

BLOCK

671

LOT

1.01

QUALIFICATION CODE

ADDRESS (SITE)

56 Chambers Bridge 17-3580

PERMIT NO.



CONSTRUCTION PERMIT APPLICATION

Applicant Completes: Sections I, II, III (optional), IV, VI, and VII

C17-004305

V. FEE SUMMARY (for office use only)

		Update	Update
1. Building	\$ 230		
2. Electrical	150		
3. Plumbing	300		
4. Fire Protection	285		
5. Elevator Devices			
6. Subtotal			
7. Less 20% for State Plan Review	\$		
8. Subtotal	\$		
9. State Permit Surcharge Fee	11-		
10. Subtotal	\$		
11. Cert. of Occupancy			
12. Other			
13. TOTAL	\$ 970		

VI. BUILDING/SITE CHARACTERISTICS

- Number of Stories
- Height of Structure ft.
- Area — Largest Floor sq. ft.
- New Building Area sq. ft.
- Volume of New Structure cu. ft.
- Max. Live Load
- Max. Occupancy Load
- If Industrialized Building: State Approved HUD
- Total Land Area Disturbed sq. ft.
- Flood Hazard Zone
- Base Flood Elevation ft.
- Wetlands yes no

(office use only)

COMMERCIAL

I. IDENTIFICATION

- Proposed Work Site at: Barnes & Noble 2803 44 Brick Plaza Bricktown, NJ 08723
- Name of Owner in Fee: Federal Realty Investment Trust
Tel. (301) 998-8100 e-mail
Address 1626 E. Jefferson Street Rockville MD 20852
street municipality zip code
- Ownership in Fee: Public Private
- Principal Contractor: SJ Alliance Mechanical Tel. (609) 704-8600
Address 601 S White Horse Pike e-mail
Hammonton, NJ 08037
- License No. OR, if new home, Builder Reg. No. 19HC00790700 Exp. Date
Home Improvement Contractor Registration No. or Exemption Reason
Federal Emp. ID No. 61-1723604 FAX: (609) 704-1101
- Architect or Engineer Contact
Address e-mail
Tel. FAX:
- Responsible Person in Charge once Work has Begun Jason Young
Tel. (609) 704-8600 FAX: (609) 704-1101

IIa. PROPOSED WORK

- ☐ Minor Work ☐ New Building ☐ Addition ☐ Demolition
- ☐ Repair ☒ Alteration ☐ Renovation ☐ Reconstruction
- ☐ Asbestos Abat. -Subch. 8 ☐ Lead Hazard Abatement ☐ Radon Remediation ☐ Annual Permit

FOR OFFICE USE ONLY (Optional)

IIb. SUBCODES

(Check all that apply)

- ☒ Building
- ☒ Electrical
- ☒ Plumbing
- ☒ Fire Protection
- ☐ Elevator

Est. Cost	Plans Rec'd by	Date Rec'd	Rejection Date	Approval Date	Re-viewer	Resubmission Dates	Re-viewer
4,600				10/12/17	KEK		
450				9/27/17	PE		
225				10-5-17	AB		
225				9/29/17	JO		

TOTAL COST \$5,500

III. PLAN REVIEW (optional)

DO YOU WANT:

- ☐ Partial Releases
- ☐ Prototype Processing

IV. DOES OR WILL YOUR BUILDING CONTAIN ANY OF THE FOLLOWING?

- ☐ Elevators/Escalators/Lifts/ Dumbwaiters/Moving Walks
- ☐ High Pressure Boilers
- ☐ Pressure Vessels
- ☐ Refrigeration Systems
- ☐ Cross-Connections/Backflow Preventers
- ☐ Hazardous Uses/Places of Assembly
- ☐ Sprinklers/Standpipes
- ☐ Smoke Control Systems in Open Wells
- ☐ Underground Storage Tanks
- ☐ Swimming Pools, Spas and Hot Tubs
- ☐ LPGas Tanks
- ☐ Fire Alarm

VII. DESCRIPTION OF BUILDING USE

A. RESIDENTIAL (primary use)

- State Specific Use:
- Use Group, Proposed: Select Group
- Change in Use Group, Indicate Present: Select Group
- No. of dwelling units: Total Units Income-restricted
Gained, Sale
Gained, Rental
Lost, Sale
Lost, Rental

B. NON-RESIDENTIAL (primary use)

- State Specific Use:
- Use Group, Proposed: Select Group Select Group
- Change in Use Group, Indicate Present

C. MIXED USE -List secondary use(s):

- D. Construct. Classification: Present
Proposed

RECEIVED

SEP 25 2017

BUILDING



Brick Township
401 Chambersbridge Rd
Brick, NJ 08723

Date Issued 11/17/2017
Control Number C-17-004305
Permit Number 17-3580
Permit Issue Date 10/26/2017
Certificate Number 17-3580

Certificate

Construction Code Division

(Certificate of Approval)

Identification

Work Site Location: 56 CHAMBERS BRIDGE RD. Brick Township, Block: 671 Lot: 1.01 Qual: _____
NJ
Owner in Fee: FEDERAL REALTY INVESTMENT TRUST
Owner Address: 1626 EAST JEFFERSON ST. ROCKVILLE MD 20852
Telephone: (301) 998-8100
Contractor SJ ALLIANCE MECHANICAL
Address 601 SOUTH WHITEHORSE PIKE HAMMONTON NJ 08037
Telephone: (609) 704-8600 Fax: (609) 704-1101
License Number or Builders Registration Number: 19HC00681200 Federal Emp. Number: 61-1723604

Home Warranty Number: _____

Type of Warranty Plan: ☐ State ☐ Private

Use Group: M Construction Classification: _____

Maximum Live Load: 0 Maximum Occupancy Load: 0

Description of Work/Use: HVAC - BARNES AND NOBLE ...REPLACE (3) RTU'S

Certificate Comments:

☐ **Certificate of Occupancy**

This serves notice that said building or structure has been constructed in accordance with the New Jersey Uniform Construction Code and is approved for occupancy.

☒ **Certificate of Approval**

This serves notice that the work completed has been constructed or installed in accordance with the New Jersey Uniform Construction Code and is approved. If the permit was issued for minor work, this certificate was based upon what was visible at the time of inspection.

☐ **Certificate of Continued Occupancy**

This serves notice that based on a general inspection of the visible parts of the building there are no imminent hazards and the building is approved for continued occupancy.

☐ **Temporary Certificate of Compliance**

The following conditions must be met no later than or the owner will be subject to fine or order to vacate:
This certificate has an expiration date of:

Conditions to be met:

☐ **Certificate of Clearance - Lead Abatement 5:17**

This serves notice that based on written certification, lead abatement was performed as per NJAC5:17 to the following extent.

- ☐ Total removal of lead-based paint hazards in scope of work
☐ Partial or limited time period (years); see file

☐ **Certificate of Clearance - Asbestos Abatement**

This serves notice that based on written certification, asbestos abatement was performed to the following extent.

- ☐ Total removal of asbestos hazards in scope of work
☐ Partial or limited time period (years); see file

☐ **Certificate of Compliance**

This serves notice that said potentially hazardous equipment has been installed and/or maintained in accordance with the New Jersey Uniform Construction Code and is approved for use until

☐ **Temporary Certificate of Occupancy**

The following conditions must be met no later than: or the owner will be subject to fine or order to vacate:
This certificate has an expiration date of:

Conditions to be met:

Construction Official

Date Printed: 11/17/2017

U.C.C. F260 (rev. 08/05)

Fee: \$0.00

Check Number: _____

Collected By: _____

Page 1

CERTIFICATION IN LIEU OF OATH

I. OWNER SECTION (to be completed if the applicant is the owner in fee)

I hereby certify that I am the owner in fee of the property listed on Page 1.

Mark the following applicable boxes:

- A. ☐ I further certify that a new home (private residence) will be constructed on this property for my own use and occupancy. This dwelling is to be occupied by myself and is not to be used for any purpose other than single family residential use. I attest that all construction, plumbing, or electrical work will be done, in whole or in part, by me or by subcontractors under my supervision, in accordance with all applicable laws; and, I further acknowledge that said new home is not covered under the New Home Warranty and Builders Registration Act (N.J.S.A. 46:3B-1 et seq.) and that such fact shall be disclosed to any person purchasing this property within ten years of the date of issuance of a certificate of occupancy.

I UNDERSTAND THAT IN MARKING BOX A, I ACKNOWLEDGE THAT I AM ASSUMING RESPONSIBILITY FOR THE WORK DONE ON SAID PROPERTY, THE CONDITION OF THE PROPERTY PRIOR TO, DURING, AND AFTER ANY WORK PERFORMED, AND FOR THE PERFORMANCE OF THE SUBCONTRACTORS I HIRE, EMPLOY, OR OTHERWISE CONTRACT OR WITH WHOM I MAKE AGREEMENTS TO PERFORM WORK. I AM VOLUNTARILY AND KNOWINGLY ASSUMING THIS RESPONSIBILITY.

- B. ☐ I further certify the following as required by the New Jersey Uniform Construction Code, N.J.A.C. 5:23-2.15(f)1.ix:

I personally prepared the plans submitted for: 1) the new home referred to in A.; or, 2) an addition, alteration, renovation, or repair to an existing single family residence owned and occupied by myself and located on the property listed on Page 1; or, 3) a new structure that will be physically separate from, but that will be deemed part of, an existing single family residence that is owned and occupied by myself and located on the property listed on Page 1.

- C. ☐ I further certify that I will perform or supervise the following work:

C.1. ☐ Building C.2. ☐ Fire Protection

I further certify that I will perform the following work:

C.3. ☐ Electrical C.4. ☐ Plumbing

- D. ☐ I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I understand that if any of the above statements are willfully false, I am subject to punishment.

Signature _____ Date _____

II. AGENT SECTION (to be completed if the applicant is not the owner in fee)

I hereby certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(d): the proposed work is authorized by the owner in fee; and I have been authorized by the owner in fee to make this application as his agent.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I understand that if any of the above statements are willfully false, I am subject to punishment.

(X) Check if contractor.

Agent Name SJ Alliance Mechanical

Address 601 S White Horse Pike

Hammoncton NJ 08037

Telephone (609) 704-8600

Signature _____

- III. ☒ LEAD HAZARD ABATEMENT: Include Homeowner or Building Owner Affidavit as per N.J.A.C. 5:17.



ELECTRICAL SUBCODE TECHNICAL SECTION



BARNES & NOBLE

Date Received
Control #
Date Issued
Permit #

10/26/17
17-3580

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 671 Lot 1.01 Qualification Code _____
Work Site Location Barnes & Noble 2803
44 Brick Plaza Bricktown, NJ 08723

Owner in Fee: Federal Realty Investment Trust
Tel. (301) 998-8100 e-mail _____

Address 1626 E. Jefferson Street Rockville MD 20852
Contractor: SJ Alliance Mechanical street municipality zip code
Address 601 S White Horse Pike Hammonton, NJ 08037 e-mail _____ Tel. (609) 704-8600

Contractor License No. 19HC00790700 Exp. Date _____
Home Improvement Contractor Registration No. or Exemption Reason _____

Federal Emp. ID No. 61-1723604 FAX: (609) 704-1101

B. ELECTRICAL CHARACTERISTICS

Use Group Present Proposed _____
☐ Pole/Pad # _____ ☐ Temporary ☐ Other _____
Building Occupied as _____ Utility Co. _____
Est. Cost of Elec. Work \$ 450

JOB SUMMARY (Office Use Only)

PLAN REVIEW		INSPECTIONS		Dates (Month/Day)	
☐ No Plans Required	Type:	Failure	Failure	Approval	Initial
☐ Partial - Underslab Utilities Approved	Rough				
☐ Barrier-Free	Trench				
☒ Electric Plans Approved <u>SPECS.</u>	Temp. Serv.				
Date: <u>7/24/17</u> Approved by: <u>PSC</u>	Const. Serv.				
Joint Plan Review Required:	TCO				
☐ Bldg. ☐ Plumb. ☐ Fire. ☐ Elev.	Other				
SUBCODE APPROVAL for PERMIT	Service				
Date: <u>8/31/17</u>	Final				
Approved by: <u>[Signature]</u>	Barrier-Free				
SUBCODE APPROVAL for CERTIFICATE	Temp. Cut-In-Card Date Issued				
☐ CO ☐ CCO <u>CA</u>	Final Cut-In-Card Date Issued				
Date: <u>11/8/17</u>	Annual Pool Inspection				
Approved by: <u>[Signature]</u>	Date of Grounding and Bonding Certification				

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to execute this application and perform the work listed on this application.

Applicant sign/Contractor sign and seal here: _____

Print name here: Jeff Hedge
☐ Licensed Elec. Contractor ☐ Certifd Landscape Irrigation Contractor

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK: Disconnect/Reconnect (3) 10 Ton Rooftop Units

QTY	SIZE	ITEMS	FEE (Office Use Only)
		Lighting Fixtures	
		Receptacles	
		Switches	
		Detectors	
		Light Poles	
		Motors—Fract. HP	
		Emergency & Exit Lights	
		Communications Points	
		Alarm Devices/F.A.C. Panel	
		TOTAL NUMBERS	
		Pool Permit/with UW Light	
		Storable Pool/Spa/Hot Tub	
		KW Elec. Range/Receptacle	
		KW Oven/Surface	
		KW Elec. Water Heater	
		KW Elec. Dryer/Receptacle	
		KW Dishwasher	
		HP Garbage Disposal	
		KW Central A/C Unit	
		HP/KW Space Heater/Air Handler	
		KW Baseboard Heat	
		HP Motors 1/4 HP	
		KW Transformer/Generator	
		AMP Service	
		AMP Subpanels	
		AMP Motor Control Center	
		KW Elec. Sign/Outline Light	

Administrative Surcharge \$ _____

Minimum Fee \$ _____

State Permit Surcharge Fee \$ _____

TOTAL FEE \$ _____



BUILDING SUBCODE TECHNICAL SECTION



A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO.: 1-800-272-1000.

Block 611 Lot 1.01 Qualification Code _____

Work Site Location Barnes & Noble 2803

44 Brick Plaza Bricktown, NJ 08723

Owner in Fee: Federal Realty Investment Trust

Tel. (301) 998-8100 e-mail _____

Address 1626 E. Jefferson Street Rockville MD 20852

Contractor: SJ Alliance Mechanical Tel. (609) 704-8600

Address 601 S White Horse Pike e-mail _____

Hammon, NJ 08037

Contractor License No. or Builder Registration No. 19HC00790700 Exp. Date _____

Home Improvement Contractor Registration No. or Exemption Reason _____

Federal Emp. ID No. 61-1723604 FAX: (609) 704-1101

JOB SUMMARY (Office Use Only)

PLAN REVIEW _____ Date _____ Initial _____

☒ No Plans Required 10/21/17 WJ Type: _____

☐ All _____ Footing _____

☐ Footings/Foundations _____ Footing Bonding _____

☐ Structural/Framework _____ Foundation _____

☐ Exterior _____ Slab _____

☐ Interior _____ Frame _____

☐ Truss Sys./Bracing _____

Joint Plan Review Required: _____

☐ Elec. ☐ Plumb. ☐ Fire ☐ Elevator _____

SUBCODE APPROVAL for PERMIT _____

Date: 10/21/17 _____

Approved by: WJ _____

SUBCODE APPROVAL for CERTIFICATE _____

☐ CO ☐ CCO WJ _____

Date: 10/21/17 _____

Approved by: WJ _____

Barrier-Free _____

Insulation _____

Finishes -Base Layer _____

Finishes -Final _____

Energy _____

Mechanical _____

TCO _____

Other _____

Final _____

Barrier-Free _____

Dates (Month/Day)

Failure _____

Failure _____

Approval _____

Initial _____

COMMERCIAL

TYPE OF WORK:

☐ New Building

☐ Addition

☐ Rehabilitation

☐ Roofing

☐ Siding

☐ Fence _____ Height (exceeds 6') _____

☐ Sign _____ Sq. Ft. _____

☐ Pool _____

☐ Retaining Wall _____ Sq. Ft. _____

☐ Asbestos Abatement Subchapter 8 _____

☐ Lead Haz. Abatement NJAC 5:17 _____

☐ Radon Remediation _____

☐ Other _____

☐ Demolition _____

FEE (Office Use Only)

\$ _____

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to execute this application.

Sign here: _____

Print name here: Jeff Hedge

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK

Replace w/same in kind

(3) 10 Ton Rooftop Units

Date Received

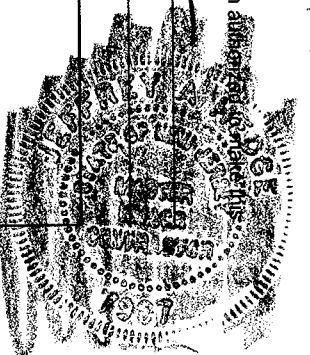
Control #

Date Issued

Permit #

17-3580

10/26/17



Administrative Surcharge \$ _____
Minimum Fee \$ _____
State Permit Surcharge Fee \$ _____
TOTAL FEE \$ _____

Applicant: When submitting this form to your Local Construction Code Enforcement Office, please provide one original plus three photocopies.

U.C.C. F-110 (rev. 11/09)
Internet version



FIRE PROTECTION SUBCODE TECHNICAL SECTION



A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 671 Lot 1.01 Qualification Code _____

Work Site Location Barnes & Noble 2803

44 Brick Plaza Bricktown, NJ 08723

Owner in Fee: Federal Realty Investment Trust

Tel. (301) 998-8100 e-mail _____

Address 1626 E. Jefferson Street Rockville MD 20852

Contractor: SJ Alliance Mechanical Municipality _____ Tel. (609) 704-8800

Address 601 S White Horse Pike e-mail _____

Hammon, NJ 08037

Fire Protection Equipment, NJ Div of Fire Safety Permit No. _____

Fire Protection Equipment, NJ Div of Fire Safety Installer No. _____

Fire Alarm Contractor No. _____ Exp. Date _____

Home Improvement Contractor Registration No. or Exemption Reason 19HC00790700

Federal Emp. ID No. 61-1723604 FAX: (609) 704-1101

B. FIRE PROTECTION CHARACTERISTICS

Use Group: Present _____ Proposed _____ Fuel Storage Tank: _____

Constr. Class: Present _____ Proposed _____ Fuel Type: ☐ Flammable or ☐ Combustible

Heating System: ☐ New or ☐ Modification to Existing Fire Alarm System: ☐ New or ☐ Existing

OR ☐ Conversion or ☐ Replacement Location of Panel: _____

Fuel Type: ☐ Gas ☐ Oil ☐ Electric ☐ Solar Fire Suppression/Standpipe System: _____

☐ Other _____ Location of Main Control Valve: _____

Location: _____

Total Cost of Fire Protection Work \$ 225

JOB SUMMARY (Office Use Only)

PLAN REVIEW

☐ No Plans Required

☐ Partial - Under/Over Utilities Approved

Date _____ Approved by: _____

☒ Fire Protection Plans Approved

Date 11-15-17 Approved by: [Signature]

Sub Plan Review Required: _____

☐ Bldg. ☐ Elec. ☐ Plumb. ☐ Elev.

SUBCODE APPROVAL for PERMIT

Date: 11-15-17

Approved by: [Signature]

SUBCODE APPROVAL for CERTIFICATE

☐ CO ☐ LCCO ☒ CA

Date: 11-15-17

Approved by: [Signature]

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to execute this application.

Applicant/Contractor sign here: _____

Print name here: Jeff Hedge

D. TECHNICAL SITE DATA ☐ Certified Contractor ☐ _____

DESCRIPTION OF WORK:

Water Supply Source Replace w/same in kind

Method of Alarm/Suppression System Supervision _____

Flammable/Combustible Tanks _____

Alarm Systems ☐ System ☐ 110v interconnected ☐ CO Detectors/110v

Alarm Devices (i.e., smoke, heat, pulls, water/flow) _____

Supervisory Devices (i.e., tampers, low/high air) _____

Signaling Devices (i.e., horns/strobes, bells) _____

Other Devices _____

TOTAL _____

Suppression Systems

Fire Pump _____ GPM Type _____

Dry Pipe/Alarm Valves _____

Pre-action Valves _____

Sprinkler Heads (Dry and Wet) _____

Standpipes _____

Pre-engineered Systems

Wet Chemical _____

Dry Chemical _____

CO₂ Suppression _____

Foam Suppression _____

FM200 Suppression _____

Other _____

Other Systems

Kitchen Hood Exhaust System _____

Smoke Control System _____

Fuel-Fired Appliances ☒ Gas ☐ Oil ☐ Solid _____

Fireplace Venting/Metal Chimney _____

Other _____

Administrative Surcharge \$ _____

Minimum Fee \$ _____

State Permit Surcharge Fee \$ _____

TOTAL FEE \$ _____

U.C.C. F140 (rev. 02/14) Applicant: When submitting this form to your Local Construction Code Enforcement Office, please provide one

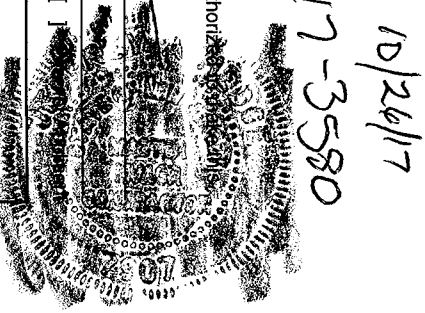
Internet version original plus three photocopies.

Date Received _____

Control # _____

Date Issued _____

Permit # _____





PLUMBING SUBCODE TECHNICAL SECTION



A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION, WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO.: 1-800-272-1000.

Block 671 Lot 1.01 Qualification Code _____

Work Site Location Barnes & Noble 2803
44 Brick Plaza Bricktown, NJ 08723

Owner in Fee: Federal Realty Investment Trust

Tel. (301) 998-8100 e-mail _____

Address 1626 E. Jefferson Street Rockville MD 20852

Contractor: SJ Alliance Mechanical Hammon, NJ 08037 601 S White Horse Pike Hammon, NJ 08037

Contractor License No. 7907 Exp. Date _____

Home Improvement Contractor Registration No. or Exemption Reason _____

Federal Emp. ID No. 61-1723604 FAX: (609) 704-1101

B. PLUMBING CHARACTERISTICS

Use Group Present Proposed _____

Building Sewer Size _____ Public Sewer _____

Water Service Size _____ Public Water _____ Private Well _____

Est. Cost of Plumbing Work \$ 450

JOB SUMMARY (Office Use Only)

PLAN REVIEW

☐ No Plans Required

☐ Partial Under-slab Utilities Approved

Date: _____ Approved by: _____

☒ Plumbing Plans Approved

Date: _____ Approved by: _____

Joint Plan Review Required: _____

☐ Bldg. ☐ Elec. ☐ Fire. ☐ Elev.

SUBCODE APPROVAL FOR PERMIT

Date: 8-5-17

Approved by: _____

SUBCODE APPROVAL FOR CERTIFICATE

☐ CO ☐ CCO ☐ CA

Date: 11-9-17

Approved by: _____

Date Received
Control #
Date Issued
Permit #

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to submit this application and perform the work listed on this application.

Applicant sign/Contractor sign and seal here: _____

Print name here: Jeff Hedge

☐ Licensed Plumbing Contractor

D. TECHNICAL SITE DATA

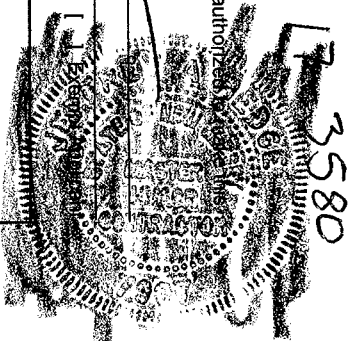
DESCRIPTION OF WORK

Disconnect/Reconnect

(3) Gas Pipe (3) Condensate Drain

QTY. _____

COMMERCIAL



10/26/17

3580

Administrative Surcharge \$ _____

Minimum Fee \$ _____

State Permit Surcharge Fee \$ _____

TOTAL FEE \$ _____



CONSTRUCTION PERMIT

Date Issued 10/26/17
Control # C-17-004305
Permit # 17-3580

IDENTIFICATION Block: 671 Lot: 1.01 Qualifier _____
Work Site Location: 56 CHAMBERS BRIDGE RD. Brick Township, NJ Contractor SJ ALLIANCE MECHANICAL
Address 601 SOUTH WHITEHORSE PIKE HAMMONTON NJ
Owner in Fee FEDERAL REALTY INVESTMENT TRUST
1626 EAST JEFFERSON ST ROCKVILLE MD
20852 Telephone: (609) 704-8600
Telephone: (301) 998-8100 Lic. No. or Bldrs. Reg. No. 19HC00681200 19HC00681200
Federal Employee No. 614723664

Is hereby granted permission to perform the following work:

- ☒ BUILDING ☒ PLUMBING ☐ LEAD HAZARD ABATEMENT
☒ ELECTRICAL ☒ FIRE PROTECTION ☐ DEMOLITION
☐ ELEVATOR DEVICES ☐ ASBESTOS ABATEMENT (Subchapter 8 only) ☐ OTHER

DESCRIPTION OF WORK:

HVAC - BARNES AND NOBLE ... REPLACE (3) RTU'S

Note: If construction does not commence within one (1) year of date of issuance, or if construction ceases for a period of six (6) months, this permit is void.
Estimated Cost of Work \$5,725

D. Newman
Construction Official

10/13/17
Date

U.C.C. F170
equiv (rev 1/04)

1 WHITE - INSPECTOR

2 CANARY - OFFICE

3 PINK - TAX ASSESSOR

4 GOLD - APPLICANT

10/26/17 10:45AM OUT 358033
END SERV 003

REQUIRED INSPECTIONS

Construction work must be inspected in accordance with the State Uniform Construction Code Regulations N.J.A.C. 5:23-2.18. This agency will carry out such periodic inspections during the progress of work as are necessary to insure that the work installed conforms with the requirements of the Uniform Construction Code.

The owner or other responsible person in charge of work must notify this agency when work is ready for any required inspections specified below. Requests for inspections must be made at least 24 hours prior to the time the inspection is desired. Inspections will be performed within three business days of the time for which they are requested. The work must not proceed in a manner which will preclude the inspection until it has been approved and approval granted.

☐ Required inspections for all subcodes for one- and two-family dwellings are as follows:

1. The bottom of footing trenches before placement of footings, except that in cases of pile foundations, inspections shall be made in accordance with the requirements of the building subcode.
2. Foundations and all walls up to grade level prior to back filling.
3. All structural framing, connections, wall and roof sheathing and insulation; electrical rough wiring, panel and service installation; rough plumbing. The framing inspection shall take place after the rough electrical and plumbing inspections and after the installation of the heating, ventilation and /or air conditioning duct system. The insulation inspection shall be performed after all other subcode rough inspections and prior to the installation of any interior finish material.
4. Installation of all finished materials, sealings of exterior joints, plumbing piping, trim and fixtures; electrical wiring, devices and fixtures; mechanical systems equipment.

Additional required inspections for all subcodes of construction, for other than one- and two-family dwellings, are fire suppression systems, heat producing devices and Barrier Free subcode accessibility, if applicable.

☐ Required special inspections. The applicant by accepting the permit will be deemed to have consented to these requirements:

☒ A final inspection is required for each applicable subcode area before a final Certificate of Occupancy or Approval may be issued. The final inspections include the installation of all interior and exterior finish materials, sealing of exterior joints, mechanical system and other required equipment; electrical wiring, devices and fixtures; plumbing pipes, trim and fixtures; tests required by any provision of the adopted subcodes, Barrier Free accessibility, if applicable; and verification of compliance with NJAC 5:23-3.5, "Posting structures".

☒ A complete copy of released plans must be kept on the job site.

If you do not understand any of this information, please ask.

#3580	
BUILDING	\$230.00
ELECTRICAL	\$150.00
PLUMBING	\$300.00
FIRE PROTECTION	\$285.00
ELEVATOR DEVICES	\$0.00
Other	\$0.00
DCA Training Fee	\$11.00
CO Fee	
Other	\$0.00
Total	\$976.00
Check No.	7729
Cash	\$0.00
Credit	\$0.00
Collected By	CW

State Of New Jersey
New Jersey Office of the Attorney General
Division of Consumer Affairs

THIS IS TO CERTIFY THAT THE
Board of Exam. of HVACR Contractors

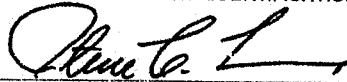
HAS LICENSED

Jeffrey A. Hedge
601 South Whitehorse Pike
Hammononton NJ 08037

FOR PRACTICE IN NEW JERSEY AS A(N): Master HVACR Contractor

05/18/2016 TO 06/30/2018
VALID

19HC00790700
LICENSE/REGISTRATION/CERTIFICATION #



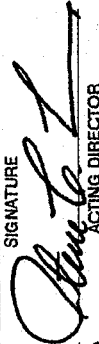
ACTING DIRECTOR

Signature of Licensee/Registrant/Certificate Holder

New Jersey Office of the Attorney General
Division of Consumer Affairs
THIS IS TO CERTIFY THAT THE
Board of Exam. of HVACR Contractors
HAS LICENSED
Jeffrey A. Hedge
Master HVACR Contractor

05/18/2016 TO 06/30/2018
VALID

SIGNATURE



ACTING DIRECTOR

19HC00790700

License/Registration/Certificate #

PLEASE DETACH HERE
IF YOUR LICENSE/REGISTRATION/
CERTIFICATE ID CARD IS LOST
PLEASE NOTIFY:
Board of Exam. of HVACR Contractors
P.O. Box 47031
Newark, NJ 07101

PLEASE DETACH HERE



Product Submittal

Project Information

Project Name: BARNES NOBLE # 2803 - BRICKTOWN, NJ

Project Number: 3000702612

Project Location: 44 BRICK PLAZA BRICKTOWN, NJ 08723, US

Project Altitude: 100

Customer Information

Company Name: Barnes & Noble Booksellers Inc

Company Address: 122 5TH AVE

Company Location: NEW YORK, NJ 08831-3417

Contact:

Phone: 212-633-3300

Engineering Information

Company Name:

Company Address:

Company Location:

Contact:

Phone:

We are pleased to provide the attached project submittal. If you have any questions or need additional information, please feel free to call our office.

Table of Contents

System ID	Qty	Model	Description
RTU 1,2,5 - L1320	3	LGH120H4B	PKGGE/10TON/CONFIGURABLE

Lennox Industries Inc. - Product Submittal

System ID: RTU 1,2,5 - L1320

Package Model: LGH120H4B

Description: PKGGE/10TON/CONFIGURABLE

HEATING PERFORMANCE

Unit Type	Packaged Gas Electric	Gas Supply Connection	0.75 (in.)
H/E LowInput	84500 (Btuh)	H/E Heat Rise	24.1 (°F)
H/E LowOutput	67500 (Btuh)	AFUE/ ThermalEff	80
H/E HighInput	130000 (Btuh)	Number of Heating Stages	2
H/E HighOutput	104000 (Btuh)	Gas Supply Pressure	7 (in.WC)
System HeatOutput	104000 (Btuh)		

COOLING PERFORMANCE

Refrigerant	R-410A	Number Compressors	2
ARI EER	12.0	Number of Cooling Stages	2
ARI IEER	13.0	Condensate Drain Size	1.00 (in.)
ARI Total Power	9900 (W)	Cooling OutdoorDB	95.0 (°F)
ARI GrossTotalCool	122000 (Btuh)	Cooling CondenserDB	95.0 (°F)
ARI NetTotalCool	118000 (Btuh)	Cooling MixedDB	80.0 (°F)
Coil GrossTotalCool	124400 (Btuh)	Cooling MixedWB	67.0 (°F)
Unit NetTotalCool	117402 (Btuh)	Coil DischargeDB	58.7 (°F)
Coil GrossSensCool	89568 (Btuh)	Coil DischargeWB	56.8 (°F)
Unit NetSensCool	82570 (Btuh)	Unit DischargeDB	60.2 (°F)
Environ Refrigerant Charge	14 LBS. 12 OZ.	Unit DischargeWB	57.4 (°F)
		Coil MoistureRemoval	32.8 (lb/hr)
		System MoistRemoval	32.8 (lb/hr)

SUPPLY FAN PERFORMANCE

Supply AirFlow	4000 (cfm)	TotalStaticPress	1.27 (in.WC)
ExtStaticPress Supply	0.80 (in.WC)	Wet Coil Static Press	0.14 (in.WC)
SupplyFan Req'dPower	2.34 (hp)	Gas H/E Static Press	0.14 (in.WC)
SupplyFan NomPower	3.00 (hp)	Economizer Static Press	0.19 (in.WC)
Supply Fan Type	CAV Belt Drive	Air Filter Qty	4
SupplyDriveReq'd RPM	945 (rpm)	Air Filter Length	20.0 (in.)
SupplyDrive Min RPM	730 (rpm)	Air Filter Width	25.0 (in.)
SupplyDrive Max RPM	970 (rpm)	Air Filter Thickness	2.0 (in.)
		Number Exhaust Fans	1

ELECTRICAL

Voltage	460V 3Ph	SupplyFan FLA	4.8 (amp)
Frequency	60 (Hz)	CondensingUnit FLA	2.6 (amp)
System MCA	27.0 (amp)	CondenserFan Power	725 (W)
System MOCP	30 (amp)		
Compressors RLA	16.0 (amp)		
Cooling FLA Total	23.4 (amp)		
Unit Oper Range-Nom Voltage	+/- 10%		

DIMENSIONS

Cabinet Width	60.1 (in.)	Downflow Supply Length	20.0 (in.)
Cabinet Length	101.3 (in.)	Downflow Supply Width	28.0 (in.)
Cabinet Height	46.9 (in.)	Downflow Return Length	24.0 (in.)
Total Weight	1244 (lb)	Downflow Return Width	27.0 (in.)

SOUND

Outdoor Sound Rating	88 (db)
----------------------	---------

Lennox Industries Inc. - Product Submittal

System ID: RTU 1,2,5 - L1320

Package Model: LGH120H4B

Description: PKGGE/10TON/CONFIGURABLE

SYSTEM FEATURES

Durable Outdoor Enamel Paint Finish	Timed Off Control
Scroll Compressor	AGA-CGA Certified
Pre-charged Refrigeration System	Units will operate cooling down to 0 degrees F (-17.7 degrees C) without additional controls.
High Capacity Driers	Redundant Comb. Gas Control Valve
Auto reset high & low pressure switch with strike 3 lockout feature in Prodigy unit controller	Electronic Flame Sensor
Totally Enclosed Fan Motor	Direct Spark Ignition
PVC Coated Fan Guard	Separate Compressor and Controls Compartment
Fan and Limit Controls	Advanced controls with Prodigy Control System
Factory Test Operated	Limited compressor warranty of 5 years
Bonded for Grounding	Limited warranty on Prodigy Unit Controller of 3 years
Internal Pressure Relief Valve	Limited warranty on Environ Coil System of 3 years
Overload Protection	Limited warranty on all other components of 1 year
Crankcase Heater Test	See Limited Warranty Certificate included with unit for details

INCLUDED SYSTEM OPTIONS - FACTORY INSTALLED

STANDARD CAP
2 IN MERV4 FILTER
CONSTANT AIR VOLUME
HINGED ACCESS DOORS
ENVIRON COIL SYSTEM

INCLUDED SYSTEM OPTIONS - FIELD INSTALLED

10U59	3	E1ECON17B-1 HIGH PERF ECONOMIZER
53W64	3	C1SNSR64FF1 SINGLE ENTHALPY
53W45	3	K1PWRE10B-1G POWER EXHAUST 460 V
54W56	3	C1DISC080B-1 DISCONNECT SWITCH - 80 AMP
87N53	3	EG T8100-LN CO2 DETECTOR/WHITE/WALL
13T05	3	C1GARD52B-1 MESH HAIL/COIL GUARD
11K76	3	C1SNSR448-2 SUP OR RET SMOKE DETECTOR KT
74M70	3	LB-101063C GFI SERVICE OUTLET KIT

Lennox Industries Inc. - Product Submittal

System ID: RTU 1,2,5 - L1320

Package Model: LGH120H4B

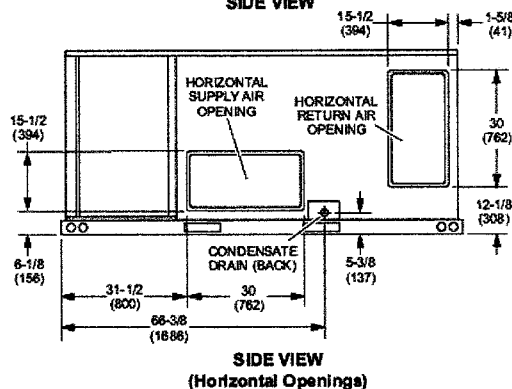
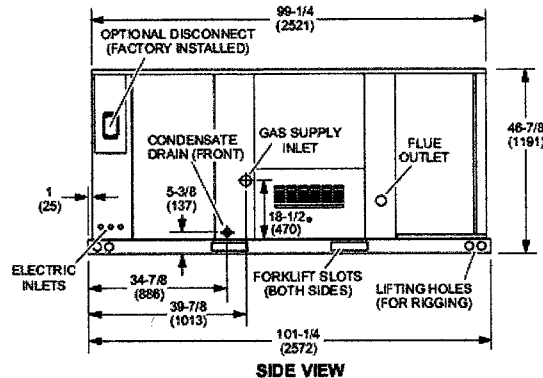
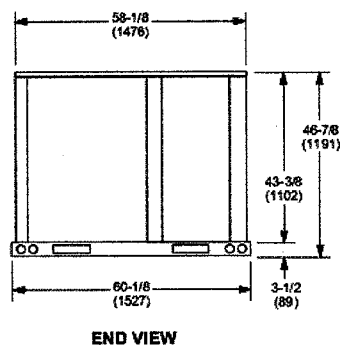
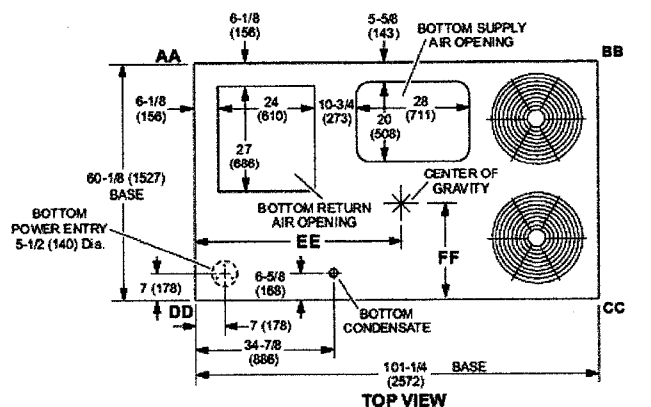
Description: PKGGE/10TON/CONFIGURABLE

DIMENSIONS - INCHES (MM)

Model No.	CORNER WEIGHTS												CENTER OF GRAVITY							
	AA				BB				CC				DD				EE		FF	
	Base		Max.		Base		Max.		Base		Max.		Base		Max.		Base		Max.	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	in.	mm	in.	mm
092	293	133	338	153	263	119	295	134	286	130	316	143	326	148	370	168	46.5	1181	45.5	1156
102	294	134	340	154	265	120	297	135	288	131	318	144	328	149	372	169	46.5	1181	45.5	1156
120	306	139	349	158	275	125	305	138	295	134	326	148	334	152	382	173	46.5	1181	45.5	1156
150	316	143	359	163	284	129	314	142	304	138	393	178	345	157	393	178	46.5	1181	45.5	1156

Base Unit - The unit with NO INTERNAL OPTIONS.

Max. Unit - The unit with ALL INTERNAL OPTIONS Installed. (Economizer, Standard Static Power Exhaust Fans, Controls, etc.). Does not include accessories external to unit or high static power exhaust.



Lennox Industries Inc. - Product Submittal

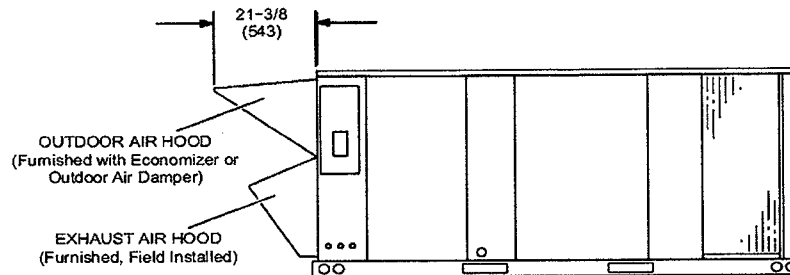
System ID: RTU 1,2,5 - L1320

Package Model: LGH120H4B

Description: PKGGE/10TON/CONFIGURABLE

ACCESSORY DIMENSIONS - INCHES (MM)

OUTDOOR AIR HOOD DETAIL



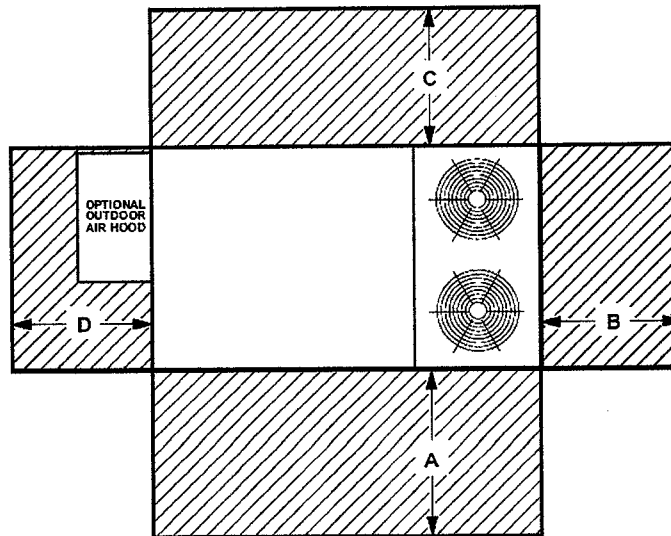
Lennox Industries Inc. - Product Submittal

System ID: RTU 1,2,5 - L1320

Package Model: LGH120H4B

Description: PKGGE/10TON/CONFIGURABLE

UNIT CLEARANCES - INCHES (MM)



1 Unit Clearance	A		B		C		D		Top Clearance
	in.	mm	in.	mm	in.	mm	in.	mm	
Service Clearance	60	1524	36	914	36	934	60	1524	Unobstructed
Clearance to Combustibles	36	914	1	25	1	25	1	25	
Minimum Operation Clearance	36	914	36	914	36	914	36	914	

NOTE - Entire perimeter of unit base requires support when elevated above the mounting surface.

1 Service Clearance - Required for removal of serviceable parts.

Clearance to Combustibles - Required clearance to combustible material.

Minimum Operation Clearance - Required clearance for proper unit operation.

Lennox Industries Inc. - Product Submittal

MISCELLANEOUS MATERIALS

80E01 QTY 3

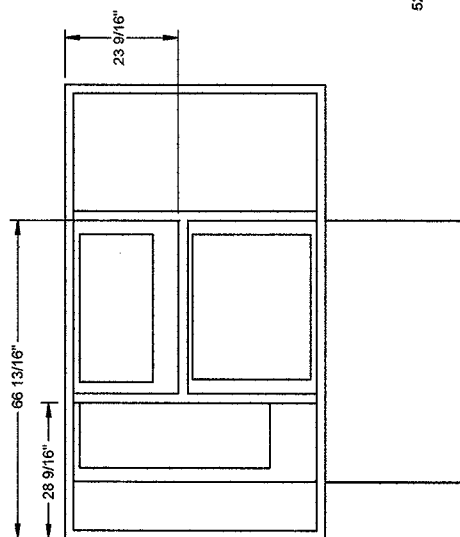
C1ACURB20B 48DJD/E008-014 LOW PROFILE CURB
ADAPTER

COMSD QTY 3

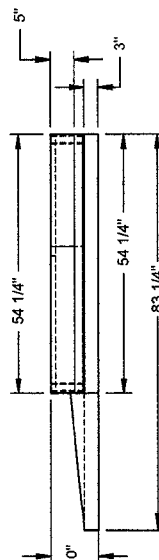
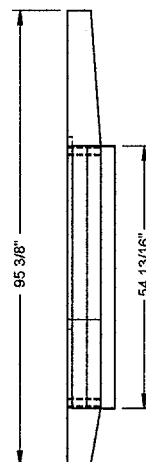
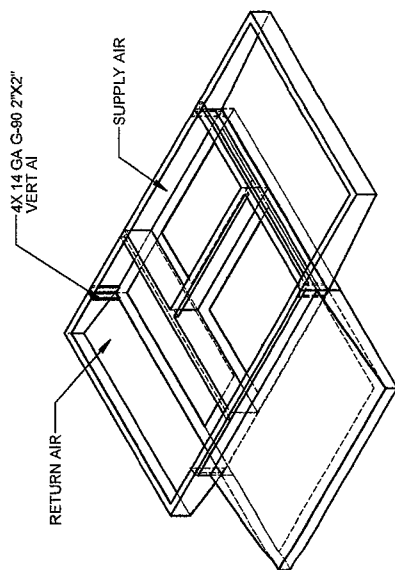
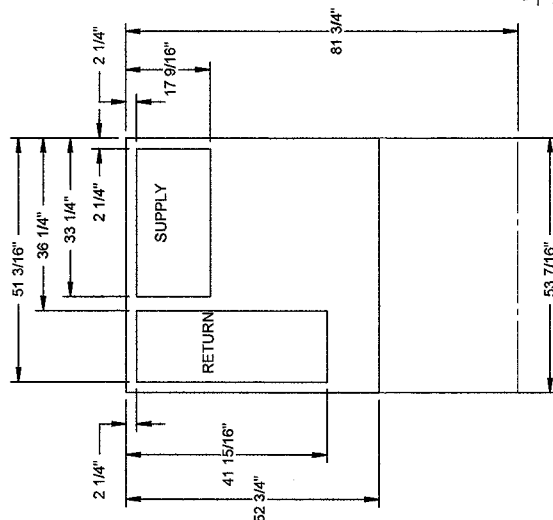
LUVATA OUTDOOR COIL ONLY COATING

Approval:

REVISIONS				
REV.	ECO#	DESCRIPTION	DATE	APPROVED
1		INITIAL DRAWING	5/24/12	MWG
2	505	UPDATED EXISTING CURB DIM	11/20/13	MWG



EXISTING CURB LAYOUT



**CURB SHOWN IS CDI STANDARD CONFIGURATION
CDI RESERVES THE RIGHT TO CHANGE LAYOUT
WITHOUT NOTIFICATION. IF CURB IS NEEDED IN A
DIFFERENT CONFIGURATION CDI MUST BE NOTIFIED
PRIOR TO PLACING AN ORDER.**

Notes:
1. 1.5" ADDED TO OLD CURB O.D
2. MATERIAL: 16 ga. GALVANIZED STEEL
3. GASKET PROVIDED WITH CURB
4. INSULATION: 1" 1 1/2 LB DENSITY

CURB WEIGHT (LBS.)		TITL#	
163.67		80E01	
MAKE AND COUNTRY OF ORIGIN MAKE AND MODEL YEAR VIN#		DRAWING NO. YEAR SERIAL # OF 5	
ORDER# Thursday, November 21, 2013 3:47:58 PM		80E01 2	
APPROVALS DATE		PLATE NO.	
DRAWN: ingrenewood CHECKED:		17660 TYLER ST NW ELK RIVER, MN 56330 (763) 991-7780 (763) 991-7780 CDI	
100% INSURANCE 100% FINANCING 100% DELIVERY 100% SERVICE		100% INSURANCE 100% FINANCING 100% DELIVERY 100% SERVICE	

Roof Top Unit Replacement Structural Analysis

FOR

Barnes and Nobile – Brick Plaza

44 Brick Plaza, Brick, NJ 08723

R&A Project No. 020.002

Prepared for:

SJ ALLIANCE MECHANICAL

601 South White Horse Pike
Hammonton, NJ 08037

September 17, 2017

Prepared by:



11 Jennifer Way, New Egypt, NJ 08533
(609) 752-9495
mreme@remeengineering.com

Mark E. Reme, PE
NJ Licensed Professional Engineer
License No. GE 44176

TABLE OF CONTENTS

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Introduction.....	3
Design and Analysis	3
Results	4
Conclusion	4

Appendices

- Appendix A Lennox RTU Cut Sheet
- Appendix B ASCE 7 Wind and Seismic parameter calculations
- Appendix C Roof Structure Calculations

Introduction

The purpose of this calculation is to determine if the existing roof structure at the Barnes and Noble Store at Brick Plaza is adequate to support the replacement of three existing roof top HVAC units with new Lennox 10 ton roof top units

Measurements of the roof structure were taken by Reme and Associates on August 26, 2017. Our office also had previously obtained roof structure drawings for the Brick Plaza with respect to some studies that were performed in 2011. The new HVAC unit information was taken from the Lennox Submittal for Barnes and Nobile - Brick prepared by SJ Alliance Mechanical and dated August 8, 2017.

Design and Analysis

The proposed HVAC units are Lennox 10 ton RTUs, 8'-5.25" in length, by 5'-0.125" in width, and 3'-0 7/8" in height and weighing 1362 pounds. The unit will be placed on new curbs weighing 164 pounds placed on the existing roof structure. The exiting units being replaced weigh approximately 1100 pounds.

The existing roof structure consists of 2x12 wood roof joists (spanning north-south) at 24" on centers and spanning 18'. The joists are supported on built-up 5'-9" deep wooden roof trusses every 18' spanning east west.

The calculations were performed using the International Building Code 2015, NJ Edition (IBC 2015 NJ) and ASCE 7-10 loading provisions which are listed below:

Dead Load of Unit (DL):	1362 pounds (taken from Lennox Proposal)
ASCE 7 Risk Category:	III
Wind Speed:	122 mph
Exposure Category:	C
Roof Height:	15'
Seismic Loading:	Brick, NJ (Address Specific Parameters from USGS)
Ss:	0.196g
S1:	0.059g
Site Class:	D – Stiff Soil (Assumed)
Seismic Design Group:	A

Per ASCE 7-10 Section 13.1.4(4), this site is located within seismic design group "A" and therefore exempt from the seismic provisions of ASCE-7.

The following roof loading was used in the analysis:

Dead Load:

- Roof Membrane 1.0 psf
- Rigid Insulation 1.5 psf
- Plywood Decking 2.0 psf
- 2x12 Roof Framing 3.0 psf
- Mech/Elec 3.0 psf

- Total 10.0 psf

IBC Roof Live Load (ASCE 7-10 Table 4-1): 20 psf

IBC Snow Load (ASCE 7-10 Section 7): 20 psf

The existing wooden joists were analyzed using StruCalc 10.0. It was assumed that the wood joists are SPF #2 (Spruce-Pine-Fir #2) with an allowable bending stress of 775 psi.

The proposed roof top units add 1362 pounds distributed over three spans of joists (approximately 450 pounds over each joist) over the units length of 8'-5.25" or 53 plf (32.21 psf).

The analysis shows that the existing roof joists under the above code required loading and dead load is about 91.2% utilized. This takes into account some dead load factored in for mechanical equipment. The weight if the existing units is about 1100 pounds each. The new units add about 262 pounds to the roof which the excess 8.8% capacity can accommodate.

Results

The analysis shows that the existing roof structure has sufficient capacity to support the replacement of the three existing roof top HVAC units.

Conclusion

The existing roof structure is sufficient for the replacement of the three existing RTU's with new Lennox 10 ton units, under the units dead weight and required IBC/ASCE loadings.

APPENDIX A

Lennox RTU Cut Sheet



Product Submittal

Project Information

Project Name: BARNES NOBLE # 2803 - BRICKTOWN, NJ

Project Number: 3000702612

Project Location: 44 BRICK PLAZA BRICKTOWN, NJ 08723, US

Project Altitude: 100

Customer Information

Company Name: Barnes & Noble Booksellers Inc

Company Address: 122 5TH AVE

Company Location: NEW YORK, NJ 08831-3417

Contact:

Phone: 212-633-3300

Engineering Information

Company Name:

Company Address:

Company Location:

Contact:

Phone:

We are pleased to provide the attached project submittal. If you have any questions or need additional information, please feel free to call our office.

Table of Contents

System ID	Qty	Model	Description
RTU 1,2,5 - L1320	3	LGH120H4B	PKGGE/10TON/CONFIGURABLE

Lennox Industries Inc. - Product Submittal

System ID: RTU 1,2,5 - L1320

Package Model: LGH120H4B

Description: PKGGE/10TON/CONFIGURABLE

HEATING PERFORMANCE

Unit Type	Packaged Gas Electric	Gas Supply Connection	0.75 (in.)
H/E LowInput	84500 (Btuh)	H/E Heat Rise	24.1 (°F)
H/E LowOutput	67500 (Btuh)	AFUE/ ThermalEff	80
H/E HighInput	130000 (Btuh)	Number of Heating Stages	2
H/E HighOutput	104000 (Btuh)	Gas Supply Pressure	7 (in.WC)
System HeatOutput	104000 (Btuh)		

COOLING PERFORMANCE

Refrigerant	R-410A	Number Compressors	2
ARI EER	12.0	Number of Cooling Stages	2
ARI IEER	13.0	Condensate Drain Size	1.00 (in.)
ARI Total Power	9900 (W)	Cooling OutdoorDB	95.0 (°F)
ARI GrossTotalCool	122000 (Btuh)	Cooling CondenserDB	95.0 (°F)
ARI NetTotalCool	118000 (Btuh)	Cooling MixedDB	80.0 (°F)
Coil GrossTotalCool	124400 (Btuh)	Cooling MixedWB	67.0 (°F)
Unit NetTotalCool	117402 (Btuh)	Coil DischargeDB	58.7 (°F)
Coil GrossSensCool	89568 (Btuh)	Coil DischargeWB	56.8 (°F)
Unit NetSensCool	82570 (Btuh)	Unit DischargeDB	60.2 (°F)
Environ Refrigerant Charge	14 LBS. 12 OZ.	Unit DischargeWB	57.4 (°F)
		Coil MoistureRemoval	32.8 (lb/hr)
		System MoistRemoval	32.8 (lb/hr)

SUPPLY FAN PERFORMANCE

Supply AirFlow	4000 (cfm)	TotalStaticPress	1.27 (in.WC)
ExtStaticPress Supply	0.80 (in.WC)	Wet Coil Static Press	0.14 (in.WC)
SupplyFan Req'dPower	2.34 (hp)	Gas H/E Static Press	0.14 (in.WC)
SupplyFan NomPower	3.00 (hp)	Economizer Static Press	0.19 (in.WC)
Supply Fan Type	CAV Belt Drive	Air Filter Qty	4
SupplyDriveReq'd RPM	945 (rpm)	Air Filter Length	20.0 (in.)
SupplyDrive Min RPM	730 (rpm)	Air Filter Width	25.0 (in.)
SupplyDrive Max RPM	970 (rpm)	Air Filter Thickness	2.0 (in.)
		Number Exhaust Fans	1

ELECTRICAL

Voltage	460V 3Ph	SupplyFan FLA	4.8 (amp)
Frequency	60 (Hz)	CondensingUnit FLA	2.6 (amp)
System MCA	27.0 (amp)	CondenserFan Power	725 (W)
System MOCB	30 (amp)		
Compressors RLA	16.0 (amp)		
Cooling FLA Total	23.4 (amp)		
Unit Oper Range-Nom Voltage	+/- 10%		

DIMENSIONS

Cabinet Width	60.1 (in.)	Downflow Supply Length	20.0 (in.)
Cabinet Length	101.3 (in.)	Downflow Supply Width	28.0 (in.)
Cabinet Height	46.9 (in.)	Downflow Return Length	24.0 (in.)
Total Weight	1244 (lb)	Downflow Return Width	27.0 (in.)

SOUND

Outdoor Sound Rating	88 (db)
----------------------	---------

Lennox Industries Inc. - Product Submittal

System ID: RTU 1,2,5 - L1320

Package Model: LGH120H4B

Description: PKGGE/10TON/CONFIGURABLE

SYSTEM FEATURES

Durable Outdoor Enamel Paint Finish	Timed Off Control
Scroll Compressor	AGA-CGA Certified
Pre-charged Refrigeration System	Units will operate cooling down to 0 degrees F (-17.7 degrees C) without additional controls.
High Capacity Driers	Redundant Comb. Gas Control Valve
Auto reset high & low pressure switch with strike 3 lockout feature in Prodigy unit controller	Electronic Flame Sensor
Totally Enclosed Fan Motor	Direct Spark Ignition
PVC Coated Fan Guard	Separate Compressor and Controls Compartment
Fan and Limit Controls	Advanced controls with Prodigy Control System
Factory Test Operated	Limited compressor warranty of 5 years
Bonded for Grounding	Limited warranty on Prodigy Unit Controller of 3 years
Internal Pressure Relief Valve	Limited warranty on Environ Coil System of 3 years
Overload Protection	Limited warranty on all other components of 1 year
Crankcase Heater Test	See Limited Warranty Certificate included with unit for details

INCLUDED SYSTEM OPTIONS - FACTORY INSTALLED

STANDARD CAP
2 IN MERV4 FILTER
CONSTANT AIR VOLUME
HINGED ACCESS DOORS
ENVIRON COIL SYSTEM

INCLUDED SYSTEM OPTIONS - FIELD INSTALLED

10U59	3	E1ECON17B-1 HIGH PERF ECONOMIZER
53W64	3	C1SNSR64FF1 SINGLE ENTHALPY
53W45	3	K1PWRE10B-1G POWER EXHAUST 460 V
54W56	3	C1DISC080B-1 DISCONNECT SWITCH - 80 AMP
87N53	3	EG T8100-LN CO2 DETECTOR/WHITE/WALL
13T05	3	C1GARD52B-1 MESH HAIL/COIL GUARD
11K76	3	C1SNSR448-2 SUP OR RET SMOKE DETECTOR KT
74M70	3	LB-101063C GFI SERVICE OUTLET KIT

Lennox Industries Inc. - Product Submittal

System ID: RTU 1,2,5 - L1320

Package Model: LGH120H4B

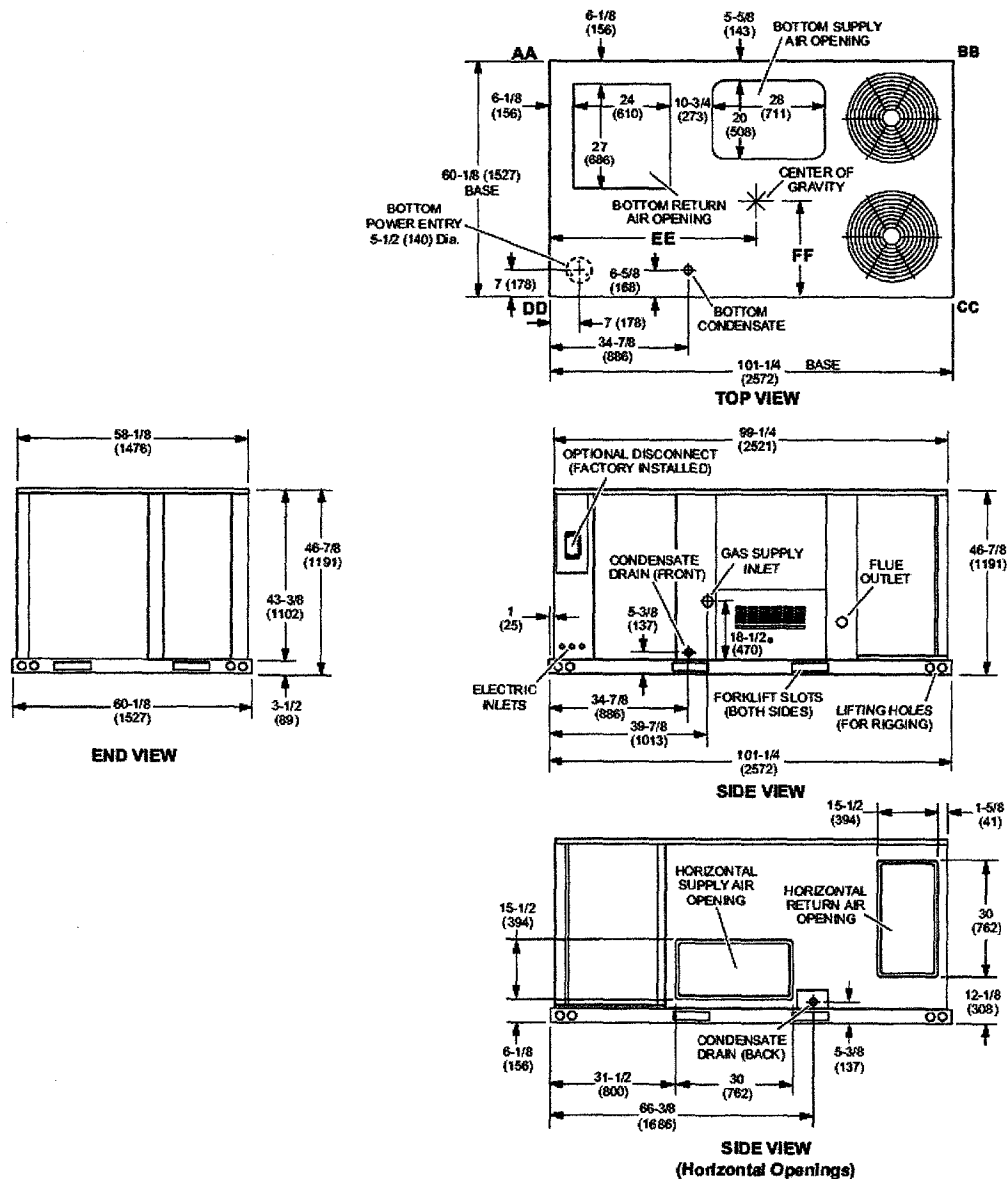
Description: PKGGE/10TON/CONFIGURABLE

DIMENSIONS - INCHES (MM)

Model No.	CORNER WEIGHTS																CENTER OF GRAVITY							
	AA				BB				CC				DD				EE				FF			
	Base		Max.		Base		Max.		Base		Max.		Base		Max.		Base		Max.		Base		Max.	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	in.	mm	in.	mm	in.	mm	in.	mm
092	293	133	338	153	263	119	295	134	286	130	316	143	326	148	370	168	46.5	1181	45.5	1156	24.5	622	25.5	648
102	294	134	340	154	265	120	297	135	288	131	318	144	328	149	372	169	46.5	1181	45.5	1156	24.5	622	25.5	648
120	306	139	349	158	275	125	305	138	295	134	326	148	334	152	382	173	46.5	1181	45.5	1156	24.5	622	25.5	648
150	316	143	359	163	284	129	314	142	304	138	393	178	345	157	393	178	46.5	1181	45.5	1156	24.5	622	25.5	648

Base Unit - The unit with NO INTERNAL OPTIONS.

Max. Unit - The unit with ALL INTERNAL OPTIONS installed. (Economizer, Standard Static Power Exhaust Fans, Controls, etc.). Does not include accessories external to unit or high static power exhaust.



Lennox Industries Inc. - Product Submittal

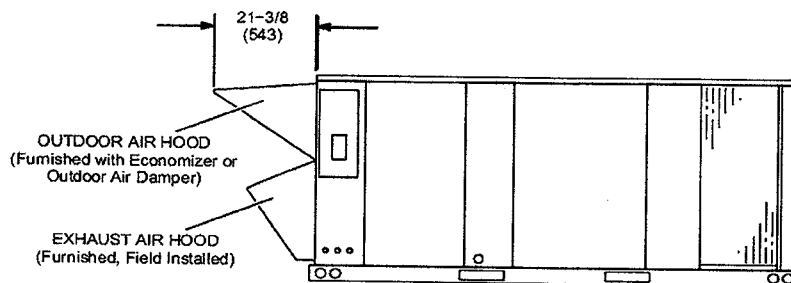
System ID: RTU 1,2,5 - L1320

Package Model: LGH120H4B

Description: PKGGE/10TON/CONFIGURABLE

ACCESSORY DIMENSIONS - INCHES (MM)

OUTDOOR AIR HOOD DETAIL



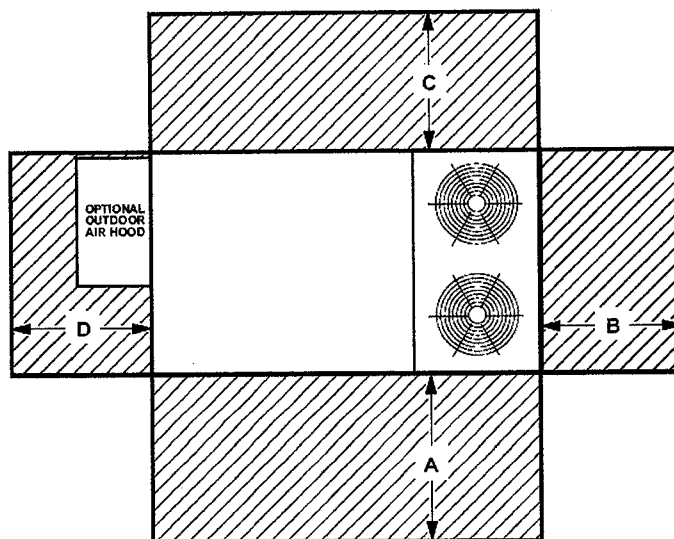
Lennox Industries Inc. - Product Submittal

System ID: RTU 1,2,5 - L1320

Package Model: LGH120H4B

Description: PKGGE/10TON/CONFIGURABLE

UNIT CLEARANCES - INCHES (MM)



¹ Unit Clearance	A		B		C		D		Top Clearance
	in.	mm	in.	mm	in.	mm	in.	mm	
Service Clearance	60	1524	36	914	36	934	60	1524	Unobstructed
Clearance to Combustibles	36	914	1	25	1	25	1	25	
Minimum Operation Clearance	36	914	36	914	36	914	36	914	

NOTE - Entire perimeter of unit base requires support when elevated above the mounting surface.

¹ Service Clearance - Required for removal of serviceable parts.

Clearance to Combustibles - Required clearance to combustible material.

Minimum Operation Clearance - Required clearance for proper unit operation.

Lennox Industries Inc. - Product Submittal

MISCELLANEOUS MATERIALS

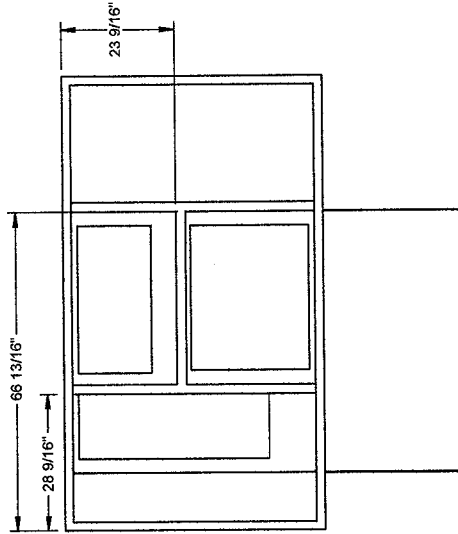
80E01	QTY 3	CIACURB20B 48DJD/E008-014 LOW PROFILE CURB ADAPTER
COMSD	QTY 3	LUVATA OUTDOOR COIL ONLY COATING

DIMENSIONED AND TOLERANCED PER ANSI Y14.1M-1992

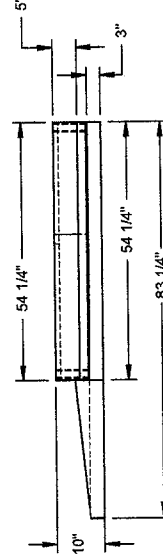
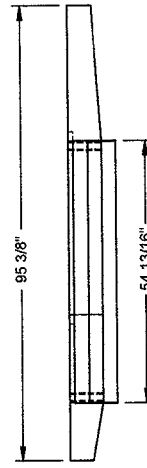
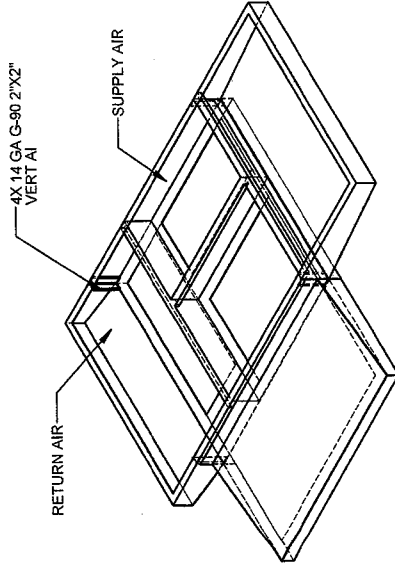
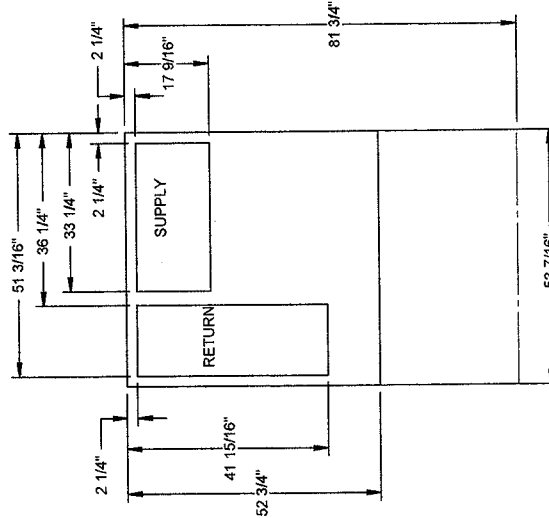
Attn: Tag: 80E01

Approval:

REVISIONS			
REV.	ECO#	DESCRIPTION	DATE
1		INITIAL DRAWING	5/24/12
2	505	UPDATED EXISTING CURB DIM	11/20/13
			MMWG



EXISTING CURB LAYOUT



- Notes:
- 1.5" ADDED TO OLD CURB O.D.
 - MATERIAL TO BE 16 GA. GALVANIZED STEEL
 - GASKET PROVIDED WITH CURB
 - INSULATION: 1" 1/2 LB DENSITY

**CURB SHOWN IS CDI STANDARD CONFIGURATION
CDI RESERVES THE RIGHT TO CHANGE LAYOUT
WITHOUT NOTIFICATION. IF CURB IS NEEDED IN A
DIFFERENT CONFIGURATION CDI MUST BE NOTIFIED
PRIOR TO PLACING AN ORDER.**

CURB WEIGHT (LBS.) 163.67		APPROVALS DATE THURSDAY, NOVEMBER 21, 2013 3:47:58 PM		TITLE 80E01	
USE SHOWN DIMENSIONS AND TOLERANCES UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS ARE 1/16" MINIMUM DECIMALS ARE TO NEAREST 0.0001 TOLERANCES ARE: FRACTIONS: ± 1/16" DECIMALS: ± 0.005"		DRAWING NO. 80E01		SCALE 1:25	
VERIFY EXISTING CURB ON SITE PRIOR TO ORDERING NOTE ANY CHANGES CALL WITH ANY QUESTIONS CDI 17660 TYLER ST NW ELK RIVER, MN 55330 (612) 381-7860 FAX 612-381-7861		SHEET: 1 OF 5		REV: 2	

APPENDIX B

ASCE Wind and Seismic Calculations

Applied Technology Council

WINDSPEED BY LOCATION
[ASCE 7 Windspeed](#) [ASCE 7 Ground Snow Load](#) [Related Resources](#) [Sponsors](#) [About ATC](#) [Contact](#)
Search Results

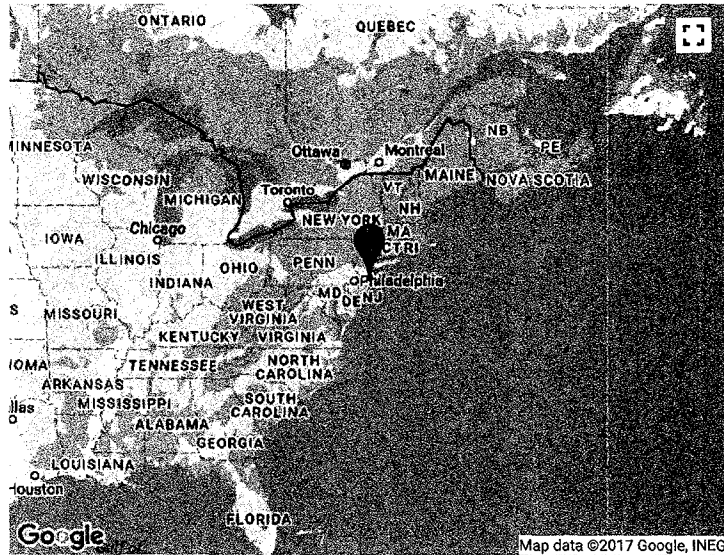
Query Date: Sun Sep 17 2017
Latitude: 40.0586
Longitude: -74.1405

ASCE 7-10 Windspeeds
(3-sec peak gust in mph*):

Risk Category I: 111
Risk Category II: 122
Risk Category III-IV: 132
MRI 10-Year:** 76
MRI 25-Year:** 87
MRI 50-Year:** 93
MRI 100-Year:** 99

ASCE 7-05 Windspeed:
 112 (3-sec peak gust in mph)

ASCE 7-93 Windspeed:
 84 (fastest mile in mph)



*Miles per hour
 **Mean Recurrence Interval

Users should consult with local building officials to determine if there are community-specific wind speed requirements that govern.



[Print your results](#)

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Design Maps Summary Report

User-Specified Input

Report Title Barnes and Nobile, Brick, NJ
Sun September 17, 2017 16:09:17 UTC

Building Code Reference Document ASCE 7-10 Standard
(which utilizes USGS hazard data available in 2008)

Site Coordinates 40.05966°N, 74.14143°W

Site Soil Classification Site Class D – "Stiff Soil"

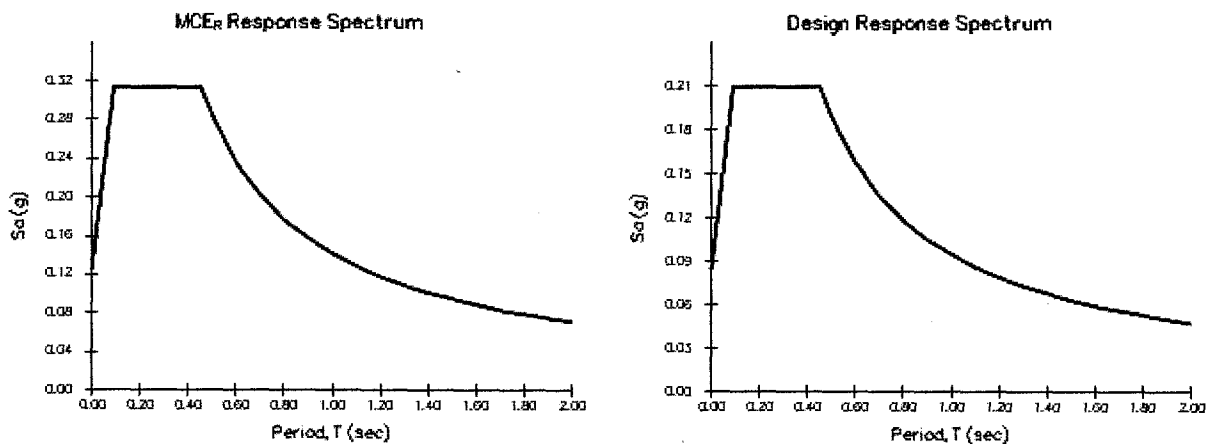
Risk Category I/II/III



USGS-Provided Output

$S_s = 0.196 \text{ g}$	$S_{MS} = 0.313 \text{ g}$	$S_{DS} = 0.209 \text{ g}$
$S_1 = 0.059 \text{ g}$	$S_{M1} = 0.142 \text{ g}$	$S_{D1} = 0.095 \text{ g}$

For information on how the S_s and S_1 values above have been calculated from probabilistic (risk-targeted) and deterministic ground motions in the direction of maximum horizontal response, please return to the application and select the "2009 NEHRP" building code reference document.



For PGA_M , T_L , C_{RS} , and C_{R1} values, please [view the detailed report](#).

Although this information is a product of the U.S. Geological Survey, we provide no warranty, expressed or implied, as to the accuracy of the data contained therein. This tool is not a substitute for technical subject-matter knowledge.

Design Maps Detailed Report

ASCE 7-10 Standard (40.05966°N, 74.14143°W)

Site Class D – “Stiff Soil”, Risk Category I/II/III

Section 11.4.1 — Mapped Acceleration Parameters

Note: Ground motion values provided below are for the direction of maximum horizontal spectral response acceleration. They have been converted from corresponding geometric mean ground motions computed by the USGS by applying factors of 1.1 (to obtain S_s) and 1.3 (to obtain S_1). Maps in the 2010 ASCE-7 Standard are provided for Site Class B. Adjustments for other Site Classes are made, as needed, in Section 11.4.3.

From Figure 22-1 ^[1]

$S_s = 0.196 \text{ g}$

From Figure 22-2 ^[2]

$S_1 = 0.059 \text{ g}$

Section 11.4.2 — Site Class

The authority having jurisdiction (not the USGS), site-specific geotechnical data, and/or the default has classified the site as Site Class D, based on the site soil properties in accordance with Chapter 20.

Table 20.3–1 Site Classification

Site Class	$\bar{v}_s$	$\bar{N}$ or $\bar{N}_{ch}$	$\bar{s}_u$
A. Hard Rock	>5,000 ft/s	N/A	N/A
B. Rock	2,500 to 5,000 ft/s	N/A	N/A
C. Very dense soil and soft rock	1,200 to 2,500 ft/s	>50	>2,000 psf
D. Stiff Soil	600 to 1,200 ft/s	15 to 50	1,000 to 2,000 psf
E. Soft clay soil	<600 ft/s	<15	<1,000 psf
Any profile with more than 10 ft of soil having the characteristics:			
• Plasticity index $PI > 20$, • Moisture content $w \geq 40\%$, and • Undrained shear strength $\bar{s}_u < 500 \text{ psf}$			
F. Soils requiring site response analysis in accordance with Section 21.1	See Section 20.3.1		

For SI: 1ft/s = 0.3048 m/s 1lb/ft² = 0.0479 kN/m²

Section 11.4.3 — Site Coefficients and Risk-Targeted Maximum Considered Earthquake (MCE_R) Spectral Response Acceleration Parameters

Table 11.4-1: Site Coefficient F_a

Site Class	Mapped MCE_R Spectral Response Acceleration Parameter at Short Period				
	$S_s \leq 0.25$	$S_s = 0.50$	$S_s = 0.75$	$S_s = 1.00$	$S_s \geq 1.25$
A	0.8	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.2	1.2	1.1	1.0	1.0
D	1.6	1.4	1.2	1.1	1.0
E	2.5	1.7	1.2	0.9	0.9
F	See Section 11.4.7 of ASCE 7				

Note: Use straight-line interpolation for intermediate values of S_s

For Site Class = D and $S_s = 0.196$ g, $F_a = 1.600$

Table 11.4-2: Site Coefficient F_v

Site Class	Mapped MCE_R Spectral Response Acceleration Parameter at 1-s Period				
	$S_1 \leq 0.10$	$S_1 = 0.20$	$S_1 = 0.30$	$S_1 = 0.40$	$S_1 \geq 0.50$
A	0.8	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.7	1.6	1.5	1.4	1.3
D	2.4	2.0	1.8	1.6	1.5
E	3.5	3.2	2.8	2.4	2.4
F	See Section 11.4.7 of ASCE 7				

Note: Use straight-line interpolation for intermediate values of S_1

For Site Class = D and $S_1 = 0.059$ g, $F_v = 2.400$

Equation (11.4-1):

$$S_{MS} = F_a S_S = 1.600 \times 0.196 = 0.313 \text{ g}$$

Equation (11.4-2):

$$S_{M1} = F_v S_1 = 2.400 \times 0.059 = 0.142 \text{ g}$$

Section 11.4.4 — Design Spectral Acceleration Parameters

Equation (11.4-3):

$$S_{DS} = \frac{2}{3} S_{MS} = \frac{2}{3} \times 0.313 = 0.209 \text{ g}$$

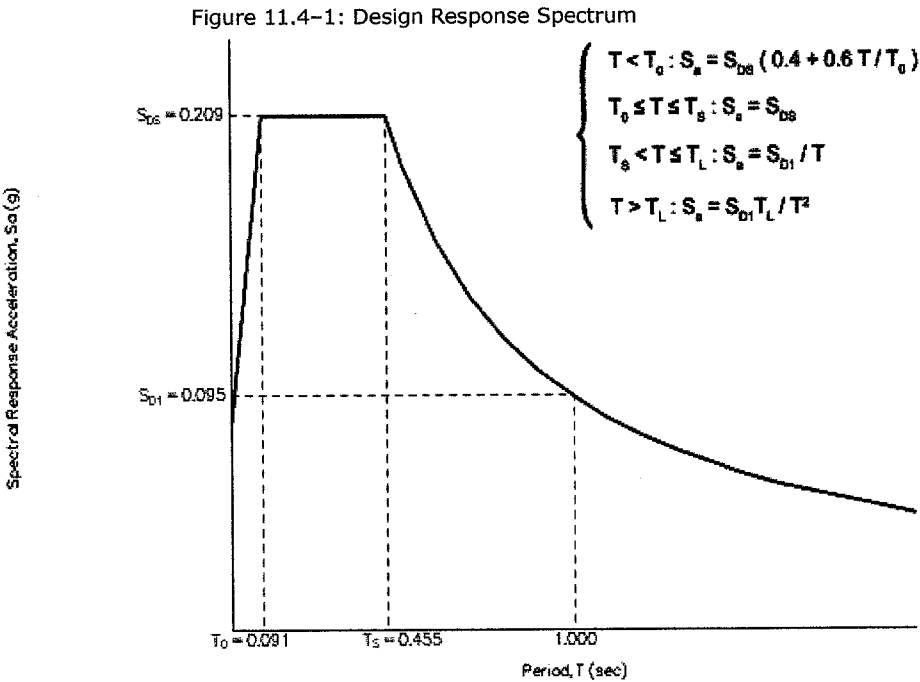
Equation (11.4-4):

$$S_{D1} = \frac{2}{3} S_{M1} = \frac{2}{3} \times 0.142 = 0.095 \text{ g}$$

Section 11.4.5 — Design Response Spectrum

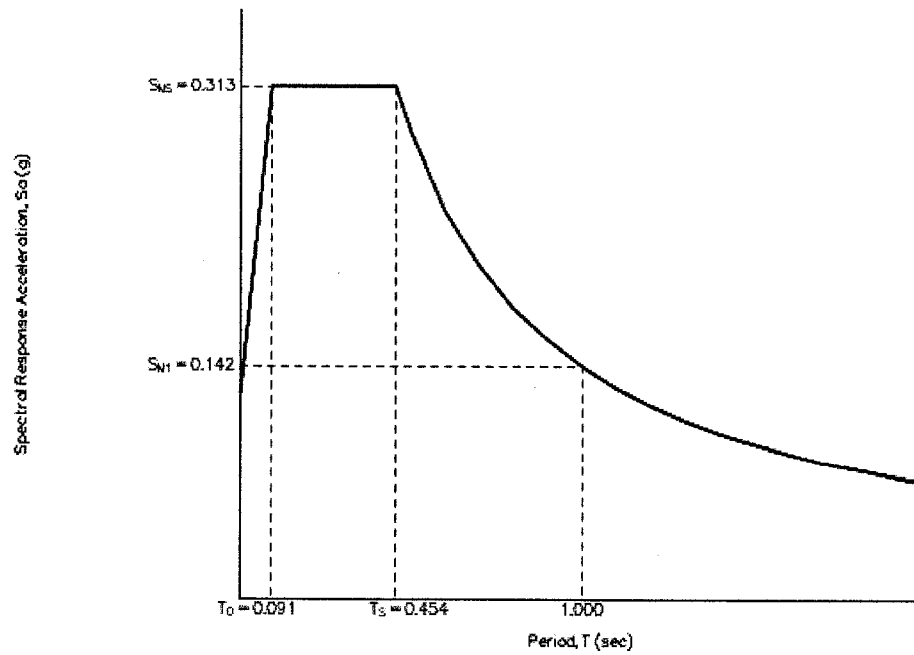
From **Figure 22-12** ^[3]

$T_L = 6 \text{ seconds}$



Section 11.4.6 — Risk-Targeted Maximum Considered Earthquake (MCE_R) Response Spectrum

The MCE_R Response Spectrum is determined by multiplying the design response spectrum above by 1.5.



Section 11.8.3 — Additional Geotechnical Investigation Report Requirements for Seismic Design Categories D through F

From **Figure 22-7** ^[4]

$$PGA = 0.107$$

Equation (11.8-1):

$$PGA_M = F_{PGA} PGA = 1.585 \times 0.107 = 0.17 \text{ g}$$

Table 11.8-1: Site Coefficient F_{PGA}

Site Class	Mapped MCE Geometric Mean Peak Ground Acceleration, PGA				
	PGA ≤ 0.10	PGA = 0.20	PGA = 0.30	PGA = 0.40	PGA ≥ 0.50
A	0.8	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.2	1.2	1.1	1.0	1.0
D	1.6	1.4	1.2	1.1	1.0
E	2.5	1.7	1.2	0.9	0.9
F	See Section 11.4.7 of ASCE 7				

Note: Use straight-line interpolation for intermediate values of PGA

For Site Class = D and PGA = 0.107 g, $F_{PGA} = 1.585$

Section 21.2.1.1 — Method 1 (from Chapter 21 – Site-Specific Ground Motion Procedures for Seismic Design)

From **Figure 22-17** ^[5]

$$C_{RS} = 0.881$$

From **Figure 22-18** ^[6]

$$C_{R1} = 0.908$$

Section 11.6 — Seismic Design Category

Table 11.6-1 Seismic Design Category Based on Short Period Response Acceleration Parameter

VALUE OF S_{DS}	RISK CATEGORY		
	I or II	III	IV
$S_{DS} < 0.167g$	A	A	A
$0.167g \leq S_{DS} < 0.33g$	B	B	C
$0.33g \leq S_{DS} < 0.50g$	C	C	D
$0.50g \leq S_{DS}$	D	D	D

For Risk Category = I and $S_{DS} = 0.209g$, Seismic Design Category = B

Table 11.6-2 Seismic Design Category Based on 1-S Period Response Acceleration Parameter

VALUE OF S_{D1}	RISK CATEGORY		
	I or II	III	IV
$S_{D1} < 0.067g$	A	A	A
$0.067g \leq S_{D1} < 0.133g$	B	B	C
$0.133g \leq S_{D1} < 0.20g$	C	C	D
$0.20g \leq S_{D1}$	D	D	D

For Risk Category = I and $S_{D1} = 0.095g$, Seismic Design Category = B

Note: When S_1 is greater than or equal to $0.75g$, the Seismic Design Category is **E** for buildings in Risk Categories I, II, and III, and **F** for those in Risk Category IV, irrespective of the above.

Seismic Design Category $\equiv$ "the more severe design category in accordance with Table 11.6-1 or 11.6-2" = B

Note: See Section 11.6 for alternative approaches to calculating Seismic Design Category.

References

1. Figure 22-1: https://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-1.pdf
2. Figure 22-2: https://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-2.pdf
3. Figure 22-12: https://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-12.pdf
4. Figure 22-7: https://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-7.pdf
5. Figure 22-17: https://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-17.pdf
6. Figure 22-18: https://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-18.pdf

APPENDIX C

Roof Structure Calculations

Project: 020.002 BN Brick

Location: JST1

Floor Joist

[2015 International Building Code(2015 NDS)]

1.5 IN x 11.25 IN x 54.0 FT (18 + 18 + 18) @ 24 O.C.

#2 - Spruce-Pine-Fir (South) - Dry Use

Section Adequate By: 8.8%

Controlling Factor: Moment



Mark E. Reme, PE
Reme and Associates, LLC
11 Jennifer Way
New Egypt, NJ 08533

page

of

StruCalc Version 10.0.1.5

9/17/2017 6:07:53 PM

DEFLECTIONS	Left	Center	Right
Live Load	0.24 IN L/902	0.16 IN L/1321	0.24 IN L/902
Dead Load	0.08 in	0.01 in	0.08 in
Total Load	0.32 IN L/670	0.17 IN L/1273	0.32 IN L/670
Live Load Deflection Criteria: L/180 Total Load Deflection Criteria: L/120			

REACTIONS	A	B	C	D
Live Load	324 lb	864 lb	864 lb	324 lb
Dead Load	144 lb	396 lb	396 lb	144 lb
Total Load	468 lb	1260 lb	1260 lb	468 lb
Bearing Length	0.93 in	2.51 in	2.51 in	0.93 in

SUPPORT LOADS	A	B	C	D
Live Load	162 plf	432 plf	432 plf	162 plf
Dead Load	72 plf	198 plf	198 plf	72 plf
Total Load	234 plf	630 plf	630 plf	234 plf

MATERIAL PROPERTIES

#2 - Spruce-Pine-Fir (South)

	Base Values	Adjusted
Bending Stress:	Fb = 775 psi Cd=1.00 CF=1.00 Cr=1.15	Fb' = 891 psi
Shear Stress:	Fv = 135 psi Cd=1.00	Fv' = 135 psi
Modulus of Elasticity:	E = 1100 ksi	E' = 1100 ksi
Comp. $\perp$ to Grain:	Fc $\perp$ = 335 psi	Fc $\perp$ = 335 psi

Controlling Moment: -2160 ft-lb
Over right support of span 1 (Left Span)
Created by combining all dead loads and live loads on span(s) 1, 2
Controlling Shear: 660 lb
At left support of span 3 (Right Span)
Created by combining all dead loads and live loads on span(s) 2, 3

Comparisons with required sections:	Req'd	Provided
Section Modulus:	29.08 in ³	31.64 in ³
Area (Shear):	7.33 in ²	16.88 in ²
Moment of Inertia (deflection):	54.49 in ⁴	272.93 in ⁴
Moment:	-2160 ft-lb	2350 ft-lb
Shear:	660 lb	1519 lb

Decking Information

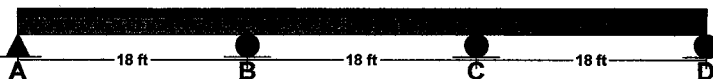
Plywood Thickness: T = 3/4 in

Plywood Is Glued:

Moment of Inertia Calculations For Glued Floor:

Joist Area:	A-joist = 16.88 IN ²
Plywood Area:	A-ply = 3.13 IN ²
Section Centroid:	C = 7 IN ABOVE BASE
Moment of Inertia (deflection):	I-comb = 273 IN ⁴

LOADING DIAGRAM



JOIST DATA

	Left	Center	Right
Span Length	18 ft	18 ft	18 ft
Unbraced Length-Top	0 ft	0 ft	0 ft
Unbraced Length-Bottom	0 ft	0 ft	0 ft
Floor sheathing applied to top of joists-top of joists fully braced.			
Sheathing/sheetrock applied to bottom of joists-bottom of joists fully braced.			
Floor Duration Factor	1.00		

JOIST LOADING

Uniform Floor Loading	Left	Center	Right
Live Load	LL = 20 psf	20 psf	20 psf
Dead Load	DL = 10 psf	10 psf	10 psf
Total Load	TL = 30 psf	30 psf	30 psf
TL Adj. For Joist Spacing wT = 60	plf 60	plf 60	plf 60