

APPLICATION FOR A SPECIAL USE PERMIT

CITY OF NEWPORT, RI
ZONING BOARD OF REVIEW

DATE: February 22, 2020

*ZBR
March 9*

RECEIVED
\$200.00
FEB 24 2020
OK# 25177

Board members:

The undersigned hereby petitions the Zoning Board of Review for a special use permit in the application of the provisions or regulations of the Zoning Ordinance affecting the following described premises in the manner and on the grounds hereinafter set forth.

Location of premises

Street & No: 0 Lee's Wharf a/k/a 5 Howard Wharf

Tax Assessor's Plat 32 Lot 314

Petitioner Information

Applicant Howard Wharf, LP Address c/o David P Martland

Owner Howard Wharf, LP Address 1100 Aquidneck Avenue

Lessee _____ Address Middletown, RI 02842

Property Characteristics

Dimensions of lot-frontage 313.24 depth 100' area 32,069 sq. ft.

Zoning District in which premises is located Waterfront Business

How long have you owned above premises? 6 months

Are there buildings on the premises at present? Yes

Total square footage of the footprint of existing buildings 900 sq ft

Total square footage of the footprint of proposed buildings 12,827 sq ft

Present use of premises Commerical off street parking facility

All of the following information and questions must be filled in and answered completely.

Proposed use of premises 21 unit inn with associated restaurant and meeting space (transient guest facility)

Give extent of proposed alterations Applicant is proposing to construct a 21 unit inn with associated accessory uses

including a restaurant, meeting space and parking. The building will have a total footprint of 12,827 sq ft. The structure will be elevated because of the flood plain. The project will provide for public access to the harbor walk.

Zoning Characteristics Matrix

	Existing	Required/Allowed	Proposed
Lot Size (sq. ft.)	32,069 sq ft	5,000 sq ft	32,069 sq ft
Lot Coverage	3%	40%	40%
Dwelling Units	n/a	n/a	n/a
Parking (# of spaces)	97	50	50
Front Setback	100'	0'	12'
Side Setbacks	0'	5'	41.3' & 101.2'
Rear Setback	0'	5'	5'
Height	9'	47'	47'

What provisions of the Comprehensive Land Use Plan are the applicable to this project?

See attached exhibit A

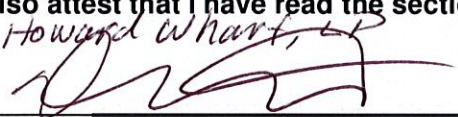
The Zoning Boards Role

Special use permits shall be granted only where the zoning board of review finds that the proposed use or the proposed extension or alteration of an existing use is in accord with the public convenience and welfare, after taking into account, where appropriate:

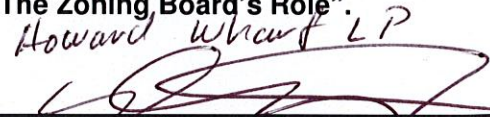
1. The nature of the proposed site, including its size and shape and the proposed size, shape and arrangement of the structure;
2. The resulting traffic patterns and adequacy of proposed off-street parking and loading;
3. The nature of the surrounding area and the extent to which the proposed use or feature will be in harmony with the surrounding area;
4. The proximity of dwellings, churches, schools, public buildings and other places of public gathering;
5. The fire hazard resulting from the nature of the proposed buildings and uses and the proximity of existing buildings and uses;
6. All standards contained in this zoning code;
7. The comprehensive plan for the city.

The burden of proof in a special-use permit application is on the applicant. This means that if the applicant fails to present adequate competent evidence to prove the applicable standard for issuing a special-use permit has been met, the board must deny the application.

By signing below, I hereby attest that the information provided is accurate and truthful. I also attest that I have read the section entitled "The Zoning Board's Role".

Howard Whart, LP


Applicant's Signature

Howard Whart LP


Owner's Signature

(401) 849-6200

Telephone Number

(401) 849-6200

Telephone Number

Email address *dmarland@silvalawgroup.com*

Be sure all required drawings are attached to this application at the time of the submittal.

EXHIBIT A

Provisions of the Comprehensive Land Use Plan Applicable to the Project

Land Use

Goal LU-1: To provide a balance City consisting of residential, commercial, and employment uses consistent with the character, environmental resources and vision of the community.

Policy LU-1.3: The City shall work with state regional agencies and private property owners to maintain viable maritime uses and public access within the city's harbor area, while also supporting uses necessary to accommodate tourism.

Policy LU-1.4: The City shall maintain design standards to protect historic structures, maintain heritage of the community, and maintain views and access to the harbor and waterfront areas.

Policy LU-1.6: The City shall encourage upgrading, beautification, revitalization and environmentally appropriate reuse of existing commercial areas.

Economic Development

Goal ED-1: To develop a robust and diverse economy, providing suitable employment opportunities for residents, and a stable tax base.

Policy ED-1.1: The City shall support key economic drivers while also seeking to attract and grow its technology sector and businesses that represent new and innovative concepts and technologies.

Policy ED-1.5: The City shall build upon thriving sectors to develop a more substantial year-round tourism economy.

Goal ED-3: To provide efficient and effective government services to encourage economic development.

Transportation

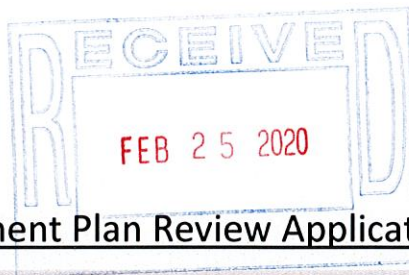
Goal T-5: To provide sufficient and suitably located parking, designed to eliminate, mitigate or reduce impacts.

Open Space & Recreation

Goal OSR-3: To protect and enhance public access to shoreline and waterfront areas.

Policy OSR-3.1: The City shall enhance and protect public access to the shoreline and waterfront areas through recreational sites, public rights-of-way, and access easements.

City of Newport
Department of Zoning and Inspections
43 Broadway, Newport, RI 02840



Application Fee: \$ 750.00

Development Plan Review Application

Instructions

Development Plan review is required for qualifying projects, as described in [Chapter 17.88 of the City of Newport Code of Ordinances](#). The Applicant shall submit one digital and six (6) full-size paper copies of all required documents, as described in [Section 17.88.040](#). Each applicant will be required to meet with the Department of Utilities prior to submittal of an application to determine submittal requirements to satisfy subsection 17.88.040(T). The City has standards which must be adhered to for stormwater control, in addition to state regulations. The City requires all stormwater to be treated on site, including on redeveloped land. This may reduce the developable area of your land. Substantial new construction will require the submittal of architectural plans and elevations.

The application shall not be processed until it is determined that all required documents have been submitted and all required fees have been paid. Development Plan Review is a prerequisite for a Building Permit. Construction shall be completed in accordance with the approved Development Plan Review. It is strongly suggested that all applicants request informal preliminary review to the City Planner prior to submittal of an application, let alone the commencement of serious design work by consultants.

Basic Information

Subject Property Address on file with City Engineer
5 Howard Wharf (0 Lee's Wharf)

Tax Assessor's Plat and Lot
32 , 314

Street

Plat Lot

Property Owner's Contact Information
Howard Wharf, LP

1100 Aquidneck Avenue, Middletown, RI

Name

Mailing Address

dmartland@silvalawgroup.com

401-849-6200

Email

Phone

Applicant's Contact Information (only complete if different)

Name

Mailing Address

Email

Phone

Property owner's signature authorizing submission of this application and certifying under possible penalty of perjury under the laws of this jurisdiction that the preceding information is true and correct.


Signature of Property Owner

Please provide contact information for any attorneys and/or design consultants retained. For properties with two owners, complete two forms. For developments on multiple properties, complete one form for each property owner.











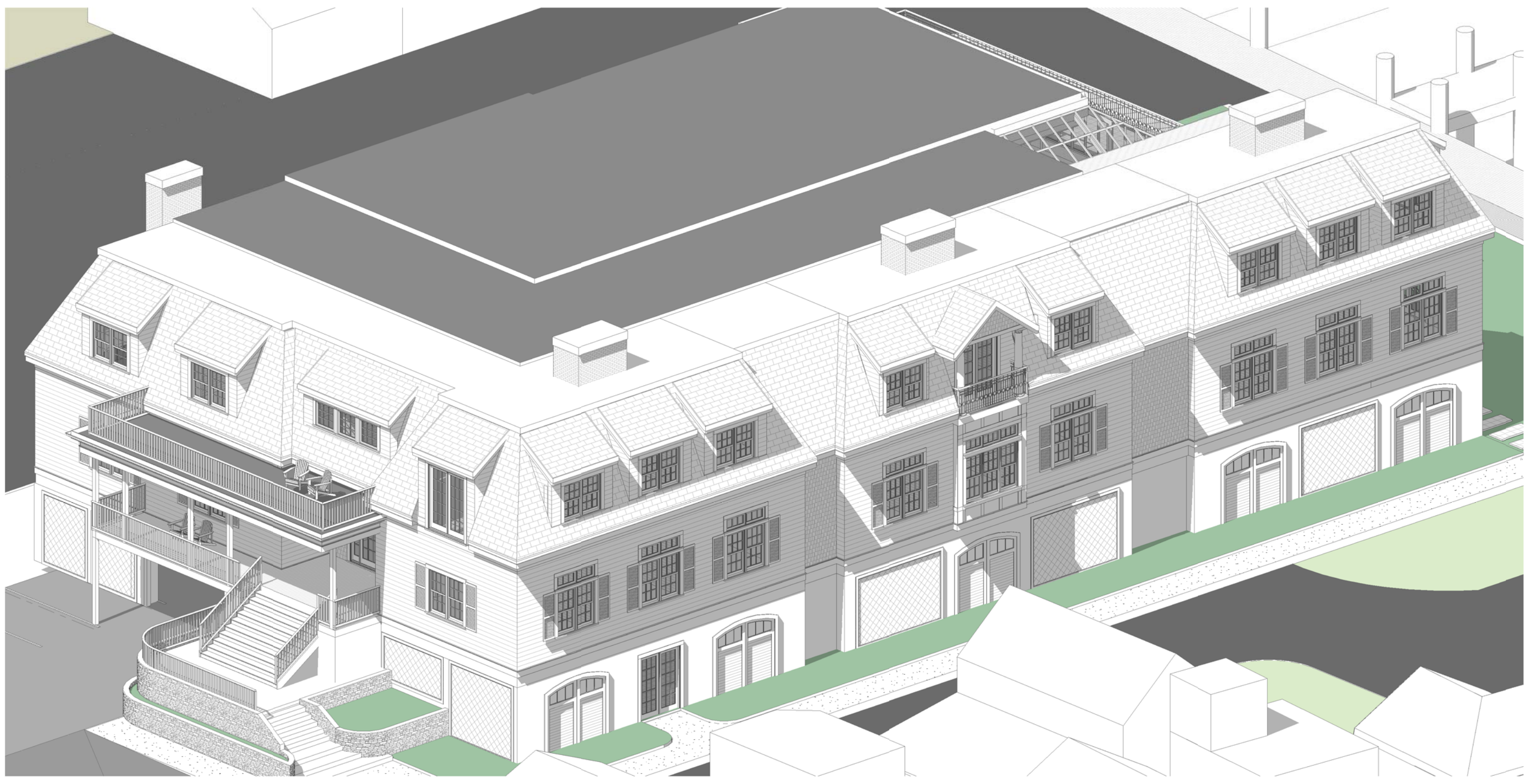
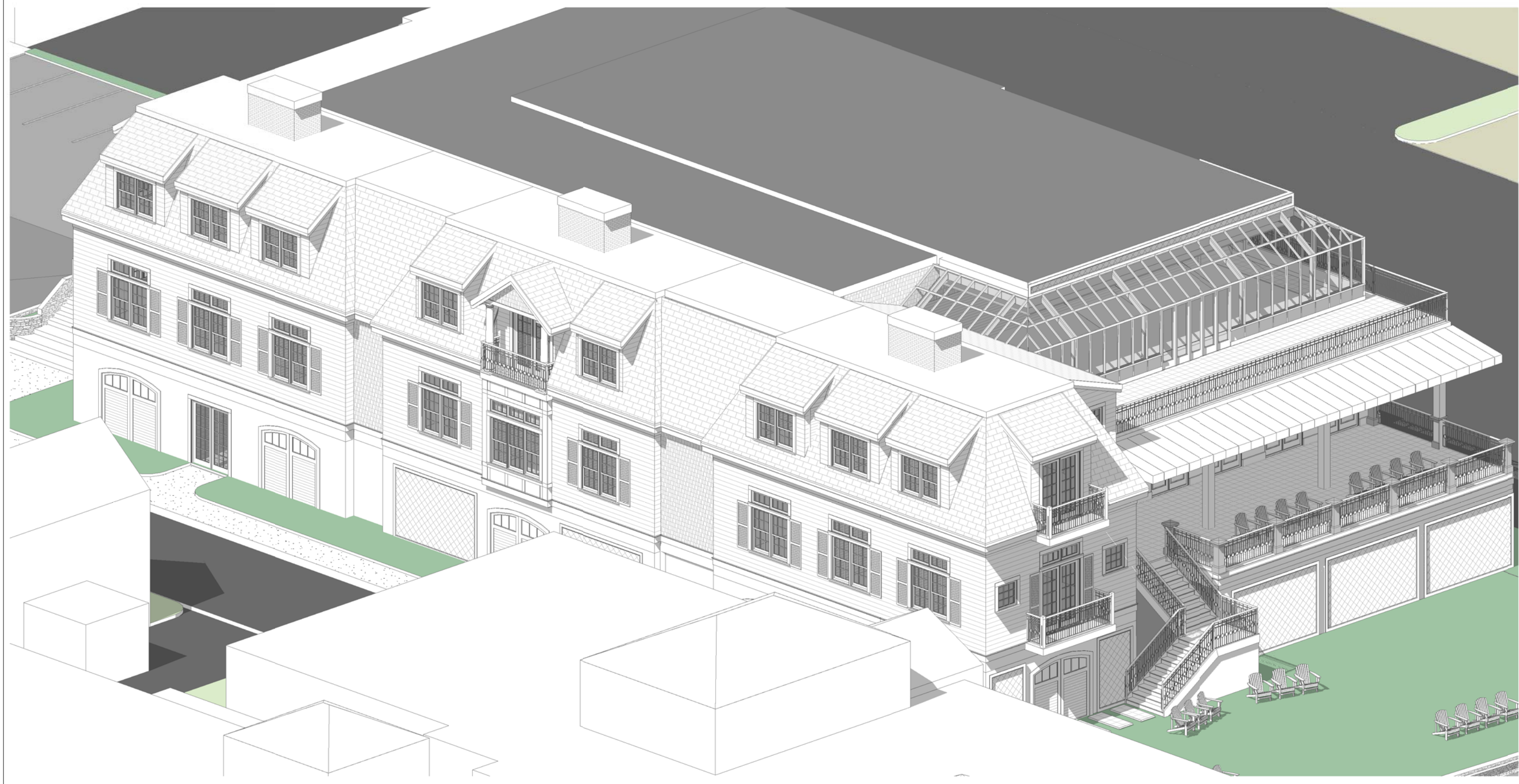












24 LEES WHARF DEVELOPMENT PLAN REVIEW SET
02/20/2020



24 LEES WHARF
NEWPORT RI 02840



REVISIONS:

No.	Description	Date

SCHEMATIC SET
NOT FOR CONSTRUCTION

TITLE: COVER

DATE: 02/20/2020

JOB NO.: 1964

DRAWING NO.:

0



1 1ST FLOOR PLAN
3/16" = 1'-0"

24 LEES WHARF
NEWPORT RI 02840

REVISIONS:

No.	Description	Date

SCHEMATIC SET
NOT FOR CONSTRUCTION

TITLE: 1ST FLOOR PLAN

DATE: 02/20/2020

JOB NO.: 1964

DRAWING NO.:

A101



① 2ND FLOOR PLAN
3/16" = 1'-0"

24 LEES WHARF
NEWPORT RI 02840

REVISIONS:

No.	Description	Date

SCHEMATIC SET
NOT FOR CONSTRUCTION

TITLE: 2ND FLOOR PLAN

DATE: 02/20/2020

JOB NO.: 1964

DRAWING NO.:

A102

24 LEES WHARF
NEWPORT RI 02840

REVISIONS:

No.	Description	Date

SCHEMATIC SET
NOT FOR CONSTRUCTION

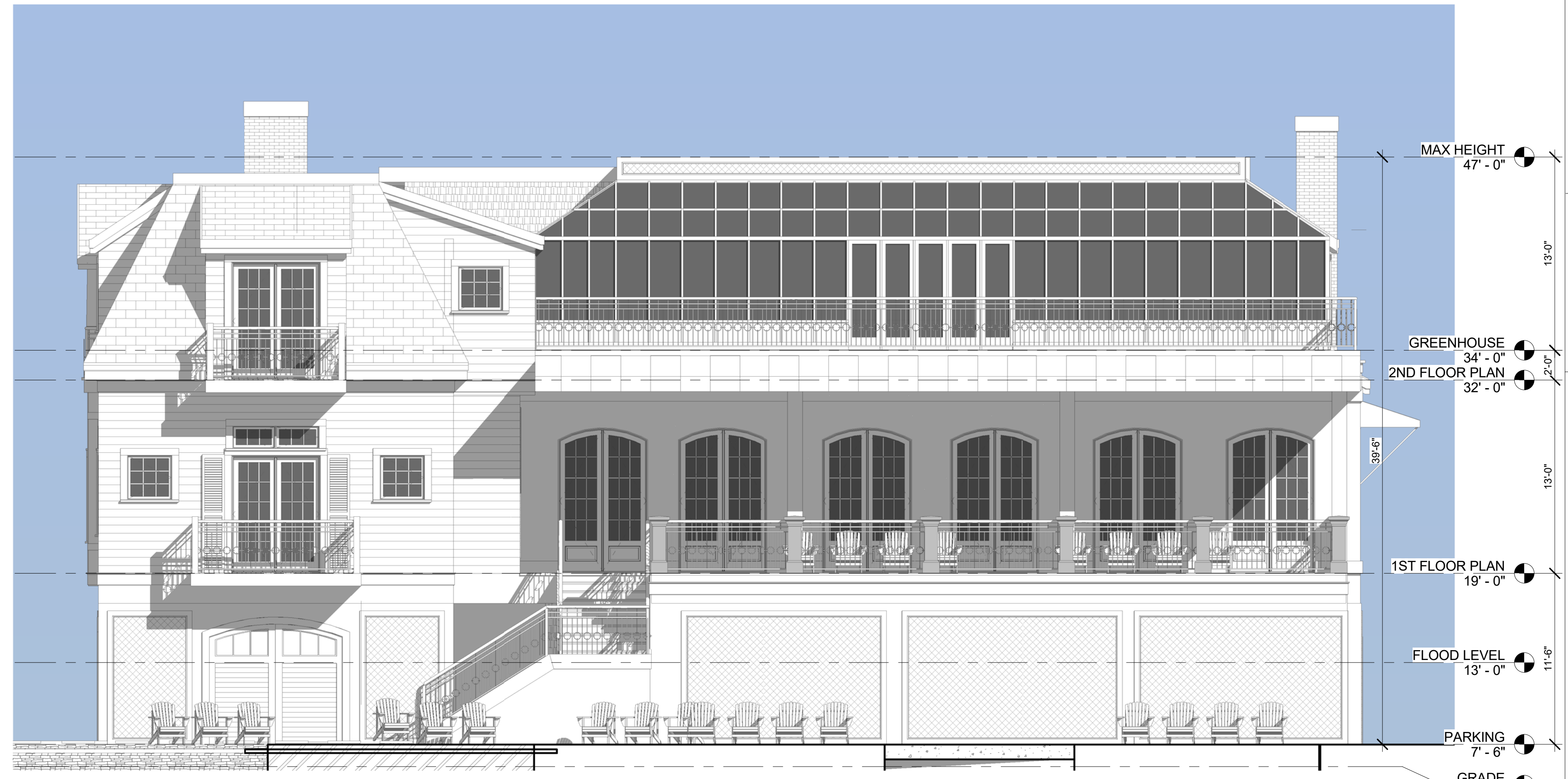
TITLE: EXTERIOR ELEVATIONS

DATE: 02/20/2020

JOB NO.: 1964

DRAWING NO.:

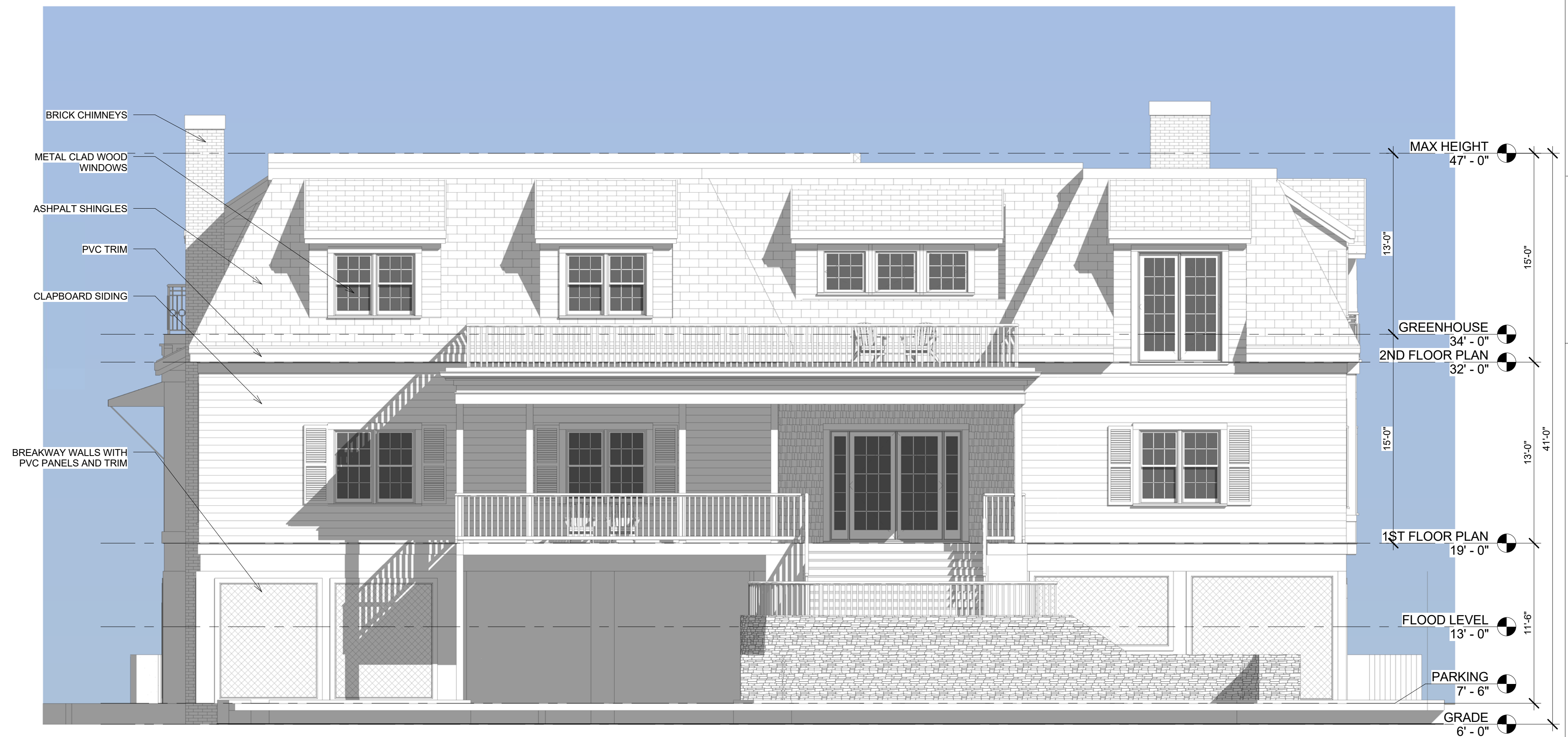
A201



① WEST ELEVATION PROPOSED
3/16" = 1'-0"



③ NORTH ELEVATION PROPOSED
3/16" = 1'-0"



② EAST ELEVATION PROPOSED
3/16" = 1'-0"



① SOUTH ELEVATION PROPOSED
3/16" = 1'-0"

24 LEES WHARF
NEWPORT RI 02840

REVISIONS:

No.	Description	Date

SCHEMATIC SET
NOT FOR CONSTRUCTION

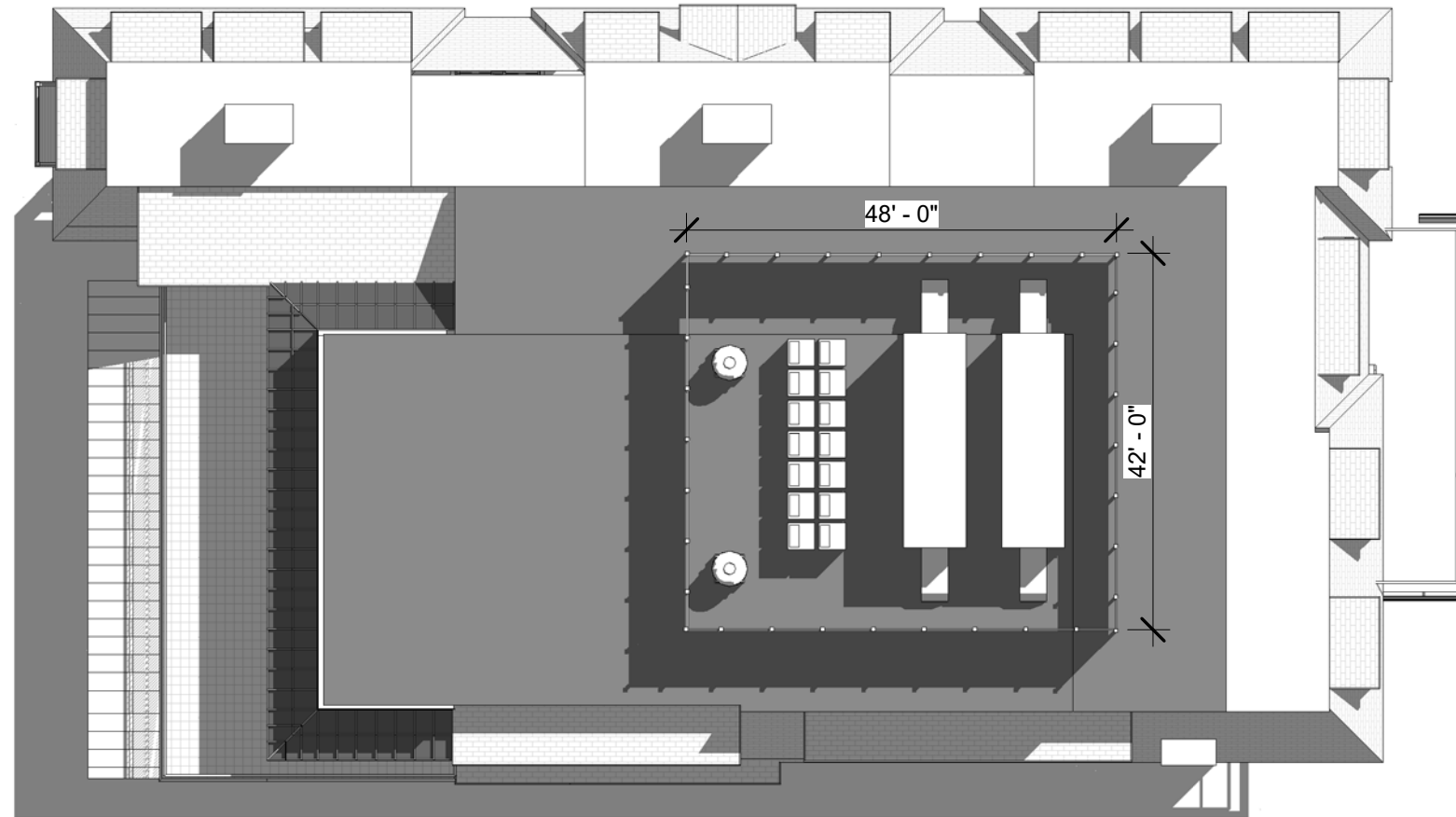
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DATE: 02/20/2020

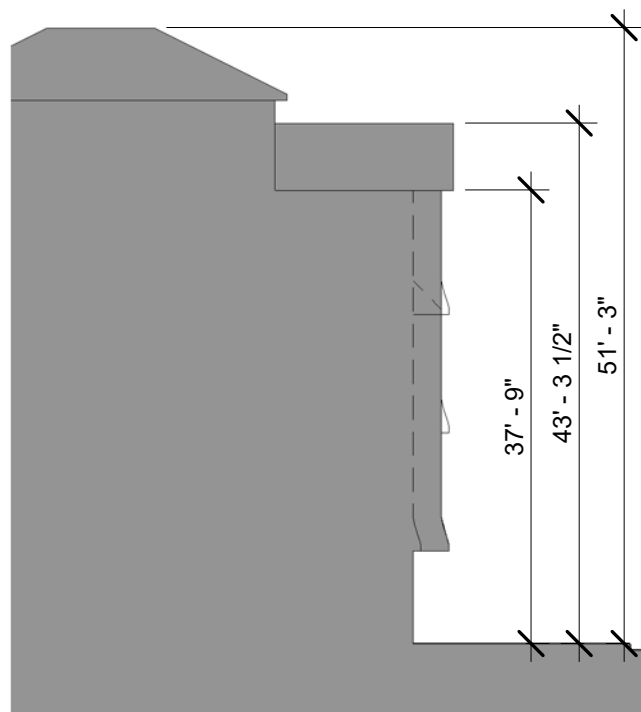
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DRAWING NO.:

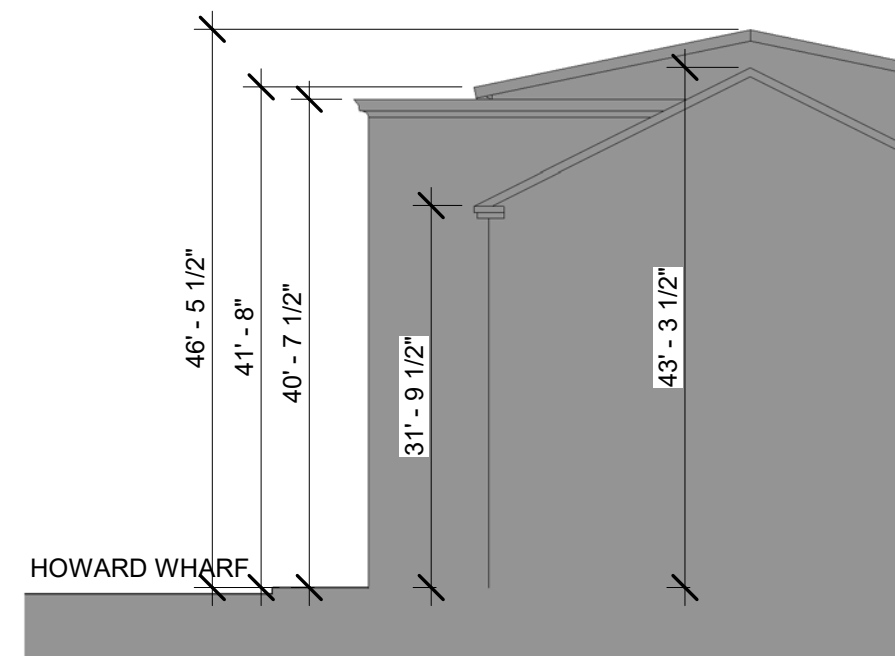
A202



2 ROOF PLAN
1" = 20'-0"



LEE'S WHARF



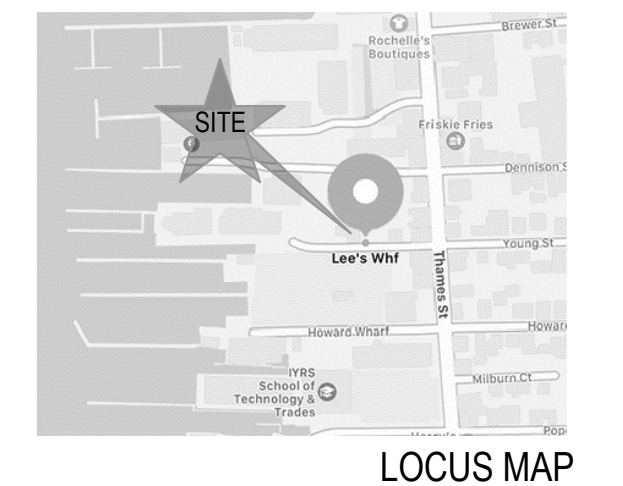
HOWARD WHARF

1 SITE SECTION - VIEW FROM HARBOR
1/16" = 1'-0"



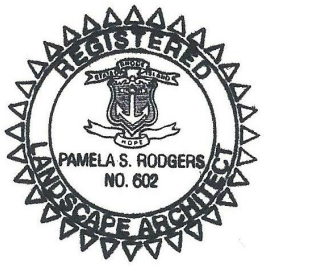
VERDE DESIGN + HORTICULTURE
89 DR MARCUS WHEATLAND BLVD
NEWPORT RI 02840
O. 401 619-0562
verdegarden@gmail.com

ENGINEER
NORTHEAST ENGINEERS & CONSULTANTS, INC.
55 JOHN CLARKE ROAD
MIDDLETOWN RI
401 849 0810



LOCUS MAP

LEE'S WHARF HOTEL
LEE'S WHARF
NEWPORT, RI



PROJECT NUMBER: 20.011
DRAWN BY: KD
CHECKED BY: PR
SCALE: 1"=20'-0"
DATE: 02.21.2020

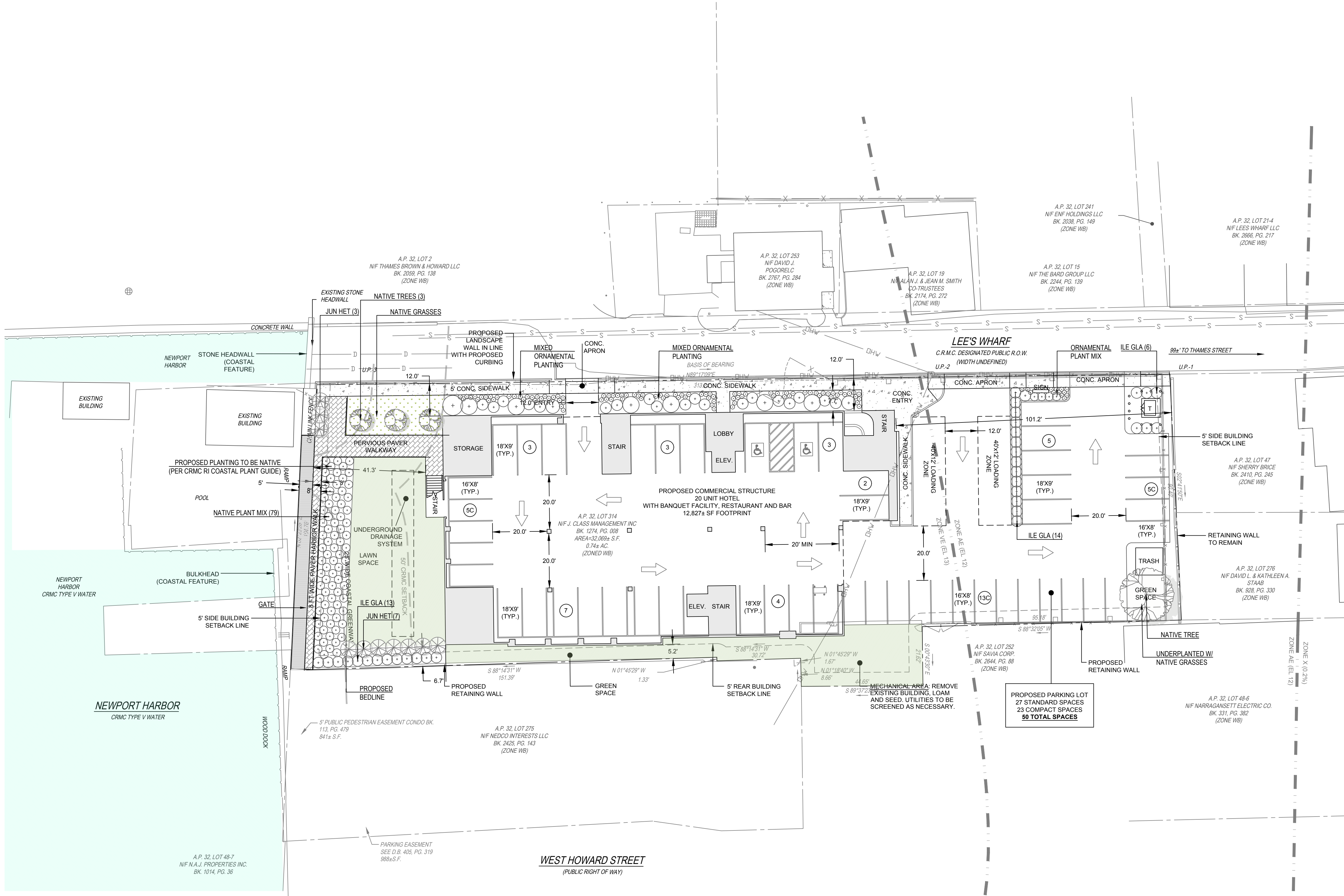
LANDSCAPE PLAN

PLANTING NOTES

1. LANDSCAPE CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTING BID TO BECOME COMPLETELY FAMILIAR WITH SITE CONDITIONS.
2. NO PLANTING WILL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
3. CONTRACTOR TO VERIFY ALL UTILITIES ON PROPERTY AND TO PROTECT ALL UTILITIES DURING EXCAVATION.
4. IF THERE IS A DISCREPANCY BETWEEN THE NUMBER OF PLANTS SHOWN ON THE PLAN AND THE NUMBER OF PLANTS SHOWN IN THE PLANT LIST, THE NUMBER OF PLANTS SHOWN ON THE LIST WILL TAKE PRECEDENCE.
5. ALL CONTAINER MATERIAL TO BE GROWN IN CONTAINER A MINIMUM OF SIX MONTHS.
6. ALL MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, ACCORDING TO THE AMERICAN ASSOCIATION OF NURSERYMEN.
7. CONTRACTOR SHALL REPAIR ALL DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO THE OWNER.
8. CONTRACTOR SHALL GUARANTEE NEW PLANT MATERIAL THROUGH ONE CALENDAR YEAR FROM TIME OF PROVISIONAL ACCEPTANCE.
9. ALL PROPOSED PLANTS SHALL BE LOCATED CAREFULLY AS SHOWN ON THE PLANS AND THE PLACEMENT SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT BEFORE THE INSTALLATION.
10. ALL DISTURBED AREAS NOT TO BE PAVED OR PLANTED SHALL BE LOAMED AND SEEDED AS SHOWN. SEE SPECIFICATIONS FOR SOIL PREPARATION AND SEED MIX.
11. TWO INCH (2") DEEP, FINELY SHREDDED BARK MULCH WILL BE INSTALLED AROUND ALL TREES AND SHRUBS THAT ARE ISOLATED FROM GROUNDCOVER AREAS AND GENERAL SHRUB MASSES.
12. ALL PLANT MATERIAL SHALL BE INSPECTED BY THE LANDSCAPE ARCHITECT ON SITE PRIOR TO INSTALLATION. THE LANDSCAPE ARCHITECT WILL TAG ALL TREES AT THE NURSERY AND INSPECT THEM AFTER DELIVERY TO THE SITE. SEE SPECIFICATIONS FOR TAGGING, INSPECTION, AND ACCEPTANCE OF PLANT MATERIAL.
13. LANDSCAPE ARCHITECT SHALL CONFIRM PLANT LIST AND APPROVE SUBSTITUTIONS OF PLANT VARIETIES PRIOR TO ORDERING OF MATERIAL.
14. SOIL MIX: 1/3 PEAT MOSS, 1/3 SCREENED LOAM, 1/3 DEHYDRATED MANURE.
15. THE OWNER RESERVES THE RIGHT TO SUBSTITUTE PLANT SELECTIONS WITH PLANTS OF SIMILAR CHARACTERISTICS IF THE SPECIFIED PLANTS ARE NOT AVAILABLE IN ACCEPTABLE QUANTITIES OR CONDITIONS.

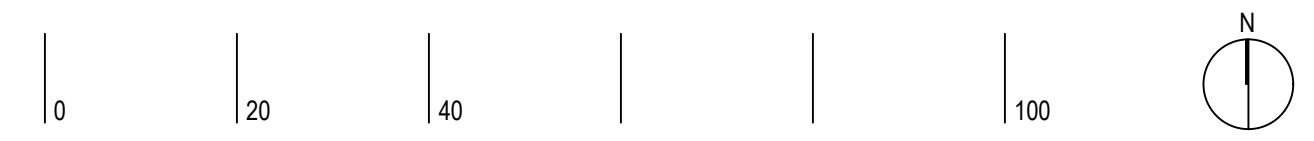
PLANTING LEGEND

BOTANICAL NAME	COMMON NAME
PROPOSED NATIVE TREES (SIZE TO BE MINIMUM 1.5" CALIPER B&B)	
AMELANCHIER SPP MAGNOLIA VIRGINIANA	SHADOBUSH SWEETBAY MAGNOLIA
PROPOSED EVERGREENS	
JUNIPERUS CHIN. 'HETZI COLUMNARIS'	HETZ COLUMNAR JUNIPER
COASTAL GREENWAY	
PROPOSED NATIVE SHRUBS	
CLETHRA ALNIFOLIA ILEX GLABRA 'SHARROCK' ILEX VERTICILLATA 'WINTER RED' ROSA VIRGINIANA VIBURNUM CORYMBOSUM VIBURNUM DENTATUM 'BLUE MUFFIN'	SWEET PEPPERBUSH WINTERBERRY WINTERBERRY VIRGINIA ROSE HICOBUSH BLUEBERRY ARROWWOOD VIBURNUM
PROPOSED HERBACEOUS LAYER	
ARCTOSTAPHYLOS UVA-URSI OSMUNDA CINNAMOMEA SIMLAX SPP. PANKIUM VIRGATUM THELYPTERIS NOVEBORACENSIS ARCTOSTAPHYLOS UVA-URSI SCHIZACHYRIUM SCOPARIUM	BEARBERRY CINNAMON FERN SWITCHGRASS NEW YORK FERN BEARBERRY LITTLE BLUESTEM
PROPOSED ORNAMENTAL MIX	
HYDRANGEAS GRASSES PERENNIALS	
LAWN	



GENERAL NOTES

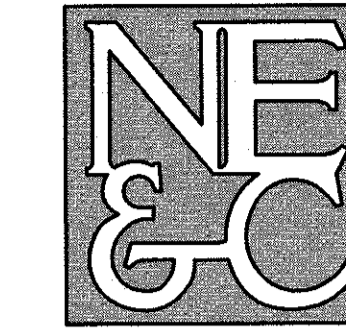
1. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND UTILITIES AND REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES BY NOTIFYING DIG-SAFE AT 1-800-322-4844 AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION.
3. THE CONTRACTOR SHALL CONDUCT PRELIMINARY INVESTIGATIONS INCLUDING ALL NECESSARY EXCAVATION TO DETERMINE IF THE WORK CAN BE DONE AS SHOWN ON THE PLANS. CHANGES MAY BE MADE AS REQUIRED BY FIELD CONDITIONS AND AS DIRECTED BY THE LANDSCAPE ARCHITECT.
4. ALL EXISTING UTILITIES MAY NOT BE SHOWN ON THE DRAWING. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR DETERMINING THE EXACT LOCATION, SIZE, AND TYPE OF ALL UNDERGROUND UTILITIES AND FOR PROTECTING ALL LINES DURING CONSTRUCTION.
5. ALL WORK SHALL COMPLY WITH ALL APPLICABLE STATE AND LOCAL REGULATIONS.



MANCHESTER HOUSE

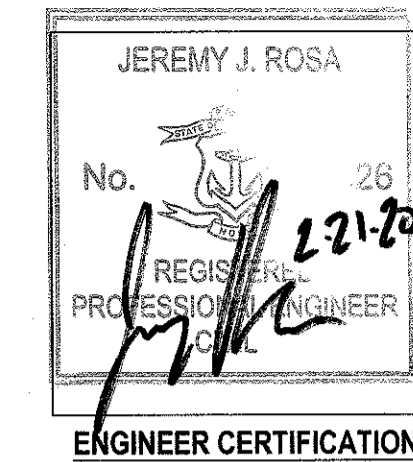
PROPOSED HOTEL AND RESTAURANT ASSESSOR'S PLAT 32 LOT 314 24 LEE'S WHARF / 5 HOWARD WHARF NEWPORT, RHODE ISLAND

CIVIL ENGINEER: NORTHEAST ENGINEERS & CONSULTANTS, INC.



A KNOWLEDGE CORPORATION
6 VALLEY ROAD MIDDLETOWN RI 02842
PHONE (401) 848-0810 FAX (401) 846-1199
WWW.NORTHEASTENGINEERS.COM

SITE/CIVIL
LAND PLANNING
WATERFRONT
SURVEYING
GEOTECHNICAL
ENVIRONMENTAL
TRANSPORTATION
STRUCTURAL
MATERIALS TESTING



OWNER:

HOWARD WHARF, LP
c/o SILVA, THOMAS, MARTLAND & OFFENBERG, LTD
1100 AQUIDNECK AVENUE
MIDDLETOWN, RI 02842

LANDSCAPE ARCHITECT:

VERDE DESIGN & HORTICULTURE
89 DR. MARCUS WHEATLAND BLVD
NEWPORT, RI 02840

FEBRUARY 21, 2020 PERMIT SET

PLAN INDEX

SITE/CIVIL ENGINEERING PLANS

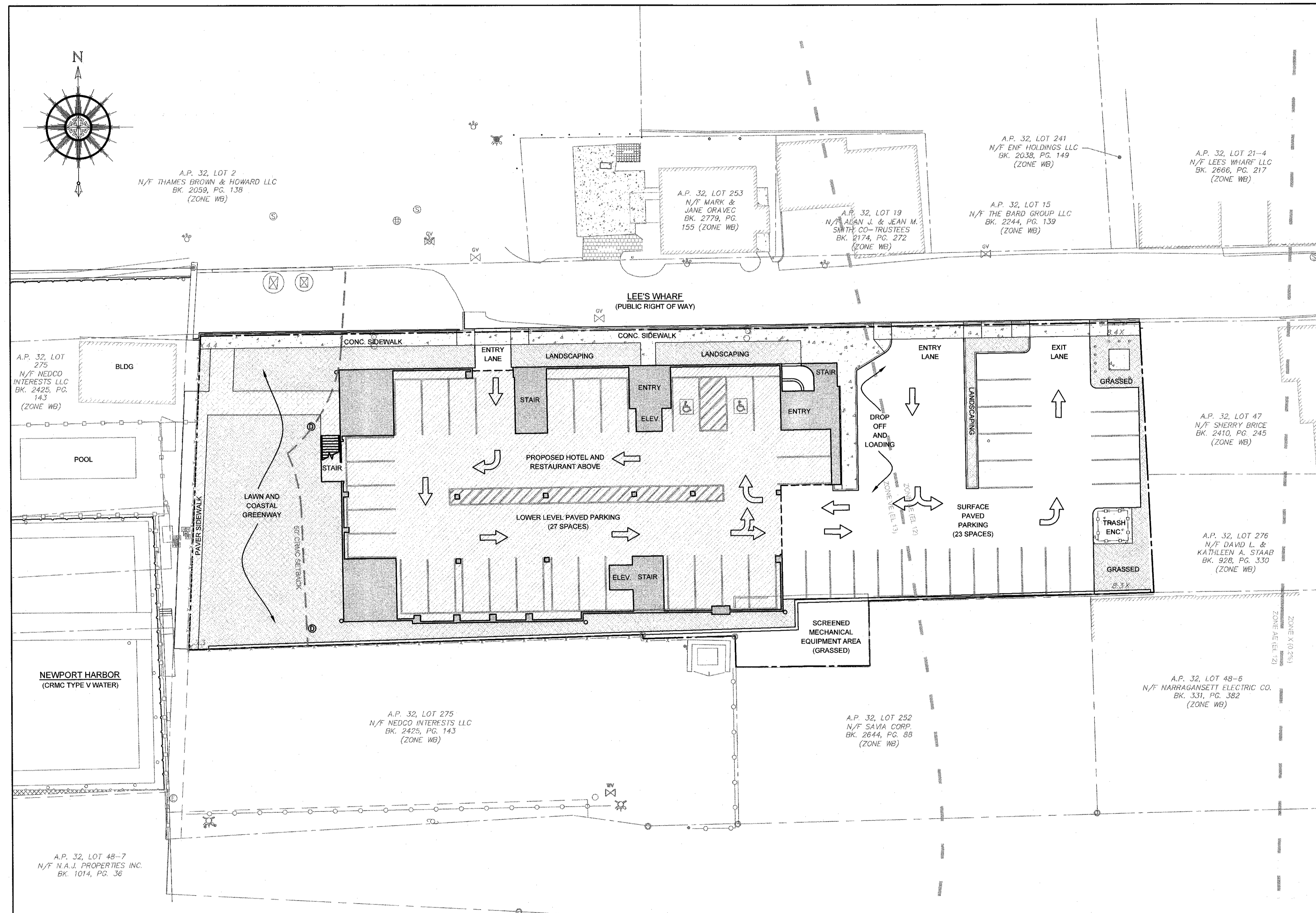
- TITLE SHEET
- NOTES
- EXISTING CONDITIONS
- PROPOSED LAYOUT PLAN
- PROPOSED GRADING AND DRAINAGE PLAN
- PROPOSED UTILITY PLAN
- PROPOSED SOIL EROSION AND SEDIMENT CONTROL PLAN
- PROPOSED DETAILS

- SHEET 1
- SHEET 2
- SHEET 3
- SHEET 4
- SHEET 5
- SHEET 6
- SHEET 7
- SHEETS 8-10

PLANS BY OTHERS

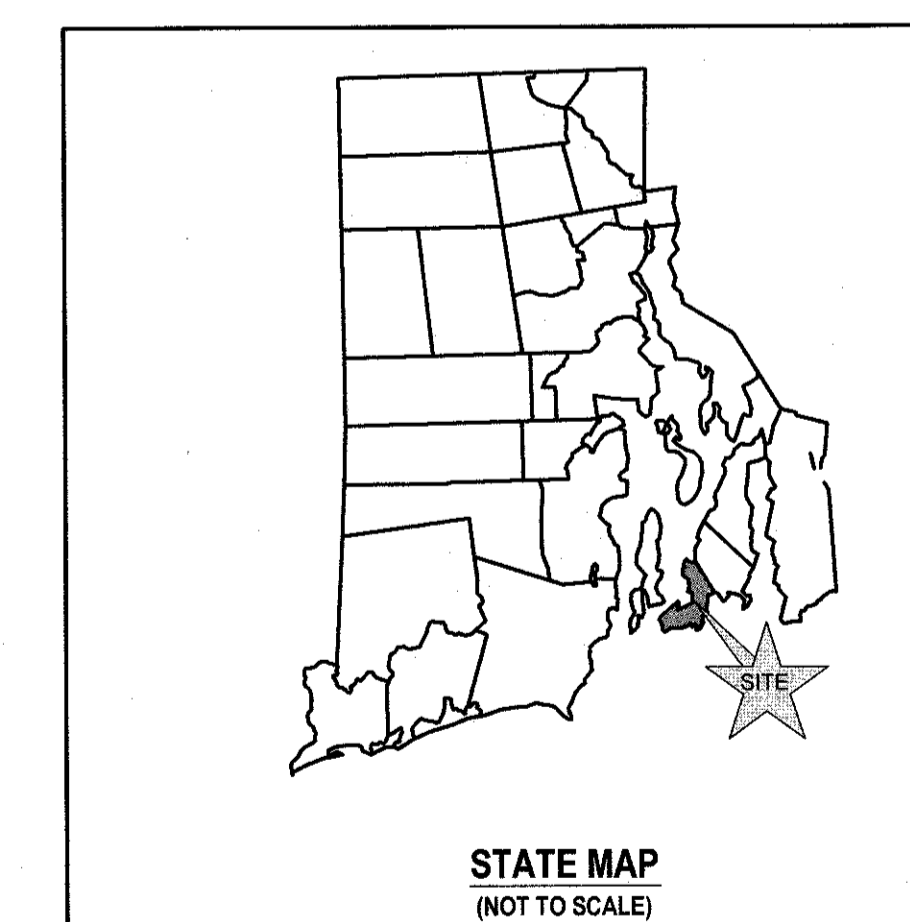
LANDSCAPE PLAN

SHEET 1

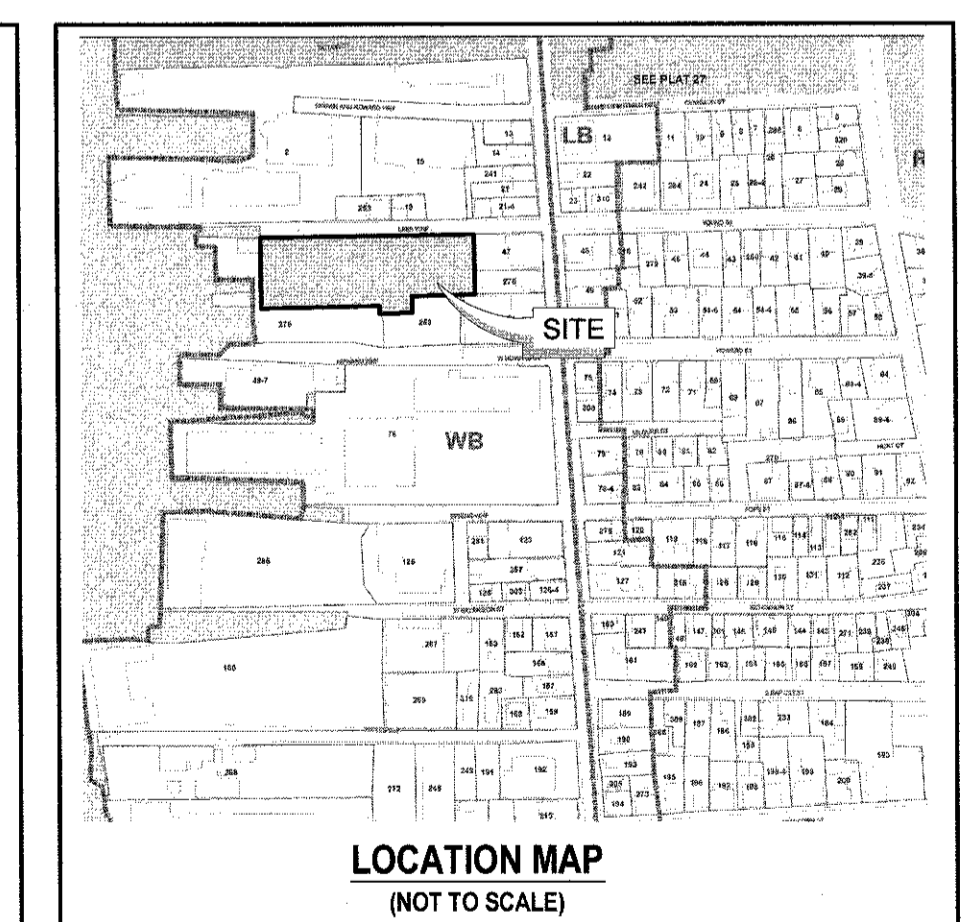


SITE PLAN

SCALE = 1"=20'



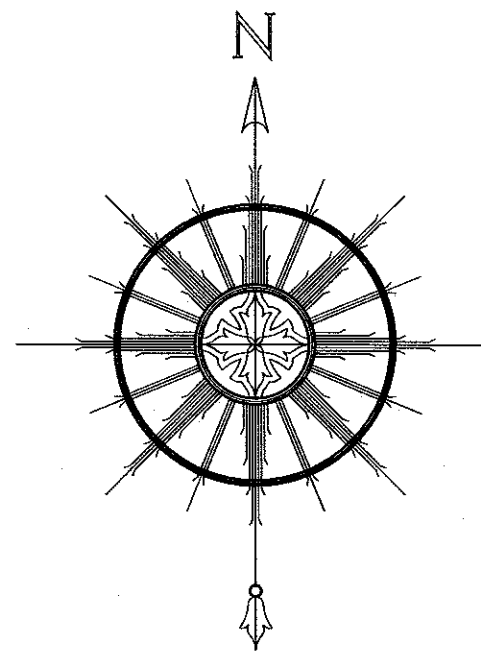
STATE MAP
(NOT TO SCALE)



LOCATION MAP
(NOT TO SCALE)

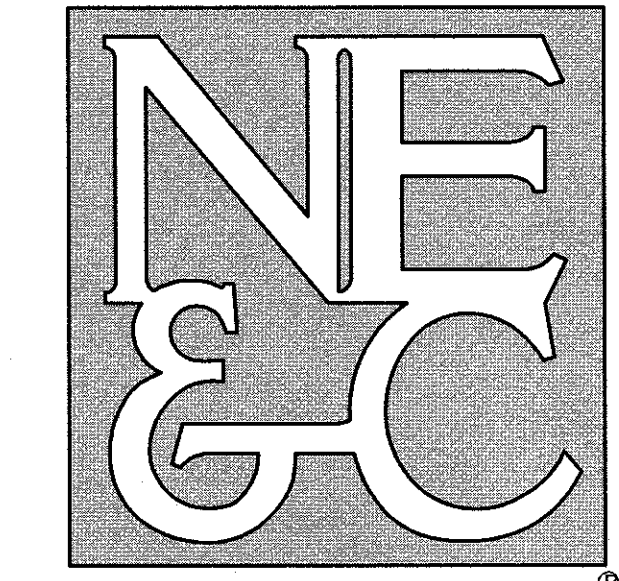
SUBMISSION AND REVISION SUMMARY

AGENCY OR REVISION	DATE:	COMMENTS:
CITY OF NEWPORT	FEB 24, 2020	DEVELOPMENT PLAN REVIEW



SEE GENERAL NOTES #2

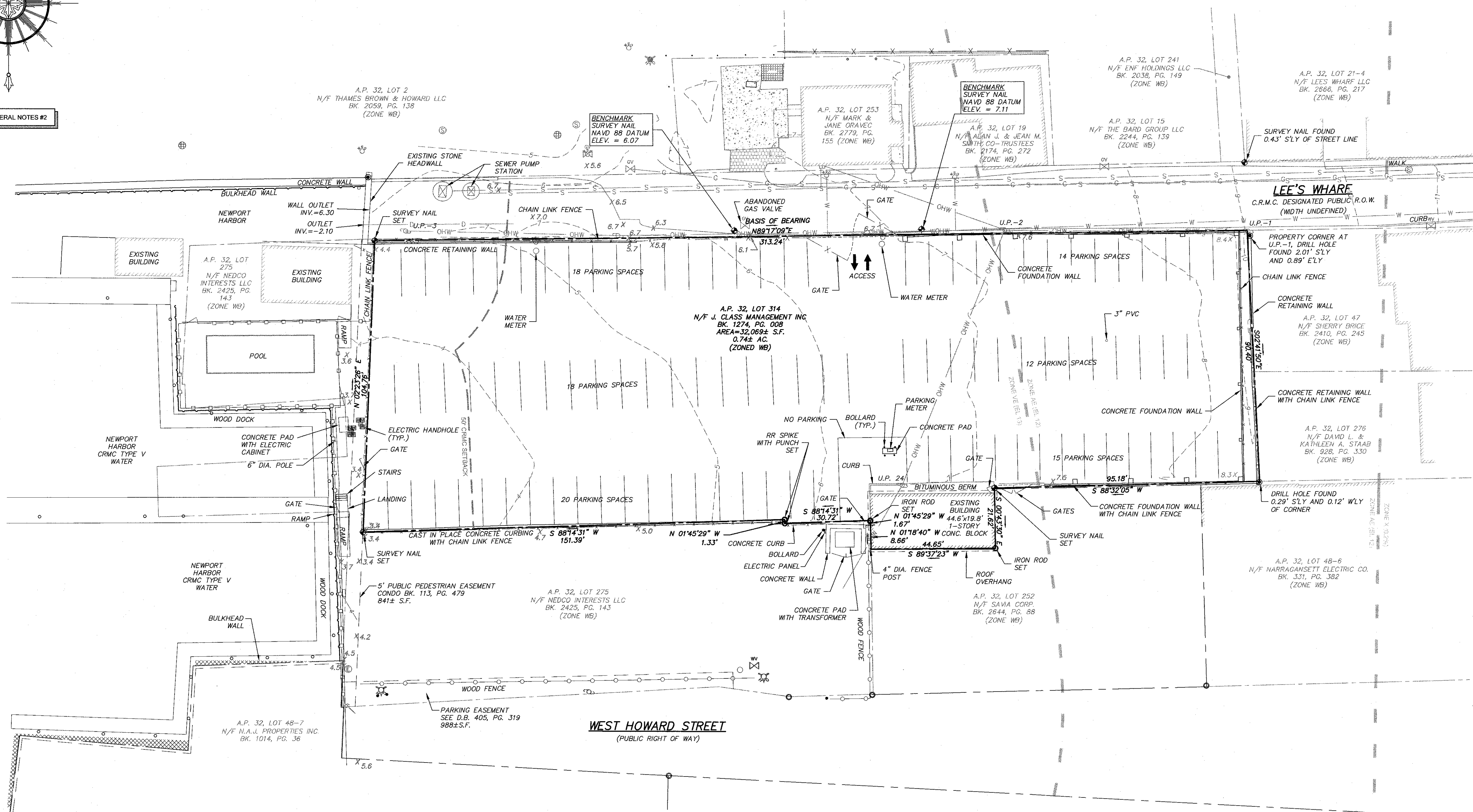
NORTHEAST ENGINEERS & CONSULTANTS, INC.



SITE/CIVIL
LAND PLANNING
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ENVIRONMENTAL
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MATERIALS TESTING

A KNOWLEDGE CORPORATION®

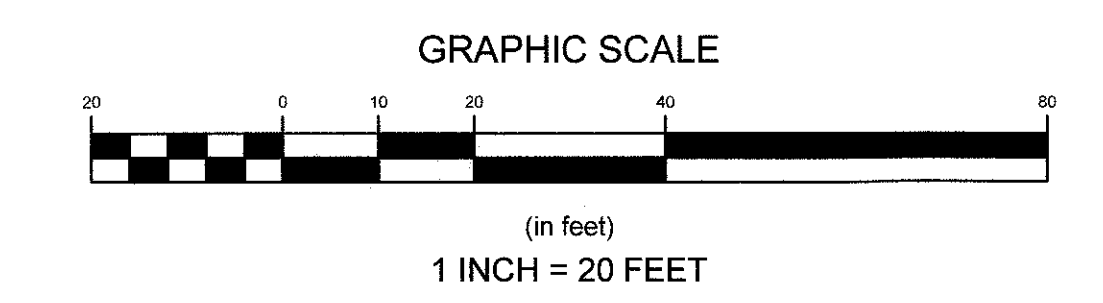
6 VALLEY ROAD MIDDLETOWN RHODE ISLAND 02842
PHONE (401) 849-0810 FAX (401) 846-4169
WWW.NORTHEASTENGINEERS.COM



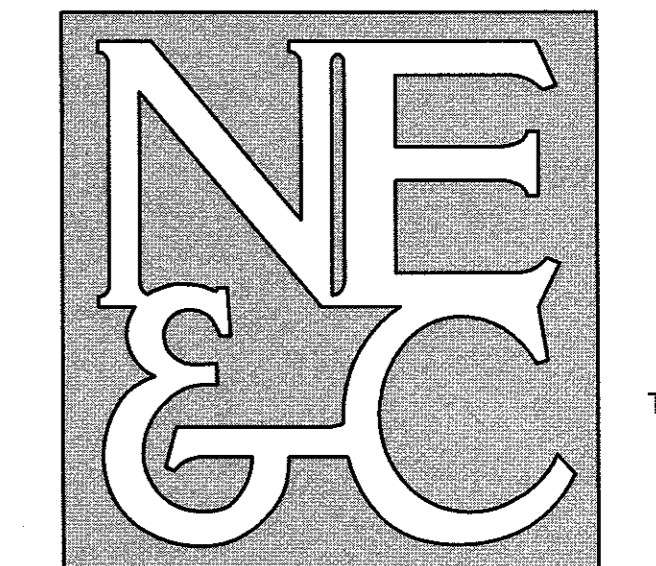
LEGEND:

—	PROPERTY LINE	⊗	WATER GATE
- - -	ABUTTER'S PROPERTY LINE	⊕	WATER SHUTOFF
- · - · -	TOPOGRAPHIC CONTOUR	⊖	CATCH BASIN
—	FEMA FLOOD ZONE BOUNDARY	⊙	DRAIN MANHOLE
X	CHAIN LINK FENCE	⊗	SEWER MANHOLE
—	WOOD FENCE	⊕	GAS GATE
—	OHW	⊖	IRON ROD/RAILROAD SPIKE
—	GAS LINE	⊙	SURVEY NAIL
—	SEWER LINE	⊗	DRILL HOLE
—	WATER LINE	⊕	SPOT ELEVATION
—	UTILITY POLE		
—	HYDRANT		

- GENERAL NOTES:**
- EXISTING CONDITIONS ARE THE RESULT OF A FIELD SURVEY BY NORTHEAST ENGINEERS & CONSULTANTS, INC. IN JULY 2019.
 - NORTH ARROW BASED ON RTK/GNSS OBSERVATION.
 - BASE OF ELEVATIONS IS NAVD88. CONVERSION TO MEAN SEA LEVEL: [MSL = NAVD88 - 0.30']
 - ALL UNDERGROUND UTILITIES SHOWN ON THIS PLAN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING PLANS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM ALL AVAILABLE INFORMATION. (PLEASE CONTACT DIGSAFE PRIOR TO CONSTRUCTION AT 1-888-344-7233, AND/OR ALL LOCAL UTILITY COMPANIES).
 - REFER TO SHEET C-2 FOR COMPLETE PROJECT NOTES.

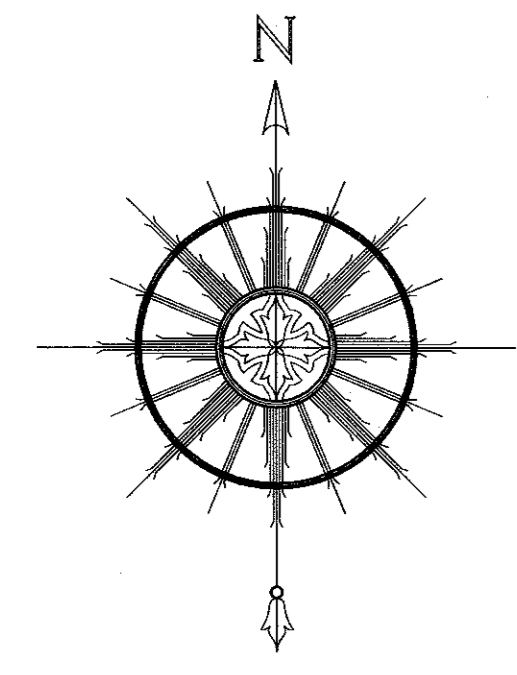


No.	Revision	Date	App.
Designed By:	Drawn by:	JJR	Checked by: GES
Scale:	1"=20'	Date:	21FEB20
Project Title:			
MANCHESTER HOUSE A.P. 32, LOT 314 LEES WHARF NEWPORT, RHODE ISLAND			
Client/Owner:			
HOWARD WHARF LP c/o SILVA, THOMAS, MARTLAND & OFFENBERG 1100 AQUIDNECK AVENUE, MIDDLETOWN, RI 02842			
Issued for:			
PERMITTING			
Drawing Title:			
EXISTING CONDITIONS PLAN			
Drawing Number:		C-3	
Sheet		3 of 10	
Project Number:		19107.0	
Survey Index:		14 - 32 - 314	
OWNERSHIP AND USE OF DOCUMENTS: DRAWINGS AND SPECIFICATIONS, AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE AND SHALL REMAIN THE PROPERTY OF THE ENGINEER. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR PART, FOR ANY OTHER PROJECTS OR PURPOSES, OR BY ANY OTHER PARTIES, THAN THOSE PROPERLY AUTHORIZED BY CONTRACT, WITHOUT THE EXPRESS AUTHORIZATION OF THE ENGINEER.			

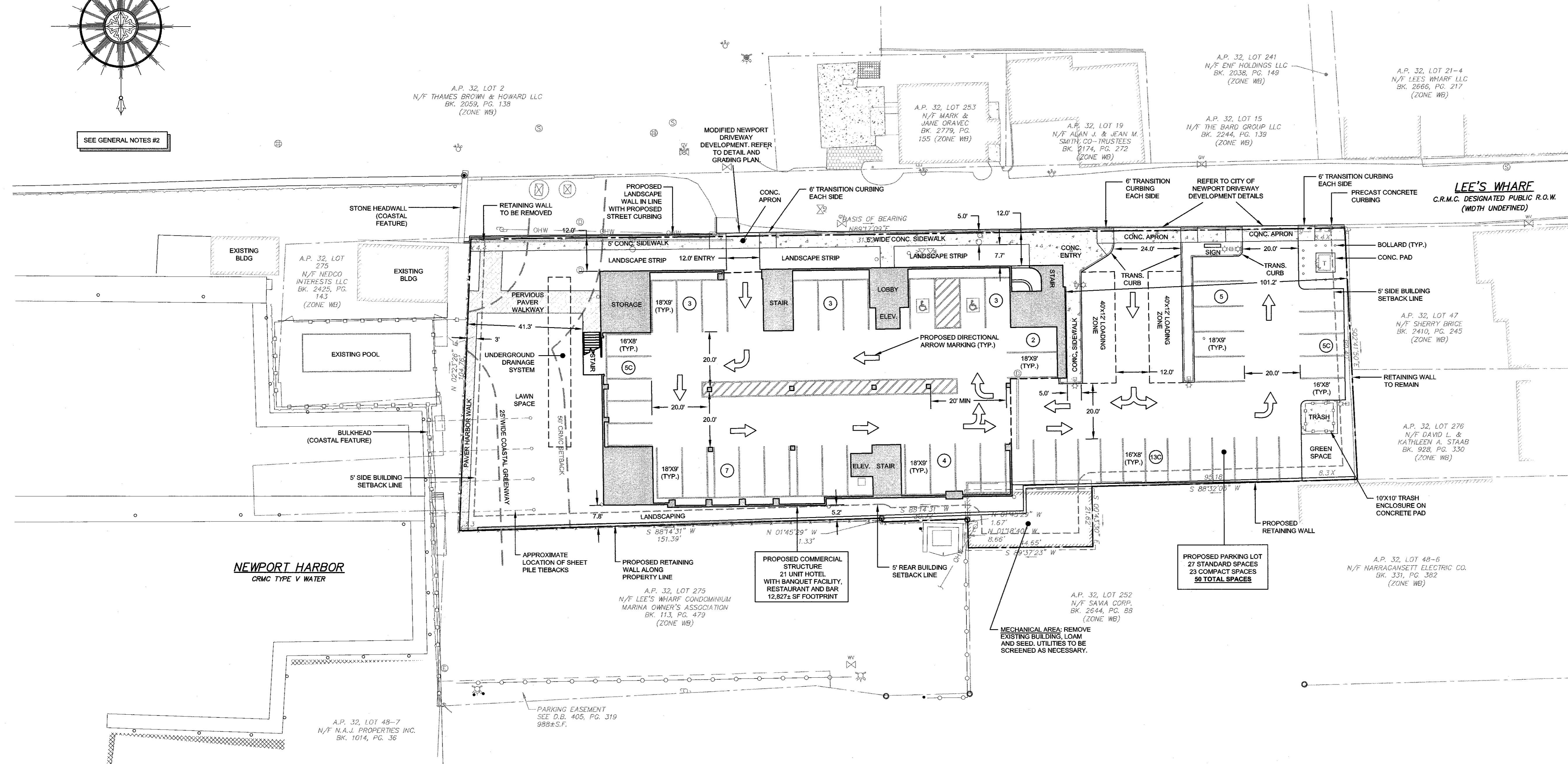


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6 VALLEY ROAD MIDDLETOWN RHODE ISLAND 02842
PHONE (401) 849-0810 FAX (401) 846-4169
WWW.NORTHEASTENGINEERS.COM



SEE GENERAL NOTES #2



NEWPORT HARBOR
CRMC TYPE V WATER

LEE'S WHARF
C.R.M.C. DESIGNATED PUBLIC R.O.W.
(WIDTH UNDEFINED)

ZONING DATA: WB (WATERFRONT BUSINESS)

	REQUIRED	PROPOSED
MINIMUM LOT AREA:	5,000 SF	32,069 SF
MINIMUM LOT WIDTH:	50 FT	313.24 FT
BUILDING SETBACKS:		
FRONT	0 FT	12.0 FT
SIDE	5 FT	41.3 / 101.2 FT
REAR	5 FT	5.0 FT
MAXIMUM BUILDING HEIGHT:	47 FT	47 FT
MAXIMUM LOT COVERAGE:	40%	40%

* MAX BUILDING HEIGHT = FLOOD ELEVATION + 5 FT FREEBOARD
- AVG. EX. GRADE + MAX HEIGHT PER ZONING
= 13 FT + 5 FT + 6 FT + 35 FT = 47 FT

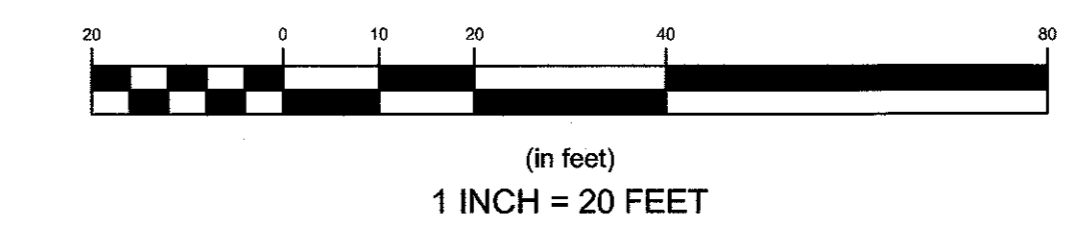
LEGEND:

- PROPERTY LINE
- - - ABUTTER'S PROPERTY LINE
- WOOD FENCE
- OHW — OVERHEAD WIRE
- ⊕ UTILITY POLE
- ⊕ HYDRANT
- ⊕ WATER GATE
- ⊕ WATER SHUTOFF
- ⊕ CATCH BASIN
- ⊕ DRAIN MANHOLE
- ⊕ SEWER MANHOLE
- ⊕ GAS GATE

GENERAL NOTES:

- EXISTING CONDITIONS ARE THE RESULT OF A FIELD SURVEY BY NORTHEAST ENGINEERS & CONSULTANTS, INC. IN JULY 2019.
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- BASE OF ELEVATIONS: NAVD88. CONVERSION TO MEAN SEA LEVEL: [MSL = NAVD88 - 0.30]
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- REFER TO SHEET C-2 FOR COMPLETE PROJECT NOTES.

GRAPHIC SCALE



3	REVISED DRAINAGE	24APR20	
2	MISC REVISIONS	31MAR20	
1	REVISED DRAINAGE	19MAR20	
No.	Revision	Date	App.
Designed By:	Drawn by:	JJR	Checked by: GES
Scale:	1"=20'	Date:	24FEB20

Project Title:
MANCHESTER HOUSE
A.P. 32, LOT 314
24 LEES WHARF
NEWPORT, RHODE ISLAND

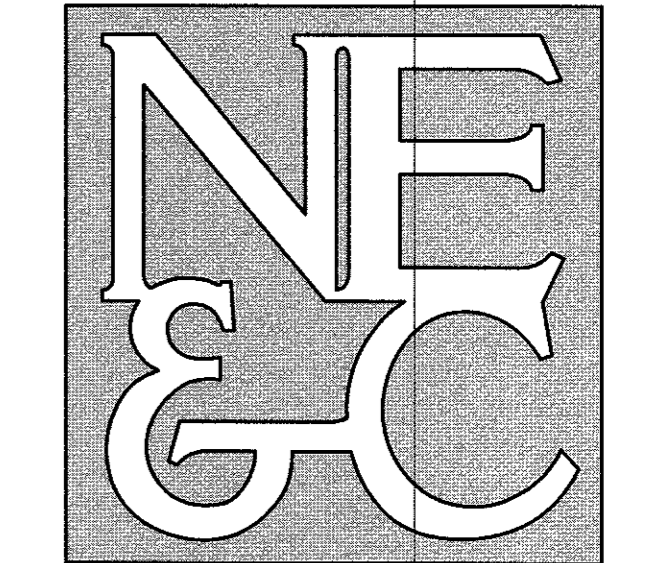
Client/Owner:
HOWARD WHARF, LP
66 OCEAN AVENUE
NEWPORT, RI 02840

Issued for:
PERMITTING

Drawing Title:
PROPOSED LAYOUT PLAN

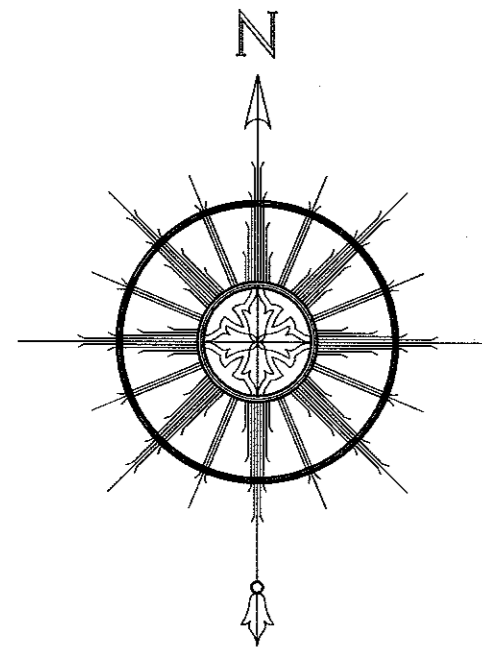
Drawing Number: C-4
Sheet 4 of 10
Project Number: 19107.0
Survey Index: 14 - 32 - 314

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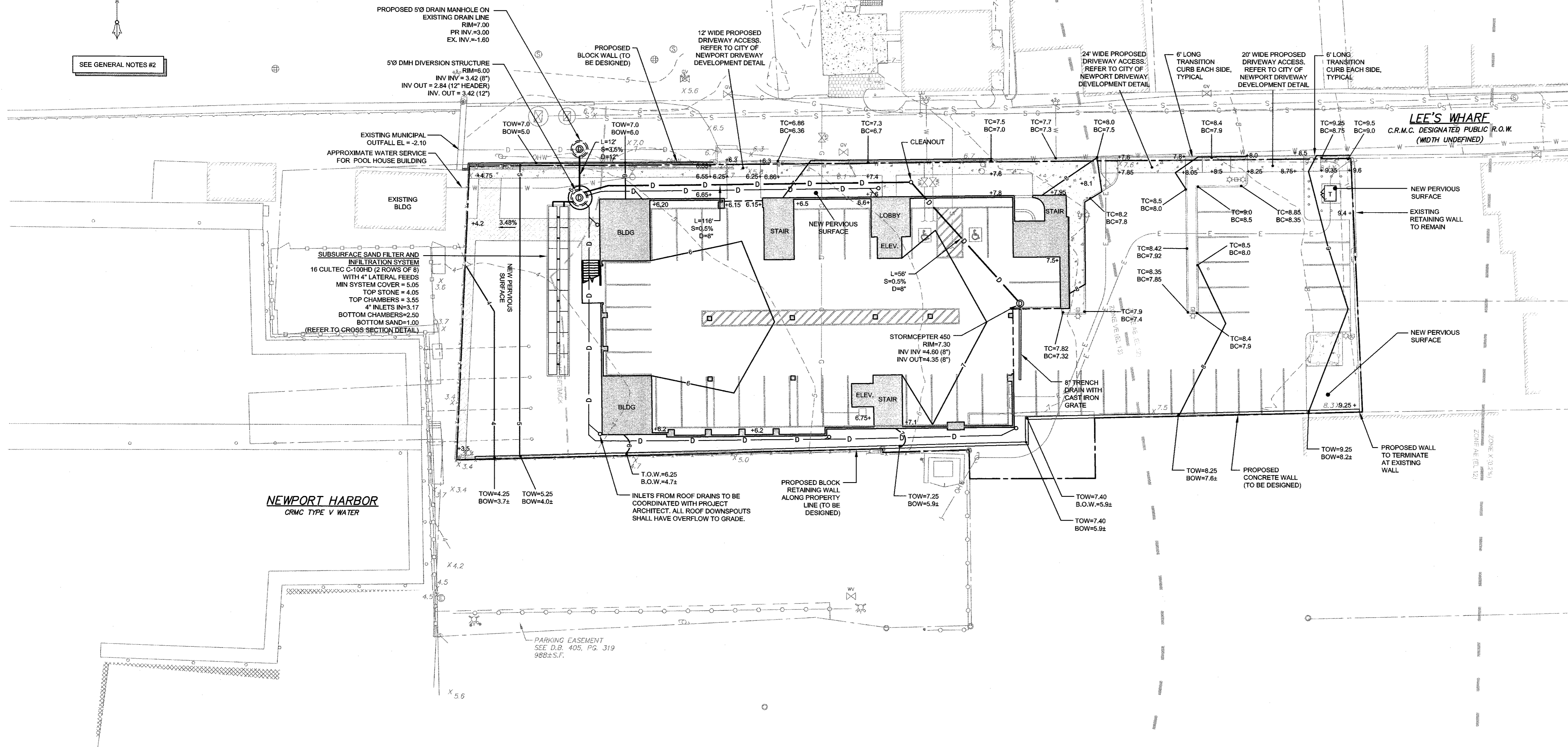


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SEE GENERAL NOTES #2



NEWPORT HARBOR
CRMC TYPE V WATER

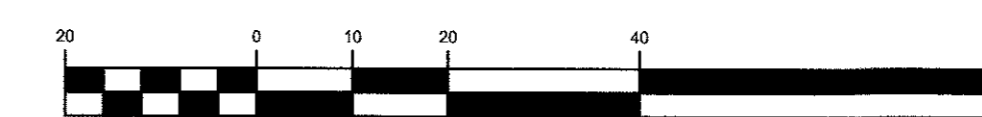
LEGEND:

---	PROPERTY LINE	⊗	WATER GATE
---	ABUTTER'S PROPERTY LINE	⊗	WATER SHUTOFF
---	TOPOGRAPHIC CONTOUR	⊗	CATCH BASIN
---	FEMA FLOOD ZONE BOUNDARY	⊗	DRAIN MANHOLE
---	WOOD FENCE	⊗	SEWER MANHOLE
---	OVERHEAD WIRE	⊗	GAS GATE
---	OHW	---	PROPOSED CONTOUR
---	GAS LINE	---	+7.0
---	SEWER LINE	---	PROPOSED SPOT ELEVATION
---	WATER LINE	---	D
---	UTILITY POLE	---	PROPOSED DRAIN LINE
---	HYDRANT		

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- REFER TO SHEET C-2 FOR COMPLETE PROJECT NOTES.

GRAPHIC SCALE



(in feet)
1 INCH = 20 FEET

2	REVISED DRAINAGE	24APR20	
1	REVISED DRAINAGE	19MAR20	
No.	Revision	Date	App.
Designed By:	Drawn by: JJR	Checked by: GES	
Scale:	1"=20'	Date:	21FEB20

Project Title:
MANCHESTER HOUSE
A.P. 32, LOT 314
24 LEES WHARF
NEWPORT, RHODE ISLAND

Client/Owner:
HOWARD WHARF, LP
c/o SILVA, THOMAS, MARTLAND & OFFENBERG
1100 AQUIDNECK AVE., MIDDLETOWN, RI 02842

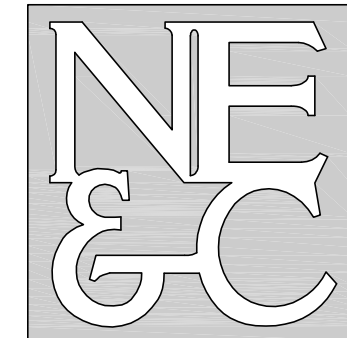
Issued for:
PERMITTING

Drawing Title:
GRADING AND DRAINAGE PLAN

Drawing Number: C-5
Sheet 5 of 10
Project Number: 19107.0
Survey Index: 14 - 32 - 314

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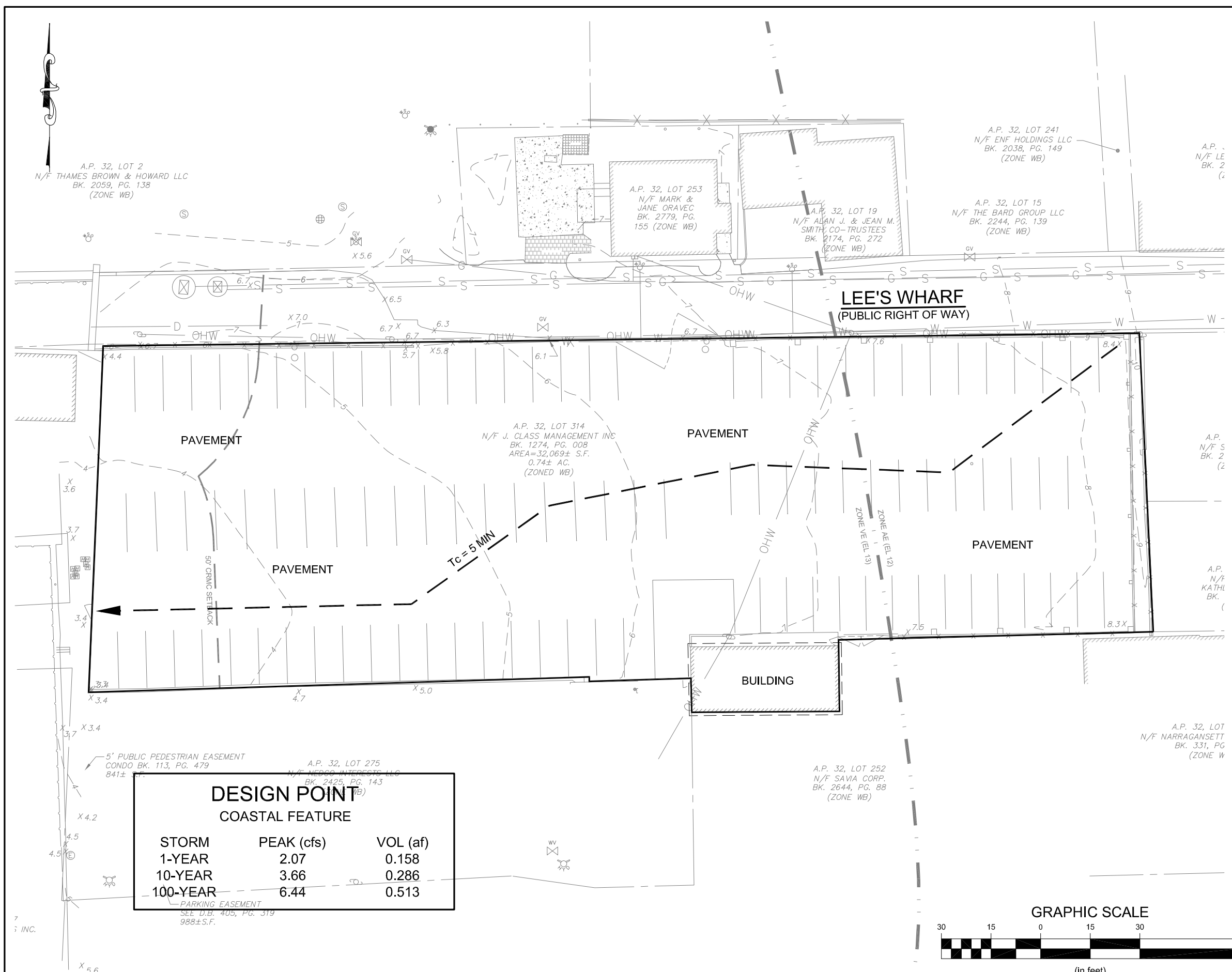
NORTHEAST ENGINEERS
& CONSULTANTS, INC.



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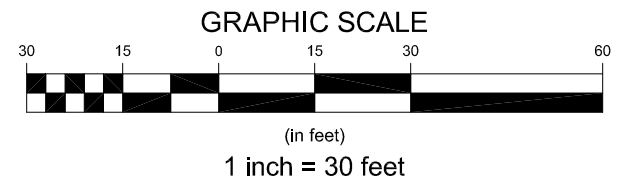
6 VALLEY ROAD MIDDLETOWN RHODE ISLAND 02842
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- SITE/CIVIL
- LAND PLANNING
- WATERFRONT
- SURVEYING
- GEOTECHNICAL
- ENVIRONMENTAL
- TRANSPORTATION
- STRUCTURAL

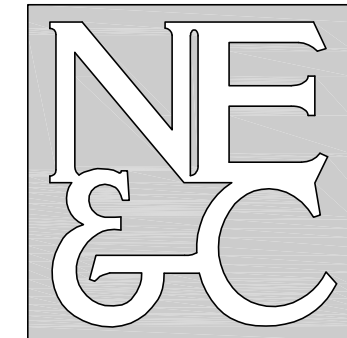


DESIGN POINT COASTAL FEATURE		
STORM	PEAK (cfs)	VOL (af)
1-YEAR	2.07	0.158
10-YEAR	3.66	0.286
100-YEAR	6.44	0.513

Drawn by: JJR	Checked by: GES
Scale: 1"=30'	Date: 13FEB20
A.P. 32 LOT 314 LEE'S WHARF NEWPORT RHODE ISLAND	
Issued for:	
PERMITTING	
Drawing Title:	
EXISTING WATERSHED PLAN	
Drawing Number:	
W-1	
Project Number:	
19107.0	



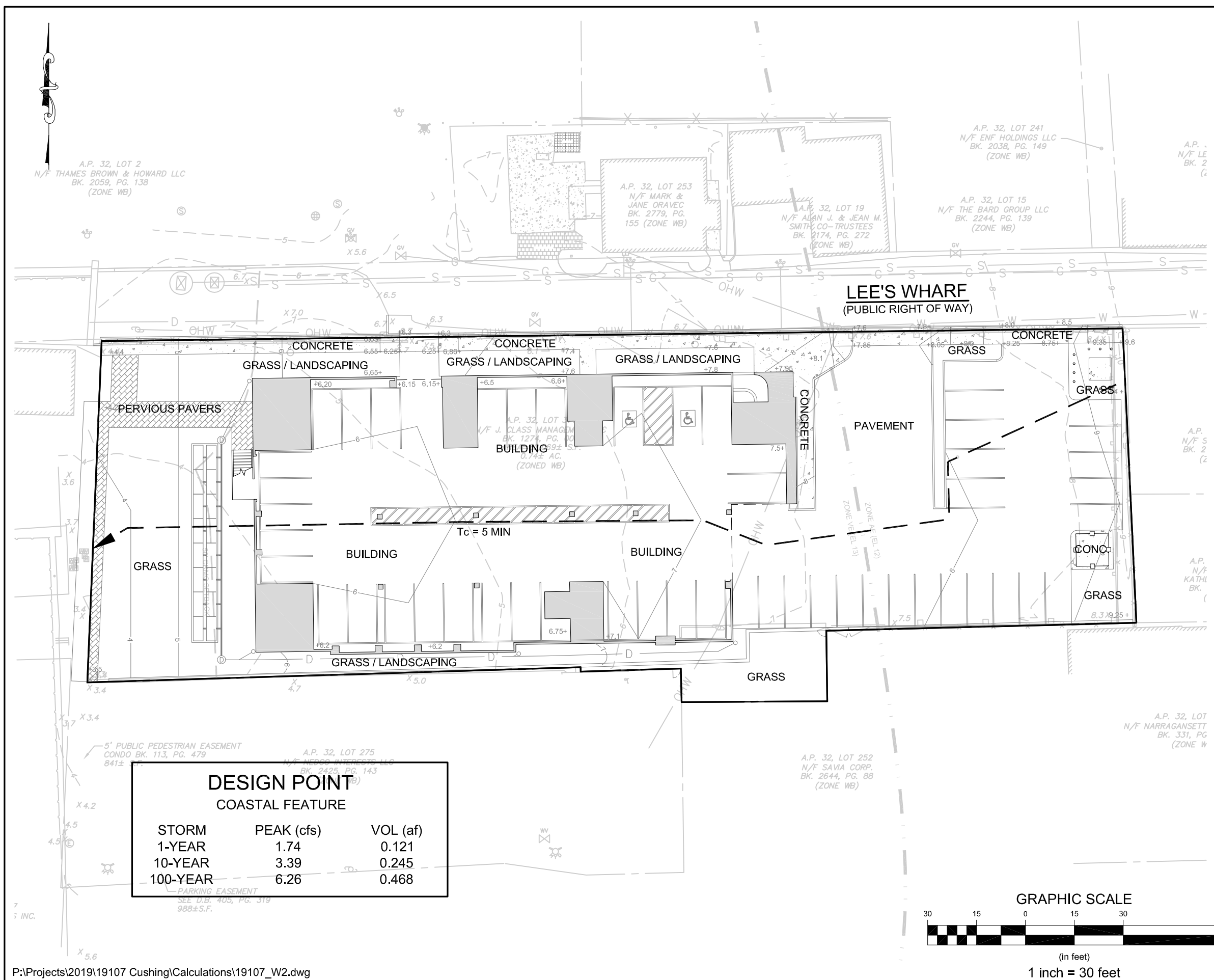
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& CONSULTANTS, INC.



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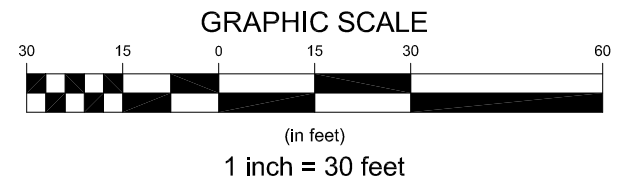
6 VALLEY ROAD MIDDLETOWN RHODE ISLAND 02842
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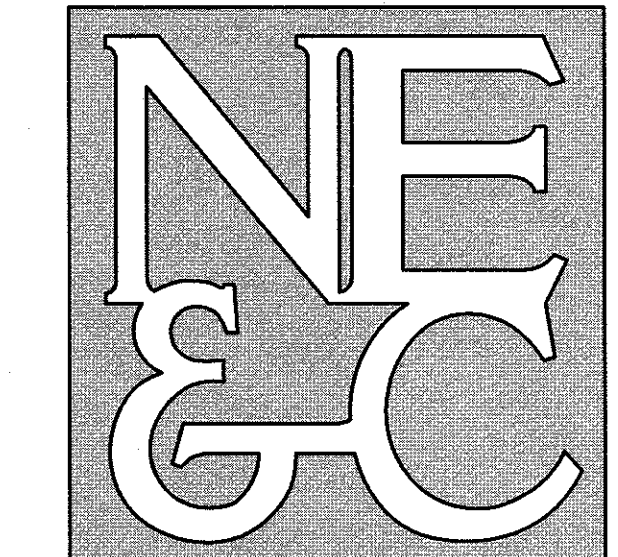
- SITE/CIVIL
- LAND PLANNING
- WATERFRONT
- SURVEYING
- GEOTECHNICAL
- ENVIRONMENTAL
- TRANSPORTATION
- STRUCTURAL



DESIGN POINT COASTAL FEATURE		
STORM	PEAK (cfs)	VOL (af)
1-YEAR	1.74	0.121
10-YEAR	3.39	0.245
100-YEAR	6.26	0.468

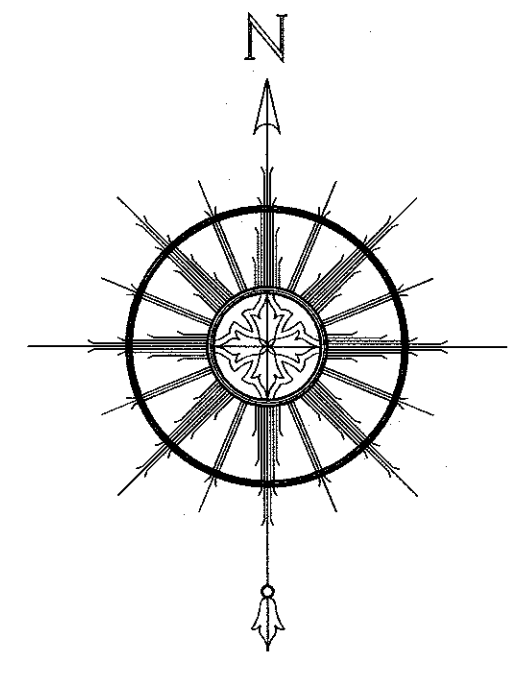
Drawn by: JJR	Checked by: GES
Scale: 1"=30'	Date: 13FEB20
A.P. 32 LOT 314	
LEE'S WHARF NEWPORT RHODE ISLAND	
Issued for:	
PERMITTING	
Drawing Title:	
PROPOSED WATERSHED PLAN	
Drawing Number:	
W-2	
Project Number:	
19107.0	



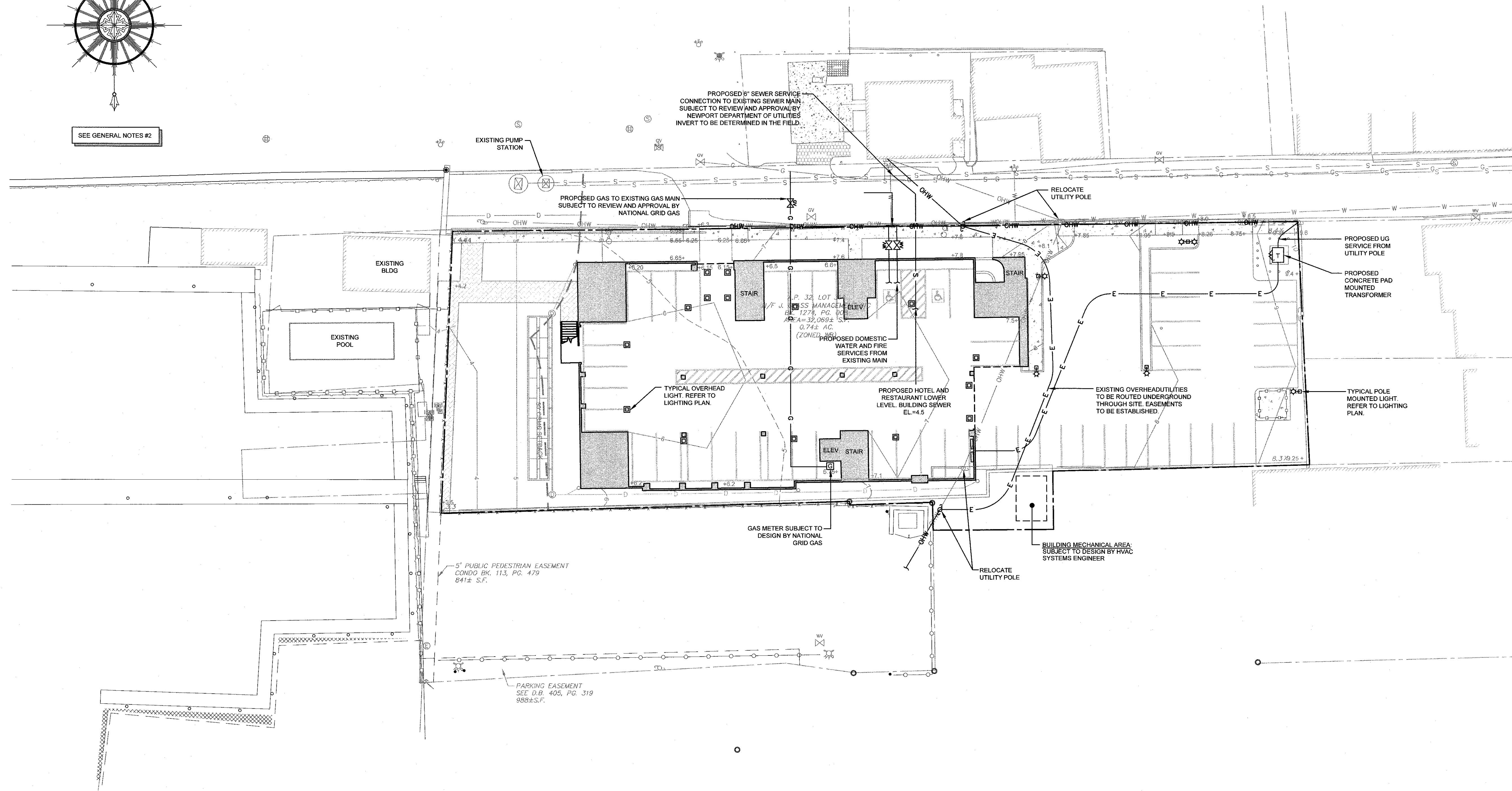


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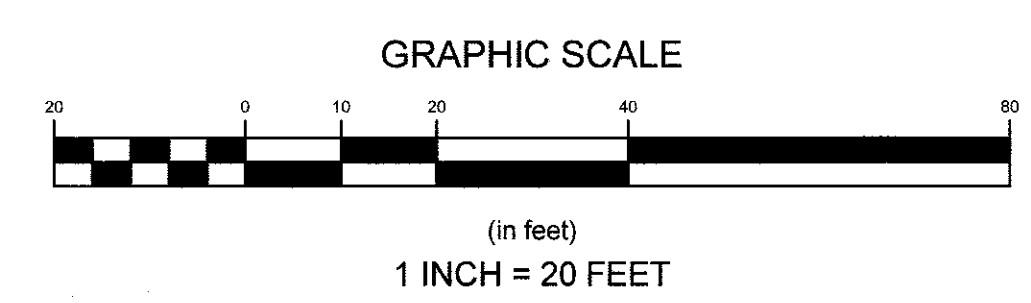
SEE GENERAL NOTES #2



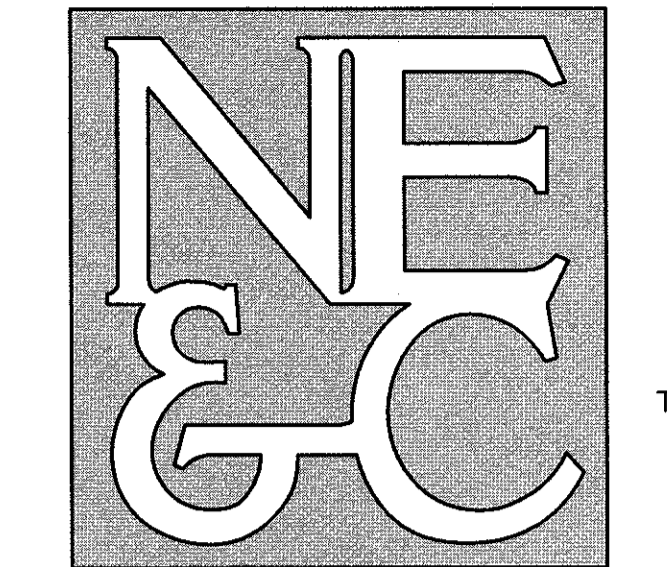
LEGEND:

—	PROPERTY LINE	— 5	PROPOSED CONTOUR
- - -	ADJUTER'S PROPERTY LINE	- +7.0	PROPOSED SPOT ELEVATION
—	WOOD FENCE	- D	PROPOSED DRAIN LINE
— OHW	OVERHEAD WIRE	- E	PROPOSED UG ELEC CONDUIT
- G	GAS LINE	- OHW	PROPOSED OVERHEAD WIRE
- S	SEWER LINE	- S	PROPOSED SEWER CONNECTION
- W	WATER LINE	- W	PROPOSED WATER SERVICES
⊕	UTILITY POLE		
⊕	HYDRANT		
⊕	WATER GATE		
⊕	WATER SHUTOFF		
⊕	CATCH BASIN		
⊕	DRAIN MANHOLE		
⊕	SEWER MANHOLE		
⊕	GAS GATE		

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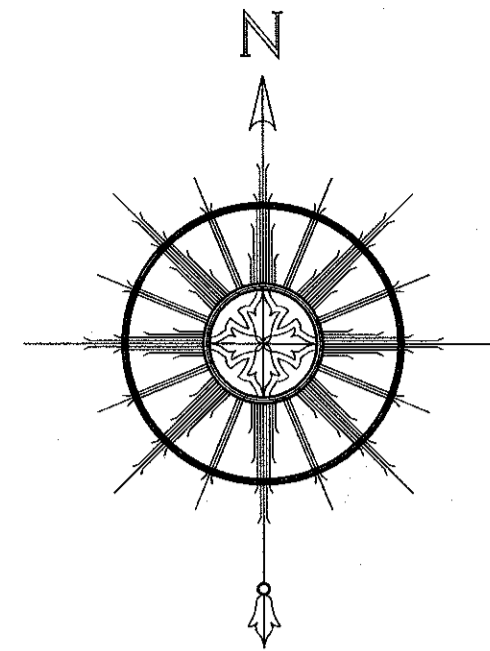
No.	Revision	Date	App.
Designed By:	Drawn by:	JJR	Checked by: GES
Scale:	1"=20'	Date:	21FEB20
Project Title:			
MANCHESTER HOUSE A.P. 32, LOT 314 24 LEES WHARF NEWPORT, RHODE ISLAND			
Client/Owner:			
HOWARD WHARF, LP c/o SILVA, THOMAS, MARTLAND & OFFENBERG 1100 AQUIDNECK AVE., MIDDLETOWN, RI 02842			
Issued for:			
PERMITTING			
Drawing Title:			
PROPOSED UTILITY PLAN			
Drawing Number:			C-6
Sheet			6 of 10
Project Number:			19107.0
Survey Index:			14 - 32 - 314
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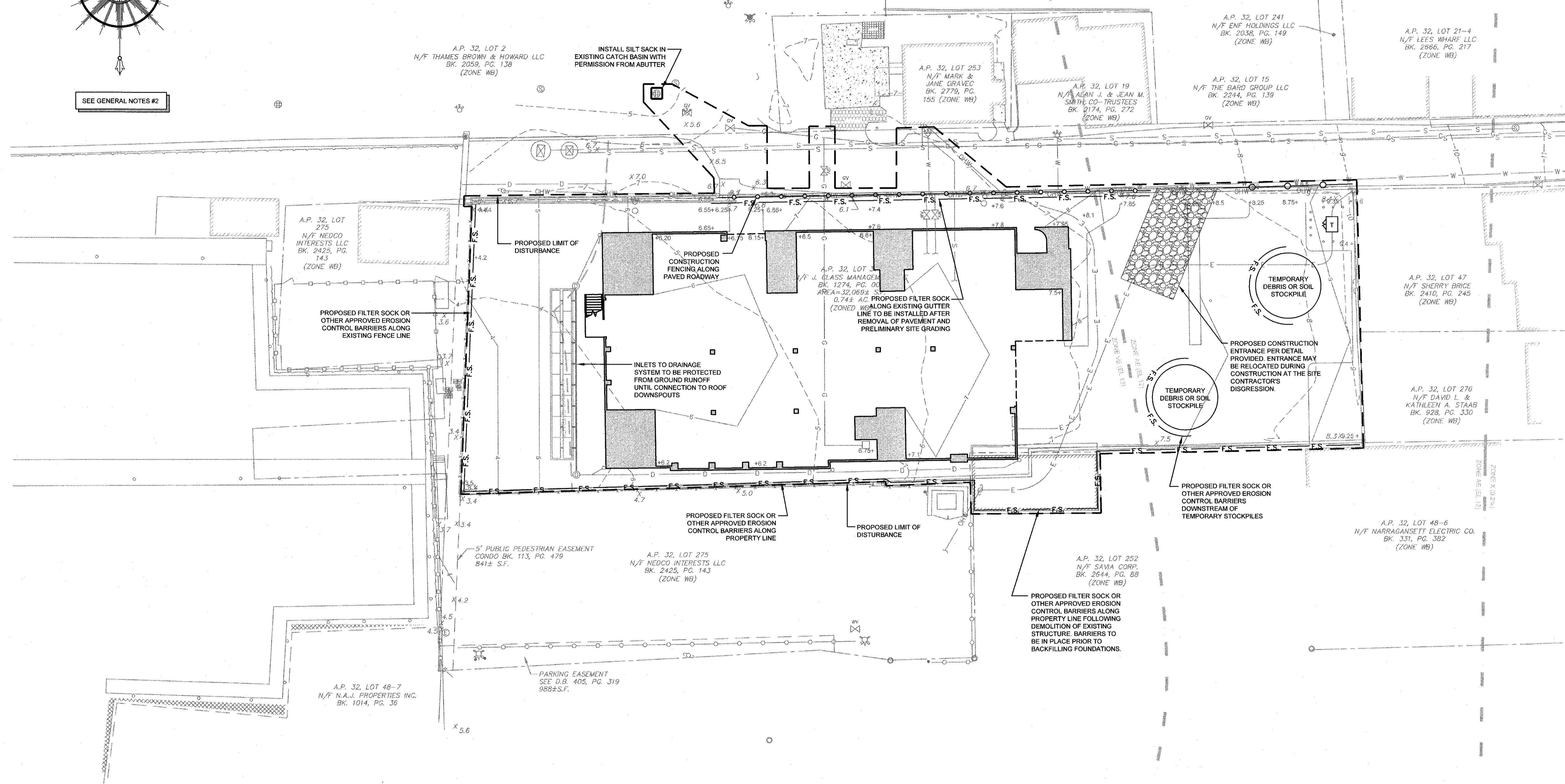
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STRUCTURAL



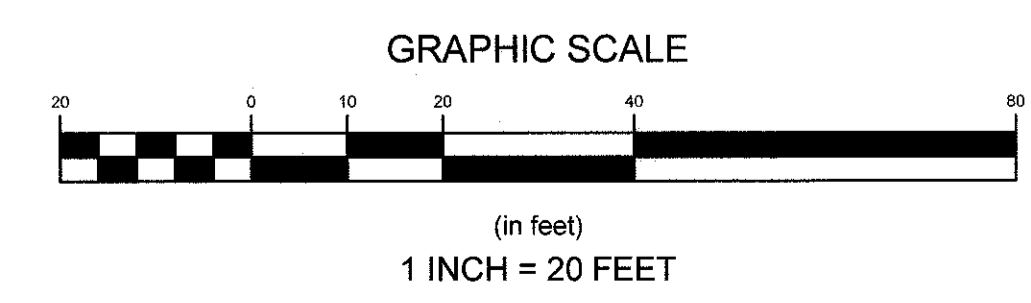
SEE GENERAL NOTES #2



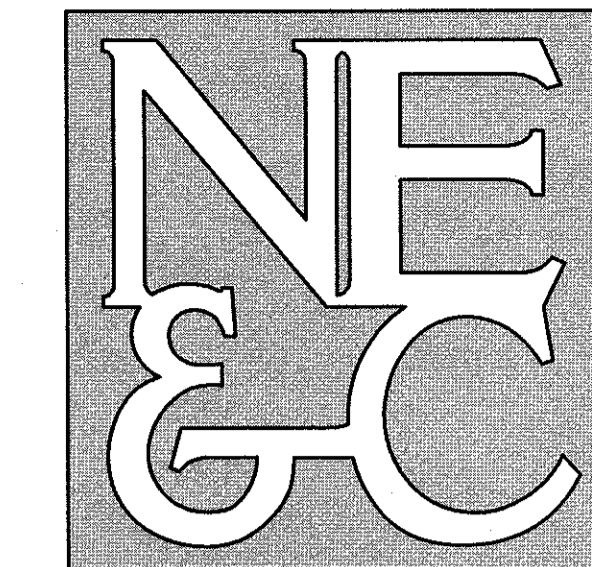
LEGEND:

---	PROPERTY LINE	W	WATER GATE
---	ABUTTER'S PROPERTY LINE	⊗	WATER SHUTOFF
---	TOPOGRAPHIC CONTOUR	⊕	CATCH BASIN
---	FEMA FLOOD ZONE BOUNDARY	⊙	DRAIN MANHOLE
---	WOOD FENCE	⊙	SEWER MANHOLE
---	OVERHEAD WIRE	⊙	GAS GATE
---	GAS LINE	---	PROPOSED CONTOUR
---	SEWER LINE	+7.0	PROPOSED SPOT ELEVATION
---	WATER LINE	---	PROPOSED DRAIN LINE
---	UTILITY POLE	F.S.	PROPOSED EROSION CONTROL BARRIER
---	HYDRANT	---	PROPOSED LIMIT OF DISTURBANCE
		---	PROPOSED CONSTRUCTION FENCING

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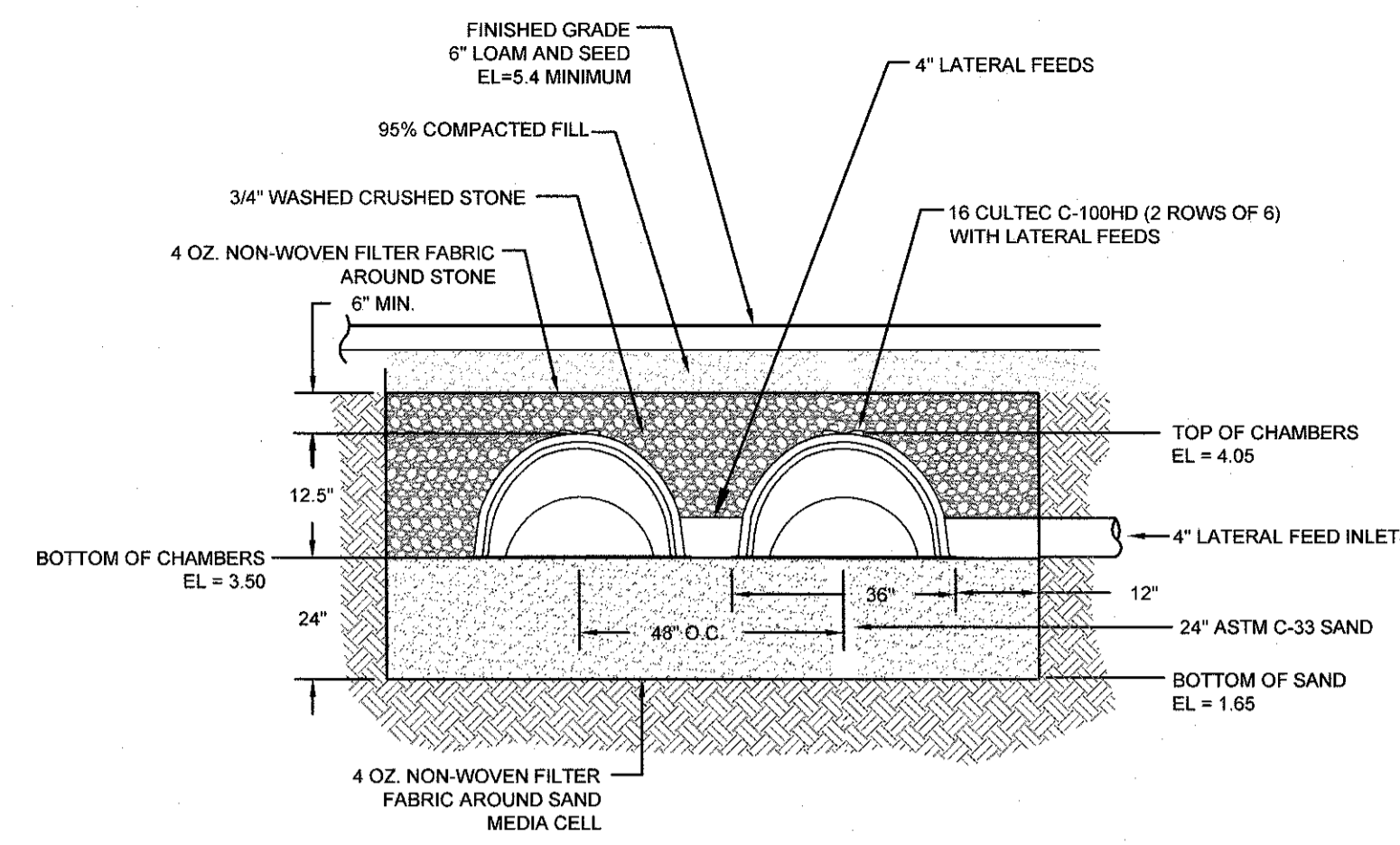
No.	Revision	Date	App.
Designed By:	Drawn by:	JJR	Checked by: GES
Scale:	1"=20'	Date:	21FEB20
Project Title:			
MANCHESTER HOUSE A.P. 32, LOT 314 24 LEES WHARF NEWPORT, RHODE ISLAND			
Client/Owner:			
HOWARD WHARF, LP c/o SILVA, THOMAS, MARTLAND & OFFENBERG 1100 AQUIDNECK AVE., MIDDLETOWN, RI 02842			
Issued for:			
PERMITTING			
Drawing Title:			
SOIL EROSION AND SEDIMENT CONTROL PLAN			
Drawing Number:			C-7
Sheet			7 of 10
Project Number:			19107.0
Survey Index:			14 - 32 - 314
<small>OWNERSHIP AND USE OF DOCUMENTS, DRAWINGS AND SPECIFICATIONS, AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE AND SHALL REMAIN THE PROPERTY OF THE ENGINEER. THESE DOCUMENTS ARE NOT TO BE USED, IN WHOLE OR PART, FOR ANY OTHER PROJECTS OR PURPOSES, OR BY ANY OTHER PARTIES, THAN THOSE PROPERLY AUTHORIZED BY CONTRACT, WITHOUT THE EXPRESS AUTHORIZATION OF THE ENGINEER.</small>			



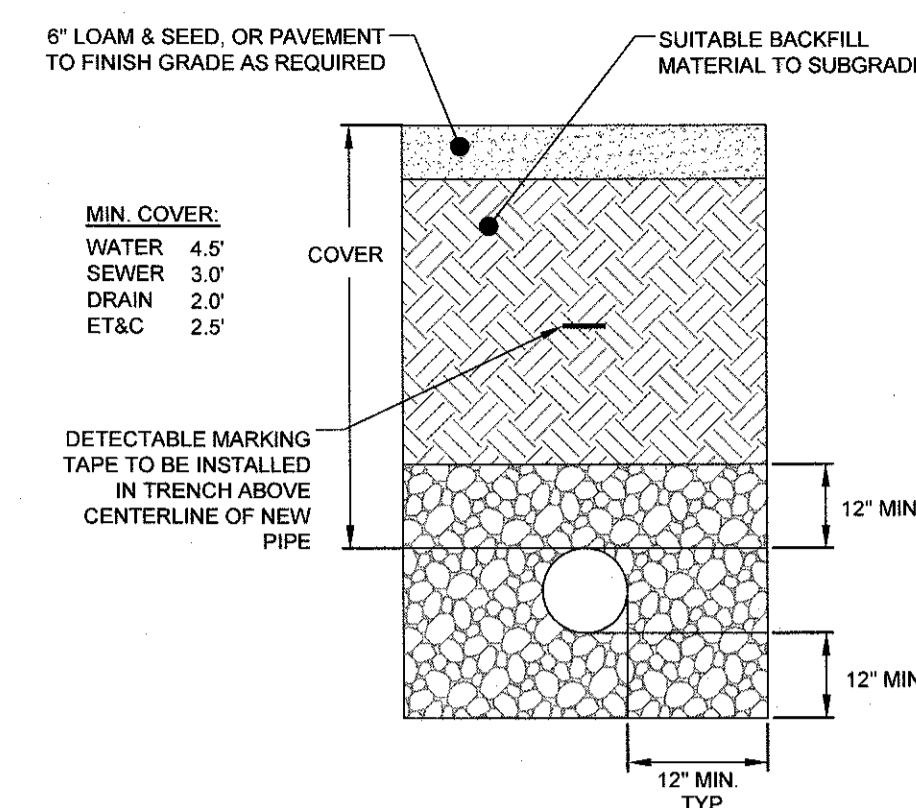
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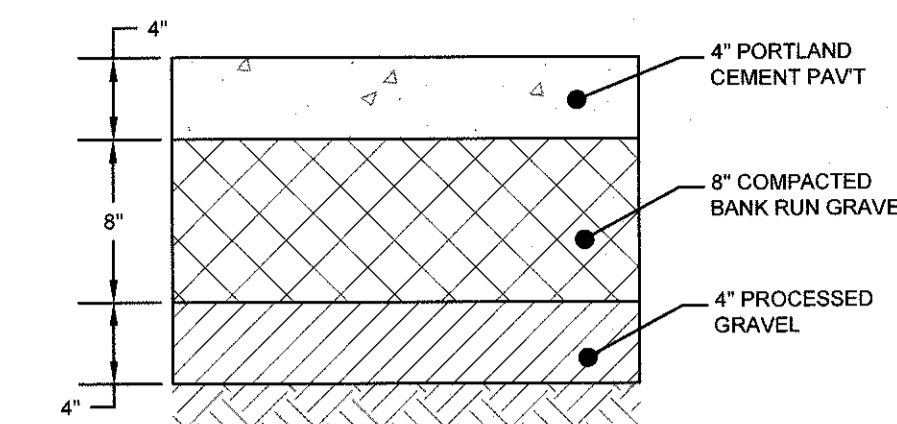


SUBSURFACE SAND FILTER SECTION
 SCALE: NOT TO SCALE

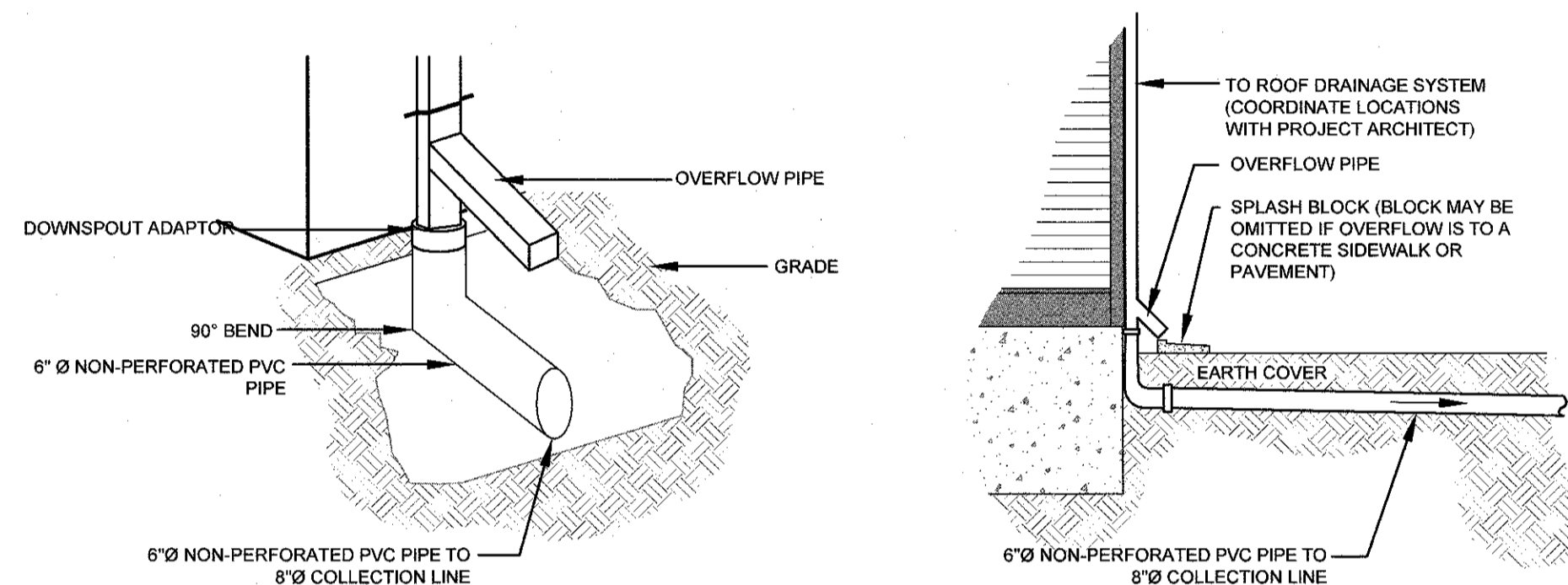


UTILITY TRENCH DETAIL
 SCALE: NOT TO SCALE

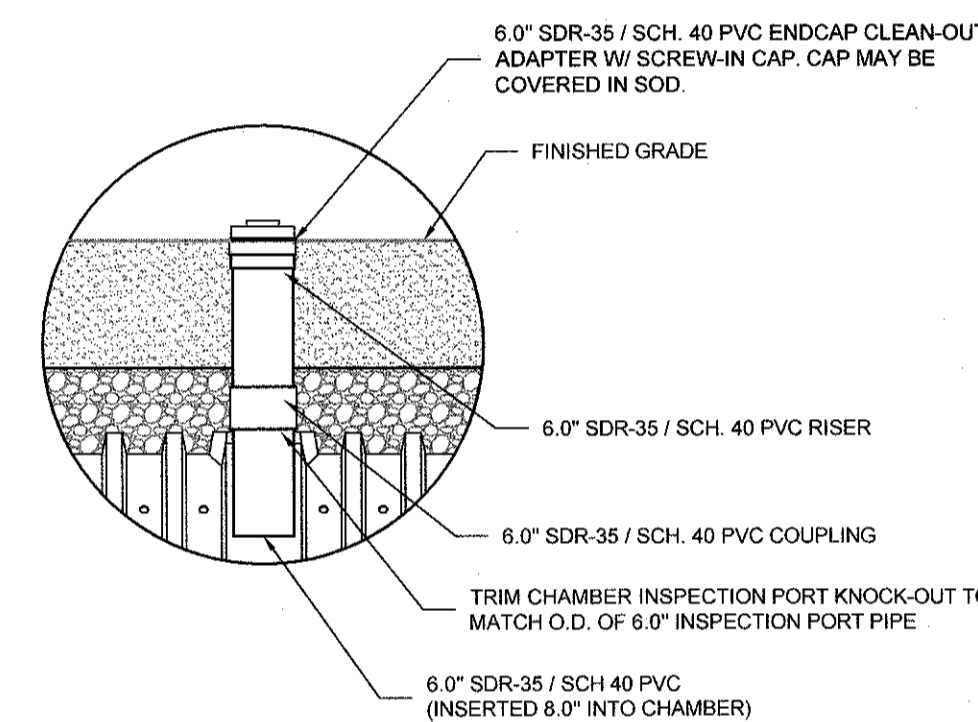
- NOTES:**
- UNSATURABLE MATERIAL SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 12-INCHES BELOW THE DESIGN INVERT ELEVATION.
 - TRENCH PROTECTION SHALL BE REQUIRED IN ACCORDANCE WITH OSHA REGULATIONS, AND AS OTHERWISE REQUIRED TO PROTECT UTILITIES, ROADWAYS, AND ADJACENT STRUCTURES.
 - SEWER AND DRAIN PIPES SHALL BE LAID BEGINNING AT THE DOWNSTREAM END OF THE PIPE LINE.
 - ALL PVC SEWER PIPES SHALL BE IPEX RING-TITE SDR 35, OR SIMILAR APPROVED.
 - ALL DRAIN PIPES SHALL BE ADS N-12 TYPE IB (SOILTIGHT) UNLESS OTHERWISE INDICATED.
 - ALL SEWER PIPE AND GASKETS SHALL CONFORM TO ASTM 3034 AND ASTM F979.
 - BACKFILL MATERIAL SHALL BE PLACED IN LAYERS NOT TO EXCEED 12" IN HEIGHT WHEN INSTALLED UNDER LANDSCAPED AREAS ONLY. INSTALLATIONS UNDER PAVEMENT REQUIRE BACKFILL MATERIAL TO BE PLACED IN LAYERS NOT TO EXCEED 6" IN HEIGHT. THESE LAYERS SHALL BE COMPACTED TO 95% MAXIMUM DENSITY (AASHTO T180). SUITABLE BACKFILL SHALL BE FREE OF LOAM, CLAY, ORGANIC MATTER AND PARTICLES LARGER THAN 2 INCHES IN DIAMETER.
 - SEWER AND DRAINAGE PIPE TRENCHES SHALL BE BEDDED WITH CRUSHED STONE OR SCREENED GRAVEL, THESE MATERIALS MUST CONFORM TO RIDOT STANDARD M 01.09 TYPE II MATERIAL.
 - WATER PIPE TRENCHES MUST BE BEDDED WITH SAND CONTAINING NO PARTICLES LARGER THAN 3/8". THIS MATERIAL MUST CONFORM TO AASHTO M6 REQUIREMENTS.
 - UTILITY INSTALLATIONS SHALL CONFORM TO ALL REQUIREMENTS OF THE CITY OF NEWPORT DEPARTMENT OF UTILITIES AND NEWPORT WATER RULES AND REGULATIONS.
 - WHEN TRENCH EXCAVATION IS ADJACENT TO OR UNDER EXISTING STRUCTURES OR FACILITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY SHEETING AND BRACING THE EXCAVATION AND STABILIZING THE EXISTING GROUND TO RENDER IT SAFE AND SECURE FROM POSSIBLE SLIDES, CAVE-INS AND SETTLEMENT AND FOR PROPERLY SUPPORTING EXISTING STRUCTURES AND FACILITIES WITH BEAMS, STRUTS OR UNDERPINNING TO FULLY PROTECT THEM FROM DAMAGE.



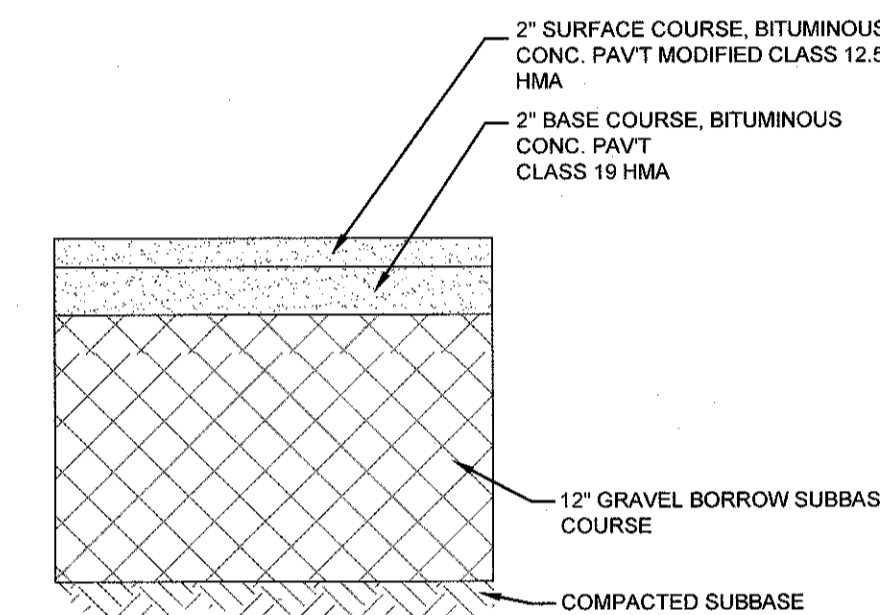
TYPICAL CONCRETE WALKWAY
 SCALE: NOT TO SCALE



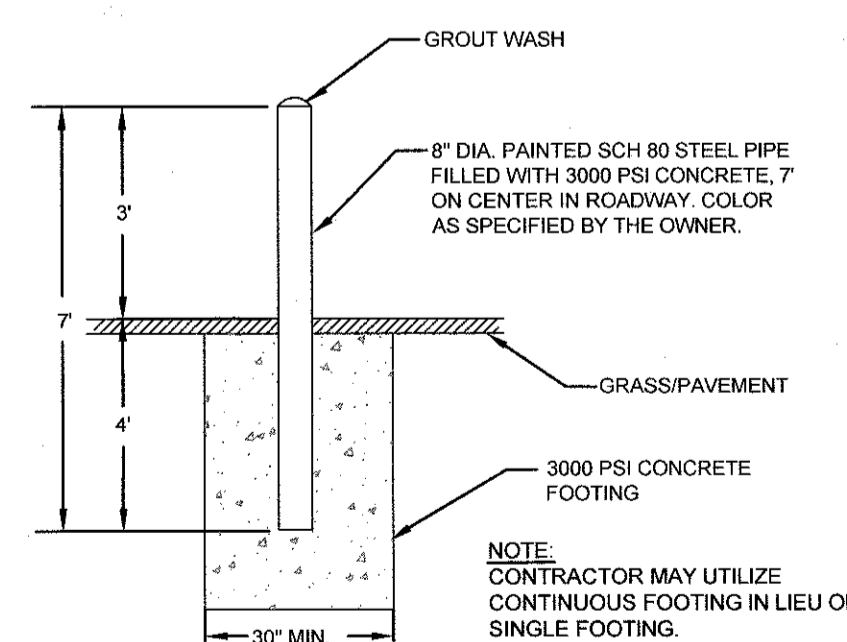
BUILDING ROOF DOWNSPOUT DETAILS
 SCALE: NOT TO SCALE



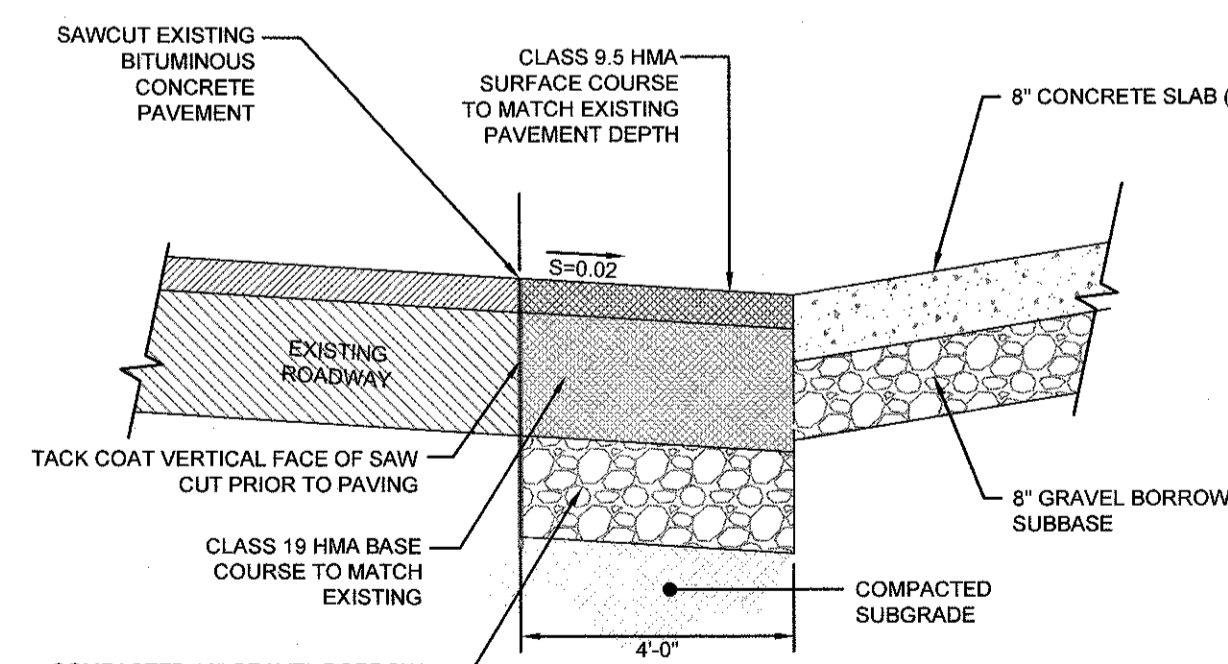
INSPECTION PORT (UNPAVED APPLICATION)
 SCALE: NOT TO SCALE



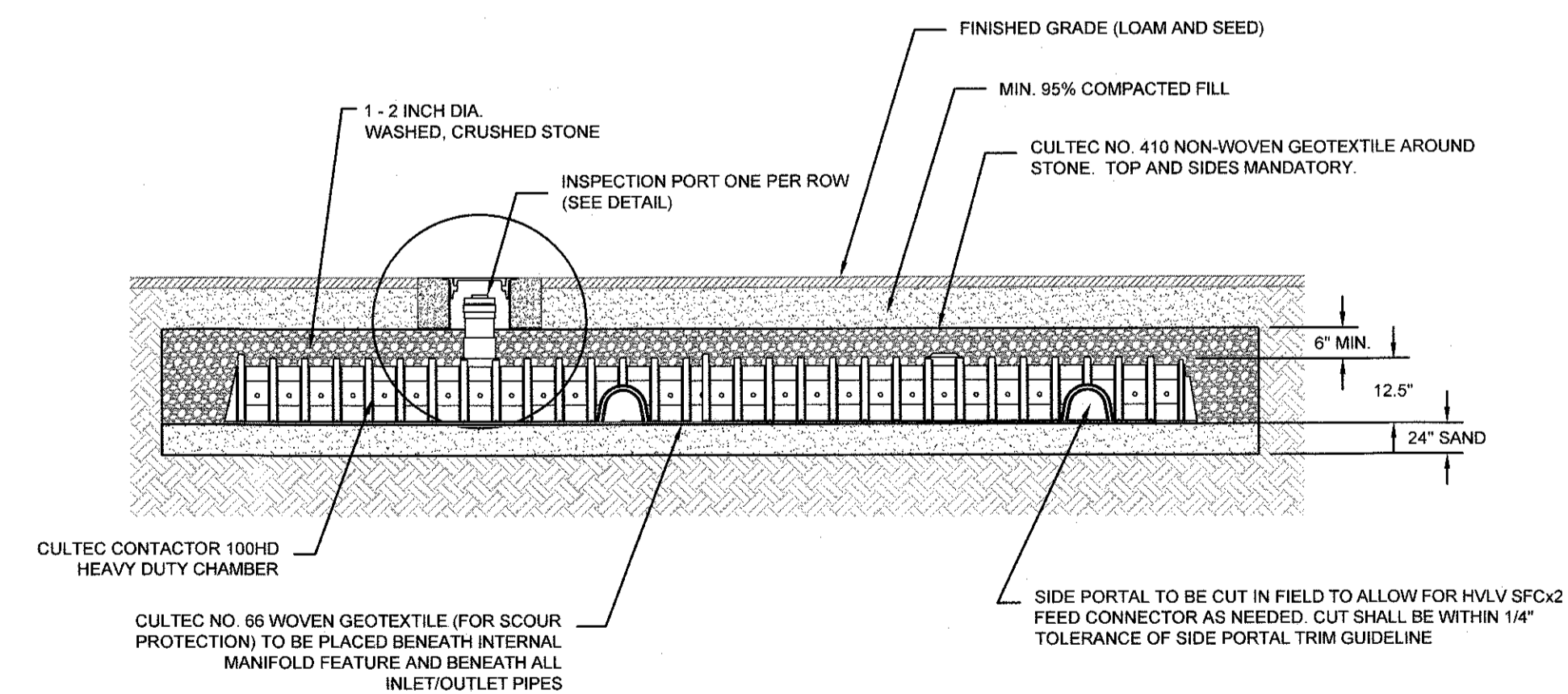
TYPICAL PARKING LOT BITUMINOUS PAVEMENT SECTION
 SCALE: NOT TO SCALE



PROTECTION BOLLARD
 SCALE: NOT TO SCALE

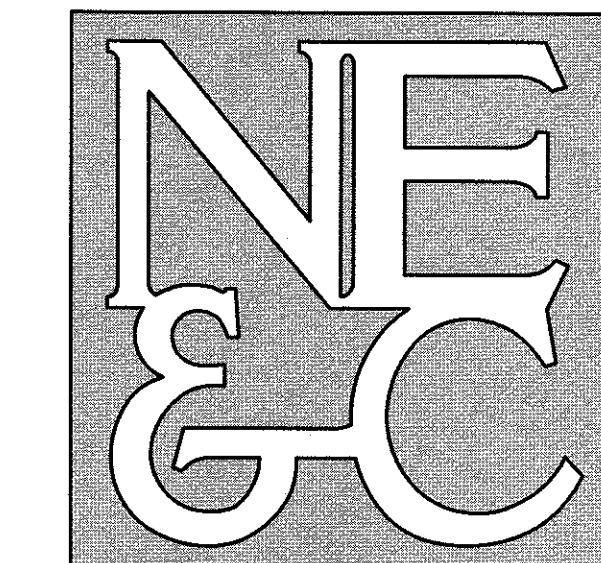


ENTRANCE SAWCUT AND MATCH DETAIL
 SCALE: NOT TO SCALE



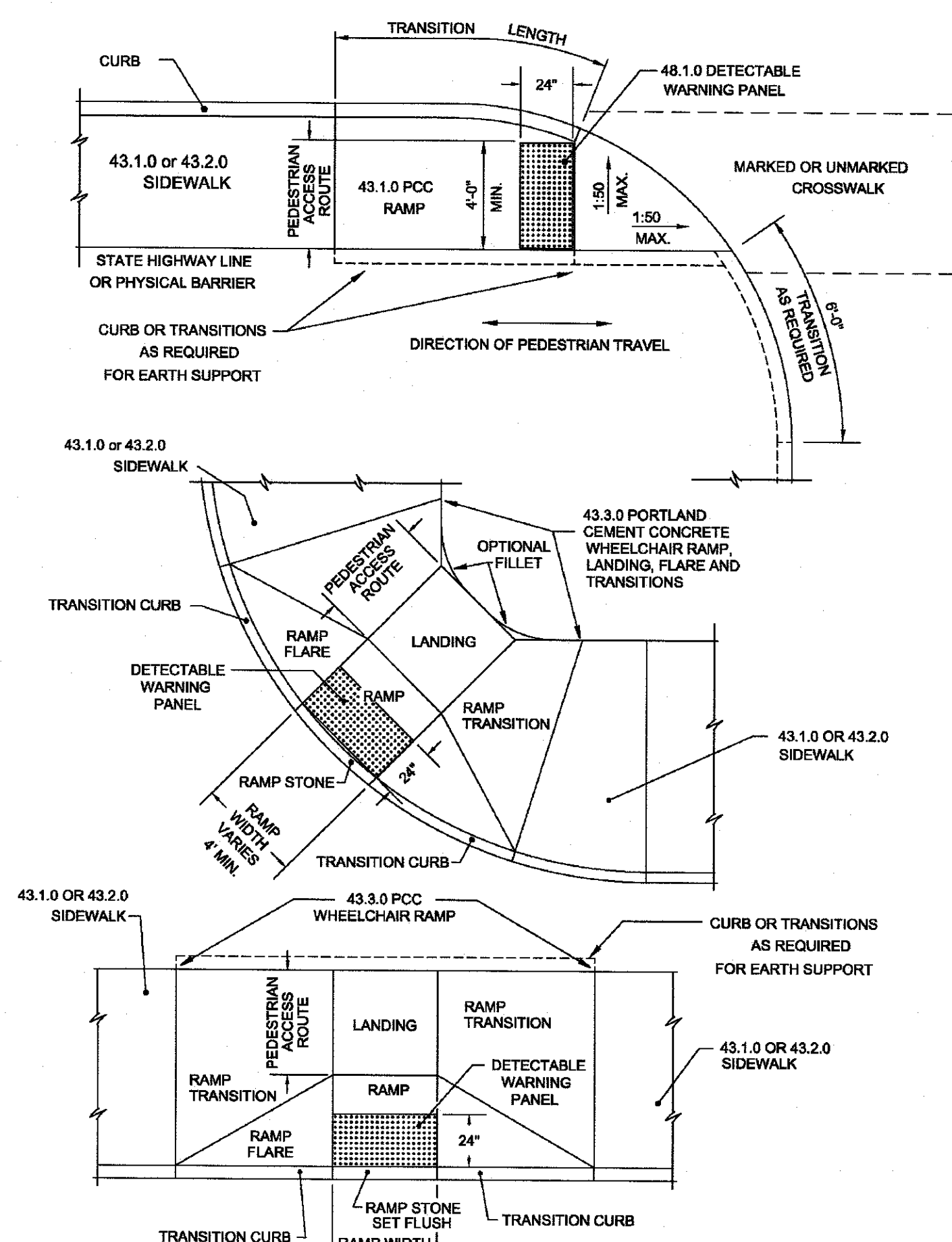
CULTEC 100HD INFILTRATING SAND FILTER PROFILE
 SCALE: NOT TO SCALE

No.	Revision	Date	App.
Designed By:	Drawn by: JJR	Checked by: GES	
Scale:	AS SHOWN	Date:	21FEB20
Project Title:			
MANCHESTER HOUSE A.P. 32, LOT 314 24 LEES WHARF NEWPORT, RHODE ISLAND			
Client/Owner:			
HOWARD WHARF, LP c/o SILVA, THOMAS, MARTLAND & OFFENBERG 1100 AQUIDNECK AVE., MIDDLETOWN, RI 02842			
Issued for:			
PERMITTING			
Drawing Title:			
DETAIL SHEET 1			
Drawing Number:		C-8	
Sheet 8 of 10		Project Number: 19107.0	
Survey Index:		14 - 32 - 314	
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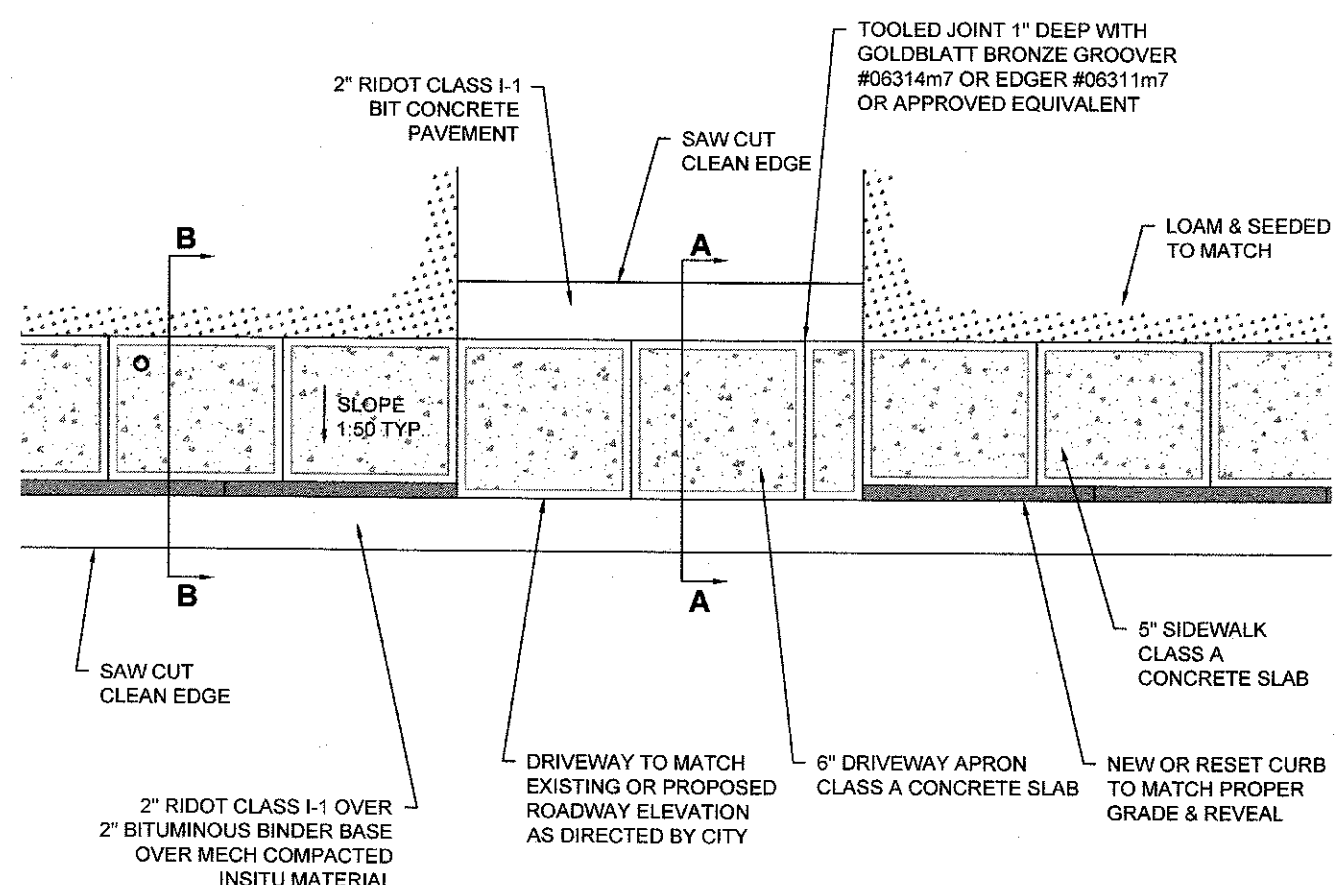
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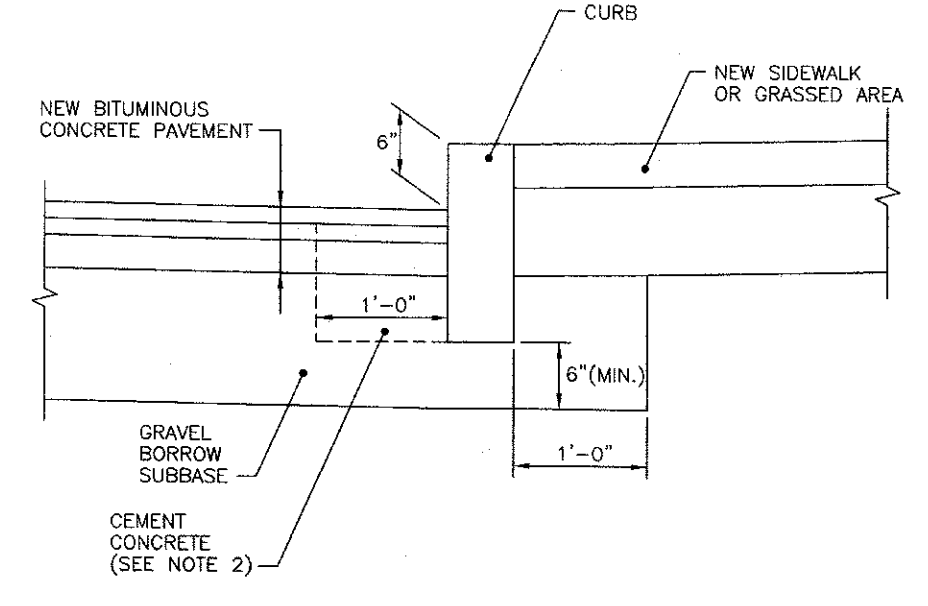


NOTES:
 1. DETECTABLE WARNING PANEL SHALL BE IN ACCORDANCE WITH SECTION 942 OF THE RHODE ISLAND STANDARD SPECIFICATIONS; PANEL TO MATCH RAMP WIDTH.

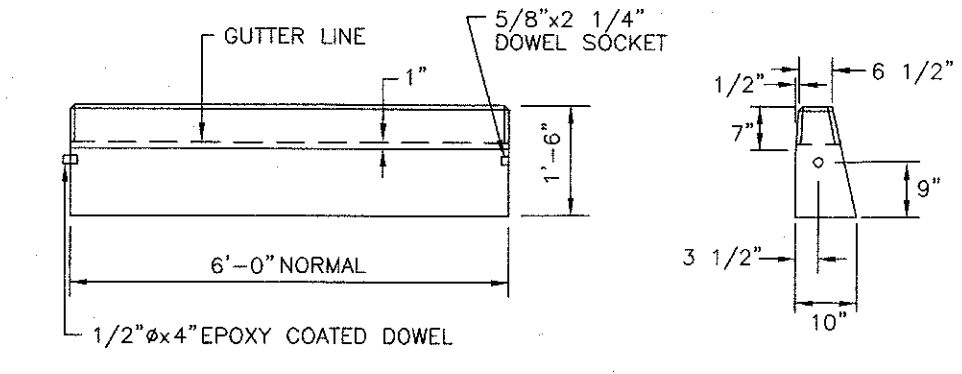
ADA RAMP AND DETECTABLE WARNING PANEL PLACEMENT
 SCALE: NOT TO SCALE



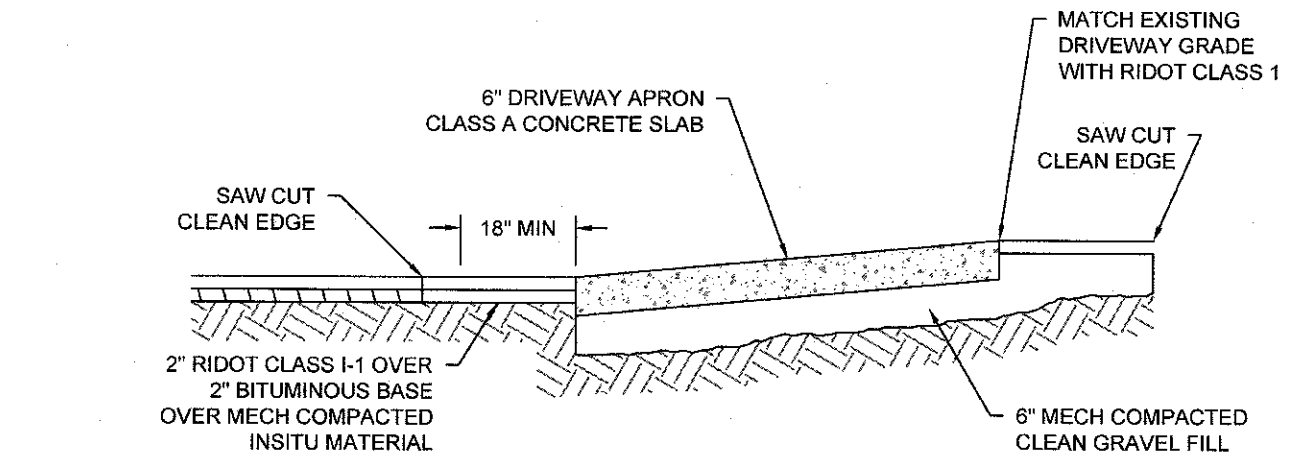
CONCRETE SIDEWALK AND DRIVEWAY DEVELOPMENT
 SCALE: 1"=5'



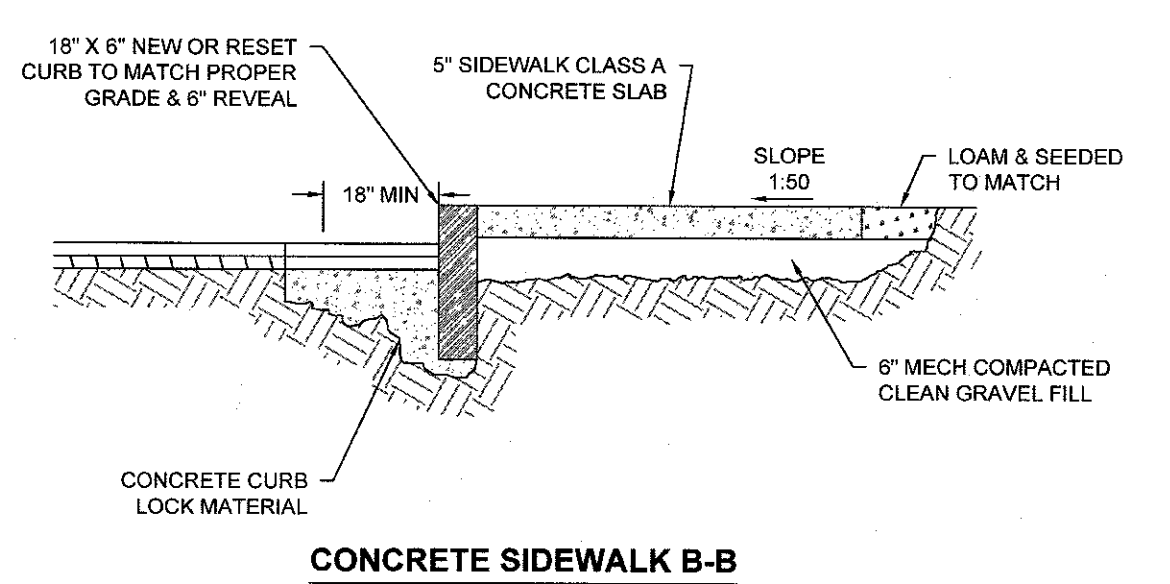
CURB SETTING DETAIL (RIDOT STD 7.6.0)
 SCALE: NOT TO SCALE



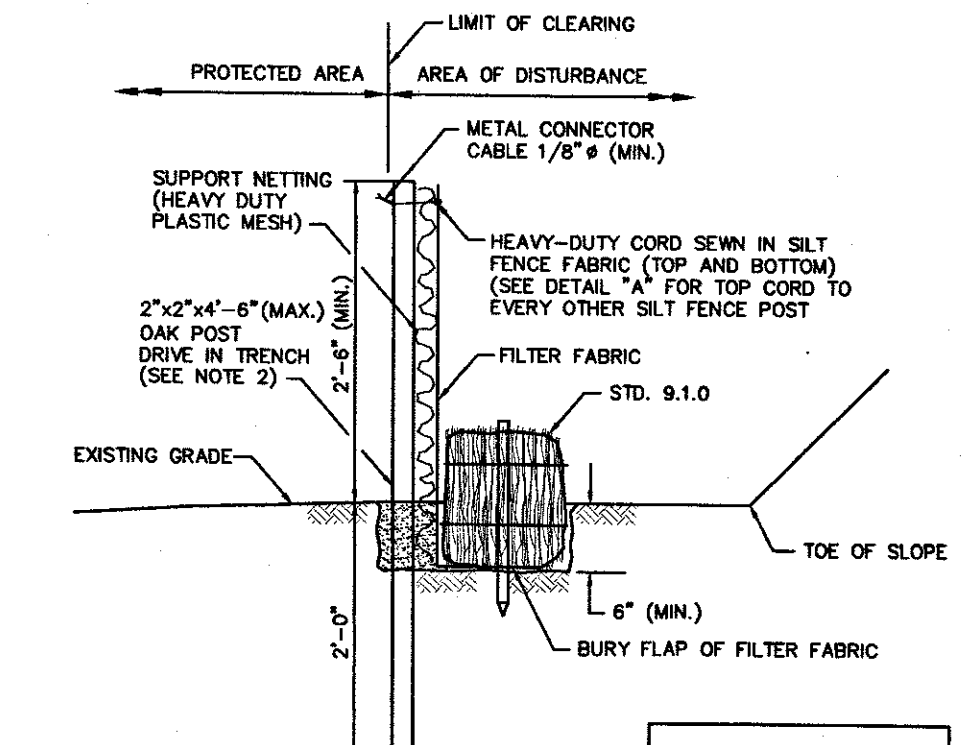
PRECAST CONCRETE CURB (RIDOT STD 7.1.0)
 SCALE: NOT TO SCALE



CONCRETE DRIVEWAY APRON A-A

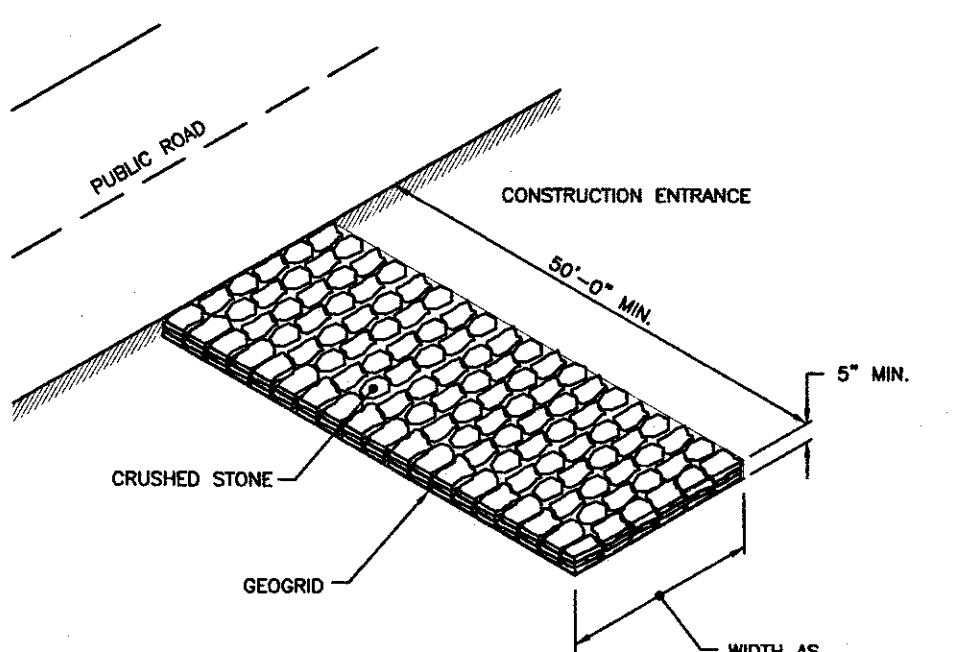


CONCRETE SIDEWALK CROSS SECTION DETAIL
 SCALE: 1"=2'

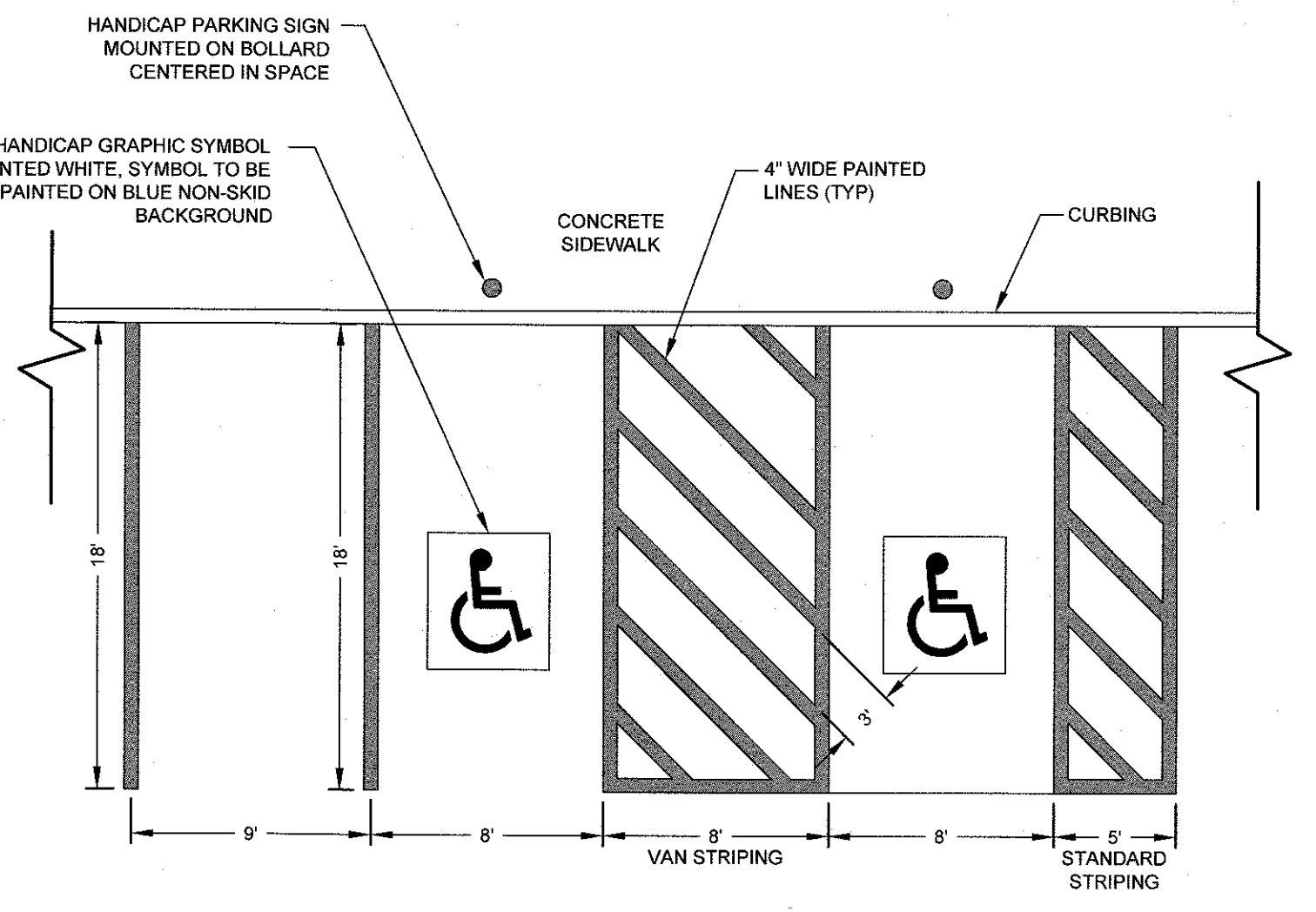


NOTES:
 1. SHALL BE IN ACCORDANCE WITH SECTION 206 OF THE R.I. STANDARD SPECIFICATIONS.
 2. STD. 9.1.0 IS INSTALLED "TIGHT" AGAINST SILT FENCE. THOROUGHLY COMPACT EXCAVATED SOILS BACK INTO TRENCH AFTER INSTALLATION OF EROSION CONTROL DEVICE. SILT FENCE FABRIC SHALL NOT BE SLIT. STD. 9.1.0 POST SHALL BE DRIVEN THROUGH SILT FENCE FABRIC. 2"x4"-(MAX) OAK POST FOR SILT FENCE SHALL BE LOCATED 8'-0" (MAX) O.C. IN WETLAND AREAS AND 4'-0" (MAX) O.C. IN WETLAND RAVINNE, GULLY OR DROP-OFF AREAS AS SHOWN ON PLANS.
 3. 1"x1"x4"-(MIN) POSTS PERMITTED FOR PRE-FABRICATED SILT FENCE.
 4. SILT FENCE AND BALED HAY SHALL BE INSTALLED BEFORE ANY GRUBBING OR EARTH EXCAVATION TAKES PLACE.

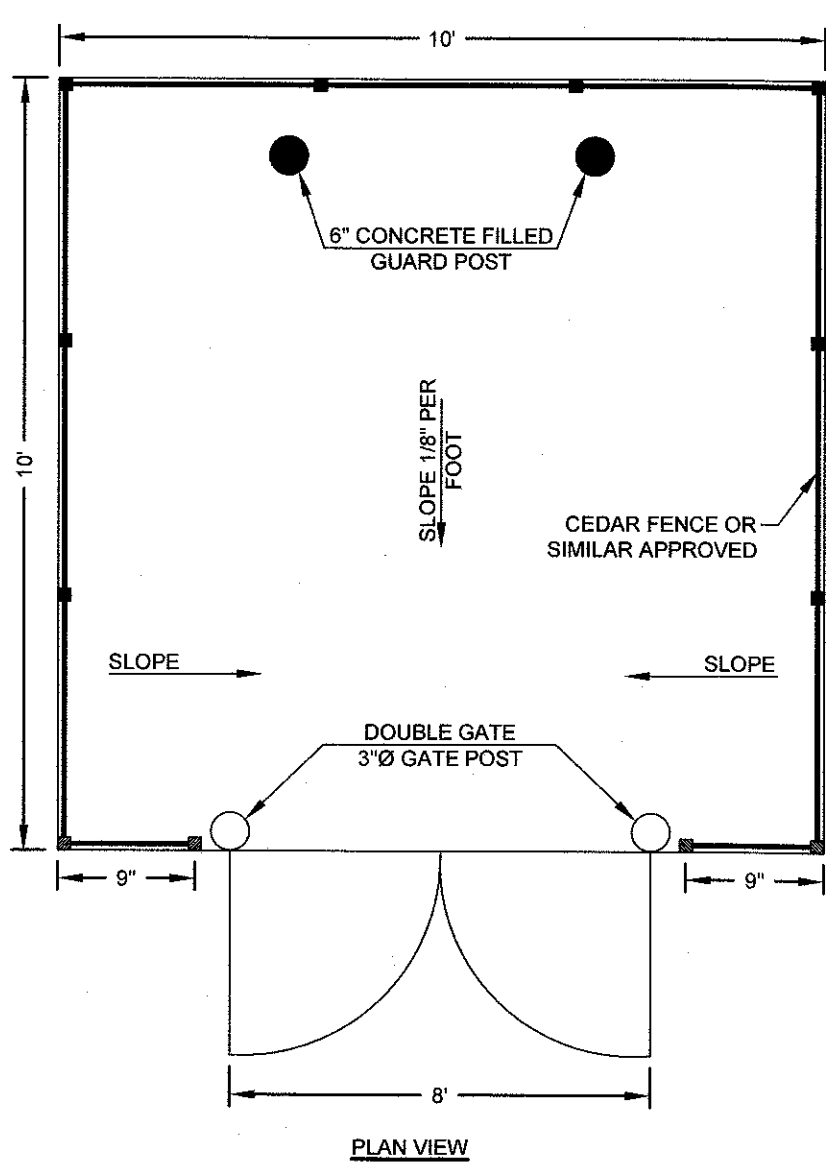
BALED HAY EROSION CHECK AND SILT FENCE COMBINED (RIDOT 9.3.0)
 SCALE: NOT TO SCALE



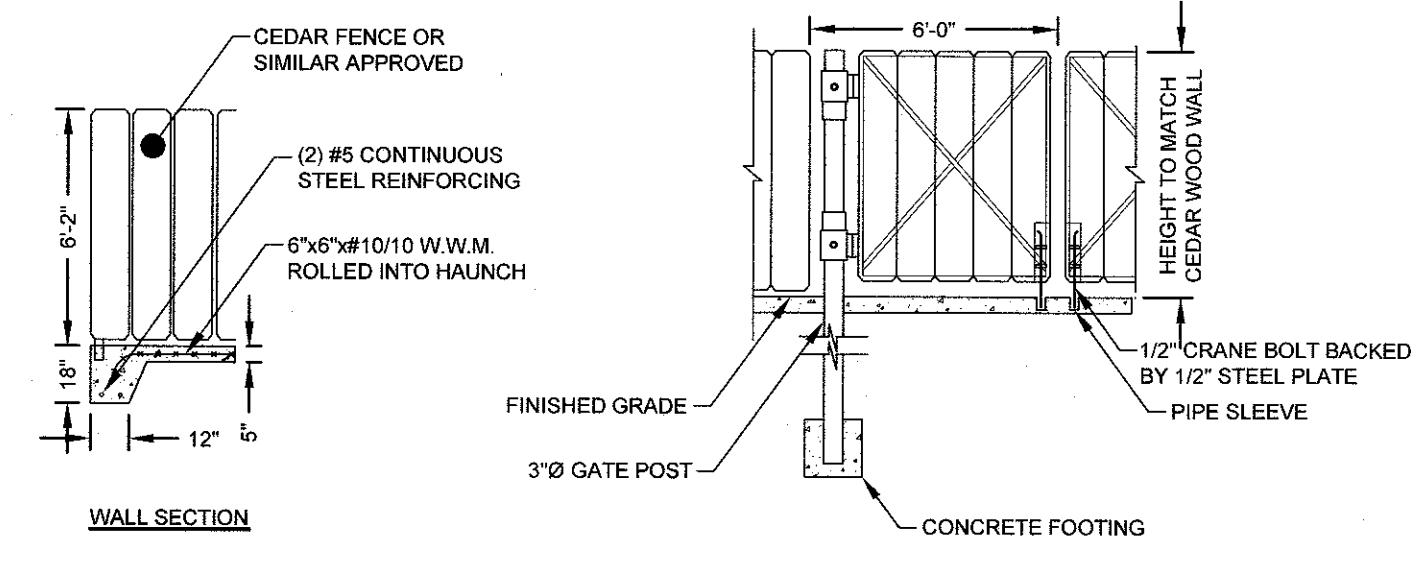
STONE CONSTRUCTION ACCESS (RIDOT 9.9.0)
 SCALE: NOT TO SCALE



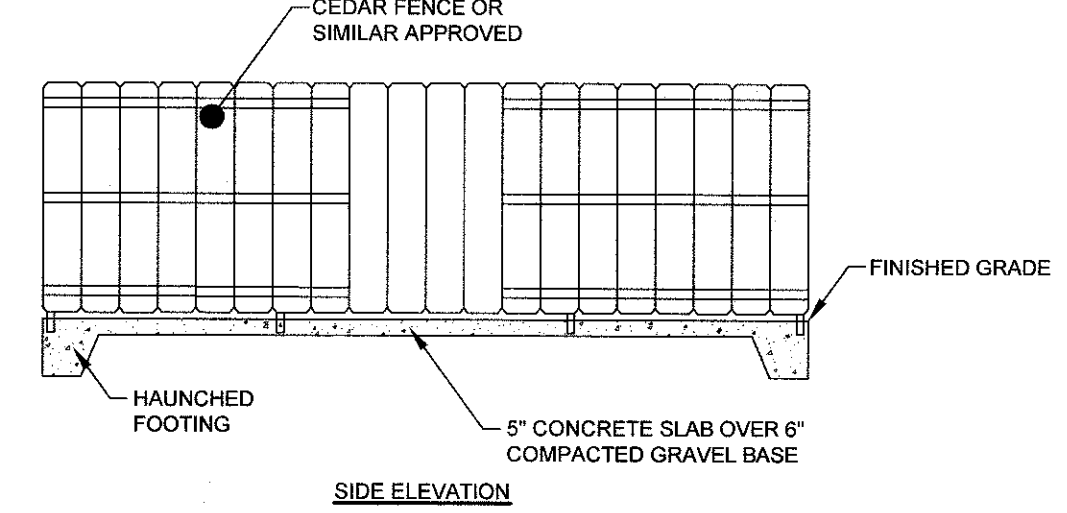
PARKING STALL STRIPING
 SCALE: NOT TO SCALE



TYPICAL TRASH ENCLOSURE
 ARCHITECT MAY PROVIDE ALTERNATE DESIGN
 SCALE: NOT TO SCALE

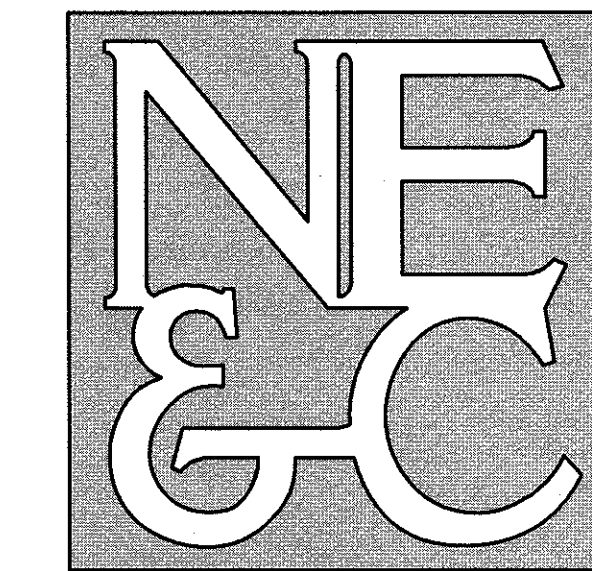


GATE DETAIL



WALL SECTION

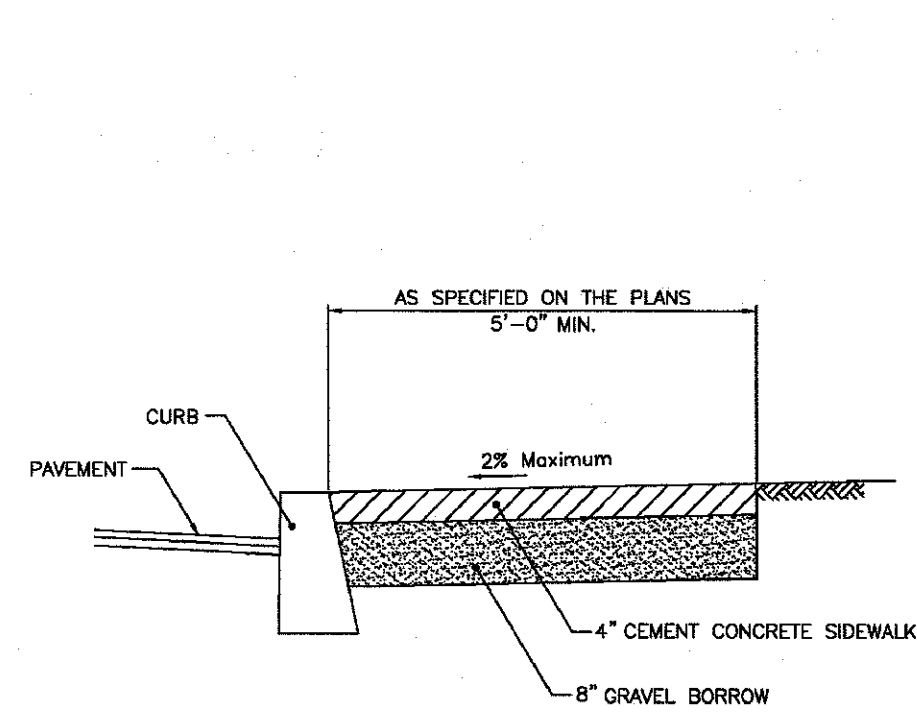
No.	Revision	Date	App.
Designed By:	Drawn by:	JJR	Checked by: GES
Scale:	AS SHOWN	Date:	21FEB20
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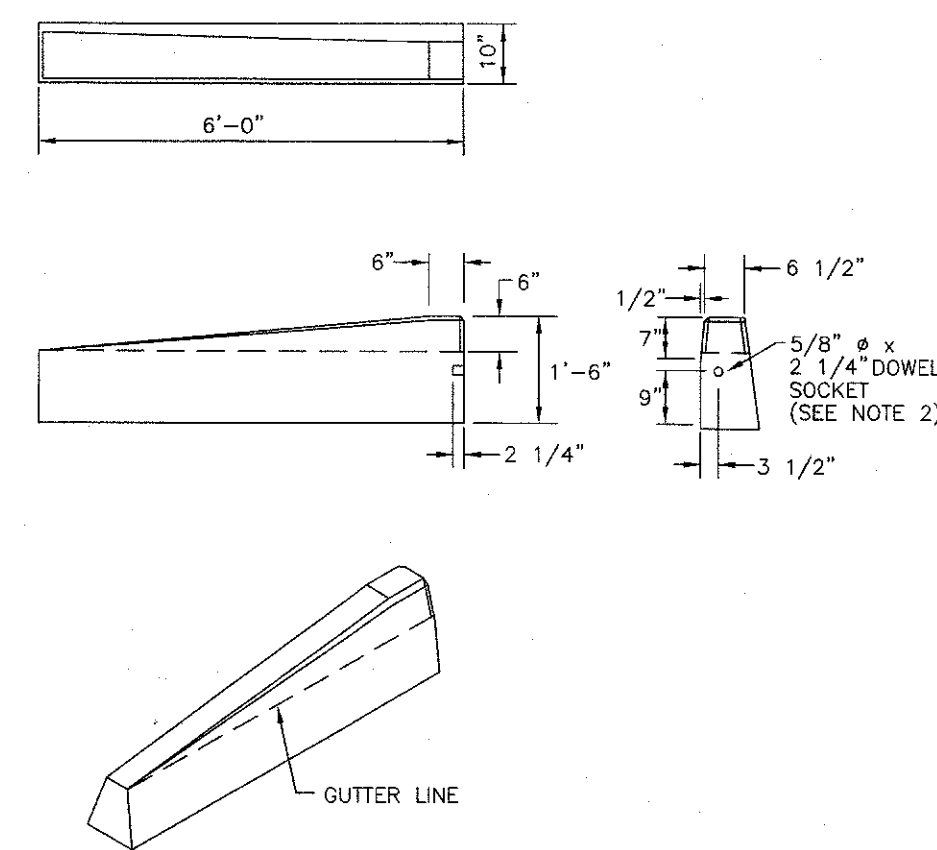
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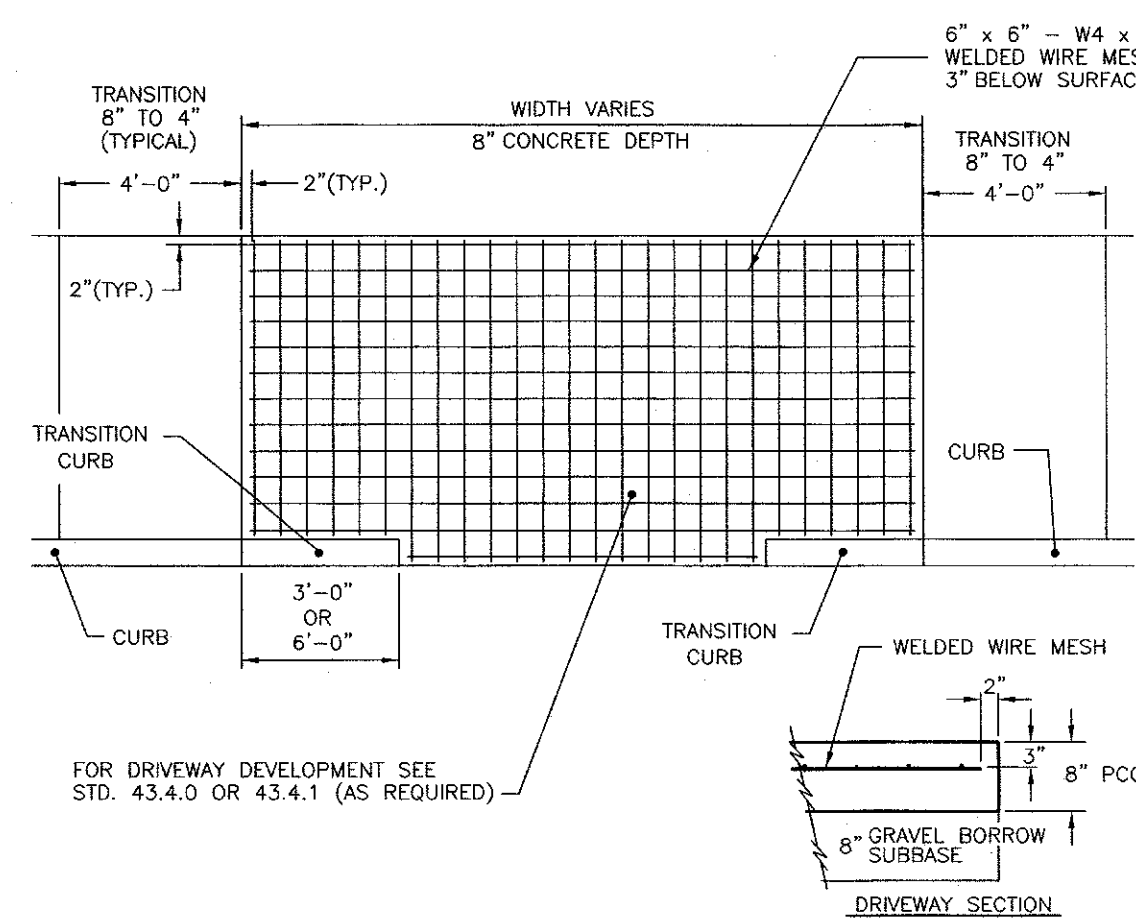
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 TRANSPORTATION
 STRUCTURAL



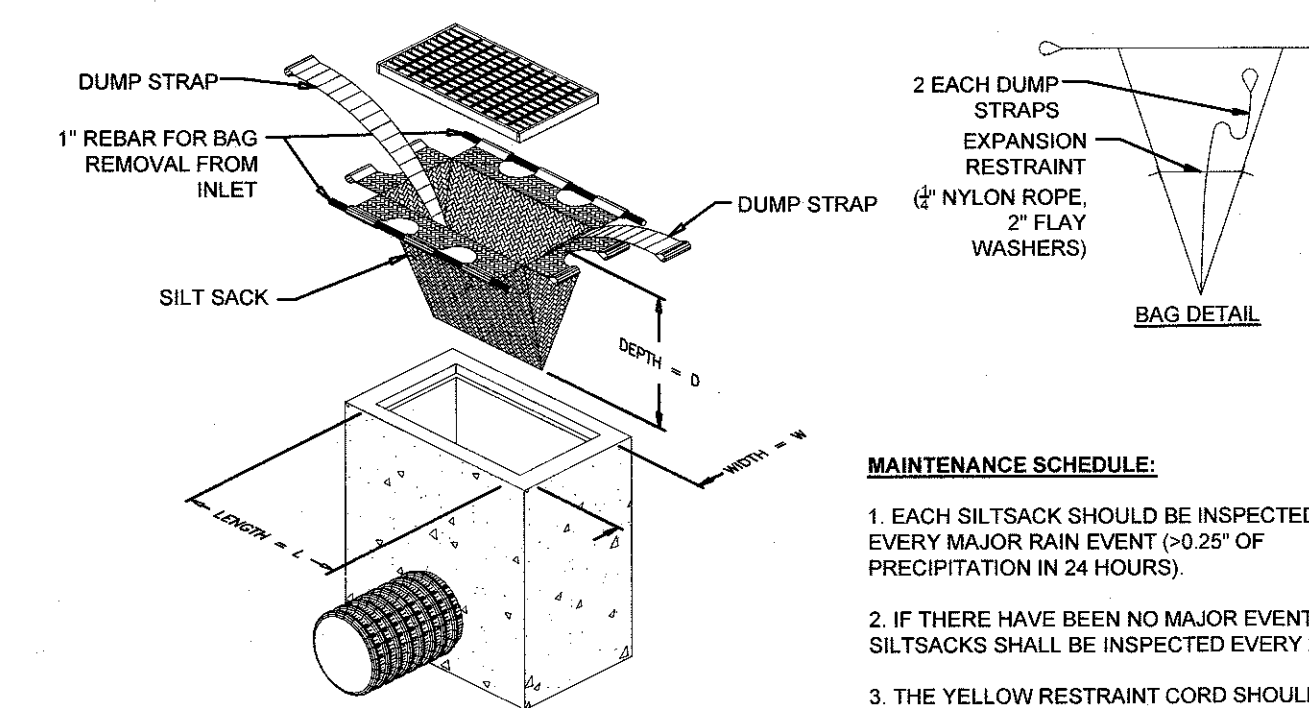
NOTES:
 1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
 2. FOR CURB SETTING DETAIL REFERENCE STD. 7.6.0.



NOTES:
 1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
 2. DRAWING SHOWS TRANSITION CURB FOR ONE DIRECTION, FOR OTHER DIRECTION USE OPPOSITE HAND AND INCLUDE A 1/2" x 4" EPOXY COATED DOWEL.
 3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH.
 4. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.



NOTE: SHALL BE IN CONFORMANCE WITH SECTION 905 OF THE RI STANDARD SPECIFICATIONS.



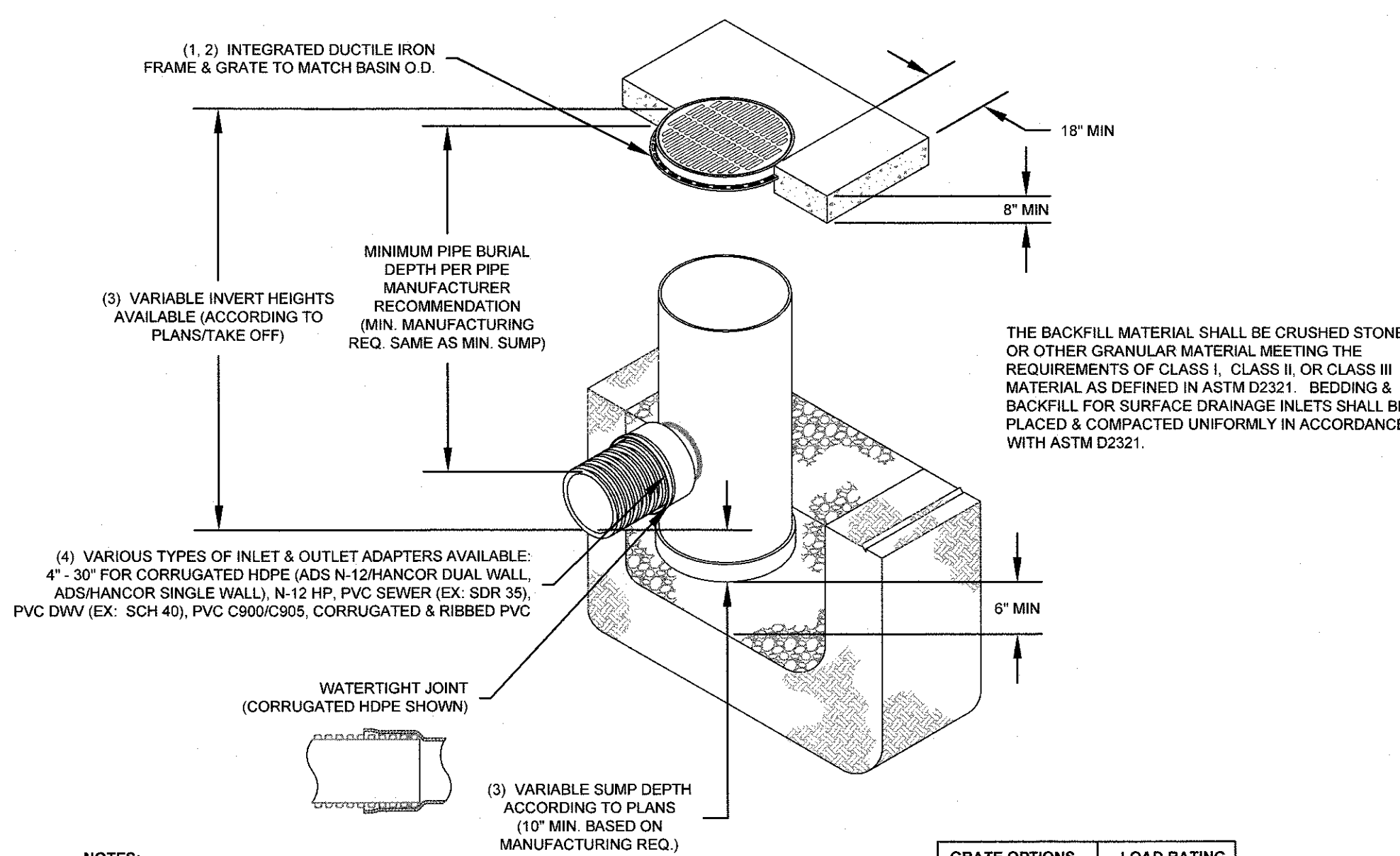
MAINTENANCE SCHEDULE:
 1. EACH SILTSACK SHOULD BE INSPECTED AFTER EVERY MAJOR RAIN EVENT (>0.25" OF PRECIPITATION IN 24 HOURS).
 2. IF THERE HAVE BEEN NO MAJOR EVENTS, SILTSACKS SHALL BE INSPECTED EVERY 2-3 WEEKS.
 3. THE YELLOW RESTRAINT CORD SHOULD BE VISIBLE AT ALL TIMES. IF THE CORD IS COVERED WITH SEDIMENT, THE SILTSACK SHOULD BE EMPTIED.

CEMENT CONCRETE SIDEWALK (RIDOT 43.1.0)
 SCALE: NOT TO SCALE

6" PRECAST CONCRETE TRANSITION CURB (RIDOT 7.1.2)
 SCALE: NOT TO SCALE

CEMENT CONCRETE DRIVEWAY (RIDOT 43.5.0)
 SCALE: NOT TO SCALE

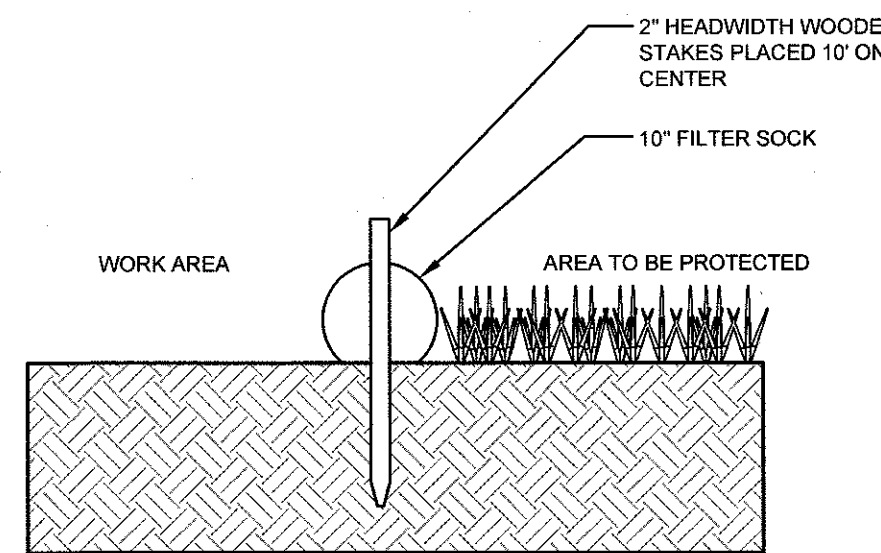
SILT SACK DETAIL
 SCALE: NOT TO SCALE



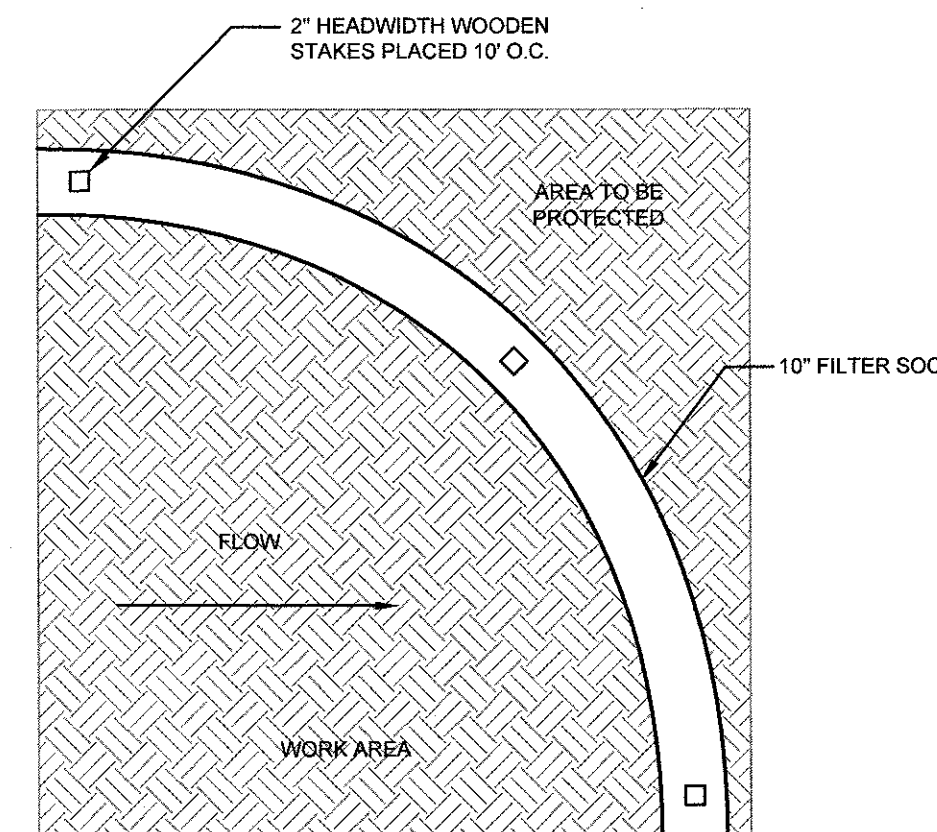
NOTES:
 1. GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
 2. FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
 3. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS.
 4. DRAINAGE CONNECTION STUD JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER (4" - 24").

GRATE OPTIONS	LOAD RATING
PEDESTRIAN	H-20
STANDARD	H-20
SOLID COVER	H-20
DOMES	N/A

24" ADS DRAIN BASIN DETAIL (W/ CONCRETE SURROUND)
 SCALE: NOT TO SCALE



SECTION VIEW



TOP VIEW

10" FILTER SOCK DETAIL
 SCALE: NOT TO SCALE

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Designed By:	Drawn by: JJR	Checked by: GES	
Scale: AS SHOWN	Date: 21FEB20		
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February 12, 2020

Mr. Howard Cushing
44 Ocean Partners, LLC
66 Ocean Avenue
Newport, RI 02840

Re: Proposed Land Development Project
Lee's Wharf Hotel
Newport, Rhode Island

Dear Mr. Cushing:

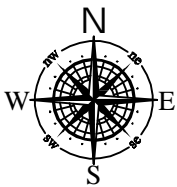
BETA Group, Inc., in accordance with our scope of services, has completed a traffic safety assessment to determine if a proposed small boutique hotel, proposed at the westerly terminus of Lee's Wharf, has adequate and safe access to the immediate local servicing roadways in Newport, Rhode Island. The property is located on the southerly side of Lee's Wharf, opposite The Brown & Howard Wharf Residences. This study was completed for submission to the City as part of the local review process and provides a summary of existing roadway conditions and an estimate of future traffic conditions if the project was to be approved and constructed.

The subject property is defined by Assessor's Plat 32, lot 314 which contains approximately 0.74 acres of fully developed land that includes one building and a paved public parking lot containing approximately 95 spaces. Based upon our discussions and a review of the site development plan prepared by Northeast Engineers & Consultants, Inc., it is our understanding that the existing building will be razed to and the site parking reconfigured to allow construction of single building to accommodate a small hotel with 21 rooms and ancillary amenities including a restaurant and a meeting room. Access to the hotel will be provided from two driveways on Lee's Wharf in addition to a loading zone/valet area along the property frontage at the main building entrance on Lee's Wharf. Figure 1 on the following page depicts the general vicinity of the project in the City of Newport. The following is a summary of our investigation of the potential impacts and recommendations to provide safe and adequate access to the subject property.

Traffic Safety Analysis

Project Approach

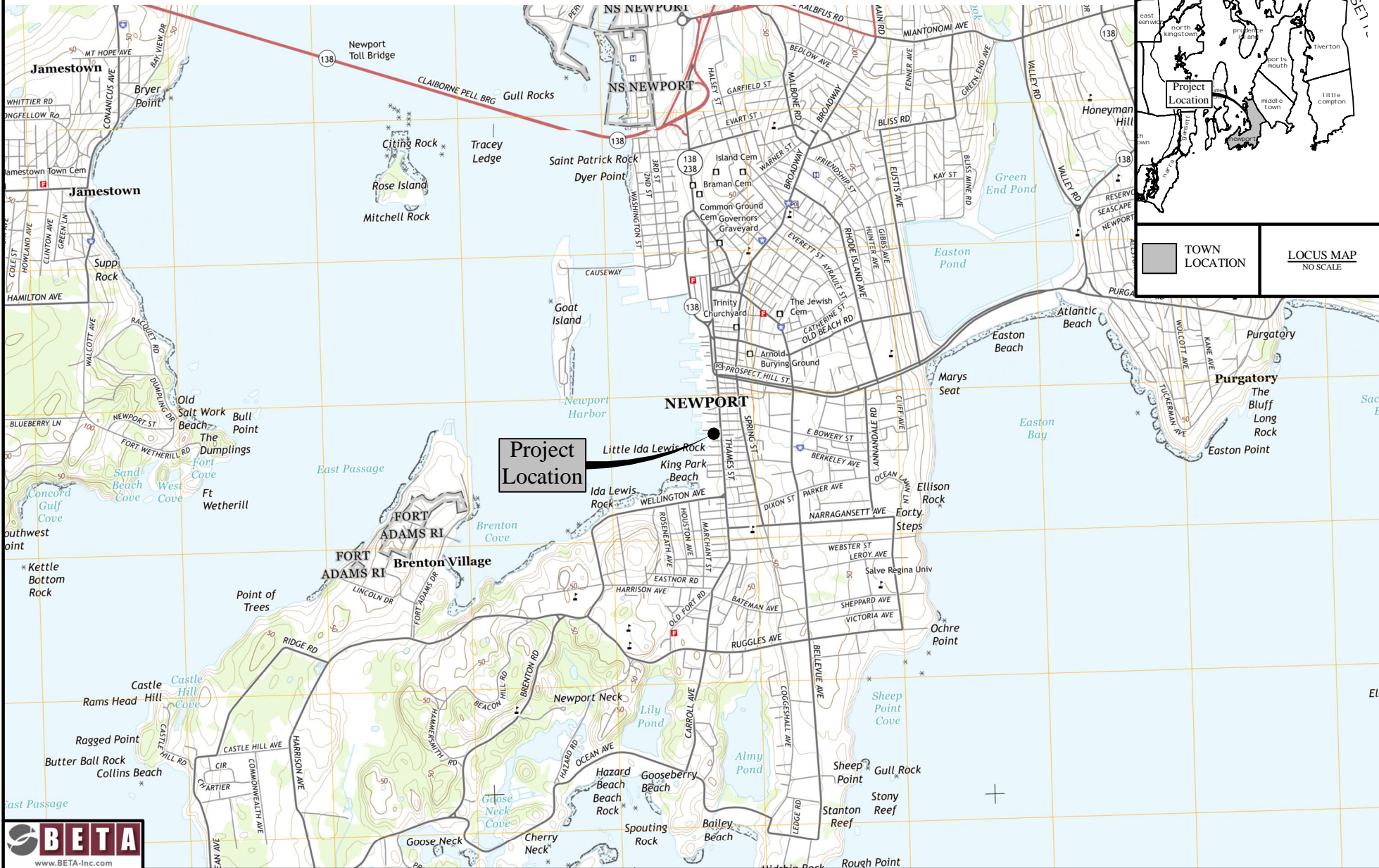
The objective of this study is to define existing, and potential future operational and/or safety concerns along the servicing roadways to the proposed hotel. A review of the existing roadway features was completed to determine if any potential safety deficiencies presently warrant mitigation. In addition to the existing conditions analysis, the study also included the assessment of potential impacts resulting from the proposed site access on Lee's Wharf, and the resultant vehicular and pedestrian traffic entering and exiting the new hotel property.



Lee's Wharf Hotel

NEWPORT, RHODE ISLAND

Figure 1 - Project Vicinity Map



The study focused on the evaluation of the safety of the proposed site access and general operations of the servicing roadways as this small-scale hotel is estimated to generate a minor volume of daily traffic with only 14 AM and 16 PM trips during the daily peak hours. This should be a reduction in traffic to and from the site on a daily basis during the peak seasonal conditions in Newport, knowing the property currently is a parking lot containing over 90 parking spaces for use by the general public. The study focused on these safety issues relative to vehicular and pedestrian access and made recommendations for improvements, if determined necessary, based upon the findings of the data collection and analysis phases of the study.

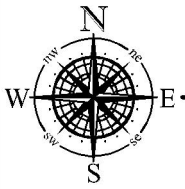
In order to complete our analysis, the following scope of work was conducted for the project:

- An inventory of the physical roadway characteristics of Lee's Wharf including roadway alignment, pavement width, signage and traffic control to determine the adequacy of the existing roadway geometric features relating to access, safety, and operations.
- Field investigations including evaluation of sight distances along Lee's Wharf in the vicinity of the proposed site access driveway intersection.
- Accident data obtained from the City of Newport Police Department was reviewed to determine if there are any safety concerns relative to the frequency, severity or pattern of crashes in the project area.
- A Site Plan for the proposed development project prepared by Northeast Engineers & Consultants, Inc. was reviewed to define future roadway conditions at the access driveway intersection to the site.
- Analysis of the data collected, evaluation of the proposed design, and development of recommendations to provide a safe and adequate access to the new hotel.

Project Area

As previously noted, the proposed commercial redevelopment project will be situated on a parcel of land along the southerly side of Lee's Wharf just west of Thames Street. The site currently has a single small building and a paved and marked public parking lot containing 96 parking spaces. The existing building will be razed to accommodate a 2-story hotel building with 21 rooms and associated parking. Access/egress to the hotel will be provided from an enter-only driveway on the westerly side of the property and an exit-only driveway on the easterly side of the property including a loading zone/valet area along the site frontage on Lee's Wharf.

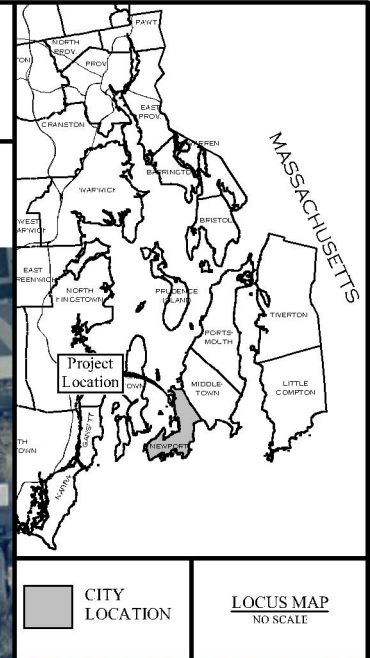
The property is within the Southern Thames Historic District that includes the southern portions of Newport's waterfront. Land use in the immediate area can be defined as predominantly commercial along Thames Street with high density residential properties off intersecting side streets. Along the waterfront on the westerly side of Thames Street there are numerous marinas, hotels, restaurants, condominiums, and retail shops. Further north along America's Cup Boulevard is what's considered the "downtown" area of the City, and includes hotels, retail shops, restaurants, and marinas. Further south



Lee's Wharf Hotel

NEWPORT, RHODE ISLAND

Figure 2 - Project Area Map



are high density residential properties including the Ocean Drive Historic District along Ocean Avenue. To the east along Memorial Boulevard is a mixture of high density residential and commercial properties including Easton's Beach, The Tennis Hall of Fame and Newport Mansions along Bellevue Avenue.

Thames Street will serve as the primary access route to the new hotel with Lee's Wharf providing immediate local access. Based upon the good operating characteristics of Thames Street in the immediate area, and the minor amount of additional peak hour traffic generated by the small-scale hotel, a study impact area was defined for this project. The limits of our analysis focused on Lee's Wharf from Thames Street west to the terminus of Lee's Wharf. Refer to Figure 2 on the following page depicting the subject property and the general project area.

Roadways

Lee's Wharf

Lee's Wharf is a short 300 foot long roadway extending between Thames Street to the east to a dead end at the waterfront to the west. The roadway is variable in width approximately 20-22 feet wide with no markings delineating travel lanes or shoulder areas. Due to the roadway width in the vicinity of Thames Street between two commercial buildings immediately abutting the back of sidewalk, it is recommended that a double yellow center line (50' long) be provided on the Lee's Wharf approach to the intersection. This marking will help to emphasize the two-way traffic flow and to allow vehicles exiting Lee's Wharf onto Thames Street to align properly at the Stop bar and not hinder right turning traffic into Lee's Wharf.

The pavement is in good condition as it was recently repaved. Narrow cement concrete sidewalks extend from Thames Street on both sides of Lee's Wharf for only approximately 60-65 feet forcing pedestrians to walk within the roadway for access to the waterfront. It is recommended that a sidewalk be extended where practicle along one side of the road to better accommodate pedestrian traffic which is prevalent in this area during the summer period. There was no observed posted speed limit in the project area and therefore was assumed to be 15 mph due to the nature of the area. Cobra head lighting is provided sporadically on utility poles along the southerly side of the roadway for night-time visibility.



Intersections

Thames Street at Lee's Wharf/Young Street

Thames Street is a minor arterial road that runs one-way southbound and one-way northbound from the America's Cup Boulevard intersection. Buildings along the southerly section of Thames Street are situated densely at the back of sidewalks typical of historical urban conditions. Lee's Wharf and Young

Street intersect Thames Street to form an unsignalized, 4-way junction with Stop control on the minor Lee's Wharf eastbound and Young Street westbound approaches. Stop signs and stop bars are provided on both Stop controlled approaches. All approaches to the intersection provide a single all-purpose lane including the Thames Street one-way southbound movement.

Sidewalks with curb ramps, though not ADA-compliant, are provided at the intersection with multiple materials (brick, cement concrete). Lighting on a utility pole is provided for nighttime illumination of the intersection. The above photograph depicts the physical characteristics of Thames Street looking north from the Lee's Wharf junction.



Safety Analysis

The geometry of Lee's Wharf in the project area was investigated to determine if there are any limiting factors affecting safety. These limiting factors would potentially include horizontal or vertical alignment changes or roadside obstructions that limit sight distances for vehicles traveling along the road or entering the road from a side street or driveway location. In this instance, the sight distance standard is necessary to permit turning vehicles to safely enter and exit the proposed site access driveways, as well as vehicles turning from Lee's Wharf onto Thames Street.

The horizontal and vertical alignment of Lee's Wharf in the project area can be described as generally straight and level. These physical features of Lee's Wharf provide sight distances of greater than 150 feet to the east and west of the site exit-only driveway intersection. These values are in excess of AASHTO's recommended minimum sight distance of 80 feet based on observed speeds of between 10-15 mph along this short section of local street. No parking is permitted along the road and there are no existing or proposed obstructions along the property frontage that would limit available sight distances as defined.

Also, as noted earlier, there is no sidewalk beyond the immediate Thames Street intersection forcing pedestrians to walk in the street. Though low speed, it is recommended that due to the potential volume of pedestrians that will utilize this roadway between Thames Street and the waterfront, the existing sidewalk should be extended along the property frontage for improved pedestrian access to and from the site. The property owner has proposed this extension as part of the hotel development plan.

The horizontal and vertical alignment of Thames Street in the project area can be described as generally level and straight. The physical features of Thames Street provide sight distances of greater than 300 feet to the north of the Lee's Wharf intersection. These values are in excess of AASHTO's recommended minimum sight distance of 80 feet based on observed speeds of between 10-15 mph. The on-street parking that is permitted along this section of Thames Street is situated along the easterly curblane and does not hinder or restrict sight lines for vehicles exiting Lee's Wharf. As noted, the buildings along Thames Street are situated at the back of sidewalk forcing drivers exiting the side street to position themselves on the approach to see beyond the

building corner to the north. This can be seen in the adjacent photograph from a vehicle pulling out of Lee's Wharf to turn right along the one-way street and the adequate sight distance available to the north where conflicting vehicles can see one another.

Also, as part of our analysis, a review of accident statistics was completed. Data was reviewed from the City of Newport Police Department for the latest full three-year period (2017-2019) to determine if any location in the immediate vicinity of the development experienced a high frequency or pattern of accidents. Only one crash occurred, with no injuries, in the project area over the three-year study period. The accident involved a hit and run with an unattended parked car on Lee's Wharf.



Based upon the historical accident data obtained from the local police, and a review of existing roadway geometry, physical features, and proposed development plan, it does not appear that any significant physical safety deficiencies presently exist on Lee's Wharf requiring mitigation in the project area.

Trip Generation and Analysis

To understand the potential traffic impact of the proposed development, an estimate of anticipated traffic to be generated by the proposed land use has been calculated for reference. As previously discussed, the development proposal consists of razing an existing building and reconfiguring the existing parking lot to allow construction of a two-story building to accommodate a 21-room hotel with associated parking. Access and egress to the site will be provided from an enter-only driveway, an exit-only driveway and a loading zone/valet area along the property frontage of Lee's Wharf. Figure 3 on the following page depicts the site layout and access plan, provided by Northeast Engineers & Consultants, Inc.

For this site, projected traffic volumes for the proposed project were based on use of trip generation factors. These factors are taken from the "Trip Generation" manual, an informational report published by the Institute of Transportation Engineers (ITE), a national professional organization for traffic and transportation engineers. The data provided in the ITE report are based on extensive traffic studies for various types of land uses (residential, commercial, industrial, etc.). This data has been found to be very reliable and provides a sound basis for estimating future trips to new development projects.

For the proposed hotel project, Land Use Code 310 Hotel was reviewed for applicability in developing an estimate of site related vehicles trips. Table 1 summarizes the peak hour site trips for the proposed development that have been estimated utilizing the land use code data available from the ITE manual. The appropriate worksheets from the manual are included in the Attachment, along with the trip estimate calculations.

Lee's Wharf Hotel

NEWPORT, RHODE ISLAND

Figure 3 - Site Layout

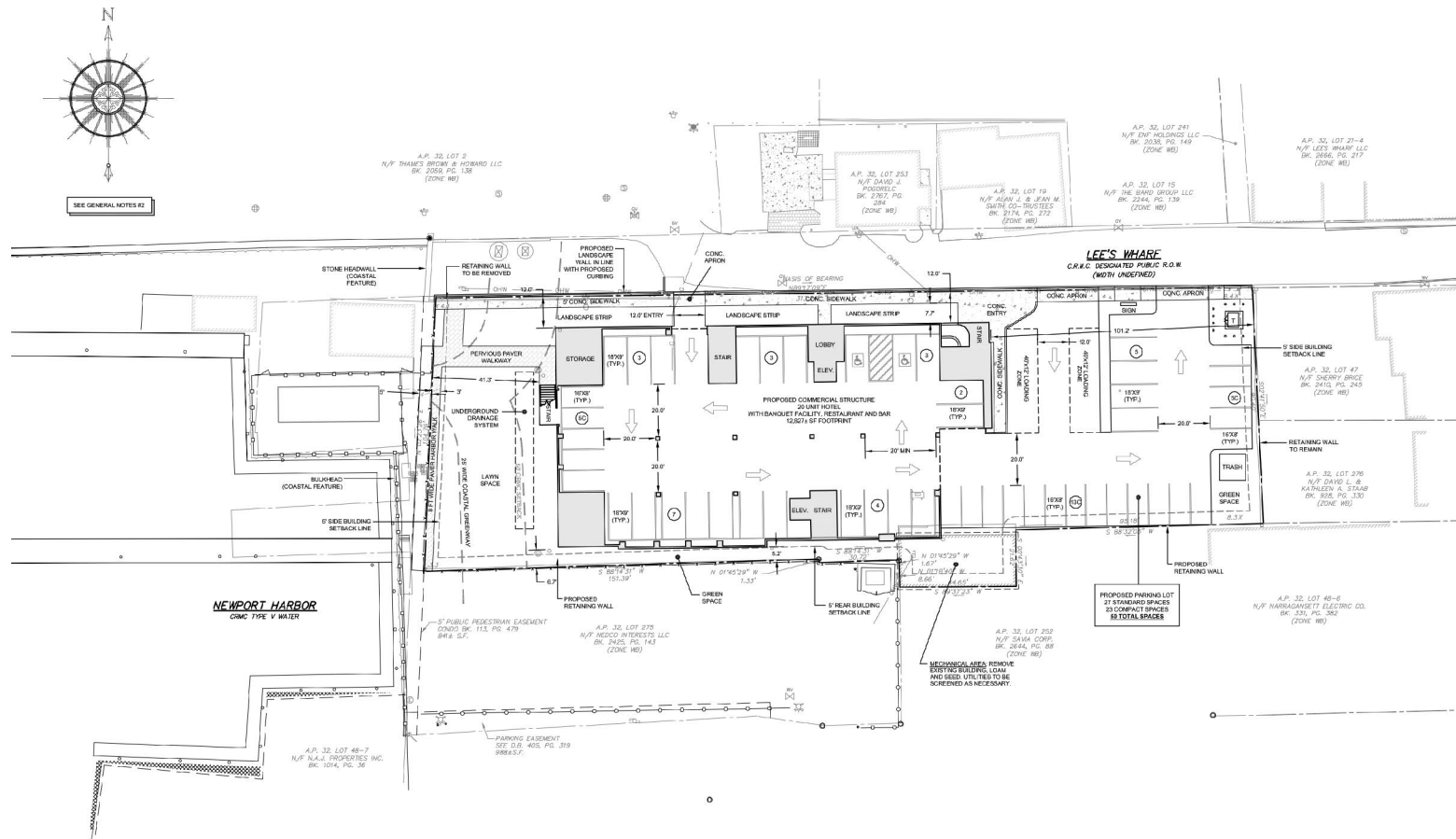


TABLE 1 – Trip Generation Estimate

	Description	Enter	Exit	Total
<u>AM Peak Hour</u>				
ITE Land Use Code 310	Hotel	8	6	14
<u>PM Peak Hour</u>				
ITE Land Use Code 310	Hotel	7	9	16

Based upon the low volume of daily and peak hour site trips (less than 14 vehicles and 16 vehicles entering/exiting the site during the morning and afternoon peak periods, respectively), resulting from the proposed small scale development, coupled with the very low volume of traffic serviced along Lee's Wharf, there should be no discernable impacts to traffic operations along Lee's Wharf or Thames Street in the immediate project area. It is anticipated that typically only one vehicle would be queued on the site driveway to exit the property or on Lee's Wharf waiting to turn right onto Thames Street, resulting in efficient operations and adequate and safe access to the new hotel. During the daily peak hours, the servicing roadways will operate efficiently as they do today, with no congestion anticipated at the site access driveway or Thames Street intersection.

In addition, it is important to note that the proposed hotel is anticipated to yield improved operations along Lee's Wharf with less traffic and managed parking for hotel guests. The existing site operations is first come first serve public parking for over 90 parking spaces which turns over several times a day. This existing condition yields a higher traffic demand on the roadway for drivers parking or looking for available parking in the area.

Conclusions and Recommendations

In summary, the study has shown that the proposed development project access and circulation plan has been designed to maintain a desirable level of traffic safety and efficiency on the servicing roadway system in the project area. Based upon our analysis of the existing roadway conditions on Lee's Wharf, there appear to be no traffic safety or operational issues that require mitigation other than the recommended sidewalk extension and the addition of double yellow pavement markings on the Lee's Wharf approach to the intersection with Thames Street to delineate travel paths.

In addition, the small-scale hotel will add a minor volume of traffic during the daily peak hours as indicated. These new vehicles will not change or negatively affect the good operating conditions that presently exist along Lee's Wharf. Therefore, based upon the data collection and analysis completed for this project, it can be concluded that the project will not have a detrimental impact on traffic safety and operations of the servicing roadways, and that adequate and safe access will be available at the

proposed site access driveway intersections with Lee's Wharf. We trust that this letter sufficiently addresses the requirements of the City to obtain your access approval. If you should have any questions, please do not hesitate to contact our office.

Very truly yours,
BETA Group, Inc.

A handwritten signature in black ink, appearing to read "Paul J. Bannon". The signature is fluid and cursive, with a long horizontal stroke at the end.

Paul J. Bannon
Associate

ATTACHMENTS

- A. Traffic Crash Data
- B. Trip Generation

ATTACHMENT A – Traffic Crash Data

January 2017 through December 2019

Lee's Wharf – Thames Street to Dead End

Lee's Wharf

	2017	2018	2019	Total	Percent
Collision Type					
Rear End	0	0	0	0	0%
Angle	0	0	0	0	0%
Head-On	0	0	0	0	0%
Pedestrian	0	0	0	0	0%
Sideswipe, Same Direction	0	0	0	0	0%
Sideswipe, Opposite Direction	0	0	0	0	0%
Collision with Object	0	0	0	0	0%
Other	0	0	0	0	0%
Unknown	0	1	0	1	100%
Accident Severity					
Property	0	1	0	1	100%
Injury	0	0	0	0	0%
Light Condition					
Daylight	0	0	0	0	0%
Dawn	0	0	0	0	0%
Dusk	0	0	0	0	0%
Dark - Lighted	0	1	0	1	100%
Dark - Not Lighted	0	0	0	0	0%
Dark - Unknown Lighting	0	0	0	0	0%
Road Condition					
Dry	0	1	0	1	100%
Wet	0	0	0	0	0%
Snow	0	0	0	0	0%
Other	0	0	0	0	0%
Unknown	0	0	0	0	0%
Hour of Day					
6:00 AM - 9:00 AM	0	0	0	0	0%
9:00 AM - 3:00 PM	0	0	0	0	0%
3:00 PM - 6:00 PM	0	1	0	1	100%
6:00 PM - 6:00 AM	0	0	0	0	0%
Total Accidents:	0	1	0	1	

STATE OF RHODE ISLAND UNIFORM CRASH REPORT

Reporting Agency Name Newport			Report Number 18-21803-AC			Crash Date 08/19/2018		Crash Time 1630		Walk In Report <input checked="" type="checkbox"/>		Parking Lot <input checked="" type="checkbox"/>											
City or Town Name NEWPORT				Street or Highway LEES WHF				<input type="checkbox"/> On Ramp <input type="checkbox"/> Off Ramp		Exit #		# of Lanes		Posted Speed Limit <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Unk									
Nearest Intersection Street PRIVATE PROPERTY				Direction From Nearest Intersection to Crash Site <input type="checkbox"/> At Inter. <input type="checkbox"/> North <input type="checkbox"/> South <input type="checkbox"/> East <input type="checkbox"/> West				Distance From Nearest Inter. <input type="checkbox"/> Feet <input type="checkbox"/> Miles		Latitude +041.480000		Longitude -071.310000											
Unit ID 1		Driver's Last Name First Name 			M.I. 		DOB 		Unit ID 2		Driver's Last Name First Name 			M.I. 		DOB 							
Address 				City 				Address 				City 											
State 		Zip 		Home Phone 		Cell Phone 		Work Phone 		State 		Zip 		Home Phone 		Cell Phone 		Work Phone 					
Driver's License # <input type="checkbox"/> CDL				Lic. State 				Driver's License # <input type="checkbox"/> CDL				Lic. State 											
M/V Violation 		M/V Violation 		M/V Violation 		M/V Violation 		M/V Violation 		M/V Violation 		M/V Violation 		M/V Violation 		M/V Violation 							
Driver & Owner are Same <input type="checkbox"/>		Owner's Last Name First Name DAVID			M.I. 		DOB 		Driver & Owner are Same <input type="checkbox"/>		Owner's Last Name First Name 			M.I. 		DOB 							
Address 				City HOPKINTON				Address 				City 											
State RI		Zip 02833		Home Phone 		Cell Phone 		Work Phone 		State 		Zip 		Home Phone 		Cell Phone 		Work Phone 					
Insurance Company Name OLD DOMINION				<input type="checkbox"/> No Ins.				Insurance Policy Number 				Insurance Company Name 				<input type="checkbox"/> No Ins.				Insurance Policy Number 			
Hit And Run <input type="checkbox"/> Yes, M/V & Driver left Scene <input type="checkbox"/> Yes, Driver left Scene <input checked="" type="checkbox"/> No <input type="checkbox"/> Unk								Hit And Run <input checked="" type="checkbox"/> Yes, M/V & Driver left Scene <input type="checkbox"/> Yes, Driver left Scene <input type="checkbox"/> No <input type="checkbox"/> Unk															
Registration # <input type="checkbox"/> Not Reg.		State RI		Yr Reg. 2020		VIN 		Registration # <input type="checkbox"/> Not Reg.		State 		Yr Reg. 		VIN unknown									
Veh Yr. 2014		Make TOYOTA		Model COROLLA		Color WHITE		Plate Type PC		Veh Yr. 		Make 		Model 		Color 		Plate Type 					
Veh Travel Direction <input type="checkbox"/> Northbound <input type="checkbox"/> Southbound <input type="checkbox"/> Eastbound <input type="checkbox"/> Westbound <input checked="" type="checkbox"/> Not on Roadway <input type="checkbox"/> Unk				Veh Travel Direction <input type="checkbox"/> Northbound <input type="checkbox"/> Southbound <input type="checkbox"/> Eastbound <input type="checkbox"/> Westbound <input type="checkbox"/> Not on Roadway <input type="checkbox"/> Unk																			
Vehicle Towed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Towing Company Name 				Haz Mat Placard? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Vehicle Towed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Towing Company Name 				Haz Mat Placard? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No									
Person Type																							
1 Driver		4 Bicyclist		7 Other Ped. (Wheelchair, Person in Building, Skater, Ped. conveyance, etc.)				9 Occupant of a Non-Motor Veh Transportation Device				10 Unknown Type of Non-Motorist											
2 Passenger		5 Other Cyclist		8 Occupant of Motor Veh. Not in Transport (Parked, etc.)				11 Unknown															
3 Pedestrian		6 Witness																					
Unit ID		Sex		Seat Position		Other Location		Air Bag Deployed		Ejected		Protection System				Injury							
1 Unit 1		M Male		13 Other Row (Bus)		17 N/A		1 N/A		1 No		1 N/A		7 Child - Forw Facing		1 Complains of Pain							
2 Unit 2		F Female		14 Unk Row		18 Sleeper		5 Other		2 Partially		2 None Used		8 Child - Rear Facing		2 Non-Incapacitating							
3 (etc.) or N/A		U Unk		15 Other Seat		19 Other Enclosed Area		2 No		3 Totally		3 Shoulder & Lap		9 Booster Seat		3 Incapacitating							
				16 Unk Seat		20 Other Unenclosed Area		3 Front		4 N/A		4 Shoulder Only		10 Child - Unk		4 Fatal							
						21 Towed Unit		4 Side		5 Unk		5 Lap Only		11 Helmet Used		5 No Injury							
						22 Unk						6 Type Unk		12 Other		6 Unk							
Name: Occupants - Witnesses - Pedestrians - Bicyclists				Person Type		Unit ID		Sex		DOB		Seat Pos.		Air Bag Deployed		Ejected		Prot. System		Injury		Trans by Rescue	
																						<input type="checkbox"/> Y <input type="checkbox"/> N	
																						<input type="checkbox"/> Y <input type="checkbox"/> N	
																						<input type="checkbox"/> Y <input type="checkbox"/> N	
Non-Vehicle Property Damage <input type="checkbox"/> State Property <input type="checkbox"/> City/Town Property <input type="checkbox"/> Private Property																							
Owner 								Address 															
Home Phone 				Cell Phone 				Work Phone 				Damage Description 											
Reporting Officer Name RECORDS CLERK MARCIA J STONE								Reporting Officer Badge Number 864				Report Date 08/22/2018				Prohibit Public Release No							

Report Number
18-21803-AC

STATE OF RHODE ISLAND UNIFORM CRASH REPORT
CODING GUIDE

1 **Type of Roadway**
 1 Two-Way, Not Divided (No Median or Barrier)
 2 Two-Way, Not Divided With a Continuous Left Turn Lane
 3 Two-Way, Divided, Unprotected (painted >4 feet) Median
 4 Two-Way, Divided, Positive Median Barrier
 5 One-Way Trafficway
 6 Unknown

Traffic Controls
 1 No Controls
 2 Person
 3 Traffic Control Signal
 4 Flashing Traffic Control Sig.
 5 School Zone Signs
 6 Stop Signs
 7 Yield Signs
 8 Warning Signs
 9 Railway Crossing Device
 10 Pavement Markings
 11 Other
 12 Unknown

1 **Road Surface Condition (Prevailing)**
 1 Dry
 2 Wet
 3 Snow
 4 Slush
 5 Ice/Frost
 6 Water (Standing, Moving)
 7 Sand
 8 Mud, Dirt, Gravel
 9 Oil
 10 Other
 11 Unknown

Pre-Crash Traffic Controls Malfunctioning, Damaged or Missing?
 Yes No N/A

4 **Light Condition (Prevailing)**
 1 Daylight
 2 Dawn
 3 Dusk
 4 Dark - Lighted
 5 Dark - Not Lighted
 6 Dark - Unknown Lighting
 7 Other
 8 Unknown

Construction Zone Crash?
 (Crash Occurs in or Related to Construction, Maintenance, or Utility Work Zone. May Include Vehicles Slowed or Stopped because of Work Zone)
 Yes No

Construction Workers Present?
 Yes No

1 **Weather Condition (Prevailing)**
 1 Clear
 2 Cloudy
 3 Fog, Smog, Smoke
 4 Rain
 5 Sleet, Hail (Freezing Rain or Drizzle)
 6 Snow
 7 Blowing Snow
 8 Severe Crosswinds

Contributing Circumstances Environment
 1 None
 2 Weather Conditions
 3 Physical Obstructions
 4 Glare
 5 Animal(s) in Roadway
 6 Other
 7 Unknown

1st
 2nd
 3rd

13 **Manner of Impact**
 1 Not a Collision Between Two Motor Vehicles in Transport
 2 Rear End (Front-to-Rear)
 3 Head-On (Front-to-Front)
 4 Angle (Front-to-Side) Same Direction
 5 Angle (Front-to-Side) Opposite Direction
 6 Angle (Front-to-Side) Right Angle (Includes Broadside)
 7 Angle-direction Not Specified
 8 Sideswipe, Same Direction
 9 Sideswipe, Opposite Direction
 10 Rear-to-Side
 11 Rear-to-Rear
 12 Other
 13 Unknown

Contributing Circumstances Road
 1 None
 2 Road Surface Condition (Wet, Icy, Snow, Slush, etc.)
 3 Debris
 4 Rut, Holes, Bumps
 5 Work Zones (Construction/Maintenance/Utility)
 6 Worn, Travel-Polished Surface
 7 Obstruction in Roadway
 8 Traffic Control Device Inoperative, Missing or Obscured
 9 Shoulders (None, Low, Soft, High)
 10 Non-Highway Work
 11 Other
 12 Unknown

1st
 2nd
 3rd

School Bus Related Crash?
 (Directly Involved Indicates Contact was Made)
 Yes, Directly Involved No
 Yes, Indirectly Involved

1 **Vehicle #1** **Unit Types** **Vehicle #2**
 1 Passenger Car
 2 (Sport) Utility Vehicle
 3 Passenger Van
 4 Cargo Van (10K lbs [4,536 kg] or Less)
 5 Pickup
 6 Motor Home
 7 School Bus
 8 Transit Bus
 9 Motor Coach
 10 Other Bus
 11 Motorcycle
 12 Moped
 13 Low Speed Vehicle
 14 Other Light Trucks (10K lbs [4,536 kg] or Less)
 15 Tractor Trailer or Combination (More than 10K lbs [4,536 kg])
 16 Medium/Heavy Trucks (More than 10K lbs [4,536 kg])
 17 Tow Truck
 18 Pedestrian
 19 Bicyclist
 20 Witness
 21 Other

Yes No **Vehicle #1** Does this Vehicle have Seats to Transport 9 or more people, including the Driver's Seat? Yes No **Vehicle #2**

Yes No **Vehicle #1** Was this Vehicle in Tow? Yes No **Vehicle #2**

1 **Vehicle #1** **Special Function Vehicle** **Vehicle #2**
 1 No Special Function
 2 Taxi
 3 Vehicle Used as School Bus
 4 Vehicle Used as Other Bus
 5 Military
 6 Police
 7 Ambulance
 8 Fire Truck
 9 Unknown

Report Number
18-21803-AC

STATE OF RHODE ISLAND UNIFORM CRASH REPORT CODING GUIDE

Yes No Unk Police, Ambulance or Fire Truck Responding to a Call?
 Yes No Unk

2 Vehicle #1 Motor Vehicle Position Vehicle #2

1 Motor Vehicle on Roadway 2 Motor Vehicle Parked 3 Working Vehicle/Equipment

2 Vehicle #1 Extent of Damage Vehicle #2

1 No Damage Observed 2 Minor damage (less than or equal to \$1000) 3 Functional Damage (greater than \$1000) 4 Disabling Damage (greater than \$1000)

13 Vehicle #1 Most Harmful Event Vehicle #2

<p>Non-Collision:</p> <ul style="list-style-type: none"> 1 Overturn/Rollover 2 Fire/Explosion 3 Immersion 4 Jackknife 5 Cargo/Equip. Loss or Shift 6 Fell/Jumped from Motor Veh. 7 Thrown or Falling Object 8 Other Non-Collision 	<p>Collision with Person, Motor Veh, or Non-fixed Obj:</p> <ul style="list-style-type: none"> 9 Pedestrian 10 Pedalcycle 11 Railway Vehicle (Train, Engine) 12 Animal 13 Motor Vehicle in Transport 14 Work Zone/Maintenance Equipment 15 Other Non-Fixed Object 	<p>Collision with Fixed Object:</p> <ul style="list-style-type: none"> 16 Impact Attenuator/Crash Cushion 17 Bridge Overhead Structure 18 Bridge Pier or Support 19 Bridge Rail 20 Culvert 21 Curb 22 Ditch 23 Embankment 24 Guardrail Face 25 Guardrail End 26 Jersey/Concrete Traffic Barrier 27 Other Traffic Barrier 28 Tree (Standing) 29 Landscaping 30 Utility Pole (Elec/Tele)/Light Support 31 Highway Lighting/Light Standard 32 Traffic Sign/Support 33 Traffic Signal/Support 34 Traffic Control Box 35 Variable Message Board/Arrow Board 36 Other Post, Pole, or Support 37 Fence 38 Mailbox 39 Other Fixed Obj. (Wall, Building, Tunnel, etc.)
--	--	--

40 Unknown - Most Harmful Event

12 Vehicle #1 Vehicle Action Prior Vehicle #2

<ul style="list-style-type: none"> 1 Movements Essentially Straight Ahead 2 Backing 3 Changing Lanes 4 Overtaking/Passing 5 Turning Right 	<ul style="list-style-type: none"> 6 Turning Left 7 Making U-Turn 8 Leaving Traffic Lane 9 Entering Traffic Lane 10 Slowing 	<ul style="list-style-type: none"> 11 Negotiating a Curve 12 Parked 13 Stopped in Traffic 14 Other 15 Unknown
--	--	--

10 Vehicle #1 Initial Impact Area Clock Diagram Vehicle #2

Passenger Car

Motorcycle

13 Top (Roof)
14 Undercarriage
15 Non-Collision
16 Unknown

Most Damaged Area

11 Vehicle #1 Initial Impact Area Clock Diagram Vehicle #2

Passenger Car W/Trailer

Bus

Tractor Trailer

13 Top (Roof)
14 Undercarriage
15 Non-Collision
16 Unknown

Most Damaged Area

Report Number
18-21803-AC

**STATE OF RHODE ISLAND UNIFORM CRASH REPORT
CODING GUIDE**

1st	Vehicle #1	Sequence of Events	Vehicle #2	1st
13				
2nd				2nd
3rd				3rd
4th				4th

Non-Collision:

- 1 Overturn/Rollover
- 2 Fire/Explosion
- 3 Immersion
- 4 Jackknife
- 5 Cargo/Equipment Loss or Shift
- 6 Fell/Jumped from Motor Vehicle
- 7 Thrown or Falling Object
- 8 Other Non-Collision

Collision with Person, Motor Veh, or Non-fixed Obj:

- 9 Pedestrian
- 10 Pedalcycle
- 11 Railway Vehicle (Train, Engine)
- 12 Animal
- 13 Motor Vehicle in Transport
- 14 Work Zone/Maintenance Equipment
- 15 Other Non-Fixed Object

Collision with Fixed Object:

- 16 Impact Attenuator/Crash Cushion
- 17 Bridge Overhead Structure
- 18 Bridge Pier or Support
- 19 Bridge Rail
- 20 Culvert
- 21 Curb
- 22 Ditch
- 23 Embankment
- 24 Guardrail Face
- 25 Guardrail End
- 26 Jersey/Concrete Traffic Barrier
- 27 Other Traffic Barrier
- 28 Tree (Standing)
- 29 Landscaping
- 30 Utility Pole (Elec/Tele)/Light Support
- 31 Highway Lighting/Light Standard
- 32 Traffic Sign/Support
- 33 Traffic Signal/Support
- 34 Traffic Control Box
- 35 Variable Message Board/Arrow Board
- 36 Other Post, Pole, or Support
- 37 Fence
- 38 Mailbox
- 39 Other Fixed Obj. (Wall, Building, Tunnel, etc.)

40 Unknown - Sequence of Events

Driver Vehicle #1	Driver Distracted	Driver Vehicle #2
	<ul style="list-style-type: none"> 1 Not Distracted 2 Electronic Communication Devices (Cell Phone, Pager, etc.) 3 Other Electronic Devices (Navigation Device, Palm Pilot, etc.) 4 Other Inside the Vehicle 5 Other Outside the Vehicle 6 Unknown 	

Driver Vehicle #1	Physical Condition of Driver	Driver Vehicle #2
	<ul style="list-style-type: none"> 1 Apparently Normal 2 Emotional (Depressed, Angry, Disturbed, etc.) 3 Ill (Sick) 4 Fell Asleep, Fainted, Fatigued, etc. 5 Under the Influence of Medications/Drugs/Alcohol 6 Other 	

1st	Vehicle #1	Non-Motorist Safety Equipment	Vehicle #2	1st
2nd	Vehicle #1	<ul style="list-style-type: none"> 1 None 2 Helmet 3 Protective Pads Used (Elbows, Knees, Shins, etc.) 4 Reflective Clothing (Jacket, Backpack, etc.) 5 Lighting 6 Other 7 N/A 8 Unknown 	Vehicle #2	2nd

Alcohol and/or Drug Testing							
Driver Vehicle #1		Driver Vehicle #2		Driver Vehicle #1		Driver Vehicle #2	
Chemical Test		Alcohol		Alcohol Test Result		Drug Test Result	
Alcohol	Drug	Alcohol	Drug	BAC	BAC	Positive	Positive
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None Given		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Negative	
Test Refused		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Awaiting Test Result	
Unknown if Tested		<input type="checkbox"/>	<input type="checkbox"/>	Unknown			
<input type="checkbox"/>	<input type="checkbox"/>	Blood					
<input type="checkbox"/>	<input type="checkbox"/>	Urine					
<input type="checkbox"/>	<input type="checkbox"/>	Serum					
<input type="checkbox"/>	<input type="checkbox"/>	Other					
<input type="checkbox"/>	<input type="checkbox"/>	Breath					

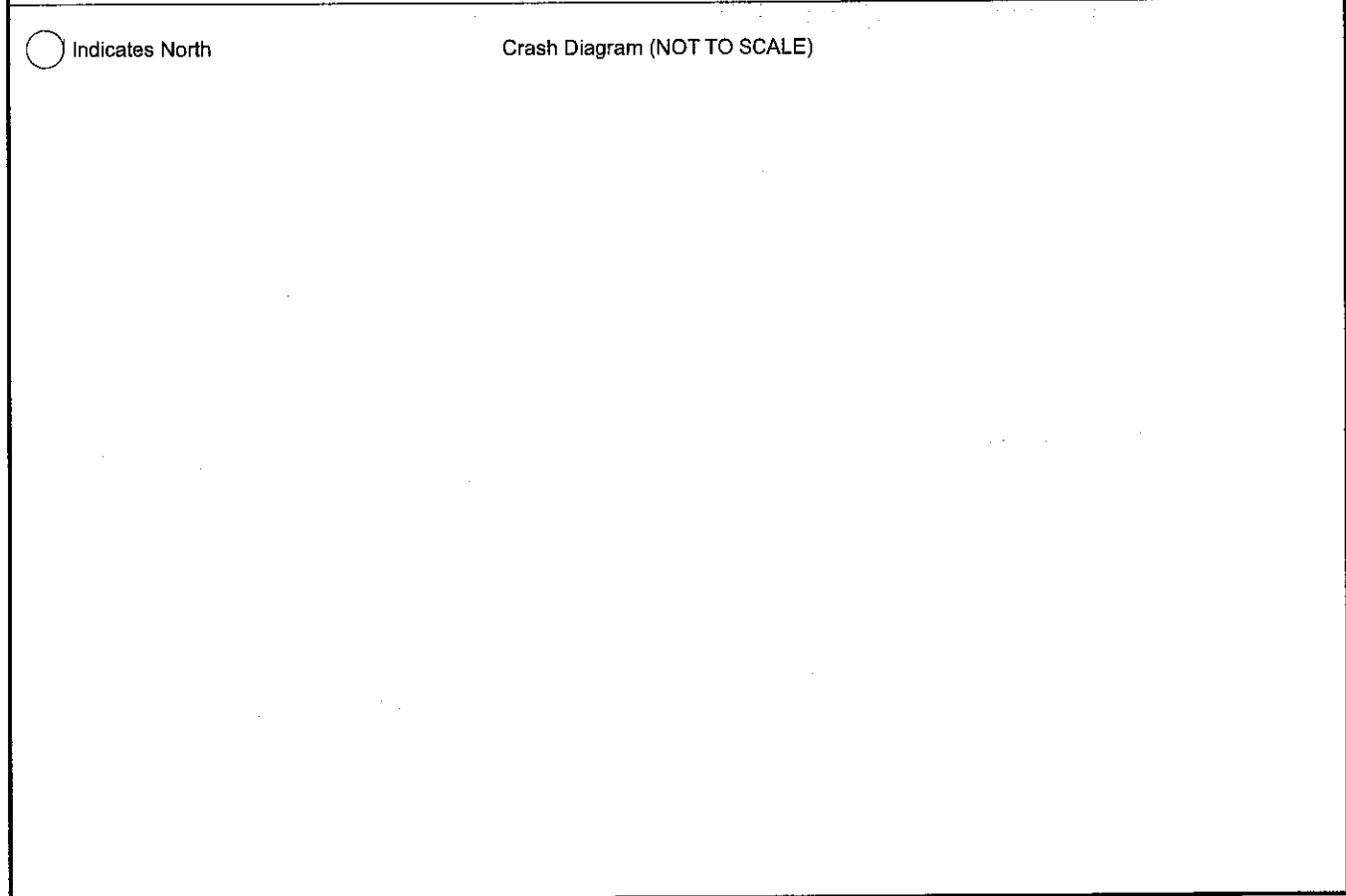
Report Number
18-21803-AC

STATE OF RHODE ISLAND UNIFORM CRASH REPORT
Narrative/Diagram Supplemental

Please see the Narrative Supplemental

Indicates North

Crash Diagram (NOT TO SCALE)



NARRATIVE FOR RECORDS CLERK MARCIA J STONE

Ref: 18-21803-AC

Entered: 08/22/2018 @ 1011	Entry ID: 864
Modified: 08/22/2018 @ 1017	Modified ID: 864
Approved: 08/22/2018 @ 1030	Approval ID: 305

08/22/2018 1011 M Stone

Durante came in to file an accident report. Her vehicle was parked on Lee's Wharf on Aug. 19th from 1613 to 1945 hours. When Ms Durante got back to her vehicle, she didn't notice the damage to the left front of her vehicle until the next day.

Ms Durante is hoping that a surveillance camera caught the accident.

APPENDIX B – Trip Generation

ITE Trip Generation Summary

ITE Land Use Code

ITE Land Use Code 310 – Hotel

B

ITE Trip Generation Summary

Trip Generation Summary

Summary;

	<u>Description</u>	<u>Enter</u>	<u>Exit</u>	<u>Total</u>
<u>AM Peak Hour</u>				
ITE Land Use Code 310	Hotel	8	6	14
<u>PM Peak Hour</u>				
ITE Land Use Code 310	Hotel	7	9	16

Calculations;

ITE Land Use Code 310 Hotel (21 Occupied Rooms)

Independent Variable (X) = Occupied Rooms X = 21

AM Peak Directional Distribution: 58% Entering 42% Exiting

T =	0.62 (X)	Enter:	8
T =	0.62 21	Exit:	6
T =	14	Total:	14

PM Peak Directional Distribution: 49% Entering 51% Exiting

T =	0.73 (X)	Enter:	7
T =	0.73 21	Exit:	9
T =	16	Total:	16

B

ITE Land Use Code

ITE Land Use Code 310 – Hotel

Land Use: 310 Hotel

Description

A hotel is a place of lodging that provides sleeping accommodations and supporting facilities such as restaurants, cocktail lounges, meeting and banquet rooms or convention facilities, limited recreational facilities (pool, fitness room), and/or other retail and service shops. All suites hotel (Land Use 311), business hotel (Land Use 312), motel (Land Use 320), and resort hotel (Land Use 330) are related uses.

Additional Data

Studies of hotel employment density indicate that, on the average, a hotel will employ 0.9 employees per room.¹

Twenty-five studies provided information on occupancy rates at the time the studies were conducted. The average occupancy rate for these studies was approximately 82 percent.

Some properties contained in this land use provide guest transportation services such as airport shuttles, limousine service, or golf course shuttle service, which may have an impact on the overall trip generation rates.

Time-of-day distribution data for this land use are presented in Appendix A. For the one center city core site with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 8:30 and 9:30 a.m. and 3:15 and 4:15 p.m., respectively. On Saturday and Sunday, the peak hours were between 5:00 and 6:00 p.m. and 10:15 and 11:15 a.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, District of Columbia, Florida, Georgia, Indiana, Minnesota, New York, Pennsylvania, South Dakota, Texas, Vermont, Virginia, and Washington.

For all lodging uses, it is important to collect data on occupied rooms as well as total rooms in order to accurately predict trip generation characteristics for the site.

Trip generation at a hotel may be related to the presence of supporting facilities such as convention facilities, restaurants, meeting/banquet space, and retail facilities. Future data submissions should specify the presence of these amenities. Reporting the level of activity at the supporting facilities such as full, empty, partially active, number of people attending a meeting/banquet during observation may also be useful in further analysis of this land use.

Source Numbers

170, 260, 262, 277, 280, 301, 306, 357, 422, 507, 577, 728, 867, 872, 925, 951

¹ Buttke, Carl H. Unpublished studies of building employment densities, Portland, Oregon.

Hotel (310)

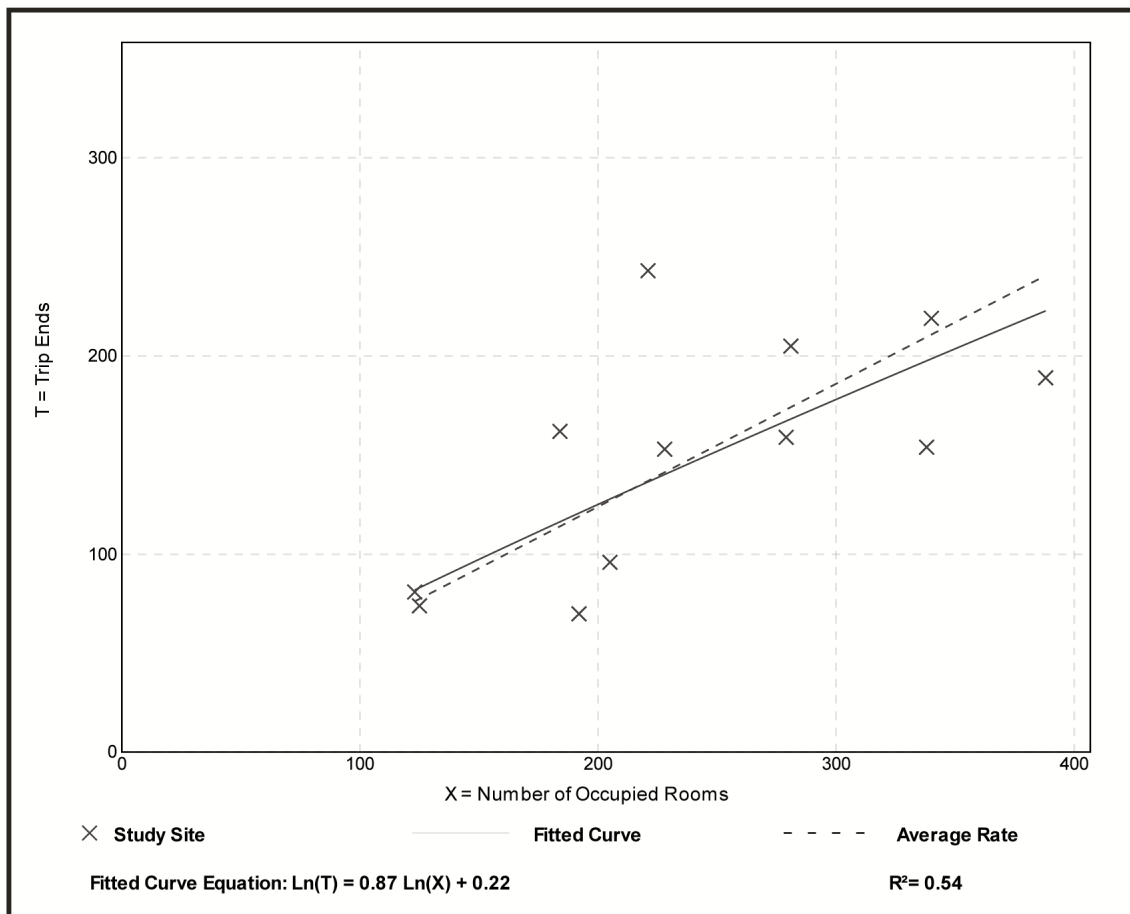
Vehicle Trip Ends vs: Occupied Rooms
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban
 Number of Studies: 12
 Avg. Num. of Occupied Rooms: 242
 Directional Distribution: 58% entering, 42% exiting

Vehicle Trip Generation per Occupied Room

Average Rate	Range of Rates	Standard Deviation
0.62	0.36 - 1.10	0.20

Data Plot and Equation



Hotel (310)

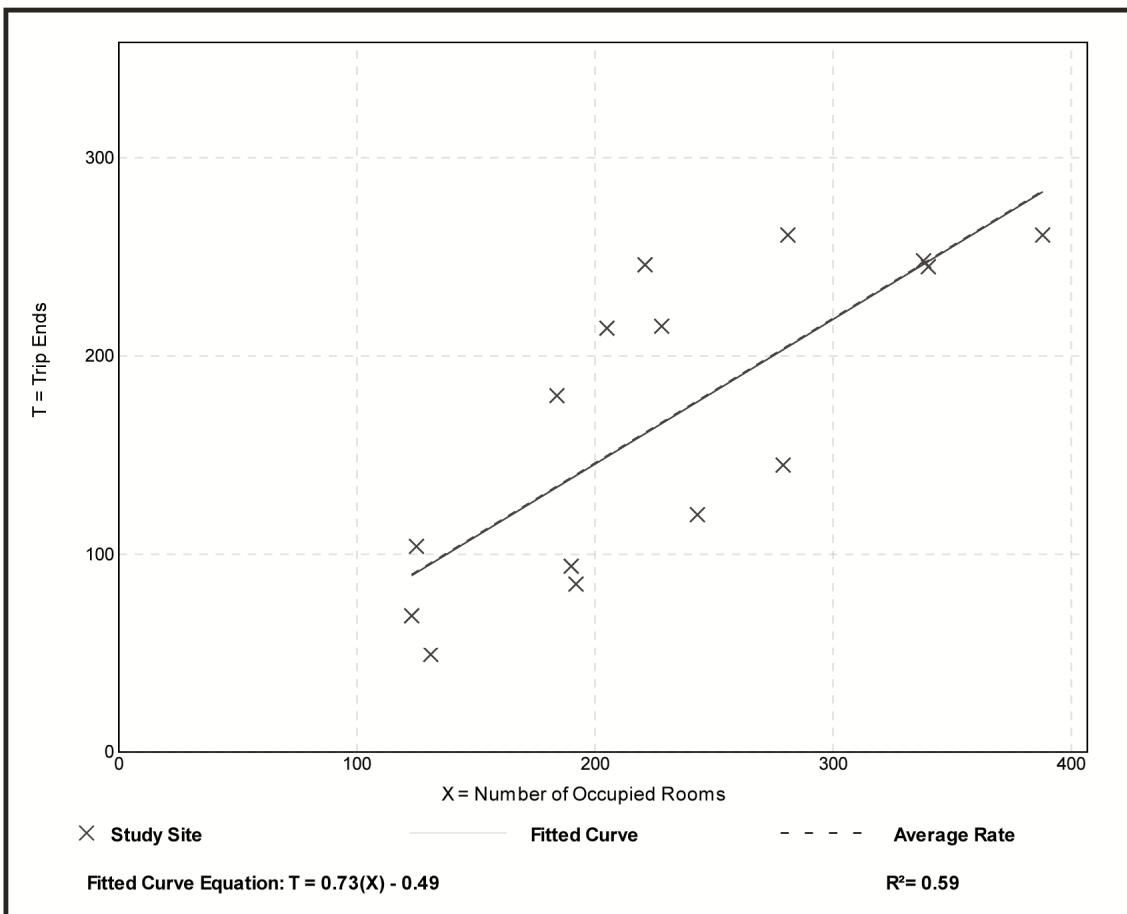
Vehicle Trip Ends vs: Occupied Rooms
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban
 Number of Studies: 15
 Avg. Num. of Occupied Rooms: 231
 Directional Distribution: 49% entering, 51% exiting

Vehicle Trip Generation per Occupied Room

Average Rate	Range of Rates	Standard Deviation
0.73	0.37 - 1.11	0.22

Data Plot and Equation



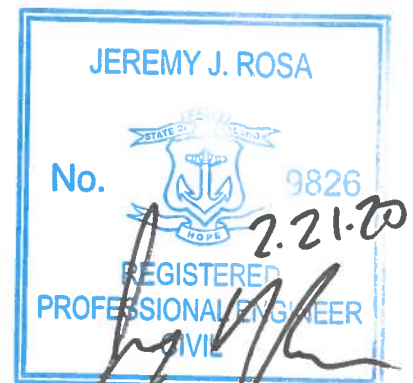
Stormwater Runoff Analysis

"Manchester House"

Proposed Hotel and Restaurant
Assessor's Map 32, Lot 314
24 Lee's Wharf
Newport, RI

Prepared For

Howard Wharf, LP
c/o SILVA, THOMAS, MARTLAND
& OFFENBERG, LTD
Middletown, RI 02842



February 2020

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1.0 PROJECT NARRATIVE

1.1 SITE INFORMATION

City / Town:	Newport, Rhode Island
Adjacent Roadways:	Lee's Wharf
Lot(s) identification:	A.P. 32 Lot 314
Zoning District:	WB (Waterfront Business)
Current Use:	Parking Lot with small accessory structure
Site Area:	0.74 Acres
FEMA Zone and Map:	Zone "VE (EL13)" and "AE (EL12)" (Panel 44005C0177J)

1.2 EXISTING IMPROVEMENTS AND SITE CONDITIONS

The existing property contains a small (880 +/- square feet) single story concrete structure and is otherwise occupied by a large parking lot. This structure is located to the rear of the lot and lies on the property lines of two abutting parcels. The narrow property lies lengthwise having significant frontage along Lee's Wharf. The parking lot is accessible from this roadway via a large gate in the chain link fence which surrounds the property. The site is surrounded by waterfront business structures and other paved parking lots. A narrow strip of property lies between this parcel and Newport Harbor. Overhead utility lines run through the middle of the property from poles along the roadway to structures to the south. Short concrete retaining walls run along portions of the property lines which allow for a somewhat flattened grade across the parking lot. Municipal utilities line along the frontage of the roadway; however, specific utility connections for this property are unknown. There are no private water quality or water retentions systems located on-site.

1.3 PROTECTED FEATURES

The site lies partially within the 50-foot setback from the coastal feature associated with Newport Harbor, although this coastal feature lies within an abutting parcel. Newport Harbor is identified as CRMC Type 5 waters. There are no wetlands or vegetation on the property. The coastal half of the property lies within the 200-foot CRMC jurisdiction line. Any development of this portion of the property would require assent from the CRMC.

1.4 SITE TERRAIN AND SOILS

In general, the site slopes evenly from the northeast corner of the parking lot to the southeast corner of the parking lot with slopes ranging from 1.5% to 2.5%. The soil type on site is Ur (Urban land) as designated by the USDA Natural Resource Conservation Service. This is generally a type C hydrologic soil common to this area of Aquidneck Island. Class IV soil evaluations performed on site revealed only fill material with a 53 to 56-inch water table. This is likely tidally influenced to the proximity of the coastal waters.



1.5 PROPOSED IMPROVEMENTS

The owner intends to demolish the exist structure and remove all other improvements, with the exception of some perimeter retaining walls. A 12,827 square foot hotel and restaurant is to be constructed just outside of the 50-foot CRMC coastal setback. This lot coverage is within the maximum 40% lot coverage allowable by the zoning ordinance. The structure shall be elevated in order to provide separation from the flood elevation, and the lower level is to be used for parking, storage, and other non-residential uses. The upper floors will contain the hotel units and amenities. The area coastal of the structure is to contain a greenway with public access from Lee's Wharf. The remainder of this area shall be planted or lawn green space. The area upland of the hotel shall be used for paved surface parking. A public access sidewalk is to run the length of the frontage of the roadway. The site is to have two paved entry lanes and one paved exit lane. The area of the former structure will be loamed and seeded. Screened pad mounted mechanical equipment will be located in this area. The site will include perimeter green space where possible.

New public and private utility services will be provided for the site. A pad mounted transformer is anticipated to be located at the northeast corner of the property adjacent to the sidewalk. The existing overhead lines which cross the property are expected to be routed underground to maintain service connections to structures to the south. All electrical service work is subject to design and approval by National Grid. Domestic water and fire service stubs shall be tapped from the main in Lee's Wharf with permission from Newport Water. The sewer service will be connected to the existing municipal main in the roadway with permission from Newport Department of Utilities. If it is determined by the DPU that the existing sewer pump station at the end of Lee's Wharf does not have the capacity for the additional flow, a new private pump station will be designed. This pump station will discharge at an existing sewer manhole in Thames Street. Any such sewer connections are subject to design review by the DPU.

In general, the total amount of impervious surfaces across the site will be reduced. Stormwater control for this development includes an underground infiltrating sand filter system for the hotel rooftop. Surface flow from this property will continue to sheet towards the coast, as in the existing conditions.

2.0 PROPOSED ALTERATIONS AND STORMWATER CONSIDERATIONS

2.1 STORMWATER SYSTEM OBJECTIVES

The objectives of the project stormwater system are to accomplish the following:

- Provide water quality treatment for stormwater runoff in accordance with the Rhode Island Stormwater Design and Installation Standards Manual
- Reduce or maintain the peak rate of runoff and total volume to all design points for the 1, 10 and 100-Year Type III 24-hour storm events.
- Maintain the overall drainage patterns from the site to the extent practicable.
- Reduce peak runoff and stormwater impact to the downstream abutters.

2.2 REDEVELOPMENT SITE

As the existing site lot coverage consists of more than 40% impervious and more than 10,000 square feet of this impervious surface is to be developed, this project qualifies as a "redevelopment site" per section 3.2.6 of the RISDISM. Per this section of the Manual, only Standards, 2, 3, and 7-11 must be addressed. Specifically, recharge and stormwater quality shall be managed in accordance with one of the following techniques:

- Reduce existing impervious area by at least 50% of the redevelopment area;
- Implement other LID techniques to the maximum extent practicable to provide recharge and water quality management for at least 50% of the redevelopment area;
- Use on-site structural BMPs to provide recharge and water quality management for at least 50% of the redevelopment area; or
- Any combination of these techniques.

2.3 MINIMUM STORMWATER MANAGEMENT STANDARDS

2.3.1 MINIMUM STANDARD 1: LID SITE PLANNING AND DESIGN STRATEGIES

The proposed development utilizes LID designs conforming to the RISDISM. These elements are located immediately downstream of the new improvements and will directly treat the newly generated runoff with minimal interception of clean runoff. This standard is not required for qualifying redevelopment sites per section 3.2.6 of the RISDISM.

2.3.2 MINIMUM STANDARD 2: GROUNDWATER RECHARGE

This majority of this standard shall be met by reducing the area of post construction impervious surfaces via the redevelopment standard. After applying credit for new pervious, a remainder of **2,493** square feet of impervious surfaces requires groundwater recharge. This equates to a total of **52** cubic feet of recharge volume based on the underlying hydrologic soil type. This recharge volume will be addressed by a rooftop infiltration system for the hotel. A minimum of **644** cubic feet of recharge is provided in the storage of the device. Refer to Appendix E for complete calculations.



2.3.3 MINIMUM STANDARD 3: WATER QUALITY

This majority of this standard shall be met by reducing the area of post construction impervious surfaces via the redevelopment standard. After applying redevelopment credit for new pervious surfaces, a remainder of **2,493** square feet of impervious surfaces require water quality treatment. This equates to a total of **208** cubic feet of water quality treatment. This will be addressed by a sub-surface infiltrating sand filter providing treatment for rooftop of the hotel. Based on the sizing of the device, a total of **644** cubic feet of water quality volume is provided. Refer to Appendix E for complete calculations.

2.3.4 MINIMUM STANDARD 4: CONVEYANCE AND NATURAL CHANNEL PROTECTION

This standard is not required for qualifying redevelopment sites per section 3.2.6 of the RISDISM.

2.3.5 MINIMUM STANDARD 5: OVERBANK FLOOD PROTECTION

This standard is not required for qualifying redevelopment sites per section 3.2.6 of the RISDISM.

2.3.6 MINIMUM STANDARD 6: REDEVELOPMENT AND INFILL PROJECTS

As stated in section 2.2 above, this project qualifies as a development project. The site is comprised of **0.74** acres of which **0.74** acres are existing impervious surfaces. This equates to approximately 100%. Only 40% is required to qualify as a redevelopment site.

2.3.7 MINIMUM STANDARD 7: POLLUTION PREVENTION

Source controls and pollution prevention measures will be present during all phases of construction. A separate stormwater pollution prevention plan (Soil Erosion and Sediment Control Narrative) will be prepared and provided upon request.

2.3.8 MINIMUM STANDARD 8: LAND USES WITH HIGHER POTENTIAL POLLUTANT LOADS

The use of this property does not qualify as a LUHPPL and does not require any specific source controls, limited BMPs, or and additional state permitting.

2.3.9 MINIMUM STANDARD 9: ILLICIT DISCHARGES

Neither the using use nor any proposed uses will include any discharges considered to be "illicit" per this section of the Manual.



2.3.10 MINIMUM STANDARD 10: SOILS EROSION AND SEDIMENT CONTROL

Soil erosion and sediment control measures will be implemented during all phases of construction. A SESC plan has been provided in the permitting plan set and a separate Soil Erosion and Sediment Control Narrative will be provided upon request.

2.3.11 MINIMUM STANDARD 11: STORMWATER MANAGEMENT OPERATIONS AND MAINTENANCE

An Operations and Maintenance (O&M) Document will be prepared and submitted in addition to this narrative. This document satisfies the minimum requirements of this standard.

2.4 OVERALL STORMWATER DESIGN FUNCTION

The overall design of the stormwater system is to provide reduction in peak rate of runoff, reduction in total volume runoff, and water quality volume through the provision of new pervious surfaces and a subsurface infiltrating sand filter system. The existing drainage patterns across the site will be minimally impacted. There will be no negative impact to the receiving municipal drainage system or to the coastal feature.

3.0 DESIGN MODELING METHODOLOGY

Runoff and routing calculations have been performed for the watershed areas affected by the proposed development under existing and proposed development conditions scenarios. Time of concentration and runoff curve number calculations have been performed using the method described in NRCS Technical Release 55 – Urban Hydrology for Small Watersheds. The TR-20 based HydroCAD modeling software has been utilized to perform the more complex runoff and routing calculations, most of which are beyond the scope of the TR-55 method.

Design rainfall events have been modeled using the Soil Conservation Service (SCS) Type III hydrograph for 24-hour duration storms. The rainfall depth for each return period is taken from the RISDISM. This guidance document splits the state into five regions for rainfall frequency based on county. The project site is located in the **Newport** County region defined in the RISDISM. The rainfall frequency values recommended by RIDEM and used in this drainage analysis are listed in the table below.

Rainfall Frequency Values for Newport County Rhode Island with 24-Hour Storm Duration			
RIDEM <i>Stormwater Design and Installation Standards manual 3/15</i>			
Frequency	1-Yr	10-Yr	100-Yr
Inches of Rainfall	2.8	4.9	8.6

The existing and proposed conditions runoff calculations were analyzed and the proposed stormwater system was designed to mitigate the peak runoff for the 1, 10, and 100-year 24-hour design storms. The resulting design effectively mitigates and treats runoff from newly developed areas of the site before allowing it to discharge in a non-erosive manner to downstream areas in accordance with the RISDISM.

3.1 ANALYSIS DESIGN POINTS AND OFF-SITE CONTRIBUTIONS

The proposed development contributes stormwater runoff to the following design points. These design points provide a direct comparison for pre-construction and post-construction runoff flows and runoff volumes.

1. Coastal Feature

The following off-site areas contribute surface stormwater runoff to these design points. This runoff either drains through the project area or contributes in some manner which directly affects the design of the stormwater system and has been included in the design calculations. These areas are:

1. None (off-site areas do not impact designed devices and therefore do not need to be modeled).

Watershed maps for both the existing and proposed conditions can be found in Appendix B. These maps demonstrate the areas of the site which contribute to each of the design points and indicate the general pattern of surface or piped runoff flow.



3.2 PROPOSED STRUCTURES

The calculations have been performed assuming maximum allowable lot coverage (40%).

3.3 BASEMENT SUMP PUMP DISCHARGE

No basements are required due to the elevated nature of the structure. No sump pump discharge is anticipated.

4.0 STORMWATER RUNOFF COMPARISONS

Analysis of the existing and proposed runoff during design storms demonstrates that there will no increase in the peak runoff and total volume runoff to the downstream design points as a result of the development.

Comparisons of the runoff at the design points are given below in. The runoff volumes given have been evaluated over a 24-hour period. All of the HydroCAD modeling worksheets are attached in Appendix C and D.

4.1 SUMMARY OF STORMWATER CALCULATIONS

**Table 4.1.1 Comparison of Runoff Values at the Design Point (EX vs. PR)
(Coastal Feature)**

Storm Return Period	Existing Conditions Peak Runoff (cfs)	Proposed Conditions Peak Runoff (cfs)	Existing Conditions Volume Runoff (af)	Proposed Conditions Volume 24 hr Runoff (af)
1-year	2.07	1.67	0.158	0.116
10-year	3.66	3.33	0.286	0.238
100-year	6.44	6.21	0.513	0.461



5.0 STORMWATER BMPS

5.1 SUBSURFACE SAND FILTER

Description

The subsurface sand filter is designed to capture and temporarily store the water quality storm runoff volume in subsurface HDPE chambers and pass it through a sand media layer. The filtered stormwater is infiltrated into the undisturbed strata below the filter. High flow runoff to the sand filter bypasses the device entirely via surface overflow devices at each roof downspout. The sand filter is not intended to have a permanent pool and should drain within 24 hours.

The stormwater design for this development includes the following subsurface sand filters.

1. Device ID (HydroCAD): (Not modeled)
Location: Coastal of the Hotel Structure
Subwatershed treated: N/A (Hotel Roof only)
Lined or Unlined: Unlined
Discharge location: Groundwater
Description: 16 Cultec C-100HD chambers over 24" ASTM C-33 sand



6.0 CONSTRUCTION STORMWATER MAINTENANCE PLAN

During the period of construction and/or until long term vegetation is established, the erosion control measures shall be inspected.

- A. Silt fence / straw wattle / filter socks shall be inspected as indicated in the plan details or notes. At a minimum these devices shall be inspected and repaired once a week and/or immediately following a significant rainfall or snowmelt. Sediment trapped behind these barriers shall be excavated when it reaches a depth of 6" and regraded on the site.
- B. Any erosion control blankets employed throughout the site shall be inspected on a weekly basis.
- C. Any stone construction entrance(s) shall be inspected weekly, and re-established or repaired as necessary. These devices shall be inspected monthly for excessive accumulation of sediment. It may be necessary to remove stones, excavate sediment, and replace stones. If existing paved entrances are utilized to remove construction sediment from vehicle tires, these areas shall be swept on a similar basis. The stabilized construction entrance(s) shall be removed prior to final surfacing.
- D. Seeded areas shall be fertilized and reseeded as necessary to ensure establishment of a vegetative growth that meets the approval of reviewing entities.
- E. Maintenance of the stormwater system during construction shall be the responsibility of the site contractor. Once construction of the site is complete, maintenance of the system shall be the responsibility of the owner.



7.0 LIMITATIONS AND SPECIAL TERMS AND CONDITIONS

1. NE&C's evaluation was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same geographical area, and NE&C observed the degree of care and skill generally exercised by other consultants under similar circumstances and conditions. No warranty expressed or implied is made.
2. Any additional research conducted should be reviewed by Northeast Engineers & Consultants, Inc., such that the conclusions presented herein may be modified.
3. All observations documented in this report were performed under the existing conditions at the time of the assessment.
4. This report has been prepared on the behalf of and is for the exclusive use of the Client. This report and findings contained herein shall not, in whole or in part be disseminated or conveyed to any party, nor used by any other party in whole or in part, without the written consent of NE&C.



APPENDIX A FIGURES



Scale:	NTS	Date:	13FEB20	Designed By:	Drawn By:	Checked By:
Project Title:				Drawing Title:		
<p style="text-align: center;">MANCHESTER HOUSE 24 LEE'S WHARF, NEWPORT, RI</p>				<p style="text-align: center;">LOCUS MAP</p>		
Issued for:				Drawing Number:		Project Number:
<p style="text-align: center;">PERMITTING</p>				<p style="text-align: center;">F-1</p>		<p style="text-align: center;">19107.0</p>



Scale:	NTS	Date:	13FEB20	Designed By:	Drawn By:	Checked By:
Project Title:				Drawing Title:		
<p style="text-align: center;">MANCHESTER HOUSE 24 LEE'S WHARF, NEWPORT, RI</p>				<p style="text-align: center;">SOILS MAP</p>		
Issued for:		Drawing Number:		Project Number:		
<p style="text-align: center;">PERMITTING</p>		<p style="text-align: center;">F-2</p>		<p style="text-align: center;">19107.0</p>		



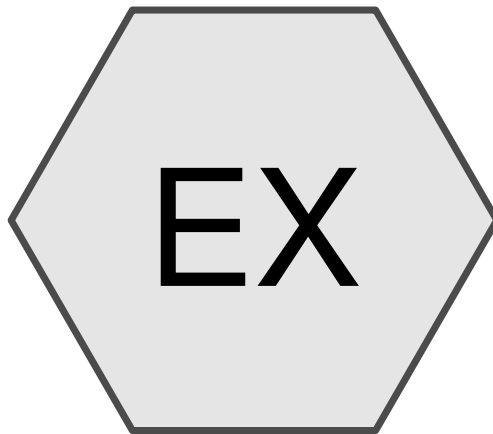
Scale:	NTS	Date:	13FEB20	Designed By:	Drawn By:	Checked By:
Project Title:				Drawing Title:		
MANCHESTER HOUSE 24 LEE'S WHARF, NEWPORT, RI				AERIAL PHOTOGRAPH		
Issued for:		Drawing Number:		Project Number:		
PERMITTING		F-3		19107.0		



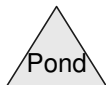
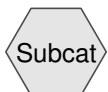
APPENDIX B WATERSHED MAPS



APPENDIX C EXISTING CONDITIONS HYDROCAD



Existing Conditions



19107_2020_02_13

Prepared by Northeast Engineers & Consultants, Inc.
HydroCAD® 9.00 s/n 04733 © 2009 HydroCAD Software Solutions LLC

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.736	98	Pavement and Rooftop (EX)
0.736		TOTAL AREA

Summary for Subcatchment EX: Existing Conditions

Runoff = 2.07 cfs @ 12.07 hrs, Volume= 0.158 af, Depth> 2.57"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type III 24-hr 1-YEAR Rainfall=2.80"

	Area (sf)	CN	Description
*	32,069	98	Pavement and Rooftop
	32,069		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum

19107_2020_02_13

Prepared by Northeast Engineers & Consultants, Inc.
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Manchester House: Existing Conditions
Type III 24-hr 10-YEAR Rainfall=4.90"

Printed 2/21/2020

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Summary for Subcatchment EX: Existing Conditions

Runoff = 3.66 cfs @ 12.07 hrs, Volume= 0.286 af, Depth> 4.66"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YEAR Rainfall=4.90"

	Area (sf)	CN	Description
*	32,069	98	Pavement and Rooftop
	32,069		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum

19107_2020_02_13

Prepared by Northeast Engineers & Consultants, Inc.
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Manchester House: Existing Conditions
Type III 24-hr 100-YEAR Rainfall=8.60"

Printed 2/21/2020

Page 5

Summary for Subcatchment EX: Existing Conditions

Runoff = 6.44 cfs @ 12.07 hrs, Volume= 0.513 af, Depth> 8.35"

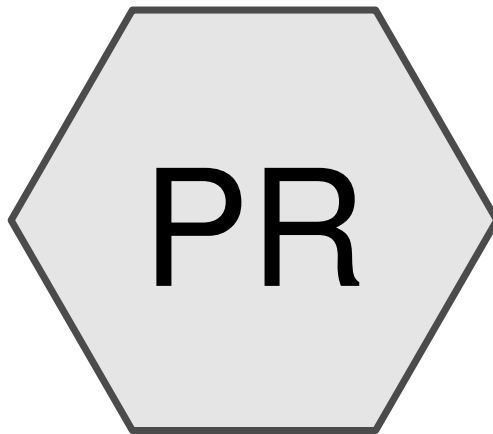
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Type III 24-hr 100-YEAR Rainfall=8.60"

	Area (sf)	CN	Description
*	32,069	98	Pavement and Rooftop
	32,069		100.00% Impervious Area

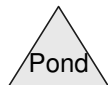
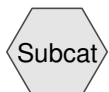
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum



APPENDIX D PROPOSED CONDITIONS HYDROCAD



Proposed Conditions



19107_2020_02_13Prepared by Northeast Engineers & Consultants, Inc.
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Printed 2/21/2020

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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.207	74	>75% Grass cover, Good, HSG C (PR)
0.294	98	Rootop (PR)
0.234	98	Uncovered Pavement and Concrete (PR)
0.736		TOTAL AREA

Summary for Subcatchment PR: Proposed Conditions

Runoff = 1.67 cfs @ 12.07 hrs, Volume= 0.116 af, Depth> 1.88"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type III 24-hr 1-YEAR Rainfall=2.80"

	Area (sf)	CN	Description
*	12,827	98	Rootop
	9,028	74	>75% Grass cover, Good, HSG C
*	10,214	98	Uncovered Pavement and Concrete
	32,069	91	Weighted Average
	9,028		28.15% Pervious Area
	23,041		71.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum

Summary for Subcatchment PR: Proposed Conditions

Runoff = 3.33 cfs @ 12.07 hrs, Volume= 0.238 af, Depth> 3.88"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type III 24-hr 10-YEAR Rainfall=4.90"

	Area (sf)	CN	Description
*	12,827	98	Rootop
	9,028	74	>75% Grass cover, Good, HSG C
*	10,214	98	Uncovered Pavement and Concrete
	32,069	91	Weighted Average
	9,028		28.15% Pervious Area
	23,041		71.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum

Summary for Subcatchment PR: Proposed Conditions

Runoff = 6.21 cfs @ 12.07 hrs, Volume= 0.461 af, Depth> 7.51"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100-YEAR Rainfall=8.60"

	Area (sf)	CN	Description
*	12,827	98	Rootop
	9,028	74	>75% Grass cover, Good, HSG C
*	10,214	98	Uncovered Pavement and Concrete
	32,069	91	Weighted Average
	9,028		28.15% Pervious Area
	23,041		71.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Minimum



APPENDIX E SUPPLEMENTARY CALCULATIONS



Redevelopment Site Calculations (Minimum Standard 6)

Project: 19107: "Manchester House" Hotel and Restaurant, 24 Lee's Wharf, Newport, RI

Water Quality Volume and Recharge Calculations (Reduced Parking):

Disturbed Impevious (DI):

Pavement & Conc.=	10,214			
Building =	12,827			
Other =	0			
Total (DI)=	23,041	sf		DI = 23,041 sf

Net Increased Pervious (NIP):

New Grass / Pervious =	9,028	sf		NIP = 9,028 sf
------------------------	-------	----	--	-----------------------

Per the RISDISM, water quality on a redevelopment site may be addressed be adding pervious surfaces. New pervious surfaces address the water quality requirement for twice the amount of redeveloped surfaces. The remaining area requiring treatment is determined by the following.

Stormwater Treatment Area (STA)	=	(DI X 50%) - (NIP)		
Stormwater Treatment Area (STA)	=	23,041	X	50% - 9,028
Stormwater Treatment Area (STA)	=	2,493	sf	



Unlined Subsurface Sand Filter

Project 19107.0: "Manchester House" Hotel and Restaurant, 24 Lee's Wharf, Newport, RI

Water Quality Volume Calculation (RIDEM Minimum Standard 3):

Pavement =	0									<i>* Area remaining after redevelopment credit</i>
Buildings* =	2,493									Min. WQ _R : 534 cf
Impervious Area:	2,493	sf								WQ _R : 208 cf
Total Disturbed Area:	32,069	sf								WQ _{R75%} : 156 cf

A = Surface area of filter bed (ft ²)									488 ft ²
d _f = Filter bed depth (ft)									2 ft
V _R = media void ratio									33%

Storage Volume in Media:

$$488 \quad \times \quad 2 \quad \times \quad 33\% \quad = \quad 322 \text{ cf}$$

Total System Volume Calculation:

Per the RISDISM, the storage volume of the system must accommodate 75% of the WQ volume (including pretreatment). The total provided area is this area, plus the area under the outlet.

V _M = storage volume in media									322 cf
A = Surface area of filter bed (ft ²)									488 ft ²
h _o = storage height below outlet									0.66 ft
V _{FB} = Volume of pretreatment (if any)									0 cf

Total Storage provided by this BMP:

$$WQ_V = V_M + (A \times h_o) + V_{FB} = 644 \text{ cf}$$

Minimum Area Calculation:

Drain time in an unlined filter is limited by the surrounding soils:

f _c = design infiltration rate									1.02 in/hr
t _f = (d _f X 12 in. / f _c) / 24 hr =									0.98 days

The minimum area of the filter, according to RISDISM, is calculated using the following equation:

$$A_R = (WQ_V) \times (d_f) / [(k) \times (h_f + d_f) \times (t_f)]$$

Where,	WQ _V = Total Required Water Quality Volume								208 cf
	d _f = Filter bed depth (ft)								2 ft
	k = Coefficient of permeability of filter media (ft/day)								3.5 ft/day
	h _f = Average height of water above surface of media								0.33 ft
	t _f = Design filter bed drain time (days)								0.98

Therefore, the minimum surface areas is:

A _R =	52 sf								
A =	488 sf								Area is greater and therefore satisfactory.



Groundwater Recharge Calculations (Minimum Standard 2)

Project: 19107: "Manchester House" Hotel and Restaurant, 24 Lee's Wharf, Newport, RI

Impervious Area*: 2,493 sf

Water Recharge Volume Calculations:

HSG	Recharge Factor (F)
A	0.60
B	0.35
C	0.25
D	0.10

Impervious Area: 2,493 sf **F =** 0.25

$$WRec_v = (\text{Impervious Area}) / 12 \times F$$

$$WRec_v = 52 \text{ cf}$$

Volume of Infiltration for a WQ storm:** 644 cf

* Remaining Area not addressed by redevelopment standards

** Total storage of the infiltrating WQ device.



APPENDIX F SOIL EVALUATIONS



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Environmental Management
Office of Water Resources
Onsite Wastewater Treatment Systems Program



Site Evaluation Form
Part A - Soil Profile Description Application Number Drainage Test Holes

Property Owner: 44 Ocean Partners, LLC
Property Location: 5 Lee's Wharf, Newport (A.P. 32, Lot 314)
Date of Test Hole: December 27, 2019
Soil Evaluator: Daniel Welch License Number: D4094
Weather: Overcast, 45°F Shaded: Yes No Time: 8:00am

Table with 11 columns: TH Horizon, Depth, Horizon Boundaries (Dist, Topo), Soil Colors (Matrix, Re-Dox Features), Re-Dox (Ab., S., Contr.), Texture, Structure, Consistence, Soil Category. Contains data for two test holes (TH 1 and TH 2) with horizons like Asphalt, HTM, and C.

TH 1 Soil Class A Total Depth 100" Impervious/Limiting Layer Depth N/R GW Seepage Depth 66" SHWT 56"
TH 2 Soil Class A Total Depth 96" Impervious/Limiting Layer Depth N/R GW Seepage Depth 70" SHWT 53"

Comments: ESHWT measured from existing grade, not original grade.

Part B





Site Evaluation – to be completed by Soil Evaluator or Class II or III Designer

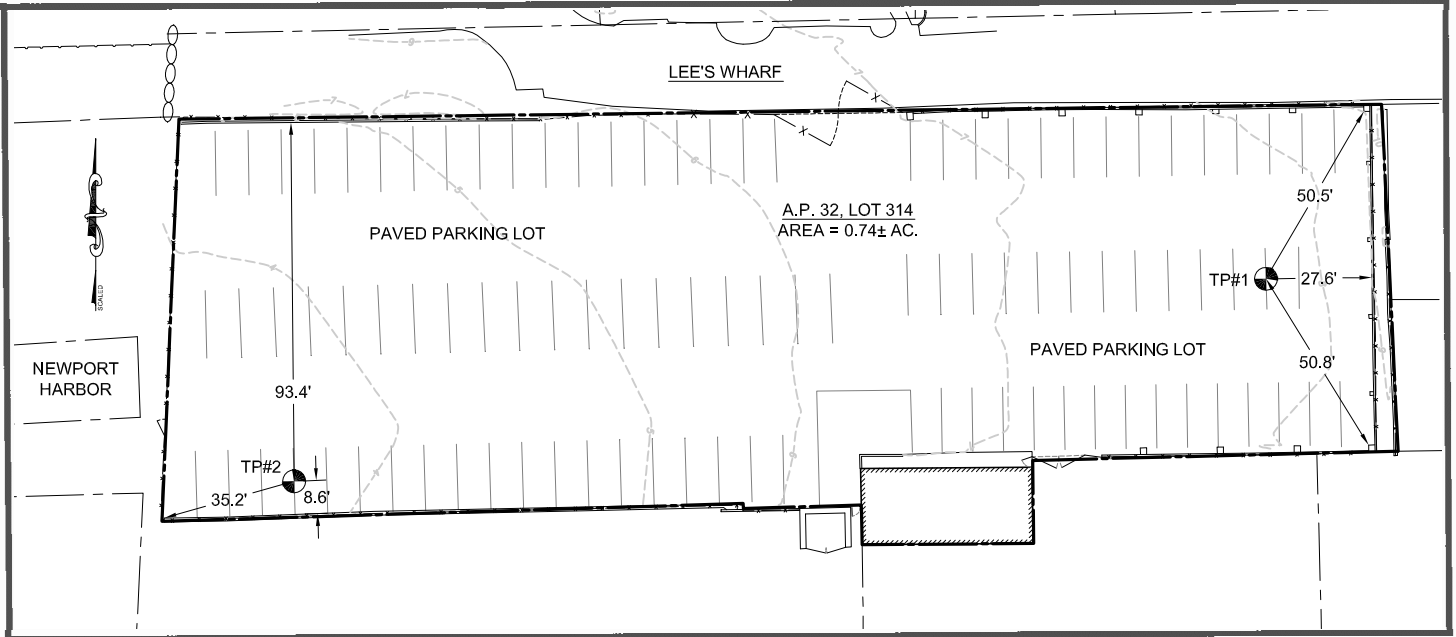
Please use the area below to locate:

1. Test holes and bedrock test holes,
2. Approximate direction of due north,
3. Offsets from all test holes to fixed points such as street, utility pole, or other permanent, marked object.*

***OFFSETS MUST BE SHOWN**

Key:

-  Approximate location of test holes
-  Approximate location of bedrock test holes
-  Estimated gradient and direction of slope
-  Approximate direction of due north



1. Relief and Slope: 0-2%
2. Presence of any watercourse, wetlands or surface water bodies, within 200 feet of test holes? If yes, locate on above sketch. NO YES
3. Restrictive Layer or Bedrock within 4' below original ground within 25 feet of test hole? Provide all test hole locations & depths above. NO YES
4. Presence of existing or proposed private drinking water wells within 200 feet of test holes? If yes, locate on above sketch. NO YES
5. Public drinking water wells within 500 feet of test holes? If yes, locate on above sketch. NO YES
6. Is site within the watershed of a public drinking water reservoir or other critical area defined in Rule 6.42? NO YES
7. Has soil been excavated from or fill deposited on site? If yes, locate on above sketch. NO YES
8. Site's potential for flooding or ponding: NONE SLIGHT MODERATE SEVERE
9. Landscape position: Toeslope
10. Vegetation: Asphalt Parking Lot
11. Indicate approximate location of property lines and roadways.
12. Additional comments, site constraints or additional information regarding site: _____

Certification

The undersigned hereby certifies that all information on this application and accompanying forms, submittals and sketches are true and accurate and that I have been authorized by the owner(s) to conduct these necessary field investigations and submit this request.

Part A prepared by: Daniel Welch D4094 Part B prepared by: Daniel Welch D4094
Signature License # Signature License #

DO NOT WRITE IN THIS SPACE

Witnessed Soil Evaluation Decision: Concur Inconclusive Disclaim

Unwitnessed Soil Evaluations Decision: Accept Inconclusive Disclaim

Wet Season Determination required Additional Field Review Required

Explanation: _____

Signature Authorized Agent _____ Date _____



APPENDIX G RISDISM STORMWATER CHECKLIST (APPENDIX A)

APPENDIX A: STORMWATER MANAGEMENT PLAN CHECKLIST AND LID PLANNING REPORT – STORMWATER DESIGN SUMMARY

PROJECT NAME: “Manchester House”	(RIDEM USE ONLY)
TOWN: Newport RI	STW/WQC File #:
BRIEF PROJECT DESCRIPTION: Hotel and Restaurant Coastal Development	Date Received:

Stormwater Management Plan (SMP) Elements – Minimum Standards

Submit **four separately bound documents**: Appendix A Checklist; Stormwater Site Planning, Analysis and Design Report with Plan Set/Drawings; Soil Erosion and Sediment Control (SESC) Plan, and Post Construction Operations and Maintenance (O&M) Plan. Please refer to [Suggestions to Promote Brevity](#).

Note: All stormwater construction projects **must submit** a Stormwater Management Plan (SMP). However, not every element listed below is required per the [RIDEM Stormwater Rules](#) and the [RIPDES Construction General Permit \(CGP\)](#). This checklist will help identify the required elements to be submitted with an Application for Stormwater Construction Permit & Water Quality Certification.

PART 1. PROJECT AND SITE INFORMATION

PROJECT TYPE (Check all that apply)

<input type="checkbox"/> Residential	<input checked="" type="checkbox"/> Commercial	<input type="checkbox"/> Federal	<input type="checkbox"/> Retrofit	<input type="checkbox"/> Restoration
<input type="checkbox"/> Road	<input type="checkbox"/> Utility	<input type="checkbox"/> Fill	<input type="checkbox"/> Dredge	<input type="checkbox"/> Mine
<input type="checkbox"/> Other (specify):				

SITE INFORMATION

Vicinity Map

INITIAL DISCHARGE LOCATION(S): The WQv discharges to: (You may choose more than one answer if several discharge points are associated with the project.) See [Guidance to identify receiving waters](#).

<input checked="" type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water	<input type="checkbox"/> MS4
<input type="checkbox"/> GAA	<input type="checkbox"/> Isolated Wetland	<input type="checkbox"/> RIDOT
<input type="checkbox"/> GA	<input checked="" type="checkbox"/> Named Waterbody	<input type="checkbox"/> RIDOT Alteration Permit is Approved
<input checked="" type="checkbox"/> GB	<input type="checkbox"/> Unnamed Waterbody Connected to Named Waterbody	<input type="checkbox"/> Town
		<input type="checkbox"/> Other (specify):

ULTIMATE RECEIVING WATERBODY LOCATION(S): Include pertinent information that applies to both WQ_v and flow from larger storm events including overflows. Choose all that apply, and repeat table for each waterbody.

<input checked="" type="checkbox"/> Groundwater or Disconnected Wetland	<input type="checkbox"/> SRWP
<input checked="" type="checkbox"/> Waterbody Name: Newport Harbor	<input type="checkbox"/> Coldwater <input type="checkbox"/> Warmwater <input checked="" type="checkbox"/> Unassessed
<input checked="" type="checkbox"/> Waterbody ID: RI0007030E-01E	<input type="checkbox"/> 4 th order stream of pond 50 acres or more
<input type="checkbox"/> TMDL for:	<input type="checkbox"/> Watershed of flood prone river (e.g., Pocasset River)
<input type="checkbox"/> Contributes to a priority outfall listed in the TMDL	<input type="checkbox"/> Contributes stormwater to a public beach
<input checked="" type="checkbox"/> 303(d) list – Impairment(s) for: Enterococcus	<input type="checkbox"/> Contributes to shellfishing grounds

PROJECT HISTORY		
<input type="checkbox"/> RIDEM Pre- Application Meeting	Meeting Date:	<input type="checkbox"/> Minutes Attached
<input type="checkbox"/> Municipal Master Plan Approval	Approval Date:	<input type="checkbox"/> Minutes Attached
<input type="checkbox"/> Subdivision Suitability Required	Approval #:	
<input type="checkbox"/> Previous Enforcement Action has been taken on the property	Enforcement #:	
FLOODPLAIN & FLOODWAY See Guidance Pertaining to Floodplain and Floodways		
<input checked="" type="checkbox"/> Riverine 100-year floodplain: FEMA FLOODPLAIN FIRMETTE has been reviewed and the 100-year floodplain is on site		
<input checked="" type="checkbox"/> Delineated from FEMA Maps		
NOTE: Per Rule 250-RICR-150-10-8-1.1(B)(5)(d)(3), provide volumetric floodplain compensation calculations for cut and fill/displacement calculated by qualified professional		
<input type="checkbox"/> Calculated by Professional Engineer		
<input type="checkbox"/> Calculations are provided for cut vs. fill/displacement volumes proposed within the 100-year floodplain	Amount of Fill (CY):	
	Amount of Cut (CY):	
<input type="checkbox"/> Restrictions or modifications are proposed to the flow path or velocities in a floodway		
<input type="checkbox"/> Floodplain storage capacity is impacted		
<input type="checkbox"/> Project area is not within 100-year floodplain as defined by RIDEM		

CRMC JURISDICTION
<input checked="" type="checkbox"/> CRMC Assent required
<input type="checkbox"/> Property subject to a Special Area Management Plan (SAMP). If so, specify which SAMP:
<input checked="" type="checkbox"/> Sea level rise mitigation has been designed into this project

LUHPPL IDENTIFICATION - MINIMUM STANDARD 8:		
1. OFFICE OF WASTE MANAGEMENT (OWM)		
<input type="checkbox"/> Known or suspected releases of HAZARDOUS MATERIAL are present at the site (Hazardous Material is defined in Rule 1.4(A)(33) of 250-140-30-1 of the RIDEM Rules and Regulations for Investigation and Remediation of Hazardous Materials (the Remediation Regulations))		RIDEM CONTACT:
<input type="checkbox"/> Known or suspected releases of PETROLEUM PRODUCT are present at the site (Petroleum Product as defined in Rule 1.5(A)(84) of 250-140-25-1 of the RIDEM Rules and Regulations for Underground Storage Facilities Used for Regulated Substances and Hazardous Materials)		
<input type="checkbox"/> This site is identified on the RIDEM Environmental Resources Map as one of the following regulated facilities		SITE ID#:
<input type="checkbox"/> CERCLIS/Superfund (NPL)		
<input type="checkbox"/> State Hazardous Waste Site (SHWS)		
<input type="checkbox"/> Environmental Land Usage Restriction (ELUR)		
<input type="checkbox"/> Leaking Underground Storage Tank (LUST)		
<input type="checkbox"/> Closed Landfill		
Note: If any boxes in 1 above are checked, the applicant must contact the RIDEM OWM Project Manager associated with the Site to determine if subsurface infiltration of stormwater is allowable for the project. Indicate if the infiltration corresponds to "Red," "Yellow" or "Green" as described in Section 3.2.8 of the RISDISM Guidance (Subsurface Contamination Guidance). Also, note and reference approval in PART 3, Minimum Standard 2: Groundwater Recharge/Infiltration.		
2. PER MINIMUM STANDARD 8 of RICR 8.14.C.1-6 "LUHPPLS," THE SITE IS/HAS:		
<input type="checkbox"/> Industrial Site with RIPDES MSGP, except where No Exposure Certification exists. http://www.dem.ri.gov/programs/water/permits/ripdes/stormwater/status.php		
<input type="checkbox"/> Auto Fueling Facility (e.g., gas station)		
<input type="checkbox"/> Exterior Vehicles Service, Maintenance, or Equipment Cleaning Area		

Stormwater Management, Design, and Installation Rules (250-RICR-150-10-8)

<input type="checkbox"/>	Road Salt Storage and Loading Areas (exposed to rainwater)	
<input type="checkbox"/>	Outdoor Storage and Loading/Unloading of Hazardous Substances	
3. STORMWATER INDUSTRIAL PERMITTING		
<input type="checkbox"/>	The site is associated with existing or proposed activities that are considered Land Uses with Higher Potential Pollutant Loads (LUHPPLS) (see RICR 8.14.C)	Activities: Sector:
<input type="checkbox"/>	Construction is proposed on a site that is subject to THE MULTI-SECTOR GENERAL PERMIT (MSGP) UNDER RULE 31(B)15 OF THE RIPDES REGULATIONS.	MSGP permit #
<input type="checkbox"/>	Additional stormwater treatment is required by the MSGP Explain:	

REDEVELOPMENT STANDARD – MINIMUM STANDARD 6		
<input checked="" type="checkbox"/> Pre Construction Impervious Area		
<input checked="" type="checkbox"/>	Total Pre-Construction Impervious Area (TIA) 32,069 sf	
<input checked="" type="checkbox"/>	Total Site Area (TSA) 32,069 sf	
<input checked="" type="checkbox"/>	Jurisdictional Wetlands (JW) 0 sf	
<input checked="" type="checkbox"/>	Conservation Land (CL) 0 sf	
<input checked="" type="checkbox"/> Calculate the Site Size (defined as contiguous properties under same ownership)		
<input checked="" type="checkbox"/>	Site Size (SS) = (TSA) – (JW) – (CL) 32,069	
<input type="checkbox"/>	$(\text{TIA}) / (\text{SS}) = 100\%$	<input checked="" type="checkbox"/> $(\text{TIA}) / (\text{SS}) > 0.4?$
<input checked="" type="checkbox"/> YES, Redevelopment		

PART 2. LOW IMPACT DEVELOPMENT ASSESSMENT – MINIMUM STANDARD 1 (NOT REQUIRED FOR REDEVELOPMENT OR RETROFITS) This section may be deleted if not required.	
<p>Note: A written description must be provided specifying why each method is not being used or is not applicable at the Site. Appropriate answers may include:</p> <ul style="list-style-type: none"> • Town requires ... (state the specific local requirement) • Meets Town’s dimensional requirement of ... • Not practical for site because ... • Applying for waiver/variance to achieve this (pending/approved/denied) • Applying for wavier/variance to seek relief from this (pending/approved/denied) 	
<p>A) PRESERVATION OF UNDISTURBED AREAS, BUFFERS, AND FLOODPLAINS</p> <input checked="" type="checkbox"/> Sensitive resource areas and site constraints are identified (required) <input checked="" type="checkbox"/> Local development regulations have been reviewed (required) <input checked="" type="checkbox"/> All vegetated buffers and coastal and freshwater wetlands will be protected during and after construction <input type="checkbox"/> Conservation Development or another site design technique has been incorporated to protect open space and pre-development hydrology. Note: If Conservation Development has been used, check box and skip to Subpart C <input checked="" type="checkbox"/> As much natural vegetation and pre-development hydrology as possible has been maintained	<p>IF NOT IMPLEMENTED, EXPLAIN HERE</p>

Stormwater Management, Design, and Installation Rules (250-RICR-150-10-8)

<p>B) LOCATE DEVELOPMENT IN LESS SENSITIVE AREAS AND WORK WITH THE NATURAL LANDSCAPE CONDITIONS, HYDROLOGY, AND SOILS</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Development sites and building envelopes have been appropriately distanced from wetlands and waterbodies <input checked="" type="checkbox"/> Development and stormwater systems have been located in areas with greatest infiltration capacity (e.g., soil groups A and B) <input type="checkbox"/> Plans show measures to prevent soil compaction in areas designated as Qualified Pervious Areas (QPA's) <input type="checkbox"/> Development sites and building envelopes have been positioned outside of floodplains <input type="checkbox"/> Site design positions buildings, roadways and parking areas in a manner that avoids impacts to surface water features <input checked="" type="checkbox"/> Development sites and building envelopes have been located to minimize impacts to steep slopes ($\geq 15\%$) <input type="checkbox"/> Other (describe): 	<p>No QPAs due to soil type.</p> <p>Building design suitable for floodplain.</p> <p>No steep slopes on site.</p>
<p>C) MINIMIZE CLEARING AND GRADING</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Site clearing has been restricted to <u>minimum area needed</u> for building footprints, development activities, construction access, and safety. <input checked="" type="checkbox"/> Site has been designed to position buildings, roadways, and parking areas in a manner that minimizes grading (cut and fill quantities) <input checked="" type="checkbox"/> Protection for stands of trees and individual trees and their root zones to be preserved has been specified, and such protection extends at least to the tree canopy drip line(s) <input type="checkbox"/> Plan notes specify that public trees removed or damaged during construction shall be replaced with equivalent 	<p>No existing vegetation.</p> <p>No steep slopes.</p> <p>No clearing required.</p>
<p>D) REDUCE IMPERVIOUS COVER</p> <ul style="list-style-type: none"> <input type="checkbox"/> Reduced roadway widths (≤ 22 feet for ADT ≤ 400; ≤ 26 feet for ADT 400 - 2,000) <input type="checkbox"/> Reduced driveway areas (length minimized via reduced ROW width (≤ 45 ft.) and/or reduced (or absolute minimum) front yard setback; width minimized to ≤ 9 ft. wide one lane; ≤ 18 ft. wide two lanes; shared driveways; pervious surface) <input type="checkbox"/> Reduced building footprint: Explain approach: <input type="checkbox"/> Reduced sidewalk area (≤ 4 ft. wide; one side of the street; unpaved path; pervious surface) <input type="checkbox"/> Reduced cul-de-sacs (radius < 45 ft; vegetated island; alternative turn-around) <input checked="" type="checkbox"/> Reduced parking lot area: Explain approach <input checked="" type="checkbox"/> Use of pervious surfaces for driveways, sidewalks, parking areas/overflow parking areas, etc. <input type="checkbox"/> Minimized impervious surfaces (project meets or is less than maximum specified by Zoning Ordinance) <input type="checkbox"/> Other (describe): 	<p>No roadways.</p> <p>Parking under building where possible.</p>
<p>E) DISCONNECT IMPERVIOUS AREA</p> <ul style="list-style-type: none"> <input type="checkbox"/> Impervious surfaces have been disconnected, and runoff has been diverted to QPAs to the maximum extent possible <input type="checkbox"/> Residential street edges allow side-of-the-road drainage into vegetated open swales <input type="checkbox"/> Parking lot landscaping breaks up impervious expanse AND accepts runoff <input type="checkbox"/> Other (describe): 	<p>No QPAs on site.</p> <p>Parking lot landscaping provided where possible.</p>
<p>F) MITIGATE RUNOFF AT THE POINT OF GENERATION</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Small-scale BMPs have been designated to treat runoff as close as possible to the source 	
<p>G) PROVIDE LOW-MAINTENANCE NATIVE VEGETATION</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Low-maintenance landscaping has been proposed using native species and cultivars <input type="checkbox"/> Plantings of native trees and shrubs in areas previously cleared of native vegetation are shown on site plan 	

Stormwater Management, Design, and Installation Rules (250-RICR-150-10-8)

<input type="checkbox"/> Lawn areas have been limited/minimized, and yards have been kept undisturbed to the maximum extent practicable on residential lots	
H) RESTORE STREAMS/WETLANDS <input type="checkbox"/> Historic drainage patterns have been restored by removing closed drainage systems, daylighting buried streams, and/or restoring degraded stream channels and/or wetlands <input type="checkbox"/> Removal of invasive species <input type="checkbox"/> Other	

PART 3. SUMMARY OF REMAINING STANDARDS

GROUNDWATER RECHARGE – MINIMUM STANDARD 2

YES	NO	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	The project has been designed to meet the groundwater recharge standard.
<input type="checkbox"/>	<input type="checkbox"/>	If “No,” the justification for groundwater recharge criterion waiver has been explained in the Narrative (e.g., threat of groundwater contamination or physical limitation), if applicable (see RICR 8.8.D);
<input type="checkbox"/>	<input type="checkbox"/>	Your waiver request has been explained in the Narrative, if applicable.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Is this site identified as a Regulated Facility in Part 1, Minimum Standard 8: LUHPPL Identification?
<input type="checkbox"/>	<input type="checkbox"/>	If “Yes,” has approval for infiltration by the Office of Waste Management Site Project Manager, per Part 1, Minimum Standard 8, been requested?

TABLE 2-1: Summary of Recharge (see RISDISM Section 3.3.2)

(Add or Subtract Rows as Necessary)

Design Point	Impervious Area Treated (sq ft)	Total Re _v Required (cu ft)	LID Stormwater Credits (see RISDISM Section 4.6.1)	Recharge Required by Remaining BMPs (cu ft)	Recharge Provided by BMPs (cu ft)
			Portion of Re _v directed to a QPA (cu ft)		
DP-1: Coastal Feature	2,493 *	52	0	52	644
DP-2:					
DP-3:					
DP-4:					
TOTALS:					

Notes:

- Only BMPs listed in RISDISM Table 3-5 “List of BMPs Acceptable for Recharge” may be used to meet the recharge requirement.
 - Recharge requirement must be satisfied for each waterbody ID.
- * After applying redevelopment credit for new pervious surfaces.

Indicate where the pertinent calculations and/or information for the above items are provided (i.e., name of report/document, page numbers, appendices, etc.):

Stormwater Report: Appendix E “Supplementary Calculations”

Stormwater Management, Design, and Installation Rules (250-RICR-150-10-8)

WATER QUALITY – MINIMUM STANDARD 3		
YES	NO	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Does this project meet or exceed the required water quality volume WQv (see RICR 8.9.E-I)?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is the proposed final impervious cover greater than 20% of the disturbed area (see RICR 8.9.E-I)? If “Yes,” either the Modified Curve Number Method or the Split Pervious/Impervious method in Hydro-CAD was used to calculate WQv; or, If “Yes,” either TR-55 or TR-20 was used to calculate WQv; and, If “No,” the project meets the minimum WQv of 0.2 watershed inches over the entire disturbed area. Not Applicable
<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Does this project meet or exceed the ability to treat required water quality flow WQf (see RICR 8.9.I.1-3)?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Does this project propose an increase of impervious cover to a receiving water body with impairments? If “Yes,” please indicate below the method that was used to address the water quality requirements of no further degradation to a low-quality water.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	RICR 8.36. A Pollutant Loading Analysis is needed and has been completed.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	The Water Quality Guidance Document (Water Quality Goals and Pollutant Loading Analysis Guidance for Discharges to Impaired Waters) has been followed as applicable.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	BMPs are proposed that are on the approved technology list . If “Yes,” please provide all required worksheets from the manufacturer.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Additional pollutant-specific requirements and/or pollutant removal efficiencies are applicable to the site as the result of a TMDL, SAMP, or other watershed-specific requirements. If “Yes,” please describe:

TABLE 3-1: Summary of Water Quality (see RICR 8.9)

Design Point and WB ID	Impervious area treated (sq ft)	Total WQv Required (cu ft)	LID Stormwater Credits (see RICR 8.18)	Water Quality Treatment Remaining (cu ft)	Water Quality Provided by BMPs (cu ft)
			WQv directed to a QPA (cu ft)		
DP-1: Coastal Feature	2,493 *	208	0	208	644
DP-2:					
DP-3:					
DP-4:					
TOTALS:					

Notes:

- Only BMPs listed in RICR 8.20 and 8.25 or the Approved Technologies List of BMPs is Acceptable for Water Quality treatment.
 - For each Design Point, the Water Quality Volume Standard must be met for each Waterbody ID.
- * After applying redevelopment credit for new pervious surfaces.

<input checked="" type="checkbox"/> YES	This project has met the setback requirements for each BMP.
<input type="checkbox"/> NO	If “No,” please explain:
<input type="checkbox"/> Indicate where the pertinent calculations and/or information for the above items are provided (i.e., name of report/document, page numbers, appendices, etc.): Stormwater Report: Appendix E “Supplementary Calculations”	

Stormwater Management, Design, and Installation Rules (250-RICR-150-10-8)

CONVEYANCE AND NATURAL CHANNEL PROTECTION (RICR 8.10) – MINIMUM STANDARD 4		
YES	NO	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Is this standard waived? If “Yes,” please indicate one or more of the reasons below:
		<input checked="" type="checkbox"/> The project directs discharge to a large river (i.e., 4th-order stream or larger. See RISDISM Appendix I for State-wide list and map of stream orders), bodies of water >50.0 acres in surface area (i.e., lakes, ponds, reservoirs), or tidal waters. <input checked="" type="checkbox"/> The project directs is a small facility with impervious cover of less than or equal to 1 acre. <input type="checkbox"/> The project has a post-development peak discharge rate from the facility that is less than 2 cfs for the 1-year, 24-hour Type III design storm event (prior to any attenuation). (<u>Note</u> : LID design strategies can greatly reduce the peak discharge rate).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Conveyance and natural channel protection for the site have been met. If “No,” explain why: This standard is not required for redevelopment sites in addition to the reasons given above.

TABLE 4-1: Summary of Channel Protection Volumes (see RICR 8.10)

Design Point	Receiving Water Body Name	Coldwater Fishery? (Y/N)	Total CPv Required (cu ft)	Total CPv Provided (cu ft)	Average Release Rate Modeled in the 1-yr storm (cfs)
DP-1:					
DP-2:					
DP-3:					
DP-4:					
TOTALS:					
<u>Note:</u> The Channel Protection Volume Standard must be met in each waterbody ID.					
<input type="checkbox"/> YES <input type="checkbox"/> NO	The CPv is released at roughly a uniform rate over a 24-hour duration (see examples of sizing calculations in Appendix D of the RISDISM).				
<input type="checkbox"/> YES <input type="checkbox"/> NO	Do additional design restrictions apply resulting from any discharge to cold-water fisheries; If “Yes,” please indicate restrictions and solutions below.				
<input type="checkbox"/> Indicate below where the pertinent calculations and/or information for the above items are provided (i.e., name of report/document, page numbers, appendices, etc.).					

Stormwater Management, Design, and Installation Rules (250-RICR-150-10-8)

OVERBANK FLOOD PROTECTION (RICR 8.11) AND OTHER POTENTIAL HIGH FLOWS – MINIMUM STANDARD 5		
YES	NO	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Is this standard waived? If yes, please indicate one or more of the reasons below:
		<input type="checkbox"/> The project directs discharge to a large river (i.e., 4th-order stream or larger. See Appendix I for state-wide list and map of stream orders), bodies of water >50.0 acres in surface area (i.e., lakes, ponds, reservoirs), or tidal waters. <input type="checkbox"/> A Downstream Analysis (see RICR 8.11.D and E) indicates that peak discharge control would not be beneficial or would exacerbate peak flows in a downstream tributary of a particular site (e.g., through coincident peaks).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Does the project flow to an MS4 system or subject to other stormwater requirements? If “Yes,” indicate as follows:
		<input type="checkbox"/> RIDOT <input type="checkbox"/> Other (specify):
<p>Note: The project could be approved by RIDEM but not meet RIDOT or Town standards. RIDOT’s regulations indicate that post-volumes must be less than pre-volumes for the 10-yr storm at the design point entering the RIDOT system. If you have not already received approval for the discharge to an MS4, please explain below your strategy to comply with RIDEM and the MS4.</p>		
		Indicate below which model was used for your analysis. <input type="checkbox"/> TR-55 <input type="checkbox"/> TR-20 <input checked="" type="checkbox"/> HydroCAD <input type="checkbox"/> Bentley/Haestad <input type="checkbox"/> Intellisolve <input type="checkbox"/> Other (Specify):
YES	NO	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Does the drainage design demonstrate that flows from the 100-year storm event through a BMP will safely manage and convey the 100-year storm? If “No,” please explain briefly below and reference where in the application further documentation can be found (i.e., name of report/document, page numbers, appendices, etc.):
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Do off-site areas contribute to the sub-watersheds and design points? If “Yes,”
<input type="checkbox"/>	<input type="checkbox"/>	Are the areas modeled as “present condition” for both pre- and post-development analysis?
<input type="checkbox"/>	<input type="checkbox"/>	Are the off-site areas shown on the subwatershed maps?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Does the drainage design confirm safe passage of the 100-year flow through the site for off-site runoff?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Is a Downstream Analysis required (see RICR 8.11.E.1)?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Calculate the following:
		<input checked="" type="checkbox"/> Area of disturbance within the sub-watershed (areas) 32,069 sq. ft.
		<input checked="" type="checkbox"/> Impervious cover (%) 72%
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Is a dam breach analysis required (earthen embankments over six (6) feet in height, or a capacity of 15 acre-feet or more, and contributes to a significant or high hazard dam)?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Does this project meet the overbank flood protection standard?

Stormwater Management, Design, and Installation Rules (250-RICR-150-10-8)

Table 5-1 Hydraulic Analysis Summary

Subwatershed (Design Point)	1.2" Peak Flow (cfs) **		1-yr Peak Flow (cfs)		10-yr Peak Flow (cfs)		100-yr Peak Flow (cfs)	
	Pre (cfs)	Post (cfs)	Pre (cfs)	Post (cfs)	Pre (cfs)	Post (cfs)	Pre (cfs)	Post (cfs)
DP-1: Coast	0.84	0.60	2.07	1.67	3.66	3.33	6.44	6.21
DP-2:								
DP-3:								
DP-4:								
TOTALS:								

** Utilize modified curve number method or split pervious /impervious method in HydroCAD.

Note: The hydraulic analysis must demonstrate no impact to each individual subwatershed DP unless each DP discharges to the same wetland or water resource.

Indicate as follows where the pertinent calculations and/or information for the items above are provided	Name of report/document, page numbers, appendices, etc.
Existing conditions analysis for each subwatershed, including curve numbers, times of concentration, runoff rates, volumes, and water surface elevations showing methodologies used and supporting calculations.	Stormwater Report Appendix C
Proposed conditions analysis for each subwatershed, including curve numbers, times of concentration, runoff rates, volumes, water surface elevations, and routing showing the methodologies used and supporting calculations.	Stormwater Report Appendix D
Final sizing calculations for structural stormwater BMPs, including contributing drainage area, storage, and outlet configuration.	Stormwater Report Appendix E
Stage-storage, inflow and outflow hydrographs for storage facilities (e.g., detention, retention, or infiltration facilities).	n/a

Table 5-2 Summary of Best Management Practices

BMP ID	DP #	BMP Type (e.g., bioretention, tree filter)	BMP Functions					Bypass Type	Horizontal Setback Criteria are met per RICR 8.21.B.10, 8.22.D.11, and 8.35.B.4		
			Pre-Treatment (Y/N/NA)	Re _v	WQ _v	CP _v (Y/N/NA)	Overbank Flood Reduction (Y/N/NA)		External (E) Internal (I) or NA	Yes/No	Technical Justification (Design Report page number)
1	1	UG sand filter	n/a	644	644	n/a	n/a	n/a	Y		10 ft
		TOTALS:									

Stormwater Management, Design, and Installation Rules (250-RICR-150-10-8)

Table 5.3 Summary of Soils to Evaluate Each BMP									
DP #	BMP ID	BMP Type (e.g., bioretention, tree filter)	Soils Analysis for Each BMP						Exfiltration Rate Applied (in/hr)
			Test Pit ID# and Ground Elevation		SHWT Elevation (ft)	Bottom of Practice Elevation* (ft)	Separation Distance Provided (ft)	Hydrologic Soil Group (A, B, C, D)	
			Primary	Secondary					
1	1	UG Sand filter	2	1	0.5	3.5	3	C	1.02
		TOTALS:							

* For underground infiltration systems (UICs) bottom equals bottom of stone, for surface infiltration basins bottom equals bottom of basin, for filters bottom equals interface of storage and top of filter layer

LAND USES WITH HIGHER POTENTIAL POLLUTANTS LOADS (LUHPPLs) – MINIMUM STANDARD 8			
YES	NO	N/A	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Describe any LUHPPLs identified in Part 1, Minimum Standard 8, Section 2. If not applicable, continue to Minimum Standard 9.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Are these activities already covered under an MSGP? If “No,” please explain if you have applied for an MSGP or intend to do so?
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	List the specific BMPs that are proposed for this project that receive stormwater from LUHPPL drainage areas. These BMP types must be listed in RISDISM Table 3-3, “Acceptable BMPs for Use at LUHPPLs.” Please list BMPs:
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Additional BMPs, or additional pretreatment BMP’s if any, that meet RIPDES MSGP requirements; Please list BMPs:
			Indicate below where the pertinent calculations and/or information for the above items are provided (i.e., name of report/document, page numbers, appendices, etc.).

ILLICIT DISCHARGES – MINIMUM STANDARD 9			
Illicit discharges are defined as unpermitted discharges to Waters of the State that do not consist entirely of stormwater or uncontaminated groundwater, except for certain discharges identified in the RIPDES Phase II Stormwater General Permit.			
YES	NO	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Have you checked for illicit discharges?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Have any been found and/or corrected? If “Yes,” please identify.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Does your report explain preventative measures that keep non-stormwater discharges out of the Waters of the State (during and after construction)?

Stormwater Management, Design, and Installation Rules (250-RICR-150-10-8)

SOIL EROSION AND SEDIMENT CONTROL (SESC) – MINIMUM STANDARD 10		
YES	NO	N/A
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Have you included a Soil Erosion and Sediment Control Plan Set and/or Complete Construction Plan Set?</p> <p>Have you provided a separately-bound document based upon the SESC Template? If yes, proceed to Minimum Standard 11 (the following items can be assumed to be addressed). If “No,” include a document with your submittal that addresses the following elements of an SESC Plan:</p>		
<input type="checkbox"/>	Soil Erosion and Sediment Control Plan Project Narrative, including a description of how the fifteen (15) Performance Criteria have been met:	
<input type="checkbox"/>	Provide Natural Buffers and Maintain Existing Vegetation	
<input type="checkbox"/>	Minimize Area of Disturbance	
<input type="checkbox"/>	Minimize the Disturbance of Steep Slopes	
<input type="checkbox"/>	Preserve Topsoil	
<input type="checkbox"/>	Stabilize Soils	
<input type="checkbox"/>	Protect Storm Drain Inlets	
<input type="checkbox"/>	Protect Storm Drain Outlets	
<input type="checkbox"/>	Establish Temporary Controls for the Protection of Post-Construction Stormwater Control Measures	
<input type="checkbox"/>	Establish Perimeter Controls and Sediment Barriers	
<input type="checkbox"/>	Divert or Manage Run-On from Up-Gradient Areas	
<input type="checkbox"/>	Properly Design Constructed Stormwater Conveyance Channels	
<input type="checkbox"/>	Retain Sediment On-Site	
<input type="checkbox"/>	Control Temporary Increases in Stormwater Velocity, Volume, and Peak Flows	
<input type="checkbox"/>	Apply Construction Activity Pollution Prevention Control Measures	
<input type="checkbox"/>	Install, Inspect, and Maintain Control Measures and Take Corrective Actions	
<input type="checkbox"/>	Qualified SESC Plan Preparer’s Information and Certification	
<input type="checkbox"/>	Operator’s Information and Certification; if not known at the time of application, the Operator must certify the SESC Plan upon selection and prior to initiating site activities	
<input type="checkbox"/>	Description of Control Measures, such as Temporary Sediment Trapping and Conveyance Practices, including design calculations and supporting documentation, as required	

STORMWATER MANAGEMENT SYSTEM OPERATION, MAINTENANCE, AND POLLUTION PREVENTION PLAN – MINIMUM STANDARDS 7 AND 9		
Operation and Maintenance Section		
YES	NO	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Have you minimized all sources of pollutant contact with stormwater runoff, to the maximum extent practicable?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Have you provided a separately-bound Operation and Maintenance Plan for the site and for all of the BMPs, and does it address each element of RICR 8.17 and RISDISM Appendix C and E?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Lawn, Garden, and Landscape Management meet the requirements of RISDISM Section G.7? If “No,” why not?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is the property owner or homeowner’s association responsible for the stormwater maintenance of all BMP’s? If “No,” you must provide a legally binding and enforceable maintenance agreement (see RISDISM Appendix E, page 26) that identifies the entity that will be responsible for maintenance of the stormwater. Indicate where this agreement can be found in your report (i.e., name of report/document, page numbers, appendices, etc.).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Do you anticipate that you will need legal agreements related to the stormwater structures? (e.g. off-site easements, deed restrictions, covenants, or ELUR per the Remediation Regulations). If “Yes,” have you obtained them? Or please explain your plan to obtain them:

Stormwater Management, Design, and Installation Rules (250-RICR-150-10-8)

<input type="checkbox"/>	<input checked="" type="checkbox"/>	Is stormwater being directed from public areas to private property? If “Yes,” note the following: <u>Note:</u> This is not allowed unless a funding mechanism is in place to provide the finances for the long-term maintenance of the BMP and drainage, or a funding mechanism is demonstrated that can guarantee the long-term maintenance of a stormwater BMP by an individual homeowner.
Pollution Prevention Section		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Designated snow stockpile locations?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Trash racks to prevent floatables, trash, and debris from discharging to Waters of the State?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Asphalt-only based sealants?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Pet waste stations? (<u>Note:</u> If a receiving water has a bacterial impairment, and the project involves housing units, then this could be an important part of your pollution prevention plan).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Regular sweeping? Please describe:
<input checked="" type="checkbox"/>	<input type="checkbox"/>	De-icing specifications, in accordance with RISDISM Appendix G. (NOTE: If the groundwater is GAA, or this area contributes to a drinking water supply, then this could be an important part of your pollution prevention plan).
<input type="checkbox"/>	<input checked="" type="checkbox"/>	A prohibition of phosphate-based fertilizers? (<u>Note:</u> If the site discharges to a phosphorus impaired waterbody, then this could be an important part of your pollution prevention plan).

PART 4. SUBWATERSHED MAPPING AND SITE-PLAN DETAILS

Existing and Proposed Subwatershed Mapping (REQUIRED)		
YES	NO	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Existing and proposed drainage area delineations
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Locations of all streams and drainage swales
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Drainage flow paths, mapped according to the DEM <i>Guidance for Preparation of Drainage Area Maps</i> (included in RISDISM Appendix K)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Complete drainage area boundaries; include off-site areas in both mapping and analyses, as applicable
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Logs of borings and/or test pit investigations along with supporting soils/geotechnical report
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mapped seasonal high-water-table test pit locations
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mapped locations of the site-specific borings and/or test pits and soils information from the test pits at the locations of the BMPs
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mapped locations of the BMPs, with the BMPs consistently identified on the Site Construction Plans
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mapped bedrock outcrops adjacent to any infiltration BMP
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Soils were logged by a:
	<input checked="" type="checkbox"/>	DEM-licensed Class IV soil evaluator Name: Daniel Welch D4094
	<input type="checkbox"/>	RI-registered P.E. Name:

Subwatershed and Impervious Area Summary				
Subwatershed (area to each design point)	First Receiving Water ID or MS4	Area Disturbed (units)	Existing Impervious (units)	Proposed Impervious (units)
DP-1: Coastal Feature	RI0007030E-01E	32,069 sf	32,069 sf	23,041 sf
DP-2:				
DP-3:				
DP-4:				
TOTALS:				

Stormwater Management, Design, and Installation Rules (250-RICR-150-10-8)

Site Construction Plans (Indicate that the following applicable specifications are provided)		
YES	NO	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Existing and proposed plans (scale not greater than 1" = 40') with North arrow
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Existing and proposed site topography (with 1 or 2-foot contours); 10-foot contours accepted for off-site areas
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Boundaries of existing predominant vegetation and proposed limits of clearing
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Site Location clarification
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Location and field-verified boundaries of resource protection areas such as: <ul style="list-style-type: none"> ▶ freshwater and coastal wetlands, including lakes and ponds ▶ coastal shoreline features Perennial and intermittent streams, in addition to Areas Subject to Storm Flowage (ASSFs)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	All required setbacks (e.g., buffers, water-supply wells, septic systems)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Representative cross-section and profile drawings, and notes and details of structural stormwater management practices and conveyances (i.e., storm drains, open channels, swales, etc.), which include: <ul style="list-style-type: none"> ▶ Location and size of the stormwater treatment practices (type of practice, depth, area). Stormwater treatment practices (BMPs) must have labels that correspond to RISDISM Table 5-2; ▶ Design water surface elevations (applicable storms); ▶ Structural details of outlet structures, embankments, spillways, stilling basins, grade-control structures, conveyance channels, etc.; ▶ Existing and proposed structural elevations (e.g., inverts of pipes, manholes, etc.); ▶ Location of floodplain and, if applicable, floodway limits and relationship of site to upstream and downstream properties or drainage that could be affected by work in the floodplain; ▶ Planting plans for structural stormwater BMPs, including species, size, planting methods, and maintenance requirements of proposed planting
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Logs of borings and/or test pit investigations along with supporting soils/geotechnical report and corresponding water tables
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mapping of any OWM-approved remedial actions/systems (including ELURs)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Location of existing and proposed roads, buildings, and other structures including limits of disturbance; <ul style="list-style-type: none"> ▶ Existing and proposed utilities (e.g., water, sewer, gas, electric) and easements; ▶ Location of existing and proposed conveyance systems, such as grass channels, swales, and storm drains, and location(s) of final discharge point(s) (wetland, waterbody, etc.); ▶ Cross sections of roadways, with edge details such as curbs and sidewalks; ▶ Location and dimensions of channel modifications, such as bridge or culvert crossings
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Locations, cross sections, and profiles of all stream or wetland crossings and their method of stabilization

**STORMWATER SYSTEM
OPERATIONS AND MAINTENANCE PLAN**

“Manchester House”

Proposed Hotel and Restaurant
Assessor’s Map 32, Lot 314
24 Lee’s Wharf
Newport, RI

Prepared For

Howard Wharf, LP
c/o SILVA, THOMAS, MARTLAND
& OFFENBERG, LTD
Middletown, RI 02842

February 2020



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APPENDIX A OPERATION AND MAINTENANCE CHECKLISTS



**Northeast Engineers
& Consultants, Inc.**
"A Knowledge Corporation"®

APPENDIX B DRAWINGS

1.0 INTRODUCTION

1.1 SITE INFORMATION

City / Town:	Newport, Rhode Island
Adjacent Roadways:	Lee's Wharf
Lot(s) identification:	A.P. 32 Lot 314
Zoning District:	WB (Waterfront Business)
Current Use:	Parking Lot with small accessory structure
Site Area:	0.74 Acres
FEMA Zone and Map:	Zone "VE (EL13)" and "AE (EL12)" (Panel 44005C0177J)

1.2 SITE CONDITIONS

The site contains a 12,827 square foot hotel and restaurant constructed just outside of the 50-foot CRMC coastal setback. The structure shall be elevated in order to provide separation from the flood elevation, and the lower level is used for parking, storage, and other non-residential uses. The upper floors contain the hotel units and amenities. The area coastal of the structure contains a greenway with public access from Lee's Wharf. The remainder of this area includes planted or lawn green space. The area upland of the hotel is used for paved surface parking. A public access sidewalk runs the length of the frontage of the roadway. The site has two paved entry lanes and one paved exit lane. Screened and pad mounted mechanical equipment is located to the south in a grassed area. The site includes perimeter green space where possible. The site is served by municipal water and sewer from mains in Lee's Wharf. A pad mounted transformer is located at the northeast corner of the property adjacent to the sidewalk.

Stormwater control for this development includes an underground infiltrating sand filter system for the hotel rooftop. This device overflows at outlets at each roof downspout to paved surfaces. Surface runoff from this property sheet flows towards the coast and into the harbor.

1.3 PROTECTED FEATURES

The site lies partially within the 50-foot setback from the coastal feature associated with Newport Harbor, although this coastal feature lies within an abutting parcel. Newport Harbor is identified as CRMC Type 5 waters. There are no coastal wetlands or wetland vegetation on the property. The coastal half of the property lies within the 200-foot CRMC jurisdiction line. Any development or modification of this portion of the property would require assent from the CRMC.

ADMINISTRATION

1.4 RESPONSIBLE PARTIES

The Owner and party responsible for the operation and maintenance of the Stormwater Management System is:

**44 Ocean Partners, LLC
c/o Howard Cushing III
66 Ocean Avenue
Newport, RI 02840**

The Owner intends that this Plan shall run with the land and be binding upon the Owner and the Owner's successors and assigns. A copy of this Plan shall be provided to any future property owners. This Section shall be amended as necessary.

Easements across the stormwater system to the City of Newport may be provided upon request; however, the Owner is solely responsible for the operation and maintenance.

1.5 O&M EXPENSES

It is anticipated that the Operation and Maintenance budget will be incorporated into the operating budget of the property. The stormwater facilities will require continual maintenance to operate at peak efficiency. It is anticipated that small equipment and hand labor will typically be required to operate and maintain the system. A vacuum truck will be required for more intensive maintenance. Operation and Maintenance activities and equipment will be funded by the Owner.

1.6 PUBLIC SAFETY FEATURES

Public safety is provided for the proposed stormwater systems. All stormwater systems are located underground.

2.0 GENERAL INSPECTION AND MAINTENANCE

This section contains a general overview of O&M guidelines and documentation procedures. Specific guidance is described in Section 4.0. Appendix A contains applicable Operation, Maintenance and Management Inspection Checklists. Appendix B contains a location map of stormwater features to be maintained and details of the devices which may be referenced during maintenance.

2.1 INSPECTION

All stormwater management facilities shall be periodically inspected by a qualified individual. Inspections shall be conducted by a registered professional engineer where the structural or hydraulic integrity of the system is in question. Inspections shall follow the inspection guidelines found in the checklists included in Appendix A. The minimum inspection schedule is summarized in the following table.

Table 1: Summary of Minimum Inspection Schedule

<i>Item</i>	<i>Annually</i>	<i>After Major Storms</i>	<i>Semi-Annually</i>
UG Sand Filter	✓	✓	
Conveyance (Roof Leaders)	✓	✓	✓
Overall Function	✓	✓	

Note: "Major Storm" refers to a storm with 2.8 inches of rain over a 24-hour period

2.2 MAINTENANCE

Maintenance activities are described in three categories based upon the magnitude and type of the maintenance activities performed. A description of each category follows.

2.2.1 PREVENTATIVE MAINTENANCE

The most effective way to maintain the stormwater system is to prevent the pollutants from entering them in the first place. Common pollutants include sediment, trash and debris, chemicals, runoff from stored materials, and illicit discharges. The Owner shall implement the following measures to address these potential contaminants, which will minimize expenses and time investments in the long term.

- Educate employees of how their actions impact water quality, and how they can help reduce maintenance costs;
- Keep the property free of trash and debris;
- Ensure the proper disposal of hazardous wastes and chemicals;
- Plan landscaping care to minimize the use of fertilizers, herbicides, and pesticides;
- Sweep paved surfaces and dispose of sweepings properly;
- Be aware of automobiles leaking fluids. Use absorbents to soak up drippings – dispose of properly;
- Re-vegetate disturbed and bare areas to maintain vegetative stabilization; and
- Protect landscaping care and other chemicals stored outdoors from stormwater.



2.2.2 ROUTINE AND MINOR MAINTENANCE

Routine maintenance work to be undertaken by the Owner shall include activities normally performed throughout the year, such as:

- Mowing and weed control,
- Trash and debris removal, and
- Cleaning drain basin inlet structures.

Such minor maintenance consists of isolated or small-scale maintenance/operational problems. Most of this work can be completed by a small crew with hand tools, and small equipment.

2.2.3 MAJOR MAINTENANCE

This work consists of more complex maintenance/operational problems and system failures. Some of this work may require consultation with the Design Engineer, CRMC, and/or the City of Newport. This work may also require more specialized maintenance equipment, design/details, surveying, or assistance through private contractors and consultants.

3.0 LAWN, GARDEN, AND LANDSCAPE MANAGEMENT

Grasses require more water and attention than alternative groundcovers, flowers, shrubs, or trees. Alternatives to turf are especially recommended for problem areas such as lawn edges, frost pockets, shady spots, steep slopes, and soggy areas.

3.1 GRASS

Grass seed is available in a wide range of cultivated varieties. The Owner should consult a landscape expert to choose the grass type that matches the site conditions, and is consistent with the property manager's desired level of maintenance.

3.2 MOWING AND MANAGEMENT

To prevent insects and weed problems, property owners should mow high, mow frequently, and keep mower blades sharp. Lawns should not be cut shorter than 2 to 3 inches, because weeds can grow more easily in short grasses. Grass can be cut lower in the spring and fall to stimulate root growth, but not shorter than 1 ½ inches.

3.3 FERTILIZATION

If fertilizing is desired, consider the following points:

- Most lawns require little or no fertilizer to remain healthy. Fertilize no more than twice a year - once in May-June, and once in September-October;
- Fertilizers are rated on their labeling by three numbers (e.g., 10-10-10 or 12-4-8), which refer to their Nitrogen (N) – Phosphorus (P) – Potassium (K) concentrations. Fertilize at a rate of no more than ½ pound of nitrogen per 1000 square feet, which can be determined by dividing 50 by the percentage of nitrogen in the fertilizer;
- Apply fertilizer carefully to avoid spreading on impervious surfaces such as paved walkways, patios, driveways, etc., where the nutrient can be easily washed into storm drains or directly into surface waters;
- To encourage more complete uptake, use slow-release fertilizers that is those that contain 50 percent or more water-insoluble nitrogen (WIN);
- Grass blades retain 30-40 percent of nutrients applied in fertilizers. Reduce fertilizer applications by 30 percent, or eliminate the spring application of fertilizer and leave clippings on the lawn where they will degrade and release stored nutrients back to the soil; and
- Fertilizer should not be applied when rain is expected. Not only does the rain decrease fertilizer effectiveness, it also increases the risk of surface and ground water contamination.

3.4 WEED MANAGEMENT

The property manager must decide how many weeds can be tolerated before action is taken to eradicate them. To the extent practicable, weeds should be dug or pulled out. If patches of weeds are present, they can be covered for a few days with a black plastic sheet. This process kills the weeds while leaving the grass intact. If weeds blanket a large enough area, the patch can be covered with clear plastic for several weeks, effectively "cooking" the weeds and their seeds. The bare area left behind after weeding should be reseeded to prevent weeds from growing back. As a last resort, the property manager may use chemical herbicides to spot treat weeds.

3.5 PEST MANAGEMENT

Effective pest management begins with maintenance of a healthy, vigorous lawn that is naturally disease resistant. The property manager should monitor plants for obvious damage and check for the presence of pest organisms. Learn to distinguish beneficial insects and arachnids, such as green lacewings, ladybugs, and most spiders, from ones that will damage plants.

When damage is detected or when harmful organisms are present, the property manager should determine the level of damage the plant is able to tolerate. No action should be taken if the plant can maintain growth and fertility. If controls are needed, there are a variety of low-impact pest management controls and practices to choose from, including the following:

- Visible insects can be removed by hand (with gloves or tweezers) and placed in soapy water or vegetable oil. Alternatively, insects can be sprayed off a plant with water, or in some cases vacuumed off of larger plants;
- Store-bought traps, such as species- specific, pheromone-based traps or colored sticky cards, can be used;
- Sprinkling the ground surface with abrasive diatomaceous earth can prevent infestations by soft-bodied insects and slugs. Slugs can also be trapped by falling or crawling into small cups set in the ground flush with the surface and filled with beer;
- In cases where microscopic parasites, such as bacteria and fungi, are causing damage to plants, the affected plant material can be removed and disposed of. (Pruning equipment should be disinfected with bleach to prevent spreading the disease organism);
- Small mammals and birds can be excluded using fences, netting, tree trunk guards, and, as a last resort, trapping. (In some areas trapping is illegal. Property owners should check local codes if this type of action is desired); and
- The property manager can encourage/attract beneficial organisms, such as bats, birds, green lacewings, ladybugs, praying mantis, ground beetles, parasitic nematodes, trichogramma wasps, seedhead weevils, and spiders that prey on detrimental pest species. These desirable organisms can be introduced directly or can be attracted to the area by providing food and/or habitat.

If chemical pesticides are used, the property manager should try to select the least toxic, water soluble and volatile pesticides possible. All selected pesticides should be screened for their potential to harm water resources. When possible, pesticides that pose the least risk to human health and the environment should be chosen. A list of popular pesticides, along with their uses, their toxicity to humans and wildlife,



EPA's toxicity rating, and alternatives to the listed chemicals, is available from *The Audubon Guide to Home Pesticides*, (<http://www.audubon.org/bird/pesticides/>).

3.6 SENSIBLE IRRIGATION

Established lawns need no more than one inch of water per week (including precipitation) to prevent dormancy in dry periods. Watering at this rate should wet soil to approximately 4-6 inches and will encourage analogous root growth. If possible, use timers to water before 9:00 a.m., preferably in the early morning to avoid evaporative loss. Use drought-resistant grasses (see "grass selection" above) and cut grass at 2-3 inches to encourage deeper rooting and heartier lawns.

4.0 STORMWATER BMPS

4.1 SUBSURFACE SAND INFILTRATION SYSTEM

Description

The subsurface sand filter is designed to capture and temporarily store the water quality storm runoff volume in subsurface HDPE chambers and pass it through a sand media layer. The filtered stormwater is infiltrated into the undisturbed strata below the filter. High flow runoff to the sand filter bypasses the device entirely via surface overflow devices at each roof downspout. The sand filter is not intended to have a permanent pool and should drain within 24 hours.

The stormwater design for this development includes the following subsurface sand filters.

1. Device ID: **UG-1**
2. Location: Coastal of the Hotel Structure
3. Subwatershed treated: N/A (Hotel Roof only)
4. Lined or Unlined: Unlined
5. Discharge location: Groundwater
6. Description: 16 Cultec C-100HD chambers over 24" ASTM C-33 sand

Required Maintenance

A subsurface sand filter shall be inspected following at least the first two precipitation events of at least 1.0 inch to ensure that the system is functioning properly. Thereafter, a filter should be inspected at least annually and after storm events of greater than or equal to the 1-year, 24-hour Type III precipitation event (2.8 inches). These maintenance objectives are focused on preserving the hydraulic and removal efficiency and maintaining structural integrity and include the following:

1. Chambers should be inspected for the presence of transported sediments. Should the average depth of sediments exceed 1-inch, all sediments shall be removed using a vacuum truck via the inspection ports. The presence of excessive sediments shall indicate a failure of the system installation. A RI license Professional Engineer shall be consulted to determine a corrective course of action.

The following maintenance tasks shall be completed on an annual basis.

1. Silt/sediment shall be removed from the sand filter bed annually, when accumulation exceeds one inch, or when the filtering capacity of the device diminishes substantially. This material shall be disposed of in accordance with all applicable regulations.

If standing water is observed more than 48 hours after a storm event, the system must be excavated and then the top six (6) inches of sand shall be removed and replaced in kind. If discolored or contaminated material is found below this removed material, then that material shall also be removed and replaced in kind until all contaminated sand has been removed from the filter media. The sand shall be disposed of



in accordance with all applicable regulations. The system shall then be reconstructed according to the original design plans.

4.2 CONVEYANCE STRUCTURES

The conveyance structures such as drain basin inlet structures and roof leaders shall be inspected semi-annually (twice a year). Any structural faults shall be repaired as necessary for proper function. Any roof runoff structures such as downspouts shall be clean and free of obstructions that reduce flow. A registered professional engineer shall be consulted, if necessary, in order to determine whether a structure has been compromised.

All inlet / outflow pipes are to be inspected at least three times in the first six months of operation. Evidence of clogging, or rapid release of flow shall be reported to the project engineer and remedied immediately. Structure sump shall be cleaned semi-annually.



5.0 APPENDICES



APPENDIX A OPERATION AND MAINTENANCE CHECKLISTS

**Operation, Maintenance, and Management Inspection Checklist
For Conveyance Structure: _____**

To be used in Conjunction with Operation and Maintenance Document

Date of Inspection:

Date of Last Inspection:

Time:

Type of Inspection: Semi - Annual Other (See 2 below)

Inspector:

General Upkeep:

1. Owner should consult an RI registered professional engineer with questions.
2. Semi-annual inspection shall also be completed three times within six (6) months of construction.
3. Inspection of pipes will require the removal of grates, covers and cleanout caps.

SEMI - ANNUAL MAINTENANCE		
MAINTENANCE ITEM	ACTION IF DEFICIENT	COMMENTS
Clogging of pipes	Pipes should be cleaned out with a high pressure water jet	
Rapid release of stormwater	Consult a RI registered professional engineer	
Cracked or broken pipes or structures	Repair or replace	
Damaged or missing overflow splash pads	Repair or replace	
Roof downspouts crushed or blocked	Repair or replace	
Sediments exceed 50% of sump	Remove and dispose in accordance with state regulations.	

Operation, Maintenance, and Management Inspection Checklist For Subsurface Sand Filter: _____

To be used in Conjunction with Operation and Maintenance Document

Date of Inspection:

Date of Last Inspection:

Time:

Type of Inspection: Annual Major Storm Biannual Other

Inspector:

General Upkeep:

1. None

ANNUAL AND MAJOR STORM MAINTENANCE		
MAINTENANCE ITEM	ACTION IF DEFICIENT	COMMENTS
Trash and debris in filter	Remove and dispose in accordance with state regulations.	
Sediments on filter surface exceeds one (1) inch in depth	Remove and dispose in accordance with state regulations.	
Overflow pipes blocked	Remove blockage and inspect for damage to structure.	

OTHER		
MAINTENANCE ITEM	ACTION IF DEFICIENT	COMMENTS
Water ponds on filter surface for more than 48 hours	The top six (6) inches of sand media shall be excavated and replaced with clean sand. Replace loam layer and re-seed. Discarded material dispose in accordance with state regulations.	



APPENDIX B DRAWINGS

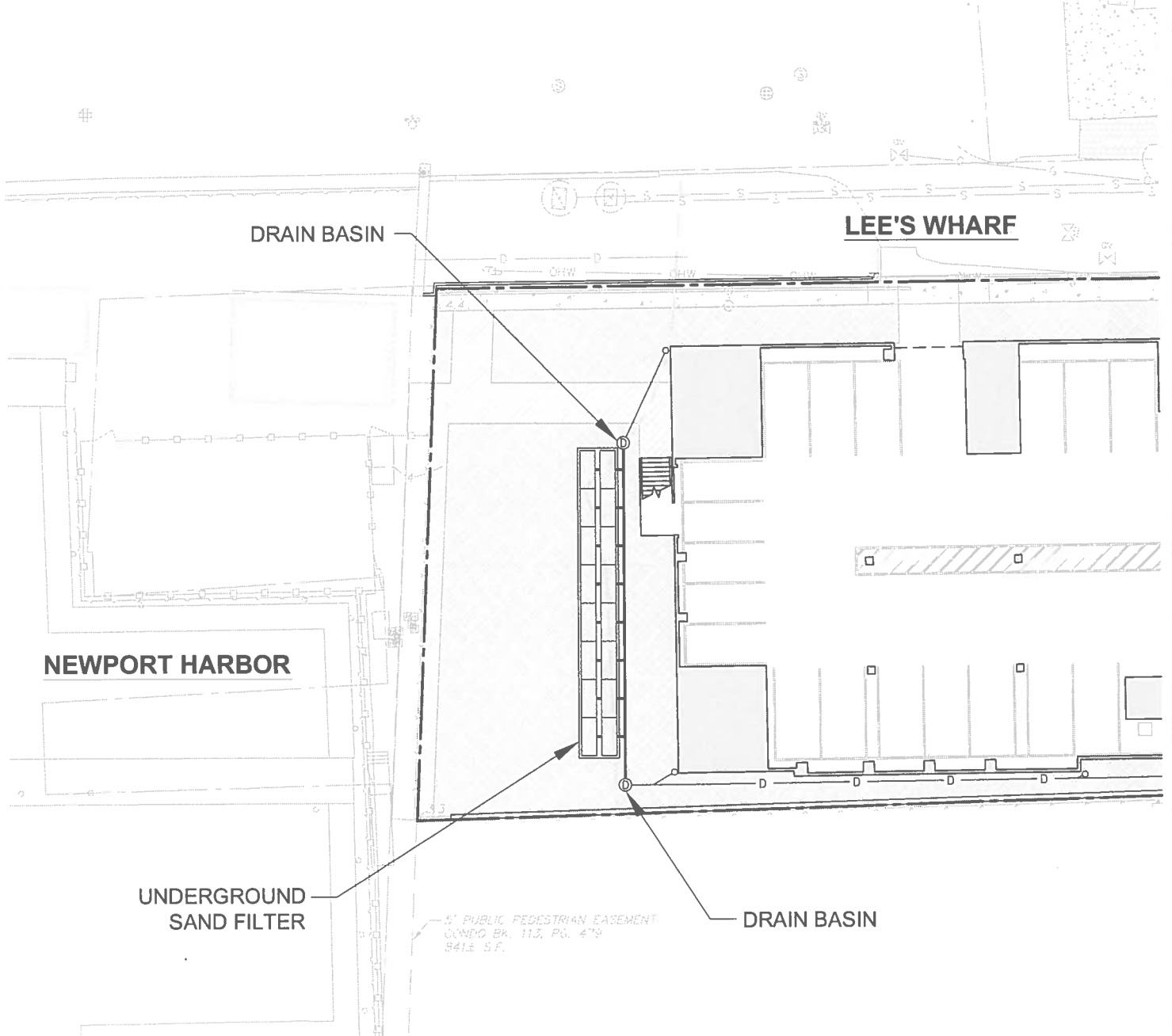
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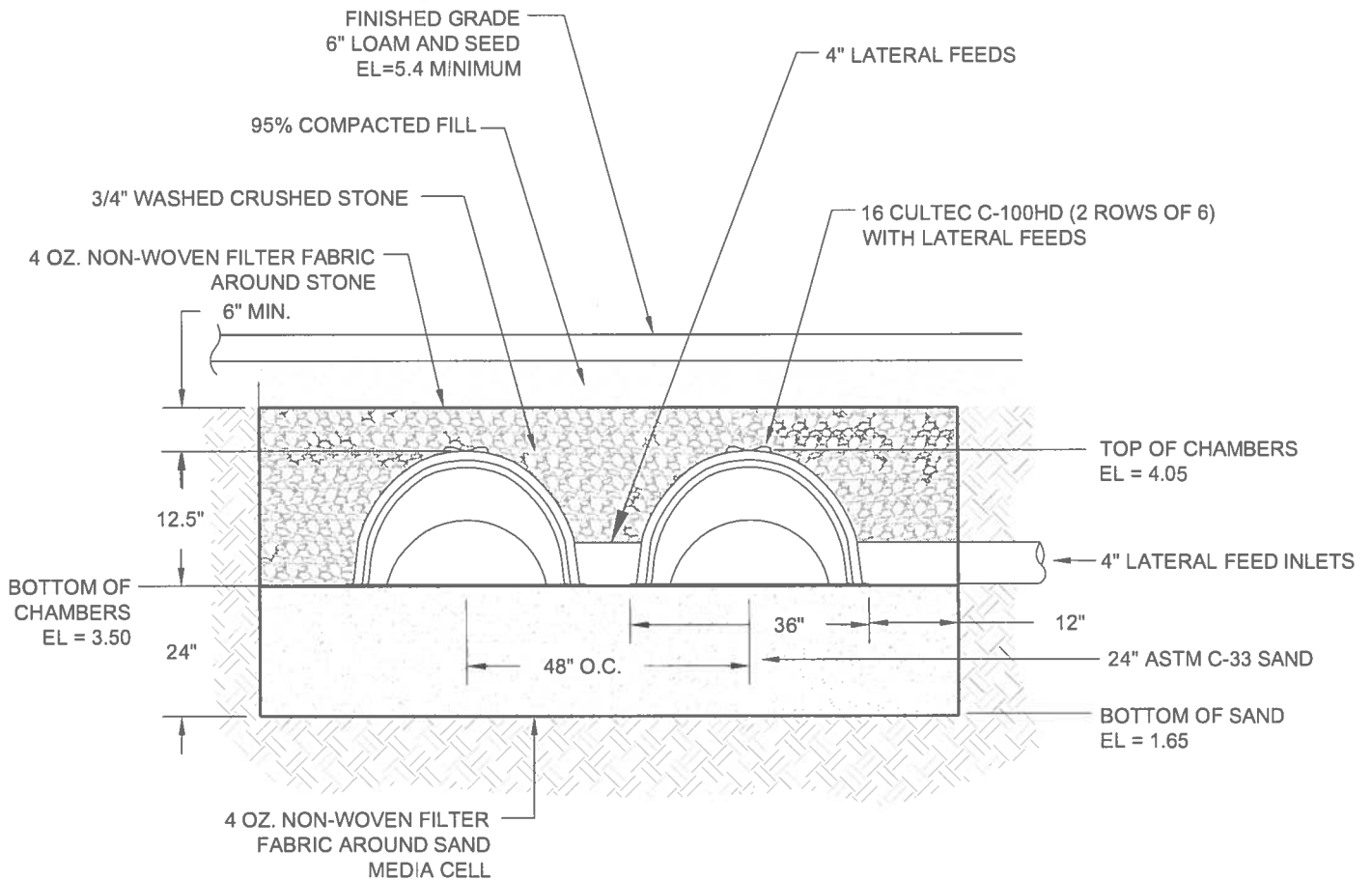
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Scale:	1"=30'	Date:	20FEB20	Designed By:	JJR	Drawn By:	JJR	Checked By:	GES
Project Title:				Drawing Title:					
MANCHESTER HOUSE LEE'S WHARF, NEWPORT RI				DRAINAGE DEVICE LOCATION MAP					
Issued for:				Drawing Number:		Project Number:			
O&M DOCUMENT				M-1		19107.0			



NOTE: THIS SECTION SHOULD BE FOLLOWED FOR ANY MAINTENANCE ACTIVITY THAT INCLUDES THE EXCAVATION OF THE SYSTEM.

Scale:	NTS	Date:	20FEB20	Designed By:	JJR	Drawn By:	JJR	Checked By:	GES
Project Title:				Drawing Title:					
MANCHESTER HOUSE LEE'S WHARF, NEWPORT RI				SUBSURFACE SAND FILTER CROSS SECTION					
Issued for:			Drawing Number:			Project Number:			
O&M DOCUMENT			M-2			19107.0			

