



Town of Brunswick, Maine

VILLAGE REVIEW BOARD

85 UNION STREET, BRUNSWICK, ME 04011

VILLAGE REVIEW BOARD AGENDA

TUESDAY, JUNE 2, 2020

7:15 P.M.

THIS MEETING IS BEING CONDUCTED VIA ELECTRONIC DEVICES WITH VILLAGE REVIEW BOARD MEMBERS PARTICIPATING FROM REMOTE LOCATIONS.

THERE IS NO OPPORTUNITY FOR THE PUBLIC TO VIEW THIS MEETING IN PERSON.

THE PUBLIC CAN VIEW OR LISTEN TO THE MEETING ON TV3 (CHANNEL 3 ON COMCAST) OR VIA LIVE STREAM FROM THE TOWN'S WEBSITE: <http://tv3hd.brunswickme.org/CablecastPublicSite/watch/1?channel=1>

THE PUBLIC MAY PROVIDE COMMENT VIA EMAIL (mpanfil@brunswickme.org) PRIOR TO THE MEETING OR THEY MAY PROVIDE LIVE COMMENT VIA ZOOM VIDEO CONFERENCING AT:

<https://us02web.zoom.us/j/86209247823?pwd=SUEwc1RHaWp0ekxTHhPUWliaGZDZz09>

OR VIA TELEPHONE AT: (301)715-8592; MEETING ID: 862 0924 7823; PASSWORD: 885231

- 1. Case #VRB 20-006 36 Pleasant Street** – At the request of the applicants, Mercie and Steve Normand, the Board will review and take action on a request for a Certificate of Appropriateness to construct a new six unit condominium building at 36 Pleasant Street (Map U14, Lot 20). A previous motion from April 29, 2020 to approve this application failed to receive a majority of votes and was rescinded by the Village Review Board on May 19, 2020 in order to allow for the applicant to revise their plans.
- 2. Case #VRB 20-012 46 Union Street** – At the request of the applicants, Paul Benham and Gretchen Feiss, the Board will review and take action on a request for a Certificate of Appropriateness to install rooftop solar panels at 46 Union Street (Map U14, Lot 1A).
- 3. Approval of Minutes**
- 4. Staff Approvals:**
 - 8 Cumberland St – Signage
 - 159 Park Row – Rear Façade Alteration
 - 16 Station Ave – Signage

This agenda is being mailed to all abutters within 200 feet of the above referenced locations for Certificate of Appropriateness requests and serves as public notice for said meeting. Village Review Board meetings are open to the public. Please call the Brunswick Department of Planning and Development (725-6660) with any questions or comments. This meeting will be televised.

Town of Brunswick, Maine

DEPARTMENT OF PLANNING AND DEVELOPMENT

DRAFT FINDINGS OF FACT REQUEST FOR CERTIFICATE OF APPROPRIATENESS FOR NEW CONSTRUCTION AND ALTERATIONS TO AN EXISTING STRUCTURE VILLAGE REVIEW BOARD

PROJECT NAME: New Condominium Building

CASE NUMBER: VRB 20-006

LOCATION: 36 Pleasant Street (Map U14, Lot 20)

**APPLICANT &
OWNER:** Steve and Mercie Normand
66 Back Shore Lane
Orr's Island, ME 04066

REVIEW DATE: June 2, 2020

PROJECT SUMMARY

This project first appeared before the Village Review Board (VRB) on April 29, 2020. At that meeting the VRB reviewed and voted on two (2) different elements of the application. A request for a Certificate of Appropriateness for Alterations to an Existing Structure to allow the applicants to renovate the existing structure located at 36 Pleasant Street (Map U14, Lot 20) and within the Growth Residential 6 (GR6) and Village Review Overlay (VRO) Zoning Districts was approved unanimously by the VRB. A second request for a Certificate of Appropriateness for New Construction to allow the applicants to construct a new six-unit condominium building, located on the same parcel as the existing building, failed to receive the necessary four (4) affirmative votes for approval (3-3-0 tie).

At their regularly scheduled meeting on May 19, 2020, the VRB unanimously approved a motion to rescind the previous motion and to table the item until June 2, 2020 to allow the applicants time to revise their plans based on comments from the public and the Town of Brunswick Planning Board, Staff Review Committee (SRC), and VRB.

Included in the applicants' revised materials is a list of design changes that have been made to the original plans that were reviewed by the VRB at their April 29, 2020 meeting. The changes include:

- Building height reduced by three feet and eight inches (3' - 8").
- Relocating the pedestrian entrance from the southeast corner to the northeast corner.
- Removal of the circular driveway.
- Raised grading around the building for less visible exterior walls at the ground floor level.
- Reduction and reorganization of window openings on the north side of the structure facing the nearest adjacent neighbors.
- Relocated trash collection area from outside of the proposed structure into a separate area within the ground floor of the building.

Design elements that remain the same as in the original plans include:

- Twelve (12) enclosed parking spaces will be provided on the first floor of the structure.
- Roof-mounted solar panels.
- Decorative stone-clad foundation.
- Metal standing seam roof to match the existing structure on the lot.
- Balconies to match the proposed balconies for the existing structure on the lot.
- Built-up Azak brand trim to match the profile of the trim on the existing structure on the lot.
- Aluminum windows to match the new windows proposed for the existing structure on the lot, with a six-over-six muntin configuration.
- Corner boards to match the existing structure on the lot.

The following draft Findings of Fact for a Certificate of Appropriateness for New Construction and Additions and Alterations to an Existing Structure is based upon review standards as stated in Subsection 5.2.8.C of the Town of Brunswick Zoning Ordinance.

REVIEW STANDARDS, SECTION 5.2.8.C, TOWN OF BRUNSWICK ZONING ORDINANCE

(1) General Standard

- a./b. All Certificates of Appropriateness for new construction, additions, alterations, relocations or demolition shall be in accordance with applicable requirements of this Ordinance. In meeting the standards of this Ordinance the applicant may obtain additional guidance from the *U.S. Secretary of Interior's Standards for Rehabilitating Historic Buildings* and the *Village Review Zone Design Guidelines*.**

Based on the information available, the proposal meets the standards for the GR6 Zoning District as established in *Table 4.2.3: Dimensional and Density Standards for Growth Area Zoning Districts*. As indicated in the supporting documents, the Department of Planning and Development will conduct an in-depth review during the development review process should the project proceed to the Planning Board for Final Plan Major Development Review.

(2) New Construction and Additions and Alterations to Existing Structures

- a. In approving applications for a Certificate of Appropriateness for new construction, additions or alterations to contributing resources, the reviewing entity shall make findings that the following standards have been satisfied:**
- i. Any additions or alterations shall be designed in a manner to minimize the overall effect on the historic integrity of the contributing resource.**

Not applicable.
 - ii. Alterations shall remain visually compatible with the existing streetscape.**

Not applicable.
 - iii. Concealing of distinctive historic or architectural character-defining features is prohibited. If needed, the applicant may replace any significant features with in-kind replacement and/or accurate reproductions.**

Not applicable.

iv. New construction or additions shall be visually compatible with existing mass, scale and materials of the surrounding contributing resources.

Massing, as defined in the Village Review Overlay Design Guidelines that were forwarded for Town Council approval is, “the organization of a building's overall volume. Often referred to as ‘bulk.’” Standards associated with the massing of a building include height, building footprint, and impervious surface coverage. The applicant has incorporated multiple architectural design techniques such as varied rooflines and materials as well as horizontal and vertical articulation

Scale, as defined in the Village Review Overlay District Design Guidelines is, “a qualitative measure of the relative height and massing of buildings and spaces. A building might disruptively dominate other to the detriment of its context, and its proportions might be such as to render it ‘out of scale’ and uncomfortable to the human eye.” Although the proposed condominium building is of a larger scale, it does not appear disproportionate to its surroundings as seen from the public right-of-way. One manner in which this is achieved is the use of an approximately 80-foot front setback instead of the minimum 15 feet established within Table 4.2.3 of the Zoning Ordinance.

The proposed materials for the new condominium building shall be the same as those used for the renovations of the existing building. Per subsection i. above, these materials are commonly found within the surrounding area.

v. When constructing additions, the applicant shall maintain the structural integrity of existing structures.

Not applicable.

b. In approving applications for a Certificate of Appropriateness for new construction of, or additions to commercial, multi-family and other non-residential structures, the Village Review Board shall make findings that the following additional standards have been satisfied.

i. Where practicable, new off-street parking shall be located to the rear of the principal building and shall be accessed from a secondary street. In cases where off-street parking currently exists in a front or side yard, the parking area shall be screened from the public right-of-way with landscaping or fencing.

Twelve (12) off-street parking spaces will be provided within the structure on the first level.

ii. Site plans shall identify pedestrian ways and connections from parking areas to public rights-of-way.

The site plan depicts a sidewalk along the driveway from the entrance to the existing sidewalk along Union Street.

- iii. **All dumpsters and mechanical equipment shall be located no less than 25 feet away from a public right-of-way, unless required by a public utility, and shall be screened from public view.**

All trash and recycling will be stored internally in a separate dedicated room on the ground level. The proposed elevations indicate that the only visible mechanical equipment will be roof-mounted solar panels on the south-facing roof.

- iv. **Roof-top mounted heating, ventilation, air conditioning and energy producing equipment shall be screened from the view of any public right-of-way or incorporated into the structural design to the extent that either method does not impede functionality. Parapets, projecting cornices, awnings or decorative roof hangs are encouraged. Flat roofs without cornices are prohibited.**

See Item iii above.

- v. **The use of cinder block, concrete and concrete block is prohibited on any portion of a structure that is visible from the building's exterior, with the exception of use in the building's foundation.**

The applicant is not proposing any use of cinder block, concrete, or concrete block on either the existing structure or new condominium building.

- vi. **The use of vinyl, aluminum or other non-wood siding is permitted as illustrated in the Village Review Board Design Guidelines. Asphalt and asbestos siding are prohibited.**

The Design Guideline revisions forwarded by the VRB to the Town Council specifically allow Hardie-brand fiber cement siding and Azak trim, as is proposed for both the existing structure and new condominium building, as an acceptable substitute material.

- vii. **Buildings with advertising icon images built into their design ("trademark buildings") are prohibited.**

Not applicable.

- viii. **No building on Maine Street shall have a horizontal expanse of more than 40 feet without a pedestrian entry.**

Not applicable.

- ix. **No building on Maine Street shall have more than 15 feet horizontally of windowless wall.**

Not applicable.

- x. **All new buildings and additions on Maine Street shall be built to the front property line. This may be waived if at least 60 percent of the building's front**

facade is on the property line, and the area in front of the setback is developed as a pedestrian space.

Not applicable.

- xi. If adding more than 50 percent new floor area to a structure located on Maine Street, the addition shall be at least two (2) stories high and/or not less than 20 feet tall at the front property line.**

Not applicable.

- xii. The first-floor facade of any portion of a building that is visible from Maine Street shall include a minimum of 50 percent glass. Upper floors shall have a higher percentage of solid wall, between 15 percent and 40 percent glass.**

Not applicable.

- c. Proposed additions or alterations to noncontributing resources shall be designed to enhance or improve the structure's compatibility with nearby contributing resources as compared to the existing noncontributing resources.**

Not applicable.

(3) Signs

Signs shall comply with the requirements of Section 4.13 (Signs) with consideration given to the Village Review Zone Design Guidelines.

Not applicable.

(4) Demolition and Relocation

- a. Demolition or partial demolition or relocation of a contributing or, if visible from a public right-of-way, a noncontributing resource, excluding incidental or noncontributing accessory buildings and structures located on the same property, shall be prohibited unless the application satisfies at least one of the following criteria.**

- i. The structure poses an imminent threat to public health or safety. An application must be accompanied by a report from a qualified structural engineer for review by the Codes Enforcement Officer and photographs depicting the current condition of the building.**

Not applicable.

- ii. The condition of the structure is such that it cannot be adapted for any other permitted use, whether by the current owner or by a purchaser, resulting in a reasonable economic return, regardless of whether that return represents the most profitable return possible, provided that the applicant can document he/she has not contributed significantly to the deterioration of the structure. An opinion shall be provided from an architect, licensed engineer, developer,**

real estate consultant or appraiser or from a professional experienced in historic rehabilitation, as to the economic feasibility for restoration, renovation, or rehabilitation of the contributing resource versus demolition or relocation of same.

Not applicable.

- b. Demo, partial demolition or relocation of a noncontributing resource visible from a public right-of-way, shall be approved by the Village Review Board if it is determined that the proposed replacement structure or reuse of the property is deemed more appropriate and compatible with the surrounding contributing resources than the resource proposed for demolition.**

Not applicable.

DRAFT MOTIONS
36 PLEASANT STREET
REQUEST FOR A CERTIFICATE OF APPROPRIATENESS FOR NEW CONSTRUCTION
VILLAGE REVIEW BOARD
REVIEW DATE: JUNE 2, 2020

Motion 1: That the Certificate of Appropriateness application is deemed complete.

Motion 2: That the Board approves the **Certificate of Appropriateness for New Construction** in order to a construct a new three-story, six-unit condominium building on the same lot and to the north of the existing structure located at 36 Pleasant Street, as outlined in the application and as satisfied by Subsection 5.2.8.C with the following condition(s):

1. That the Board's review and approval does hereby refer to these findings of fact, the plans and materials submitted by the applicant and the written and oral comments of the applicant, his representatives, reviewing officials, and members of the public as reflected in the public record. Any changes to the approved plan not called for in these conditions of approval or otherwise approved by the Director of Planning and Development as a minor modification, shall require further review and approval in accordance with the Brunswick Zoning Ordinance.

Received: _____
By: _____

VRB Case #: _____

**VILLAGE REVIEW BOARD
CERTIFICATE OF APPROPRIATENESS
APPLICATION**

1. Project Applicant:

Name: Steve Normand
Address: 100 Back Shore Lane
Orri's Island, Maine 04066
Phone Number: (707) 751-6394
Email Address: sn@stevenormand.com

2. Project Property Owner:

Name: Steve Normand & Mercie Normand
Address: 100 Back Shore Lane
Orri's Island, Maine 04066
Phone Number: 207-751-6394
Email Address: sn@stevenormand.com

3. Authorized Representative: (If different than applicant)

Name: _____
Address: SAME
Phone Number: _____
Email Address: _____

4. Physical Location of Property Being Affected:

Address: 34 Pleasant Street - Brunswick

5. Tax Assessor's Map # U14 Lot # 20 of subject property.

6. Underlying Zoning District GRC

7. Type of Activity (check all that apply):

- Additions and New Construction
 Structural Alteration
 Demolition/Moving of Structure
 Sign Permit

8. Describe the location and nature of the proposed change(s), including a brief description of the proposed construction, reconstruction, alteration, demolition, proposed re-use, or other change (use separate sheet if necessary):

Complete renovation of the existing building (34 Pleasant St.) to include new shingles, handrails, new windows, repair & repainting of existing chimneys, repair and/or replacement of metal roof.
Construction of a new level, condominium building with materials in context w/ the existing structure.
See attached Plans & Renderings

Applicant's
Signature

[Signature]

014-20

HISTORIC PRESERVATION SURVEY



Cumberland Brunswick 36 Pleasant
County City/Town Street Address and Number
Name of Building/site: historic: residence of Robert? Dunning
(later John A. Dunning)
Common and/or Historic

Approximate Date: pre-1802 (1774?) Style: Federal

Type of Structure:
 Residential Commercial Industrial Other: 1979-1980 photos L. Borysenko & J. Goff

Condition: Good Fair Poor

Endangered: No Yes

Surveyor: J. Goff Organization: Pejepscot Regional Survey Date:

Rating: National Register quality

Historic Significance to the Community: Earliest surviving landmark on street. During the opening years of the 19th century, this building was the landmark used to distinguish Pleasant Street from other streets. (See reverse of card, also deed 72:190 for #73 Pleasant) (For Additional Information - Use Reverse Side)
Has been occupied by Lovell family pre-1917 -1979...

36 PLEASANT

- Title: 39:445 Robert Dunning to John Dunning, innholder "the Dwelling house now occupied by the said John..." 4/28/1802
- 71:114 JD to JD3d \$6000 130 acres...w/bldgs on 4 rod road "on which my dwelling house stands" 11/26/1814 /deed 103:562 equates JD3d with John A. Dunning,
- 134:466 JAD to Abner B. Thompson ...dw. hse now occ by Dunning...9/14/1833
- 194:439 ABT to John D. Coburnnow occupied by Thompson 10/27/1845.
- 198:539 JDC to Jos. McKeen+ ...dw. hse now occ ABT...10/29/1846. cites ABT
- 243:535 JMck+ to Samuel R. Jackson ...now occ. Miss T.B. Hinkley...6/16/1853
- 433:84 SRJ to Hiram Henry...8/14/1876 cites J McK.
- 451:265 HH to Calvin W. Allen 6/12/78 cites 433:84.

- Maps: 1828 = J. A. Dunning
- 1846 = J. D. Coburn
- 1871 = S. R. Jackson
- 1910 #36 = C.W. Allen

Newspaper: Telegraph 5/15/1885 p. 2: "In the early part of the present century, this thoroughfare /Pleasant Street/ only led from Main street to the residence of Capt. John Dunning, now occupied by Dr. Allen. The road was only one rod in width, and was known at that time as 'Mud Lane.' The unfinished room in the second story of the L of the house was the largest hall in the village, and was used for several years for public meetings and the College exhibitions."

- Directories: 1910= C.W. Allen (& family)
- 1917-1938=Horace D. Lovell
- 1940-1942=firs. Florence M. Lovell, Lovell Homestead, Tourists
- 1944-1967= Horace A. Lovell or Horace Lovell
- 1971-1979=firs. Mabel C. Lovell

Response to VRB's concerns

We have attempted to respond to the comments and concerns heard in the previous 2 VRB meetings as well as the Site Walks held on May 12th and 14th. In addition, as you know we have met with the Planning Board for a Staff Review, which entailed conversations with all Town Departments.

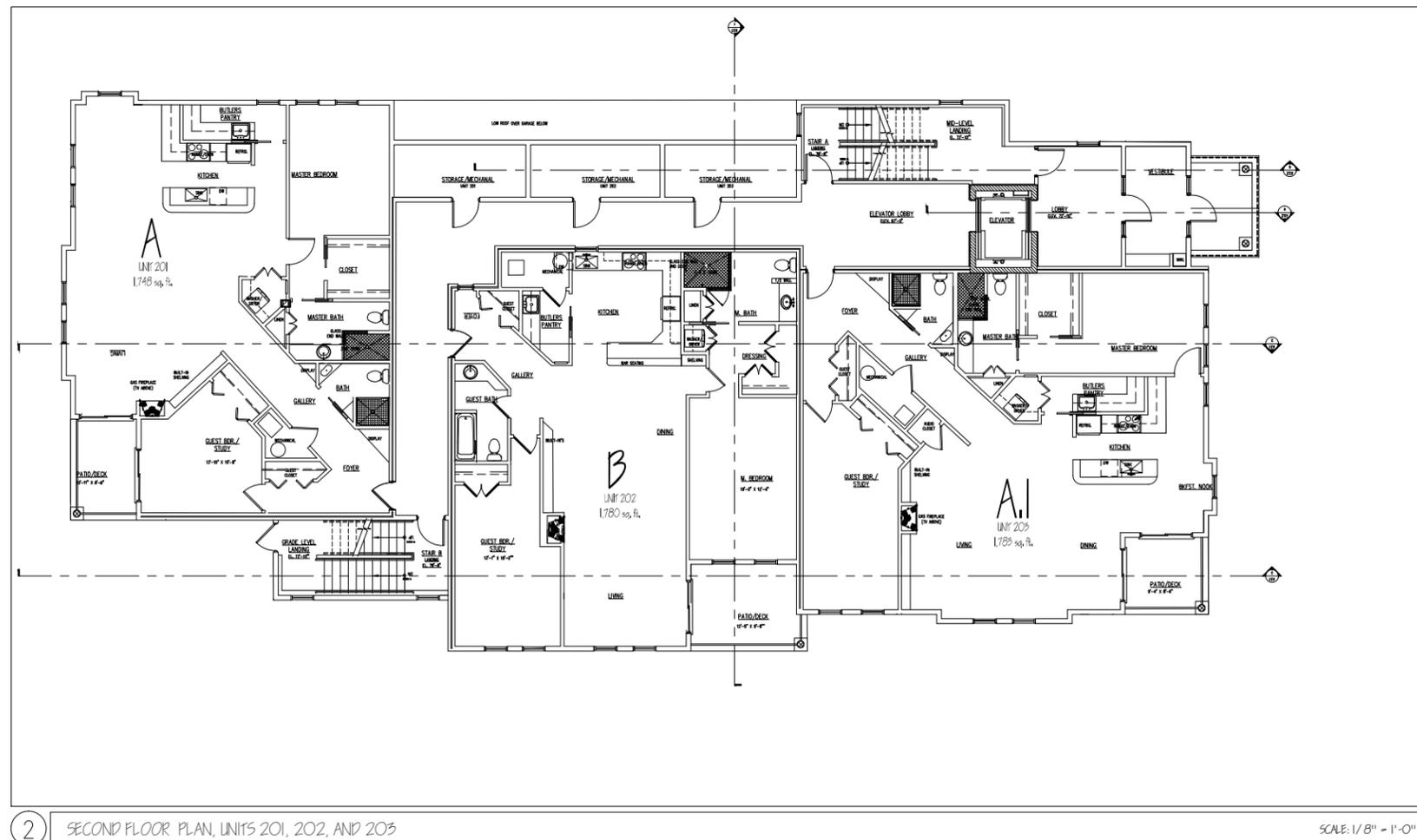
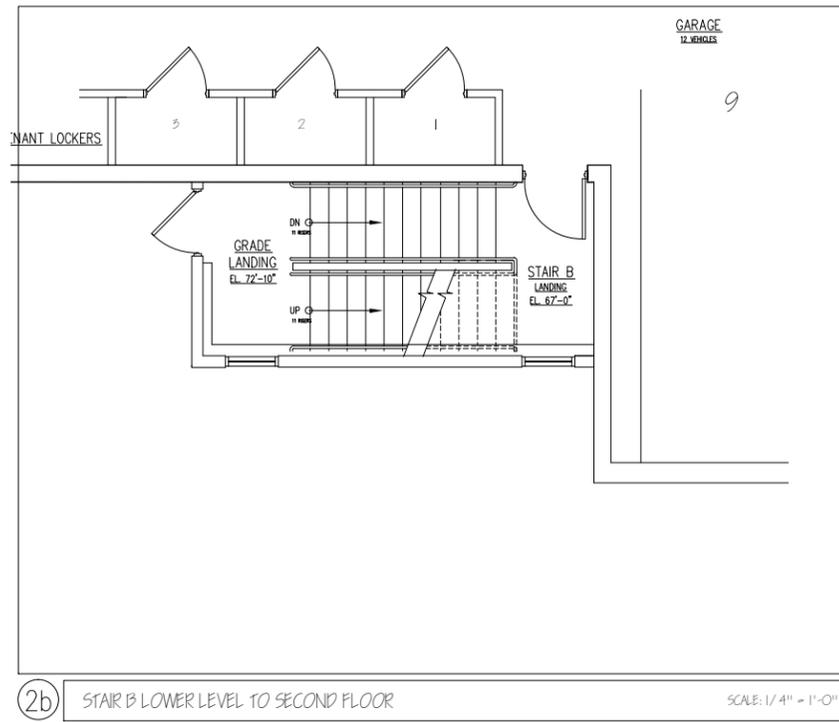
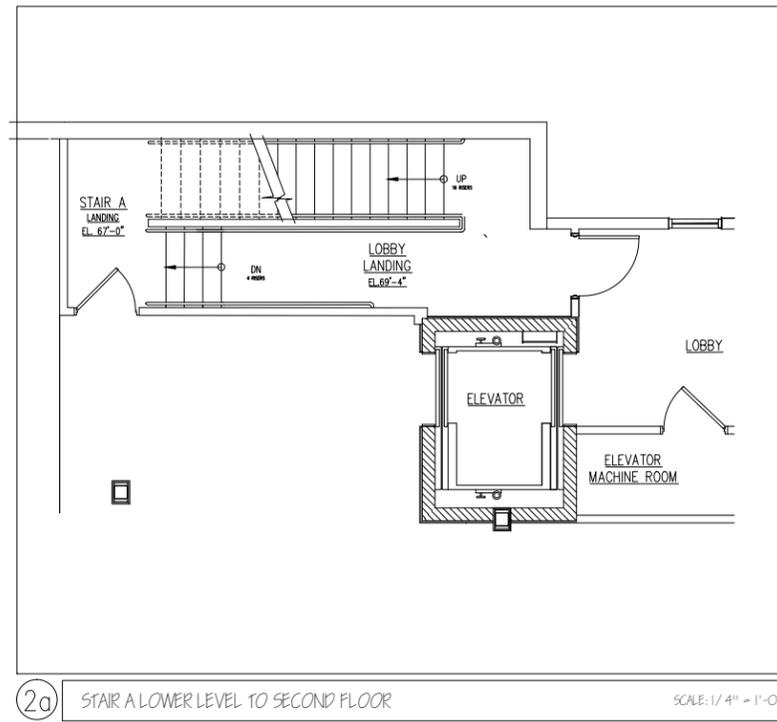
The results of these meetings have produced numerous changes in the buildings layout and more importantly it's perceived height as viewed from Union Street. While these changes have been many the original design intent remains as originally envisioned.

1. Building Height: A reduction of 3' - 8" was accomplished by several design modifications:
 - a. A lowered headroom in the garage reduced the overall building height by 16"
 - b. 4" were taken out of the living units on each floor for a reduction of 8"
 - c. A narrower unit (lower roof height) was moved from the back to the front, effectively reducing the height by another 1' - 8"

A total height reduction by making these changes of 3' - 8"

2. The main entry has been moved from the south side of the building to the north. In doing this the transition from the neighboring home to the north is more gradual and more residential in scale.
 - a. At the site meetings this change was greeted with enthusiasm by the neighbors.
3. The circular drive has been eliminated and a more residential in scale drive and configuration has been provided.
 - a. The 20' width is dictated by the requirements of the fire department.
 - b. The removal of the large Ash tree has been OK'd by the Town Arborist based on a "replacement" street tree will be planted at his direction.
4. The grading around the building has been raised about 2' also reducing the apparent height of the new building.
 - a. The Union Street roof is a "Hip" sloping back away from Union Street and at its peak is 8' - 10" higher than the existing building or 3' - 6" higher than the chimneys on the existing building.
5. A reduction in window openings and realignment of the windows has been made to afford the neighboring home on the north as much privacy as possible. We have oriented all living units to the south there by eliminating views from the proposed new building into the existing home on the north.

OWNERSHIP OF INSTRUMENTS OF SERVICE
 All reports, plans, specifications, computer files, field data, notes and other documents and instruments prepared by the Consultant as instruments of service shall remain the property of the Consultant. The Consultant shall retain all common law, statutory and other reserved rights, including, without limitation the copyright thereto.



**Architectural
 Concept
 Development**
 Steve Normand
 (207) 751-6394
 sn@stevnormand.com

Stamp

The
 Second Floor, Condominium Units
 201, 202, and 203
 Date: May 27, 2020

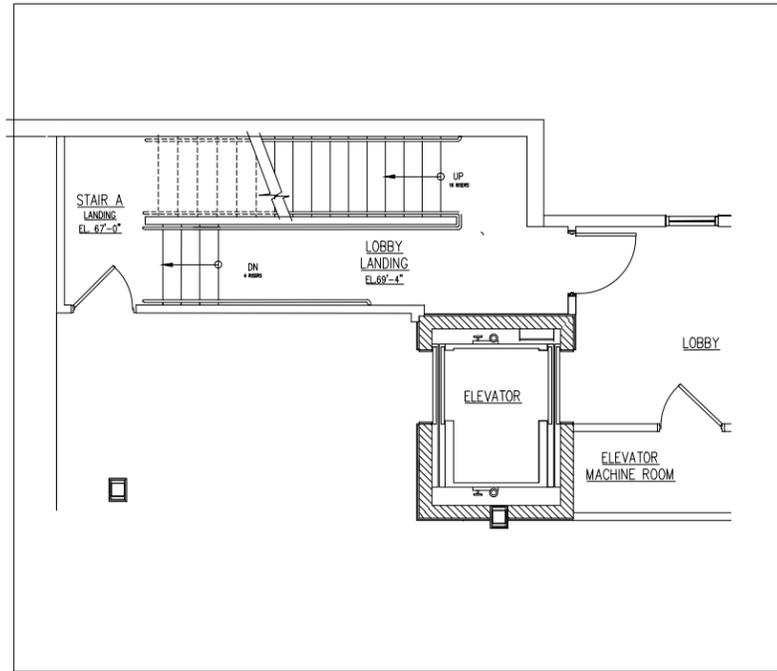
Project
 PLEASANT @ UNION STREETS
 CONDOMINIUM DEVELOPMENT
 36 PLEASANT STREET
 BRUNSWICK, MAINE



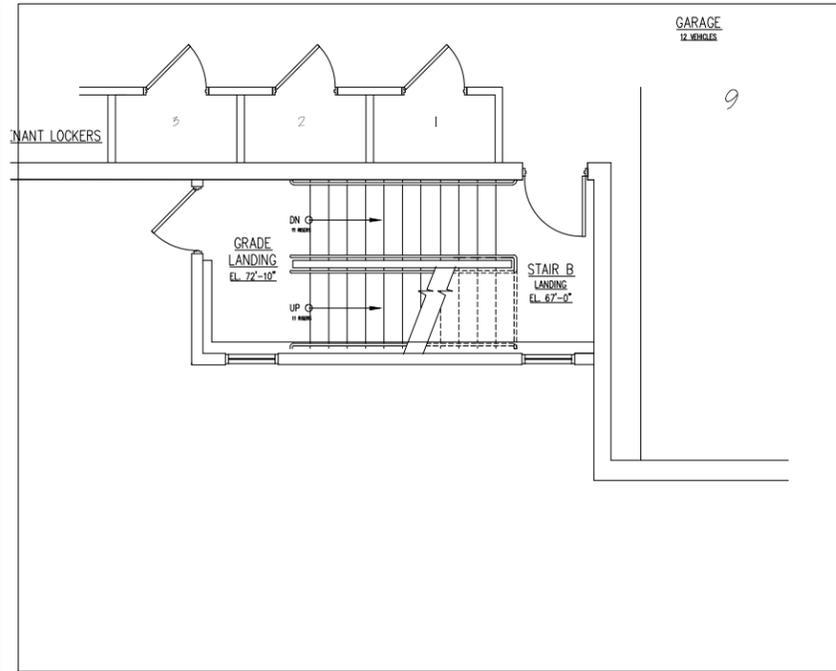
Revisions

Sheet Number
A1.2

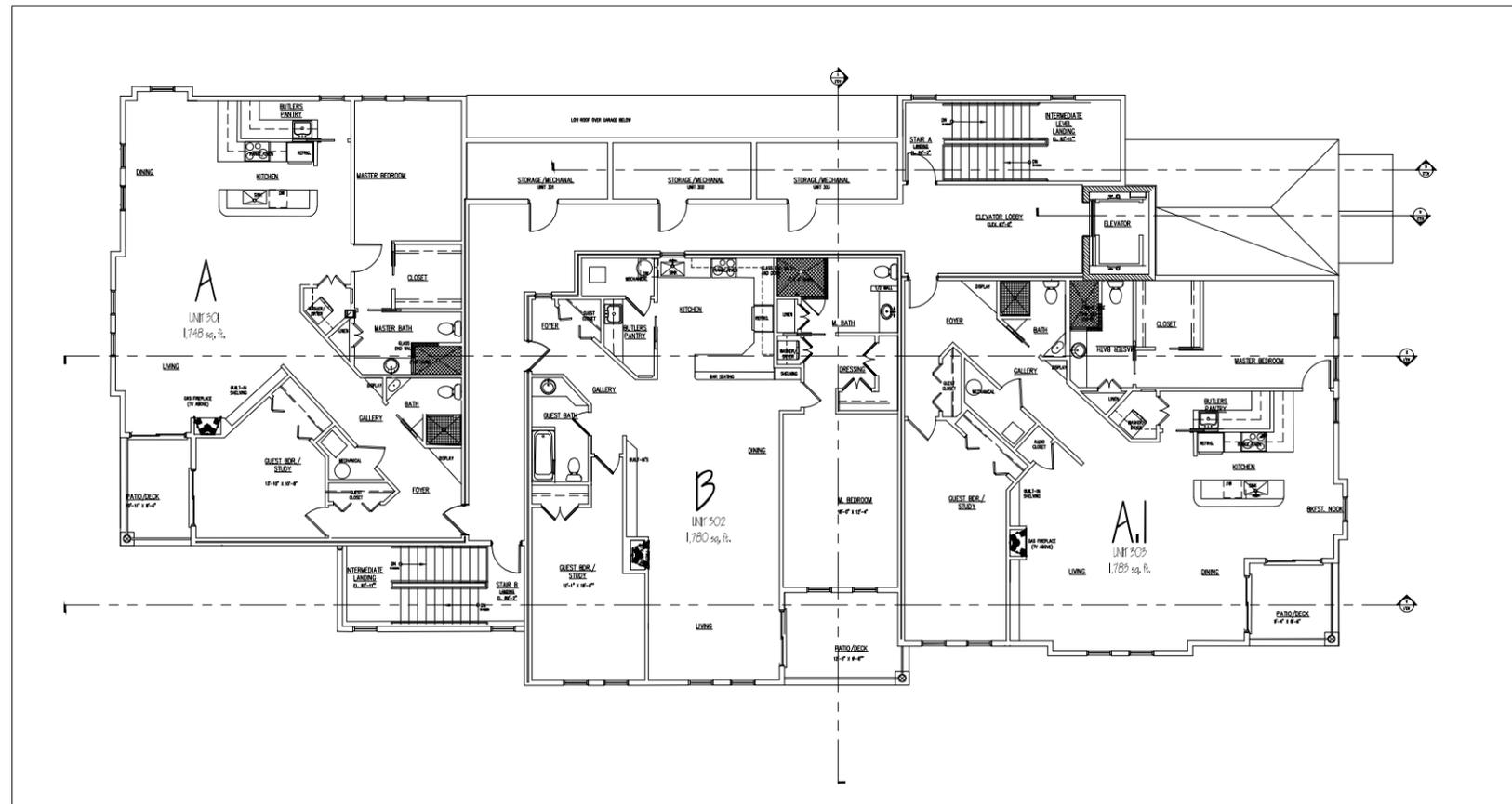
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3a STAIR A LOWER LEVEL TO SECOND FLOOR SCALE: 1/4" = 1'-0"



3b STAIR A LOWER LEVEL TO GRADE LEVEL SCALE: 1/80" = 1'-0"



3 THIRD FLOOR PLAN, UNITS 301, 302, AND 303 SCALE: 1/8" = 1'-0"



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The
 Second Floor, Condominium Units
 301, 302, and 303
 Date: May 27, 2020

Project
 PLEASANT @ UNION STREETS
 CONDOMINIUM DEVELOPMENT
 36 PLEASANT STREET
 BRUNSWICK, MAINE



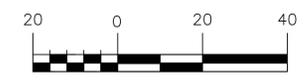
Revisions

Sheet Number
A1.3

LANDSCAPE NOTES:

1. CONTRACTOR TO MAINTAIN A ONE YEAR WARRANTY ON ALL PLANTINGS FOLLOWING INSTALLATION.
2. CONTRACTOR TO BE HELD RESPONSIBLE FOR THE WATERING AND MAINTENANCE OF ALL PLANT MATERIAL AND LANDSCAPING IMPROVEMENTS AS NECESSARY.
3. NO PLANTING TO BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
4. ANY SUBSTITUTIONS TO THE PLANTING SCHEDULE ARE TO BE REVIEWED FOR APPROVAL BY THE TOWN.
5. ALL PROPOSED GREEN SPACES AND ASSOCIATED PLANT SPECIES ARE TO COMPLY WITH THE TOWN OF BRUNSWICK STANDARDS. ANY SUBSTITUTIONS WILL BE REVIEWED FOR APPROVAL BY THE TOWN ARBORIST.
6. NO PLANTING SHALL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
7. CONTRACTOR TO VERIFY ALL UTILITIES ON PROPERTY AND TO PROTECT ALL UTILITIES DURING EXCAVATION FOR PLANTS.
8. ALL CONTAINER MATERIAL TO BE GROWN IN CONTAINER MINIMUM OF 6 MONTHS.
9. ALL MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMAN.
10. CONTRACTOR SHALL REPAIR ALL DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO OWNER.
11. THE PROPERTY OWNER IS RESPONSIBLE FOR THE CONTINUED CARE AND MAINTENANCE OF THE LANDSCAPED AREA. PLANTINGS THAT SHOW SIGNS OF CONSTRUCTION DAMAGE WITHIN A ONE YEAR PERIOD FOLLOWING CONSTRUCTION SHALL BE REJECTED AND REPLACED PRIOR TO ANY DEFECT GUARANTEE AT NO COST TO THE OWNER.
12. THE ENGINEER MAY TAG ALL PLANTS AT THE NURSERY AND INSPECT THEM AFTER DELIVERY TO THE SITE. ALL PLANT MATERIALS SHALL BE INSPECTED BY THE ENGINEER ON SITE PRIOR TO INSTALLATION.

PLANT SCHEDULE				
ID	BOTANICAL NAME	COMMON NAME	QTY	SIZE
TREES				
RP	QUERCUS X WAREI 'LONG'	'REGAL PRINCE' OAK	2	2" CALIPER
CC	CARPINUS CAROLINIANA	AMERICAN HORNBEAM, MUSCLEWOOD	3	1.75" CALIPER
TO	THUJA OCCIDENTALIS 'TECHNY'	AMERICAN ARBORVITAE	10	7-8 FEET
SHRUBS				
PM	PRUNUS MARITIMA	BEACH PLUM	4	5 GAL
SV	SYRINGA VULGARIS 'ALBA'	COMMON WHITE LILAC	4	5 GAL
SA	SYMPHORICARPOS ALBA	SNOWBERRY	3	5 GAL
RC	RHODODENDRON DANADENSE	RHODORA	3	5 GAL
TC	TAXUS CANADENSIS	CANADIAN YEW	3	5 GAL
JC	JUNIPERUS COMMUNIS	COMMON JUNIPER	2	2" CALIPER
PERENNIAL GROUND COVER/GRASSES				
PV	PANICUM VIRGATUM	SWITCHGRASS	7	1 GAL
AG	ANDROPOGON GERARDII 'BLACKHAWKS'	BLACKHAWKS BLUESTEM	7	1 GAL
RH	RUDBECKIA HIRTA	BLACK EYED SUSAN	9	1 GAL
PS	PHLOX STOLONIFERA 'BRUCE'S WHITE'	CREEPING PHLOX	9	1 GAL



PRELIMINARY
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR	BY
CLIENT REVIEW	DATE
	5/27/2020

LANDSCAPING PLAN
36 PLEASANT STREET REDEVELOPMENT

DRAWING NAME:
PROJECT NAME/
ADDRESS:
CLIENT/OWNER OF RECORD:
99 BACK SHORE LANE ORR'S ISLAND, MAINE 04066

A C O R N
ENGINEERING, INC.

THIS PLAN SHALL NOT BE USED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR UNAUTHORIZED, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

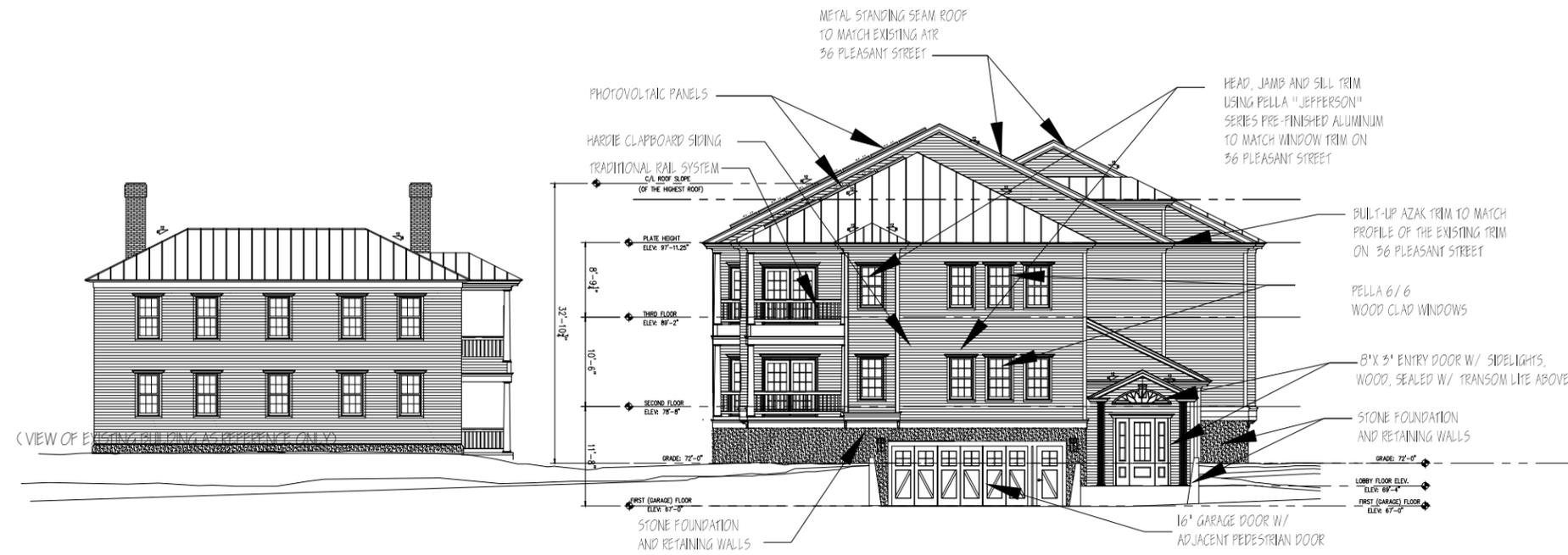
ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04101
(207) 775-2655

FILE:	1135_CIVIL
JN:	1135
SCALE:	AS NOTED
DESIGNED BY:	PFH
DRAWN BY:	FRT
CHECKED BY:	WHS



DRAWING NO.
L-1

OWNERSHIP OF INSTRUMENTS OF SERVICE
 All reports, plans, specifications, computer files, field data, notes and other documents and instruments prepared by the Consultant as instruments of service shall remain the property of the Consultant. The Consultant shall retain all common law, statutory and other reserved rights, including, without limitation the copyright thereto.



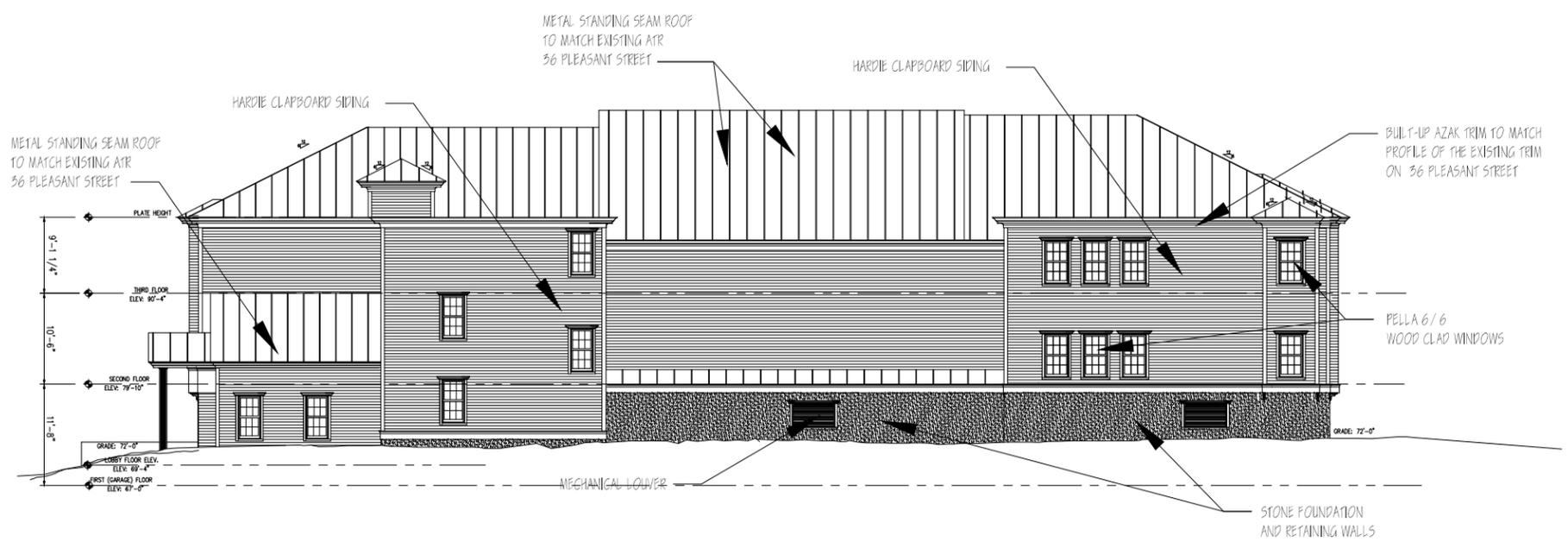

**Architectural
Concept
Development**
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Stamp

East and North Elevations
 New 6 Unit Building
 Scale as Noted
 Date: May 27, 2020

1 UNION STREET, EAST ELEVATION NEW 6 UNIT BUILDING

SCALE: 1/8" = 1'-0"



Project
 PLEASANT @ UNION STREETS
 CONDOMINIUM DEVELOPMENT
 36 PLEASANT STREET
 BRUNSWICK, MAINE

Project North

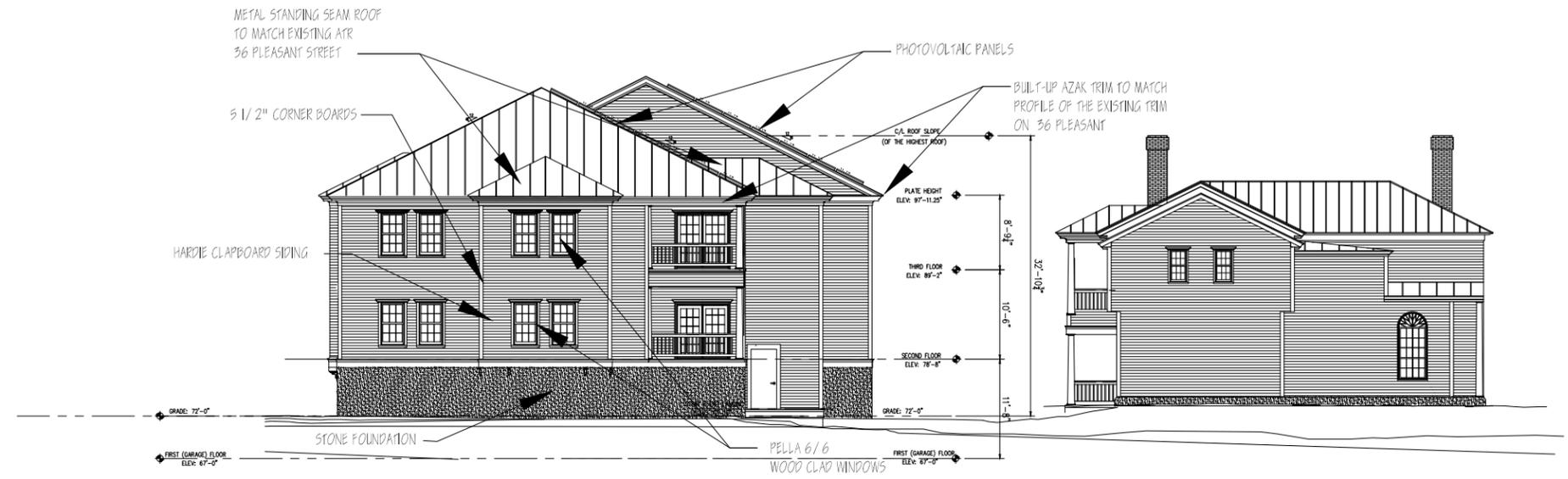
Revisions

2 NORTH ELEVATION NEW 6 UNIT BUILDING

SCALE: 1/8" = 1'-0"

Sheet Number
A2.1

OWNERSHIP OF INSTRUMENTS OF SERVICE
 All reports, plans, specifications, computer files, field data, notes and other documents and instruments prepared by the Consultant as instruments of service shall remain the property of the Consultant. The Consultant shall retain all common law, statutory and other reserved rights, including, without limitation the copyright thereto.



3 WEST ELEVATION NEW 6 UNIT BUILDING

SCALE: 1/8" = 1'-0"



4 SOUTH ELEVATION NEW 6 UNIT BUILDING

SCALE: 1/8" = 1'-0"

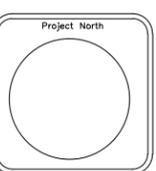


**Architectural
 Concept
 Development**
 Steve Normand
 (207) 751-6394
 sn@stevenormand.com

Stamp

Title
 West and South Elevations
 New 6 Unit Building
 Scale as Noted
 Date: May 27, 2020

Project
 PLEASANT @ UNION STREETS
 CONDOMINIUM DEVELOPMENT
 36 PLEASANT STREET
 BRUNSWICK, MAINE



Revisions

Sheet Number
A2.2



Pleasant @ Union Street Condominium Development

View from Union Street

sn

Architectural
Concept
Development

Steve
Normand
(207)
751-6394
sn@stevenormand.com

May, 2020

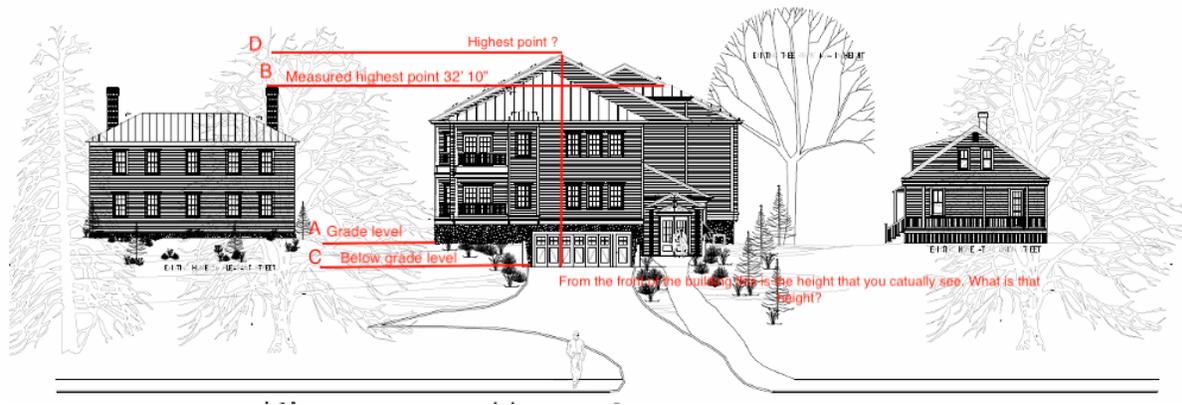
From: paul_benham@mac.com <paul_benham@mac.com>
Sent: Wednesday, May 27, 2020 8:44 PM
To: Matt Panfil <mpanfil@brunswickme.org>; Steve Normand <sn@stevenormand.com>
Subject: Follow up questions regarding the 36 Pleasant St condo development

To the members of the Village Review Board, Matt Panfil and Steve and Mercy Normand,

At the recent Planning Board meeting, and others, Steve has mentioned that the neighbors are happy with the changes that he has made. This is true. Yet we would like to correct the implication that we fully endorse the structure's current plans. That is not fully accurate. Whilst we have expressed our genuine appreciation for the improvements so far, we have also continued to raise concerns and ask questions both at these meetings as well as in private correspondence with Steve. We ask that the board consider some of those concerns.

Firstly, we continue to question the necessity of the condominium's overall size. We greatly appreciate that rearranging the components, reducing the height by 3.75 feet, and moving the structure back on the property, have mitigated the perceived size and overshadowing effect on our home. But it's worth noting that the bulk of the building has not substantially changed.

We were surprised to learn at the end of the Planning Board meeting on 5/26 that the overall roof height ordinance does not measure a roof from its highest point. In fact it is measured as the average between the ridge line and the eaves. This means that even with the improvements that have been made, the overall height as seen from the front of the building on Union St remains much taller than 35 ft. Consider that even though the vertical distance between point A and B on the renderings below adhere to the town ordinances on new construction building height in this development zone, the actual visible height as seen from Union St (point C to D) remains substantially greater. As this is the main view of the building, and the obvious front of the building (where the front entrance way is) it makes this view of the building larger than its 'official' 32' 10" height.



We have continued to question why the size and number of units in the buildings are essential to the development of this property. Comprised of two bedroom units, the square footage of each condominium is significant, placing them in a luxury market. While we understand that it is not the purview of the VRB to discuss matters pertaining to the Town Plan, we wonder whether this development actually preserves the community character. These condominiums would enter the same high-end market that appeals to buyers seeking to acquire second homes in-town. We see evidence of this gentrification already occurring here in Brunswick, both in rentals and the Abbey Road condominium units. Such trends displace affordable year-round family housing on our downtown area. Is that meeting the goals of high density in-town development? Is it preserving the character of our village?

Another question we still have pertains to the placement the driveway. At several meetings, different parties have questioned why the driveway to the condominiums could not come in from Pleasant St. instead of Union St. The primary response has been that the building would have to be turned 180° to achieve this. However, we have pointed out that the pedestrian entrance could remain on Union St, whilst moving the driveway and garage entrance to the Pleasant St side (south elevation). While we are obviously neither architects nor engineers (as evidenced the annotations we have made to Steve's drawings), affecting this change seems to solve many existing issues at once.

With regards to the bulk of the development, having the driveway enter underneath the building at its NW side would make its eastern frontage visually more compatible with surrounding buildings (with the garage entrance no longer there). Compare the top sketch without the garage to the bottom one below to see this effect.



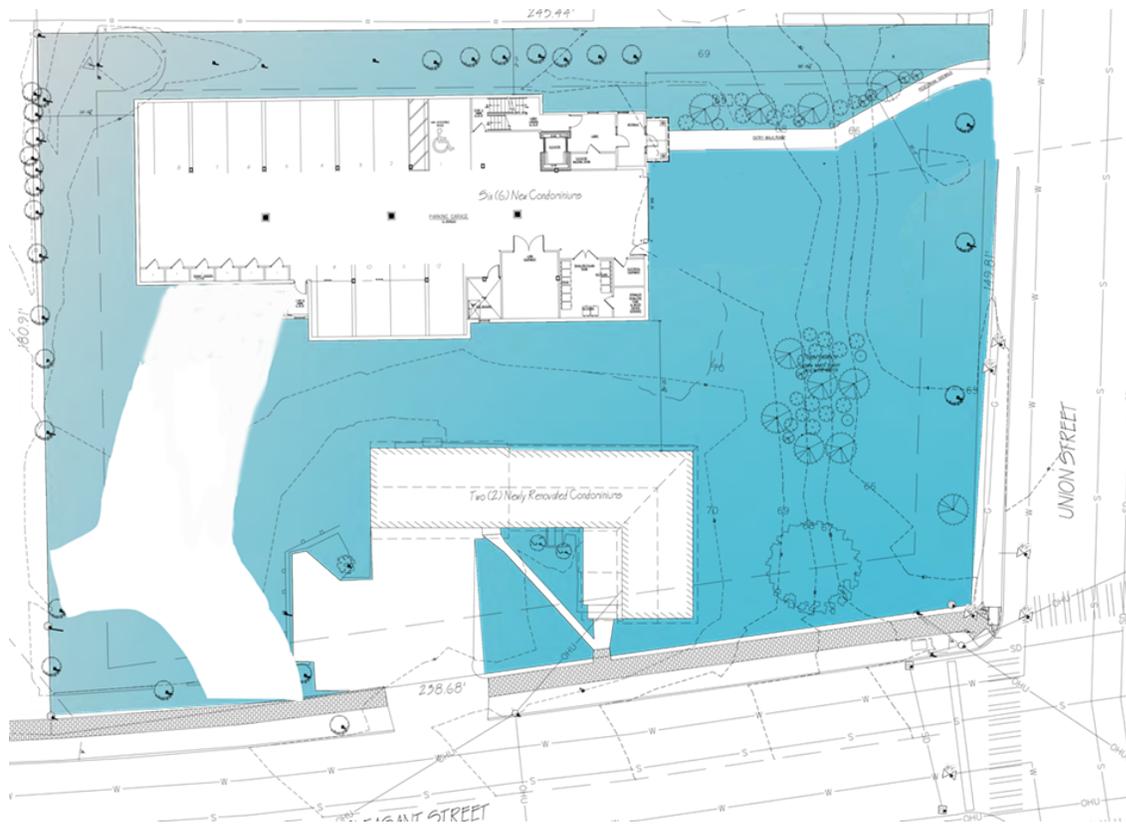
Putting the driveway on Pleasant St. next to the existing driveway would also resolve ongoing concerns about the proximity to the intersection, traffic congestion, and disruption of on-street parking on Union St. It would also achieve VRB guideline #5 as it pertains to the popular pedestrian route along Union St.:

Existing driveways should be maintained. New driveways should be avoided as they interrupt sidewalks, pedestrian activity and the established rhythm of openings along the street edge.

Because there has been reference to using the driveway's turnaround as parking for visitors, moving the garage to the Pleasant St. entrance would also meet VRB guideline #13:

Parking areas should be located to the side or rear of the primary building. In no cases shall it be located in the front yard.

This change would additionally preserve the green space on Union St., both for pedestrians and for the tenants of the condominium. The current design makes the proposed green space that abuts Pleasant Street functionally inaccessible to the condominium tenants. Finally, shifting the driveway would even improve the safety of the garage for its tenants, situating the parking spaces directly adjacent to the garage door, rather than requiring cars to travel through "people space" to park. See figure below for a very rough sketch of what we imagine such a layout could look like.



We truly do appreciate all of the hard work and re-envisioning that has already gone into this project, and wish to confirm that we are pleased with the improvements already made. Our genuine gratitude coexists with the aforementioned reservations, that still deserve to be considered. While this process of public hearings and discussion can be tedious, the outcome is always improved by an open process that considers the perspective of all stakeholders. As we have made clear before, we believe this to be a very special property. We know that we all hope that the final design is the best one possible for the entire community.

Thank you again for your time and consideration on this matter,

Paul Benham & Gretchen Feiss

Town of Brunswick, Maine

DEPARTMENT OF PLANNING AND DEVELOPMENT

DRAFT FINDINGS OF FACT REQUEST FOR CERTIFICATE OF APPROPRIATENESS FOR ALTERATIONS TO AN EXISTING STRUCTURE VILLAGE REVIEW BOARD

PROJECT NAME: Rooftop Solar Panels

CASE NUMBER: VRB 20-012

LOCATION: 46 Union Street (Map U14, Lot 1A)

**APPLICANT &
OWNER:** Gretchen Feiss and Paul Benham
46 Union Street
Brunswick, ME 04011

REVIEW DATE: June 2, 2020

PROJECT SUMMARY

The applicant is requesting a Certificates of Appropriateness for Alterations to an Existing Structure to install nineteen (19) solar panels on the south side of the roof, atop the existing principal dormer, of the structure located at 46 Union Street (Map U14, Lot 1A) and within the Growth Residential 6 (GR6) Zoning District and the Village Review Overlay (VRO) District. The existing structure is listed as a contributing resource in the 2013 Classification Project.

The following draft Findings of Fact for a Certificate of Appropriateness for New Construction and Additions and Alterations to an Existing Structure is based upon review standards as stated in Subsection 5.2.8.C of the Town of Brunswick Zoning Ordinance.

REVIEW STANDARDS, SECTION 5.2.8.C, TOWN OF BRUNSWICK ZONING ORDINANCE

(1) General Standard

- a./b. **All Certificates of Appropriateness for new construction, additions, alterations, relocations or demolition shall be in accordance with applicable requirements of this Ordinance. In meeting the standards of this Ordinance the applicant may obtain additional guidance from the *U.S. Secretary of Interior's Standards for Rehabilitating Historic Buildings* and the *Village Review Zone Design Guidelines*.**

As proposed, the solar panels will comply with Section 3.4.1.U.(2).b – Structure Mounted Solar Energy Collection Facilities of the Town of Brunswick Zoning Ordinance and the updated Village Review Overlay District Design Guidelines which state, “roof-mounted solar panels should be located on the upper roof and laid as flat as possible. Installing roof-mounted solar panels on the front of the roof or installing solar panels with a high degree of tilt is not recommended.”

(2) New Construction and Additions and Alterations to Existing Structures

a. In approving applications for a Certificate of Appropriateness for new construction, additions or alterations to contributing resources, the reviewing entity shall make findings that the following standards have been satisfied:

i. Any additions or alterations shall be designed in a manner to minimize the overall effect on the historic integrity of the contributing resource.

As the proposed solar panels must comply with the Town of Brunswick Zoning Ordinance, they will not extend more than eighteen inches (18") above the existing structure and therefore will minimize the overall effect on the historic integrity of the existing structure. Furthermore, if installed, the proposed solar panels can be removed in the future without any significant negative effect on the historic integrity on the existing structure.

ii. Alterations shall remain visually compatible with the existing streetscape.

As stated in above Item i, the proposed solar panels shall not extend more than eighteen inches (18") about the existing structure. Therefore, they will be visually compatible with the existing streetscape.

iii. Concealing of distinctive historic or architectural character-defining features is prohibited. If needed, the applicant may replace any significant features with in-kind replacement and/or accurate reproductions.

The proposed solar panels will not conceal any distinctive historic or architectural character-defining features.

iv. New construction or additions shall be visually compatible with existing mass, scale and materials of the surrounding contributing resources.

See above Items i and ii.

v. When constructing additions, the applicant shall maintain the structural integrity of existing structures.

The applicant is required to obtain a Town building permit to ensure that the installation of the proposed solar panels maintains the integrity of the existing structure.

b. In approving applications for a Certificate of Appropriateness for new construction of, or additions to commercial, multi-family and other non-residential structures, the Village Review Board shall make findings that the following additional standards have been satisfied.

i. Where practicable, new off-street parking shall be located to the rear of the principal building and shall be accessed from a secondary street. In cases where off-street parking currently exists in a front or side yard, the parking area shall be screened from the public right-of-way with landscaping or fencing.

Not applicable.

- ii. **Site plans shall identify pedestrian ways and connections from parking areas to public rights-of-way.**

Not applicable.

- iii. **All dumpsters and mechanical equipment shall be located no less than 25 feet away from a public right-of-way, unless required by a public utility, and shall be screened from public view.**

Not applicable.

- iv. **Roof-top mounted heating, ventilation, air conditioning and energy producing equipment shall be screened from the view of any public right-of-way or incorporated into the structural design to the extent that either method does not impede functionality. Parapets, projecting cornices, awnings or decorative roof hangs are encouraged. Flat roofs without cornices are prohibited.**

Not applicable.

- v. **The use of cinder block, concrete and concrete block is prohibited on any portion of a structure that is visible from the building's exterior, with the exception of use in the building's foundation.**

Not applicable.

- vi. **The use of vinyl, aluminum or other non-wood siding is permitted as illustrated in the Village Review Board Design Guidelines. Asphalt and asbestos siding are prohibited.**

Not applicable.

- vii. **Buildings with advertising icon images built into their design ("trademark buildings") are prohibited.**

Not applicable.

- viii. **No building on Maine Street shall have a horizontal expanse of more than 40 feet without a pedestrian entry.**

Not applicable.

- ix. **No building on Maine Street shall have more than 15 feet horizontally of windowless wall.**

Not applicable.

- x. **All new buildings and additions on Maine Street shall be built to the front property line. This may be waived if at least 60 percent of the building's front**

facade is on the property line, and the area in front of the setback is developed as a pedestrian space.

Not applicable.

- xi. If adding more than 50 percent new floor area to a structure located on Maine Street, the addition shall be at least two (2) stories high and/or not less than 20 feet tall at the front property line.**

Not applicable.

- xii. The first floor facade of any portion of a building that is visible from Maine Street shall include a minimum of 50 percent glass. Upper floors shall have a higher percentage of solid wall, between 15 percent and 40 percent glass.**

Not applicable.

- c. Proposed additions or alterations to noncontributing resources shall be designed to enhance or improve the structure's compatibility with nearby contributing resources as compared to the existing noncontributing resources.**

Not applicable.

(3) Signs

Signs shall comply with the requirements of Section 4.13 (Signs) with consideration given to the Village Review Zone Design Guidelines.

Not applicable

(4) Demolition and Relocation

- a. Demolition or partial demolition or relocation of a contributing or, if visible from a public right-of-way, a noncontributing resource, excluding incidental or noncontributing accessory buildings and structures located on the same property, shall be prohibited unless the application satisfies at least one of the following criteria.**

- i. The structure poses an imminent threat to public health or safety. An application must be accompanied by a report from a qualified structural engineer for review by the Codes Enforcement Officer and photographs depicting the current condition of the building.**

Not applicable.

- ii. The condition of the structure is such that it cannot be adapted for any other permitted use, whether by the current owner or by a purchaser, resulting in a reasonable economic return, regardless of whether that return represents the most profitable return possible, provided that the applicant can document he/she has not contributed significantly to the deterioration of the structure. An opinion shall be provided from an architect, licensed engineer, developer,**

real estate consultant or appraiser or from a professional experienced in historic rehabilitation, as to the economic feasibility for restoration, renovation, or rehabilitation of the contributing resource versus demolition or relocation of same.

Not applicable.

- b. Demo, partial demolition or relocation of a noncontributing resource visible from a public right-of-way, shall be approved by the Village Review Board if it is determined that the proposed replacement structure or reuse of the property is deemed more appropriate and compatible with the surrounding contributing resources than the resource proposed for demolition.**

Not applicable.

**DRAFT MOTIONS
46 UNION STREET
REQUEST FOR A CERTIFICATE OF APPROPRIATENESS FOR
ALTERATIONS TO AN EXISTING STRUCTURE
VILLAGE REVIEW BOARD
REVIEW DATE: JUNE 2, 2020**

Motion 1: That the Certificate of Appropriateness application is deemed complete.

Motion 2: That the Board approves the Certificate of Appropriateness for Alterations to an Existing Structure in order to install solar panels on the south side of the roof, atop the existing principal dormer, of the structure located at 46 Union Street, as outlined in the application and as satisfied by Subsection 5.2.8.C.(4).ii with the following condition:

1. That the Board's review and approval does hereby refer to these findings of fact, the plans and materials submitted by the applicant and the written and oral comments of the applicant, his representatives, reviewing officials, and members of the public as reflected in the public record. Any changes to the approved plan not called for in these conditions of approval or otherwise approved by the Director of Planning and Development as a minor modification, shall require further review and approval in accordance with the Brunswick Zoning Ordinance.

Received: 5/19/20
By: [Signature]

VRB Case #: 20-012

**VILLAGE REVIEW BOARD
CERTIFICATE OF APPROPRIATENESS
APPLICATION**

1. Project Applicant:

Name: Paul Benham & Gretchen Feiss
Address: 46 Union St, Brunswick, ME 04011

Phone Number: 207 729 3380
Email Address: paul_benham@mac.com

2. Project Property Owner:

Name: Paul Benham & Gretchen Feiss
Address: 46 Union St, Brunswick, ME 04011

Phone Number: 207 729 3380
Email Address: paul_benham@mac.com

3. Authorized Representative: (If different than applicant)

Name: Aaron Carterfield
Address: 245 Brown Rd, Durham, ME 04222

Phone Number: 207 747 7130
Email Address: aaron@mainesolarsolutions.com

4. Physical Location of Property Being Affected:

Address: 46 Union St, Brunswick, ME 04011

5. Tax Assessor's Map # U14 Lot # 1A of subject property.

6. Underlying Zoning District GR6

7. Type of Activity (check all that apply):

- Additions and New Construction
- Structural Alteration
- Demolition/Moving of Structure
- Sign Permit

8. Describe the location and nature of the proposed change(s), including a brief description of the proposed construction, reconstruction, alteration, demolition, proposed re-use, or other change (use separate sheet if necessary): Installation of 19 x 335w all black solar panels mounted using IronRidge racking.

Applicant's Signature Paul Benham

u-14 1a

HISTORIC PRESERVATION SURVEY

Cumberland Brunswick 46 Union
County City/Town Street Address and Number



Name of Building/site:
Common and/or Historic

Approximate Date: Style:

Type of Structure:

Residential Commercial Industrial Other:

Condition: Good Fair Poor

Endangered: No Yes

Surveyor: Organization: Date:

Rating:

Historic Significance to the Community:

.....

.....

(For Additional Information — Use Reverse Side)

014-1a

HISTORIC PRESERVATION SURVEY

.....
County City/Town He Union
Street Address and Number



Name of Building/site:
Common and/or Historic

Approximate Date: 1820 Style: Federal Cape

Type of Structure:
 Residential Commercial Industrial Other:

Condition: Good Fair Poor

Endangered: No Yes

Surveyor: LB Organization: Date: 6/79

Rating: one of the oldest houses on Union, between Mill + Pleasant Sts.

Historic Significance to the Community: Title search revealed that in 1836, John Cushing sold the property as land only (to John L. Swift), ... but in an 1845 transaction between Swift and Samuel Webb there were already

An aerial photograph of a residential property. The property is bounded by Dunning St to the north and Union St to the east. A large, brown-roofed house is the central feature. A solar array, consisting of several dark panels, is installed on the roof of a smaller structure or extension at the rear of the property. This solar array is highlighted with a red rectangular border. The surrounding area includes other houses, trees, and a driveway with a red car. The text 'Dunning St' is visible at the top left and top center, and 'Union St' is visible on the right side. A 'Google' logo is partially visible at the bottom center.

Dunning St

Dunning St

Union St

Union St

Array Location

*No Lot Cover Change

*No Lot Setback Change

Google



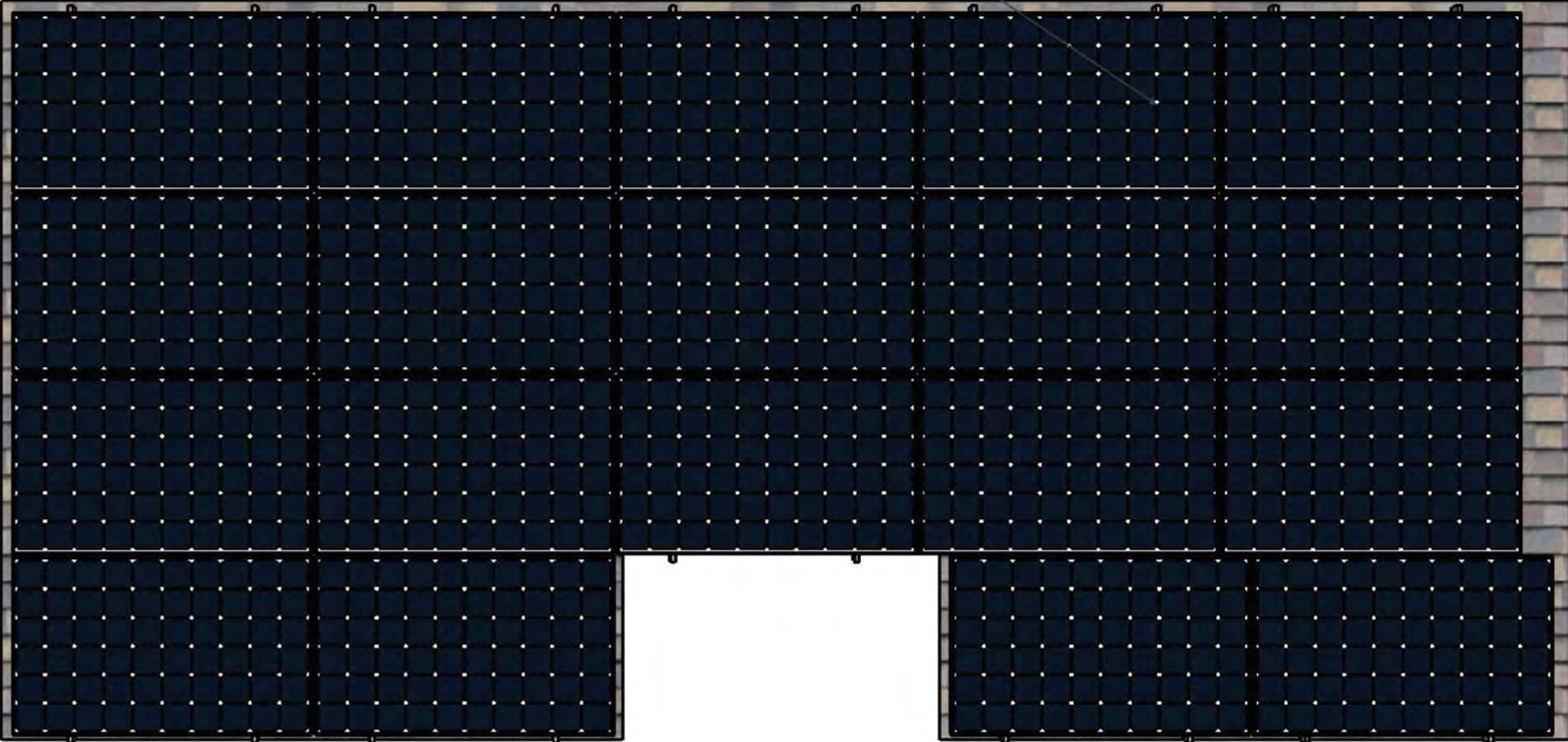
Pleasant St

Union St



View from corner of Pleasant St and Union St looking NNW

19 x Small Format Panels



Project Details			
Name	Benham	Date	05/18/2020
Location	Merepoint, Merepoint, ME, 04011	Total modules	19
Module	Q. Cells : Q.PEAK DUO-BLK G6 335 (32mm)	Total watts	6,365
Dimensions	68.5" x 40.55" x 1.26" (1740.0mm x 1030.0mm x 32.0mm)	Attachments	60
ASCE	7-10		

System Weight	
Total system weight	1,088.0 lbs
Weight/attachment	18.1 lbs
Racking weight	254.3 lbs
Distributed weight	2.9 psf

Load Assumptions	
Wind exposure	B
Wind speed	120 mph
Ground snow load	50 psf
Attachment spacing	4.0'

Roof Information			
Roof material	Comp Shingle	Building height	30 ft
Roof attachment	Flashfoot2	Roof slope	15 °
Attachment hardware	Square	Risk category	II

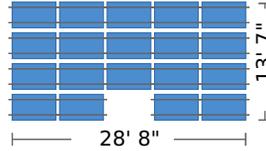
Span Details XR100 - Landscape		
Zone	Max span	Max cantilever
1	5' 8"	2' 3"
2	5' 8"	2' 3"
3	5' 8"	2' 3"

Reaction Forces XR100 - Landscape			
Zone	Down (lbs)	Uplift (lbs)	Lateral (lbs)
1	280	67	74
2	280	137	74
3	280	216	74

Roof Section 1

Definition	Roof Section Weights	Roof Section (all segments)
19 modules	Total weight: 1,088.0 lbs	Provided rail: 242' [10 x 14', 6 x 17']
Landscape orientation	Weight/attachment: 18.1 lbs	Attachments: 60
Graphical entry	Total Area: 373.0 sq ft	Splices: 6
	Distributed weight: 2.9 psf	Clamps: 48

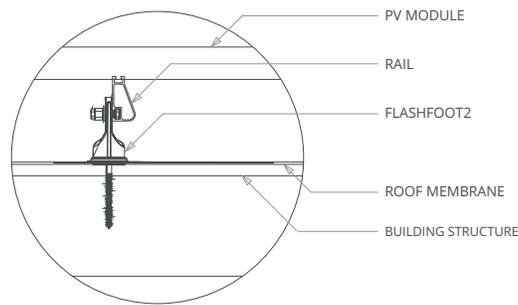
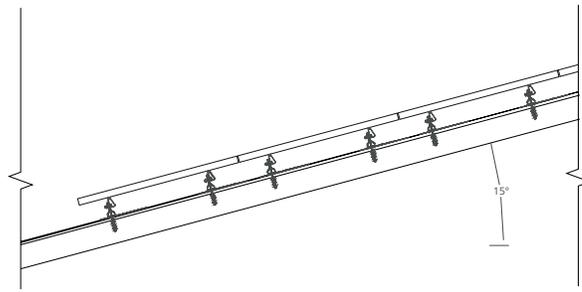
Diagram



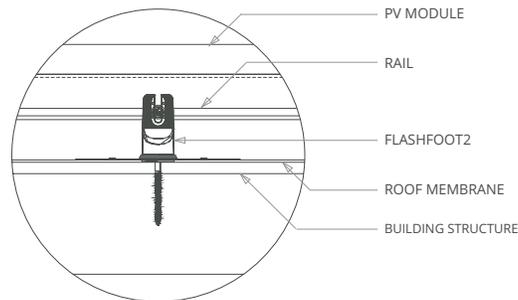
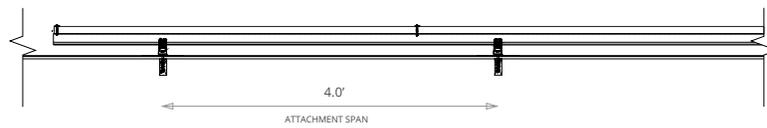
Segments

Columns	Length	Cantilever	Cantilever Violations	Rail	Attachments	Splices	Clamps
2	11' 7"	1' 10"	None	28' [2 x 14']	6	0	6
Row segment totals (x 2) →				56' [4 x 14']	12	0	12
5	28' 10"	5"	None	62' [2 x 14', 2 x 17']	16	2	12
Row segment totals (x 3) →				186' [6 x 14', 6 x 17']	48	6	36

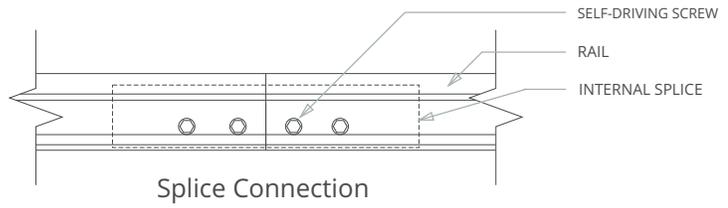
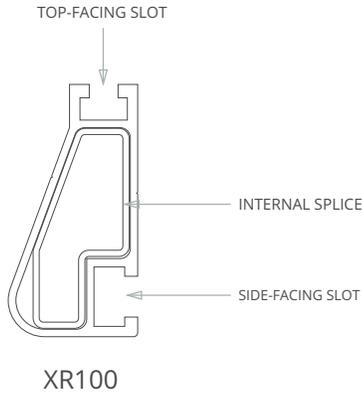
Side View (landscape)



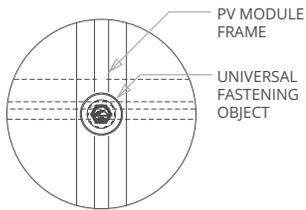
Front View (landscape)



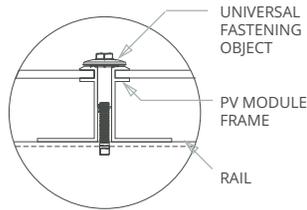
Splice Details



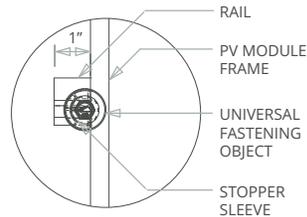
Clamp Detail



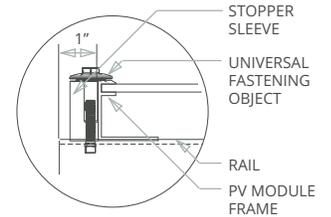
Mid Clamp, Plan



Mid Clamp, Front

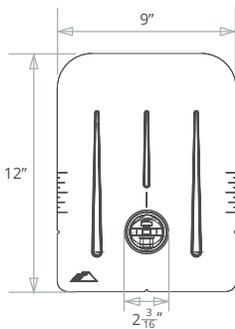


End Clamp, Plan

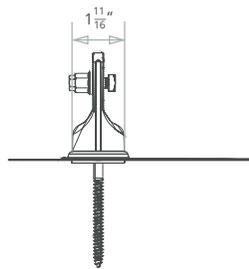


End Clamp, Front

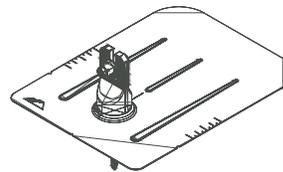
FlashFoot2 Detail



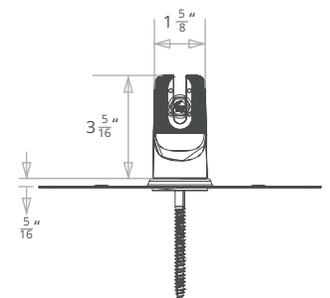
Plan View



Side View

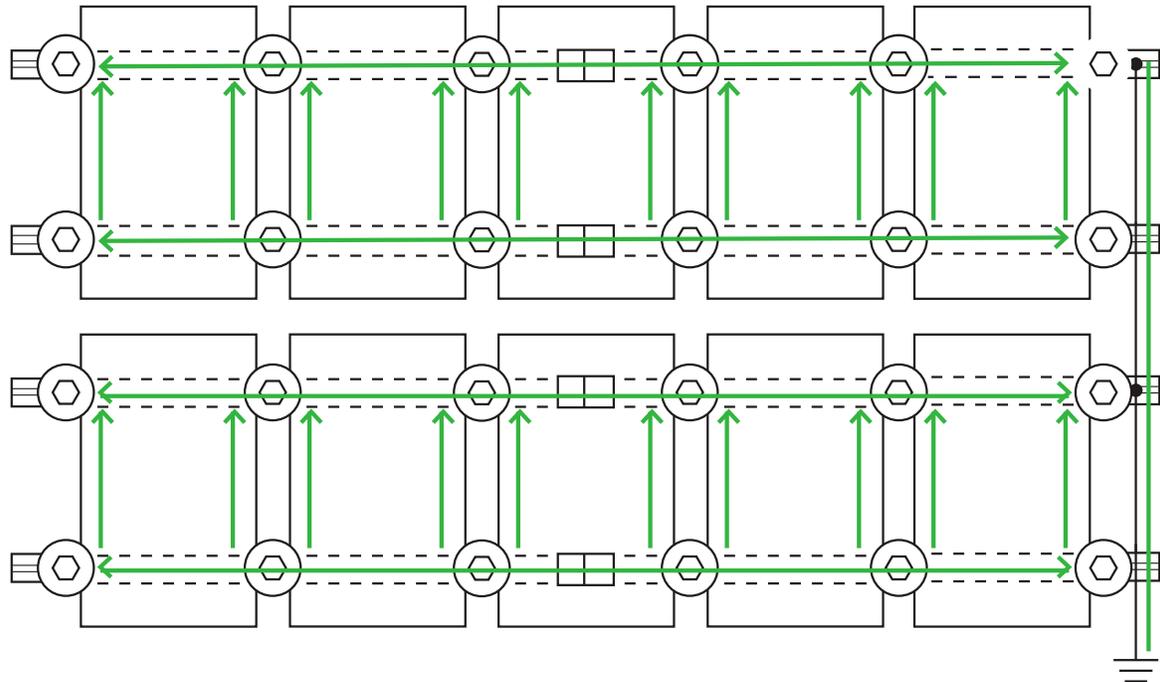


Perspective View



Front View

Grounding Diagram



UFO Clamp

Fault Current Ground Path

Grounding Lug *

Min 10 AWG Copper Wire *

Bonded Splice (Rail Connection)

* Grounding Lugs and Wire are not required in systems using Enphase microinverters.

Bill of Materials

Part	Spares	Total Qty
Rails & Splices		
XR-100-204A XR100, Rail 204" (17 Feet) Clear	0	6
XR-100-168A XR100, Rail 168" (14 Feet) Clear	0	10
XR-100-SPLC-M1 XR100 Bonded Splice (Incl. Self-tapping Screws)	0	6
Clamps & Grounding		
UFO-CL-01-A1 Universal Module Clamp, Clear	0	48
UFO-STP-32MM-M1 Stopper Sleeve, 32MM, Mill	0	20
XR-LUG-03-A1 Grounding Lug, Low Profile	0	5
Attachments		
FF2-01-M2 FlashFoot2, Mill	0	60
BHW-SQ-02-A1 Square-Bolt Bonding Hardware	0	60

Q.PEAK DUO BLK-G6+

330-345

ENDURING HIGH
PERFORMANCE



Q.ANTUM TECHNOLOGY: LOW LEVELIZED COST OF ELECTRICITY

Higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 19.5%.



INNOVATIVE ALL-WEATHER TECHNOLOGY

Optimal yields, whatever the weather with excellent low-light and temperature behavior.



ENDURING HIGH PERFORMANCE

Long-term yield security with Anti LID and Anti PID Technology¹, Hot-Spot Protect and Traceable Quality Tra.Q™.



EXTREME WEATHER RATING

High-tech aluminum alloy frame, certified for high snow (5400 Pa) and wind loads (4000 Pa).



A RELIABLE INVESTMENT

Inclusive 25-year product warranty and 25-year linear performance warranty².



STATE OF THE ART MODULE TECHNOLOGY

Q.ANTUM DUO combines cutting edge cell separation and innovative wiring with Q.ANTUM Technology.

¹ APT test conditions according to IEC/TS 62804-1:2015, method B (-1500 V, 168h)

² See data sheet on rear for further information

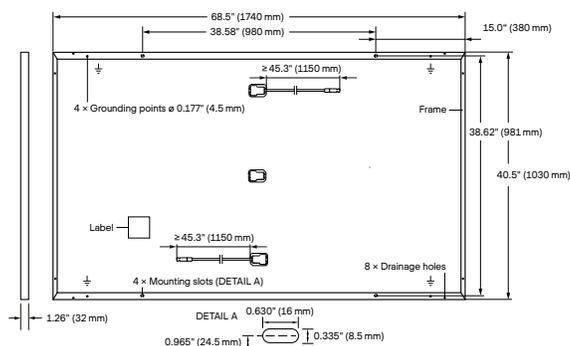
THE IDEAL SOLUTION FOR:



Rooftop arrays on
residential buildings

MECHANICAL SPECIFICATION

Format	68.5 × 40.6 × 1.26 in (including frame) (1740 × 1030 × 32 mm)
Weight	43.9 lbs (19.9 kg)
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodized aluminum
Cell	6 × 20 monocrystalline Q.ANTUM solar half cells
Junction Box	2.09-3.98 × 1.26-2.36 × 0.59-0.71 in (53-101 × 32-60 × 15-18 mm), Protection class IP67, with bypass diodes
Cable	4 mm ² Solar cable; (+) ≥ 45.3 in (1150 mm), (-) ≥ 45.3 in (1150 mm)
Connector	Stäubli MC4, Hanwha Q CELLS HQC4, Amphenol UTX, Renhe 05-6, Tongling TL-Cable01S, JMTHY JM601; IP68 or Friends PV2e; IP67

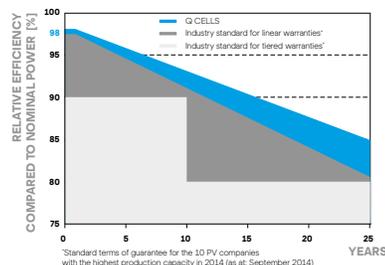


ELECTRICAL CHARACTERISTICS

POWER CLASS		330	335	340	345	
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC ¹ (POWER TOLERANCE +5 W / -0 W)						
Minimum	Power at MPP ¹	P _{MPP} [W]	330	335	340	345
	Short Circuit Current ¹	I _{SC} [A]	10.41	10.47	10.52	10.58
	Open Circuit Voltage ¹	V _{OC} [V]	40.15	40.41	40.66	40.92
	Current at MPP	I _{MPP} [A]	9.91	9.97	10.02	10.07
	Voltage at MPP	V _{MPP} [V]	33.29	33.62	33.94	34.25
	Efficiency ¹	η [%]	≥ 18.4	≥ 18.7	≥ 19.0	≥ 19.3
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT ²						
Minimum	Power at MPP	P _{MPP} [W]	247.0	250.7	254.5	258.2
	Short Circuit Current	I _{SC} [A]	8.39	8.43	8.48	8.52
	Open Circuit Voltage	V _{OC} [V]	37.86	38.10	38.34	38.59
	Current at MPP	I _{MPP} [A]	7.80	7.84	7.89	7.93
	Voltage at MPP	V _{MPP} [V]	31.66	31.97	32.27	32.57

¹Measurement tolerances P_{MPP} ± 3%; I_{SC}; V_{OC} ± 5% at STC: 1000 W/m², 25 ± 2 °C, AM 1.5 according to IEC 60904-3 • 2800 W/m², NMOT, spectrum AM 1.5

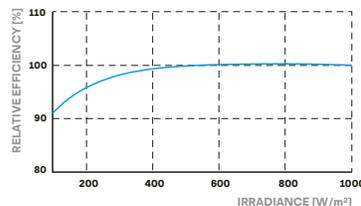
Q CELLS PERFORMANCE WARRANTY



At least 98% of nominal power during first year. Thereafter max. 0.54% degradation per year. At least 93.1% of nominal power up to 10 years. At least 85% of nominal power up to 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Q CELLS sales organization of your respective country.

PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25 °C, 1000 W/m²)

TEMPERATURE COEFFICIENTS

Temperature Coefficient of I _{SC}	α [%/K]	+0.04	Temperature Coefficient of V _{OC}	β [%/K]	-0.27
Temperature Coefficient of P _{MPP}	γ [%/K]	-0.36	Normal Module Operating Temperature	NMOT [°F]	109 ± 5.4 (43 ± 3 °C)

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V _{sys}	[V]	1000 (IEC)/1000 (UL)	Safety Class	II
Maximum Series Fuse Rating	[A DC]	20	Fire Rating based on ANSI / UL 1703	C (IEC)/TYPE 2 (UL)
Max. Design Load, Push / Pull ³	[lbs / ft ²]	75 (3600 Pa) / 55 (2667 Pa)	Permitted Module Temperature on Continuous Duty	-40 °F up to +185 °F (-40 °C up to +85 °C)
Max. Test Load, Push / Pull ³	[lbs / ft ²]	113 (5400 Pa) / 84 (4000 Pa)		

³ See Installation Manual

QUALIFICATIONS AND CERTIFICATES

UL 1703, VDE Quality Tested, CE-compliant, IEC 61215:2016, IEC 61730:2016, Application Class II, U.S. Patent No. 9,893,215 (solar cells)



PACKAGING INFORMATION

Number of Modules per Pallet	32
Number of Pallets per 53' Trailer	28
Number of Pallets per 40' HC-Container	24
Pallet Dimensions (L × W × H)	71.5 × 45.3 × 48.0 in (1815 × 1150 × 1220 mm)
Pallet Weight	1505 lbs (683 kg)

Note: Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product.

Hanwha Q CELLS America Inc.

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