TOWN OF KITTERY

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Planning Board Meeting
March 14, 2024

ITEM 2—90 US Route 1—Major Site Plan — Preliminary Review
Action: accept site plan as complete. Schedule site walk/public hearing. Geoff Aleva, on behalf of owner/applicants 90 US Route 1 LLC, requests approval to develop a hotel with 62 rooms and associated parking and utilities on the property of 90 US Route 1, Tax Map 14, Lot 2, in the Bypass-Old Post Road Commercial (C-3) Zone.

PROCESS SUMMARY

REQ'D	ACTION	COMMENTS	STATUS
NO	Sketch Plan Acceptance/Approval	8/10/23	Accepted
YES	Planning board determination of completeness	2/8/24	Accepted
NO	Site Visit	2/20/24	Held
YES	Public Hearing	Scheduled for 3/14/24	Pending
YES	Preliminary Plan Approval	Scheduled for 3/14/24	Pending
YES	Final Plan Review and Decision		TBD
Applicant: Prior to the signing of the approved Plan any **Conditions of Approval related to the Findings of Fact along with waivers and variances (by the BOA) must be placed on the Final Plan and, when applicable, recorded at the York County Registry of Deeds. PLACE THE MAP AND LOT NUMBER IN 1/4" HIGH LETTERS AT LOWER RIGHT BORDER OF ALL PLAN SHEETS.**			

OTHER POTENTIAL PERMITS AND REQUIREMENTS

- Approval from DOT regarding revised driveway placements
- State Fire Marshal NFPA #13 fire protection system approval.
- DEP stormwater permit by rule
- Driveway entrance permit with public works

PROJECT INTRODUCTION

This is the second preliminary review for a new 62-room hotel on the property of 90 US Route 1. Previously the site of the now demolished Little Guest House Motel, the lot currently contains a parking area with driveways providing access to the Route 1 Bypass, as well as existing woodland on the eastern portion of the lot. The lot abuts various commercial properties across the Route 1 right-of-way. From the site, Old Post Road leads to Legion Pond southward and commercial businesses along the Kittery Traffic Circle northward.

The applicant proposes developing the property into a 3-story hotel with 62 rooms and associated parking and utilities. Access would be provided through a new single driveway along the Route 1

Bypass. The plan proposes to add a sidewalk along the entire frontage of Old Post Road and to maintain the existing tree line to the greatest extent possible.

The planning board accepted the preliminary site plan as complete on February 8th, then scheduled a site walk for February 20th and a public hearing on March 14th. Since plan acceptance, a third-party review engineer from CMA has determined that all remaining issues in the site plan application are minor enough that they can be addressed as part of the final application. After holding the public hearing, **staff believe preliminary plan approval is warranted at this time.**

WAIVERS REQUESTED

1. Utility lines aboveground: utilities are required to be built underground in the C-3 zone, although the planning board has the authority to allow alternatives to this. There are three above ground electric utility poles current on the site. The applicant plans to remove 2 of them and relocate one closer to Old Post Road. Underground utilities will be connected from the single remaining utility pole. The applicant states one pole is required to route CMP power lines to the property.
2. Parking dimension modifications: the applicant is requesting to reduce the length of some of their parking spaces, to allow more room for landscaping in the parking lot. The applicant will specify the number of spaces needing this waiver in a future rendition of the plan.
    a. During the sketch review, the planning board requested more landscaping in the parking lot, and indicated they would entertain a reduction in the size of parking spaces to facilitate this.

STAFF COMMENTS

Listed below are additional comments provided by staff in addition to general review of standards:

1. The Kittery Water District has identified Route 1 as a priority area to upgrade the size of the current water main. The Water District and applicant have been collaborating on a cost-sharing agreement to upgrade the portion of the road along 90 Route 1. Staff suggest a condition of approval tying certificate of occupancy to the completion of said water main expansion.
2. The plan originally proposed a second driveway on Old Post Road, to be accessed by service vehicles only. Following feedback from the planning board, the applicant has removed the service vehicle driveway on Old Post Road. The only proposed access area is now along the Route 1 Bypass, in roughly the same area as the existing driveway.
3. The applicant is proposing sidewalks along the frontage of Old Post Road, and not the Route 1 Bypass. Public Works would rather have the applicant provide pedestrian access along Old Post Road to avoid confusion regarding maintenance responsibilities, as Route 1 is a state road and not the authority of the Town.
4. Fire staff requested that any trees planted along the perimeter of the building be ornamental. They are worried that if the planted trees grow too large, it could impede fire truck access in the future.
5. The traffic study proposes to clear shrubbery to the left of the entrance onto Route 1 bypass to improve sight lines.

6. No high-crash areas have been identified in the immediate vicinity of the project. The nearest known high-crash area is the Kittery Traffic Circle on the northeast end of Old Post Road, approximately 1,500 feet from the property.
7. The traffic study shows a calculated peak hours of less than 100, meaning a Traffic Movement Permit is not required by the MDOT.

PROJECT ANALYSIS

Staff reviewed the application and provided materials and have provided their determination on the requirements and standards below. All requirements that have not been met or require further discussion are highlighted.

Code Ref.	§16.4 Land Use Zone Standards	
	Standard	Determination
§16.4.21.B/C.	Permitted/Special Exception Uses	The proposed use is permitted
§16.4.21.E.(2).(a).	Lot size: 40,000 sq ft. minimum	It appears the standard is satisfied.
§16.4.21.E.(2).(b).	Street frontage: no requirements in C-3 Zone	It appears the standard is satisfied.
§16.4.21.E.(2).(c).	Front setback: this lot has two "front yards:" • 15 ft maximum along Route 1 Bypass 15 ft minimum along Old Post Road	It appears both standards are satisfied.
§16.4.21.E.(2).(d).	Rear and side setbacks: 10 ft minimum. NOTE: side yard setback is 15 ft minimums where property abuts residential structures	It appears the standard is satisfied.
§16.4.21.E.(2).(e).	Building height: 40 ft maximum NOTE: structures along Old Post Road may not exceed 25 ft building heights within a 30 ft setback from Old Post Road	It appears both standards are satisfied.
§16.4.21.E.(2).(f).	Imperious surface: 70% maximum for currently developed lots	It appears the standard is satisfied.
§16.4.21.E.(2).(m)..	Underground utilities required	The applicant is requesting a modification to allow one utility pole to remain, explained above. Otherwise, the standard appears met.
§16.4.21.E.(3).(a).	Parking standards: • parking areas must be visually screened when abutting residential properties.	The applicant is proposing plantings along the parking lot in conjunction with

	• Parking spaces must have a dimension of 19' x 9'	existing vegetation that will remain. The applicant is requesting a waiver for the parking spaces not meeting the dimensional requirement. Otherwise, the standard appears to be satisfied.
§16.4.21.E.(3).(b).	Loading docks and overhead doors must be located on the side of rear of the building with visual screening from view from adjacent residential properties.	All loading docks and overhead doors appear to be screened by landscaping on the side of the building. The standard appears to be satisfied.
§16.4.21.E.(3).(c).[2].	Landscaping improvements include: • A minimum 15 ft vegetated landscape planter strips between the lot and adjacent rights-of-way. • One street tree for every 50 feet of street frontage	The standard appears to be met along the Old Post ROW. The Route 1 ROW has a planter strip along the majority of the frontage, except for the portion where the building directly faces the road. Staff suggest the planning board decide if they believe this meets the requirement, or if the applicant should request a waiver for this portion of the frontage.
§16.4.21.E.(3).(d).	Traffic circulation standards: sidewalks are required internally and along the entire portion of the lot facing Old Post Road.	The standard appears to be satisfied.
§16.4.21.E.(3).(e).	Open Space standards: 20% minimum. Designated open space areas must be notated on the plan	The standard appears to be satisfied.

Code Ref.	§16.5 Performance Standards	
	Standard	Determination
§16.5.10	Essential Services	Wastewater and Water District staff have both confirmed sufficient capacity for the entire proposed development. An emergency service driveway will be installed along Old Post Road, with signage indicating it is not to be used for public traffic. The applicant will work out the details of the water main expansion described above as a condition of approval.
§16.5.25	Sprinkler Systems are required in all hotels and buildings of three or more stories.	Sprinkler systems must meet NFPA standards for the entire structure, including the attached hotel canopy.
§16.5.27	Street Standards: sidewalks are required along the entire ROW for Old Post Road	The plan proposes sidewalks connecting the hotel to Old Post Road.
§16.7.11.F.(e).	Minimum parking spaces is determined by: • 62 spaces for 62 rooms • 2 spaces for 193 sq ft of meeting area • Total: 64 spaces required.	With 66 spaces proposed, the plan appears to exceed minimum requirements. The plan appears to meet ADA space requirements
§13.1.6.5/§13.1.6.6	Sewer impact fees and special sewer entrance fees	A rough estimate of the sewer cost will be calculated by staff before issuance of any permitting.
Code Ref.	§16.7.10 Preliminary Site Plan Requirements	
	Standard	Determination

§16.7.10.C.(4).(a-i).	• Paper plan sheets no smaller than 11" x 17" • Scale of drawing no greater than 1 inch = 30 feet • Code block in right-hand corner • Standard boundary survey of existing conditions • Compass with arrow pointing true north • Locus map of property • Vicinity map and aerial photograph • Surveyed acreage of parcel(s), rights-of-way, wetlands, and amount of street frontage • Names and addresses of owners of record abutting property	Provided
§16.7.10.C.(4).(j).	Existing conditions survey including all identified structures, natural resources, rights-of-way, and utilities located on and within 100 feet of the property.	Provided
§16.7.10.C.(4).(k).	• Proposed development area including: • Location and detail of proposed structures and signs • Proposed utilities including power, water, and sewer. • Sewage facilities type and placement. • Domestic water source • Lot lines, rights-of-way, and street alignments • Road and other paved area plans • Existing and proposed setbacks • Storage areas for waste or hazardous materials • Topographic contours of existing contours and finished grade elevations • Locations and dimensions of artificial features such as pedestrian ways, sidewalks, curb cuts, driveways, fences, retaining walls,	Provided
§16.7.10.C.(4).(l).	Natural features or site elements to be preserved.	Provided
§16.7.10.C.(4).(m).	Identified property encumbrances.	Provided
§16.7.10.C.(4).(n).	Kittery Water District approval letter.	Provided
§16.7.10.C.(4).(o).	Erosion and sedimentation control plan.	Provided

§16.7.10.C.(4).(p).	Stormwater management plan and drainage analysis.	Provided
§16.7.10.C.(4).(q).	Soil survey.	Provided
§16.7.10.C.(4).(r).	Vehicular traffic report.	Provided
§16.7.10.C.(4).(s).	Traffic impact analysis.	Provided
§16.7.10.C.(4).(t).	Test pit analysis.	Not applicable
§16.7.10.C.(4).(u).	Approval letter from Town sewage.	Provided
§16.7.10.C.(4).(v).	Evaluation of development by Technical Review Committee department heads.	Provided
§16.7.10.C.(4).(w).	Additional submissions as required.	None identified at this time

DISCUSSION, NEXT STEPS, AND RECOMMENDATIONS

The purpose of a public hearing is to gather feedback from abutters, residents, and interested parties that may identify potential conflicts or suggestions to the proposed development. Staff believe the revised submission addresses initial concerns from both the third-party engineer and the planning board, and believe approval is warranted at this time. After the public hearing, the planning board should discuss public feedback and the waiver requests.

RECOMMENDED MOTIONS

Below are recommended motions for the Board's use and consideration:

Motion to approve the application

Move to approve the preliminary site plan by Geoff Aleva, on behalf of owner/applicants 90 US Route 1 LLC

CIVIL CONSULTANTS MEMORANDUM

TO:	**CMA Engineers, Inc. Jodie Bray Strickland, P.E.**	**FROM:**	**Geoffrey R. Aleva, P.E.**	**DATE:**	**February 19, 2024**
SUBJECT:	**90 US Route 1 Proposed Hotel Development Review**				
PROJECT:	**90 US Route 1, Tax Map 14, Lot 2 Holiday Inn Express Hotel Redevelopment C.C. Project 2132300**				

Following please find CIVIL CONSULTANTS's responses to the memorandum from CMA Engineers, Inc dated January 29, 2024.

COMMENT	RESPONSE
16.5 General Performance Standards	
16.5.25 Sprinkler systems 16.5.25.(1)(a)&(d) – The building is required to be sprinkled, but a fire suppression service is not shown on the plan. The applicant should coordinate with Kittery Water District for a statement of capacity and/or the Kittery Fire Department for design approval of the required system.	*The applicant is coordinating with Kittery Water District and Kittery Fire Department for capacity and design approval.* *Capacity letter is provided.*
16.7 General Development Requirements	
16.7.11 Performance Standards and Approval Criteria	
16.7.11.A. Water supply The proposed water service is a proposed service from US Route 1 Bypass. The size and material of the service are not shown. There are no fittings specified. The details show a gate valve and thrust blocks but the locations of these are not shown on the plan. The service is proposed to be directionally drilled under the bypass. The applicant should secure information from Kittery Water District with respect to design approval, when a full design is submitted, and capacity.	*Proposed water service to be coordinated with Kittery water District.* *Information from Kittery Water District to be secured prior to connection.* *Since the service will be directionally drilled to the site, the values and final locations are not yet determined.*
16.7.11.B. Sewage Disposal The proposed sewer is a 6" PVC line to an on-site sewer manhole with a drop and then to a proposed manhole in Old Post Road. Several details, including the sewer manhole and sewer manhole with drop, are missing. The service detail shows a cleanout but the location of one is not specified on the plan. The applicant should secure information with respect to design approval and capacity from Kittery sewer services.	*All missing details have been added to the plans.* *The sewer cleanout from the Service Connection Detail has been added to the plans.* *We have been in contact with the sewer District during design and staff review.*
16.7.11.C. Stormwater and Surface Drainage The proposed stormwater management system uses closed drainage and a subsurface sand filter to treat and manage stormwater. The total area of disturbance does not exceed the threshold for a Maine Construction General Permit from the Maine Department of Environmental Protection, but the Stormwater Permit by Rule standards must be met.	*The total impervious area of the site now exceeds 1 acre after adding an additional sidewalk to the rear of the proposed hotel building. This addition was mandated by Holiday In Express. The sidewalk widths were all changed to be 5' as well. A MDEP Stormwater application will be submitted instead of a PBR application.*
16.7.11.D.(3)(d)[1](c) – In the Stormwater Management Operation & Maintenance Manual, Section A should be changed to meet the Kittery ordinances that specify annual	*Section A has been updated to meet the Kittery ordinance.*

inspection reports are due to the Code Enforcement Officer by July 1st.	
We have the following comments on the drainage analysis:	
1. Is the parking lot drainage run proposed to be replaced? 2. The stormwater management plan is missing several components in the post development analysis including the Area Listing table, Soil Listing table, Ground Covers table and the Routing Diagram. Additionally, only the analysis of the 25-year storm was provided (not the 2, 10 or 50-year storms). 3. Has the condition of the existing downstream drainage been assessed? A substantial portion of the on-site stormwater is routed to this system. 4. For Reach 10R, the elevation of the outlet invert of 38.19' is different than that shown on the plans. 5. For Reach 30R, elevations of the inlet and outlet inverts are different than those shown on the plans. 6. The width of the subsurface sand filter is modelled as 71' but is shown as 70.1' on the plans. 7. In the modelling of the subsurface sand filter, the pavement may have been included in the volume calculations. The detail does not clearly label the various components of the "12" min fill and surface" above the feature. 8. The Stormwater Maintenance and Inspection Plan has sections that do not apply including references to roads, water bars, and open top culverts. Remove these for clarity. 9. In the Vegetated Swales table, correct "reseedinged". 10. There is reference to riprap channels in the Vegetated Swales table. Please remove. 11. There are no proposed access ports shown on the subsurface sand filter. How are inspections accomplished/completed? 12. A component of the subsurface sand filter design includes a 12" overflow pipe that is utilized after other piping components fill. It is not clear that this happens in the model.	*1. The 12" PVC parking lot drainage run is not proposed to be replaced. If variations from the plan's existing conditions are found during excavation, then the pipeline will be recreated to match the plan's existing conditions as close as possible. See the new callout on sheet L1.* *2. All missing components in the post development analysis have been added to the drainage analysis. The missing components were erroneously omitted from the previous submission.* *3. The proposed stormwater management system has been designed to minimize the impact to the existing downstream drainage on the North side of U.S. Route 1 By-pass. The stormwater analysis reveals that the outflows decrease in the post development conditions for all storm events analyzed. This maintains the condition of the existing downstream drainage.* *4. The outlet invert elevation of Reach 10R was changed in the hydrocad stormwater analysis to match the invert A elevation of DMH4 on the plans.* *5. The inlet and outlet invert elevations for Reach 30R were changed in the hydrocad stormwater analysis to match the invert elevations shown on the plans.* *6. The width of the subsurface sand filter has been changed to 71' on the plans in order to match the hydrocad model.* *7. The pavement was previously included in the volume calculations in order to show that the peak elevation within the subsurface sand filter did not include the pavement. The flood elevation of the subsurface sand filter has been changed to match the top of stone on the plan sheet L3 subsurface sand filter detail, excluding the surface fill and pavement.*

	Added a new callout to the subsurface sand filter detail referencing the typical pavement section detail on plan sheet L2 for the various components of the 12" min fill & surface layer. *8. The non applicable sections have been removed from the stormwater maintenance and inspection plan.* *9. Spelling error corrected.* *10. Riprap channels have been removed from the Vegetated Swales table.* *11. Proposed access ports have been added to the subsurface sand filter detail on plan sheet L3.* *12. See updated inverts for DMH 6 and CB 5 on plan sheet L1.*
16.7.11.H. Exterior lighting requirements There is glare beyond the property line on Old Post Road and at the site entrance on US Route 1 Bypass. The applicant should explore lighting that meets the ordinance or apply for a waiver.	*Lighting plan has been updated.*
16.7.11.H.(2)(a) The applicant should provide uniformity ratios in conformance with the ordinance.	*Lighting plan has been updated.*
General Engineering The plan set lacks details that will need to be developed before final approval. The missing items include: 1. A demolition plan. We understand that the building has been removed, but there should be information on pavement removal, utility abandonment /removal/ replacement, overhead electric removal, tree removal, fence removal, etc. 2. A complete water and sewer design including all applicable details. 3. Fire truck turning movement plan. 4. An easement for drainage maintenance should be shown on the plan.	*1. A demolition plan has been added to the plan set.* *2. To the extent practical the details have been added to the plans. We will work with the water and sewer departments to comply with their standards during construction.* *3. A fire truck turning movement plan has been added to the plan set.* *4. This comment is unclear. Please provide additional info so we can address properly.*
We have the following comments on the plans: Cover 1. We note that the architectural plans indicated on the cover page were not provided in the plan set. 2. The date is listed as 6/23/2023 with no revisions. Is this correct? 3. The title block indicates this is sheet 1 of 4 but there are more than 4 sheets in the set.	*1. The Architectural plans have been added to the plan set.* *2. The date listed is correct. 6/23/2023 is the date that the cover sheet was created along with sheets L1-L4. The revisions section of the title block has been updated on sheets where Town comments have been addressed.* *3. The title block numbering has been changed to "1 OF 1" for the cover sheet. "L1" on the cover sheet title block has been changed to "CVR". See the full plan set numbering on the left most column of the Cover Sheet's*

	Plan Index. The numbering from this column will be added to the lower right-hand margin on each sheet of the plan set upon resubmission. Sheets such as L1-L4 will have sheet numbering 1-4 on their title blocks because they are all the same type of sheet in that they focus on the site plan and its applicable construction details and notes. Other sheets like U1, E1, and DEM are each numbered 1 of 1 because they are the only sheet that focuses on that particular information.
<u>Sheet EC1 – Boundary/Existing Conditions Plan</u> 1. All existing utility information for water, sewer, and drainage, should be provided on the plan – pipe size, material, inverts, rim elevations, etc.	*Existing utility information has been added to the existing conditions plan (EC1).*
<u>Sheet L1 – Proposed Site Plan</u> 1. All proposed pipe sizes and material should be listed on the plan. 2. Is the parking lot drainage run proposed to be replaced? 3. What are the inverts of the cleanouts for the roof drain and the canopy underdrain? 4. The title block indicates this is sheet 1 of 4 but this is not sheet 1 and there are more than 4 sheets in the set. 5. The proposed concrete walk on Old Post Road should be graded in. 6. It is not clear what "infill pavement to new walk" means. Provide a note or explanation. 7. There should be a note describing "water to be abandoned". 8. Show limits of sawcut on Old Post Road for the sewer installation. 9. P-SMH 1 has two inverts but three pipes. Please clarify. 10. Explain the difference in hatching of the paved access for emergency vehicles. 11. What does the hatching adjacent to the concrete walk along Post Road signify? 12. There is proposed work in the right-of-way on both roads (drainage, sidewalk). Have these been approved by MDOT and/or the Town of Kittery? 13. Where is the 49' contour? 14. Label the widths of the accessible parking spaces. Indicate which space is for van parking. 15. The proposed sidewalk on Old Post Road is located in the planter strip.	1. *Missing callouts for proposed pipe sizes and materials have been added to the plan.* 2. *See response 1 to the drainage analysis comments above. See new callout added to plan sheet L1.* 3. *Cleanout inverts for the roof drain and canopy underdrain have been added to the plans.* 4. *See the full plan set numbering added to the lower right-hand margin on each sheet of the plan set.* 5. *The intention is to have minimal cross slope to the existing catch basins on Old Post Road to match the existing drainage conditions.* 6. *New pavement is proposed between the existing pavement and the proposed sidewalk curb. Callout now points to the proposed pavement.* 7. *See updated callout on plan sheets L1 and U1 that says capped and witnessed.* 8. *See limit of sewer line trench callout and boundary line added to plan sheet L1.* 9. *See updated P-SMH 1 callout with third invert.* 10. *The Old Post Road connector has been removed.* 11. *The hatching represents the proposed pavement (currently consists of gravel) between the existing pavement of Old Post Road and the proposed*

	curbed sidewalk. See response 6 above. 12. *Yes, we are working with both MDOT and the Town of Kittery to show these improvements.* 13. *The three 49' spot grades in the middle of the parking area indicate a high point and are not missing a contour line.* 14. *Widths for the accessible parking space widths have been provided on the plans. See the accessible van and car parking detail on sheet L2.* 15. *Landscape plan has been updated.*
<u>Sheet L2– Construction Details</u> 1. Why is there a cloud around the Vertical Granite Curb with Sidewalk detail? Does this detail apply to the project? If not, remove it from the sheet. 2. Provide a trench patch detail. 3. Provide sewer manhole details (one with a drop). 4. Where is the Riprap Apron Pipe Outlet located? Please indicate the location on Sheet L1. If this does not apply to the project, remove it from the sheet. 5. Does the MUTCD R5-11 sign apply to this project? If not, remove it from the plan. 6. Where is the Concrete Curb located? 7. "Isle" is spelled incorrectly in the Accessible Van & Car Parking Detail. 8. "Length of Parking Space" Should be specified in the Accessible Van & Car Parking Detail. 9. Erosion and Sediment Control Practices Note 5 is not clear. 10. Is the June 15 date in Erosion and Sediment Control Practices Note 7 correct?	1. *The cloud indicates a revision from plans submitted to the Town. It has been removed from the plan.* 2. *A Trench patch detail has been added to Construction Details sheet L3.* 3. *A sewer manhole detail with a drop has been added to Construction Details sheet L3.* 4. *The detail has been removed from the sheet since it does not apply to the project.* 5. *The MUTCD R5-11 sign does not apply to this project and has been removed. The MUTCD R1-1 and MUTCD R5-1 signs do apply to this project and have been included.* 6. *Concrete curb added to legend. See concrete curb callouts added to sheet L1 and revised concrete curb detail on sheet L2. Concrete curbing to be used for the proposed internal sidewalks and edge of proposed parking on the lot, as well as the entrance to U.S. Route 1 Bypass. Vertical Granite curb to be used for the proposed sidewalk along Old Post Road.* 7. *Spelling error corrected.* 8. *The parking space length was updated to 19'.* 9. *Note 5 has been corrected to be clearer. Replaced comma with a period, removing the run on sentence.* 10. *The June 15 date was changed to "45 days before the first killing frost" as noted on page 9 of the Maine Erosion and Sediment Control BMPs Manual (October 2016).*

Sheet L3 -Construction Details 1. The type of frame and grate/cover with H-20 loading should be specified on the Catch Basin with Snout and Drain Manhole details. 2. The fill above the Subsurface Sand Filter should be specified on the detail. 3. The location of inspection ports should be shown on Sheet L1 and on the Subsurface Sand Filter Detail (Plan View). 4. Provide a detail for the detectable warning surface. 5. Why is there a cloud around the Typical Sidewalk Ramp detail? 6. The Service Connection Detail is not reflective of this project. Provide a detail that applies. 7. Where is the Gatre Valve located? 8. There should be warning tape on the Sewer Line Trench Detail. 9. There should be warning tape on the Water Line Trench Detail. 10. Provide details and/or information on the proposed directional drilling under US Route 1 Bypass.	*1. Have been added to the details.* *2. The base gravel fill has been specified on the plan. Added a new callout to the subsurface sand filter detail referencing the typical pavement section detail on plan sheet L2 for the various components of the 12" min fill & surface layer.* *3. Inspection port locations have been added on sheet L1 and this sheets subsurface sand filter detail (Plan View).* *4. A detail has been added to plan sheet L3 for the detectable warning surface.* *5. The cloud indicates a revision from plans submitted to the Town. It has been removed from the plan.* *6. The detail has been replaced with one from Kittery Water District that applies to this project and has been moved to the Utility Plan sheet. The intent is to work with the water district for all connections.* *7. To be coordinated with Kittery Water District. Gate valve detail moved to utility plan sheet.* *8. Warning tape has been added to the detail.* *9. Warning tape has been added to the detail. Detail moved to the Utility Plan Sheet.* *10. Details to be provided after coordinating with Kittery Water District.*
Sheet L4 – Notes 1. What is the significance of the area within the cloud? 2. There are several mentions of a permit, please clarify.	*1. The cloud indicates a revision from plans submitted to the Town. It has been removed from the plan.* *2. Mentions of a permit have been removed from all notes except for the housekeeping notes section per ME DEP Chapter 500 – Appendix C. These housekeeping notes are required to be followed by MDEP.*
Sheet LP1 – Landscape Plan 1. Multiple trees are planted in the proposed sidewalk on Old Post Road and in the walkway from the building to the sidewalk.	*Landscaping plan has been updated.*
Comments on Memorandum The memo indicates in multiple places that the existing water and sewer from Old Post Road are to be reused. The plans show a new water service from US Route 1 Bypass and a new sewer	*That is a typo. New services are to be constructed for water and sewer.*

service from Old Post Road (the existing sewer service is not shown). Please clarify.	

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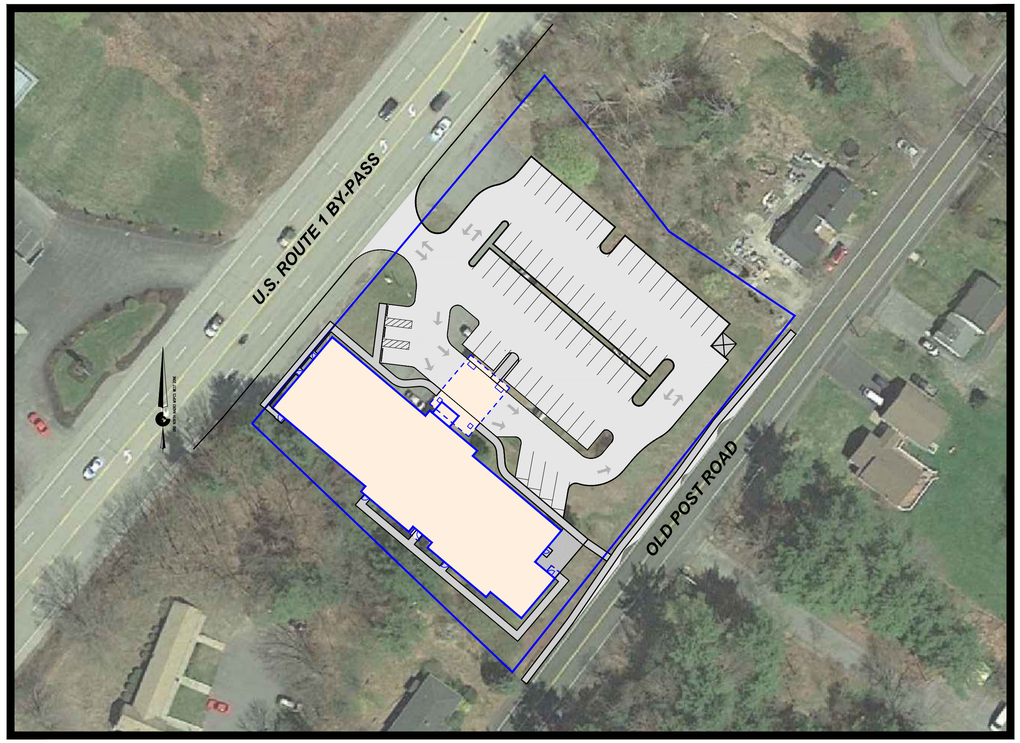
P.O. Box 100 South Berwick, Maine 03908 207-384-2550

REDEVELOPMENT PLAN OF LAND OF 90 US ROUTE 1, LLC

(MAP 14, LOT 2)
KITTERY, MAINE

PREPARED FOR:
90 US ROUTE 1, LLC
PO BOX 630
KITTERY, ME 03904



PROPOSED LAYOUT
SCALE: 1"=50'

HOTEL ARCHITECT: SILVESTRI ARCHITECTS, PC
1321 MILLERSPORT HWY
AMHERST, NY 14221

LANDSCAPE ARCHITECT: SCOTT STRYNAR #3148
LANDSCAPE ARCHITECT, LLC
98 MEEHAN LANE
NORTH BERWICK, ME 03906

APPROVED WAIVERS:
THE PLANNING BOARD AT THE XX XX, XXXX MEETING APPROVED THE FOLLOWING WAIVERS:

16.7.11.F.(4)(i)[1]: EACH ACCESSIBLE PARKING SPACE MUST CONTAIN A RECTANGULAR AREA AT LEAST 19 FEET LONG AND EIGHT FEET WIDE WITH ACCESS TO A DESIGNATED AND MARKED FIVE-FOOT-WIDE AISLE.

16.7.11.F.(4)(n)TABLE 2: ALLOW REDUCED STALL DEPTH TO 18' INSTEAD OF 19'.

CONDITIONS OF APPROVAL:
THE PLANNING BOARD AT THE XX XX, XXXX MEETING APPROVED THE PROJECT WITH THE FOLLOWING CONDITIONS.

1. NO CHANGES, ERASURES, MODIFICATIONS OR REVISIONS MAY MADE TO ANY PLANNING BOARD APPROVED FINAL PLAN . (16.7.12.C)
2. APPLICANT / CONTRACTOR SHALL FOLLOW MAINE DEP BEST MANAGEMENT PRACTICES FOR ALL WORK ASSOCIATED WITH THE SITE AND BUILDING CONSTRUCTION TO ENSURE ADEQUATE EROSION CONTROL AND SLOPE STABILIZATION.
3. PRIOR TO THE COMMENCEMENT OF GRADING AND/OR CONSTRUCTION WITHIN A BUILDING ENVELOP, AS SHOWN ON THE PLAN, THE OWNER AND OR DEVELOPER MUST STAKE ALL CORNERS OF THE ENVELOPE. THESE MARKERS MUST REMAIN IN PLACE UNTIL THE CODE ENFORCEMENT OFFICER DETERMINES CONSTRUCTION IS COMPLETED AND THERE IS NOT DANGER OF DAMAGE TO AREAS THAT ARE, PER PLANNING BOARD APPROVAL, TO REMAIN UNDISTURBED.
4. ALL NOTICES TO APPLICANT CONTAINED IN THE FINDINGS OF FACT: DATED XX-XX-XXXX.

OWNER: 90 US ROUTE 1, LLC
PO BOX 630
KITTERY, ME 03904

CIVIL ENGINEER: CIVIL CONSULTANTS
P.O. BOX 100
293 MAIN STREET
SOUTH BERWICK, ME 03908

PLAN INDEX:

STATE OF MAINE
GEOFFREY R. ALLEN
No. 9679
LICENSED PROFESSIONAL ENGINEER
2/19/2024

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

NO.	REVISIONS	INT.	DATE
1	REVISED PER TOWN COMMENTS	GRA	02/16/24

RECORD OWNER: 90 US ROUTE 1 LLC
ADDRESS: PO BOX 630 KITTERY, ME 03904

REDEVELOPMENT PLAN OF LAND OF
90 US ROUTE 1 LLC
90 U.S. ROUTE 1 BY-PASS
KITTERY - YORK COUNTY, MAINE

PREPARED FOR: 90 US ROUTE 1 LLC
CLIENT ADDRESS: PO BOX 630, KITTERY, ME 03904

1" = 20'
0' 20'

DATE: 06/23/2023
DRAWN BY: JAA/DRC
CHECKED BY: GRA
APPROVED BY:

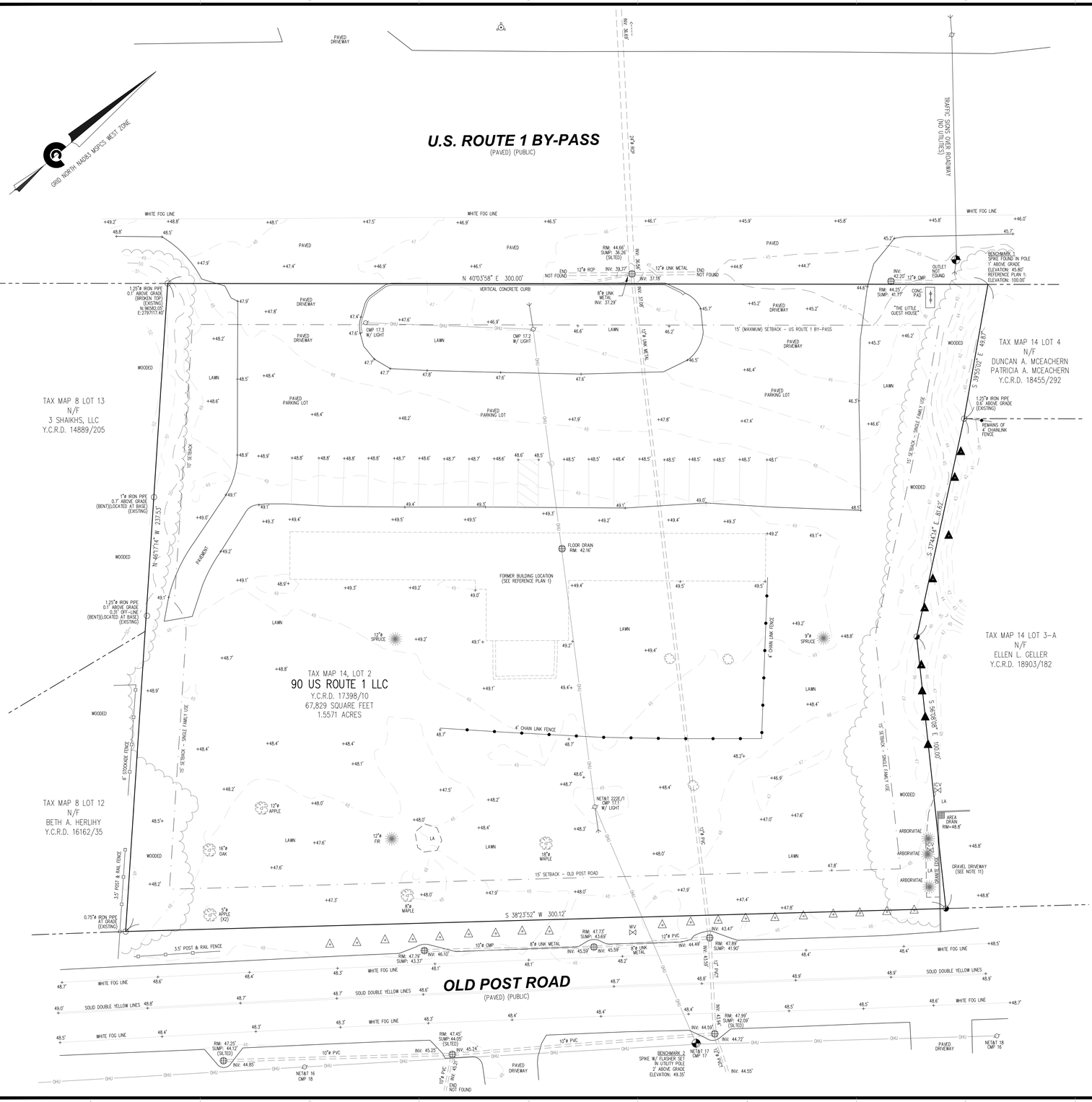
PROPOSED SITE PLAN

PROJECT NO: 21-323.00

CVR

SHEET: 1 OF 1

COORDINATE FILE: J:\AAA\2021\2132300\CARLSON\SURVEY\POINTS\2132300-MESPCS-NAD83W.crd
CADD FILE: J:\AAA\2021\2132300\CARLSON\ENGR\2132300-ST.DWG



ZONING REGULATIONS:

ZONING INFORMATION PER THE TOWN OF KITTERY ZONING ORDINANCE
LAST REVISED OCTOBER 24, 2022 – E-CODE ONLINE APRIL 11, 2023

COMMERCIAL 3 – BYPASS/OLD POST RD COMMERCIAL ZONE (C-3)

MINIMUM LOT SIZE:	40,000 SQUARE FEET
MINIMUM STREET FRONTAGE:	NO MINIMUM (MUST CONFORM WITH 16.5.14)
MINIMUM FRONT SETBACK:	15 FEET (OLD POST ROAD)
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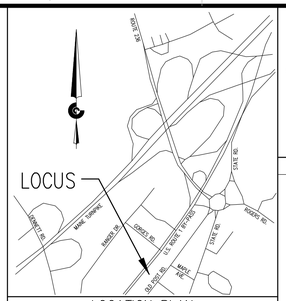
MAXIMUM BUILDING HEIGHT:	40 FEET
MAXIMUM IMPERVIOUS SURFACE:	70%* (SEE 16.4.21.E.2.F)

*FOR CURRENTLY DEVELOPED LOTS WITH A PROPOSED NON-RESIDENTIAL REDEVELOPMENT (SEE 16.4.21.E.2.F)

FOR COMPLETE ZONING INFORMATION REFER TO THE TOWN OF KITTERY ZONING ORDINANCE



LOCATION PLAN
(NOT TO SCALE)

NOTES:

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3. ELEVATIONS DEPICTED HEREON ARE REFERENCED TO NAVD88, DERIVED FROM THE ABOVE REFERENCED GPS SURVEY. [TO CONVERT NAVD88 ELEVATIONS TO NGVD29 ELEVATIONS ADD 0.76'].
4. THE 1-FOOT CONTOUR INTERVAL TOPOGRAPHIC INFORMATION ON THE SUBJECT PROPERTY IS BASED ON THE ABOVE-REFERENCED, ON-THE-GROUND FIELD SURVEY.
5. RECORD OWNER: 90 US ROUTE 1 LLC
6. ASSESSOR'S INFORMATION: TOWN OF KITTERY ASSESSOR'S MAP 14, LOT 2
7. DEED REFERENCE: Y.C.R.D. 17938/10
8. THE LOCUS PARCEL IS LOCATED IN "ZONE C" ON THE NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP (FIRM) FOR THE TOWN OF KITTERY, MAINE, YORK COUNTY, COMMUNITY PANEL NUMBER 230171 0007 C, EFFECTIVE DATE JULY 5, 1984. ZONE C IS DEFINED AS "AREAS OF MINIMAL FLOODING".
9. UTILITY INFORMATION DEPICTED HEREON IS COMPILED USING PHYSICAL EVIDENCE LOCATED IN THE FIELD. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS NEED TO CONTACT DIGSAFE AND FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
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11. A PORTION OF A LANDSCAPED AREA AND GRAVEL DRIVEWAY ENCROACH ONTO THE LOCUS PARCEL AT THE SOUTHEASTERLY CORNER.

REFERENCE PLAN:

1. "EXISTING CONDITIONS PLAN FOR PROPERTY AT 90 U.S. ROUTE 1 BY-PASS, KITTERY, YORK COUNTY, MAINE, OWNED BY 90 U.S. ROUTE 1, LLC", PREPARED BY NORTH EASTERLY SURVEYING, INC., DATED JULY 11, 2019, LAST REVISED OCTOBER 8, 2019, NOT RECORDED, EASTERLY SURVEYING PROJECT NO: 19654.

LEGEND:

ø	DIAMETER
18828/758	DEED BOOK/PAGE NUMBER
INV.	INVERT
RCP	REINFORCED CONCRETE PIPE
PVC	POLYVINYL CHLORIDE
HDPE	HIGH DENSITY POLYETHYLENE
CMP	CORRUGATED METAL PIPE
CONC.	CONCRETE
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	SURVEY BENCHMARK (AS NOTED)
	APPROXIMATE ADJOINING PARCEL BOUNDARY LINE
	LOCUS PARCEL PROPERTY LINE
N:96582.05' E:2797117.40'	STATE PLANE COORDINATES

CERTIFICATION:

THIS SURVEY WAS PERFORMED UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH THE STANDARDS OF PRACTICE ESTABLISHED BY THE MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS (02-360 CMR CHAPTER 90, PART I & PART II – SEE NOTES HEREON FOR EXCEPTIONS, IF ANY).

APRIL 25, 2023

MICHAEL P. PEVERETT
MAINE PROFESSIONAL LAND SURVEYOR #2362
CIVIL CONSULTANTS
SOUTH BERWICK, MAINE 03908
207-384-2550

STATE OF MAINE
MICHAEL P. PEVERETT
2362
PROFESSIONAL LAND SURVEYOR

© CIVIL CONSULTANTS
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South Berwick
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NO.	REVISIONS	INT.	DATE

RECORD OWNER:
90 US ROUTE 1 LLC

ADDRESS:
PO BOX 630
KITTERY, ME 03904

UPDATED BOUNDARY & EXISTING CONDITIONS PLAN OF LAND OF
90 US ROUTE 1 LLC
90 U.S. ROUTE 1 BY-PASS
KITTERY - YORK COUNTY, MAINE

PREPARED FOR: 90 US ROUTE 1 LLC
CLIENT ADDRESS: PO BOX 630, KITTERY, ME 03904

1" = 20'
0' 20'

DATE: APRIL 25, 2023
DRAWN BY: AHP/MPP
CHECKED BY: CHM
APPROVED BY: MPP

BOUNDARY/EXISTING CONDITIONS PLAN

PROJECT NO: 2132300

B1

SHEET: 1 OF 1

COORDINATE FILE: J:\AAA\2021\2132300\CARLSON\SURVEY\POINTS\2132300-MESPCS-NAD83W.crd
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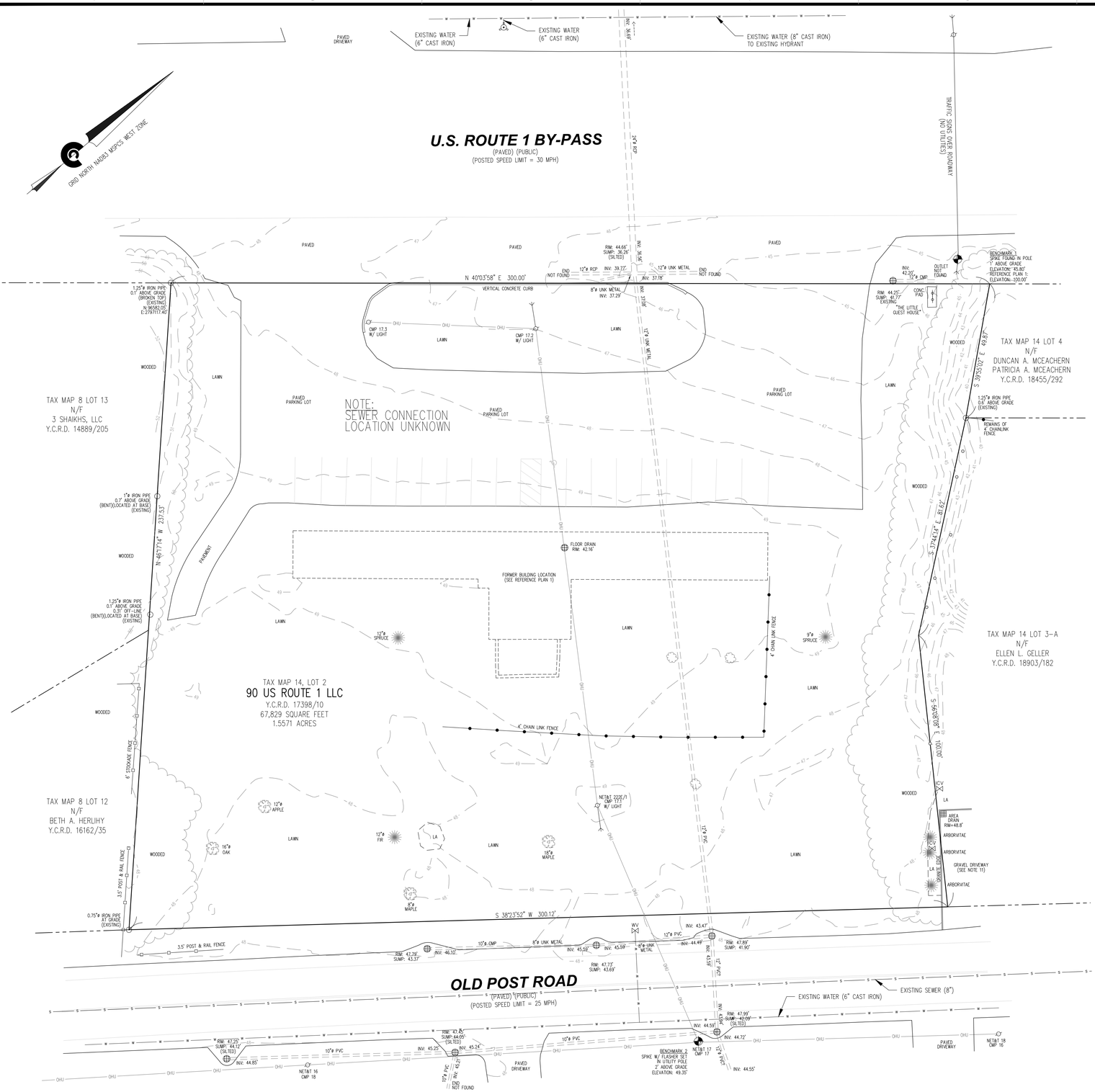

EXISTING COVERAGE INFO

LOT AREA	67,829	SF
MOTEL BUILDING	3,702	SF
OPEN FOUNDATION (REAR OF MOTEL)	328	SF
PAVEMENT	15,275	SF
VERTICAL CONCRETE CURB	62	SF
CONCRETE PAD (THE LITTLE GUEST HOUSE SIGN)	25	SF
GRANITE EDGE	9	SF
TOTAL IMPERVIOUS AREA	19,401	SF
PROPOSED LOT COVERAGE	19,401/67,829 = 28.60% < 70%	

ZONING REGULATIONS:

ZONING INFORMATION PER THE TOWN OF KITTERY ZONING ORDINANCE
LAST REVISED OCTOBER 24, 2022 - E-CODE ONLINE APRIL 11, 2023

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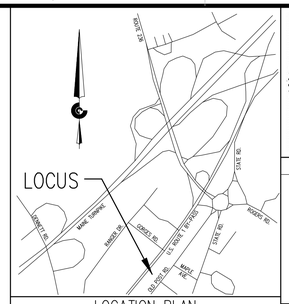

LOCATION PLAN
(NOT TO SCALE)

STATE OF MAINE
GEOFFREY R. ALLEN
No. 9679
LICENSED PROFESSIONAL ENGINEER
2/19/2024

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NO.	REVISIONS	INT.	DATE
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PREPARED FOR: 90 US ROUTE 1 LLC
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DATE: APRIL 25, 2023
DRAWN BY: AHP/MPP
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PROJECT NO: 2132300

EC1

SHEET: 1 OF 1

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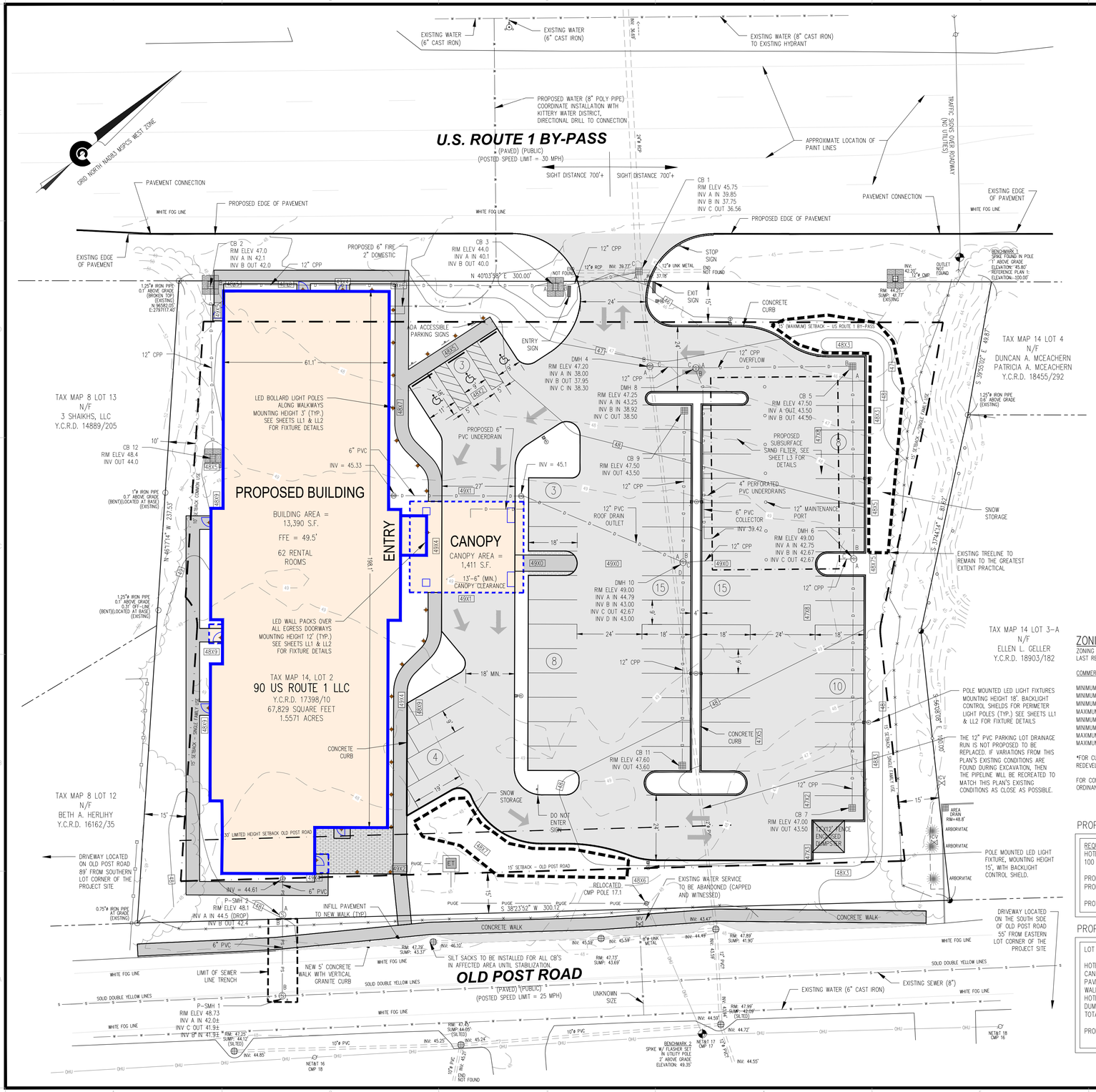

CONDITIONS OF APPROVAL:

THE PLANNING BOARD AT THE XX XX, XXXX MEETING APPROVED THE PROJECT WITH THE FOLLOWING CONDITIONS.

1. NO CHANGES, ERASURES, MODIFICATIONS OR REVISIONS MAY MADE TO ANY PLANNING BOARD APPROVED FINAL PLAN . (16.7.12.C)
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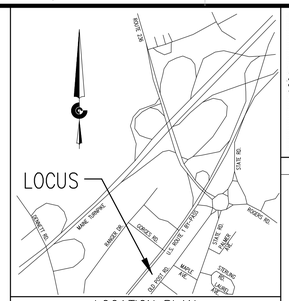

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12. SNOW REMOVAL SHALL BE IN AREAS SHOWN. SNOW SHALL NOT BE STORED IN WETLAND AREAS. IF REQUIRED SNOW SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.

REFERENCE PLAN:

1. "EXISTING CONDITIONS PLAN FOR PROPERTY AT 90 U.S. ROUTE 1 BY-PASS, KITTERY, YORK COUNTY, MAINE, OWNED BY 90 U.S. ROUTE 1, LLC", PREPARED BY NORTH EASTERLY SURVEYING, INC., DATED JULY 11, 2019, LAST REVISED OCTOBER 8, 2019, NOT RECORDED, EASTERLY SURVEYING PROJECT NO: 19654.

SCOPE OF WORK:

THE INTENT OF THE PROJECT IS TO CREATE A 3-STORY HOLIDAY INN EXPRESS HOTEL CONTAINING 62 ROOMS AND AN ENTRY CANOPY. THE PARKING LOT WILL BE REVISED TO PROVIDE 66 PARKING SPACES, INCLUDING 3 ADA ACCESSIBLE PARKING SPACES. THE DRIVEWAY ACCESS FROM ROUTE 1 BYPASS WILL BE REVISED TO PROVIDE A SINGLE TWO-WAY ACCESS LOCATED BETWEEN THE TWO EXISTING ENTRANCES WHICH ARE INTENDED TO BE REMOVED. THE ENTIRE LOT AREA IS TO BE DISTURBED BY THE PROPOSED REDEVELOPMENT.

ZONING REGULATIONS:

ZONING INFORMATION PER THE TOWN OF KITTERY ZONING ORDINANCE
LAST REVISED OCTOBER 24, 2022 - E-CODE ONLINE APRIL 11, 2023

COMMERCIAL 3 - BYPASS/OLD POST RD COMMERCIAL ZONE (C-3)

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FOR COMPLETE ZONING INFORMATION REFER TO THE TOWN OF KITTERY ZONING ORDINANCE

PROPOSED PARKING SPACES

REQUIRED:
HOTEL: 1 SPACE PER RENTAL ROOM PLUS 1 SPACE FOR EACH 100 SQUARE FEET OF MEETING ROOM

PROPOSED RENTAL ROOMS	=	62
PROPOSED MEETING ROOM (193 SF)	=	2
		64

PROVIDED: 66 SPACES > 64

PROPOSED COVERAGE INFO

LOT AREA	67,829	SF
HOTEL BUILDING	13,390	SF
CANOPY	1,411	SF
PAVEMENT	26,649	SF
WALKWAYS	2,570	SF
HOTEL PATIO AREA	433	SF
DUMPSTER PAD	144	SF
TOTAL IMPERVIOUS AREA	44,597	SF
PROPOSED LOT COVERAGE	44,597/67,829 = 65.75% < 70%	

LEGEND:

ø	DIAMETER
18828/758	DEED BOOK/PAGE NUMBER
INV.	INVERT
RCP	REINFORCED CONCRETE PIPE
PVC	POLYVINYL CHLORIDE
HDPE	HIGH DENSITY POLYETHYLENE
CMP	CORRUGATED METAL PIPE
CONC.	CONCRETE
LA	LANDSCAPED AREA
N/F	NOW OR FORMERLY
Y.C.R.D.	YORK COUNTY REGISTRY OF DEEDS
UNK	UNKNOWN
(2X)	MULTIPLE TREES OF SIMILAR TYPE
▫	4' WOOD FENCE POST
○	STEEL FENCE POST (VARIABLE HEIGHT)
ICV	IRRIGATION CONTROL VALVE
WV	WATER GATE VALVE
	FIRE HYDRANT
	SEWER MANHOLE
	CATCH BASIN
	GUY WIRE
	UTILITY POLE
OHU	OVERHEAD UTILITIES
	CHAIN LINK FENCE (AS NOTED)
	WOOD FENCE (AS NOTED)
	CONCRETE CURB
	SIGN (AS NOTED)
	HANDICAPPED PARKING
	DECIDUOUS TREE (AS NOTED)
	CONIFEROUS TREE (AS NOTED)
	BUSH
	EXISTING IRON PIPE (AS NOTED)
	5/8" REBAR W/CAP "CIVIL CONSULT PLS 2362" TO BE SET
	SURVEY BENCHMARK (AS NOTED)
	APPROXIMATE ADJOINING PARCEL BOUNDARY LINE
	LOCUS PARCEL PROPERTY LINE
N 96582.05' E 279117.40'	STATE PLANE COORDINATES

STATE OF MAINE
GEOFFREY R. AIKEN
No. 9679
LICENSED PROFESSIONAL ENGINEER
2/19/2024

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P.O. Box 100
South Berwick
Maine
03908
207-384-2550
www.civcon.com

NO.	REVISIONS	INT.	DATE
1	REVISED PER TOWN COMMENTS	GRA	02/16/24

RECORD OWNER: 90 US ROUTE 1 LLC
ADDRESS: PO BOX 630 KITTERY, ME 03904

REDEVELOPMENT PLAN OF LAND OF
90 US ROUTE 1 LLC
90 U.S. ROUTE 1 BY-PASS
KITTERY - YORK COUNTY, MAINE

PREPARED FOR: 90 US ROUTE 1 LLC
CLIENT ADDRESS: PO BOX 630, KITTERY, ME 03904

1" = 20'
0' 20'

DATE: 06/23/2023
DRAWN BY: JAA/DRC
CHECKED BY: GRA
APPROVED BY:

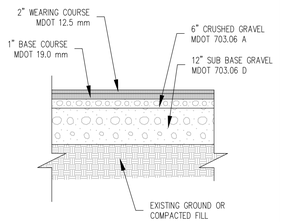
PROPOSED SITE PLAN

PROJECT NO: 21-323.00

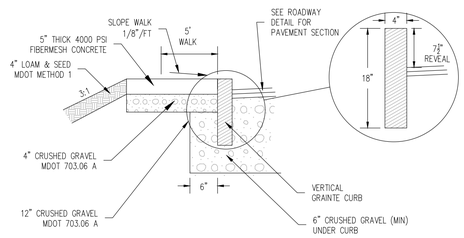
L1

SHEET: 1 OF 4

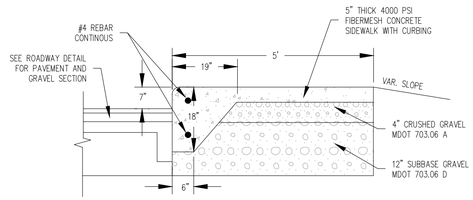
COORDINATE FILE: J:\AAA\2021\2132300\CARLSON\SURVEY\POINTS\2132300-MESPCS-NAD83W.crd
CADD FILE: J:\AAA\2021\2132300\CARLSON\ENGR\2132300-ST.DWG



TYPICAL PAVEMENT SECTION
NOT TO SCALE

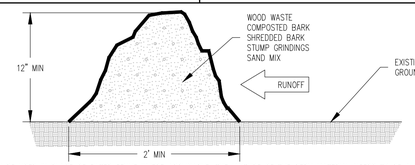


VERTICAL GRANITE CURB WITH SIDEWALK DETAIL
NOT TO SCALE



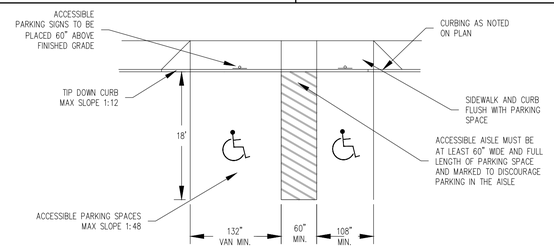
CONCRETE CURB DETAIL (TYPICAL)
NOT TO SCALE

NOTE: THIS DETAIL IS FOR ALL SIDEWALKS ON SITE AND NOT FOR THE PROPOSED SIDEWALK ALONG OLD POST ROAD. SEE VERTICAL GRANITE CURB WITH SIDEWALK DETAIL FOR CURBING ALONG OLD POST ROAD.



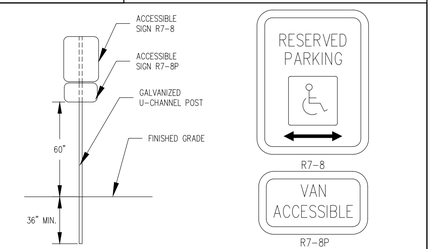
NOTES:
1. THIS BERM MAY BE USED IN PLACE OF FILTER FENCE WHERE APPLICABLE. THE MIXTURE OF THE BERM MATERIAL NEEDS TO BE A WELL-GRADE BLEND OF ORGANIC & MINERAL SUBSTANCE CONFORMING TO THE FOLLOWING STANDARDS:
   ORGANIC MATTER CONTENT: BETWEEN 80% AND 100%
   MOISTURE CONTENT: 30%-60%
   PH: BETWEEN 5.0 AND 8.0
   PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 5" SCREEN AND A MINIMUM OF 70% MAXIMUM OF 85%, PASSING A 0.75" SCREEN. LARGE PORTION OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE MIX
2. THE BERM SHALL BE PLACED ALONG A RELATIVELY LEVEL CONTOUR WHEREVER POSSIBLE. THE EXISTING SURFACE MUST BE SCOURED AND THE MIXTURE KEYED IN LIKE ANY OTHER SEDIMENT CONTROL MEASURE.

FILTER BERM DETAIL
NOT TO SCALE



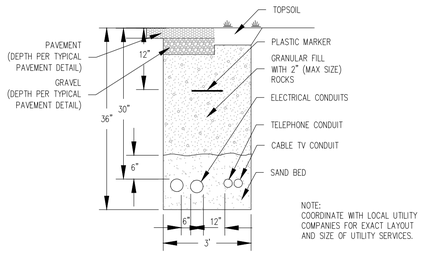
ACCESSIBILE VAN & CAR PARKING DETAIL
NOT TO SCALE

NOTES:
1. ALL SIGNAGE SHALL BE TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS AND MDOT STANDARDS.
2. SIGN, HARDWARE, AND INSTALLATION TO CONFORM TO MDOT STANDARD SPECIFICATIONS, SECTION 719 – SIGNING MATERIAL.
3. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS/ CATALOGUE CUTS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ERECTING SIGNS.



SIGN R7-8 AND R7-8P AS SHOWN IN THE MUTCD. INSTALLATION WILL BE IN ACCORDANCE WITH THE MUTCD AND MDOT STANDARD SPECIFICATIONS SECTION 719 – SIGNING MATERIAL.

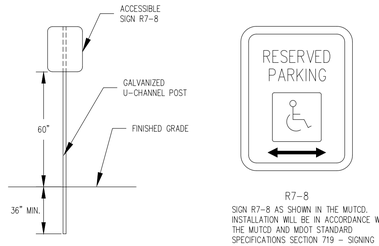
ACCESSIBLE VAN SIGN & SIGN POST
NOT TO SCALE



NOTE:
COORDINATE WITH LOCAL UTILITY COMPANIES FOR EXACT LAYOUT AND SIZE OF UTILITY SERVICES.

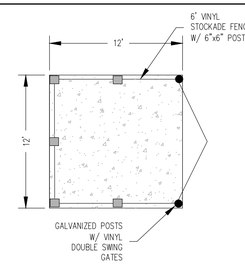
ELECTRIC & TELEPHONE TRENCH DETAIL
NOT TO SCALE

NOTES:
1. ALL SIGNAGE SHALL BE TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS AND MDOT STANDARDS.
2. SIGN, HARDWARE, AND INSTALLATION TO CONFORM TO MDOT STANDARD SPECIFICATIONS, SECTION 719 – SIGNING MATERIAL.
3. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS/ CATALOGUE CUTS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ERECTING SIGNS.

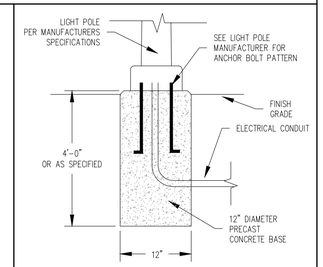


SIGN R7-8 AS SHOWN IN THE MUTCD. INSTALLATION WILL BE IN ACCORDANCE WITH THE MUTCD AND MDOT STANDARD SPECIFICATIONS SECTION 719 – SIGNING MATERIAL.

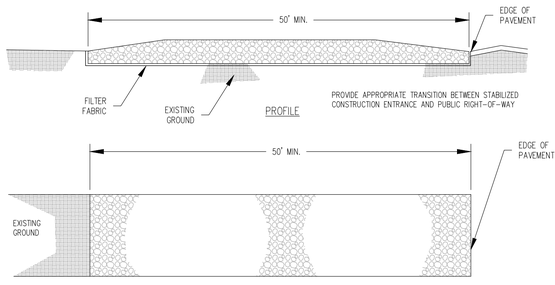
ACCESSIBLE SIGN & SIGN POST
NOT TO SCALE



DUMPSTER ENCLOSURE DETAIL
NOT TO SCALE



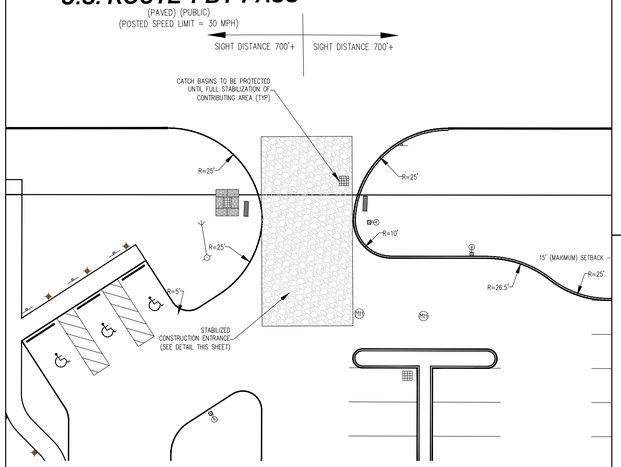
TYPICAL LIGHT POLE BASE
NOT TO SCALE



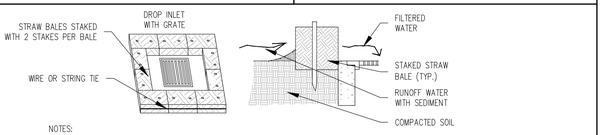
CONSTRUCTION SPECIFICATIONS

1. STONE SIZE – AASHTO DESIGNATION M43, SIZE NO 2 (2-1/2" TO 1-1/2"). USE CRUSHED STONE.
2. LENGTH – AS EFFECTIVE, BUT NOT LESS THAT 50 FEET.
3. THICKNESS – NOT LESS THAN EIGHT (8) INCHES.
4. WIDTH – NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
5. WASHING – WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATER COURSE THROUGH USE OF SAND BAGS, GRAVEL, BOARDS, OR OTHER APPROVED METHODS.
6. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED, ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



STABILIZED CONSTRUCTION ENTRANCE PLAN
SCALE: 1 " = 20'



NOTES:
1. BALES SHALL BE EITHER WIRE-BOUND OR STRING-TIED WITH THE BINDINGS ORIENTED AROUND THE SIDES RATHER THAN OVER AND UNDER THE BALES
2. BALES SHALL BE PLACED LENGTHWISE IN A SINGLE ROW SURROUNDING THE INLET, WITH THE ENDS OF ADJACENT BALES PRESSED TOGETHER.
3. THE FILTER BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED AROUND THE INLET THE WIDTH OF A BALE TO A MINIMUM DEPTH OF 4 INCHES. AFTER THE BALES ARE STAKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AND COMPACTED AGAINST THE BARRIER.
4. EACH BALE SHALL BE SECURELY ANCHORED AND HELD IN PLACE BY AT LEAST TWO STAKES OR REBARS DRIVEN THROUGH THE BALE.
5. LOOSE STRAW SHALL BE WEDGED BETWEEN BALES TO PREVENT WATER FROM ENTERING BETWEEN BALES.

CATCH BASIN HAY BALE BARRIER
NOT TO SCALE

MUTCD R1-1
NOT TO SCALE

MUTCD R5-1
NOT TO SCALE

EROSION AND SEDIMENT CONTROL PRACTICES

1. NO SOIL SHALL BE DISTURBED DURING THE PERIOD OF MARCH 1 THROUGH APRIL 15, NOR DURING ANY OTHER PERIOD WHEN SOILS ARE SATURATED DUE TO RAIN OR SNOW MELT.
2. DISTURBED SOILS SHALL BE STABILIZED WITHIN ONE (1) WEEK FROM THE TIME IT WAS LAST ACTIVELY WORKED USING TEMPORARY OR PERMANENT MEASURES SUCH AS PLACEMENT OF RIPRAP, MULCH OR EROSION CONTROL BLANKET, OR OTHER COMPARABLE MEASURES.
3. HAY OR STRAW MULCH SHALL BE APPLIED AT A RATE OF AT LEAST ONE (1) BALE PER 500 SQUARE FEET (1-2 TONS PER ACRE).
4. IF MULCH IS LIKELY TO BE REMOVED DUE TO TO STEEP SLOPES OR WIND, IT SHALL BE ANCHORED WITH NETTING, PEG OR TWINE, OR OTHER SUITABLE METHOD AND SHALL BE MAINTAINED UNTIL A CATCH OF VEGETATION IS ESTABLISHED OVER THE ENTIRE DISTURBED AREA.
5. MULCH OR EROSION CONTROL BLANKETS, ADDITIONAL STEPS SHALL BE TAKEN WHERE NECESSARY IN ORDER TO PREVENT SEDIMENTATION OF THE WATER. EVIDENCE OF SEDIMENTATION INCLUDES VISIBLE GULLY EROSION, DISCOLORATION OF WATER BY SUSPENDED PARTICLES AND SLUMPING OF BANKS. SILT FENCES, STAKED HAY BALES AND OTHER SEDIMENTATION CONTROL MEASURES, WHERE PLANNED FOR, SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF WORK, BUT SHALL ALSO BE INSTALLED WHEREVER NECESSARY DUE TO SEDIMENTATION.
6. MULCH OR OTHER TEMPORARY MEASURES SHALL BE MAINTAINED UNTIL THE SITE IS PERMANENTLY STABILIZED WITH VEGETATION OR OTHER PERMANENT CONTROL MEASURES AFTER WHICH TEMPORARY MEASURES WILL BE REMOVED.
7. PERMANENT RE-VEGETATION OF ALL DISTURBED AREAS, USING NATIVE PLANT MATERIAL WHEN POSSIBLE, SHALL OCCUR WITHIN 30 DAYS FROM THE TIME THE AREAS WERE LAST ACTIVELY WORKED, OR FOR FALL AND WINTER ACTIVITIES, 45 DAYS BEFORE THE FIRST KILLING FROST, EXCEPT WHERE PRECLUDED BY THE TYPE OF ACTIVITY (E.G. RIRRAP, ROAD SURFACES, ETC.). THE VEGETATIVE COVER SHALL BE MAINTAINED.
8. DISPOSAL OF COLLECTED DEBRIS MUST BE IN CONFORMANCE WITH MAINE SOLID WASTE LAW, TITLE 38 MRSA SECTION 1301 ET. SEQ.
9. LIME AND FERTILIZER APPLICATION RATES SHALL NOT EXCEED THE FOLLOWING:

   GROUND LIMESTONE: 3 TONS/ACRE (130 LBS./1000 S.F.)
   FERTILIZER, 10-10-10 OR EQUIVALENT: 600 LBS./ACRE (14 LBS./1000 S.F.)

FERTILIZER SHALL NOT BE APPLIED BEFORE START OF THE GROWING SEASON NOR AFTER SEPTEMBER 30. FERTILIZED AREAS SHALL BE MULCHED TO REDUCE OFF-SITE TRANSPORT OF NUTRIENTS UNTIL USED BY VEGETATIVE GROWTH.

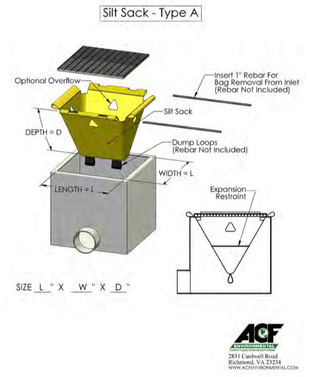
SEEDING MIXTURE AND SCHEDULE:

SPREAD TOPSOIL UNIFORMLY 6" DEEP OVER AREAS TO BE RECLAIMED. THE FOLLOWING SEED MIXTURE SHALL BE USED:

LAWNS:

KENTUCKY BLUEGRASS	1.60 LBS./1000 S.F.
PERENNIAL RYE GRASS	0.40 LBS./1000 S.F.
TOTAL	2.00 LBS./1000 S.F.

APPLY LIME AND FERTILIZER AS SPECIFIED UNDER THE EROSION AND SEDIMENTATION CONTROL NOTES. WORK INTO THE TOP (4) INCHES OF SOIL PRIOR TO SEEDING. AFTER SEEDING, APPLY MULCH HAY AS SPECIFIED. ON FLAT AREAS AND NOT EXPOSED TO WIND, THE MULCH WILL BE ANCHORED BY WETTING DOWN. IN OTHER AREAS, JUTE NETTING SHALL BE USED FOR ANCHORAGE. THE ABOVE SEEDING SCHEDULE IS APPLICABLE IF SEEDING DURING THE GROWING SEASON (APRIL 15 TO JUNE 15 AND AUGUST 30 TO SEPTEMBER 30). BETWEEN JUNE 15 AND AUGUST 30, SEEDING WILL BE DELAYED UNTIL AUGUST 30. IF SOIL IS DISTURBED BETWEEN OCTOBER 1 AND NOVEMBER 1, DELAY SEEDING UNTIL NOVEMBER 1. AFTER NOVEMBER 1 AND BEFORE A SNOW COVER FORMS, THE SAME PROCEDURE WILL BE FOLLOWED EXCEPT THE SEED RATE WILL BE DOUBLED. AFTER SNOW COVER AND BEFORE APRIL 15, SEEDING WILL BE DELAYED UNTIL APRIL 15. HAY MULCH WILL BE APPLIED AT A RATE OF 150 LBS./1000 SQUARE FEET. THIS WILL BE ANCHORED BY NON-ASPHALTIC TACKIFIER SPRAYED ON LAWNS AND JUTE NETTING IN DRAINAGE WAYS AND OTHER AREAS.



SILT SACK
NOT TO SCALE

TAX MAP 14 LOT 2

STATE OF MAINE
GEOFFREY R. AILES
No. 9679
LICENSED PROFESSIONAL ENGINEER
2/9/2024

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NO.	DATE
1	REVISED PER TOWN COMMENTS 02/16/24
2	REVISED PER TOWN COMMENTS 12/15/23
REVISIONS	INT.
	GRA
	N.R

RECORD OWNER:
90 US ROUTE 1 LLC

ADDRESS:
PO BOX 630
KITTERY, ME 03904

REDEVELOPMENT PLAN OF LAND OF
90 US ROUTE 1 LLC
90 U.S. ROUTE 1 BY-PASS
KITTERY - YORK COUNTY, MAINE

PREPARED FOR:
90 US ROUTE 1 LLC
CLIENT ADDRESS:
PO BOX 630, KITTERY, ME 03904

1" = 20'
0' 20'

DATE: 06/23/2023
DRAWN BY: JAA/DRC
CHECKED BY: GRA
APPROVED BY:

CONSTRUCTION DETAILS

PROJECT NO: 2132300

L2

SHEET: 2 OF 4

COORDINATE FILE: J:\AAA\2021\2132300\CARLSON\SURVEY\POINTS\2132300-MESPCS-NAD83W.crd
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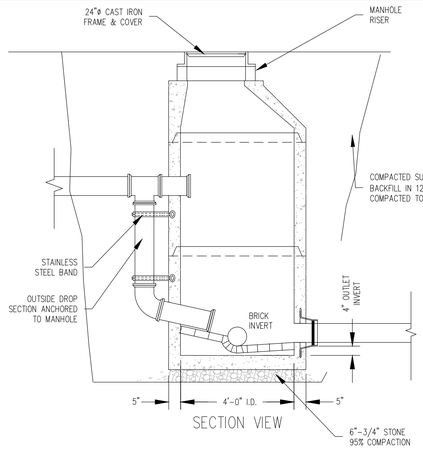
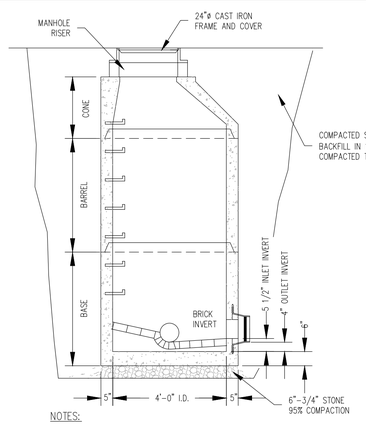


SECTION VIEW

SEWER DROP MANHOLE DETAIL

NOT TO SCALE

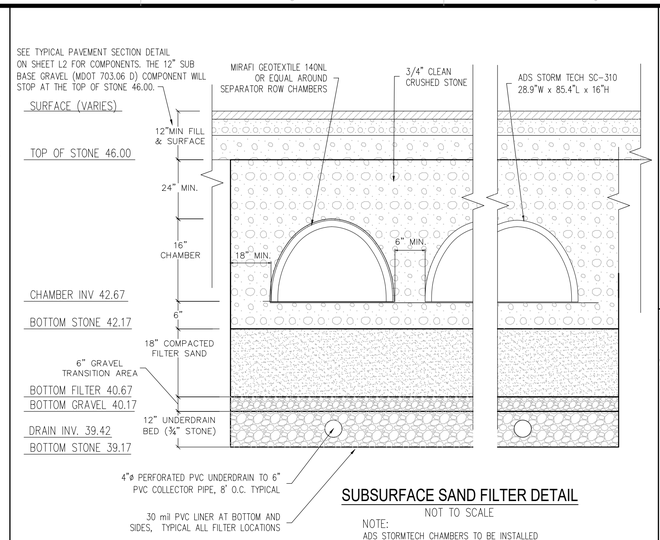


NOTES:

1. CONCRETE: 4,000 PSI AFTER 28 DAYS.
2. REINFORCING: H-20 LOADING 4 X 4/4 X 4 W.W.M.
3. SHIPLAP JOINTS SEALED WITH 1 STRIP OF 1" DIA. BUTYL RUBBER SEALANT.
4. EXTERIOR ASPHALT COATED. (SANITARY MANHOLES ONLY)
5. LOCK JOINT FLEXIBLE PIPE SLEEVES, CAST IN.
6. EACH CASTING TO HAVE LIFTING HOLES CAST IN.
7. MANHOLE STEPS @ 12" O.C. (WHEN REQUIRED)
8. PROVIDE 2" LIP AT TOP OF CONE TO ACCOMODATE VACUUM TESTING. (SANITARY MANHOLES ONLY)

SEWER MANHOLE DETAIL

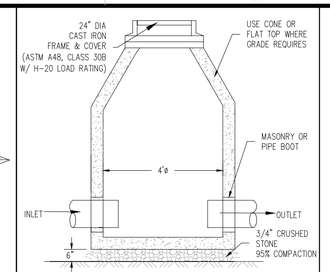
NOT TO SCALE



SUBSURFACE SAND FILTER DETAIL

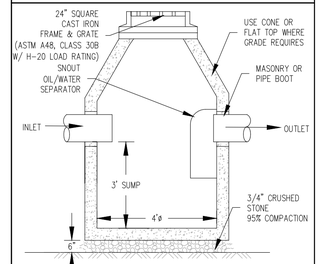
NOT TO SCALE

NOTE:
ADS STORMTECH CHAMBERS TO BE INSTALLED PER MANUFACTURER INSTRUCTIONS.



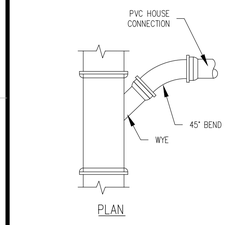
DRAIN MANHOLE

NOT TO SCALE



CATCH BASIN WITH SNOUT

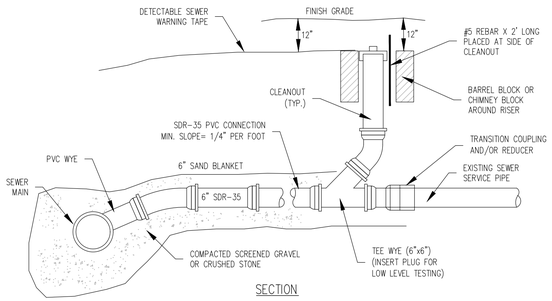
NOT TO SCALE



PLAN

SERVICE CONNECTION NOTES:

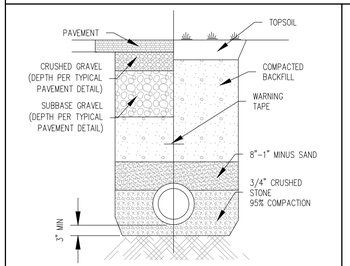
1. SEE DETAILS FOR SERVICE CONNECTION REQUIREMENTS.
2. SERVICE CONNECTION SHALL BE INSTALLED BELOW WATER MAIN WHERE POSSIBLE.
3. CLEANOUTS SHALL BE INSTALLED AT EACH SERVICE CONNECTION.
4. REBAR SHALL BE PLACED AT SIDE OF CLEANOUT.
5. CLEANOUT SHALL BE USED TO PLUG AND TEST ALL NEW LATERALS WITH MINIMAL INTERRUPTION TO OPERATION OF HOMEOWNER SANITARY SYSTEM.
6. CLEANOUT RISER PIPE AND FITTINGS SHALL BE INCIDENTAL AND SHALL NOT BE CONSIDERED FOR PAYMENT.
7. CLEANOUTS SHALL BE PLACED EVERY 75 FEET AND AT BENDS IN PIPING.



SECTION

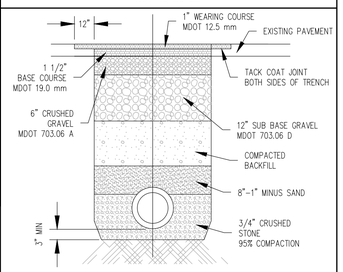
SERVICE CONNECTION DETAIL

NOT TO SCALE



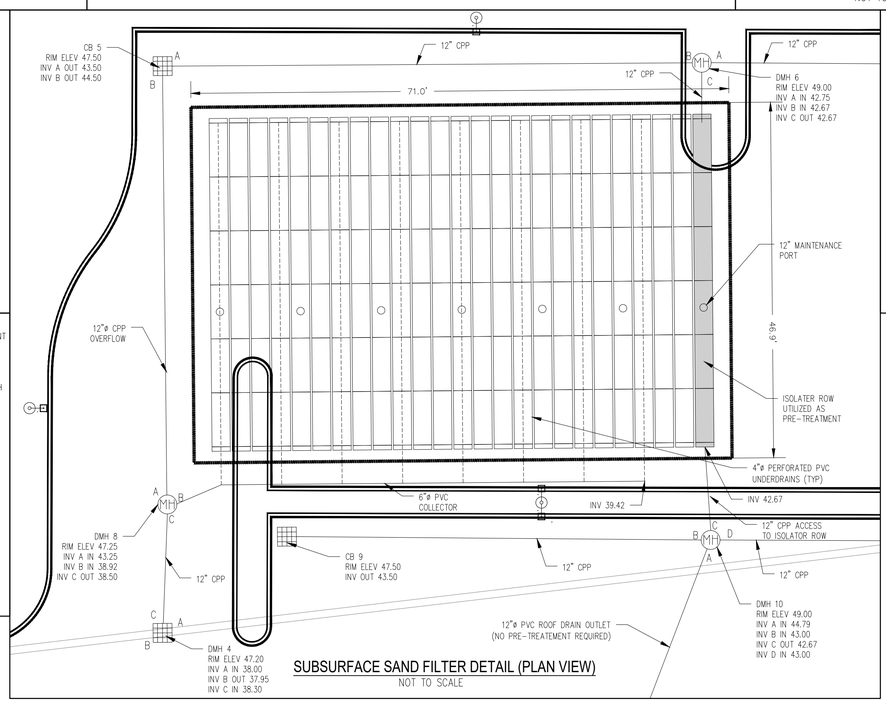
SEWER LINE TRENCH DETAIL

NOT TO SCALE



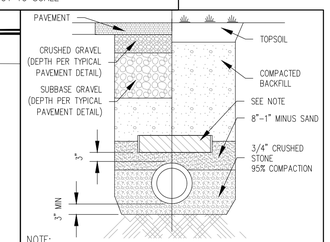
SEWER LINE TRENCH PATCH DETAIL

NOT TO SCALE



SUBSURFACE SAND FILTER DETAIL (PLAN VIEW)

NOT TO SCALE



NOTE:
2"x2' STYROFOAM INSULATION BOARD SHALL BE PLACED IN AREAS WHERE COVER OVER LINE IS LESS THAN 2.5', OR WHERE SHOWN.

DRAINLINE TRENCH DETAIL

NOT TO SCALE

TAX MAP 14 LOT 2

COORDINATE FILE: J:\AAA\2021\2132300\CARLSON\SURVEY\POINTS\2132300-MESPCS-NAD83W.crd CADD FILE: J:\AAA\2021\2132300\CARLSON\ENGR\2132300-ST.DWG

STATE OF MAINE
GEOFFREY R. ALLEN
No. 9679
LICENSED PROFESSIONAL ENGINEER
2/9/2024

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NO.	REVISIONS	INT.	DATE
2	REVISED PER TOWN COMMENTS	GRA	02/16/24
1	REVISED PER TOWN COMMENTS	NJR	12/15/23

RECORD OWNER:
90 US ROUTE 1 LLC

ADDRESS:
PO BOX 6.30
KITTERY, ME 03904

REDEVELOPMENT PLAN OF LAND OF
90 US ROUTE 1 LLC
90 U.S. ROUTE 1 BY-PASS
KITTERY - YORK COUNTY, MAINE

PREPARED FOR:
90 US ROUTE 1 LLC
CLIENT ADDRESS:
PO BOX 630, KITTERY, ME 03904

1" = 20'
0' 20'

DATE: 06/23/2023
DRAWN BY: JAA/DRC
CHECKED BY: GRA
APPROVED BY:

CONSTRUCTION DETAILS

PROJECT NO: 2132300

L3

SHEET: 3 OF 4

5

STORMWATER MAINTENANCE PROCEDURES DURING CONSTRUCTION

THE FOLLOWING PROCEDURES WILL BE FOLLOWED FOR MAINTENANCE OF THE STORMWATER MANAGEMENT FACILITIES AND EROSION & SEDIMENTATION CONTROL (ESC) MEASURES AT THIS SITE. NOTE: FOR THE PURPOSES OF THESE PROCEDURES, A SIGNIFICANT RAINFALL IS 1/2" IN A 24 HOUR PERIOD.

CONSTRUCTION INSPECTIONS WILL BE PERFORMED AT LEAST ONCE A WEEK AS WELL AS BEFORE, AND WITHIN 24 HOURS AFTER A STORM EVENT.

IF INSPECTIONS IDENTIFY AREAS IN NEED OF REPAIR, THOSE REPAIRS SHALL BE STARTED BY THE END OF THE NEXT WORK DAY AND COMPLETED WITHIN SEVEN DAYS (OR BEFORE THE NEXT STORM EVENT).

ALL CONSTRUCTION INSPECTIONS SHALL BE CONDUCTED BY SOMEONE WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL.

THE SCOPE OF CONSTRUCTION INSPECTIONS INCLUDES THE EROSION CONTROL MEASURES AS WELL AS DISTURBED AREAS, MATERIAL STORAGE AREAS, AND LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE (STABILIZED CONSTRUCTION ENTRANCE).

THE CONTRACTOR WILL BE RESPONSIBLE FOR INSPECTION AND MAINTENANCE OF ALL STORMWATER AND ESC MEASURES UNTIL FINAL STABILIZATION OF THE SITE IS ACHIEVED. UPON STABILIZATION, THE DEVELOPER WILL BE RESPONSIBLE FOR LONG-TERM INSPECTION AND MAINTENANCE OF STORMWATER MANAGEMENT AND EROSION CONTROL MEASURES.

MAINTENANCE LOG

THE RESPONSIBLE PARTY SHALL ESTABLISH A MAINTENANCE LOG/PLAN FOR USE IN RECORDING MAINTENANCE ACTIVITIES. AS A MINIMUM, THE LOG SHALL INCLUDE THE DATE(S) OF ACTIVITIES, WHO PERFORMED THE DUTIES, WHAT WAS DONE (I.E. LOOKED AT DETENTION BERMS, CLEANED DROP INLETS, ETC.), THE RESULTS OF THE ACTIVITY (I.E. ALL STRUCTURES WERE IN GOOD SHAPE, OR, POND #44 NEEDS TO BE REPAIRED). IF ANY ITEM NEEDS TO BE REPAIRED, A FOLLOW-UP ENTRY SHALL SHOW THE DATE THAT REPAIRS WERE COMPLETED.

CONSTRUCTION INSPECTION AND CORRECTIVE ACTION DOCUMENTATION RECORDS WILL BE MAINTAINED BY THE CONTRACTOR FOR A MINIMUM OF THREE YEARS AND PROVIDED TO THE DEVELOPER.

LAND GRADING AND SLOPE STABILIZATION

ALL SLOPES SHOULD BE CHECKED PERIODICALLY TO SEE THAT VEGETATION IS IN GOOD CONDITION. ANY RILLS OR DAMAGE FROM EROSION AND ANIMAL BURROWING SHOULD BE REPAIRED IMMEDIATELY TO AVOID FURTHER DAMAGE. IF SEEPS DEVELOP ON THE SLOPES, THE AREA SHOULD BE EVALUATED TO DETERMINE IF THE SEEP WILL CAUSE AN UNSTABLE CONDITION. SUBSURFACE DRAINS OR GRAVEL MULCHING MAY BE REQUIRED TO SOLVE SEEP PROBLEMS. DIVERSIONS, BERMS, AND WATERWAYS IN THE LAND GRADING AREA SHOULD BE CHECKED TO SEE THAT THEY ARE FUNCTIONING PROPERLY. PROBLEMS FOUND DURING THE INSPECTIONS SHOULD BE REPAIRED. SLOPES AND ASSOCIATED PRACTICES UTILIZING VEGETATION SHOULD BE LIMED AND FERTILIZED AS NECESSARY TO KEEP THE VEGETATION HEALTHY. ENCROACHMENT OF UNDESIRABLE VEGETATION SUCH AS WEEDS AND WOODY GROWTH THAT IS NOT PLANNED SHOULD BE CONTROLLED TO AVOID PROBLEMS OF BANK STABILITY IN THE FUTURE.

a. EROSION CONTROL MULCH (ECM) WILL BE USED TO STABILIZE SLOPES LESS STEEP THAN 3:1 UNTIL THEY ARE VEGETATED;
b. ECM SHALL NOT BE USED AS THE SOLE MEASURE FOR SLOPES STEEPER THAN 8% OR WHERE THERE IS RUNNING WATER;
c. EROSION CONTROL BLANKETS SHALL BE USED TO STABILIZE SLOPES BETWEEN 3:1 AND 2:1; AND
d. SLOPES STEEPER THAN 1.5:1 ARE PROHIBITED;

ROCK RIPRAP (INITIAL & LONG TERM)

ROCK RIPRAP SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM TO DETERMINE IF THE RIPRAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED. WOODY VEGETATION SHOULD BE REMOVED FROM THE ROCK RIPRAP ANNUALLY. IF THE RIPRAP IS ON A CHANNEL BANK, THE STREAM SHOULD BE KEPT CLEAR OF OBSTRUCTIONS. IF DAMAGE HAS OCCURED, REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE RIPRAP.

STORM DRAIN INLET PROTECTION

ALL STRUCTURES SHALL BE INSPECTED AFTER SIGNIFICANT RAIN EVENTS AND REPAIRED AS NEEDED.

SEDIMENT SHALL BE REMOVED AND THE STORM DRAIN SEDIMENT BARRIER RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.

STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

ALL CATCH BASINS AND STORM DRAIN INLETS SHALL BE CLEANED AT THE END OF CONSTRUCTION AND AFTER THE SITE HAS BEEN FULLY STABILIZED.

STRAW OR HAY BALE BARRIER, SILT FENCE AND FILTER BERM

HAY BALE BARRIERS, SILT FENCES AND FILTER BERMS SHALL BE INSPECTED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. THEY SHALL BE REPAIRED IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OF THE EDGES OF THE BARRIER, THE FLOW CURRENTLY REACHING THE BARRIER SHALL BE INTERCEPTED WITH ADDITIONAL EROSION CONTROL MATERIALS OR SEDIMENTATION BASINS TO PREVENT SEDIMENTS FROM LEAVING THE SITE.

SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED.

SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN THE DEPOSITS REACH APPROXIMATELY ONE-HALF OF THE HEIGHT OF THE BARRIER.

FILTER BERMS SHOULD BE RESHAPED AS NEEDED.

SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHOULD BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

OUTLET PROTECTION

OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM. IF THE RIPRAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED, IT SHOULD BE REPAIRED. THE CHANNEL IMMEDIATELY BELOW THE OUTLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION APRON.

TEMPORARY CHECK DAMS

REGULAR INSPECTIONS MUST BE MADE TO ENSURE THAT THE CENTER OF THE CHECK DAM IS LOWER THAN THE EDGES. EROSION CAUSED BY HIGH FLOWS AROUND THE EDGES OF THE CHECK DAM MUST BE CORRECTED. IF EVIDENCE OF SILTATION IN THE WATER IS APPARENT DOWNSTREAM OF THE CHECK DAM, THE CHECK DAM MUST BE INSPECTED AND ADJUSTED.

CHECK DAMS MUST BE CHECKED FOR SEDIMENT ACCUMULATION AFTER EACH SIGNIFICANT RAINFALL. SEDIMENT MUST BE REMOVED WHEN IT REACHES ONE HALF THE ORIGINAL HEIGHT OF BEFORE.

IF IT POSSIBLE, LEAVE THE CHECK DAM IN PLACE PERMANENTLY. IN TEMPORARY DITCHES AND SWALES, CHECK DAMS MUST BE REMOVED WHEN A PERMANENT LINING HAS BEEN ESTABLISHED. IF A CHECK DAM MUST BE REMOVED FROM A GRASS LINED DITCH, WAIT UNTIL THE GRASS HAS MATURED TO PROTECT THE DITCH OR SWALE. THE AREA BENEATH THE CHECK DAM MUST BE SEEDED AND MULCHED REMOVAL.

STABILIZED CONSTRUCTION ENTRANCE (ANTI-TRACKING PAD)

EXITS SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED ALONG WITH THE COLLECTED SOIL MATERIAL AND REDISTRIBUTED ON SITE IN A STABLE MANNER AND THE ENTRANCE RECONSTRUCTED. THE CONTRACTOR SHALL SWEEP OR WASH PAVEMENT AT EXITS, WHICH HAVE EXPERIENCED MUD-TRACKING ONTO THE PAVEMENT OR TRAVELED WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES OR WATERWAYS.

CULVERTS

CULVERTS MUST BE MAINTAINED BY KEEPING INLETS, TRASH GUARDS, AND COLLECTION BOXES AND STRUCTURES CLEAN AND FREE OF MATERIALS THAT CAN REDUCE THE FLOW. ALL LEAKS SHALL BE REPAIRED TO ENSURE PROPER FUNCTIONING OF THE CULVERT. ANIMAL GUARDS MUST BE INSPECTED AND MAINTAINED IN PROPER WORKING ORDER.

DROP IN CATCH BASIN SILT SACK

EACH SILT SACK SHOULD BE INSPECTED AT REGULAR INTERVALS AND AFTER EACH MAJOR STORM EVENT FOLLOWED BY THE REMOVAL OF ALL ACCUMULATED SEDIMENT AND DEBRIS IN THE VICINITY OF THE UNIT. AFTER EACH STORM EVENT LOOK INTO THE SILT SACK(S). IF THE CONTAINMENT AREA IS MORE THAN 1/3 FULL OF SEDIMENT, THE UNIT MUST BE EMPTIED. TO EMPTY UNIT, SIMPLY LIFT THE UNIT USING LIFTING STRAPS AND REMOVE THE GRATE. IF USING OPTIONAL OIL ABSORBENTS, REPLACE ABSORBENT PILLOW WHEN NEAR SATURATION.

OVERWINTER CONSTRUCTION

MAINE EROSION AND SEDIMENT CONTROL BMP (3/2003 REV 2016)

THE WINTER CONSTRUCTION PERIOD IS FROM NOVEMBER 1 THROUGH APRIL 15. IF THE CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 15 THEN THE SITE NEEDS TO BE PROTECTED WITH OVER-WINTER STABILIZATION. AN AREA CONSIDERED OPEN IS ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MATS, RIPRAP OR GRAVEL BASE ON A ROAD.

WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY TIME. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDER TAKEN DURING THE PROCEEDING 15 DAYS AND THAT CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT. ALL AREA SHALL BE CONSIDERED TO BE DENUDED UNTIL THE SUBBASE GRAVEL IS INSTALLED IN ROADWAY AREAS OR THE AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. A COVER OF EROSION CONTROL MIX PERFORMS THE BEST.

ANY ADDED MEASURES, WHICH MAY BE NECESSARY TO CONTROL EROSION/SEDIMENTATION, MUST BE BE INSTALLED. THESE MAY BE DEPENDENT UPON SITE AND WEATHER CONDITIONS AND THE ACTUAL SITE SIZE. TO MINIMIZE AREAS WITHOUT EROSION CONTROL PROTECTION, CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED.

1. NATURAL RESOURCES PROTECTION

ANY AREAS WITHIN 100 FEET FROM ANY NATURAL RESOURCE, IF NOT STABILIZED WITH A MINIMUM OF 75% MATURE VEGETATION CATCH, SHALL BE MULCHED BY DECEMBER 1 AND ANCHORED WITH PLASTIC NETTING OR PROTECTED WITH AN EROSION CONTROL COVER.

DURING WINTER CONSTRUCTION, A DOUBLE ROW OF SEDIMENT BARRIERS (I.E. SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX) WILL BE PLACED BETWEEN ANY NATURAL RESOURCE AND THE DISTURBED AREA. PROJECTS CROSSING THE NATURAL RESOURCE SHALL BE PROTECTED A MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE FROM THE RESOURCE. EXISTING PROJECTS NOT STABILIZED BY DECEMBER 1 SHALL BE PROTECTED WITH THE SECOND LINE OF SEDIMENT BARRIER TO ENSURE FUNCTIONALITY DURING THE SPRING THAW AND RAINS.

2. SEDIMENT BARRIERS

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS MAY CONSIST OF EROSION CONTROL MIX BERMS OR ANY OTHER RECOGNIZED SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES AND SEDIMENT SILT FENCES.

3. MULCHING

ALL AREA SHALL BE CONSIDERED TO BE DENUDED UNTIL SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75 LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. EROSION CONTROL MIX MUST BE APPLIED WITH A MINIMUM 4 INCH THICKNESS.

MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW WILL BE REMOVED DOWN TO A ONE INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA WILL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED OR ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THOUGH THE MULCH. BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER MULCH NETTING, ASPHALT EMULSION CHEMICAL, TRACKING OR WOOD CELLULOSE FIBER. THE COVER WILL BE CONSIDERED SUFFICIENT WHEN THE GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH.

AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL EXPOSED SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.

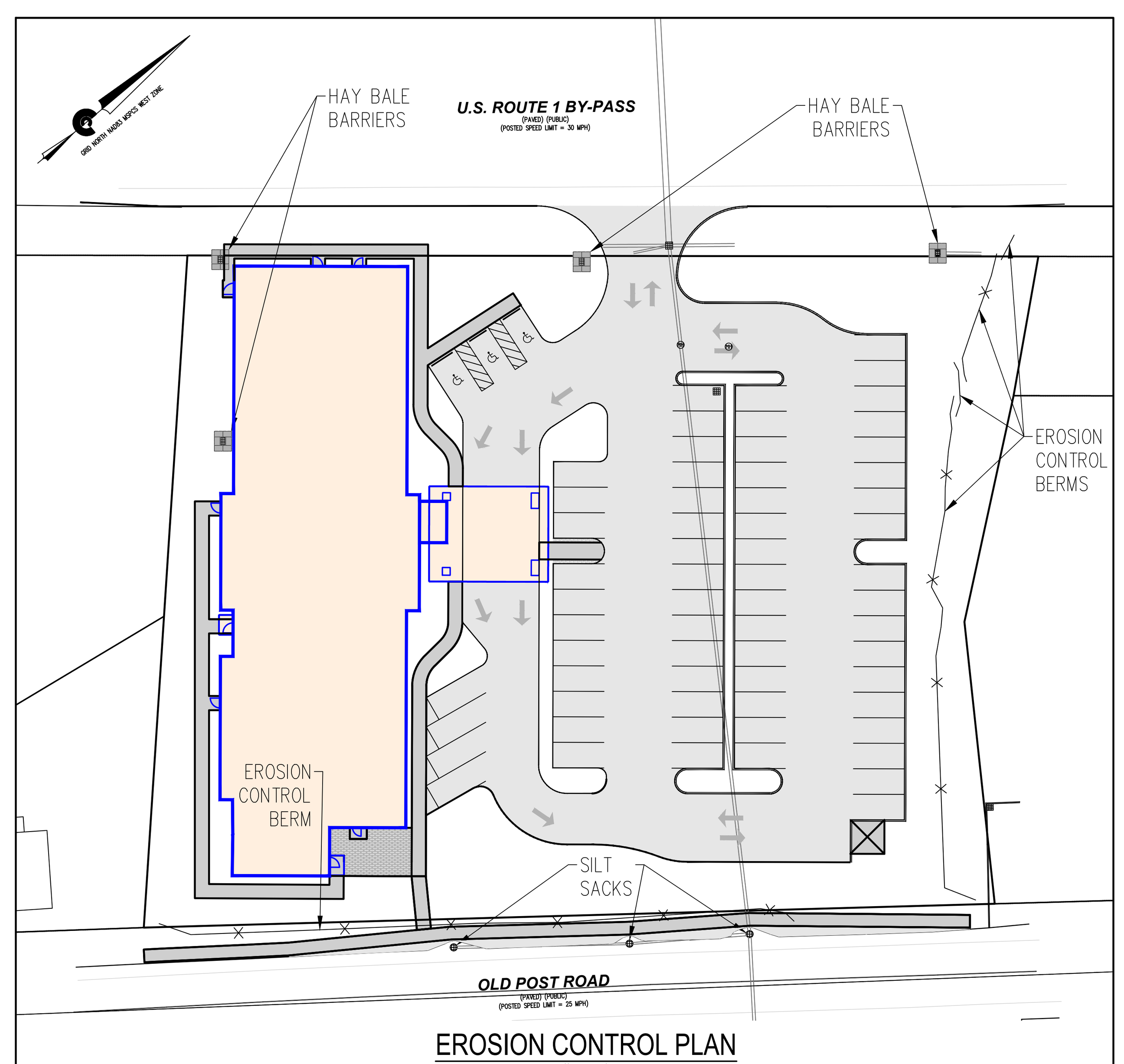
4. SOIL STOCKPILES

STOCKPILES OF SOIL OR SUBSOIL WILL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A FOUR-INCH LAYER OF EROSION CONTROL MIX. THIS WILL BE DONE WITHIN 24 HOURS OF STOCKING AND REESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. ANY SOIL STOCKPILE WILL NOT BE PLACED (EVEN COVERED WITH MULCH) WITHIN 100 FEET FROM ANY NATURAL RESOURCES. STORMWATER SHALL BE PREVENTED FROM RUNNING ONTO STOCKPILES.

5. SEEDING

BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS NOVEMBER 1ST AND THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED.

DORMANT SEEDING MAY BE SELECTED TO BE PLACED PRIOR TO THE PLACEMENT OF MULCH AND EROSION CONTROL BLANKETS. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4' OF LOAM AND SEED AT AN APPLICATION RATE OF 5LBS/1,000 S.F. ALL AREAS SEEDED DURING THE WINTER WILL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75% CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING.



EROSION CONTROL PLAN
1"=50'

OVERWINTER STABILIZATION

MAINE EROSION AND SEDIMENT CONTROL BMP (3/2003 REV 2016)

1. STABILIZATION OF DITCHES AND CHANNELS

ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. ALL GRASS-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY SEPTEMBER 1. IF A DITCH OR CHANNEL IS NOT GRASS-LINED BY SEPTEMBER 1, THEN ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE DITCH FOR LATE FALL AND WINTER MUST BE TAKEN.

SOD LINING: A DITCH OR CHANNEL MUST BE LINED WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES: PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL, AND ANCHORING THE SOD AT THE BASE OF THE DITCH WITH JUTE OR PLASTIC MESH TO PREVENT THE SOD FROM SLOUGHING DURING FLOW CONDITIONS.

STONE LINING: A DITCH OR CHANNEL MUST BE LINED WITH STONE RIPRAP BY NOVEMBER 15. A REGISTERED PROFESSIONAL ENGINEER MUST DETERMINE THE STONE SIZE AND LINING THICKNESS NEEDED TO WITHSTAND THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHIN THE DITCH. IF NECESSARY, THE CONTRACTOR WILL REGRADE THE DITCH PRIOR TO PLACING THE STONE LINING TO PREVENT THE STONE LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA.

2. STABILIZATION OF DISTURBED SLOPES

ALL STONE-COVERED SLOPES MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. ALL SLOPES TO BE VEGETATED MUST BE SEEDED AND MULCHED BY SEPTEMBER 1. THE DEPARTMENT WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% TO BE A SLOPE. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER.

TEMPORARY VEGETATION AND EROSION CONTROL MATS: BY OCTOBER 1, THE DISTURBED SLOPE MUST BE SEEDED WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET FOLLOWED BY INSTALLATION OF EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE SLOPE BY NOVEMBER 1, THEN THE CONTRACTOR WILL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR STONE RIPRAP AS DESCRIBED IN THE FOLLOWING STANDARDS.

SOD: THE DISTURBED SLOPE MUST BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR WILL NOT USE LATE-SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (3H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

EROSION CONTROL MIX: EROSION CONTROL MIX MUST BE PROPERLY INSTALLED BY NOVEMBER 15. THE CONTRACTOR WILL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GRADES GREATER THAT 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

STONE RIPRAP: PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE DEVELOPMENT'S OWNER WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY ON THE SLOPE AND TO DESIGN A FILTER LAYER TO BE INSTALLED BENEATH THE RIPRAP.

3. STABILIZATION OF DISTURBED SOILS

TEMPORARY VEGETATION: BY OCTOBER 1, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3-LBS PER 1,000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75-LBS PER 1,000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 1, THEN MULCH THE AREA FOR OVERWINTER PROTECTION AS FOLLOWS.

MULCH: BY NOVEMBER 15, MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150-LBS PER 1,000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

MAINTENANCE

MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION. FOLLOWING THE TEMPORARY AND OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL IN THE SPRING INSPECT AND REPAIR ANY DAMAGES AND/OR BARE SPOTS. AN ESTABLISHED VEGETATIVE COVER MEANS A MINIMUM OF 85% TO 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH.

STABILIZATION SCHEDULE BEFORE WINTER

SEPTEMBER 15 ALL DISTURBED AREAS MUST BE SEEDED AND MULCHED. ALL SLOPES MUST BE STABILIZED. SEEDED AND MULCHED. ALL GRASS-LINED DITCHES AND CHANNELS MUST BE STABILIZED WITH MULCH OR AN EROSION CONTROL BLANKET.

OCTOBER 1 IF THE SLOPE IS STABILIZED WITH AN EROSION CONTROL BLANKET AND SEEDED. ALL DISTURBED AREAS TO BE PROTECTED WITH ANNUAL GRASS MUST BE SEEDED AT A SEEDING RATE OF 3-LBS PER 1,000 SQUARE FEET AND MULCHED.

NOVEMBER 15 ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED. SLOPES THAT ARE COVERED WITH RIPRAP MUST BE CONSTRUCTED BY THIS DATE.

DECEMBER 1 ALL DISTURBED AREAS WHERE GROWTH OF VEGETATION FAILS TO BE AT LEAST THREE INCHES TALL OR AT LEAST 75% OF THE DISTURBED SOIL IS COVERED VEGETATION, MUST BE PROTECTED FOR OVER-WINTER.
NOTE: THE DATES GIVEN ARE FOR PROJECTS IN SOUTH-CENTRAL MAINE.

PERMANENT STABILIZATION

90% COVERAGE OF SEEDED AREAS IS THE STANDARD FOR "STABILIZED".

HOUSEKEEPING NOTES
*PER ME DEP CHAPTER 500 – APPENDIX 'C'

1. SPILL PREVENTION. CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM CONSTRUCTION AND WASTE MATERIALS STORED ON SITE TO ENTER STORMWATER, WHICH INCLUDES STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER. THE SITE CONTRACTOR OR OPERATOR MUST DEVELOP, AND IMPLEMENT AS NECESSARY, APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING MEASURES.

2. GROUNDWATER PROTECTION. DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS. ANY PROJECT PROPOSING INFILTRATION OF STORMWATER MUST PROVIDE ADEQUATE PRE-TREATMENT OF STORMWATER PRIOR TO DISCHARGE OF STORMWATER TO THE INFILTRATION AREA, OR PROVIDE FOR TREATMENT WITHIN THE INFILTRATION AREA, IN ORDER TO PREVENT THE ACCUMULATION OF FINES, REDUCTION IN INFILTRATION RATE, AND CONSEQUENT FLOODING AND DESTABILIZATION.

3. FUGITIVE SEDIMENT AND DUST. ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL, BUT OTHER WATER ADDITIVES MAY BE CONSIDERED AS NEEDED. A STABILIZED CONSTRUCTION ENTRANCE (SCE) SHOULD BE INCLUDED TO MINIMIZE TRACKING OF MUD AND SEDIMENT. IF OFF-SITE TRACKING OCCURS, PUBLIC ROADS SHOULD BE SWEPT IMMEDIATELY AND NO LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS. OPERATIONS DURING DRY MONTHS, THAT EXPERIENCE FUGITIVE DUST PROBLEMS, SHOULD WET DOWN UNPAVED ACCESS ROADS ONCE A WEEK OR MORE FREQUENTLY AS NEEDED WITH A WATER ADDITIVE TO SUPPRESS FUGITIVE SEDIMENT AND DUST.

4. DEBRIS AND OTHER MATERIALS. MINIMIZE THE EXPOSURE OF CONSTRUCTION DEBRIS, BUILDING AND LANDSCAPING MATERIALS, TRASH, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS TO PRECIPITATION AND STORMWATER RUNOFF. THESE MATERIALS MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.

5. EXCAVATION DE-WATERING. EXCAVATION DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED BY THE DEPARTMENT.

6. AUTHORIZED NON-STORMWATER DISCHARGES. IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST, THEY MUST BE IDENTIFIED AND STEPS SHOULD BE TAKEN TO ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES ARE:

(a) DISCHARGES FROM FIREFIGHTING ACTIVITY;
(b) FIRE HYDRANT FLUSHINGS;
(c) VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED);
(d) DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS AND APPENDIX (C)(3);
(e) ROUTINE EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS;
(f) PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED MATERIAL HAD BEEN REMOVED) IF DETERGENTS ARE NOT USED;
(g) UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE;
(h) UNCONTAMINATED GROUNDWATER OR SPRING WATER;
(i) FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED;
(j) UNCONTAMINATED EXCAVATION DEWATERING (SEE REQUIREMENTS IN APPENDIX C(5));
(k) POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; AND
(l) LANDSCAPE IRRIGATION.

7. UNAUTHORIZED NON-STORMWATER DISCHARGES THE DEPARTMENT'S APPROVAL UNDER THIS CHAPTER DOES NOT AUTHORIZE A DISCHARGE THAT IS MIXED WITH A SOURCE OF NON-STORMWATER, OTHER THAN THOSE DISCHARGES IN COMPLIANCE WITH APPENDIX C (6). SPECIFICALLY, THE DEPARTMENT'S APPROVAL DOES NOT AUTHORIZE DISCHARGES OF THE FOLLOWING:

(a) WASTEWATER FROM THE WASHOUT OR CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS;
(b) FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE;
(c) SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING; AND
(d) TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.

TAX MAP 14 LOT 2

STATE OF MAINE
GEOFFREY R. ALEVA
No. 9679
LICENSED PROFESSIONAL ENGINEER
2/19/2024

CIVIL CONSULTANTS
Engineers
Planners
Surveyors
P.O. Box 100
South Berwick
Maine
03908
207-384-2550
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NO.	REVISIONS	INT.	DATE
2	REVISED PER TOWN COMMENTS	GRA	02/16/24
1	REVISED PER TOWN COMMENTS	NJR	12/15/23

RECORD OWNER:
90 US ROUTE 1 LLC

ADDRESS:
PO BOX 630
KITTERY, ME 03904

REDEVELOPMENT PLAN OF LAND OF
90 US ROUTE 1 LLC
90 U.S. ROUTE 1 BY-PASS
KITTERY - YORK COUNTY, MAINE

PREPARED FOR: 90 US ROUTE 1 LLC
CLIENT ADDRESS: PO BOX 630, KITTERY, ME 03904

AS NOTED
0' X"

DATE: 06/23/2023
DRAWN BY: JAA/DRC
CHECKED BY: GRA
APPROVED BY:

NOTES

PROJECT NO: 2132300

L4

SHEET: 4 OF 4

COORDINATE FILE: J:\AAA\2021\2132300\CARLSON\SURVEY\POINTS\2132300-MESPCS-NAD83W.crd
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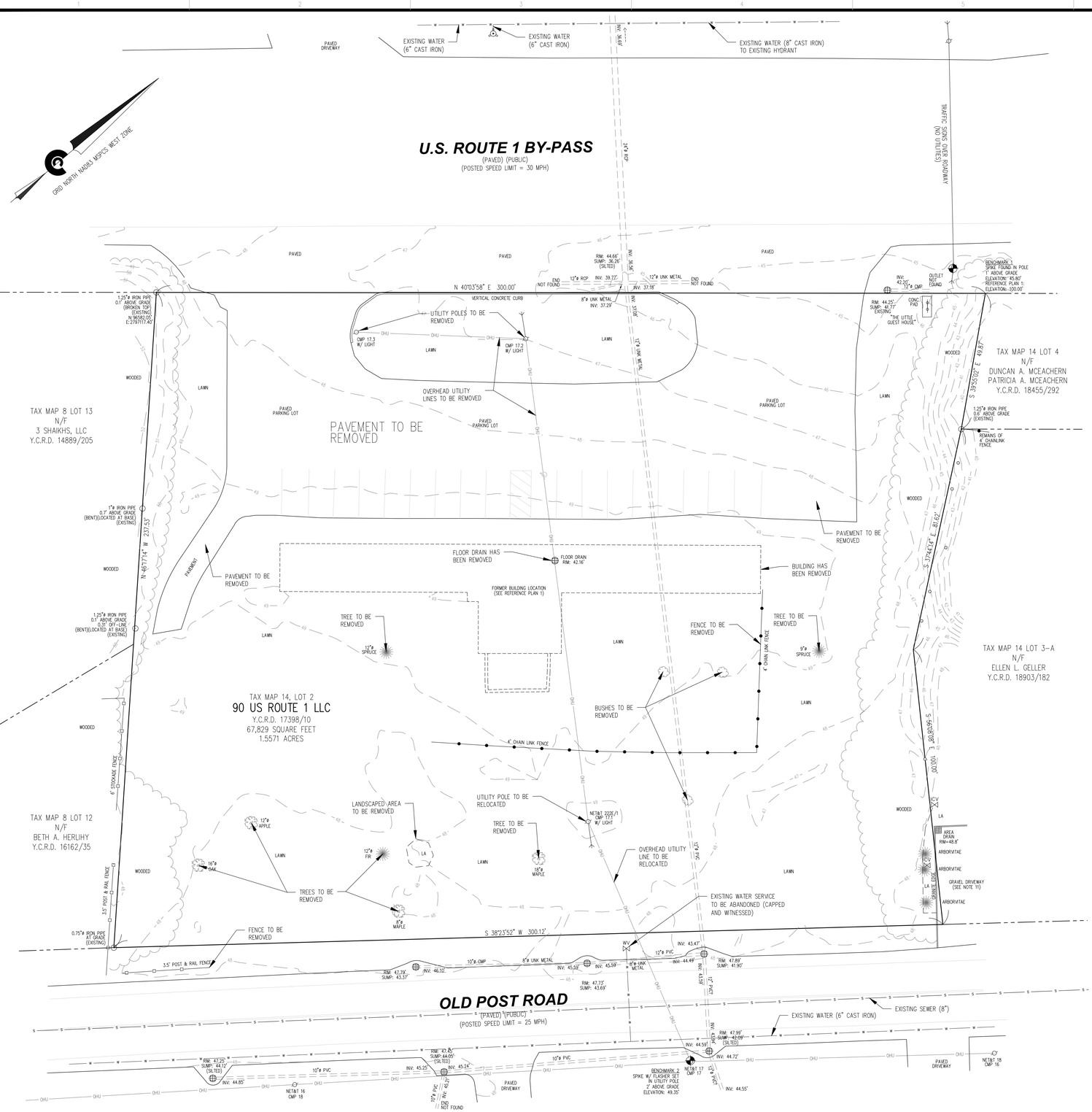

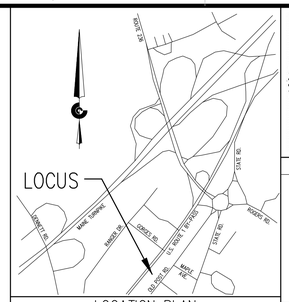

LOCATION PLAN
(NOT TO SCALE)

STATE OF MAINE
GEOFFREY R. ALLEN
No. 9679
LICENSED PROFESSIONAL ENGINEER
2/19/2024

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NO.	REVISIONS	INT.	DATE
1	REVISED PER TOWN COMMENTS	GRA	02/16/24

RECORD OWNER:
90 US ROUTE 1 LLC

ADDRESS:
PO BOX 630
KITTERY, ME 03904

DEMOLITION ITEMS:

1. TO BE REMOVED:
   - 1.1. PAVEMENT
   - 1.2. UTILITY POLES (CMP 17.3 & 17.2) AND OVERHEAD UTILITY LINES
   - 1.3. CHAIN LINK FENCE AND POST & RAIL FENCE
   - 1.4. LANDSCAPED AREA
   - 1.5. SEVERAL TREES AND BUSHES
2. UTILITY POLE CMP 17.1 TO BE RELOCATED ALONG WITH OVERHEAD UTILITY LINE FROM OLD POST ROAD.
3. EXISTING WATER SERVICE TO BE ABANDONED (CAPPED AND WITNESSED)
4. MOTEL BUILDING HAS BEEN DEMOLISHED

LEGEND:

ø	DIAMETER
18828/758	DEED BOOK/PAGE NUMBER
INV.	INVERT
RCP	REINFORCED CONCRETE PIPE
PVC	POLYVINYL CHLORIDE
HDPE	HIGH DENSITY POLYETHYLENE
CMP	CORRUGATED METAL PIPE
CONC.	CONCRETE
LA	LANDSCAPED AREA
N/F	NOW OR FORMERLY
Y.C.R.D.	YORK COUNTY REGISTRY OF DEEDS
UNK	UNKNOWN
(2X)	MULTIPLE TREES OF SIMILAR TYPE
▫	4' WOOD FENCE POST
○	STEEL FENCE POST (VARIABLE HEIGHT)
ICV	IRRIGATION CONTROL VALVE
WV	WATER GATE VALVE
	FIRE HYDRANT
	SEWER MANHOLE
	CATCH BASIN
	GUY WIRE
	UTILITY POLE
OHU	OVERHEAD UTILITIES
	CHAIN LINK FENCE (AS NOTED)
	WOOD FENCE (AS NOTED)
	CONCRETE CURB
	SIGN (AS NOTED)
	HANDICAPPED PARKING
	DECIDUOUS TREE (AS NOTED)
	CONIFEROUS TREE (AS NOTED)
	BUSH
	EXISTING IRON PIPE (AS NOTED)
	5/8" REBAR W/CAP "CIVIL CONSULT PLS 2362" TO BE SET
	SURVEY BENCHMARK (AS NOTED)
	APPROXIMATE ADJOINING PARCEL BOUNDARY LINE
	LOCUS PARCEL PROPERTY LINE
N:96582.05' E:2797117.40'	STATE PLANE COORDINATES

UPDATED BOUNDARY & EXISTING CONDITIONS PLAN OF LAND OF

90 US ROUTE 1 LLC

90 U.S. ROUTE 1 BY-PASS

KITTERY - YORK COUNTY, MAINE

PREPARED FOR: 90 US ROUTE 1 LLC
CLIENT ADDRESS: PO BOX 630, KITTERY, ME 03904

1" = 20'
0' 20'

DATE: APRIL 25, 2023
DRAWN BY: AHP/MPP
CHECKED BY: CHM
APPROVED BY: MPP

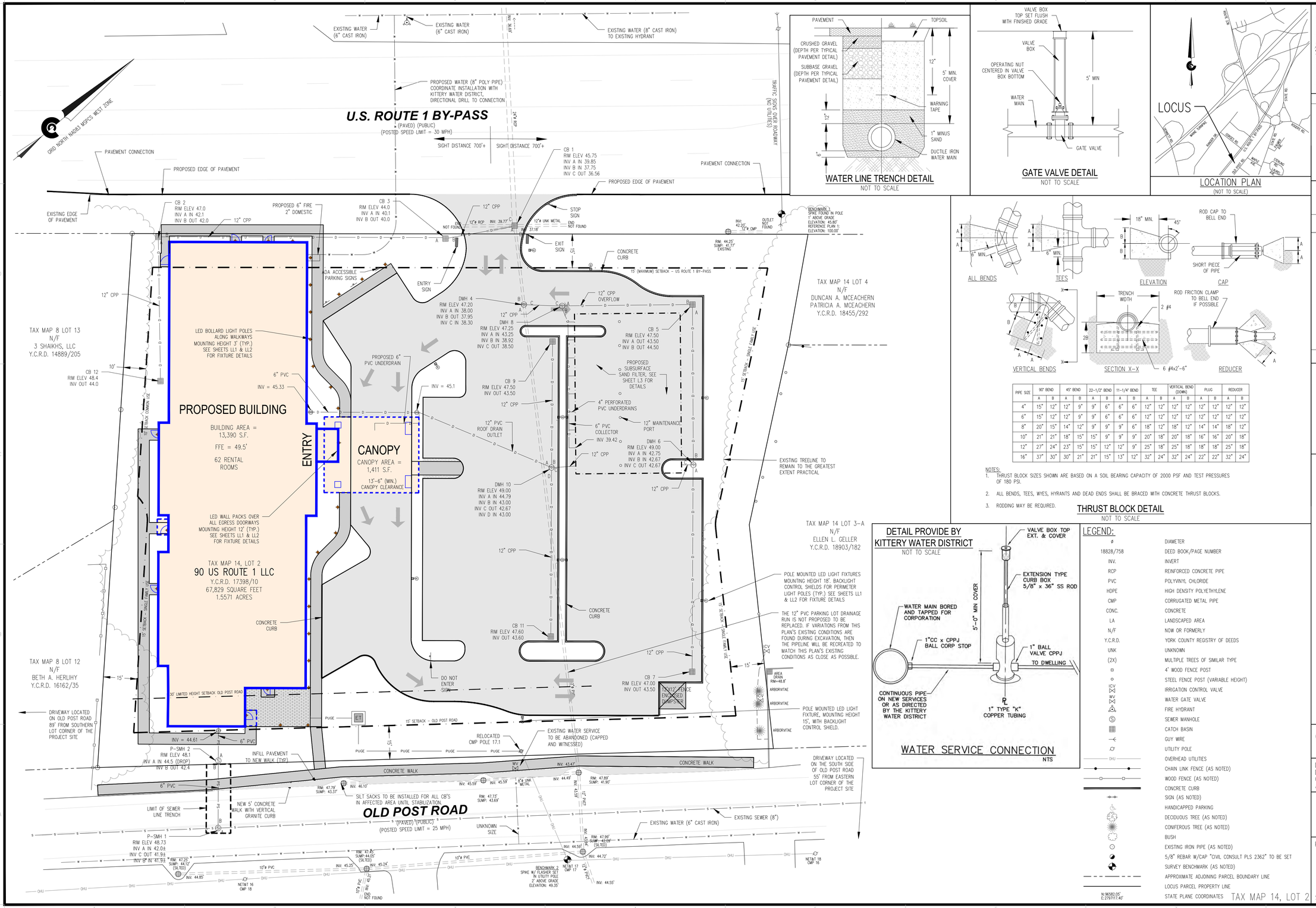
DEMOLITION PLAN

PROJECT NO: 2132300

DEM

SHEET: 1 OF 1

COORDINATE FILE: J:\AAA\2021\2132300\CARLSON\SURVEY\POINTS\2132300-MESPCS-NAD83W.crd
CADD FILE: J:\AAA\2021\2132300\CARLSON\ENGR\2132300-ST.DWG



WATER LINE TRENCH DETAIL
NOT TO SCALE

GATE VALVE DETAIL
NOT TO SCALE

LOCATION PLAN
(NOT TO SCALE)

PIPE SIZE	90° BEND		45° BEND		22-1/2° BEND		11-1/4° BEND		TEE		VERTICAL BEND (DOWN)		PLUG		REDUCER	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
4"	15"	12"	12"	9"	9"	6"	6"	6"	12"	12"	12"	12"	12"	12"	12"	12"
6"	15"	12"	12"	9"	9"	6"	6"	6"	12"	12"	12"	12"	12"	12"	12"	12"
8"	20"	15"	14"	12"	9"	9"	9"	6"	18"	12"	18"	12"	14"	14"	18"	12"
10"	21"	21"	18"	15"	9"	9"	9"	9"	20"	18"	20"	18"	16"	16"	20"	18"
12"	27"	24"	23"	15"	12"	9"	9"	9"	25"	18"	25"	18"	18"	18"	25"	18"
16"	37"	30"	30"	21"	21"	15"	13"	12"	32"	24"	32"	24"	22"	22"	32"	24"

NOTES:
1. THRUST BLOCK SIZES SHOWN ARE BASED ON A SOIL BEARING CAPACITY OF 2000 PSF AND TEST PRESSURES OF 180 PSI.
2. ALL BENDS, TEES, WYES, HYRANTS AND DEAD ENDS SHALL BE BRACED WITH CONCRETE THRUST BLOCKS.
3. RODDING MAY BE REQUIRED.

THRUST BLOCK DETAIL
NOT TO SCALE

DETAIL PROVIDE BY KITTERY WATER DISTRICT
NOT TO SCALE

WATER SERVICE CONNECTION
NTS

LEGEND:

ø	DIAMETER
18828/758	DEED BOOK/PAGE NUMBER
INV.	INVERT
RCP	REINFORCED CONCRETE PIPE
PVC	POLYVINYL CHLORIDE
HDPE	HIGH DENSITY POLYETHYLENE
CMP	CORRUGATED METAL PIPE
CONC.	CONCRETE
LA	LANDSCAPED AREA
N/F	NOW OR FORMERLY
Y.C.R.D.	YORK COUNTY REGISTRY OF DEEDS
UNK	UNKNOWN
(2X)	MULTIPLE TREES OF SIMILAR TYPE
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	WOOD FENCE (AS NOTED)
	CONCRETE CURB
	SIGN (AS NOTED)
	HANDICAPPED PARKING
	DECIDUOUS TREE (AS NOTED)
	CONIFEROUS TREE (AS NOTED)
	BUSH
	EXISTING IRON PIPE (AS NOTED)
	5/8" REBAR W/CAP "CIVIL CONSULT PLS 2362" TO BE SET
	SURVEY BENCHMARK (AS NOTED)
	APPROXIMATE ADJOINING PARCEL BOUNDARY LINE
	LOCUS PARCEL PROPERTY LINE
	STATE PLANE COORDINATES

STATE OF MAINE
GEOFFREY R. ALLEN
No. 9679
LICENSED PROFESSIONAL ENGINEER
2/19/2024

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NO.	REVISIONS	INT.	DATE
1	REVISED PER TOWN COMMENTS	GRA	02/16/24

RECORD OWNER:
90 US ROUTE 1 LLC

ADDRESS:
PO BOX 630
KITTERY, ME 03904

REDEVELOPMENT PLAN OF LAND OF
90 US ROUTE 1 LLC
90 U.S. ROUTE 1 BY-PASS
KITTERY - YORK COUNTY, MAINE

PREPARED FOR:
90 US ROUTE 1 LLC
CLIENT ADDRESS:
PO BOX 630, KITTERY, ME 03904

1" = 20'
0' 20'

DATE: 06/23/2023
DRAWN BY: JAA/DRC
CHECKED BY: GRA
APPROVED BY:

UTILITY PLAN

PROJECT NO: 21-323.00

U1

SHEET: 1 OF 1

COORDINATE FILE: J:\AAA\2021\2132300\CARLSON\SURVEY\POINTS\2132300-MESPCS-NAD83W.crd
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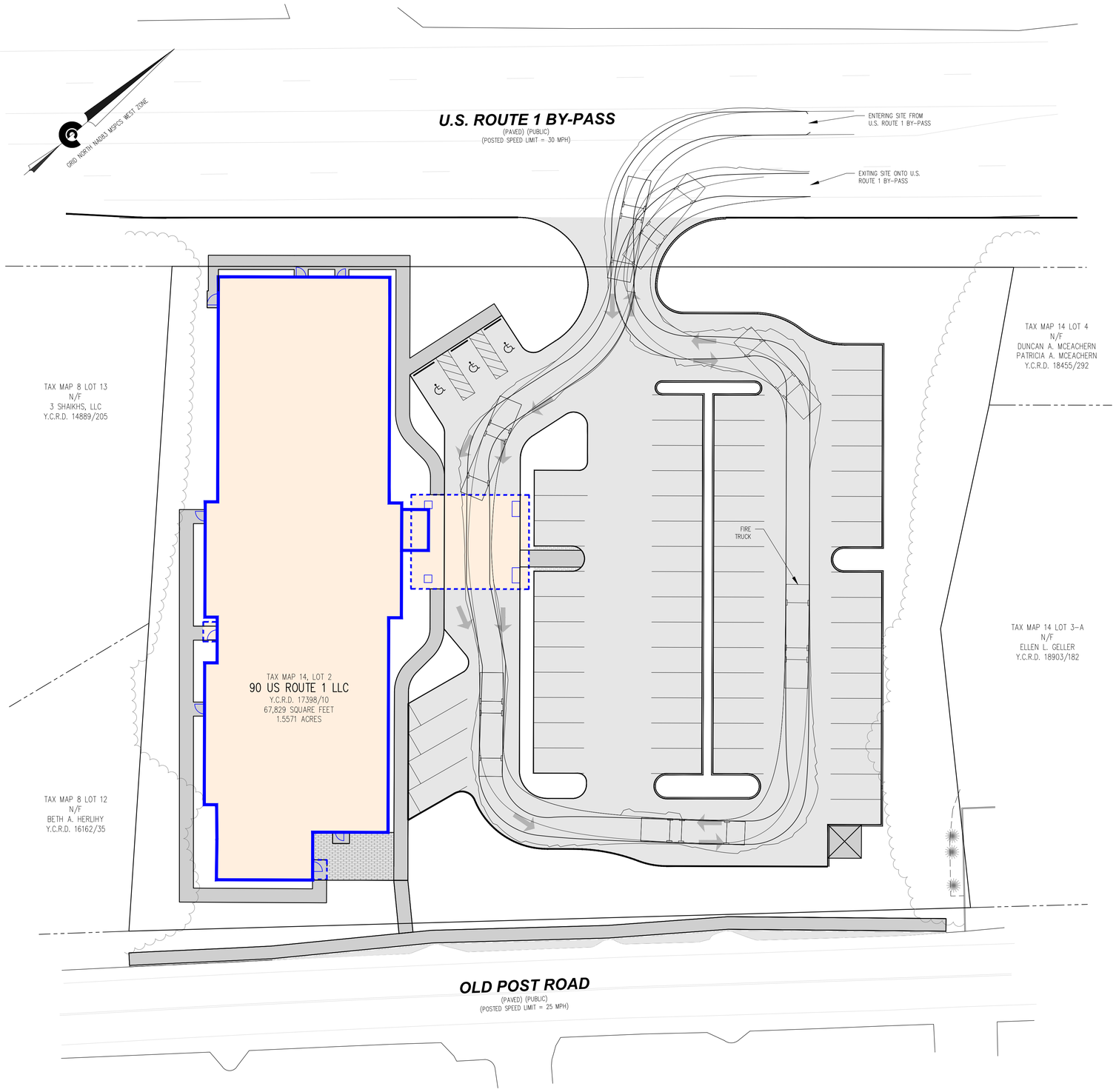

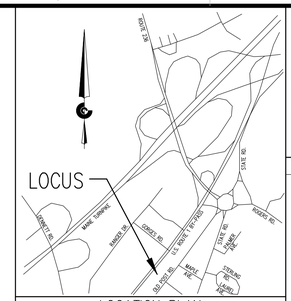

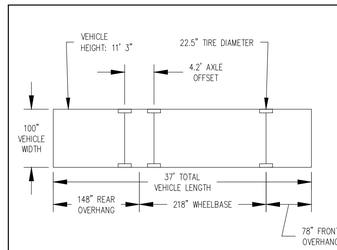

EXPECTED FIRE TRUCK (LADDER) DETAIL
NOT TO SCALE

LEGEND:

ø	DIAMETER
18828/758	DEED BOOK/PAGE NUMBER
INV.	INVERT
RCP	REINFORCED CONCRETE PIPE
PVC	POLYVINYL CHLORIDE
HDPE	HIGH DENSITY POLYETHYLENE
CMP	CORRUGATED METAL PIPE
CONC.	CONCRETE
LA	LANDSCAPED AREA
N/F	NOW OR FORMERLY
Y.C.R.D.	YORK COUNTY REGISTRY OF DEEDS
UNK	UNKNOWN
(2X)	MULTIPLE TREES OF SIMILAR TYPE
▫	4" WOOD FENCE POST
○	STEEL FENCE POST (VARIABLE HEIGHT)
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WV	WATER GATE VALVE
	FIRE HYDRANT
S	SEWER MANHOLE
	CATCH BASIN
	GUY WIRE
	UTILITY POLE
OHU	OVERHEAD UTILITIES
	CHAIN LINK FENCE (AS NOTED)
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	CONCRETE CURB
	SIGN (AS NOTED)
	HANDICAPPED PARKING
	DECIDUOUS TREE (AS NOTED)
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	5/8" REBAR W/CAP "CIVIL CONSULT PLS 2362" TO BE SET
	SURVEY BENCHMARK (AS NOTED)
	APPROXIMATE ADJOINING PARCEL BOUNDARY LINE
	LOCUS PARCEL PROPERTY LINE
N: 96582.05' E: 2797117.40'	STATE PLANE COORDINATES

TAX MAP 14, LOT 2

STATE OF MAINE
GEOFFREY R. ALLEN
No. 9679
LICENSED PROFESSIONAL ENGINEER
2/9/2024

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Engineers
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NO.	REVISIONS	INT.	DATE
1	REVISED PER TOWN COMMENTS	GRA	02/16/24

RECORD OWNER:
90 US ROUTE 1 LLC

ADDRESS:
PO BOX 630
KITTERY, ME 03904

REDEVELOPMENT PLAN OF LAND OF
90 US ROUTE 1 LLC
90 U.S. ROUTE 1 BY-PASS
KITTERY - YORK COUNTY, MAINE

PREPARED FOR:
90 US ROUTE 1 LLC
CLIENT ADDRESS:
PO BOX 630, KITTERY, ME 03904

1" = 20'
0' 20'

DATE: 06/23/2023
DRAWN BY: JAA/DRC
CHECKED BY: GRA
APPROVED BY:

EMERGENCY VEHICLE TURNING PLAN

PROJECT NO: 21-323.00

E1

SHEET: 1 OF 1

COORDINATE FILE: J:\AAA\2021\2132300\CARLSON\SURVEY\POINTS\2132300-MESPCS-NAD83W.crd
CADD FILE: J:\AAA\2021\2132300\CARLSON\ENGR\2132300-ST.DWG

PLANT LIST

QTY	NAME	LATIN	SIZE
9	OCTOBER GLORY MAPLE	ACER RUBRUIM 'OCTOBER GLORY'	2.5-3" CAL.
8	GREEN MOUNTAIN SUGAR MAPLE	ACER SACC. 'GREEN MOUNTAIN	2.5-3" CAL.
7	GREEN ASH	FRAXINUS PENNSYLVANICA	2.5-3" CAL.
16	HERITAGE RIVERS BIRCH (MULTI-STEM)	BETUAL NIGRA	10-12 FT HT.
15	WHITE SPRUCE	PICEA ABIES	7-8 FT HT.
13	AUSTRIAN PINE	PINUS NIGRA	7-8 FT HT.
4	DWARF FAT ALBERT BLUE SPRUCE	PICEA PUNGENS 'FAT ALBERT'	6-7 FT HT.
21	DARK AMERICAN ARBORVITAE	THUJA OCCIDENTALIS	6-7 FT HT.
10	RED SPRITE WINTERBERRY	ILEX VERTICILLATA 'RED SPRITE' (FEMALE)	3-3.5 FT HT.
2	JIM DANDY WINTERBERRY	ILEX VERTICILLATA 'JIM DANDY' (MALE)	3-3.5 FT HT.
39	ENDLESS SUMMER HYDRANGEA	HYDRANGEA 'ENDLESS SUMMER'	5 GAL.
43	REED GRASS 'KARL FOERSTER'	MISCANTHUS SINENSIS 'KARL FOERSTER'	5 GAL.
103	DWARF FOUNTAIN GRASS 'HAMELN'	PENNISETUM ALOPECUROIDES	3 GAL.
300	LIRIOPE (GROUNDCOVER @ 24" O.C.)	LIROPE SPICATA	1 GAL
1250	HAYSCENTED FERN	DENNSTAEDTIA PUNCTILOBULA	SOD SF
17,000	LAWN	SEED TO LAWN	SF

PLANT SYMBOL LEGEND

CT–CANOPY TREE (MAPLE & ASH)

OT–ORNAMENTAL TREE (MULTI–STEM BIRCH)

ET–EVERGREEN TREE (SPRUCE, PINE & ARBORVITAE)

SH–SHRUB (WINTERBERRY & HYDRANGEA)

GR–GRASEES (LARGE & SMALL)

PLANTING NOTES:

1. THE LANDSCAPE CONTRACTOR SHALL SUPPLY ALL PLANTS IN QUANTITIES SUFFICIENT TO COMPLETE THE WORK SHOWN ON THE PLAN.

2. ANY SUBSTITUTION OF SPECIFIED PLANTS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT. ONLY NATIVE SPECIES AND/OR VARIETIES WILL BE ACCEPTABLE.

3. ALL TREE, SHRUB, VINE, AND PLANT BED (GROUNDCOVERS, PERENNIALS, BULBS, ETC.) LOCATIONS SHALL BE STAKED OR MARKED BY CONTRACTOR AND THEN APPROVED BY THE LANDSCAPE ARCHITECT IN THE FIELD PRIOR TO PLANTING. CONTRACTOR MUST GIVE A MINIMUM 3 DAY NOTICE BETWEEN STAKING AND PLANTING.

4. CHALK MARK NORTH AT TREE BASE PRIOR TO DIGGING AT NURSERY. REPLANT ON SITE WITH SAME NORTH ORIENTATION FOR ALL TREES.

5. ALL PLANTS INSTALLED SHALL MEET THE SPECIFICATIONS OF THE AMERICAN STANDARD FOR NURSERY STOCK (LATEST ADDITION) AS SET FORTH BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.

6. ALL PLANTS SHALL BE DELIVERED TO THE SITE FOR REVIEW BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

7. THE LANDSCAPE CONTRACTOR IS ADVISED OF THE EXISTENCE OF UNDERGROUND UTILITIES, THE LOCATION OF WHICH SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY EXCAVATION OPERATIONS. SHOULD THE LOCATION OF PROPOSED PLANTINGS CONFLICT WITH ANY OF SAID UTILITIES, ADJUST PLANT LOCATIONS ACCORDINGLY AFTER CONSULTATION WITH THE LANDSCAPE ARCHITECT.

8. PLANTING TREES AND SHRUBS: EXCAVATE PLANTING PITS WITH SLOPING SIDES, AND WITH BOTTOM OF EXCAVATION RAISED IN CENTER FOR DRAINAGE. LOOSEN HARD SUBSOIL IN BOTTOM OF EXCAVATION, AND LOOSEN SOIL ON SIDES OF SLOPES. SET PLANTS IN CENTER OF PIT WITH TOP OF BALL RAISED SLIGHTLY ABOVE FINISH GRADES. PLACE A SETTING LAYER OF COMPACTED PLANTING MIX. REMOVE BURLAP AND WIRE BASKETS FROM TOP OF BALLS. ON SIDES, FOLD BACK WIRE AND REMOVE UPPER PORTIONS OF BURLAP. DO NOT USE PLANT IF ROOT BALL IS CRACKED OR BROKEN. IF CONTAINER, REMOVE CONTAINER AND SCOUR PERIMETER SOIL AND ROOTS. PLACE PLANTING MIX AROUND BALL/CONTAINER IN LAYERS, TAMPING TO ELIMINATE VOIDS AND AIR POCKETS. DO NOT COVER TOP OF ROOT BALL. PRUNE, THIN, AND SHAPE AFTER PLANTING.

9. MULCH PLANTING BEDS AND TREE PITS WITH 3" FINELY SHREDDED AND AGED BARK MULCH OR AS SPECIFIED ON THE PLAN.

10. ALL DISTURBED LAWN AREAS TO BE LOAMED AND SODDED AS NECESSARY AT NO ADDITIONAL COST TO OWNER(S).

11. GRADES SHOWN REPRESENT PROPOSED GRADES PER CONTRACT. CONTRACTOR TO VERIFY GRADES AS NEEDED.

12. PLANT MATERIALS SHALL BE GUARANTEED FOR ONE (1) YEAR AFTER PLANTING. ANY DEAD, UNSIGHTLY, OR UNHEALTHY PLANTS SHALL BE REPLACED IN KIND AT NO COST TO THE OWNER(S).

13. THE CONTRACTOR SHALL REPLACE OR REPAIR TO ORIGINAL CONDITION ANY AND ALL UTILITIES, PAVING, CURBING, ETC., DAMAGED AS A RESULT OF THEIR OPERATIONS AT NO ADDITIONAL COST TO THE OWNER(S).

14. A PRE-CONSTRUCTION MEETING SHALL BE HELD PRIOR TO LANDSCAPE CONTRACTOR BEGINNING CONSTRUCTION OR ORDERING PLANT MATERIALS.

15. PLANTING PLAN IS DIAGRAMMATIC IN NATURE. FINAL PLACEMENT OF PLANTS TO BE APPROVED BY THE LANDSCAPE ARCHITECT IN THE FIELD.

16. OWNER TO REPLACE DEAD PLANTS IN PERPETUITY AFTER THE INITIAL (1) YEAR GUARANTEE EXPIRES.

17. ALL STREET SIDE TREES MUST BE A MINIMUM OF 2.5" CALIPER AND BE AT LEAST 12 FEET HIGH AT THE TIME OF PLANTING. (KITTERY ZONING ORDINANCE SECTION 16.4.21.E.3(c) LANDSCAPING SITE IMPROVEMENTS.)

SEEDING NOTES:

1. THE FOLLOWING GENERAL PRACTICES SHALL BE USED TO ESTABLISH LAWNS. FOR MORE DETAILED SPECIFIC REQUIREMENTS, REFER TO PROJECT MANUAL AND WRITTEN EROSION AND SEDIMENTATION CONTROL PLAN:

2. ALL DISTURBED AREAS ON-SITE NOT COVERED BY BUILDINGS OR PAVED AREAS SHALL RECEIVE A MINIMUM OF 4" OF LOAM AND SOD, UNLESS DETAILED OR SPECIFIED ELSEWHERE.

3. ALL FINAL SEEDING SHALL BE COMPLETED WITHIN SEVEN (7) DAYS FOLLOWING THE FINAL GRADING.

4. FOR LAWN CONSTRUCTION SPECIFICATIONS, SOIL AMENDMENTS, SEED MIX AND APPLICATION RATES, REFER TO THE PROJECT MANUAL AND THE "EROSION AND SEDIMENTATION CONTROL PLAN.

5. ALL AREAS SHALL BE MULCHED IMMEDIATELY AFTER SEEDING. MULCHING SHALL BE MONITORED. IF MULCHING PROVES TO BE INEFFECTIVE, THEN NETTING AND MATTING SHALL BE USED IN ITS PLACE.

6. CONSTRUCTION SHALL BE PLANNED TO ELIMINATE THE NEED FOR SEEDING BETWEEN OCTOBER 1 AND APRIL 15. DORMANT SEEDING SHALL NOT BE USED UNLESS APPROVED BY OWNER'S REPRESENTATIVE.

7. SHOULD DORMANT SEEDING BE NECESSARY, THE SPECIFIED SEED APPLICATION RATE SHALL BE DOUBLED.

8. FOR LATE SEEDING OR DORMANT SEEDING, ALL FERTILIZING, SEEDING, AND MULCHING SHALL BE DONE ON THE SAME DAY IMMEDIATELY AFTER THE LOAM IS SPREAD. FINAL GRADING SHALL BE LIMITED TO AREAS WHICH CAN BE COMPLETED AND SEEDED THE SAME DAY.

LICENSED LANDSCAPE ARCHITECT
2-15-24
SCOTT M. STRYNAR
NO. 3148
STATE OF MAINE

Scott Strynar
Landscape Architect, LLC.
98 Meehan Lane
North Berwick, ME 03906
(t) 207-957-4441

Registered Landscape Architect
Maine, New Hampshire & Mass.
www.scottstrynarla.com

NO.	REVISIONS	INT.	DATE.

RECORD OWNER:
90 US ROUTE 1 LLC

ADDRESS:
PO BOX 630
KITTERY, ME 03904

UPDATED BOUNDARY & EXISTING CONDITIONS PLAN OF LAND OF
90 US ROUTE 1 LLC
90 U.S. ROUTE 1 BY-PASS
KITTERY - YORK COUNTY, MAINE

PREPARED FOR:
90 US ROUTE 1 LLC
CLIENT ADDRESS:
PO BOX 630, KITTERY, ME 03904

1" = 20'
0' 20'

DATE: 06/23/2023
DRAWN BY: SS
CHECKED BY: SS
APPROVED BY:

LANDSCAPE PLAN

PROJECT NO: 21-323.00

LP1

SHEET: 1 OF 3

COORDINATE FILE: J:\AAA\2021\2132300\CARLSON\SURVEY\POINTS\2132300-MESPCS-NAD83W.crd

CADD FILE: F:\PROJECTS\182-90 US RTE ONE KITTERY\CAD\182-BASE 2-15-24.DWG

Luminaire Schedule						
Tag	Qty	Watts	Lumens	LLF	Description	Mounting Height
B1	11	24.2	816	0.900	VRB2-20L3K	3.5
SA	1	83.6	9214	0.900	VP-ST-1-36L-85-3K7-3	18
SB	3	83.6	8085	0.900	VP-ST-1-36L-85-3K7-4W	18
SC	2	85	7343	0.900	VP-ST-1-36L-85-3K7-4W-BC	18
SD	2	56.8	5944	0.900	TWIN - VP-ST-1-36L-55-3K7-4W	18
W1	4	14.9	1805	0.900	GEO1-24L-15-3K7-3-UNV	12
W2	5	16.4	1581	0.900	CUSO-AC	9

NOTE: PHOTOMETRIC CALCULATIONS PREPARED BY SWANEY LIGHTING ASSOCIATES, SCARBOROUGH, MAINE

LIGHT SYMBOLS

Symbol	Description
SB MH: 18	AREA LIGHT POLE: BEACON VIPER, LED, COLOR TEMP 3K FIXTURE HEIGHT: 18 FT MOUNT: POLE ARM FINISH: BRONZE
SB1 MH: 15	AREA LIGHT POLE: BEACON VIPER, LED, COLOR TEMP 3K FIXTURE HEIGHT: 15 FT MOUNT: POLE ARM FINISH: BRONZE
BL MH: 3	BOLLARD: KIM LIGHTING, LED, COLOR TEMP 3K FIXTURE HEIGHT: 3 FT MOUNT: GROUND FINISH BRONZE
W1 & W2 MH: 9 & 12	WALL PACK: BEACON LIGHTING LED COLOR TEMP 3K FIXTURE HEIGHT: 9 & 12 FT MOUNT: WALL FINISH: BRONZE

LICENSED LANDSCAPE ARCHITECT
2-15-24
SCOTT M. STRYNAR
No. 3148
STATE OF MAINE

[illegible]

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RECORD OWNER:
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ADDRESS:
PO BOX 630
KITTERY, ME 03904

UPDATED BOUNDARY & EXISTING CONDITIONS PLAN OF LAND OF

90 US ROUTE 1 LLC

90 U.S. ROUTE 1 BY-PASS

KITTERY - YORK COUNTY, MAINE

PREPARED FOR: 90 US ROUTE 1 LLC
CLIENT ADDRESS: PO BOX 630, KITTERY, ME 03904

1" = 20'
0' 20'

DATE: 06/23/2023
DRAWN BY: SS
CHECKED BY: SS
APPROVED BY:

SITE LIGHTING PLAN

PROJECT NO: 21-323.00

LL1

TAX MAP 14, LOT 2

SHEET: 1 OF 3

COORDINATE FILE: J:\AAA\2021\2132300\CARLSON\SURVEY\POINTS\2132300-MESPCS-NAD83W.crd

CADD FILE: F:\PROJECTS\182-90 US RTE ONE KITTERY\CAD\182-BASE 2-15-24.DWG

BEACON design . performance . technology

DATE: | LOCATION: MAINE
TYPE: | PROJECT: 90 US ROUTE 1 BY-PASS
CATALOG #:

VIPER Area/Site
VIPER LUMINAIRE

MICROSTRIKE | STRIKE OPTICS

FEATURES
- Low profile LED area/site luminaire with a variety of IES distributions for lighting applications such as auto dealership, retail, commercial, and campus parking lots
- Featuring two different optical technologies, Strike and Micro Strike Optics, which provide the best distribution patterns for retrofit or new construction
- Rated for high vibration applications including bridges and overpasses. All sizes are rated for 1.5G
- Control options including photo control, occupancy sensing, NX Lighting Controls™, wiSCAPE and 7-Pin with networked controls
- New customizable lumen output feature allows for the wattage and lumen output to be customized in the factory to meet whatever specification requirements may entail
- Field interchangeable mounting provides additional flexibility after the fixture has shipped

c UL us IP65 BUY AMERICAN SOLUTIONS See Certification Specifications DLC LISTED DLC LISTED PREMIUM

10-DAY QUICK SHIP PROGRAM QS

CONTROL TECHNOLOGY
NX LIGHTING CONTROLS wiSCAPE

SPECIFICATIONS
CONSTRUCTION
- Die-cast housing with hidden vertical heat fins are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with 1000 hour powder coat paint finish
- External hardware is corrosion resistant

OPTICS
- ~~Micro Strike Optics (160, 320, 480, or 720 LED counts) maximize uniformity in applications and come standard with mid-power LEDs which evenly illuminate the entire luminous surface area to provide a low glare appearance. Catalog logic found on page 2~~
- Strike Optics (36, 72, 108, or 162 LED counts) provide best in class distributions and maximum pole spacing in new applications with high powered LEDs. Strike optics are held in place with a polycarbonate bezel to mimic the appearance of the Micro Strike Optics so both solutions can be combined on the same application. Catalog logic found on page 3
- Both optics maximize target zone illumination with minimal losses at the house-side, reducing light trespass issues. Additional backlight control shields and house side shields can be added for further reduction of illumination behind the pole
- One-piece silicone gasket ensures a weatherproof seal
- Zero up-light at 0 degrees of tilt
- Field rotatable optics

INSTALLATION
- Mounting patterns for each arm can be found on page 11
- Optional universal mounting block for ease of installation during retrofit applications. Available as an option (ASQU) or accessory for square and round poles
- All mounting hardware included

INSTALLATION (CONTINUED)
- Knuckle arm fitter option available for 2-3/8" OD tenon
- For products with EPA less than 1 mounted to a pole greater that 20ft, a vibration damper is recommended

ELECTRICAL
- Universal 120-277 VAC or 347-480 VAC input voltage, 50/60 Hz
- Ambient operating temperature -40°C to 40°C
- Drivers have greater than 90% power factor and less than 20% THD
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- Field replaceable surge protection device provides 20kA protection meeting ANSI/IEEE C62.41.2 Category C High and Surge Location Category C3; Automatically takes fixture off-line for protection when device is compromised
- Dual Driver option provides 2 drivers within luminaire but only one set of leads exiting the luminaire, where Dual Power Feed provides two drivers which can be wired independently as two sets of leads are extended from the luminaire. Both options cannot be combined

CONTROLS
- Photo control, occupancy sensor programmable controls, and Zigbee wireless controls available for complete on/off and dimming control
- Please consult brand or sales representative when combining control and electrical options as some combinations may not operate as anticipated depending on your application
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules (control accessories sold separately)

CONTROLS (CONTINUED)
- 0-10V Dimming Drivers are standard and dimming leads are extended out of the luminaire unless control options require connection to the dimming leads. Must specify if wiring leads are to be greater than the 6" standard
- NX Lighting Controls™ available with in fixture wireless control module, features dimming and occupancy sensor
- wiSCAPE® available with in fixture wireless control module, features dimming and occupancy sensor. Also available in 7-pin configuration

CERTIFICATIONS
- DLC® (DesignLights Consortium Qualified), with some Premium Qualified configurations. Not all product variations listed in this document are DLC® qualified. Refer to http://www.designlights.org for the most up-to-date list.
- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations and 40°C ambient temperatures
- 1.5 G rated for ANSI C136.31 high vibration applications
- Fixture is IP65 rated
- Meets IDA recommendations using 3K CCT configuration at 0 degrees of tilt
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 04/23/2020.

WARRANTY
- 5 year warranty

KEY DATA	
Lumen Range	5,000–80,000
Wattage Range	36–600
Efficacy Range (LPW)	92–155
Weight lbs. (kg)	13.7-30.9 (6.2-13.9)

BEACON design . performance . technology

DATE: | LOCATION: MAINE
TYPE: | PROJECT: 90 US ROUTE 1 BY-PASS
CATALOG #:

GEOPAK Series 2
SIZE 2 - TRP2/QSP2/RDI2

FEATURES
- Mid sized architectural wallpacks in three stylish shapes
- Capable of replacing up to 400w HID luminaires
- Type I, II, III and IV distributions for a wide variety of applications
- Integral battery backup options
- Control capabilities offer additional energy savings options
- Zero uplight distributions

UL CERTIFIED BUY AMERICAN SOLUTIONS See Certification Specifications

SPECIFICATIONS
CONSTRUCTION
- Die-cast aluminum housing and door
- Seven powder coat standard finishes, plus custom color options

OPTICS
- LEDs deliver up to 10,800 lumens
- Up to 146 lumens per watt
- Different lenses offer a variety of distribution patterns - Type I, II, III and IV (Forward throw)
- 3000K - 70 CRI, 4000K - 70 CRI and 5000K - 70 CRI, CCT nominal

INSTALLATION
- Quick-mount adapter with gasket seal provides easy installation to wall or to recessed junction box (4" square junction box). Fixture attaches by two Allen-head hidden fasteners for tamper resistance
- Black box accessory available for surface conduit application

ELECTRICAL
- Optional Dual Drivers & Dual Power Feeds for 50, 70 and 90 watt versions
- 120-277, 347 and 480 voltage, 50/60Hz
- Power factor ≥ 90%
- THD (Total Harmonic Distortion) <20%
- Ambient operating temperature -40°C to 40°C
- 20kA surge protection (series); Automatically takes fixture off-line when device is consumed

ELECTRICAL (CONTINUED)
- Integral Battery Backup provides emergency lighting for the required 90 minute path of egress
- Includes a long-life Lithium Iron Phosphate battery with optional battery heater for cold temperature application
- Utilizes 4 LEDs in emergency mode with 657 lumens. Each of the 4 LEDs in emergency are designed to function independently in the unlikely event of a single LED malfunction
- Independent dedicated driver and LED array for battery/emergency mode operation

CONTROLS
- Drivers are 0-10V dimming standard
- Universal button photocontrol for dusk to dawn energy savings
- Photocell and occupancy sensor options available for complete on/off and dimming control
- Dual Driver option provides 2 drivers within luminaire but only one set of leads exiting the luminaire, where Dual Power Feed provides two drivers which can be wired independently as two sets of leads are extended from the luminaire. Both options can not be included in one same fixture.

CERTIFICATIONS
- IP65 rated housing
- Zero uplight (U0), dark sky, neighbor friendly
- Drivers IP66 and RoHS compliant
- This product qualifies as both (i) a "domestic construction material" per FAR §52.225-9 Buy American-Construction Materials and a "(COTS) item" per FAR §2.101 and (ii) a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 06/03/2020.

WARRANTY
- 5 year limited warranty

KEY DATA	
Lumen Range	3,200-11,000
Wattage Range	28–87
Efficacy Range (LPW)	112–146
Weights lbs. (kg)	16–18 (7.3–8.2)

architectural arealighting

DATE: | LOCATION: MAINE
TYPE: | PROJECT: 90 US ROUTE 1 BY-PASS
CATALOG #:

RSA-A Series
ROUND STRAIGHT ALUMINUM POLE

AAL Poles

SPECIFICATIONS
APPLICATIONS
- Lighting installations for side and top mounting of luminaires with effective projected area (EPA) not exceeding maximum allowable loading of the specified pole in its installed geographic location

CONSTRUCTION
- SHAFT: One-piece straight aluminum with round cross section; Extruded shafts of 6061-T6 aluminum in 1/8", 3/16", or 1/4" thickness. Base plate of 356 cast aluminum.
- BOLT COVERS: Four (4) individual bolt covers provided, painted to match pole and base finish.
- POLE CAP: Pole shaft supplied with removable cover when applicable; Tenon and post-top configurations also available
- HAND HOLE: Rectangular 3x5 aluminum hand hole frame (2.38" x 4.38" opening); Mounting provisions for grounding lug located behind gasketed cover
- ANCHOR BOLTS: Four galvanized anchor bolts provided per pole with minimum yield of 55,000 psi (ASTM F1554). Galvanized hardware with two washers and two nuts per bolt for levelingwarnings

FINISH
- Durable thermoset polyester powder coat paint finish with nominal 3.0 mil thickness
- Powder paint finish coat available in multiple standard colors; Custom colors available; RAL number preferable

ORDERING GUIDE
Example: PR4-4R12-125-PCR-GFI-SBC-PTF-BLT

CATALOG #

POLE

RSA-A					BLT	
Seiries	**Pole**	**Shaft**	**Thickness**	**Mounting**	**Finish**	**VM2**
RSA-A Round Straight Aluminum Pole	Reference page 2 Ordering matrix	Reference page 2 Ordering matrix	Reference page 2 Ordering matrix	TA Tenon (2.375" OD) TB Tenon (2.875" OD) OT Open Top (includes pole cap)	BLS Black Gloss Smooth BLT Black Matte Textured DBS Dark Bronze Gloss Smooth DBT Dark Bronze Matte Textured GTT Graphite Matte Textured LGS Light Grey Gloss Smooth LGT Light Grey Matte Textured PSS Platinum Silver Gloss Smooth VGT Verde Green Matte Textured WHS White Gloss Smooth WHT White Matte Textured **Color Option** CC[1] Custom Color	GFI 20 Amp GFCI Receptacle and Cover EHH Extra Handhole C05 .5" Coupling C07 .75" Coupling C20 2" Coupling VM2 2nd mode vibration damper LAB Less Anchor Bolts UL UL Certified

Accessories	
VM2SXX	2nd mode vibration damper, ordered separately

RSA-A-12-40-C (14FT) @ 4" ROUND
RSA-A-18-40-C (18FT @ 4" ROUND

MOUNTING ORIENTATION ○← Denotes handhole location
1 2 2L 3T 3Y 4

Notes:
1 Consult factory for custom color, marine and corrosive finish

KIM LIGHTING®

VRB1 LED Round Bollard
SINGLE FUNCTION, VANDAL-RESISTANT, ALUMINUM SHAFT

Type:
Job:
Catalog number:

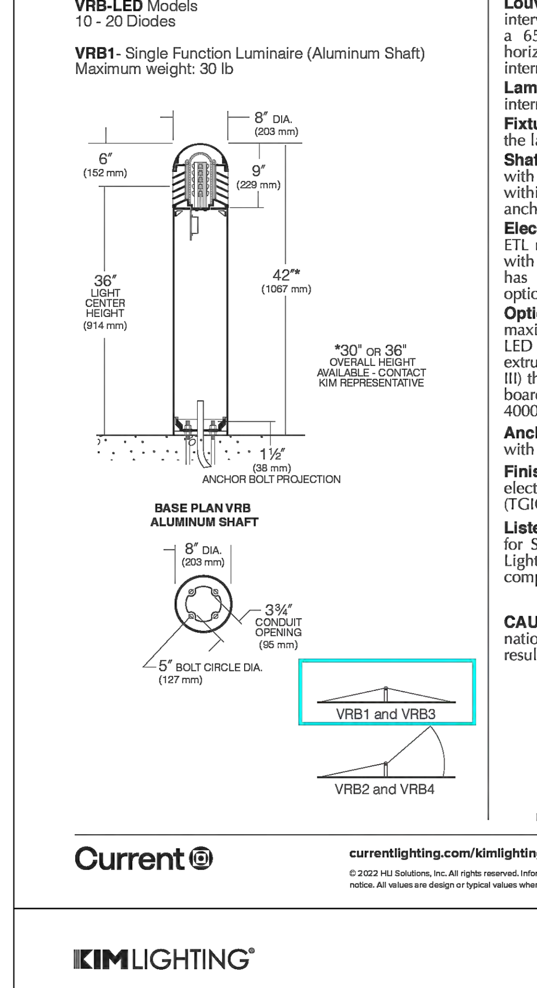
Approvals:

VRB1 / Fixture / Electrical Module / Luminaire Finish (includes top cap and shaft) / Option — See page 2

Date:
Page: 1 of 4

Specifications
VRB-LED Models
10 - 20 Diodes

VRB1- Single Function Luminaire (Aluminum Shaft)
Maximum weight: 30 lb



Domed Top Cap: One-piece die-cast aluminum secured to louvers by concealed allen screws in keyhole slots. For relamping access, allen screws shall not require complete removal.
Louvers: Aluminum die-cast with vertical support ribs at 90° intervals. Horizontal louver blades shall have a 13/4" depth, a 65° upward pitch and provide light source cutoff above horizontal. Louver assembly shall be secured to shaft by four internal tie rods.
Lamp Enclosure: One-piece tempered molded glass with internal flutes and full gasketing at bottom edge.
Fixture Head: Allows flow-through ventilation around and above the lamp enclosure.
Shaft: One-piece extruded aluminum, .125" wall thickness with a heavy cast aluminum twist-lock anchor base concealed within the shaft. Concealed set screws shall lock shaft onto the cast anchor base.
Electronic Module: All electrical components are either UL or ETL recognized, mounted on a single plate and factory prewired with quick disconnect plugs. Driver is rated for -40°F starting and has a 0-10V dimming interface for multi-level illumination options.
Optical Module: Each LED equipped with a directional optic for maximum beam angle projecting through louver stack spacings. LED boards to be mounted to an anodized inter-locking heat sink extrusion. (Type I) two 5-LED boards for a total of 10-LED. (Type III) three 5-LED boards for a total of 15-LED. (Type V) four 5-LED boards for a total of 20-LED. Available in 580nm Amber, 3000K, 4000K and 5000K color temperatures.
Anchor Bolts: Four 3/8" x 10" + 2" zinc plated L-hooks, each with two nuts, washers and a rigid pressed board template.
Finish: Each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat finish.
Listed to: UL 1598 Standard for Luminaires - UL 8750 Standard for Safety for Light Emitting Diode (LED) Equipment for use in Lighting Products and CSA C22.2#250.0 Luminaires. RoHS compliant. Meets Buy American provisions within ARRA.

CAUTION: Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.

KIM LIGHTING RESERVES THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT NOTICE

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DATE: | LOCATION: MAINE
TYPE: | PROJECT: 90 US ROUTE 1 BY-PASS
CATALOG #:

VIPER Area/Site
VIPER LUMINAIRE

STRIKE OPTIC – ORDERING GUIDE
Example: VP–ST–1–36L-39–3K7–2–UNV–A–BLT

CATALOG #

Series	Optic Platform	Size	Light Engine	CCT/CRI	Distribution	Optic Rotation	Voltage
VP Viper	ST Strike	1 Size 1 2 Size 2 3 Size 3 4 Size 4	36L-39[8] 5500 lumens 36L-55[8] 7500 lumens 36L-85 10000 lumens 36L-105 12500 lumens 36L-120 14000 lumens 72L-115 15000 lumens 72L-145 18000 lumens 72L-180 21000 lumens 72L-210 24000 lumens 72L-240 27000 lumens 108L-215[8] 27000 lumens 108L-250 30000 lumens 108L-280 33000 lumens 108L-325 36000 lumens 108L-365 40000 lumens 162L-320 40000 lumens 162L-365[10] 44000 lumens 162L-405 48000 lumens 162L-445 52000 lumens 162L-485 55000 lumens 162L-545[8] 60000 lumens CLO Custom Lumen Output[1]	AM monochromatic amber, 595nm 27K8 2700K, 80 CRI 3K7 3000K, 70 CRI 3K8 3000K, 80 CRI 3K9 3000K, 90 CRI 35K8 3500K, 80 CRI 4K7 4000K, 70 CRI 4K8 4000K, 80 CRI 4K9 4000K, 90 CRI 5K7 5000K, 70 CRI 5K8 5000K, 80 CRI	FR Auto Front Row 2 Type 2 3 Type 3 4F Type 4 Forward 4W Type 4 Wide 5QN Type 5 Square Narrow 5QW Type 5 Square Wide 5QM Type 5 Square Medium 5W Type 5 Wide (Round) 5RW Type 5 Rectangular C Corner Optic TC Tennis Court Optic	BLANK No Rotation L Optic rotation left R Optic rotation right	UNV 120-277V 120 120V 208 208V 240 240V 277 277V 347 347V 480 480V

Mounting	Color	Options	Network Control Options
A Arm mount for square pole/flat surface A_ Arm mount for round pole[3] ASQU Universal arm mount for square pole A_U Universal arm mount for round pole[3] AAG Adjustable arm for pole mounting (universal drill pattern) AA_U Adjustable arm mount for round pole[3] ADU Decorative upswept Arm (universal drill pattern) AD_U Decorative upswept arm mount for round pole[3] MAF Mast arm fitter for 2-3/8" OD horizontal arm K Knuckle T Trunnion WB Wall Bracket, horizontal tenon with MAF WM Wall mount bracket with decorative upswept arm WA Wall mount bracket with adjustable arm	BLT Black Matte Textured BLS Black Gloss Smooth DBT Dark Bronze Matte Textured DBS Dark Bronze Gloss Smooth GTT Graphite Matte Textured LGS Light Grey Gloss Smooth LGT Light Grey Gloss Textured PSS Platinum Silver Smooth WHT White Matte Textured WHS White Gloss Smooth VGT Verde Green Textured **Color Option** CC Custom Color	F Fusing E Battery Backup[1,2,7,8,9] 2PF Dual Power Feed 2DR Dual Driver TE Tooless Entry BC Backlight Control TB Terminal Block	NXWS16F NX Networked Wireless Enabled Integral NXSMP2-LMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming[1,3,4] NXWS40F NX Networked Wireless Enabled Integral NXSMP2-HMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming[1,3,4] NXW NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor[3,4] WIR wiSCAPE® In-Fixture Module[3,4] WIRSC wiSCAPE® Module and Occupancy Sensor[3,4] **Stand Alone Sensors** BTS-14F Bluetooth® Programmable, BTSMP-LMO PIR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens[11] BTS-40F Bluetooth® Programmable, BTSMP-HMO PIR Occupancy Sensor with Automatic Dimming® Photocell and 360° Lens[11] BTSO-12F Bluetooth® Programmable, BTSMP-OMNI-O PIR Occupancy Sensor with Automatic Dimming Photocell and 360° Lens[11] 7PR 7-Pin Receptacle[4] 7PR-SC 7-Pin Receptacle with shorting cap[4] 3PR 3-Pin twist lock[4] 3PR-SC 3-Pin receptacle with shorting cap[4] 3PR-TL 3-Pin PCR with photocontrol[4] **Programmed Controls** SCP-_F Sensor Control Programmable, 8F or 40F[12] ADD AutoDim Timer Based Dimming[4] ADT AutoDim Time of Day Dimming[4] **Photocontrols** PC Button Photocontrol[4,7]

1 – Items with a grey background can be done as a custom order. Contact brand representative for more information
2 – Battery temperature rating -20C to 55C
3 – Replace "_" with "3" for 3.5"-4.13" OD pole, "4" for 4.18"-5.25" OD pole, "5" for 5.5"-6.5" OD pole
4 – Networked Controls cannot be combined with other control options
5 – Not available with 2PF option
6 – Not available with 480V
7 – Not available with 347 or 480V
8 – Not available with Dual Driver option
9 – Only available in Size 1 housing, up to 105 Watts
10 – Some voltage restrictions may apply when combined with controls
11 – BTS and BTSO are only available on Size 3 and Size 4
12 – At least one SCPREMOTE required to program SCP motion sensor. Must select 8ft or 40ft.

POLE MOUNTED LED AREA LIGHT

BEACON design . performance . technology

DATE: | LOCATION: MAINE
TYPE: | PROJECT: 90 US ROUTE 1 BY-PASS
CATALOG #:

GEOPAK Series 2
SIZE 2 - TRP2/QSP2/RDI2

ORDERING GUIDE
Example: TRP2-24L30-3K7-2-UNV-DBT

CATALOG #

ORDERING INFORMATION

Series	# LEDs - Wattage	CCT/CRI	Distribution	Voltage	Secondary Mounting
TRP2 Trapezoid RDI2 Radius QSP2 Qtr-sphere	24L-30 24 LEDs, 30 watts 24L-50 24 LEDs, 50 watts 24L-70 24 LEDs, 70 watts 24L-90 24 LEDs, 90 watts 32L-70 32 LEDs, 70 watts 32L-90 32 LEDs, 90 watts	3K7 3000K, 70 CRI 3K8 3000K, 80 CRI 4K7 4000K, 70 CRI 4K8 4000K, 80 CRI 5K7 5000K, 70 CRI	1 TYPE I 2 TYPE II 3 TYPE III 4 TYPE IV	UNV 120-277V 120 120V 208 208V 240 240V 277 277V UHV[1] 347/480V 347[1] 347V 480[1] 480V	BLANK Downlight Only

Color	Control Options Network	Options
BLT Black Matte Textured BLS Black Gloss Smooth DBT Dark Bronze Matte Textured DBS Dark Bronze Gloss Smooth GTT Graphite Matte Textured LGS Light Grey Gloss Smooth PSS Platinum Silver Smooth WHT White Matte Textured WHS White Gloss Smooth VGT Verde Green Textured **Color Option** CC Custom Color	PC Button Photocontrol SCP[3,4] Programmable occupancy sensor, factory default is 10% light output SCO[3] Sensor Control, On/Off **Spec SCP/SCO & SWPM Mount Height** -8F Up to 8ft mount height -20F Up to 20ft mount height	SF[2] Single fuse & fuse holder DF[2] Double fuse & fuse holder E[2,6] Battery pack (0°C) EH[2,6] Battery pack (-30°C) with heater 2DR[5] Dual Drivers 2PF[5,6] Dual power feeds CS Comfort shield

Notes:
1 70 & 90 watt versions only
2 Must specify voltage (120 or 277V for E & EH)
3 PCU option not applicable, included in sensor
4 Must order minimum of one remote control to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings
5 Not available with 30w version
6 Battery option not compatible with 2 power feeds

ACCESSORIES (ORDERED SEPARATELY)

Catalog Number	Description
☐ SCP-REMOTE*	Remote control for SCP option. Order at least one per
☐ BB-GEO-XX	Back box with 4-1/2" threaded conduit holes, specify finish by replacing "XX" with finish selection, eg. Dark Bronze "DB"

Notes:
* Must order minimum of one remote control to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings.

LED WALL PACK

architectural arealighting

DATE: | LOCATION: MAINE
TYPE: | PROJECT: 424 POST ROAD, WELLS MAINE
CATALOG #:

RSA-A Series
ROUND STRAIGHT ALUMINUM POLE

PRODUCTS EXCEPTIONS & DETAILS
ORDERING MATRIX

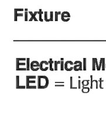
Catalog Number	Height Feet	Height Meters	Nominal Shaft Dimensions	Wall Thickness	Bolt Circle (suggested)	Bolt Circle (range)	Base Plate Diameter	Anchor bolt size	Bolt Projection	Pole weight
RSA-A-10-40-A	10	3.0	4" round	0.125	6.75"	4.77"	9.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	27
RSA-A-12-40-A	12	3.7	4" round	0.125	6.75"	4.77"	9.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	31
RSA-A-14-40-A	14	4.3	4" round	0.125	6.75"	4.77"	9.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	36
RSA-A-16-40-A	16	4.9	4" round	0.125	6.75"	4.77"	9.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	40
RSA-A-18-40-A	18	5.5	4" round	0.125	6.75"	4.77"	9.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	45
RSA-A-20-40-A	20	6.1	4" round	0.125	6.75"	4.77"	9.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	50
RSA-A-10-40-B	10	3.0	4" round	0.188	6.75"	4.77"	9.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	38
RSA-A-12-40-B	12	3.7	4" round	0.188	6.75"	4.77"	9.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	44
RSA-A-14-40-B	14	4.3	4" round	0.188	6.75"	4.77"	9.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	51
RSA-A-16-40-B	16	4.9	4" round	0.188	6.75"	4.77"	9.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	58
RSA-A-18-40-B	18	5.5	4" round	0.188	6.75"	4.77"	9.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	65
RSA-A-20-40-B	20	6.1	4" round	0.188	6.75"	4.77"	9.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	71
RSA-A-10-40-C	12	3.7	4" round	0.25	6.75"	4.77"	9.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	57
RSA-A-12-40-C	14	4.3	4" round	0.25	6.75"	4.77"	9.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	66
RSA-A-14-40-C	16	4.9	4" round	0.25	6.75"	4.77"	9.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	75
RSA-A-16-40-C	18	5.5	4" round	0.25	6.75"	4.77"	9.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	83
RSA-A-18-40-C	20	6.1	4" round	0.25	6.75"	4.77"	9.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	92
RSA-A-12-50-B	12	3.7	5" round	0.188	7.75"	5.48"	10.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	56
RSA-A-14-50-B	14	4.3	5" round	0.188	7.75"	5.48"	10.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	64
RSA-A-16-50-B	16	4.9	5" round	0.188	7.75"	5.48"	10.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	73
RSA-A-18-50-B	18	5.5	5" round	0.188	7.75"	5.48"	10.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	81
RSA-A-20-50-B	20	6.1	5" round	0.188	7.75"	5.48"	10.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	90
RSA-A-25-50-B	25	7.6	5" round	0.188	7.75"	5.48"	10.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	111
RSA-A-16-60-A	16	4.9	6" round	0.125	8.75"	6.19"	11.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	60
RSA-A-18-60-A	18	5.5	6" round	0.125	8.75"	6.19"	11.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	67
RSA-A-20-60-A	20	6.1	6" round	0.125	8.75"	6.19"	11.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	74
RSA-A-25-60-A	25	7.6	6" round	0.125	8.75"	6.19"	11.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	91
RSA-A-16-60-C	16	5.5	6" round	0.25	8.75"	6.19"	11.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	127
RSA-A-18-60-C	18	6.1	6" round	0.25	8.75"	6.19"	11.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	140
RSA-A-20-60-C	20	7.6	6" round	0.25	8.75"	6.19"	11.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	174
RSA-A-25-60-C	25	9.1	6" round	0.25	8.75"	6.19"	11.62" Dia x 1.88" Thk	3/4" x 30" x 3"	2.75"	208

MOUNTING ORIENTATION
1 2 2L 3T 3Y 4 ○← Denotes handhole location

POSTS FOR POLE MOUNTED AREA LIGHTS

KIM LIGHTING®

VRB1 LED Round Bollard
SINGLE FUNCTION, VANDAL-RESISTANT, ALUMINUM SHAFT



Standard and Optional Features

Fixture	Cat. No. VRB1 Single Function, Aluminum Shaft, Domed Top
Electrical Module LED = Light Emitting Diode	Cat. Nos. for LED Electrical Modules available: xL — **Source:** 10L= 10 LED (IES Type I); 15L= 15 LED (IES Type III); 20L= 20 LED (IES Type V) xK — **Color Temperature:** 2K = 590nm - Amber; 3K = 3000K; 4K = 4000K; 5K = 5000K UV — **Voltage:** UV Universal Voltage shall range from 120V-277V
Finish TGIC thermoset polyester powder coat paint applied over a titanated zirconium conversion coating on fixture and shaft.	Cat. No.: Color: BLS Black Gloss Smooth BLT Black Matte Textured DBS Dark Bronze Gloss Smooth DBT Dark Bronze Matte Textured GTT Graphic Matte Textured LGS Light Grey Gloss Smooth LGT Light Grey Matte Textured PSS Platinum Silver Gloss Smooth VGT Verde Green Matte Textured WHS White Gloss Smooth WHT White Matte Textured CC[1] Custom Color **NOTE:** Black and Dark Bronze colors will produce slightly less louver brightness than Light Gray or White. [1]Custom colors subject to additional charges, minimum quantities and extended lead times. Consult representative. Custom color description:______

LED BOLLARD

LICENSED LANDSCAPE ARCHITECT 2-15-24 SCOTT M. STRYNAR NO. 3148 STATE OF MAINE

Scott Strynar
Landscape Architect, LLC.
98 Meehan Lane
North Berwick, ME 03906
(t) 207-957-4441

Registered Landscape Architect
Maine, New Hampshire & Mass.
www.scottstrynarla.com

NO.	REVISIONS	INT.	DATE

RECORD OWNER:
90 US ROUTE 1 LLC

ADDRESS:
PO BOX 630
KITTERY, ME 03904

UPDATED BOUNDARY & EXISTING CONDITIONS PLAN OF LAND OF
90 US ROUTE 1 LLC
90 U.S. ROUTE 1 BY-PASS
KITTERY - YORK COUNTY, MAINE

PREPARED FOR: 90 US ROUTE 1 LLC
CLIENT ADDRESS: PO BOX 630, KITTERY, ME 03904

1" = 20'
0' 20'

DATE: 06/23/2023
DRAWN BY: SS
CHECKED BY: SS
APPROVED BY:

LIGHTING DETAILS

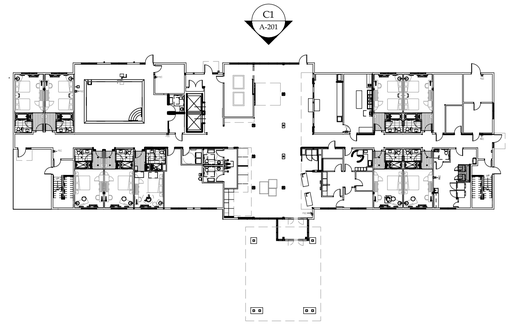
PROJECT NO: 21-323.00

LL2

SHEET: 1 OF 3

TAX MAP 14, LOT 2

COORDINATE FILE: J:\AAA\2021\2132300\CARLSON\SURVEY\POINTS\2132300-MESPCS-NAD83W.crd
CADD FILE: F:\PROJECTS\182-90 US RTE ONE KITTERY\CAD\182-BASE 2-15-24.DWG



E5 KEY PLAN
SCALE: NTS

C1 SOUTHWEST ELEVATION
SCALE: 1/8" = 1'-0"

A1 NORTHEAST ELEVATION
SCALE: 1/8" = 1'-0"

Holiday Inn Express

INNCODE: PWMKT

90 Rte 1 Bypass
Kittery, ME

ISSUE:

SA PROJECT TEAM: PRINCIPAL P.Silvestri
PROJ. ARCH. _____ DRAFTER _____
JOB CAPT. S. Henry INTERIORS _____

SEAL:

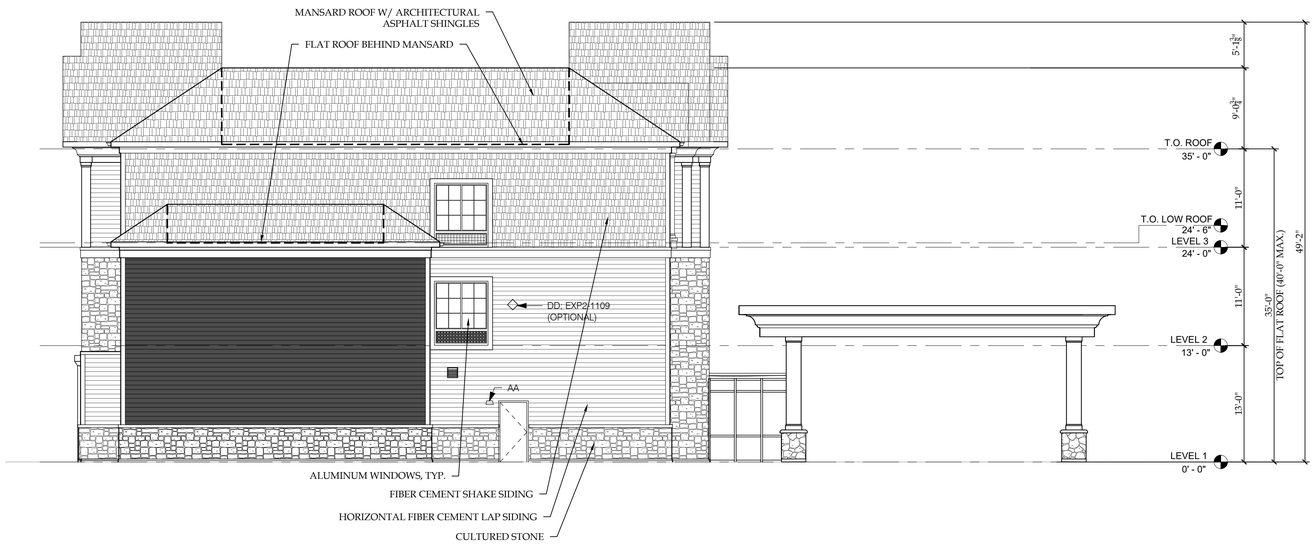
TITLE:

EXTERIOR ELEVATIONS

SILVESTRI
ARCHITECTS · PC
1321 MILLERSPORT HWY PH. 716.691.0900
AMHERST, NY 14221 FAX 716.691.4773

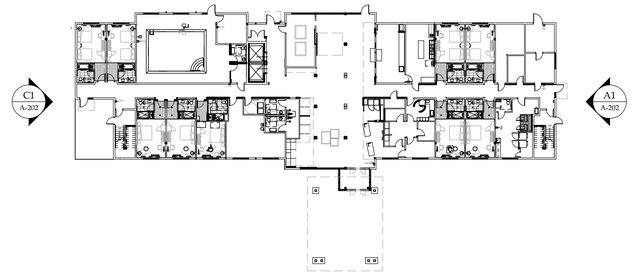
SA JOB #: 22070.01
DATE: 11-30-23

DRAWING #: A-201



C1 EAST ELEVATION
SCALE: 1/8" = 1'-0"

A1 WEST ELEVATION
SCALE: 1/8" = 1'-0"



E5 KEY PLAN
SCALE: NTS

Holiday Inn Express

INNCODE: PWMKT

90 Rte 1 Bypass
Kittery, ME

ISSUE:

SA PROJECT TEAM: PRINCIPAL P.Silvestri
PROJ. ARCH. _____ DRAFTER _____
JOB CAPT. S. Henry INTERIORS _____

SEAL:

TITLE:

EXTERIOR ELEVATIONS

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SA JOB #: 22070.01
DATE: 11-30-23

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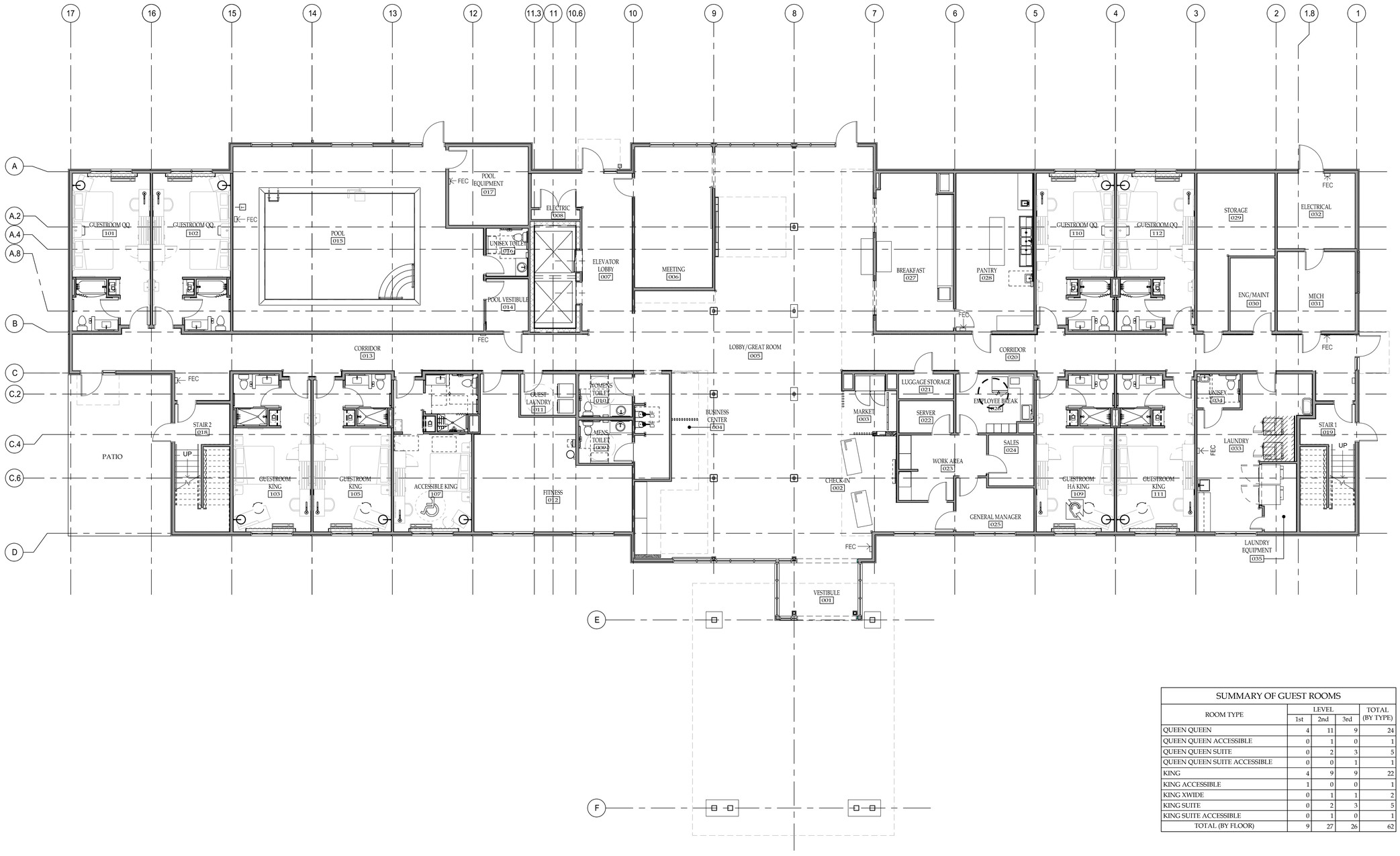


SUMMARY OF GUEST ROOMS				
ROOM TYPE	LEVEL			TOTAL (BY TYPE)
	1st	2nd	3rd	
QUEEN QUEEN	4	11	9	24
QUEEN QUEEN ACCESSIBLE	0	1	0	1
QUEEN QUEEN SUITE	0	2	3	5
QUEEN QUEEN SUITE ACCESSIBLE	0	0	1	1
KING	4	9	9	22
KING ACCESSIBLE	1	0	0	1
KING XWIDE	0	1	1	2
KING SUITE	0	2	3	5
KING SUITE ACCESSIBLE	0	1	0	1
TOTAL (BY FLOOR)	9	27	26	62

A1 FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

Holiday Inn Express

INNCODE: PWMKT

90 Rte 1 Bypass
Kittery, ME

ISSUE:

SA PROJECT TEAM: PRINCIPAL P.Silvestri
PROJ. ARCH. _____ DRAFTER _____
JOB CAPT. S. Henry INTERIORS _____

SEAL:

TITLE:

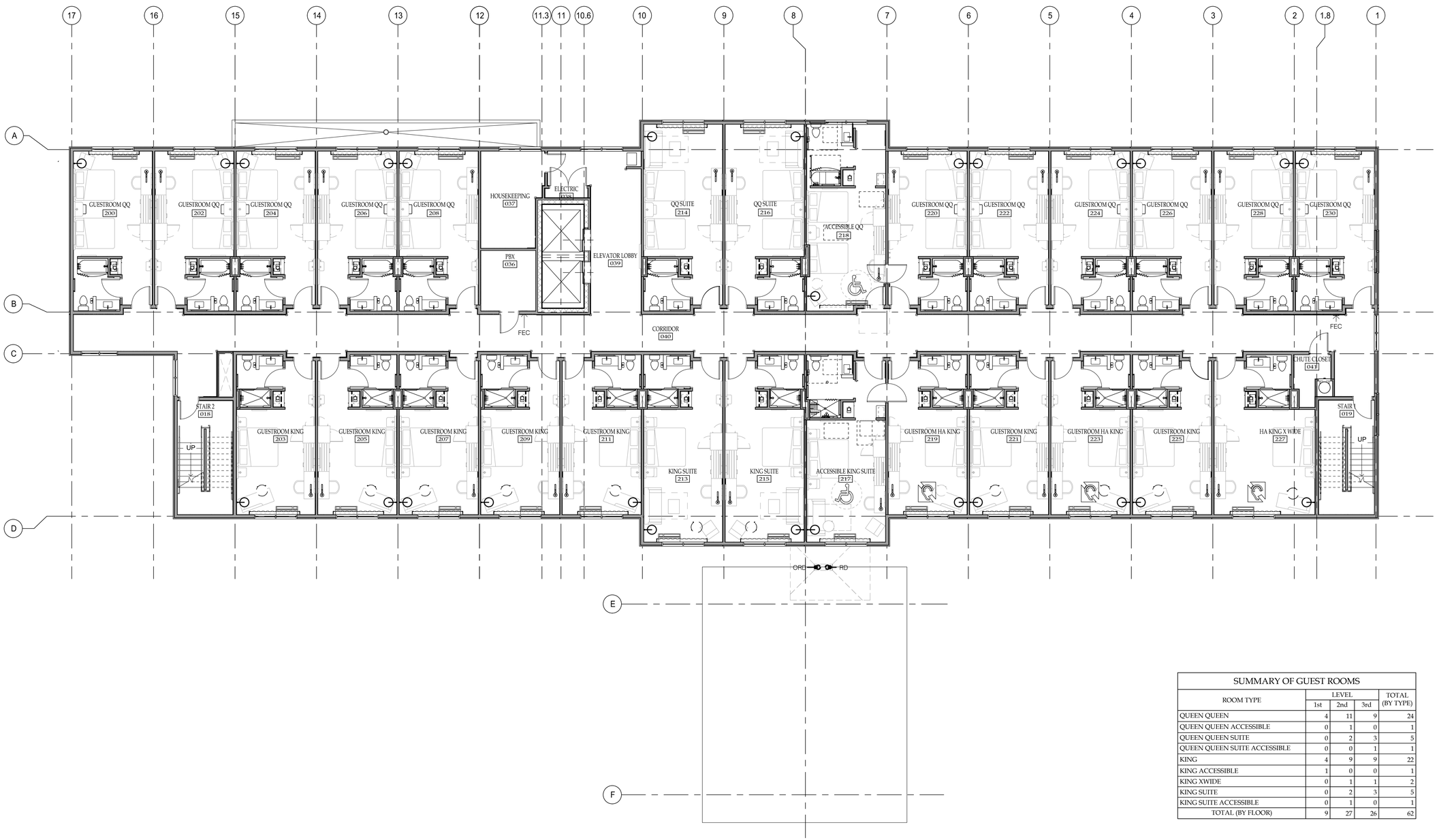
FIRST FLOOR PLAN

SILVESTRI
ARCHITECTS · PC
1321 MILLERSPORT HWY PH. 716.691.0900
AMHERST, NY 14221 FAX 716.691.4773

SA JOB #: 22070.01

DATE: 11-30-23

DRAWING #: A-101



SUMMARY OF GUEST ROOMS				
ROOM TYPE	LEVEL			TOTAL (BY TYPE)
	1st	2nd	3rd	
QUEEN QUEEN	4	11	9	24
QUEEN QUEEN ACCESSIBLE	0	1	0	1
QUEEN QUEEN SUITE	0	2	3	5
QUEEN QUEEN SUITE ACCESSIBLE	0	0	1	1
KING	4	9	9	22
KING ACCESSIBLE	1	0	0	1
KING XWIDE	0	1	1	2
KING SUITE	0	2	3	5
KING SUITE ACCESSIBLE	0	1	0	1
TOTAL (BY FLOOR)	9	27	26	62

A1 SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"

Holiday Inn Express

INNCODE: PWMKT

90 Rte 1 Bypass
Kittery, ME

ISSUE:

SA PROJECT TEAM: PRINCIPAL P.Silvestri
PROJ. ARCH. _____ DRAFTER _____
JOB CAPT. S. Henry INTERIORS _____

SEAL:

TITLE:

SECOND FLOOR PLAN

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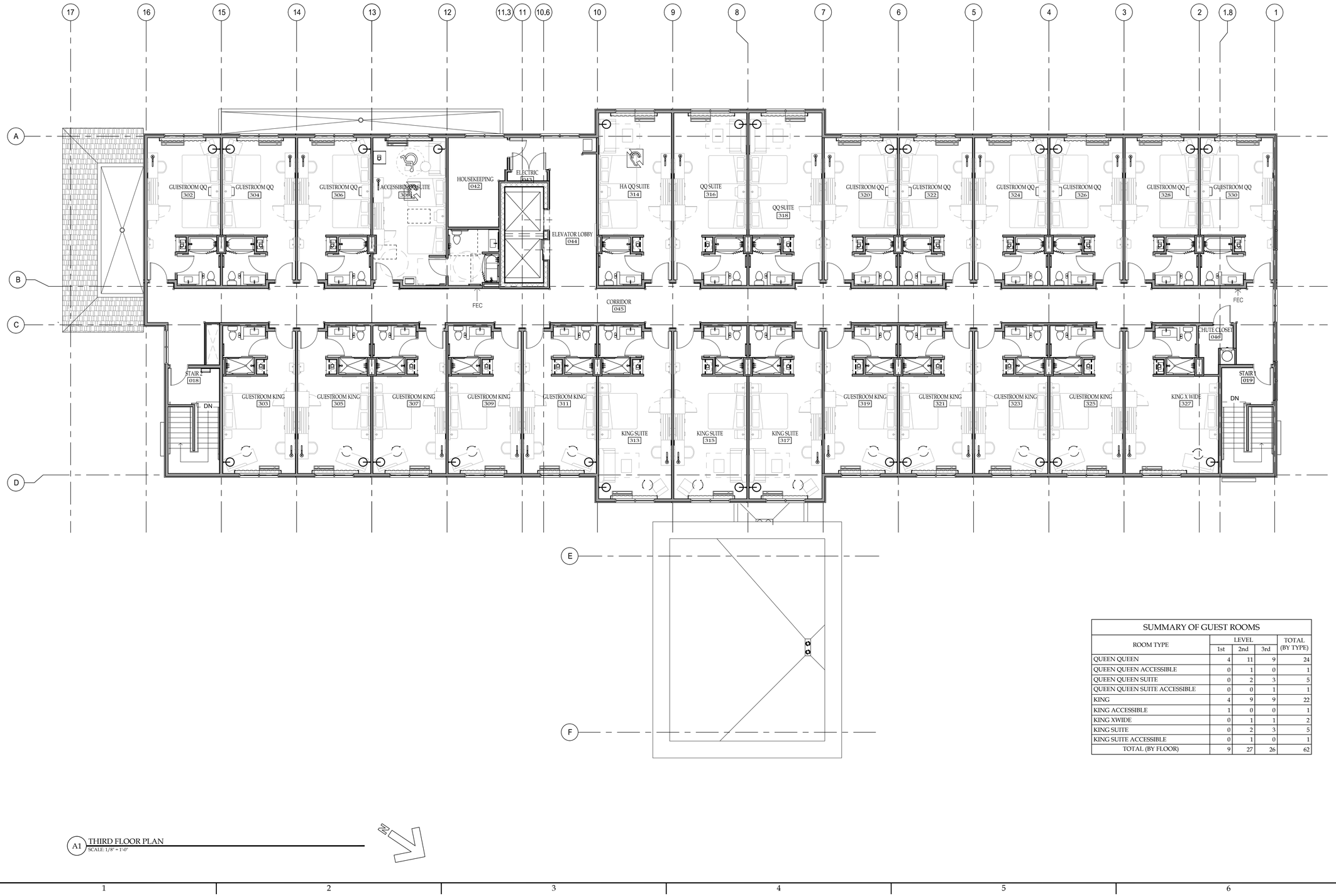
SA JOB #: 22070.01

DATE: 11-30-23

DRAWING #: A-102



SUMMARY OF GUEST ROOMS				
ROOM TYPE	LEVEL			TOTAL (BY TYPE)
	1st	2nd	3rd	
QUEEN QUEEN	4	11	9	24
QUEEN QUEEN ACCESSIBLE	0	1	0	1
QUEEN QUEEN SUITE	0	2	3	5
QUEEN QUEEN SUITE ACCESSIBLE	0	0	1	1
KING	4	9	9	22
KING ACCESSIBLE	1	0	0	1
KING XWIDE	0	1	1	2
KING SUITE	0	2	3	5
KING SUITE ACCESSIBLE	0	1	0	1
TOTAL (BY FLOOR)	9	27	26	62

A1 THIRD FLOOR PLAN
SCALE: 1/8" = 1'-0"

Holiday Inn Express

INNCODE: PWMKT

90 Rte 1 Bypass
Kittery, ME

ISSUE:

SA PROJECT TEAM: PRINCIPAL P.Silvestri
PROJ. ARCH. _____ DRAFTER _____
JOB CAPT. S. Henry INTERIORS _____

SEAL:

TITLE:

THIRD FLOOR PLAN

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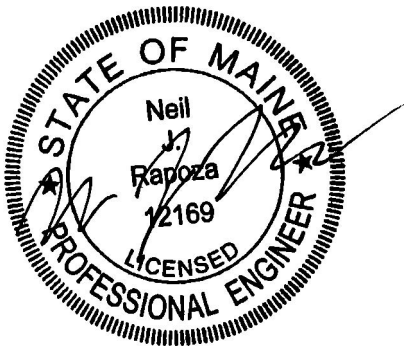
AMHERST, NY 14221 FAX 716.691.4773

SA JOB #: 22070.01

DATE: 11-30-23

DRAWING #: A-103



The seal affixed above applies to this report,
Appendices A through D, and Stormwater Plans D1 & D2.

Stormwater Management Plan

"HOLIDAY INN EXPRESS"

HOTEL REDEVELOPMENT

90 U.S. ROUTE 1 BYPASS, KITTERY, MAINE

Prepared for

90 U.S. Route 1, LLC.
P.O. Box 630
Kittery, ME 03904

December 2023
Revised February 2024

CIVIL
CONSULTANTS

Engineers

Planners

Surveyors

Stormwater Management Narrative

STORMWATER MANAGEMENT PLAN

"Holiday Inn Express"
90 U.S. Route 1 Bypass
Kittery, Maine

Prepared for:

90 U.S. Route 1, LLC.
P.O. Box 630
Kittery, ME 03904

December 2023
(Revised February, 2024)

INTRODUCTION:

The proposed site is located at 90 U.S. Route 1 Bypass in Kittery. The project is situated between U.S. Route 1 and Old Post Road and is shown as Lot 2, Map 14 of the Town of Kittery tax maps. 90 U.S. Route 1, LLC intends to redevelop the lot and construct a new 3 story Holiday In Express hotel. The lot was previously home to The Little Guest House, a 10-unit motel which has since been demolished. There is an existing paved parking lot with two entrances from Route 1 Bypass. The site contains pavement, a demolished building and grass, with woodland on the eastern portion of the lot. No wetlands are located on the site.

The proposed hotel will be serviced by a new 66 space paved parking lot with driveway access from Route 1 Bypass, as well as a paved and gated emergency vehicle access off Old Post Road. The existing access drives will be revised to provide a single two-way access between the two existing entrances.

Stormwater treatment and runoff control facilities are proposed to minimize impact to downstream abutters and conveyance systems. The proposed storm water BMP that will be used to treat runoff and limit peak flows will be a subsurface sand filter beneath the northern corner of the proposed parking lot.

DESIGN REQUIREMENTS:

Section 16.4.21.E.2.f.3 of the Kittery Ordinance defines the 70% maximum impervious surface ratio for lots in the C-3 zone for new nonresidential structures. This makes the maximum allowable lot coverage 47,480 sf for the 67,829 lot. The total impervious area from the proposed hotel redevelopment will be ***44,597 sf*** or ***65.8%***. The additional criterion of section 16.4.21.E.2.f.3 requires all stormwater to be managed on-site utilizing low-impact design (LID) and best management practice (BMP) systems based on MDEP's Maine Stormwater Best Management Practices, Volume I through III. A subsurface sand filter BMP will be installed under the proposed parking lot to improve runoff quality and mitigate impacts of flows from the site.

The ***44,597 sf*** of impervious area created or replaced by the redevelopment ***will require Stormwater Permitting per Maine DEP Chapter 500. This requires treatment of runoff from the site prior to entering the receiving drainage system. The level of treatment required has been determined using the Redevelopment standards per Chapter 500 Section C(2)d. The calculation for this requirement results in a required treatment level of 60%. This treatment has been achieved via a subsurface sand filter, which will be located where it will provide treatment to the area with the heaviest predicted pollutant loading (parking lot runoff)***.

Refer to the calculations included in this submittal for additional information regarding the BMP sizing.

Although not required for Chapter 500 permitting, the analysis for this report includes the 2-, 10-, and 25-year event to predict the downstream effects of the proposed site coverage changes. The 50-year event has also been evaluated per Maine DOT requirements.

EXISTING DRAINAGE CONDITIONS:

Most of the project site contains grass, with the eastern portion containing woodland. The foundation of the former building is located at the center of the site and a paved parking lot with two access drives is located at the front of the site. A ponding area (OUT 2) consisting of woodland, where runoff from the eastern side of the site and the adjacent lot collects, is located just beyond the eastern lot line of the site. This ponding area is assumed to outlet on the northern side of U.S. Route 1 Bypass via an 8" diameter cast iron culvert that is identified in the Kittery GIS system but could not be identified in the field.

Runoff south of the former building location flows to a set of rear lot catch basins connected in series by existing 10" diameter CMP culverts. These pipes run to a catch basin on the front side of the lot (south side of U.S. Route 1 Bypass) through a 12" diameter PVC culvert. Runoff north of the former building location flows directly to the catch basin at the front of the lot. Approximately two thirds of the site's runoff flows into this catch basin and outlets on the northern side of U.S. Route 1 Bypass through a 24" RCP culvert. Runoff east of the former building location flows directly to a ponding area located just beyond the eastern lot line of the site.

No wetlands are located on the project site.

Soils in the watershed are classified predominantly as hydrologic soil type D (Urban Land, Lyman) as determined by using the Web Soil Survey from the USGS. See sheet D1 for the soil plan and HSG designations.

The project is located in Flood Zone C, which is defined as areas of minimal flooding. See Appendix E for a copy of the applicable FEMA map.

PROPOSED DRAINAGE:

The proposed stormwater management system has been designed to treat the developed and impervious area as well as limit flows off site to levels to the greatest extent practicable.

To treat the runoff from the new paved parking area, a subsurface sand filter system is proposed. The system has been designed per the design guidelines of the Maine Stormwater Best Management Practices Manual, Volume III, chapter 7.3, in accordance with Maine DEP's Chapter 500 Stormwater Management Rules.

See the attached calculations for additional information.

ANALYSIS:

The overall perimeter of the watershed remained the same for both Pre and Post Development.

There were three subcatchments identified for the Pre-Development analysis and seven subcatchments were used to model the site for the Post Development analysis. The additional

subcatchments are required to evaluate the flows to proposed BMPs and developed area. The stormwater flows have been analyzed as exiting the site at two locations.

OUT 1 includes the runoff areas north and south of the former building location which both end up collecting at a single front lot catch basin and outlet on the north side of U.S. Route 1 Bypass by means of a 24" RCP culvert.

OUT 2 includes the runoff area east of the former building location that briefly flows across lawn and then outlets directly to the ponding area beyond the eastern lot line.

For further details regarding subcatchment determination, refer to the project drawings and D1 & D2 included in the appendix of this report.

METHODOLOGY:

All runoff calculations were performed using methods based on USDA–SCS Technical Release No. 20 (also known as TR-20). The 2-, 10-, 25- and 50-year events (Type III rainfall distribution) were used for the site-specific analysis to determine pre- and post-development peak discharge rates and required stormwater treatment & conveyance systems.

Runoff curve numbers (CN) and times of concentration (Tc) were determined by the methods outlined in USDA-SCS Technical Release No. 55 (better known as TR-55). On site watershed areas were determined using one-foot contour data provided by field survey crews and two-foot contours for areas off-site from previously compiled topography plans and LIDAR information.

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

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

BMP SIZING:

The proposed subsurface sand filter was sized per the design guidelines of the Maine Stormwater Best Management Practices Manual.

The storm intensities have been obtained from the values published on the Northeast Regional Climate Center by Cornell University.

FLOW RATES:

TWO-YEAR EVENT -

Discharge Point Desig Pre/Post	Peak Runoff(in cfs) Pre	Post	Change (cfs)
OUT 1	4.47	4.22	-0.25
OUT 2	0.75	0.39	-0.36

TEN-YEAR EVENT -

Discharge Point Desig Pre/Post	Peak Runoff(in cfs) Pre	Post	Change (cfs)
OUT 1	7.92	6.79	-1.13
OUT 2	1.47	0.77	-0.70

TWENTY-FIVE-YEAR EVENT -

Discharge Point Desig Pre/Post	Peak Runoff(in cfs) Pre	Post	Change (cfs)
OUT 1	10.67	8.82	-1.85
OUT 2	2.06	1.09	-0.97

FIFTY-YEAR EVENT -

Discharge Point Desig Pre/Post	Peak Runoff(in cfs) Pre	Post	Change (cfs)
OUT 1	13.24	10.72	-2.52
OUT 2	2.62	1.39	-1.23

The analysis reveals that flow to OUT 1 and OUT 2 decreases in the post development conditions for all storms events analyzed.

Please see Appendix D for the stormwater maintenance and inspection plan.

CONCLUSIONS:

The proposed hotel redevelopment will reduce or maintain approximately the same flow rates exiting the site for all evaluated storm events and the storm drainage systems of surrounding lots will not be negatively affected.

Runoff from the parking area has been properly treated through the use of a subsurface sand filter system under the northern corner of the proposed parking lot.

It is our opinion that there will be no adverse downstream impacts as a result of this project and surrounding natural resources have been sufficiently protected by the proposed stormwater management plan.

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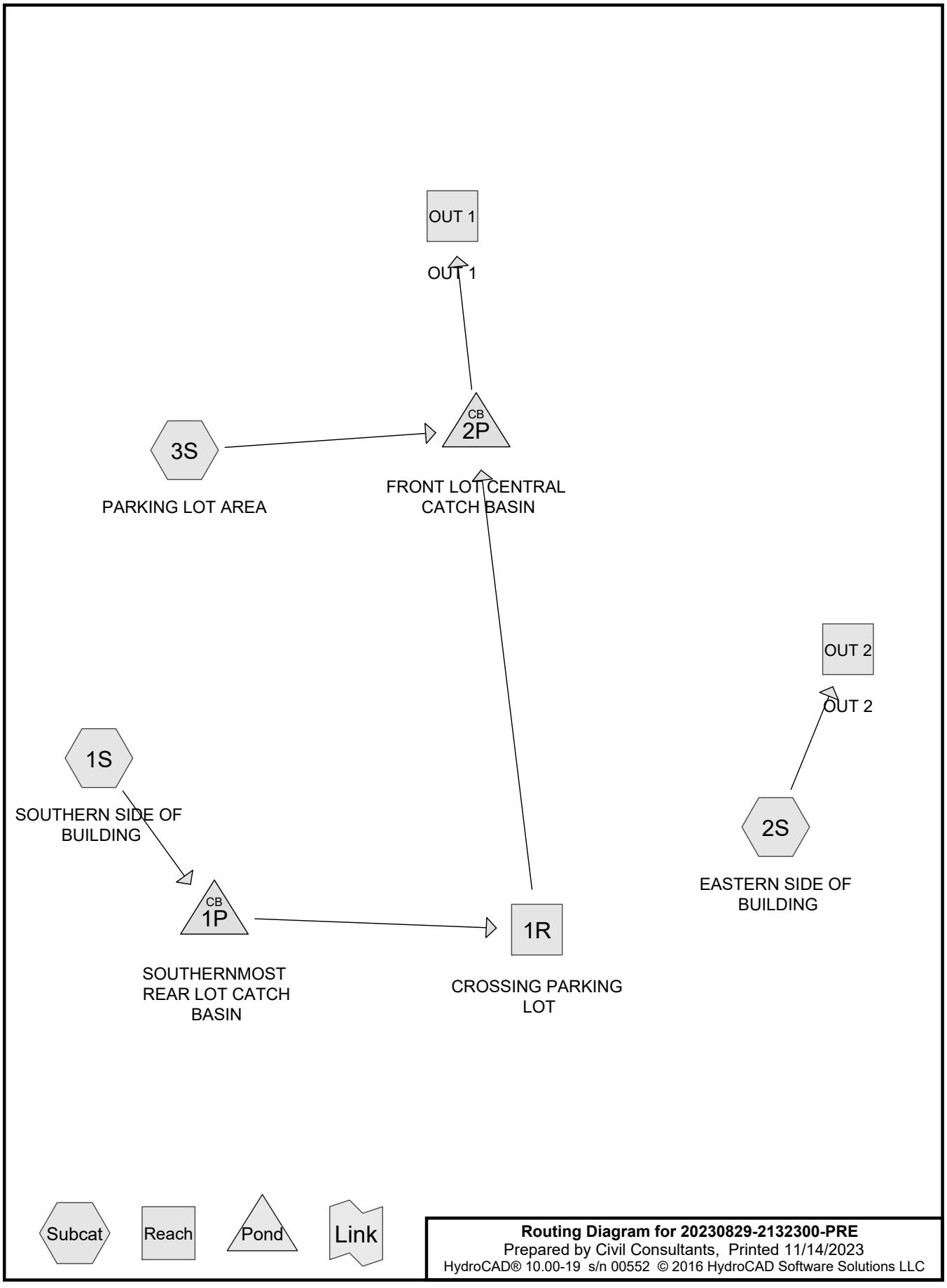
CIVIL
CONSULTANTS

Engineers

Planners

Surveyors

Pre-Development Calculations



Routing Diagram for 20230829-2132300-PRE
Prepared by Civil Consultants, Printed 11/14/2023

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.984	80	>75% Grass cover, Good, HSG D (1S, 2S, 3S)
0.019	96	Gravel surface, HSG D (2S)
0.376	98	Paved parking, HSG D (1S, 2S, 3S)
0.566	93	Paved roads w/open ditches, 50% imp, HSG D (1S, 2S, 3S)
0.126	98	Roofs, HSG D (1S, 2S, 3S)
0.600	77	Woods, Good, HSG D (1S, 2S, 3S)
0.071	79	Woods/grass comb., Good, HSG D (1S)
2.742	**85**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
2.742	HSG D	1S, 2S, 3S
0.000	Other	
2.742		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchr Numbers
0.000	0.000	0.000	0.984	0.000	0.984	>75% Grass cover, Good	
0.000	0.000	0.000	0.019	0.000	0.019	Gravel surface	
0.000	0.000	0.000	0.376	0.000	0.376	Paved parking	
0.000	0.000	0.000	0.566	0.000	0.566	Paved roads w/open ditches, 50% imp	
0.000	0.000	0.000	0.126	0.000	0.126	Roofs	
0.000	0.000	0.000	0.600	0.000	0.600	Woods, Good	
0.000	0.000	0.000	0.071	0.000	0.071	Woods/grass comb., Good	
0.000	**0.000**	**0.000**	**2.742**	**0.000**	**2.742**	**TOTAL AREA**	

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: SOUTHERN SIDE OF Runoff Area=0.938 ac 15.19% Impervious Runoff Depth=1.62"
Flow Length=353' Tc=9.3 min CN=83 Runoff=1.58 cfs 0.126 af

Subcatchment 2S: EASTERN SIDE OF Runoff Area=0.538 ac 7.06% Impervious Runoff Depth=1.48"
Flow Length=204' Tc=12.4 min CN=81 Runoff=0.75 cfs 0.066 af

Subcatchment 3S: PARKING LOT AREA Runoff Area=55,166 sf 47.75% Impervious Runoff Depth=2.09"
Flow Length=309' Tc=7.0 min CN=89 Runoff=2.98 cfs 0.221 af

Reach 1R: CROSSING PARKING LOT Avg. Flow Depth=0.31' Max Vel=7.59 fps Inflow=1.58 cfs 0.126 af
12.0" Round Pipe n=0.010 L=242.0' S=0.0264 '/' Capacity=7.53 cfs Outflow=1.58 cfs 0.126 af

Reach OUT 1: OUT 1 Inflow=4.47 cfs 0.347 af
Outflow=4.47 cfs 0.347 af

Reach OUT 2: OUT 2 Inflow=0.75 cfs 0.066 af
Outflow=0.75 cfs 0.066 af

Pond 1P: SOUTHERNMOST REAR LOT CATCH BASIN Peak Elev=46.38' Inflow=1.58 cfs 0.126 af
12.0" Round Culvert n=0.010 L=40.0' S=0.0275 '/' Outflow=1.58 cfs 0.126 af

Pond 2P: FRONT LOT CENTRAL CATCH BASIN Peak Elev=37.82' Inflow=4.47 cfs 0.347 af
24.0" Round Culvert n=0.011 L=103.0' S=-0.0013 '/' Outflow=4.47 cfs 0.347 af

Total Runoff Area = 2.742 ac Runoff Volume = 0.413 af Average Runoff Depth = 1.81"
71.37% Pervious = 1.957 ac 28.63% Impervious = 0.785 ac

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: SOUTHERN SIDE OF Runoff Area=0.938 ac 15.19% Impervious Runoff Depth=3.05"
Flow Length=353' Tc=9.3 min CN=83 Runoff=2.98 cfs 0.238 af

Subcatchment 2S: EASTERN SIDE OF Runoff Area=0.538 ac 7.06% Impervious Runoff Depth=2.86"
Flow Length=204' Tc=12.4 min CN=81 Runoff=1.47 cfs 0.128 af

Subcatchment 3S: PARKING LOT AREA Runoff Area=55,166 sf 47.75% Impervious Runoff Depth=3.64"
Flow Length=309' Tc=7.0 min CN=89 Runoff=5.08 cfs 0.384 af

Reach 1R: CROSSING PARKING LOT Avg. Flow Depth=0.44' Max Vel=9.02 fps Inflow=2.98 cfs 0.238 af
12.0" Round Pipe n=0.010 L=242.0' S=0.0264 '/' Capacity=7.53 cfs Outflow=2.98 cfs 0.238 af

Reach OUT 1: OUT 1 Inflow=7.92 cfs 0.622 af
Outflow=7.92 cfs 0.622 af

Reach OUT 2: OUT 2 Inflow=1.47 cfs 0.128 af
Outflow=1.47 cfs 0.128 af

Pond 1P: SOUTHERNMOST REAR LOT CATCH BASIN Peak Elev=47.09' Inflow=2.98 cfs 0.238 af
12.0" Round Culvert n=0.010 L=40.0' S=0.0275 '/' Outflow=2.98 cfs 0.238 af

Pond 2P: FRONT LOT CENTRAL CATCH BASIN Peak Elev=38.26' Inflow=7.92 cfs 0.622 af
24.0" Round Culvert n=0.011 L=103.0' S=-0.0013 '/' Outflow=7.92 cfs 0.622 af

Total Runoff Area = 2.742 ac Runoff Volume = 0.750 af Average Runoff Depth = 3.28"
71.37% Pervious = 1.957 ac 28.63% Impervious = 0.785 ac

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: SOUTHERN SIDE OF Runoff Area=0.938 ac 15.19% Impervious Runoff Depth=4.25"
Flow Length=353' Tc=9.3 min CN=83 Runoff=4.13 cfs 0.332 af

Subcatchment 2S: EASTERN SIDE OF Runoff Area=0.538 ac 7.06% Impervious Runoff Depth=4.04"
Flow Length=204' Tc=12.4 min CN=81 Runoff=2.06 cfs 0.181 af

Subcatchment 3S: PARKING LOT AREA Runoff Area=55,166 sf 47.75% Impervious Runoff Depth=4.90"
Flow Length=309' Tc=7.0 min CN=89 Runoff=6.74 cfs 0.517 af

Reach 1R: CROSSING PARKING LOT Avg. Flow Depth=0.53' Max Vel=9.80 fps Inflow=4.13 cfs 0.332 af
12.0" Round Pipe n=0.010 L=242.0' S=0.0264 '/' Capacity=7.53 cfs Outflow=4.12 cfs 0.332 af

Reach OUT 1: OUT 1 Inflow=10.67 cfs 0.849 af
Outflow=10.67 cfs 0.849 af

Reach OUT 2: OUT 2 Inflow=2.06 cfs 0.181 af
Outflow=2.06 cfs 0.181 af

Pond 1P: SOUTHERNMOST REAR LOT CATCH BASIN Peak Elev=48.00' Inflow=4.13 cfs 0.332 af
12.0" Round Culvert n=0.010 L=40.0' S=0.0275 '/' Outflow=4.13 cfs 0.332 af

Pond 2P: FRONT LOT CENTRAL CATCH BASIN Peak Elev=38.60' Inflow=10.67 cfs 0.849 af
24.0" Round Culvert n=0.011 L=103.0' S=-0.0013 '/' Outflow=10.67 cfs 0.849 af

Total Runoff Area = 2.742 ac Runoff Volume = 1.030 af Average Runoff Depth = 4.51"
71.37% Pervious = 1.957 ac 28.63% Impervious = 0.785 ac

Summary for Subcatchment 1S: SOUTHERN SIDE OF BUILDING

Runoff = 4.13 cfs @ 12.13 hrs, Volume= 0.332 af, Depth= 4.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=6.17"

Area (ac)	CN	Description
0.063	98	Roofs, HSG D
0.071	79	Woods/grass comb., Good, HSG D
0.504	80	>75% Grass cover, Good, HSG D
0.029	98	Paved parking, HSG D
0.170	77	Woods, Good, HSG D
0.101	93	Paved roads w/open ditches, 50% imp, HSG D
0.938	83	Weighted Average
0.796		84.81% Pervious Area
0.143		15.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	38	0.1100	0.13		**Sheet Flow, 1.1** Woods: Light underbrush n= 0.400 P2= 3.19"
0.2	28	0.3500	2.96		**Shallow Concentrated Flow, 1.2** Woodland Kv= 5.0 fps
0.5	43	0.0700	1.32		**Shallow Concentrated Flow, 1.3** Woodland Kv= 5.0 fps
1.5	94	0.0213	1.02		**Shallow Concentrated Flow, 1.4** Short Grass Pasture Kv= 7.0 fps
1.6	90	0.0022	0.97	10.51	**Trap/Vee/Rect Channel Flow, 1.5** Bot.W=3.00' D=0.50' Z= 50.0 & 25.0 '/' Top.W=40.50' n= 0.030 Short grass
0.5	60	0.0085	1.93	1.05	**Pipe Channel, 1.6** 10.0" Round Area= 0.5 sf Perim= 2.6' r= 0.21' n= 0.025 Corrugated metal
9.3	353	Total			

Summary for Subcatchment 2S: EASTERN SIDE OF BUILDING

Runoff = 2.06 cfs @ 12.17 hrs, Volume= 0.181 af, Depth= 4.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=6.17"

Area (ac)	CN	Description
0.029	98	Roofs, HSG D
0.001	98	Paved parking, HSG D
0.019	96	Gravel surface, HSG D
0.300	80	>75% Grass cover, Good, HSG D
0.173	77	Woods, Good, HSG D
0.016	93	Paved roads w/open ditches, 50% imp, HSG D
0.538	81	Weighted Average
0.500		92.94% Pervious Area
0.038		7.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.8	50	0.0100	0.08		**Sheet Flow, 2.1** Grass: Dense n= 0.240 P2= 3.19"
0.5	37	0.0270	1.15		**Shallow Concentrated Flow, 2.2** Short Grass Pasture Kv= 7.0 fps
0.6	38	0.0263	1.14		**Shallow Concentrated Flow, 2.3** Short Grass Pasture Kv= 7.0 fps
0.4	31	0.0050	1.46	14.98	**Trap/Vee/Rect Channel Flow, 2.4** Bot.W=3.00' D=0.50' Z= 35.0 '/' Top.W=38.00' n= 0.030 Stream, clean & straight
0.1	42	0.0476	5.05	17.03	**Trap/Vee/Rect Channel Flow, 2.5** Bot.W=3.00' D=0.50' Z= 10.0 & 5.0 '/' Top.W=10.50' n= 0.030 Stream, clean & straight
0.0	6	0.4000	15.03	75.14	**Trap/Vee/Rect Channel Flow, 2.6** Bot.W=5.00' D=0.50' Z= 10.0 '/' Top.W=15.00' n= 0.030 Stream, clean & straight
12.4	204	Total			

Summary for Subcatchment 3S: PARKING LOT AREA

Runoff = 6.74 cfs @ 12.10 hrs, Volume= 0.517 af, Depth= 4.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=6.17"

Area (sf)	CN	Description
15,054	98	Paved parking, HSG D
1,501	98	Roofs, HSG D
7,836	80	>75% Grass cover, Good, HSG D
11,203	77	Woods, Good, HSG D
19,572	93	Paved roads w/open ditches, 50% imp, HSG D
55,166	89	Weighted Average
28,825		52.25% Pervious Area
26,341		47.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	50	0.1200	0.14		**Sheet Flow, 4.1** Woods: Light underbrush n= 0.400 P2= 3.19"
0.2	38	0.2631	2.56		**Shallow Concentrated Flow, 4.2** Woodland Kv= 5.0 fps
0.2	20	0.1000	1.58		**Shallow Concentrated Flow, 4.3** Woodland Kv= 5.0 fps
0.2	32	0.1016	2.23		**Shallow Concentrated Flow, 4.4** Short Grass Pasture Kv= 7.0 fps
0.4	169	0.0242	7.51	62.89	**Trap/Vee/Rect Channel Flow, 4.5** Bot.W=3.00' D=0.50' Z= 35.0 & 20.0 '/' Top.W=30.50' n= 0.013 Asphalt, smooth
7.0	309	Total			

Summary for Reach 1R: CROSSING PARKING LOT

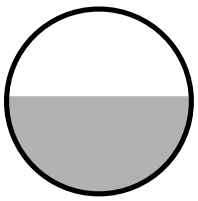
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.938 ac, 15.19% Impervious, Inflow Depth = 4.25" for 25-YR event
Inflow = 4.13 cfs @ 12.13 hrs, Volume= 0.332 af
Outflow = 4.12 cfs @ 12.13 hrs, Volume= 0.332 af, Atten= 0%, Lag= 0.3 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 3
Max. Velocity= 9.80 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 3.47 fps, Avg. Travel Time= 1.2 min

Peak Storage= 102 cf @ 12.13 hrs
Average Depth at Peak Storage= 0.53'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.53 cfs

12.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 242.0' Slope= 0.0264 '/'
Inlet Invert= 43.47', Outlet Invert= 37.08'



Summary for Reach OUT 1: OUT 1

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

Inflow Area = 2.204 ac, 33.90% Impervious, Inflow Depth = 4.62" for 25-YR event
Inflow = 10.67 cfs @ 12.11 hrs, Volume= 0.849 af
Outflow = 10.67 cfs @ 12.11 hrs, Volume= 0.849 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 3

Summary for Reach OUT 2: OUT 2

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

Inflow Area = 0.538 ac, 7.06% Impervious, Inflow Depth = 4.04" for 25-YR event
Inflow = 2.06 cfs @ 12.17 hrs, Volume= 0.181 af
Outflow = 2.06 cfs @ 12.17 hrs, Volume= 0.181 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 3

Summary for Pond 1P: SOUTHERNMOST REAR LOT CATCH BASIN

Inflow Area = 0.938 ac, 15.19% Impervious, Inflow Depth = 4.25" for 25-YR event
Inflow = 4.13 cfs @ 12.13 hrs, Volume= 0.332 af
Outflow = 4.13 cfs @ 12.13 hrs, Volume= 0.332 af, Atten= 0%, Lag= 0.0 min
Primary = 4.13 cfs @ 12.13 hrs, Volume= 0.332 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 48.00' @ 12.13 hrs
Flood Elev= 48.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	45.59'	**12.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 45.59' / 44.49' S= 0.0275 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=4.12 cfs @ 12.13 hrs HW=48.00' TW=44.00' (Dynamic Tailwater)
↑**1=Culvert** (Inlet Controls 4.12 cfs @ 5.25 fps)

Summary for Pond 2P: FRONT LOT CENTRAL CATCH BASIN

[62] Hint: Exceeded Reach 1R OUTLET depth by 1.00' @ 12.10 hrs

Inflow Area = 2.204 ac, 33.90% Impervious, Inflow Depth = 4.62" for 25-YR event
Inflow = 10.67 cfs @ 12.11 hrs, Volume= 0.849 af
Outflow = 10.67 cfs @ 12.11 hrs, Volume= 0.849 af, Atten= 0%, Lag= 0.0 min
Primary = 10.67 cfs @ 12.11 hrs, Volume= 0.849 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 38.60' @ 12.11 hrs
Flood Elev= 45.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	36.69'	**24.0" Round Culvert** L= 103.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 36.56' / 36.69' S= -0.0013 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 3.14 sf

Primary OutFlow Max=10.67 cfs @ 12.11 hrs HW=38.60' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 10.67 cfs @ 4.14 fps)

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: SOUTHERN SIDE OF Runoff Area=0.938 ac 15.19% Impervious Runoff Depth=5.40"
Flow Length=353' Tc=9.3 min CN=83 Runoff=5.19 cfs 0.422 af

Subcatchment 2S: EASTERN SIDE OF Runoff Area=0.538 ac 7.06% Impervious Runoff Depth=5.17"
Flow Length=204' Tc=12.4 min CN=81 Runoff=2.62 cfs 0.232 af

Subcatchment 3S: PARKING LOT AREA Runoff Area=55,166 sf 47.75% Impervious Runoff Depth=6.09"
Flow Length=309' Tc=7.0 min CN=89 Runoff=8.27 cfs 0.643 af

Reach 1R: CROSSING PARKING LOT Avg. Flow Depth=0.61' Max Vel=10.33 fps Inflow=5.19 cfs 0.422 af
12.0" Round Pipe n=0.010 L=242.0' S=0.0264 '/' Capacity=7.53 cfs Outflow=5.19 cfs 0.422 af

Reach OUT 1: OUT 1 Inflow=13.24 cfs 1.064 af
Outflow=13.24 cfs 1.064 af

Reach OUT 2: OUT 2 Inflow=2.62 cfs 0.232 af
Outflow=2.62 cfs 0.232 af

Pond 1P: SOUTHERNMOST REAR LOT CATCH BASIN Peak Elev=49.12' Inflow=5.19 cfs 0.422 af
12.0" Round Culvert n=0.010 L=40.0' S=0.0275 '/' Outflow=5.19 cfs 0.422 af

Pond 2P: FRONT LOT CENTRAL CATCH BASIN Peak Elev=38.94' Inflow=13.24 cfs 1.064 af
24.0" Round Culvert n=0.011 L=103.0' S=-0.0013 '/' Outflow=13.24 cfs 1.064 af

Total Runoff Area = 2.742 ac Runoff Volume = 1.296 af Average Runoff Depth = 5.67"
71.37% Pervious = 1.957 ac 28.63% Impervious = 0.785 ac

CIVIL
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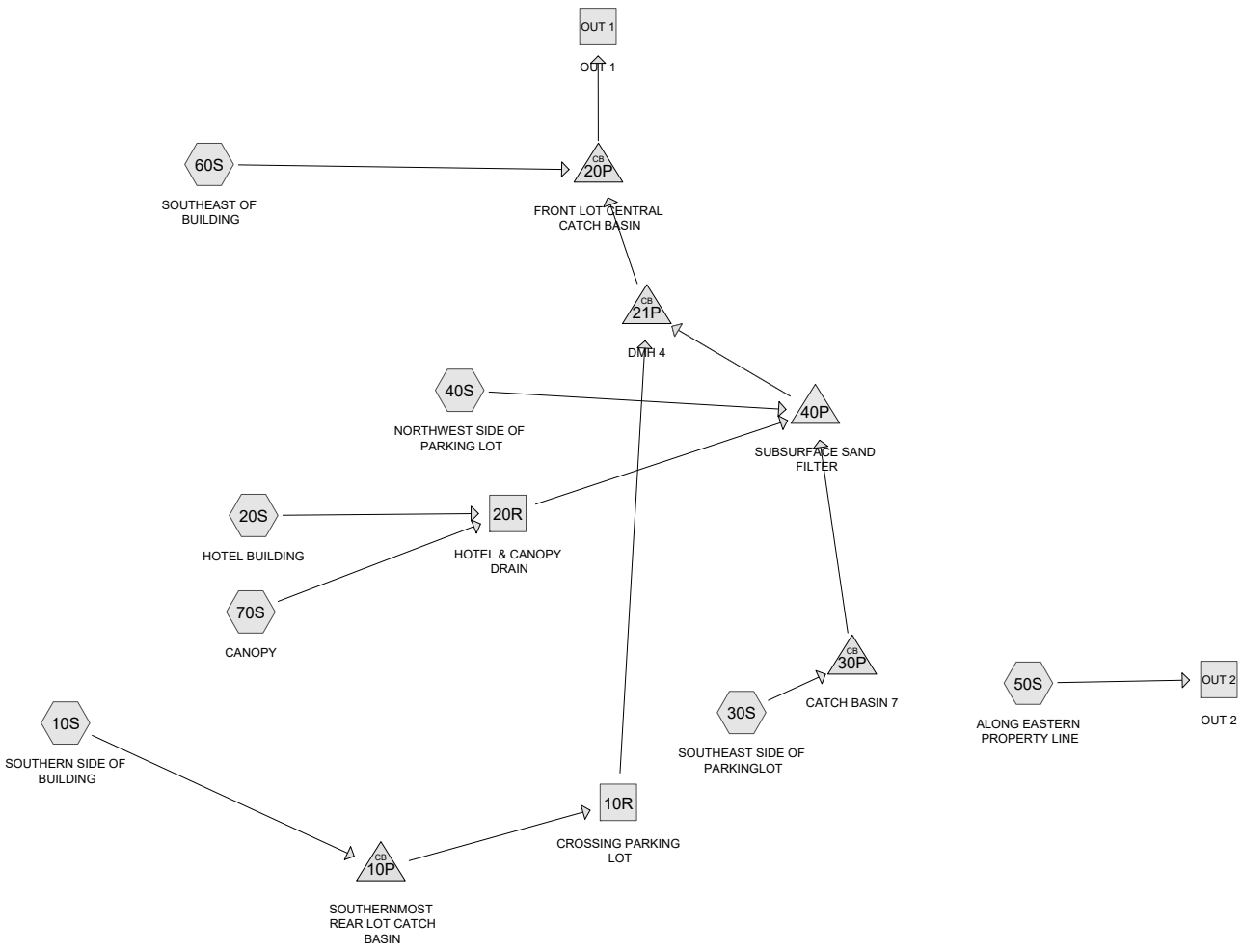
Surveyors

Post-Development Calculations



Subcat Reach Pond Link

Routing Diagram for 20240208-2132300-POST-rev
Prepared by Civil Consultants, Printed 2/20/2024

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.592	80	>75% Grass cover, Good, HSG D (10S, 30S, 40S, 50S, 60S)
0.014	96	Gravel surface, HSG D (50S)
0.736	98	Paved parking, HSG D (10S, 30S, 40S, 50S, 60S)
0.403	93	Paved roads w/open ditches, 50% imp, HSG D (10S, 50S, 60S)
0.343	98	Roofs, HSG D (10S, 20S, 30S, 40S, 60S, 70S)
0.583	77	Woods, Good, HSG D (10S, 50S, 60S)
0.071	79	Woods/grass comb., Good, HSG D (10S)
2.742	**88**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
2.742	HSG D	10S, 20S, 30S, 40S, 50S, 60S, 70S
0.000	Other	
2.742		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchr Numbers
0.000	0.000	0.000	0.592	0.000	0.592	>75% Grass cover, Good	
0.000	0.000	0.000	0.014	0.000	0.014	Gravel surface	
0.000	0.000	0.000	0.736	0.000	0.736	Paved parking	
0.000	0.000	0.000	0.403	0.000	0.403	Paved roads w/open ditches, 50% imp	
0.000	0.000	0.000	0.343	0.000	0.343	Roofs	
0.000	0.000	0.000	0.583	0.000	0.583	Woods, Good	
0.000	0.000	0.000	0.071	0.000	0.071	Woods/grass comb., Good	
0.000	**0.000**	**0.000**	**2.742**	**0.000**	**2.742**	**TOTAL AREA**	

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 10S: SOUTHERN SIDE OF Runoff Area=0.653 ac 26.11% Impervious Runoff Depth=1.69"
Flow Length=393' Tc=8.5 min CN=84 Runoff=1.19 cfs 0.092 af

Subcatchment 20S: HOTEL BUILDING Runoff Area=0.161 ac 100.00% Impervious Runoff Depth=2.98"
Tc=6.0 min CN=98 Runoff=0.50 cfs 0.040 af

Subcatchment 30S: SOUTHEAST SIDE OF Runoff Area=0.459 ac 82.79% Impervious Runoff Depth=2.65"
Tc=6.0 min CN=95 Runoff=1.35 cfs 0.102 af

Subcatchment 40S: NORTHWEST SIDE OF Runoff Area=0.300 ac 83.67% Impervious Runoff Depth=2.65"
Tc=6.0 min CN=95 Runoff=0.88 cfs 0.066 af

Subcatchment 50S: ALONG EASTERN Runoff Area=0.248 ac 5.44% Impervious Runoff Depth=1.41"
Flow Length=145' Tc=7.3 min CN=80 Runoff=0.39 cfs 0.029 af

Subcatchment 60S: SOUTHEAST OF Runoff Area=0.889 ac 30.65% Impervious Runoff Depth=1.84"
Flow Length=347' Tc=7.0 min CN=86 Runoff=1.86 cfs 0.137 af

Subcatchment 70S: CANOPY Runoff Area=0.032 ac 100.00% Impervious Runoff Depth=2.98"
Tc=6.0 min CN=98 Runoff=0.10 cfs 0.008 af

Reach 10R: CROSSING PARKING LOT Avg. Flow Depth=0.27' Max Vel=6.98 fps Inflow=1.19 cfs 0.092 af
12.0" Round Pipe n=0.010 L=208.0' S=0.0263 '/' Capacity=7.51 cfs Outflow=1.18 cfs 0.092 af

Reach 20R: HOTEL & CANOPY DRAIN Avg. Flow Depth=0.17' Max Vel=7.00 fps Inflow=0.60 cfs 0.048 af
12.0" Round Pipe n=0.010 L=73.7' S=0.0465 '/' Capacity=9.99 cfs Outflow=0.60 cfs 0.048 af

Reach OUT 1: OUT 1 Inflow=4.22 cfs 0.439 af
Outflow=4.22 cfs 0.439 af

Reach OUT 2: OUT 2 Inflow=0.39 cfs 0.029 af
Outflow=0.39 cfs 0.029 af

Pond 10P: SOUTHERNMOST REAR LOT CATCH BASIN Peak Elev=46.25' Inflow=1.19 cfs 0.092 af
12.0" Round Culvert n=0.010 L=40.0' S=0.0275 '/' Outflow=1.19 cfs 0.092 af

Pond 20P: FRONT LOT CENTRAL CATCH BASIN Peak Elev=37.78' Inflow=4.22 cfs 0.439 af
24.0" Round Culvert n=0.011 L=103.0' S=-0.0013 '/' Outflow=4.22 cfs 0.439 af

Pond 21P: DMH 4 Peak Elev=38.83' Inflow=2.41 cfs 0.302 af
18.0" Round Culvert n=0.013 L=34.0' S=0.0059 '/' Outflow=2.41 cfs 0.302 af

Pond 30P: CATCH BASIN 7 Peak Elev=44.21' Inflow=1.35 cfs 0.102 af
12.0" Round Culvert n=0.010 L=93.3' S=0.0089 '/' Outflow=1.35 cfs 0.102 af

Pond 40P: SUBSURFACE SAND FILTER Peak Elev=42.55' Storage=2,034 cf Inflow=2.83 cfs 0.216 af
Primary=1.27 cfs 0.210 af Secondary=0.00 cfs 0.000 af Outflow=1.27 cfs 0.210 af

Total Runoff Area = 2.742 ac Runoff Volume = 0.474 af Average Runoff Depth = 2.07"
53.30% Pervious = 1.461 ac 46.70% Impervious = 1.280 ac

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 10S: SOUTHERN SIDE OF Runoff Area=0.653 ac 26.11% Impervious Runoff Depth=3.14"
Flow Length=393' Tc=8.5 min CN=84 Runoff=2.20 cfs 0.171 af

Subcatchment 20S: HOTEL BUILDING Runoff Area=0.161 ac 100.00% Impervious Runoff Depth=4.62"
Tc=6.0 min CN=98 Runoff=0.77 cfs 0.062 af

Subcatchment 30S: SOUTHEAST SIDE OF Runoff Area=0.459 ac 82.79% Impervious Runoff Depth=4.28"
Tc=6.0 min CN=95 Runoff=2.12 cfs 0.164 af

Subcatchment 40S: NORTHWEST SIDE OF Runoff Area=0.300 ac 83.67% Impervious Runoff Depth=4.28"
Tc=6.0 min CN=95 Runoff=1.39 cfs 0.107 af

Subcatchment 50S: ALONG EASTERN Runoff Area=0.248 ac 5.44% Impervious Runoff Depth=2.77"
Flow Length=145' Tc=7.3 min CN=80 Runoff=0.77 cfs 0.057 af

Subcatchment 60S: SOUTHEAST OF Runoff Area=0.889 ac 30.65% Impervious Runoff Depth=3.34"
Flow Length=347' Tc=7.0 min CN=86 Runoff=3.32 cfs 0.247 af

Subcatchment 70S: CANOPY Runoff Area=0.032 ac 100.00% Impervious Runoff Depth=4.62"
Tc=6.0 min CN=98 Runoff=0.15 cfs 0.012 af

Reach 10R: CROSSING PARKING LOT Avg. Flow Depth=0.37' Max Vel=8.30 fps Inflow=2.20 cfs 0.171 af
12.0" Round Pipe n=0.010 L=208.0' S=0.0263 '/' Capacity=7.51 cfs Outflow=2.19 cfs 0.171 af

Reach 20R: HOTEL & CANOPY DRAIN Avg. Flow Depth=0.20' Max Vel=7.93 fps Inflow=0.92 cfs 0.074 af
12.0" Round Pipe n=0.010 L=73.7' S=0.0465 '/' Capacity=9.99 cfs Outflow=0.92 cfs 0.074 af

Reach OUT 1: OUT 1 Inflow=6.79 cfs 0.758 af
Outflow=6.79 cfs 0.758 af

Reach OUT 2: OUT 2 Inflow=0.77 cfs 0.057 af
Outflow=0.77 cfs 0.057 af

Pond 10P: SOUTHERNMOST REAR LOT CATCH BASIN Peak Elev=46.63' Inflow=2.20 cfs 0.171 af
12.0" Round Culvert n=0.010 L=40.0' S=0.0275 '/' Outflow=2.20 cfs 0.171 af

Pond 20P: FRONT LOT CENTRAL CATCH BASIN Peak Elev=38.13' Inflow=6.79 cfs 0.758 af
24.0" Round Culvert n=0.011 L=103.0' S=-0.0013 '/' Outflow=6.79 cfs 0.758 af

Pond 21P: DMH 4 Peak Elev=39.06' Inflow=3.53 cfs 0.510 af
18.0" Round Culvert n=0.013 L=34.0' S=0.0059 '/' Outflow=3.53 cfs 0.510 af

Pond 30P: CATCH BASIN 7 Peak Elev=44.50' Inflow=2.12 cfs 0.164 af
12.0" Round Culvert n=0.010 L=93.3' S=0.0089 '/' Outflow=2.12 cfs 0.164 af

Pond 40P: SUBSURFACE SAND FILTER Peak Elev=43.19' Storage=3,598 cf Inflow=4.42 cfs 0.345 af
Primary=1.39 cfs 0.339 af Secondary=0.00 cfs 0.000 af Outflow=1.39 cfs 0.339 af

Total Runoff Area = 2.742 ac Runoff Volume = 0.821 af Average Runoff Depth = 3.59"
53.30% Pervious = 1.461 ac 46.70% Impervious = 1.280 ac

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 10S: SOUTHERN SIDE OF Runoff Area=0.653 ac 26.11% Impervious Runoff Depth=4.36"
Flow Length=393' Tc=8.5 min CN=84 Runoff=3.01 cfs 0.237 af

Subcatchment 20S: HOTEL BUILDING Runoff Area=0.161 ac 100.00% Impervious Runoff Depth=5.93"
Tc=6.0 min CN=98 Runoff=0.97 cfs 0.080 af

Subcatchment 30S: SOUTHEAST SIDE OF Runoff Area=0.459 ac 82.79% Impervious Runoff Depth=5.58"
Tc=6.0 min CN=95 Runoff=2.72 cfs 0.213 af

Subcatchment 40S: NORTHWEST SIDE OF Runoff Area=0.300 ac 83.67% Impervious Runoff Depth=5.58"
Tc=6.0 min CN=95 Runoff=1.78 cfs 0.140 af

Subcatchment 50S: ALONG EASTERN Runoff Area=0.248 ac 5.44% Impervious Runoff Depth=3.93"
Flow Length=145' Tc=7.3 min CN=80 Runoff=1.09 cfs 0.081 af

Subcatchment 60S: SOUTHEAST OF Runoff Area=0.889 ac 30.65% Impervious Runoff Depth=4.57"
Flow Length=347' Tc=7.0 min CN=86 Runoff=4.49 cfs 0.339 af

Subcatchment 70S: CANOPY Runoff Area=0.032 ac 100.00% Impervious Runoff Depth=5.93"
Tc=6.0 min CN=98 Runoff=0.19 cfs 0.016 af

Reach 10R: CROSSING PARKING LOT Avg. Flow Depth=0.44' Max Vel=9.03 fps Inflow=3.01 cfs 0.237 af
12.0" Round Pipe n=0.010 L=208.0' S=0.0263 '/' Capacity=7.51 cfs Outflow=3.01 cfs 0.237 af

Reach 20R: HOTEL & CANOPY DRAIN Avg. Flow Depth=0.23' Max Vel=8.51 fps Inflow=1.17 cfs 0.095 af
12.0" Round Pipe n=0.010 L=73.7' S=0.0465 '/' Capacity=9.99 cfs Outflow=1.17 cfs 0.095 af

Reach OUT 1: OUT 1 Inflow=8.82 cfs 1.018 af
Outflow=8.82 cfs 1.018 af

Reach OUT 2: OUT 2 Inflow=1.09 cfs 0.081 af
Outflow=1.09 cfs 0.081 af

Pond 10P: SOUTHERNMOST REAR LOT CATCH BASIN Peak Elev=47.11' Inflow=3.01 cfs 0.237 af
12.0" Round Culvert n=0.010 L=40.0' S=0.0275 '/' Outflow=3.01 cfs 0.237 af

Pond 20P: FRONT LOT CENTRAL CATCH BASIN Peak Elev=38.37' Inflow=8.82 cfs 1.018 af
24.0" Round Culvert n=0.011 L=103.0' S=-0.0013 '/' Outflow=8.82 cfs 1.018 af

Pond 21P: DMH 4 Peak Elev=39.22' Inflow=4.41 cfs 0.680 af
18.0" Round Culvert n=0.013 L=34.0' S=0.0059 '/' Outflow=4.41 cfs 0.680 af

Pond 30P: CATCH BASIN 7 Peak Elev=44.83' Inflow=2.72 cfs 0.213 af
12.0" Round Culvert n=0.010 L=93.3' S=0.0089 '/' Outflow=2.72 cfs 0.213 af

Pond 40P: SUBSURFACE SAND FILTER Peak Elev=43.86' Storage=5,039 cf Inflow=5.67 cfs 0.448 af
Primary=1.51 cfs 0.443 af Secondary=0.00 cfs 0.000 af Outflow=1.51 cfs 0.443 af

Total Runoff Area = 2.742 ac Runoff Volume = 1.105 af Average Runoff Depth = 4.84"
53.30% Pervious = 1.461 ac 46.70% Impervious = 1.280 ac

Summary for Subcatchment 10S: SOUTHERN SIDE OF BUILDING

Runoff = 3.01 cfs @ 12.12 hrs, Volume= 0.237 af, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=6.17"

Area (ac)	CN	Description
0.060	98	Paved parking, HSG D
0.190	80	>75% Grass cover, Good, HSG D
0.170	77	Woods, Good, HSG D
0.071	79	Woods/grass comb., Good, HSG D
0.059	98	Roofs, HSG D
0.103	93	Paved roads w/open ditches, 50% imp, HSG D
0.653	84	Weighted Average
0.482		73.89% Pervious Area
0.170		26.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0	38	0.1100	0.13		**Sheet Flow, 10.1** Woods: Light underbrush n= 0.400 P2= 3.19"
0.2	28	0.3500	2.96		**Shallow Concentrated Flow, 10.2** Woodland Kv= 5.0 fps
0.5	43	0.0700	1.32		**Shallow Concentrated Flow, 10.3** Woodland Kv= 5.0 fps
1.3	94	0.0300	1.21		**Shallow Concentrated Flow, 10.4** Short Grass Pasture Kv= 7.0 fps
0.5	30	0.0022	0.97	10.51	**Trap/Vee/Rect Channel Flow, 10.5** Bot.W=3.00' D=0.50' Z= 50.0 & 25.0 '/' Top.W=40.50' n= 0.030 Stream, clean & straight
0.5	100	0.0050	3.21	20.85	**Trap/Vee/Rect Channel Flow, 10.6** Bot.W=0.50' D=0.50' Z= 0.0 & 50.0 '/' Top.W=25.50' n= 0.013 Asphalt, smooth
0.5	60	0.0085	1.93	1.05	**Pipe Channel, 10.7** 10.0" Round Area= 0.5 sf Perim= 2.6' r= 0.21' n= 0.025 Corrugated metal
8.5	393	Total			

Summary for Subcatchment 20S: HOTEL BUILDING

Runoff = 0.97 cfs @ 12.08 hrs, Volume= 0.080 af, Depth= 5.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=6.17"

Area (ac)	CN	Description
0.161	98	Roofs, HSG D
0.161		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, 20.1**

Summary for Subcatchment 30S: SOUTHEAST SIDE OF PARKINGLOT

Runoff = 2.72 cfs @ 12.08 hrs, Volume= 0.213 af, Depth= 5.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=6.17"

Area (ac)	CN	Description
0.357	98	Paved parking, HSG D
0.023	98	Roofs, HSG D
0.079	80	>75% Grass cover, Good, HSG D
0.459	95	Weighted Average
0.079		17.21% Pervious Area
0.380		82.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, 30.1**

Summary for Subcatchment 40S: NORTHWEST SIDE OF PARKING LOT

Runoff = 1.78 cfs @ 12.08 hrs, Volume= 0.140 af, Depth= 5.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=6.17"

Area (ac)	CN	Description
0.227	98	Paved parking, HSG D
0.024	98	Roofs, HSG D
0.049	80	>75% Grass cover, Good, HSG D
0.300	95	Weighted Average
0.049		16.33% Pervious Area
0.251		83.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, 40.1**

Summary for Subcatchment 50S: ALONG EASTERN PROPERTY LINE

Runoff = 1.09 cfs @ 12.10 hrs, Volume= 0.081 af, Depth= 3.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=6.17"

Area (ac)	CN	Description
0.156	77	Woods, Good, HSG D
0.017	93	Paved roads w/open ditches, 50% imp, HSG D
0.014	96	Gravel surface, HSG D
0.056	80	>75% Grass cover, Good, HSG D
0.005	98	Paved parking, HSG D
0.248	80	Weighted Average
0.234		94.56% Pervious Area
0.013		5.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	9	0.0150	0.76		**Sheet Flow, 50.1** Smooth surfaces n= 0.011 P2= 3.19"
6.5	41	0.0244	0.11		**Sheet Flow, 50.2** Grass: Dense n= 0.240 P2= 3.19"
0.3	27	0.0370	1.35		**Shallow Concentrated Flow, 50.3** Short Grass Pasture Kv= 7.0 fps
0.3	62	0.0323	3.72	38.08	**Trap/Vee/Rect Channel Flow, 50.4** Bot.W=3.00' D=0.50' Z= 35.0 '/' Top.W=38.00' n= 0.030 Stream, clean & straight
0.0	6	0.4000	15.03	75.14	**Trap/Vee/Rect Channel Flow, 50.5** Bot.W=5.00' D=0.50' Z= 10.0 '/' Top.W=15.00' n= 0.030 Stream, clean & straight
7.3	145	Total			

Summary for Subcatchment 60S: SOUTHEAST OF BUILDING

Runoff = 4.49 cfs @ 12.10 hrs, Volume= 0.339 af, Depth= 4.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=6.17"

Area (ac)	CN	Description
0.087	98	Paved parking, HSG D
0.218	80	>75% Grass cover, Good, HSG D
0.283	93	Paved roads w/open ditches, 50% imp, HSG D
0.257	77	Woods, Good, HSG D
0.044	98	Roofs, HSG D
0.889	86	Weighted Average
0.616		69.35% Pervious Area
0.272		30.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	50	0.1200	0.14		**Sheet Flow, 60.1** Woods: Light underbrush n= 0.400 P2= 3.19"
0.2	38	0.2632	2.57		**Shallow Concentrated Flow, 60.2** Woodland Kv= 5.0 fps
0.2	20	0.1000	1.58		**Shallow Concentrated Flow, 60.3** Woodland Kv= 5.0 fps
0.0	24	0.1500	8.72	34.89	**Trap/Vee/Rect Channel Flow, 60.4** Bot.W=3.00' D=0.50' Z= 10.0 '/' Top.W=13.00' n= 0.030 Stream, clean & straight
0.6	215	0.0193	6.30	4.95	**Pipe Channel, 60.5** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
7.0	347	Total			

Summary for Subcatchment 70S: CANOPY

Runoff = 0.19 cfs @ 12.08 hrs, Volume= 0.016 af, Depth= 5.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-YR Rainfall=6.17"

Area (ac)	CN	Description
0.032	98	Roofs, HSG D
0.032		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, 70.1**

Summary for Reach 10R: CROSSING PARKING LOT

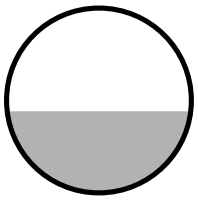
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.653 ac, 26.11% Impervious, Inflow Depth = 4.36" for 25-YR event
Inflow = 3.01 cfs @ 12.12 hrs, Volume= 0.237 af
Outflow = 3.01 cfs @ 12.12 hrs, Volume= 0.237 af, Atten= 0%, Lag= 0.3 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 3
Max. Velocity= 9.03 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 3.13 fps, Avg. Travel Time= 1.1 min

Peak Storage= 69 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.44'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.51 cfs

12.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 208.0' Slope= 0.0263 '/'
Inlet Invert= 43.47', Outlet Invert= 38.00'



Summary for Reach 20R: HOTEL & CANOPY DRAIN

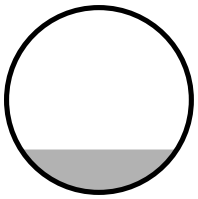
[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.193 ac,100.00% Impervious, Inflow Depth = 5.93" for 25-YR event
Inflow = 1.17 cfs @ 12.08 hrs, Volume= 0.095 af
Outflow = 1.17 cfs @ 12.08 hrs, Volume= 0.095 af, Atten= 0%, Lag= 0.1 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 3
Max. Velocity= 8.51 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.80 fps, Avg. Travel Time= 0.4 min

Peak Storage= 10 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.23'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 9.99 cfs

12.0" Round Pipe
n= 0.010 PVC, smooth interior
Length= 73.7' Slope= 0.0465 '/'
Inlet Invert= 46.10', Outlet Invert= 42.67'



Summary for Reach OUT 1: OUT 1

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

Inflow Area = 2.494 ac, 50.80% Impervious, Inflow Depth = 4.90" for 25-YR event
Inflow = 8.82 cfs @ 12.11 hrs, Volume= 1.018 af
Outflow = 8.82 cfs @ 12.11 hrs, Volume= 1.018 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 3

Summary for Reach OUT 2: OUT 2

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

Inflow Area = 0.248 ac, 5.44% Impervious, Inflow Depth = 3.93" for 25-YR event
Inflow = 1.09 cfs @ 12.10 hrs, Volume= 0.081 af
Outflow = 1.09 cfs @ 12.10 hrs, Volume= 0.081 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 3

Summary for Pond 10P: SOUTHERNMOST REAR LOT CATCH BASIN

Inflow Area = 0.653 ac, 26.11% Impervious, Inflow Depth = 4.36" for 25-YR event
Inflow = 3.01 cfs @ 12.12 hrs, Volume= 0.237 af
Outflow = 3.01 cfs @ 12.12 hrs, Volume= 0.237 af, Atten= 0%, Lag= 0.0 min
Primary = 3.01 cfs @ 12.12 hrs, Volume= 0.237 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 47.11' @ 12.12 hrs
Flood Elev= 48.37'

Device	Routing	Invert	Outlet Devices
#1	Primary	45.59'	**12.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 45.59' / 44.49' S= 0.0275 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=3.01 cfs @ 12.12 hrs HW=47.11' TW=43.91' (Dynamic Tailwater)
1=Culvert (Inlet Controls 3.01 cfs @ 3.83 fps)

Summary for Pond 20P: FRONT LOT CENTRAL CATCH BASIN

Inflow Area = 2.494 ac, 50.80% Impervious, Inflow Depth = 4.90" for 25-YR event
Inflow = 8.82 cfs @ 12.11 hrs, Volume= 1.018 af
Outflow = 8.82 cfs @ 12.11 hrs, Volume= 1.018 af, Atten= 0%, Lag= 0.0 min
Primary = 8.82 cfs @ 12.11 hrs, Volume= 1.018 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 38.37' @ 12.11 hrs
Flood Elev= 45.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	36.69'	**24.0" Round Culvert** L= 103.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 36.56' / 36.69' S= -0.0013 '/' Cc= 0.900 n= 0.011 Concrete pipe, straight & clean, Flow Area= 3.14 sf

Primary OutFlow Max=8.82 cfs @ 12.11 hrs HW=38.37' TW=0.00' (Dynamic Tailwater)
1=Culvert (Barrel Controls 8.82 cfs @ 3.88 fps)

Summary for Pond 21P: DMH 4

[62] Hint: Exceeded Reach 10R OUTLET depth by 0.78' @ 12.13 hrs

Inflow Area = 1.605 ac, 61.96% Impervious, Inflow Depth = 5.08" for 25-YR event
Inflow = 4.41 cfs @ 12.13 hrs, Volume= 0.680 af
Outflow = 4.41 cfs @ 12.13 hrs, Volume= 0.680 af, Atten= 0%, Lag= 0.0 min
Primary = 4.41 cfs @ 12.13 hrs, Volume= 0.680 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 39.22' @ 12.13 hrs
Flood Elev= 47.20'

Device	Routing	Invert	Outlet Devices
#1	Primary	37.95'	**18.0" Round Culvert** L= 34.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 37.95' / 37.75' S= 0.0059 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=4.41 cfs @ 12.13 hrs HW=39.22' TW=38.36' (Dynamic Tailwater)
1=Culvert (Barrel Controls 4.41 cfs @ 3.71 fps)

Summary for Pond 30P: CATCH BASIN 7

Inflow Area = 0.459 ac, 82.79% Impervious, Inflow Depth = 5.58" for 25-YR event
Inflow = 2.72 cfs @ 12.08 hrs, Volume= 0.213 af
Outflow = 2.72 cfs @ 12.08 hrs, Volume= 0.213 af, Atten= 0%, Lag= 0.0 min
Primary = 2.72 cfs @ 12.08 hrs, Volume= 0.213 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 44.83' @ 12.08 hrs
Flood Elev= 48.30'

Device	Routing	Invert	Outlet Devices
#1	Primary	43.50'	**12.0" Round Culvert** L= 93.3' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 43.50' / 42.67' S= 0.0089 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.72 cfs @ 12.08 hrs HW=44.83' TW=43.01' (Dynamic Tailwater)
1=Culvert (Inlet Controls 2.72 cfs @ 3.46 fps)

Summary for Pond 40P: SUBSURFACE SAND FILTER

[62] Hint: Exceeded Reach 20R OUTLET depth by 1.07' @ 12.45 hrs

Inflow Area = 0.952 ac, 86.55% Impervious, Inflow Depth = 5.65" for 25-YR event
Inflow = 5.67 cfs @ 12.08 hrs, Volume= 0.448 af
Outflow = 1.51 cfs @ 12.43 hrs, Volume= 0.443 af, Atten= 73%, Lag= 21.1 min
Primary = 1.51 cfs @ 12.43 hrs, Volume= 0.443 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 43.86' @ 12.43 hrs Surf.Area= 8,231 sf Storage= 5,039 cf
Flood Elev= 46.00' Surf.Area= 10,681 sf Storage= 7,909 cf

Plug-Flow detention time= 48.3 min calculated for 0.443 af (99% of inflow)
Center-of-Mass det. time= 40.2 min (799.3 - 759.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	42.17'	4,259 cf	**71.00'W x 46.92'L x 3.83'H Field A** 12,770 cf Overall - 2,123 cf Embedded = 10,647 cf x 40.0% Voids
#2A	42.67'	2,123 cf	**ADS_StormTech SC-310 +Cap** x 144 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 24 Rows of 6 Chambers
#3	40.67'	551 cf	**FILTER SAND (Prismatic)**Listed below (Recalc) 3,675 cf Overall x 15.0% Voids
#4	39.17'	980 cf	**UNDERDRAIN BEDDING (Prismatic)**Listed below (Recalc) 2,450 cf Overall x 40.0% Voids
#5	46.00'	245 cf	**Pave base matl (Prismatic)**Listed below (Recalc) 2,450 cf Overall x 10.0% Voids
		8,158 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
40.67	2,450	0	0
42.17	2,450	3,675	3,675

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
39.17	2,450	0	0
40.17	2,450	2,450	2,450

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
46.00	2,450	0	0
47.00	2,450	2,450	2,450

Device	Routing	Invert	Outlet Devices
#1	Primary	39.42'	**6.0" Round Culvert** L= 62.3' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 39.42' / 38.92' S= 0.0080 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf
#2	Secondary	44.50'	**12.0" Round Culvert** L= 62.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.50' / 43.25' S= 0.0202 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.51 cfs @ 12.43 hrs HW=43.86' TW=38.87' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 1.51 cfs @ 7.70 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=39.17' TW=37.95' (Dynamic Tailwater)
└**2=Culvert** (Controls 0.00 cfs)

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 10S: SOUTHERN SIDE OF Runoff Area=0.653 ac 26.11% Impervious Runoff Depth=5.51"
Flow Length=393' Tc=8.5 min CN=84 Runoff=3.78 cfs 0.300 af

Subcatchment 20S: HOTEL BUILDING Runoff Area=0.161 ac 100.00% Impervious Runoff Depth=7.15"
Tc=6.0 min CN=98 Runoff=1.17 cfs 0.096 af

Subcatchment 30S: SOUTHEAST SIDE OF Runoff Area=0.459 ac 82.79% Impervious Runoff Depth=6.79"
Tc=6.0 min CN=95 Runoff=3.28 cfs 0.260 af

Subcatchment 40S: NORTHWEST SIDE OF Runoff Area=0.300 ac 83.67% Impervious Runoff Depth=6.79"
Tc=6.0 min CN=95 Runoff=2.15 cfs 0.170 af

Subcatchment 50S: ALONG EASTERN Runoff Area=0.248 ac 5.44% Impervious Runoff Depth=5.06"
Flow Length=145' Tc=7.3 min CN=80 Runoff=1.39 cfs 0.104 af

Subcatchment 60S: SOUTHEAST OF Runoff Area=0.889 ac 30.65% Impervious Runoff Depth=5.74"
Flow Length=347' Tc=7.0 min CN=86 Runoff=5.57 cfs 0.425 af

Subcatchment 70S: CANOPY Runoff Area=0.032 ac 100.00% Impervious Runoff Depth=7.15"
Tc=6.0 min CN=98 Runoff=0.23 cfs 0.019 af

Reach 10R: CROSSING PARKING LOT Avg. Flow Depth=0.50' Max Vel=9.57 fps Inflow=3.78 cfs 0.300 af
12.0" Round Pipe n=0.010 L=208.0' S=0.0263 '/' Capacity=7.51 cfs Outflow=3.77 cfs 0.300 af

Reach 20R: HOTEL & CANOPY DRAIN Avg. Flow Depth=0.25' Max Vel=8.97 fps Inflow=1.40 cfs 0.115 af
12.0" Round Pipe n=0.010 L=73.7' S=0.0465 '/' Capacity=9.99 cfs Outflow=1.40 cfs 0.115 af

Reach OUT 1: OUT 1 Inflow=10.72 cfs 1.264 af
Outflow=10.72 cfs 1.264 af

Reach OUT 2: OUT 2 Inflow=1.39 cfs 0.104 af
Outflow=1.39 cfs 0.104 af

Pond 10P: SOUTHERNMOST REAR LOT CATCH BASIN Peak Elev=47.69' Inflow=3.78 cfs 0.300 af
12.0" Round Culvert n=0.010 L=40.0' S=0.0275 '/' Outflow=3.78 cfs 0.300 af

Pond 20P: FRONT LOT CENTRAL CATCH BASIN Peak Elev=38.60' Inflow=10.72 cfs 1.264 af
24.0" Round Culvert n=0.011 L=103.0' S=-0.0013 '/' Outflow=10.72 cfs 1.264 af

Pond 21P: DMH 4 Peak Elev=39.38' Inflow=5.24 cfs 0.839 af
18.0" Round Culvert n=0.013 L=34.0' S=0.0059 '/' Outflow=5.24 cfs 0.839 af

Pond 30P: CATCH BASIN 7 Peak Elev=45.21' Inflow=3.28 cfs 0.260 af
12.0" Round Culvert n=0.010 L=93.3' S=0.0089 '/' Outflow=3.28 cfs 0.260 af

Pond 40P: SUBSURFACE SAND FILTER Peak Elev=44.78' Storage=6,287 cf Inflow=6.83 cfs 0.545 af
Primary=1.66 cfs 0.535 af Secondary=0.26 cfs 0.004 af Outflow=1.92 cfs 0.539 af

Total Runoff Area = 2.742 ac Runoff Volume = 1.374 af Average Runoff Depth = 6.02"
53.30% Pervious = 1.461 ac 46.70% Impervious = 1.280 ac

CIVIL
CONSULTANTS

Engineers

Planners

Surveyors

APPENDICIES

A – Location & Topographic Plan

B – Soils Information

C – Supplemental Calculations

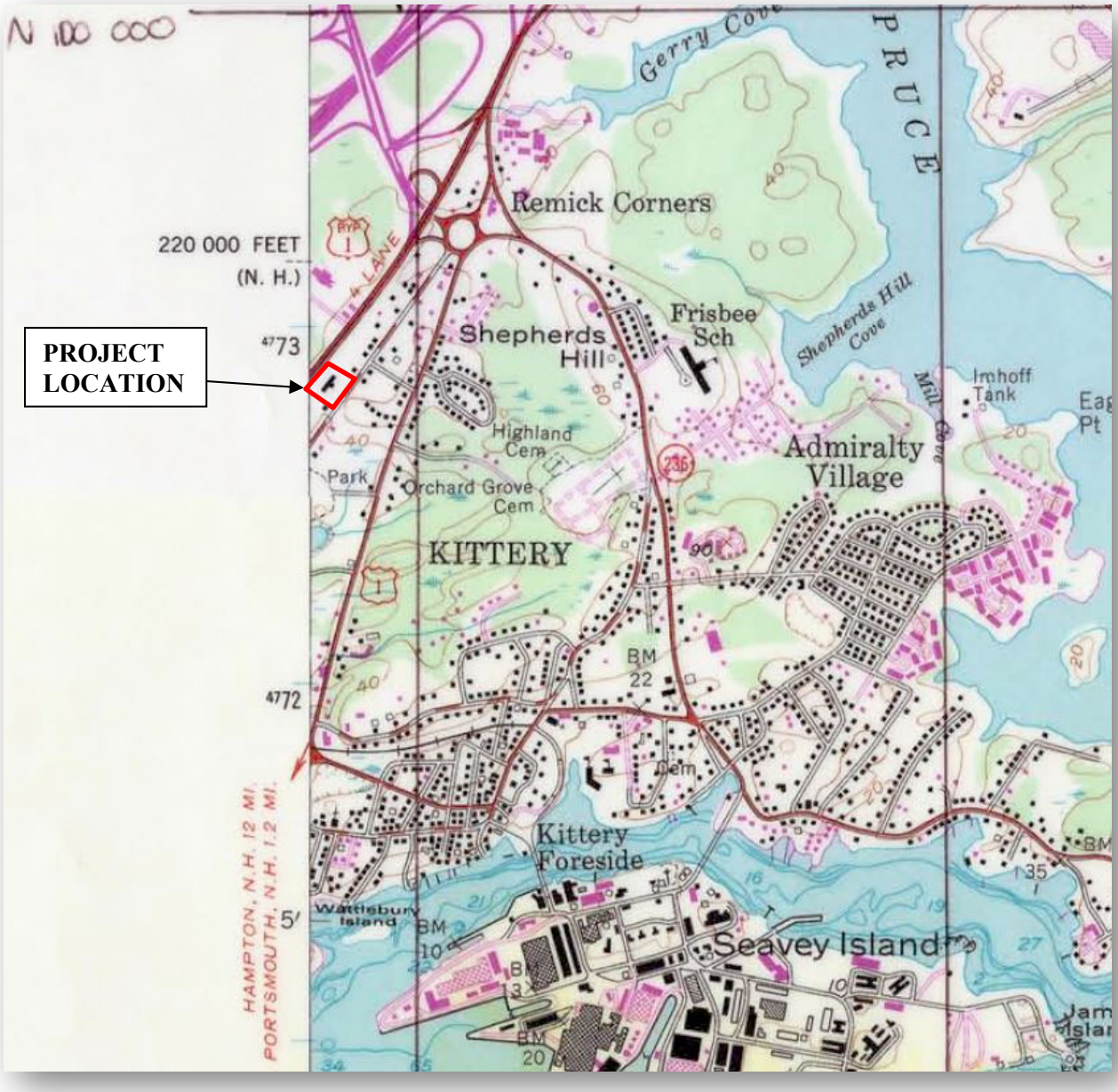
D – Stormwater Maintenance Plan and Inspection Log

E – FIRM Flood Mapping

F – Drainage Plans

APPENDIX A

LOCATION AND TOPOGRAPHIC PLAN



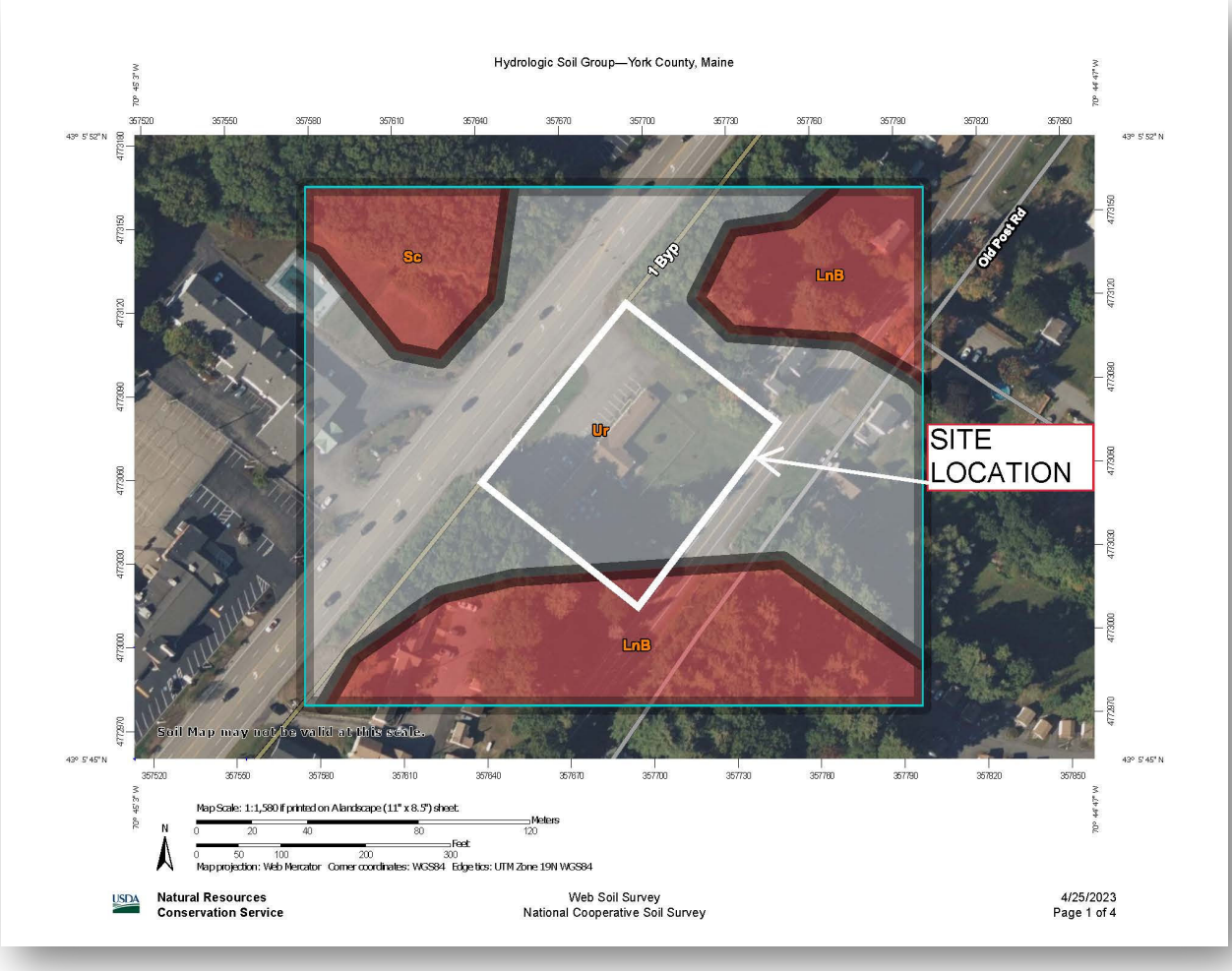
Portion of

U.S.G.S. Map for Kittery Quadrangle
Maine – New Hampshire 7.5 Minute Series
Not To Scale

APPENDIX B

Soil Exploration Results & Medium Intensity Soil Survey Plan

Portions of
USDA Soil Conservation Service – WEB SOIL SURVEY
YORK COUNTY, MAINE



Hydrologic Soil Group—York County, Maine

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: York County, Maine
Survey Area Data: Version 21, Aug 30, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

USDA Natural Resources Conservation Service

Web Soil Survey
National Cooperative Soil Survey

4/25/2023
Page 2 of 4

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
LnB	Lyman loam, 3 to 8 percent slopes, rocky	D	3.1	30.0%
Sc	Scantic silt loam, 0 to 3 percent slopes	D	0.8	8.1%
Ur	Urban land		6.3	61.9%
Totals for Area of Interest			**10.2**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

APPENDIX C

Supplemental Stormwater Calculations

Conveyance Systems. Calculations for sizing on-site conveyance structures, including culverts are included in the HydroCad print outs included in this report. Stabilization calculations are included here. Ditch stabilization is per MDOT Highway design manual. Riprap sizing and erosion control measures are shown and noted on the Site Plans. These plans also show scaled drawings and cross sections of these conveyance systems and associated practices.

Subsurface Sand Filter. A Subsurface Sand Filter is proposed to treat the runoff from the proposed hotel building and parking area and limit flows off site to levels to the greatest extent practicable. The sub surface sand filter will use ADS StormTech SC-310 drainage storage chambers with an isolator row utilized for pre-treatment, 4" perforated PVC underdrains, and a 6" PVC collector pipe. The ADS StormTech chambers are to be installed per manufacturer instructions. The system has been designed per the design guidelines of the Maine Stormwater Best Management Practices Manual, Volume III, chapter 7.3, in accordance with Maine DEP's Chapter 500 Stormwater Management Rules. Sizing for the subsurface sand filter BMP is noted in the HydroCAD report.

Project: 2132300
Date:2/8/2024

STORMWATER TREATMENT SIZING TABLE

Area (See D3)		BMP Type	Developed area	Linear non-impv	Drives	Linear Impv.	Buildings	Lawn	Min BMP size	BMP provided	Untreated developed	Untreated linear dvlpd	Untreated linear impervious	Untreated impervious
60	Area of Route 1	Untreated	10,103	0	2,485	0	1,820	5,798	Untreated area		5798	0	0	4305
20,30,40,70	Center of lot	Filter	41,620	0	25,125	0	10,600	5,895	1,904 sf filter	Sand Filter (40P)	0	0	0	0
10	Area of Old	Untreated	10,320	0	3,693	0	2,201	4,426	Untreated area		4426	0	0	5894
50	Site perimeter	Untreated	1,087	0	0	0	0	1,087	Untreated area		1087	0	0	0
TOTAL			63,130	0	31,303	0	14,621	17,206			11311	0	0	10199

TOTAL IMPERVIOUS AREA 45,924 sf *1.054 acres*

TOTAL DEVELOPED AREA 63,130 sf *1.45 acres*

PERCENT OF TOTAL DEVELOPED AREA TREATED	**66** %	**>**	60% MINIMUM REQUIRED TREATMENT (see redevelopment calc per Chpt 500 4(c)2.d)
PERCENT OF IMPERVIOUS TREATED	**78** %		

Project: 2132300
Date:2/8/2024

BMP Sizing: Subsurface Sand Filter 40P

Sizing per Chapter 502, Section 7.1

Filter must detain a runoff volume equal to the sum of 1.0 inch times the subcatchment's impervious area plus 0.4 inch times the subcatchment's landscaped/grassed area.

The filtration BMPs are sized based on the available volume between the surface of the filter and the lowest outlet.

The area of the filter (surface area of the filter) must be no less than the sum of 5% of the impervious area and 2% of the landscaped area draining to the filter.

The filters were sized to meed the more restrictive of the volume requirement or the surface requirement. Both are reported below.

Min volume=	(Impervious area/12*1 inch)+(Lawn/12*0.4 inch) =	**3,174**	cu ft
Min area =	(Impervious area*0.05)+(Lawn*0.02) =	**1,904**	sq ft
	Area Provided =	**3331**	sf OK
	Volume Provided =	**6382**	cf OK

(see pond model, volume of StormTech system)

Sediment volume required = **32** cu ft Available = **100** cu ft **> Required, OK**

3.12 years of sediment capacity

(10 storms * acres sanded * 500 lbs / 90 lbs/cf) (4' CB w/2' sump x 4)

Project: 2132300 90 US Route 1 - Holiday Inn
Date:2/8/2024

Redevelopment Pollutant Ranking Calculation

*Per Chapter 500 Section 4.C(2)(d)

** Excludes developed area beyond limits of work.*

Use / Pollutant Ranking (Per Table 2)		***Area Pre 12/31/1997*** (sf)	(acres)	***Pollutant Load***	***Area Post*** (sf)	(acres)	***Pollutant Load***
Idling traffic	5	-	0.00	0.00	-	0.00	0.00
Roads, medium parking	4	15,275.00	0.35	1.40	26,979.00	0.62	2.48
Driveways, flat roofs	3	3,702.00	0.08	0.25	14,801.00	0.34	1.02
Other roof, lawn, sidewalks	2	41,538.00	0.95	1.91	21,225.00	0.49	0.97
Landscaping, treatment BMP	1	-	0.00	0.00	-	0.00	0.00
Natural meadow, forest	0	7,313.00	0.17	0.00	4,823.00	0.11	0.00
Total		67,828.00	1.56	3.56	67,828.00	1.56	4.47
		Pollutant ranking (pre) =		2.29	Pollutant ranking (post) =		2.87

Ranked Impact Change = 0.58

Required Treatment = ***60%***

(Per Table 3)

Stormwater Maintenance & Inspection Plan

Prepared by: Neil J. Rapoza, PE, CIVIL CONSULTANTS

(Revised February 2024)

During the construction of the 90 U.S. Route 1 Bypass Hotel Redevelopment, maintenance of all erosion, sedimentation, and stormwater flow control structures and devices will be the responsibility of the contractor on site. Upon stabilization of the completed Development, the developer will assume all responsibilities. The developer will be responsible for the required maintenance of the stormwater treatment system.

The developer will be responsible for the maintenance of all erosion, sedimentation, and stormwater flow control structures and devices within the limits of the development and will retain that responsibility until such time as another individual and/or agency (acceptable to the Town) accepts the responsibility. All post-construction inspections shall be conducted by personnel with knowledge of erosion and stormwater control, including the standards and conditions in the permit.

During and after construction all erosion control devices and structures shall be checked monthly and after each "significant rainfall"**. Necessary repairs will be made to correct undermining or deterioration of the devices and/or structures. Sediment in the pretreatment structures will be removed annually or as needed to maintain functionality of the structure.

The developer shall maintain inspection logs as shown below (or similar) of all stormwater and erosion control measures. The log shall reflect the dates of the inspections and describe actions taken (if any) and be kept on file for a minimum of 5 years. This logbook will be made available to the Town upon request. The developer must, on or by July 1 of each year, provide a copy of the annual inspection report and a completed and signed certification to the Code Enforcement Officer in a form provided by the Town.

Where a major storm event is noted in the plan, this is classified as a rainfall exceeding 1.0 inch storm event.

** significant rainfall is ½" in 24 hr

Sweeping

Paved surfaces shall be swept or vacuumed at least annually in the spring to remove all winter sand, and periodically during the year on an as-needed basis to minimize transportation of sediment during rainfall events.

Parking Surfaces				
	Spring	Fall or Yearly	After a Major Storm	Every 2– 5 Years
Clear accumulated winter sand in parking lots	**X**			
Sweep pavement to remove sediment	**X**			
Grade shoulders and remove excess sand either manually or by a front-end loader	**X**			
Grade gravel shoulders	**X**			
Ensure that stormwater is not impeded by accumulations of material.	**X**			

Catch Basins & Culverts

All catch basins, and any other field inlets throughout the collection system, need to be inspected on a monthly basis to assure that the inlet entry point is clear of debris and will allow the intended water entry. These will be cleared, if necessary on a yearly basis or when sediment reaches two thirds of total volume. Catch basins need to be vacuumed and cleaned of all accumulated sediment. This work must be done by a vacuum truck. The removed material must be disposed of in accordance with the Maine Solid Waste Disposal Rules.

Catch Basins Systems				
	Spring	Fall or Yearly	After a Major Storm	Every 2– 5 Years
Remove and legally dispose of accumulated sediments and debris from the bottom of the basin, inlet grates, inflow channels to the basin, and pipes between basins.	**X**	**X**		
Remove floating debris and floating oils (using oil absorptive pads) from any trap designed for such	**X**	**X**		

Culverts				
	Spring	Fall or Yearly	After a Major Storm	Every 2– 5 Years
Remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit	**X**	**X**	**X**	
Repair any erosion damage at the culvert's inlet and outlet	**X**	**X**	**X**	

Vegetated Swales

Erosion: It is important to install erosion and sediment control measures to stabilize this area as soon as possible and to retain any organic matter in the bottom of the trench.

Routine Maintenance and Inspection: The area should be inspected for failures following heavy rainfall and repaired as necessary for newly formed channels or gullies, reseeding or sodding of bare spots, removal of trash, leaves and/or accumulated sediments, the control of woody or other undesirable vegetation, and to check the condition and integrity of any stone dams.

Mowing: Grass should not be trimmed extremely short, as this will reduce the filtering effect of the swale. The cut vegetation should be removed to prevent the decaying organic litter from adding pollutants to the discharge from the swale. The mowed height of the grass should be 2-4 inches taller than the maximum flow depth of the design water quality storm. A minimum mow height of 6 inches is generally recommended.

Fertilization: Routine fertilization and/or use of pesticides is strongly discouraged. If complete reseeding is necessary, half the original recommended rate of fertilizer should be applied with a full rate of reseeding.

Sediment Removal: The level of sediment deposition in the channel should be monitored regularly, and removed from grassed channels before permanent damage is done to the grassed vegetation, or if infiltration times are longer than 12 hours.

	Spring	Fall or Yearly	After a Major Storm	Every 2– 5 Years
Vegetated Swales				
Grass should not be trimmed extremely short, as this will reduce the filtering effect of the swale (MPCA, 1989). The cut vegetation should be removed to prevent the decaying organic litter from adding pollutants to the discharge from the swale. The mowed height of the grass should be 2-4 inches taller than the maximum flow depth of the design water quality storm. A minimum mow height of 6 inches is generally recommended.		**X**		
The area should be inspected for failures following heavy rainfall and repaired as necessary for newly formed channels or gullies, sodding of bare spots, removal of trash, leaves and/or accumulated sediments, the control of woody or other undesirable vegetation.			**X**	
The level of sediment deposition in the channel should be monitored regularly, and removed from grassed channels before permanent damage is done to the grassed vegetation, or if infiltration times are longer than 12 hours.				**X**

Vegetated Areas

All areas of maintained lawn are to be inspected regularly for signs of erosions and channelization. Areas where erosion is occurring or areas of sparse growth shall be replanted and stabilized. Channelized flows from the eroded land shall be diverted to buffers or other areas able to withstand the high sediment load in the erosive runoff.

	Spring	Fall or Yearly	After a Major Storm	Every 2– 5 Years
Vegetated Areas				
Inspect all slopes and embankments	**X**		**X**	
Replant bare areas or areas with sparse growth	**X**		**X**	
Armor areas with fill erosions with an appropriate lining or divert the erosive flows to on-site areas able to withstand concentrated flows. Any materials used to armor/stabilize the affected areas shall be submitted to the Town and Engineer for review and approval prior to installation.	**X**		**X**	

Ditches, Swales and Culverts

Open swales and ditches need to be inspected on a monthly basis or after a major rainfall event to assure that debris or sediments do not reduce the effectiveness of the system. Debris needs to be removed at that time. Any sign of erosion or blockage shall be immediately repaired to assure a vigorous growth of vegetation for the stability of the structure and proper functioning.

Vegetated ditches should be mowed at least monthly during the growing season. Larger brush or trees must not be allowed to become established in the channel. Any areas where the vegetation fails will be subject to erosion and should be repaired and revegetated.

If sediment in culverts or piped drainage systems exceeds 20% of the diameter of the pipe, it should be removed. This may be accomplished by hydraulic flushing or any mechanical means; however, care should be taken to not flush the sediments into the retention/detention pond as it will reduce the pond's capacity and hasten the time when it must be cleaned. All pipes should be inspected on an annual basis.

Stormwater Channels				
	Spring	Fall or Yearly	After a Major Storm	Every 2– 5 Years
Inspect ditches and swales	**X**	**X**	**X**	
Remove any obstructions and accumulated sediments or debris	**X**	**X**		
Control vegetated growth and woody vegetation		**X**		
Repair any ditch erosion		**X**		
Mow vegetated ditches		**X**		
Repair any slumping side slopes	**X**	**X**		

Subsurface Sand Filters

Pre-Treatment Device Inspection: The structures providing the pre-treatment for the filter shall be routinely maintained by an approved operator on a regular schedule as appropriate for a commercial establishment. The soil filter should be inspected after every major storm in the first few months to ensure proper function. Thereafter, the filter should be inspected at least once every six months to ensure that it is draining between 24 and 48 hours.

Sediment Removal: Sediment and debris should be removed from the pre-treatment structure at least annually, or as needed to maintain unimpeded flow to the filter.

Flow Monitoring: Filters shall be monitored to determine the initial drain time of the system. If the system is draining a 1" storm faster than 24 hours, an adjustable orifice may need to be added. If drain time is greater than 48 hours, the system may be receiving unintended flows. For either case, a professional engineer shall review the system and recommend action as appropriate.

Subsurface Filter				
	Spring	Fall or Yearly	After a Major Storm	Every 2– 5 Years
The filter should be inspected after every major storm in the first few months to ensure proper function. Thereafter, the filter should be inspected at least once every six months to ensure that it is draining between 24 and 48 hours	**X**	**X**	**X**	
Sediment and plant debris should be removed from the pre-treatment structure at least annually	**X**		**X**	

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Stormwater Maintenance

90 U.S. Route 1 Bypass Hotel Redevelopment

Maintenance Log

This log is intended to accompany the Stormwater Management Facilities Maintenance Plan for the 90 U.S. Route 1 Bypass Hotel Redevelopment. The following items shall be checked, cleaned and maintained on a regular basis as specified in the Maintenance Plan and as described in the table below. This log shall be kept on file for a minimum of five years and shall be available for review by MDEP. Qualified personnel familiar with drainage systems and soils shall perform all inspections.

Item	Maintenance Required & Frequency	Spring	Fall or Yearly	After a Major Storm	Every 2– 5 Years	Date Completed	Maintenance Personnel	Comments
Sweeping of Drives and Parking Lots	Clear accumulated winter sand in parking lots.	**X**						
	Sweep pavement to remove sediment	**X**						
	Grade shoulders and remove excess sand either manually or by a front-end loader	**X**						
	Grade gravel shoulders	**X**						
	Ensure that stormwater is not impeded by accumulations of material.	**X**						

Vegetated Swales		Spring	Fall or Yearly	After a Major Storm	Every 2– 5 Years			
	Grass should not be trimmed extremely short, as this will reduce the filtering effect of the swale (MPCA, 1989). The cut vegetation should be removed to prevent the decaying organic litter from adding pollutants to the discharge from the swale. The mowed height of the grass should be 2-4 inches taller than the maximum flow depth of the design water quality storm. A minimum mow height of 6 inches is generally recommended		**X**					
	The area should be inspected for failures following heavy rainfall and repaired as necessary for newly formed channels or gullies, sodding of bare spots, removal of trash, leaves and/or accumulated sediments, the control of woody or other undesirable vegetation.			**X**				
	The level of sediment deposition in the channel should be monitored regularly, and removed from grassed channels before permanent damage is done to the grassed vegetation, or if infiltration times are longer than 12 hours. Sediment should be removed from riprap channels when it reduces the capacity of the channel				**X**			

<table>
<tr><th>Item</th><th>Maintenance Required & Frequency</th><th>Date Completed</th><th>Maintenance Personnel</th><th>Comments</th></tr>
<tr><td>Catch Basins and Culverts</td><td>
<table>
<tr><th></th><th>Spring</th><th>Fall or Yearly</th><th>After a Major Storm</th><th>Every 2– 5 Years</th></tr>
<tr><td>Remove and legally dispose of accumulated sediments and debris from the bottom of the basin, inlet grates, inflow channels to the basin, and pipes between basins.</td><td>X</td><td>X</td><td></td><td></td></tr>
<tr><td>Remove floating debris and floating oils (using oil absorptive pads) from any trap designed for such</td><td>X</td><td>X</td><td></td><td></td></tr>
<tr><td>Remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit</td><td>X</td><td>X</td><td>X</td><td></td></tr>
<tr><td>Repair any erosion damage at the culvert’s inlet and outlet</td><td>X</td><td>X</td><td>X</td><td></td></tr>
</table>
</td><td></td><td></td><td></td></tr>
<tr><td>Ditches, Swales and Culverts</td><td>
<table>
<tr><td>Inspect ditches and swales</td><td>X</td><td>X</td><td>X</td><td></td></tr>
<tr><td>Remove any obstructions and accumulated sediments or debris</td><td>X</td><td>X</td><td></td><td></td></tr>
<tr><td>Control vegetated growth and woody vegetation</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>Repair any ditch erosion</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>Mow vegetated ditches</td><td></td><td>X</td><td></td><td></td></tr>
<tr><td>Repair any slumping side slopes</td><td>X</td><td>X</td><td></td><td></td></tr>
</table>
</td><td></td><td></td><td></td></tr>
</table>

Subsurface Sand Filter			Spring	Fall or Yearly	After a Major Storm	Every 2– 5 Years			
		The filter should be inspected after every major storm in the first few months to ensure proper function. Thereafter, the filter should be inspected at least once every six months to ensure that it is draining between 24 and 48 hours	**X**	**X**	**X**				
		Sediment and plant debris should be removed from the pre-treatment structure at least annually	**X**		**X**				

J:\aaa\2021\2132300\DRAINAGE\STORMWATER MANAGEMENT PLAN\COMPONENTS\20240220-2132300-DEP_Appendix.docx

Stormwater Management System
90 U.S. Route 1 Bypass
Hotel Redevelopment

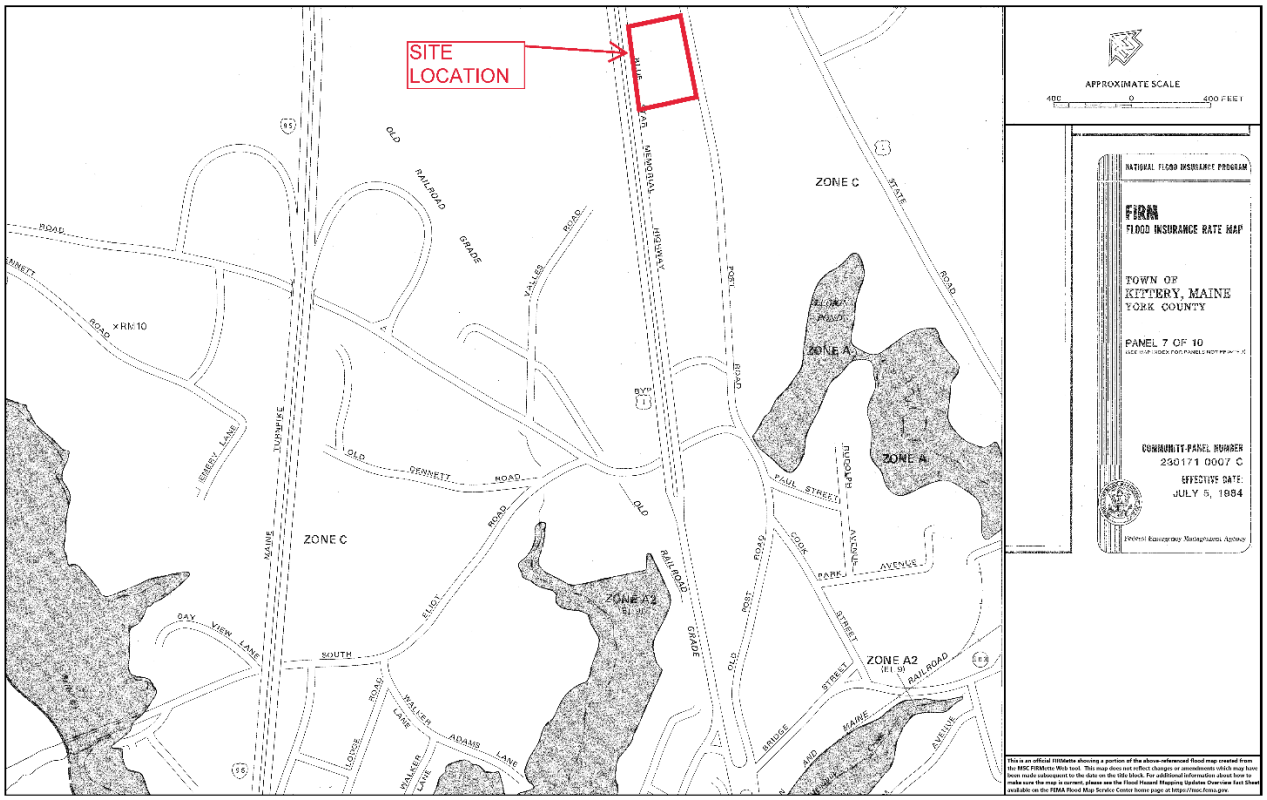
Inspection & Maintenance Checklist

BMP/System Component	Date Inspected	Inspector	Cleaning/Repair Needed *(List Items/Comments)*	Date of Cleaning/Repair	Performed By

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

APPENDIX E

NATIONAL FLOOD INSURANCE RATE MAP- FIRM



Reduced Scale Sketch Reproduced from Portion of

Town of Kittery, ME
Panel 230171 0007 C
(Effective dates: July 5,1984)

CIVIL
CONSULTANTS

Engineers

Planners

Surveyors

APPENDIX F

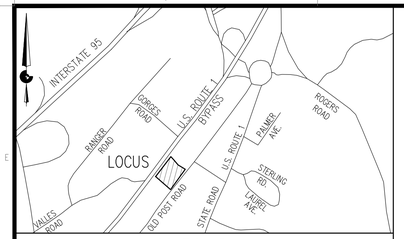
All site plans at ½ scale 11x17 prints, 22x34 included with application

D1 – Pre-Development Stormwater Management Plan

D2 – Post-Development Stormwater Management Plan

D3 – Post-Development Stormwater Treatment Plan

RD1 – Redevelopment Plan



LOCATION PLAN
(NOT TO SCALE)

POND — 4 — POND NUMBER

SUBCATCHMENT — 11 — SUBCATCHMENT NUMBER; 0.56 — SUBCATCHMENT ACREAGE

REACH — 50 / L=50 — SCS Soils: Ln, Ur; HISS Soils:

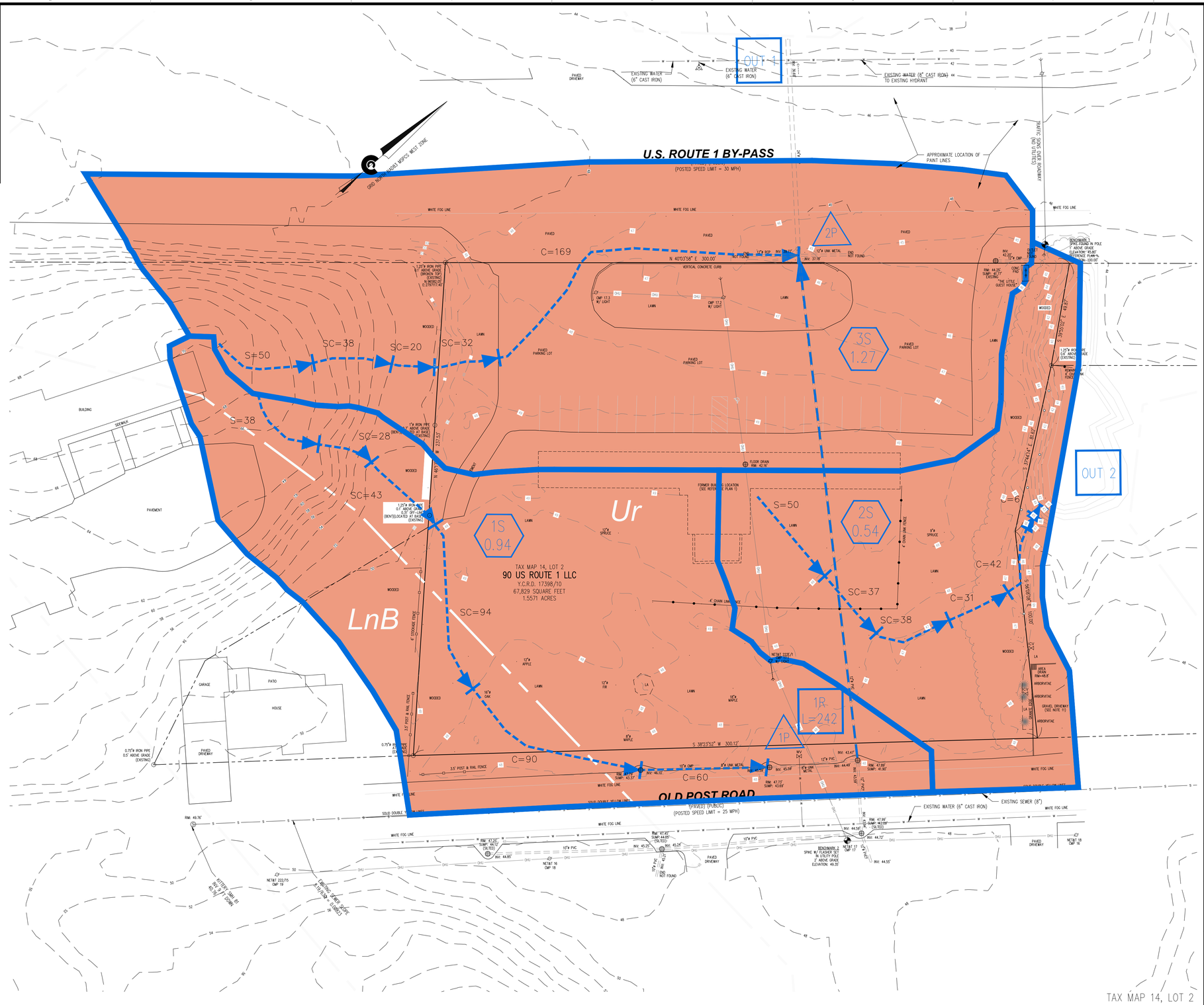
Tc COMPONENTS — S = Sheet; SC = Shallow Concentrated; C = Channel

ROUTING DIRECTION

SOILS LEGEND

- A Soils: SCS Soils: HISS Soils:
- B Soils: SCS Soils: HISS Soils:
- C Soils: SCS Soils: HISS Soils:
- D Soils: SCS Soils: Ln, Ur HISS Soils:

- Subcatchment Boundaries Pre-Development
- Subcatchment Boundaries Post-Development
- SCS Soil Line
- High Intensity Soil Line
- Tc Flow Path & Direction Pre-Development
- Tc Flow Path & Direction Post-Development



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NO.	REVISIONS	INT.	DATE
1	REVISED MODEL, ADDED SHEETS D3 & RD1	NJR	2/20/24

REDEVELOPMENT PLAN OF LAND OF
90 US ROUTE 1 LLC
90 U.S. ROUTE 1 BY-PASS
KITTERY - YORK COUNTY, MAINE

CLIENT ADDRESS: SONNY NATARJAN, 8 PEPPERELL WAY, YORK, ME 03909

1"=20'
0' 20'

DATE: 12/15/2023
DRAWN BY: NJR
CHECKED BY:
APPROVED BY:

PRE-DEVELOPMENT STORMWATER MANAGEMENT PLAN

PROJECT NO: 21-323.00

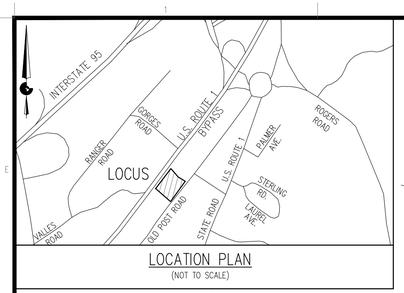
D1

SHEET: 1 OF 3

STATE OF MAINE
Neil J. Rapoza
12169
LICENSED PROFESSIONAL ENGINEER
2/20/2024

CADD FILE: J:\aaa\2021\2132300\CARLSON\ENGR\2132300-ST.dwg

PLOT DATE: 2/20/2024



LOCATION PLAN
(NOT TO SCALE)

POND — 4 — POND NUMBER

SUBCATCHMENT — 11 / 0.56 — SUBCATCHMENT NUMBER / SUBCATCHMENT ACREAGE

REACH — 50 / L=50 — REACH NUMBER / REACH LENGTH

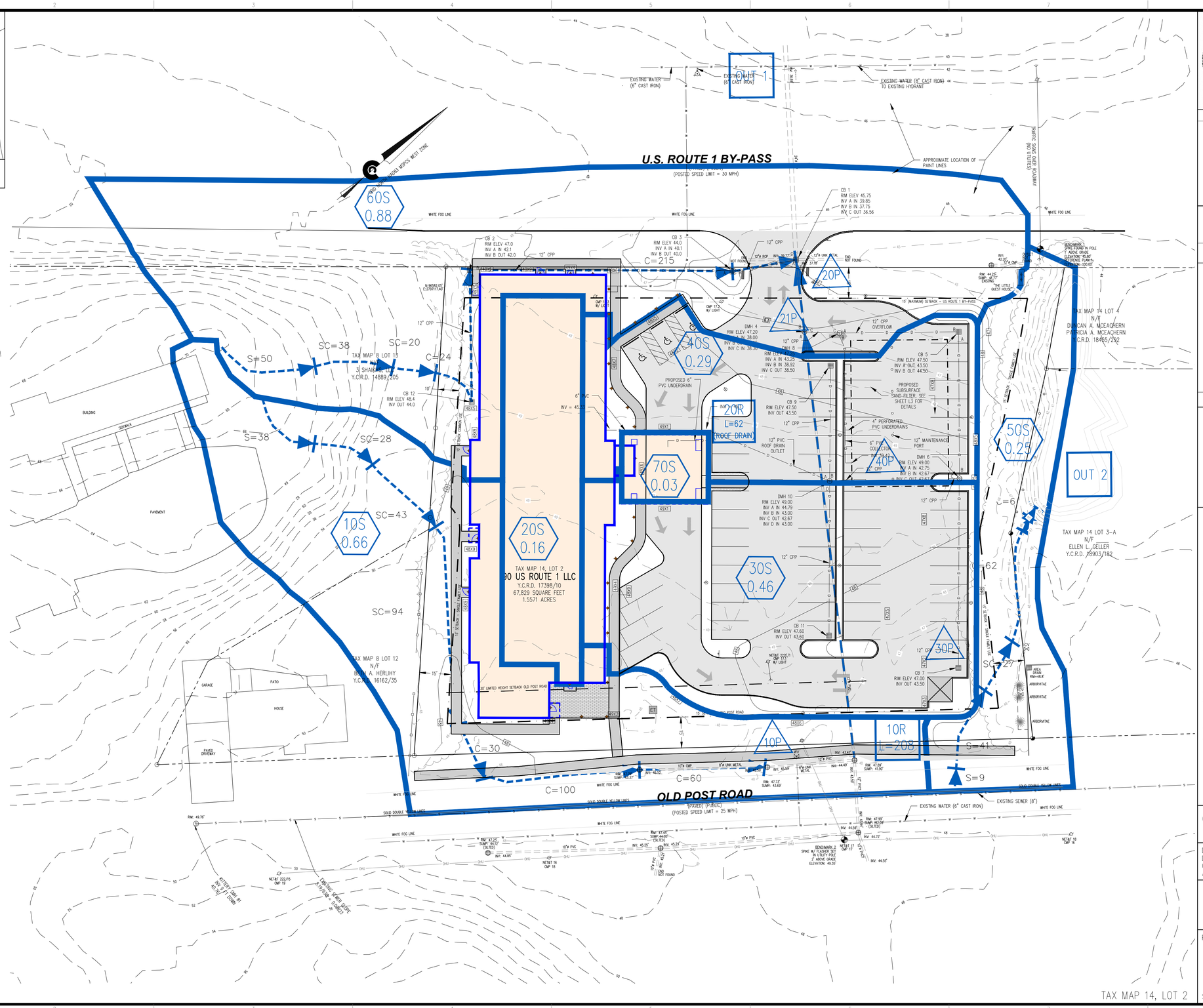
Tc COMPONENTS — S = Sheet; SC = Shallow Concentrated; C = Channel

ROUTING DIRECTION

SOILS LEGEND (SEE SHEET D1 FOR HATCHING)

- A Soils: SCS Soils: HISS Soils:
- B Soils: SCS Soils: HISS Soils:
- C Soils: SCS Soils: HISS Soils:
- D Soils: SCS Soils: Ln, Ur HISS Soils:

- Subcatchment Boundaries Pre-Development
- Subcatchment Boundaries Post-Development
- SCS Soil Line
- High Intensity Soil Line
- Tc Flow Path & Direction Pre-Development
- Tc Flow Path & Direction Post-Development



STATE OF MAINE
Neil J. Ragozzo
12169
LICENSED PROFESSIONAL ENGINEER
12/20/2024

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NO.	REVISIONS	INT.	DATE
1	REVISED MODEL, ADDED SHEETS D3 & R01	NJR	2/20/24

REDEVELOPMENT PLAN OF LAND OF
90 US ROUTE 1 LLC
90 U.S. ROUTE 1 BY-PASS
KITTERY - YORK COUNTY, MAINE

CLIENT ADDRESS: SONNY NATARJAN, 8 PEPPERELL WAY, YORK, ME 03909

1"=20'
0' 20'

DATE: 12/15/2023
DRAWN BY: NJR
CHECKED BY:
APPROVED BY:

POST-DEVELOPMENT STORMWATER MANAGEMENT PLAN

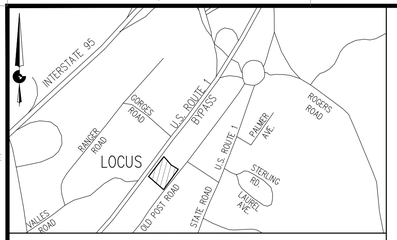
PROJECT NO: 21-323.00

D2

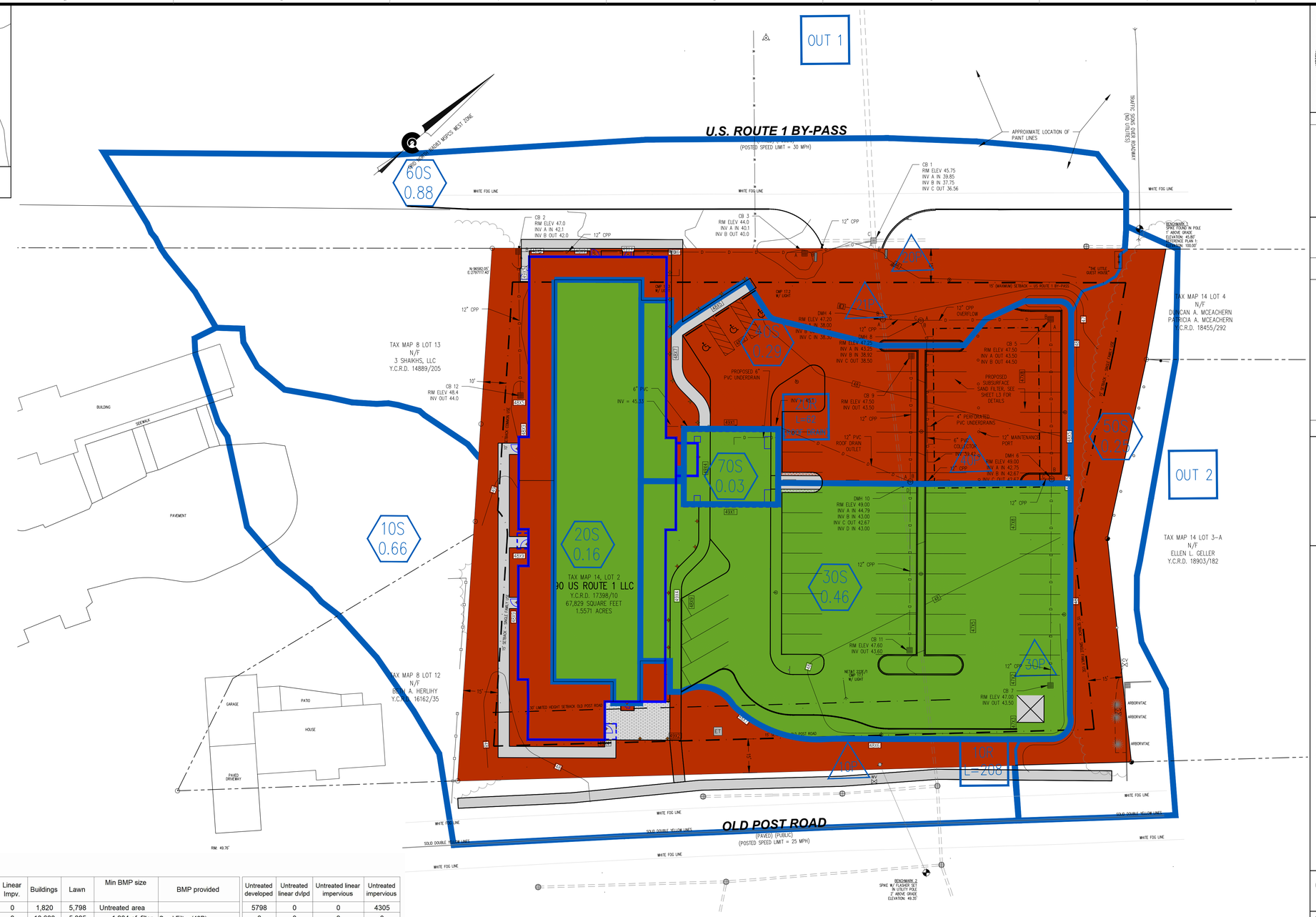
SHEET: 2 OF 3

CADD FILE: J:\aaa\2021\2132300\CARLSON\ENGR\2132300-ST.dwg

PLOT DATE: 2/20/2024



LOCATION PLAN
(NOT TO SCALE)



TREATMENT LEGEND

- UNTREATED AREA
- TREATED AREA

STORMWATER TREATMENT SIZING TABLE

	Area (See D3)	BMP Type	Developed area	Linear non-impv	Drives	Linear Impv.	Buildings	Lawn	Min BMP size	BMP provided	Untreated developed	Untreated linear dvlpd	Untreated linear impervious	Untreated impervious
60	Area of Route 1	Untreated	10,103	0	2,485	0	1,820	5,798	Untreated area		5798	0	0	4305
20,30,40,70	Center of lot	Filter	41,620	0	25,125	0	10,600	5,895	1,904 sf filter	Sand Filter (40P)	0	0	0	0
10	Area of Old	Untreated	10,320	0	3,693	0	2,201	4,426	Untreated area		4426	0	0	5894
50	Site perimeter	Untreated	1,087	0	0	0	0	1,087	Untreated area		1087	0	0	0
TOTAL			63,130	0	31,303	0	14,621	17,206			11311	0	0	10199

TOTAL IMPERVIOUS AREA	45,924	sf	*1.054 acres*
TOTAL DEVELOPED AREA	63,130	sf	*1.45 acres*

PERCENT OF TOTAL DEVELOPED AREA TREATED	**66** %	>	60% MINIMUM REQUIRED TREATMENT (see redevelopment calc per Chpt 500 4(c)2.d)
PERCENT OF IMPERVIOUS TREATED	**78** %		

TAX MAP 14, LOT 2

STATE OF MAINE
Neil J. Ratzoza
12169
LICENSED PROFESSIONAL ENGINEER
2/20/2024

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NO.	REVISIONS	INT.	DATE
1	REVISED MODEL, ADDED SHEETS D3 & RD1	NJR	2/20/24

REDEVELOPMENT PLAN OF LAND OF
90 US ROUTE 1 LLC
90 U.S. ROUTE 1 BY-PASS
KITTERY - YORK COUNTY, MAINE

CLIENT ADDRESS: SONNY NATARJAN, 8 PEPPERELL WAY, YORK, ME 03909

1"=20'
0' 20'

DATE: 2/20/2024
DRAWN BY: NJR
CHECKED BY:
APPROVED BY:

POST-DEVELOPMENT STORMWATER MANAGEMENT PLAN

PROJECT NO: 21-323.00

D3

SHEET: 3 OF 3

CADD FILE: J:\aaa\2021\2132300\CARLSON\ENGR\2132300-ST.dwg

PLOT DATE: 2/20/2024

Redevelopment Pollutant Ranking Calculation

*Per Chapter 500 Section 4.C(2)(d)

** Excludes developed area beyond limits of work.*

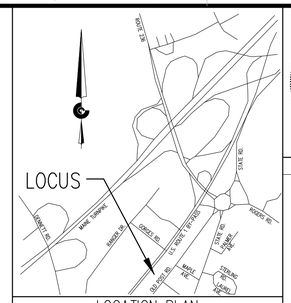
Use / Pollutant Ranking (Per Table 2)		***Area Pre 12/31/1997*** (sf)	(acres)	***Pollutant Load***	***Area Post*** (sf)	(acres)	***Pollutant Load***
Idling traffic	5	-	0.00	0.00	-	0.00	0.00
Roads, medium parking	4	15,275.00	0.35	1.40	26,979.00	0.62	2.48
Driveways, flat roofs	3	3,702.00	0.08	0.25	14,801.00	0.34	1.02
Other roof, lawn, sidewalks	2	41,538.00	0.95	1.91	21,225.00	0.49	0.97
Landscaping, treatment BMP	1	-	0.00	0.00	-	0.00	0.00
Natural meadow, forest	0	7,313.00	0.17	0.00	4,823.00	0.11	0.00
Total		67,828.00	1.56	3.56	67,828.00	1.56	4.47
			Pollutant ranking (pre) =	2.29		Pollutant ranking (post) =	2.87

Ranked Impact Change = ***0.58***

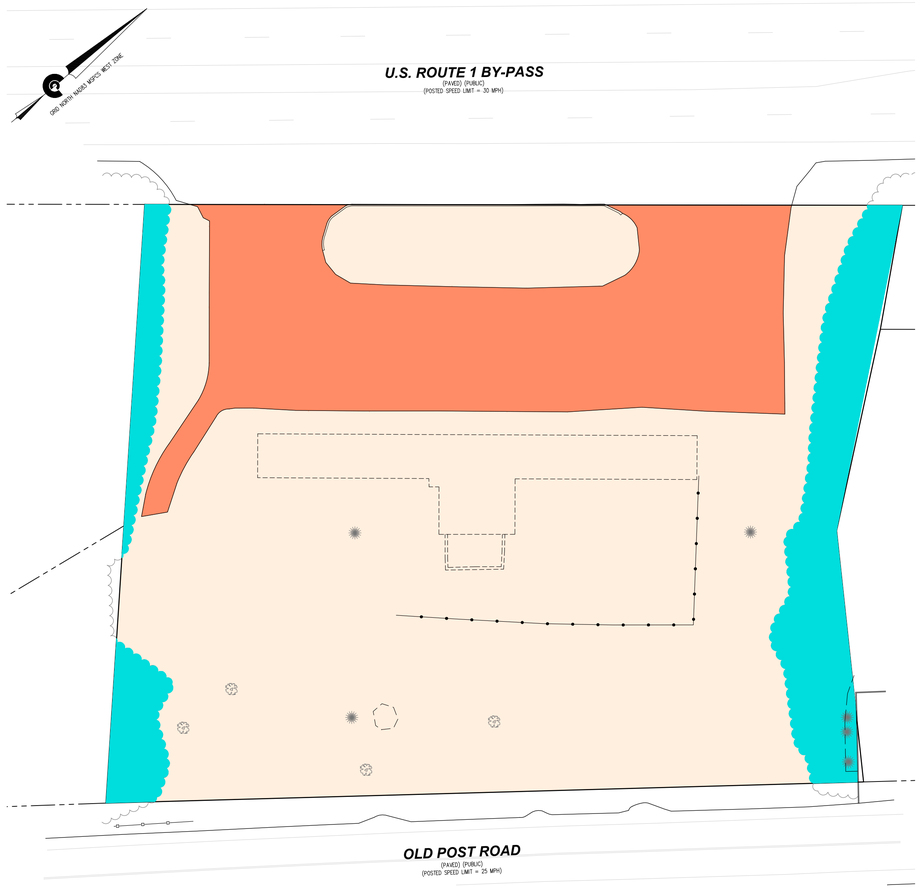
Required Treatment = ***60%***
(Per Table 3)

LEGEND: USE (POLLUTANT RANKING)

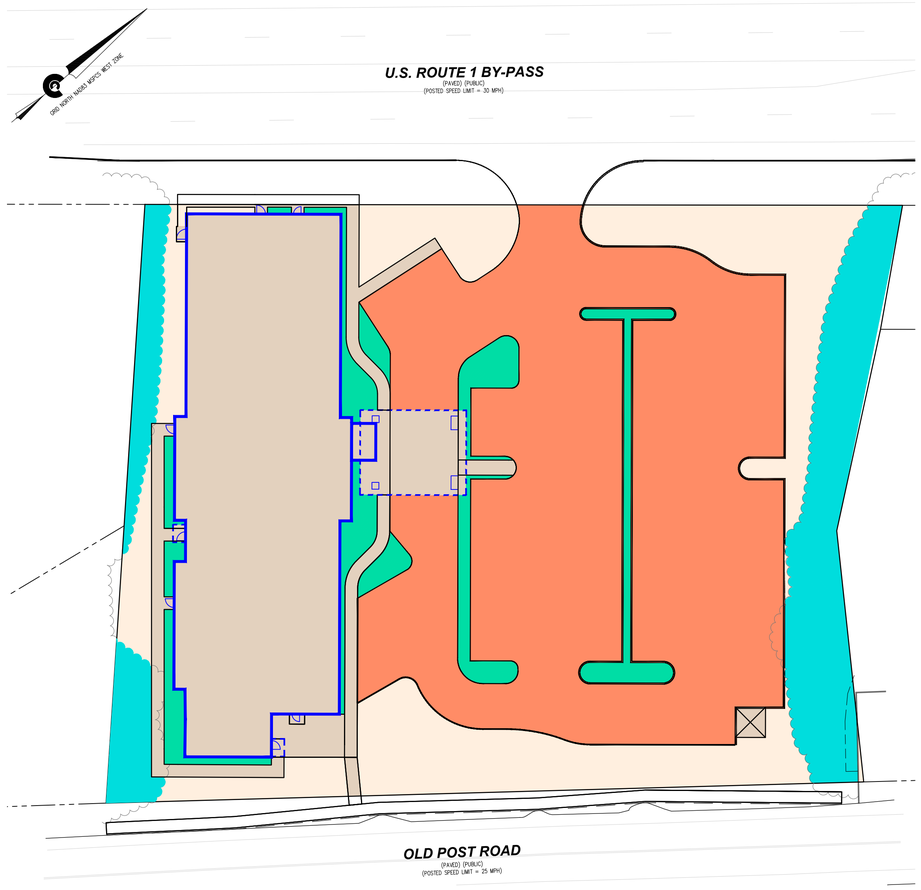
- IDLING TRAFFIC (5)
- ROADS, MEDIUM PARKING (4)
- DRIVEWAYS, FLAT ROOFS (3)
- OTHER ROOF, LAWN, SIDEWALKS (2)
- LANDSCAPING, TREATMENT BMP (1)
- NATURAL MEADOW, FOREST (0)



EXISTING DEVELOPMENT



PROPOSED DEVELOPMENT



TAX MAP 14, LOT 2

STATE OF MAINE
Neil J. Bajgoza
12169
LICENSED PROFESSIONAL ENGINEER
2/20/2024

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NO.	REVISIONS	INT.	DATE
1	REVISED MODEL, ADDED SHEETS D3 & RD1	NJR	2/20/24

RECORD OWNER:
90 US ROUTE 1 LLC

ADDRESS:
PO BOX 630
KITTERY, ME 03904

REDEVELOPMENT PLAN OF LAND OF
90 US ROUTE 1 LLC
90 U.S. ROUTE 1 BY-PASS
KITTERY - YORK COUNTY, MAINE

PREPARED FOR: 90 US ROUTE 1 LLC
CLIENT ADDRESS: PO BOX 630, KITTERY, ME 03904

1" = 30'
0' 30'

DATE: 02/20/2024
DRAWN BY: NJR/DRC
CHECKED BY: NJR
APPROVED BY:

REDEVELOPMENT PLAN

PROJECT NO: 21-323.00

RD1

SHEET: 1 OF 1

COORDINATE FILE: J:\AAA\2021\2132300\CARLSON\SURVEY\POINTS\2132300-MESPCS-NAD83W.crd

CADD FILE: J:\AAA\2021\2132300\CARLSON\ENGR\2132300-ST.DWG

CMA ENGINEERS, INC.
CIVIL | ENVIRONMENTAL | STRUCTURAL

35 Bow Street
Portsmouth, New Hampshire
03801-3819

P: 603|431|6196
www.cmaengineers.com

February 22, 2024

Maxim Zakian, Town Planner
Town of Kittery
200 Rogers Road
Kittery, Maine 03904

RE: Town of Kittery, Planning Board Services
90 US Route 1 Proposed Hotel Development Review #2
Tax Map 14, Lot 2
CMA #591.172

Dear Max:

CMA Engineers has received the following information for Assignment #172, review #2 of the proposed hotel at 90 US Route 1 Bypass (Tax Map 14, Lot 2):

1) "Redevelopment Plan of Land of 90 US Route 1 LLC, Map 14, Lot 2, Kittery, Maine" by Civil Consultants, dated January 5, 2024 and revised February 16, 2024.
2) Civil Consultants memorandum dated February 19, 2024.
3) "Stormwater Management Plan, Holiday Inn Express Hotel Redevelopment, 90 US Route 1 Bypass, Kittery, Maine" by Civil Consultants dated December 2023 and revised February 2024.

The project consists of one lot (Map 14, Lot 2) with an area of approximately 1.56 acres. The lot is located in the Commercial 3 (C-3) district. There are no wetlands on site. The project includes construction of a 3-story, 62-room hotel with associated parking and access drives.

The development will be served by public sewer on Old Post Road and Kittery Water District will provide water from US Route 1 Bypass. Stormwater management is through a subsurface sand filter.

We have reviewed the information submitted for conformance with the Kittery Land Use and Development Code (LUDC) and general engineering practices and offer the comments below that correspond directly to the Town's Ordinances.

16.5 General Performance Standards

16.5.25 Sprinkler systems

16.5.25.(1)(a)&(d) – The building is required to be sprinkled, but a fire suppression service is not shown on the plan. The applicant indicates that they are coordinating with Kittery Water District for and the Kittery Fire Department for design approval. They have also indicated that a letter of capacity was provided, but we did not receive this letter.

16.7 General Development Requirements

16.7.11 Performance Standards and Approval Criteria

16.7.11.A. Water supply

The proposed water service is a proposed service from US Route 1 Bypass. The details show a gate valve and thrust blocks but the locations of these are not shown on the plan. The service is proposed to be directionally

drilled under the bypass. We reiterate that the applicant should secure information from Kittery Water District with respect to design approval when a full design is submitted. The applicant concurs.

16.7.11.B. Sewage Disposal

The proposed sewer is a 6" PVC line to an on-site sewer manhole with a drop and then to a proposed manhole in Old Post Road. Several details, including the sewer manhole and sewer manhole with drop, are missing. The service detail shows a cleanout but the location of one is not specified on the plan. The applicant has indicated that they have been in contact with Kittery sewer services during design. We reiterate that they should secure design approval and confirm capacity with Kittery sewer services.

16.7.11.C. Stormwater and surface drainage

The proposed stormwater management system uses closed drainage and a subsurface sand filter to treat and manage stormwater.

With the addition of a sidewalk to the rear of the proposed hotel, the total area of disturbance exceeds the threshold for a Maine Construction General Permit from the Maine Department of Environmental Protection. The applicant has indicated that this stormwater application will be submitted. The Town of Kittery should be copied on MDEP correspondence.

We reiterate the following remaining comment on the drainage analysis and design:

1. The applicant has not assessed the condition of the downstream drainage. Despite decreasing flows to this system, an assessment of the existing facilities is an accepted engineering practice.

16.7.11.H. Exterior lighting requirements

16.7.11.H.(2)(a) The applicant should provide uniformity ratios in conformance with the ordinance. This comment remains unaddressed.

General Engineering

We note that:

1. Complete water and sewer designs are still not yet fully developed. There are additional details involved with directional drilling of the water main under Route 1 that have not yet been provided. Approval of the proposed water and sewer services should be secured. The applicant has indicated that they will work with water and sewer during construction.
2. Is the existing drainage that crosses the property owned by the applicant? If not, is an easement required for maintenance of this drainage by others (i.e. the Town if they are the owners)?

We have the following comments on the plans:

Cover

1. Have the waivers been approved? If so, fill in the date under Approved Waivers.
2. The dates for the Planning Board meeting and Findings of Fact under Conditions of Approval will need to be filled in.
3. Amend Conditions of Approval Note 1 to read "…revisions may **be** made…".
4. Envelope is misspelled in Conditions of Approval 3.

Sheet EC1 –Existing Conditions Plan

1. There should be a note with respect to the unknown sewer service. When it is located, it should be cut and capped per sewer services requirements. The applicant should verify location and abandonment procedures with Kittery sewer services.
2. Change "Proposed Lot Coverage" to "**Existing** Lot Coverage" in the Existing Coverage Info box.

591.172-Kittery-DL-240223-90 US Route 1 Hotel Review #2-JBS

Sheet L1 – Proposed Site Plan

1. The various hatches should be defined in the legend.
2. There appears to be work in US Route 1 at the entrance with respect to tying into the existing pavement. Has approval/coordination with Maine DOT occurred? Please provide additional information – notes, limits of work, details, striping, etc. to describe this area.
3. Amend Note 12 to read "Snow **storage** shall be in areas shown."

Sheet L2– Construction Details

1. The trench patch detail should indicate to match the existing pavement thickness.
2. Erosion and Sediment Control Practices Note 5 is not clear.
3. Should the Silt Sack detail be in color or grayscale?
4. Are the 4" and 12" layers of gravel both MDOT 703.06 A in the Vertical Granite Curb with Sidewalk Detail?
5. Remove manhole steps and Note 7 from the Sewer Manhole Detail.
6. Verify that Kittery sewer services wants an exterior drop rather than an interior drop for the Sewer Drop Manhole Detail.
7. Rename "Service Connection Detail" to "**Sewer** Service Connection Detail".
8. In all details, specify 3/4" stone, crushed gravel, crushed stone, subbase gravel, etc. with MDOT #s.

Sheet L3 -Construction Details

1. Provide a detail for the detectable warning surface.

Sheet L4 – Notes

1. Are the colors in the Erosion Control Plan detail necessary or should this be grayscale?

Sheet DEM – Demolition Plan

1. Provide information on locating and abandoning the unknown sewer service. Coordinate with Kittery sewer services.

Sheet U1 – Utility Plan

1. Amend "Detail **Provided** by…" on Water Service Connection detail.
2. Provide information on directional drilling of water main.
3. Show the location of the gate valve.
4. Reference Sheet L2 for sewer, electric and drainage details.

Sheet LP1 – Landscape Plan

1. Provide details on landscaping/tree planting.

Sheet LL1 – Site Lighting Plan

1. Provide uniformity ratios in conformance with the ordinances.

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

Very truly yours,

CMA ENGINEERS, INC.

Jodie Bray Strickland

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