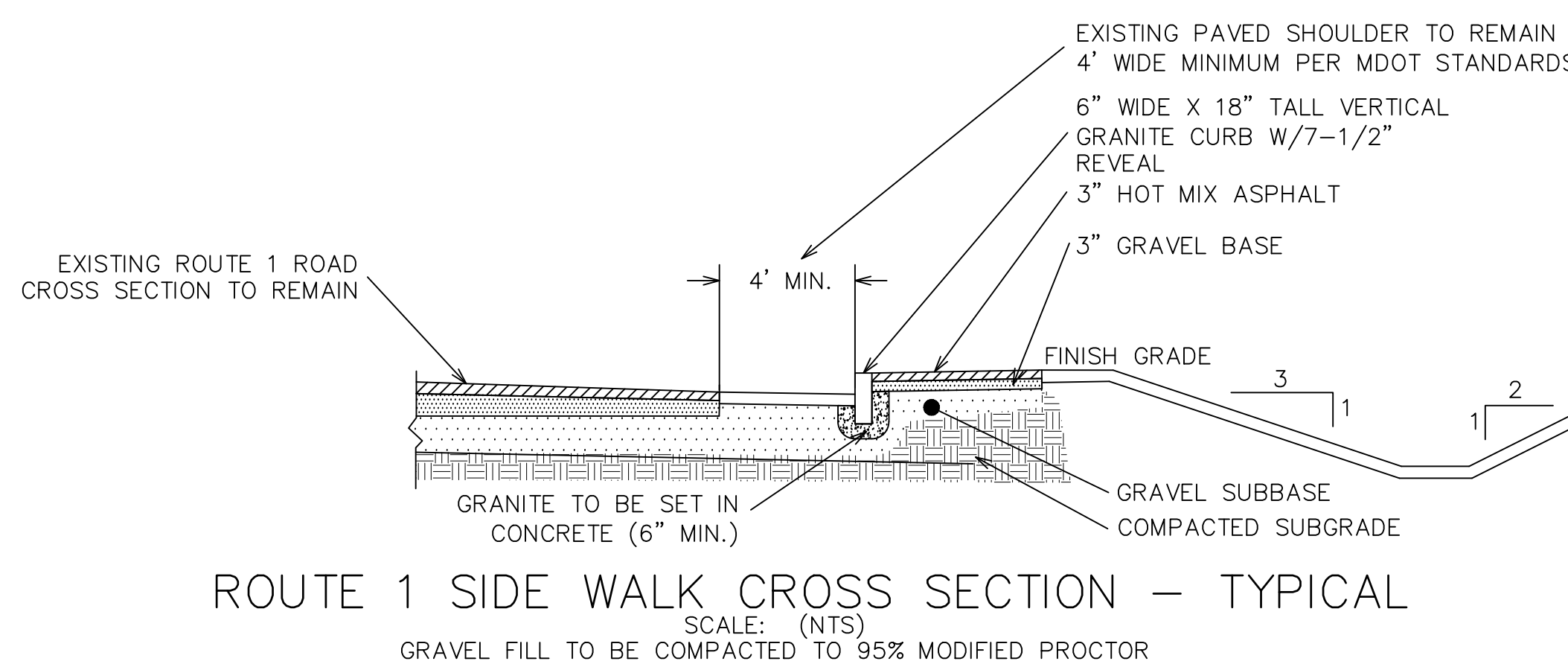
ROAD CROSS SECTION - HOSPITALITY LANE
SCALE: (NTS)



GRANITE CURB DETAIL
SCALE: (NTS)



CONCRETE CURB DETAIL
SCALE: (NTS)



ROUTE 1 SIDE WALK CROSS SECTION - TYPICAL
SCALE: (NTS)

GRAVEL FILL TO BE COMPACTED TO 95% MODIFIED PROCTOR

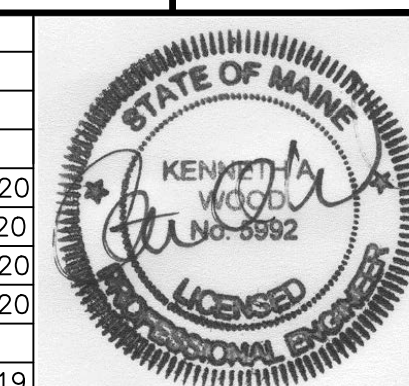
9.4

SITE DETAILS
THE HOMESTEAD
459 U.S. ROUTE 1, KITTERY, MAINE

FOR: MIDDLESEX LAND HOLDINGS, LLC
1 BRIDGEVIEW CIRCLE
TYNGSBORO, MA 01879

ATTAR ENGINEERING, INC.

CIVIL ♦ STRUCTURAL ♦ MARINE
1284 STATE ROAD - ELIOT, MAINE 03903
PHONE: (207)439-6023 FAX: (207)439-2128

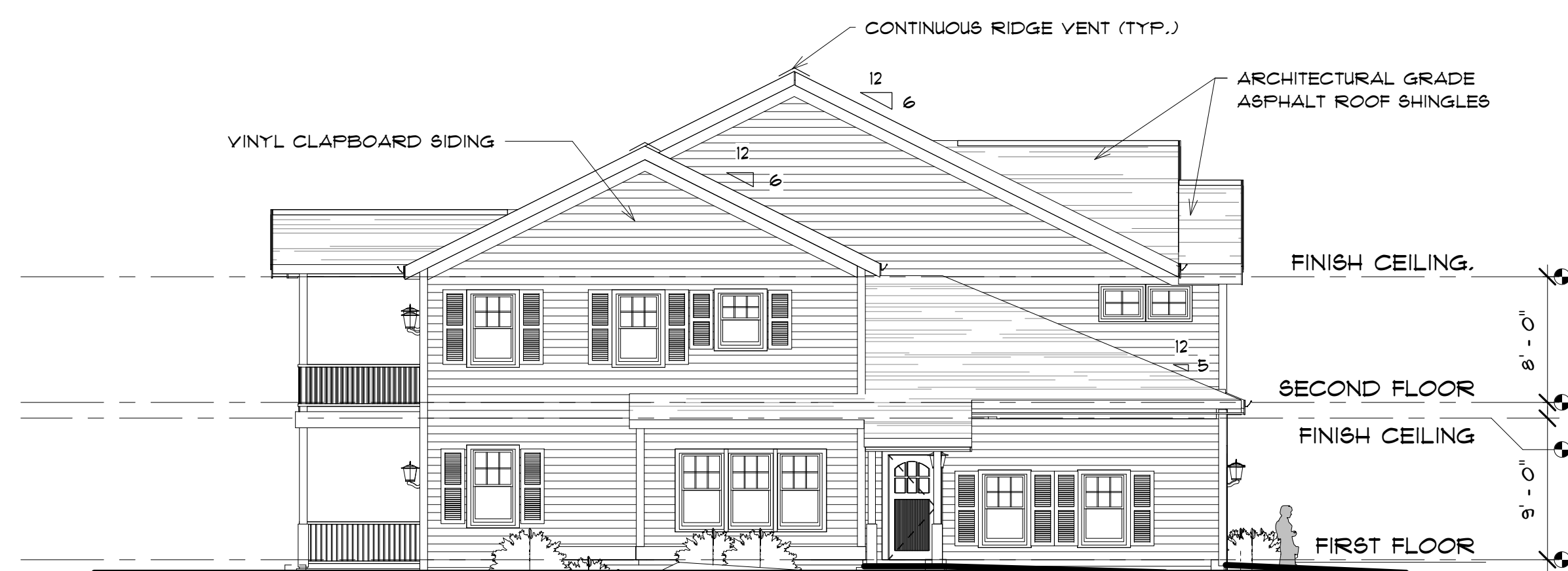


SCALE: AS SHOWN APPROVED BY: DRAWN BY: BRN

DATE: 3/21/2019 REVISION DATE: M : 6/29/2020

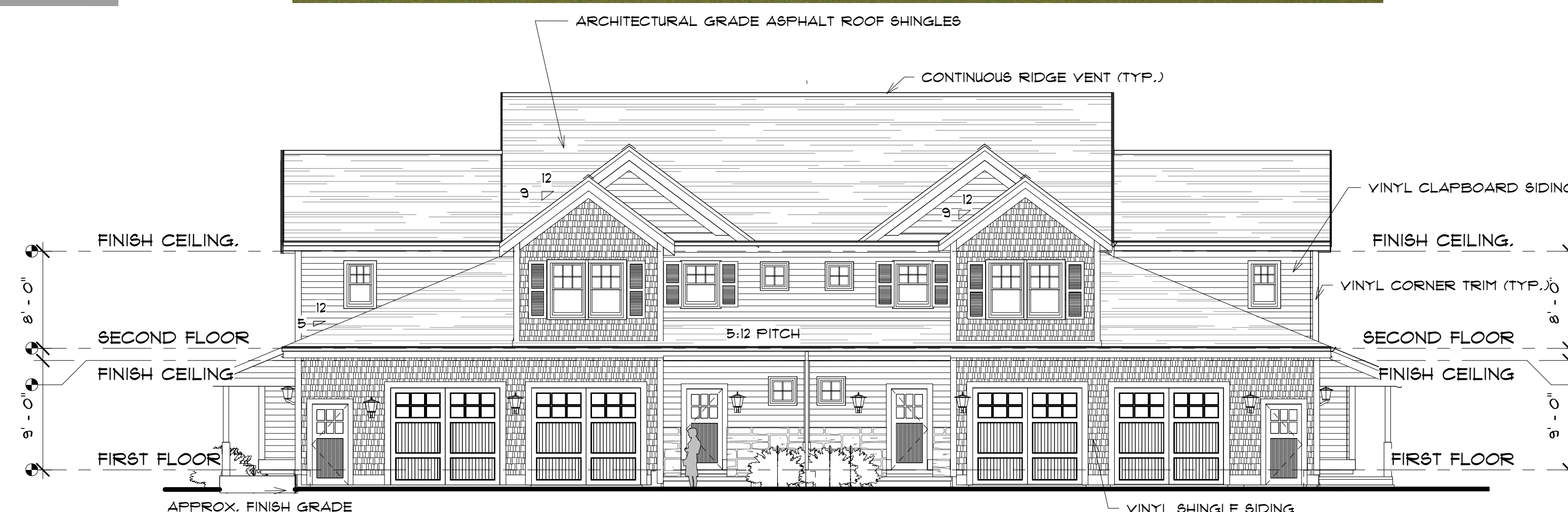
JOB NO: C052-20 FILE: THE HOMESTEAD DET.DWG SHEET: 9.4

NO.	DESCRIPTION	DATE
M	HOTEL REVISION	6/29/2020
L	CURBING CHANGES	5/11/2020
K	MAJOR MODIFICATION	2/06/2020
J	FINAL PLAN REVISION	3/27/2020
I	FINAL PLAN SUBMISSION	
H	MDEP SUBMISSION	1/23/2019
-	SEE EARLIER PLANS FOR PREVIOUS REVISIONS	-
NO.	DESCRIPTION	DATE
	REVISIONS	



1 LEFT ELEVATION.
1/8" = 1'-0"

RIGHT ELEVATION
IDENTICAL TO LEFT
ELEVATION



2 FRONT ELEVATION..
1/8" = 1'-0"

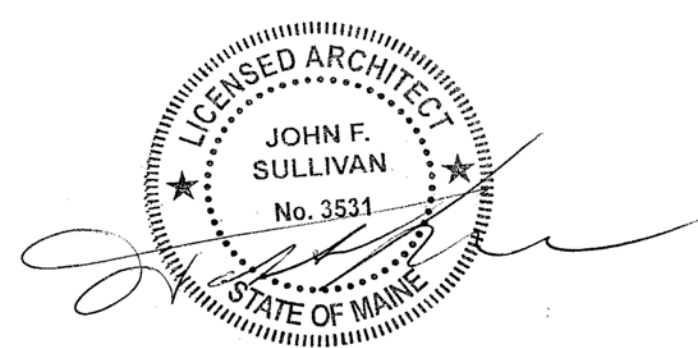


3 REAR ELEVATION .
1/8" = 1'-0"

PROPOSED MULTI-FAMILY FOR:
HOMESTEAD, LLC

ROUTE 1
KITTERY, ME

DATE: MARCH 16, 2021

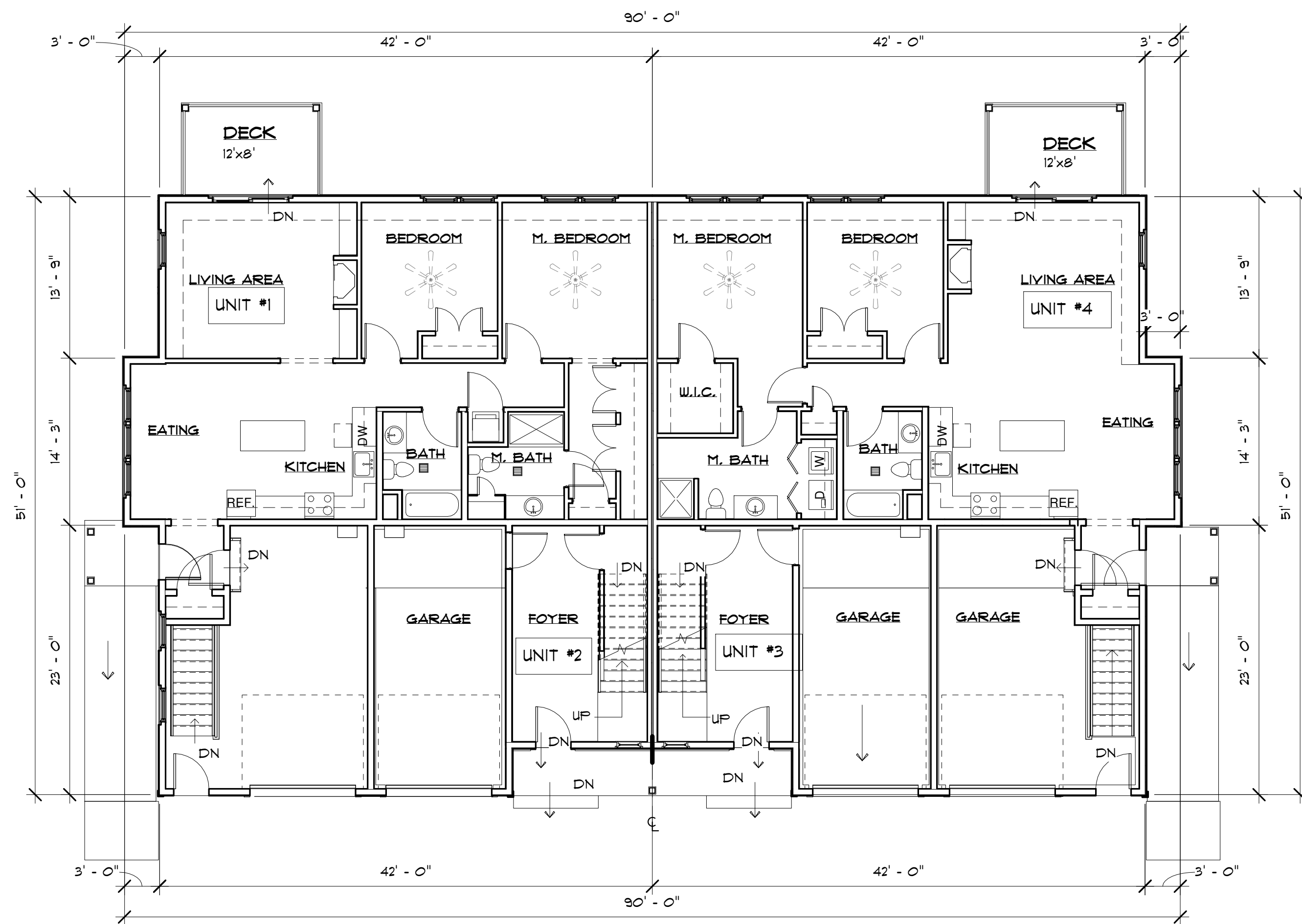


SQUARE FOOTAGE BREAKDOWN
1ST FLOOR OVERALL 4,193 +/- SQ.FT.
2ND FLOOR OVERALL 3,361 +/- SQ.FT.
TOTAL 7,554 +/- SQ.FT.

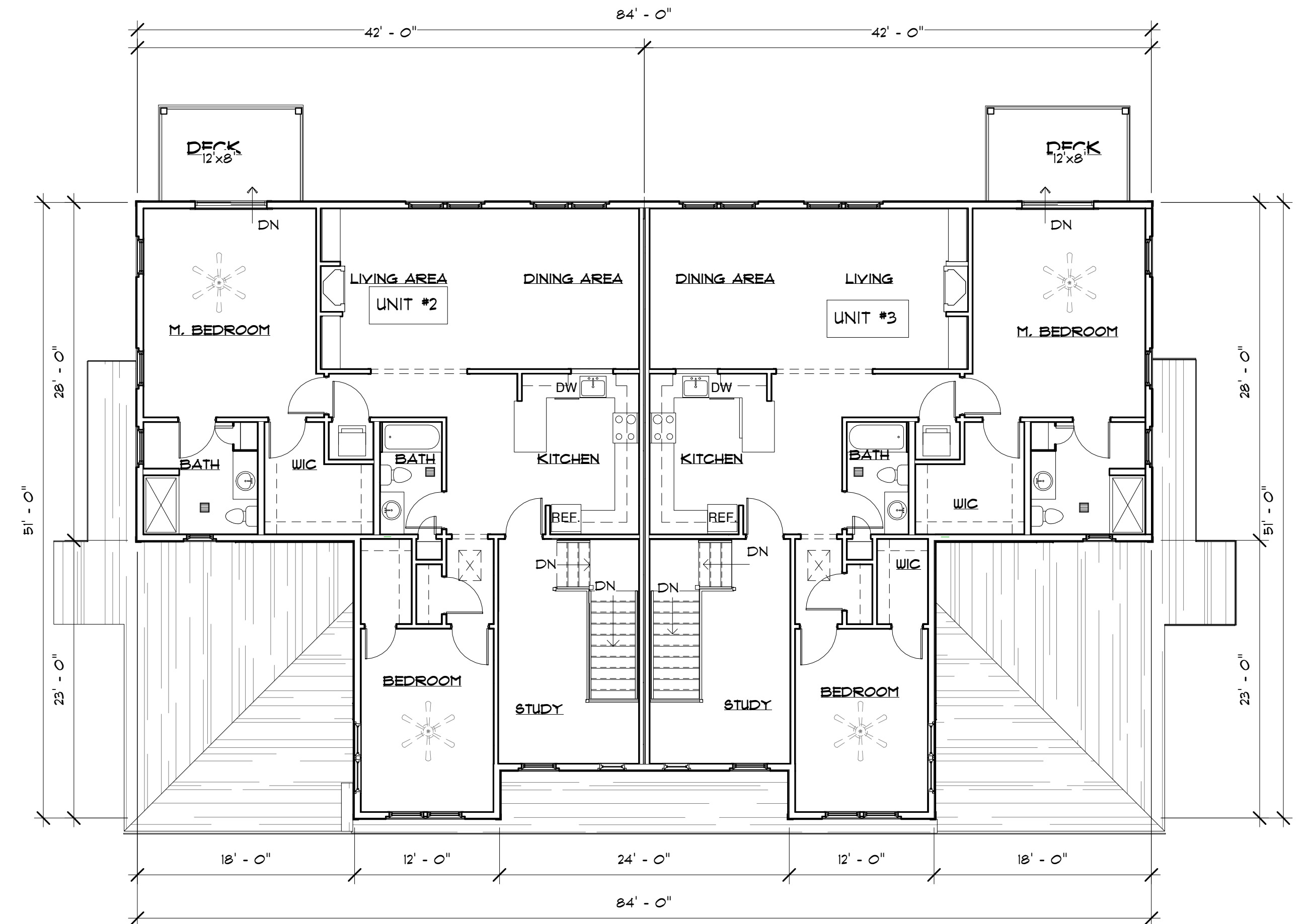
UNIT #1 AND #4 1,255 +/- SQ.FT. (DOES NOT INCLUDE THE GARAGE AND BASEMENT)
UNIT #2 & #3 1,913 +/- SQ.FT. (DOES NOT INCLUDE GARAGE AND BASEMENT)

DESIGNED BY:
GAVIN AND SULLIVAN ARCHITECTS, INC.

128 WARREN STREET
LOWELL, MA 01852



1 FIRST FLOOR PLAN.
1/8" = 1'-0"



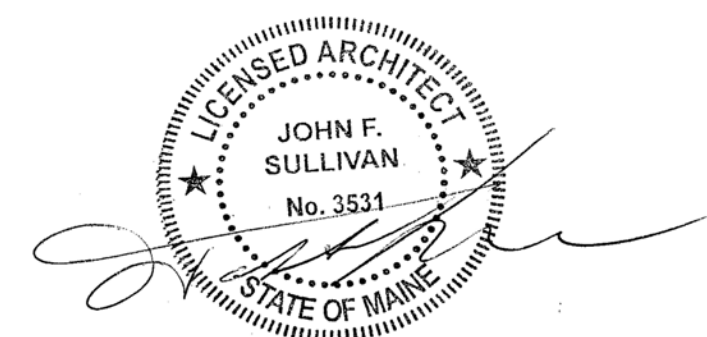
2 SECOND FLOOR PLAN.
1/8" = 1'-0"

PROPOSED MULTI-FAMILY FOR:

HOMESTEAD, LLC

ROUTE 1
KITTERY, ME

DATE: MARCH 16, 2021



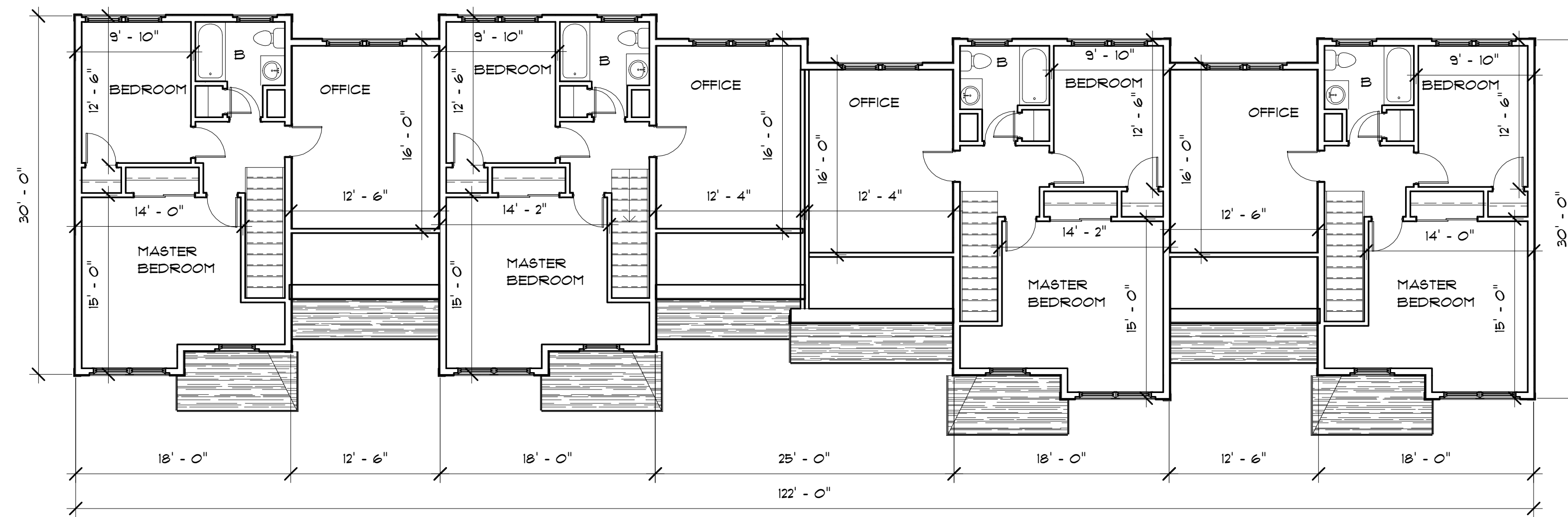
DESIGNED BY:

GAVIN AND SULLIVAN ARCHITECTS, INC.

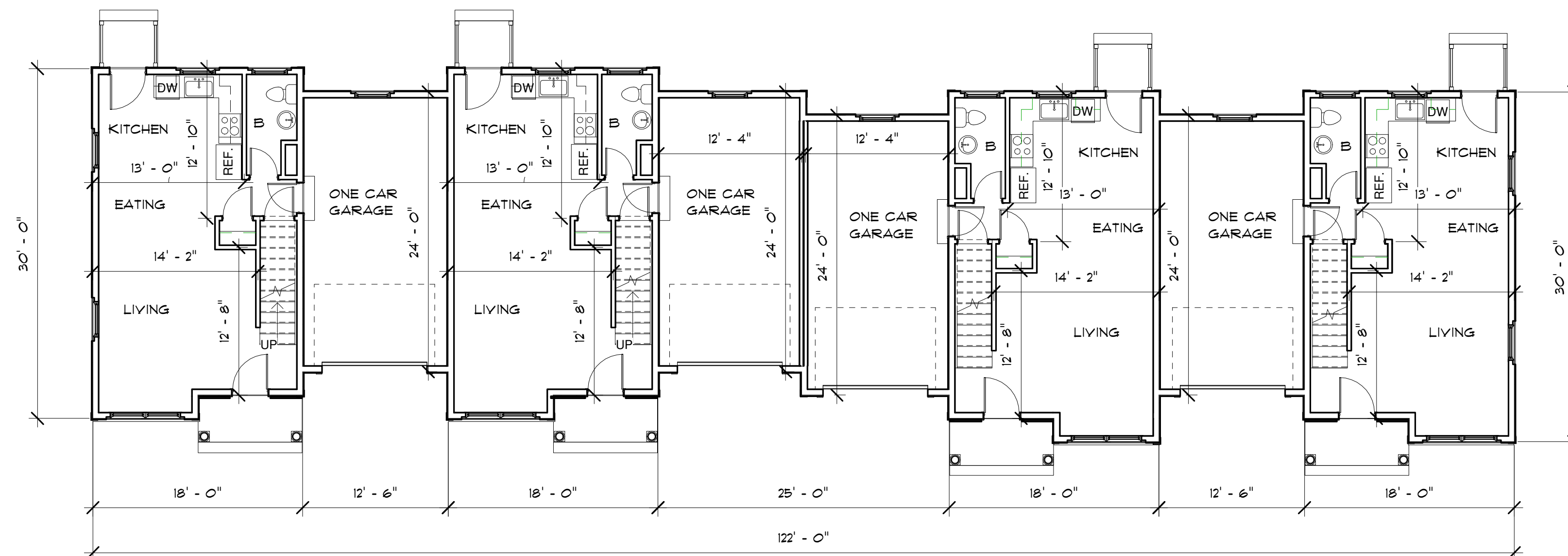
128 WARREN STREET
LOWELL, MA 01852



3 FRONT ELEVATION
1/8" = 1'-0"



2 SECOND FLOOR
1/8" = 1'-0"



1 FIRST FLOOR
1/8" = 1'-0"

FIRST FLOOR 522 SQ. FT.
SECOND FLOOR 122 SQ. FT.
TOTAL LIVING 1,244 SQ. FT.
GARAGE 300 SQ. FT.
UNIT TOTAL 1,544 SQ. FT.



3 3D VIEW 3



2 3D VIEW 2



1 3D VIEW 1

DESIGNED BY:
GAYN & SULLIVAN ARCHITECTS, INC.
128 WARREN STREET LOWELL, MA.

PROPOSED PLAN FOR
DCT DEVELOPMENT
WELLS, MAINE

3D VIEWS

PROJECT: 20-000 SCALE AS NOTED
DATE: JANUARY 4, 2021 DRAWN BY: DJD

A2