CONSTRUCTION PERMIT

Date Issued 4/5/17
Control # C-17-001114
Permit # 17-658

IDENTIFICATION Block: 322 Lot: 26 Qualifier
Work Site Location: 232 CIRCLE DR. Brick Township, NJ
Owner in Fee ADKISSON, TAMMY LEE
232 CIRCLE DR BRICK NJ 08723
Telephone: [redacted]

Contractor Toms River Heating & Air Conditioning
Address 400 CORPORATE CR. TOMS RIVER NJ 08755 - 4993
Telephone: (732) 244-2880
Lic. No. or Bldrs. Reg. No. 13VH00881700 19HC00125700
Federal Employee. No. 22-2651391

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:
ALTERATION - RESIDENTIAL ...NEW A/C, REPLACE HWH & FURNACE

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 $7,400

Construction Official Date 4/3/17

PAYMENTS (Office Use Only)

Building	$0
Electrical	$150
Plumbing	$0
Fire Protection	$0
Elevator Devices	$0
Other	$275.00
DCA Training Fee	$14
CO Fee	
Other	$0
Total	$439
Check No.	1869
Cash	$0
Credit	$0
Collected By	Matt Fagen

+75 = 514.

U.C.C. F170
equiv (rev 1/04)
1 WHITE - INSPECTOR 2 CANARY - OFFICE 3 PINK - TAX ASSESSOR 4 GOLD - APPLICANT

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 made 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.

$150.00
MECH. $275.00
DCA $14.00
ZPA $75.00
CHECK $514.00

ELECTRICAL SUBCODE
TECHNICAL SECTION

Date Received 4/5/17
Control#
Date Issued
Permit # 17-1058

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

Block 322 Lot 26 Qualification Code

Work Site Location 232 Circle Dr.

Owner in Fee: AOKISSON

T [redacted] e-mail

Address 232 Circle Dr. (street) Brick (municipality) NJ 08724 (zip code)

Contractor: ACR Electrical Services Tel. (732) 244-2880

Address 400 Corporate Circle e-mail
Toms River NJ 08755

Contractor License No. 5188 Exp. Date 3-31-18

Home Improvement Contractor Registration No. or Exemption Reason (if applicable):

Federal Emp. ID No. 22-3240431 FAX: (732) 244-2889

B. ELECTRICAL CHARACTERISTICS

Use Group Present Proposed

[ ] Pole/Pad # [ ] Temporary [ ] Other

Building Occupied as Utility Co.

Est. Cost of Elec. Work $ 1400-

JOB SUMMARY (Office Use Only)

PLAN REVIEW

[✓] No Plans Required

[ ] Partial -Underslab Utilities Approved
Date: Approved by:

[ ] Electric Plans Approved
Date: Approved by:

Joint Plan Review Required:
[ ] Bldg. [ ] Plumb. [ ] Fire. [ ] Elev.

SUBCODE APPROVAL for PERMIT
Date: 3/31/17
Approved by:

SUBCODE APPROVAL for CERTIFICATE
[ ] CO [ ] CCO [✓] CA
Date: 3/31/17
Approved by:

INSPECTIONS	Dates (Month/Day)			
Type:	Failure	Failure	Approval	Initial
Rough				
Barrier-Free				
Trench				
Temp. Serv.				
Constr. Serv.				
TCO				
Other				
Service				
Final			5/10/17	
Barrier-Free				

Temp. Cut-in-Card Date Issued
Final Cut-in-Card Date Issued
Annual Pool Inspection
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 make this application and perform the work listed on this application.

Applicant sign/Contractor sign and seal here:

Print name here: CHARLES HENNINGER

[✓] Licensed Elec. Contractor [ ] Certif'd Landscape Irrigation Contr [ ] Exempt Applicant

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK: R&D Replace
Replace Furnace -A/C -HW Heater -Install ~~Heat Pump Furnace~~

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 Lights	
		Storable Pool/Spa/Hot Tub	
		KW Elec. Range/Receptacle	
		KW Oven/Surface Unit	
		KW Elec. Water Heater	
		KW Elec. Dryer/Receptacle	
		KW Dishwasher	
		HP Garbage Disposal	
2	2½T	KW Central A/C Unit 3 KW	
2	70A	~~HP/KW Space Heater/Air Handler~~ Gas Furnace 1 HP	
		KW Baseboard Heat	
		HP Motors 1/+ HP	
		KW Transformer/Generator	
		AMP Service	
		AMP Subpanels	
		AMP Motor Control Center	
		KW Elec. Sign/Outline Light	
1	2½T	Heat Pumps	

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

MECHANICAL INSPECTOR
TECHNICAL SECTION

Date Received 4/05/17
Control #
Date Issued
Permit # 17-1058

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

Block 322 Lot 26 Qualification Code

Work Site Location 232 CIRAW DR.

Owner in Fee: AOKISSON

Tel [redacted] e-mail

Address 232 CIRAW DR BRICK NJ 08724
street municipality zip code

Contractor: DUSLWAN HEATING + AC Tel. (732) 244-2880

Address 400 CORPORATE CIRCLE e-mail
TOMS RIVER NJ. 08753

Contractor License No. or Builder Registration No. Exp. Date

Home Improvement Contractor Registration No. or Exemption Reason (if applicable):

Federal Emp. ID No. 22-2651591 FAX: (732) 244-2884

B. MECHANICAL CHARACTERISTICS

Use Group: Present: R-3, R-4 or R-5 *(circle one)* Proposed: R-3, R-4 or R-5 *(circle one)*

Heating System work: [ ] New *OR* [ ] Modification to Existing *OR* [ ] Conversion *OR* [X] Replacement

Type: [ ] Hydronic [X] Hot Air

Fuel Type: [X] Gas [ ] Oil [ ] Electric [ ] Solar [ ] Other

Estimated Cost of Mechanical Work $ 6000 -

C. CERTIFICATION IN LIEU OF OATH

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

Sign here:

Print name here: CHRIS SCHREMMER

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK

ADD Replace
(1) Replace GAS FURNACE A.C. & H/W HEATER
ADD DUCTLESS HP FOR THIRD FLOOR - OUTSIDE BEHIND HOUSE
(2) ~~ADD DUCTLESS HEAT PUMP FOR GARAGE - OUTSIDE UNIT BEHIND~~

JOB SUMMARY (Office Use Only)

PLAN REVIEW
[ ] No Plans Required
[ ] Mechanical Plans Approved
Date: Approved by:
Joint Plan Review Required:
[ ] Bldg. [ ] Elec. [ ] Plumb. [ ] Fire. [ ] Elev.

SUBCODE APPROVAL for PERMIT
Date: 4-3-17
Approved by:

SUBCODE APPROVAL for CERTIFICATE
[ ] CA [ ] CCO
Date: 5-17-17
Approved by: Final 5-17-17

INSPECTIONS Type:	DATES Failure	Failure	Approval	Initial
Gas Piping				
Appliance				
Chimney/Vent				
Oil Piping				
Oil Tank				
LPG Tank				
Hydronic Piping				
Fireplace				
Chimney Cert.				
Other				

NO.	FIXTURE/EQUIPMENT	FEE (Office Use Only) $
1	Water Heater	
	Fuel Oil Piping Connections	
	Gas Piping Connections	
	Steam Boiler	
	Hot Water Boiler	
1	Hot Air Furnace	
	Oil Tank	
	LPG Tank	
	Fireplace	
~~2~~ 3	Other DUCTLESS HP 1 A/C Heat pump	

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

U.C.C. F145
(rev. 11/09)

1 White = Inspector Copy 2 Canary = Office Copy
3 Pink = Office Copy 4 Gold = Applicant Copy

RECEIVING CLERK _____
DATE REC'D 3-24-17

ZONING PERMIT APPLICATION

PERMIT # ZP17-004/18
DATE ISSUED 4/5/17

BLOCK: 322 LOT: 26 QUALIFIER: ✓ SITE ADDRESS: 232 CIRCLE DR.

IDENTIFICATION:

1. NAME OF OWNER IN FEE: ADKISSON
   COMPLETE ADDRESS: 232 CIRCLE DR.
   BRICK NJ. 08724
   PHONE # [redacted] EMAIL: [redacted]

2. NAME OF APPLICANT: TOMS RIVER HEATING + A.C.
   APPLICANT ADDRESS: 400 CORPORATE CIRCLE
   TOMS RIVER, NJ 08755
   PHONE # 732.244.2880 EMAIL: INFO@TRHAC.COM.

3. RESPONSIBLE PERSON FOR WORK: MIKE BEAULIEU
   PHONE# 732.244.2880 FAX# 732.244.2889

4. SIGNATURE OF APPLICANT: [signature] (agent)

FOR OFFICE USE ONLY

FEE SUMMARY:

APPLICATION FEE: $ 75-
OTHER: $ _____
TOTAL: $ 75-

REQUIRED BY APPLICANT

RESIDENTIAL: ✓
COMMERCIAL: _____
EXISTING USE: SFR
PROPOSED USE SFR

BOARD APPROVAL: ___ PB ___ ZB
RESOLUTION#: _____
APPROVAL DATE: _____

PROJECT DESCRIPTION: (PLEASE CHECK APPLICABLE WORK & DESCRIBE)
*NEW BUILDING: _____ *ADDITION _____ *ALTERATION _____ *PORCH _____ *DECK _____

POOL: ABOVE GROUND _____ IN GROUND _____ FENCE: HEIGHT _____ TYPE _____

HEIGHT: _____ (*APPLICABLE)

~~OTHER~~ ① REPLACE GAS FURNACE + NEW HEATER PLUS BELOW ↓ DUCTWORK ↙

DESCRIPTION: ADD A.C + H.P TO HOUSE - OUTSIDE UNITS BEHIND HOUSE / ② ADD H.P TO GARAGE, OUTSIDE UNIT RIGHT SIDE ↓ DUCTWORK

ZONING REVIEW:
DATE REVIEWED: 3-24-17 DATE DENIED: _____ DATE APPROVED: 3-24-17 INTLS: _____

(SEE BACK PAGE)

OFFICE USE ONLY

RECEIVED
MAR 2 8 2017
ZONING

ZONING REVIEW:

DATE REVIEWED: 3/28/17 DATE DENIED: — DATE APPROVED: 3/28/17 INTLS:

DATE:	COMMENTS:	INITIALS:
3/28/17	SENT TO CMM	

Brick Township
401 Chambers Bridge Rd.

Brick, NJ 08723
(732) 262-1336

Date Issued: 4/5/17
Application Number: ZA-17-00335
Application Date: 03/21/2017
Project Number:
Permit Number: ZP-17-00418
Fee: $75.00

Zoning Permit

Worksite Location: **232 CIRCLE DR.** **Brick Township, NJ**

Block: **322**
Lot: **26**
Qualifier:
Zone: **R-15**

Owner: **ADKISSON, TAMMY LEE**
Address: **232 CIRCLE DR**
BRICK, NJ 08723

Applicant: **Toms River Heating & A/C**
Address: **400 Corporate Circle**
Toms River, NJ 08755

Application Approved Date: 03/24/2017

This Certifies that an application for the issuance of a Zoning Permit has been examined.

Use is: Single-Family Residential
Nonconforming Use is:

Work Description:

Heat Pump Unit - Installation of 2 condensing units to service the principle structure.

The A/C unit must be setback at least 35' from the front property line, 12' from the side, and 35' from the rear property line.

Additional Zoning Permit is required for additional work.

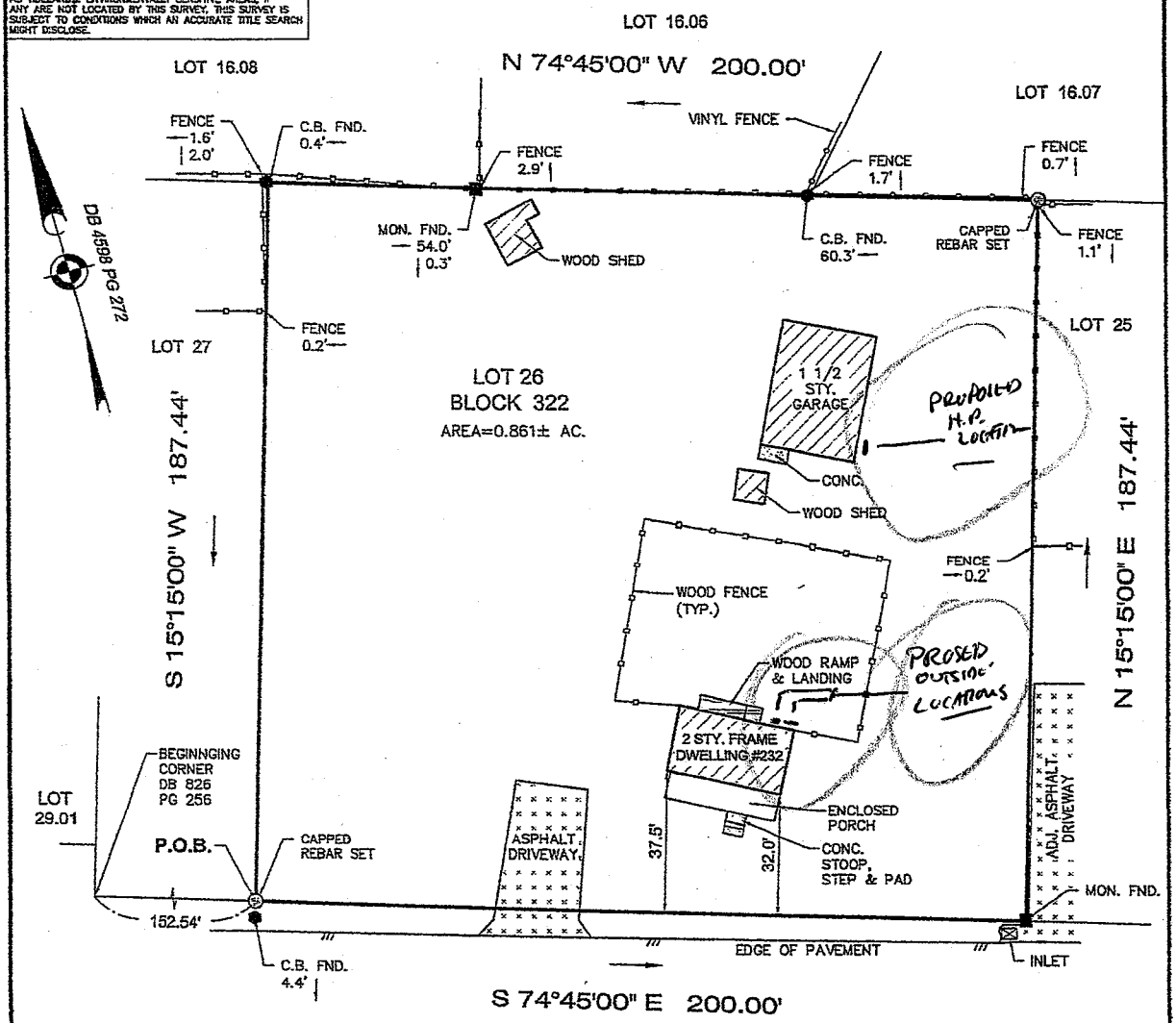
Upon review it was determined that the Zoning Permit:

- ☑ Permitted by Ordinance
- ☐ Permitted by Variance approved on:
- ☐ Valid Nonconforming Use is established by
  - ☐ Zoning Board of Adjustment
  - ☐ Zoning Officer

Christopher J. Romano, Assistant Zoning Officer — 03/24/2017 Date

Sean Kinnevy, Zoning Officer — 3/28/17 **Date**

NO ATTEMPT WAS MADE TO DETERMINE IF ANY PORTION OF THIS PROPERTY IS CLAIMED BY THE STATE OF NEW JERSEY AS TIDELANDS, ENVIRONMENTALLY SENSITIVE AREAS, IF ANY ARE NOT LOCATED BY THIS SURVEY. THIS SURVEY IS SUBJECT TO CONDITIONS WHICH AN ACCURATE TITLE SEARCH MIGHT DISCLOSE.



CIRCLE DRIVE
(33' R.O.W.)

Zoning Review
Approval
By: CW AIC
Date: 3-24-17

PREPARED FOR: *TAMMY LEE ADKISSON*

TITLE INSURER: *PARADIGM TITLE GROUP (16-PTG-NJ01261)*
CHICAGO TITLE INSURANCE COMPANY

CLOSING ATTORNEY: *THE ALBERTO BROTHERS LAW FIRM*

I declare that, to the best of my professional knowledge and belief, this map or plan made on 12/20/16 by me or under my direct supervision is in accordance with the Rules and Regulations promulgated by the STATE BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS. This survey does not purport to identify below ground encroachments, utilities, services lines or structures, wetlands, or riparian rights. Offset dimensions from structures to property lines shown hereon are not to be used to reestablish property lines. This survey is subject to a full and accurate title search, subject to restrictions and easement record and/or unrecorded.

DB 4598 PG 272

CERTIFICATE OF AUTHORIZATION: 24GA28229800

MORGAN engineering & surveying

P.O. BOX 5232
TOMS RIVER, N.J. 08754
TEL: 732-270-9690
FAX: 732-270-9691
www.morganengineeringllc.com

FRANK R. DeSANTIS
PROFESSIONAL LAND SURVEYOR
N.J. LIC. No. 42001

SURVEY OF PROPERTY

LOT No. 26 **BLOCK No. 322**

TOWNSHIP OF BRICK

COUNTY OF OCEAN **NEW JERSEY**

Scale:	Drawn By:	Date:	JOB #:	CAD File #:	Sheet #:
1"=30'	DVP	12/20/16	16-10424	16-10424DVP	1 OF 1

ENGINEERING PERMIT APPLICATION

RECEIVING CLERK: _____

PERMIT #: _____

BLOCK: 322 LOT: 26 ADDRESS: 232 Circle Drive

IDENTIFICATION:

1. WORK SITE ADDRESS: 232 CIRCLE DR.
2. NAME OF OWNER IN FEE: ADKISSON

   ADDRESS: 232 CIRCLE DR. PHONE [redacted]

   BRICK, NJ. 08724 FAX #: (__) _____
3. PRINCIPAL CONTRACTOR: TOMS RIVER HEATING & A.C.

   ADDRESS: 400 CORPORATE CIRCLE PHONE #: (732) 244-2880

   TOMS RIVER NJ 08755 FAX #: (732) 244-2889
4. ARCHITECT OR ENGINEER: _____

   ADDRESS: _____ PHONE: # (__) _____
5. RESPONSIBLE PERSON FOR WORK: MIKE BOULIEU

   ADDRESS: 400 CORPORATE CIRCLE TOMS RIVER

PHONE #: (732) 244-2880 FAX #: (732) 244-2889 E-MAIL: _____

PROJECT DESCRIPTION: ☐ GRADING/CLEARING ☐ ROAD OPENING

☐ SOIL REMOVAL/FILL ☐ RETAINING WALL ☐ POOL

☐ BULKHEAD/DOCK ☐ DWELLING ☐ TREE REMOVAL _____

☐ OTHER ADD A C + DUCTLESS HEAT PUMP

LENGTH: _____ WIDTH: _____ HEIGHT: _____

FEE SUMMARY:

APPLICATION FEE: $ _____

REVIEW FEE: $ _____

INSPECTION FEE: $ _____

OTHER _____: $ _____

BOND(S): $ _____

TOTAL: $ _____

SPECIAL CONDITIONS:

OCEAN COUNTY SOILS: _____

DRAINAGE EASEMENTS: _____

UTILITY EASEMENTS: _____

CONSERVATION EASEMENTS: _____

FEMA REQUIREMENTS: _____

D.E.P. PERMITS: _____

BOARD APPROVAL: ☐ PB ☐ ZB

APPLICATION NUMBER: _____

APPROVED DATE: _____

ENGINEERING REVIEW:

DATE RECEIVED: _____ DATE REJECTED: _____ DATE APPROVED: _____ INITIALS: _____

CHIMNEY VERIFICATION FOR REPLACEMENT OF FUEL-FIRED EQUIPMENT

BLOCK 322 LOT 26 QUALIFICATION CODE _____ PERMIT # _____

WORK SITE ADDRESS 232 CIRCLE DR.

Owner in Fee ADKISSON

Verifying Individual JOHN HOAG Company TOMS RIVER HEATING & A.C.

Address 400 CORPORATE CIRCLE (Street) TOMS RIVER (City) NJ (State) 08755 (Zip Code)

Tel: (732) 244-2880 Fax: (732) 244-2889

Check the Appropriate Box(es):

Type of Replacement:

- [ ] Oil to Gas Conversion
- [ ] Gas to Oil Conversion
- [X] Gas Appliance Replacement
- [ ] Oil to Oil Replacement
- [ ] Other _____

Existing Vent/Chimney: Size _____

- [ ] "B" Label Vent
- [ ] "L" Label Vent
- [ ] Flexible Liner
- [ ] Power Vent/Exhauster
- [ ] Chimney-Interior
- [ ] Chimney-Exterior
- [ ] Masonry Chimney-Tile Lined
- [ ] Masonry Chimney-Unlined
- [✓] Other NEW PVC

	Type	Fuel Type	BTU Rating (input/hour)
Appliance 1:	FURNACE	Oil / (Gas) / Other:	66,000
Appliance 2:	NEW HEATER	Oil / (Gas) / Other:	40,000
Appliance 3:		Oil / Gas / Other:	

CHIMNEY LINER

If a chimney liner is being installed, all documentation on the liner must accompany the Permit application.

Manufacturer: _____ Model: _____ UL Listing: _____

Material of Liner: Stainless Steel _____ Aluminum _____

Size of Appliance Vent: _____ Size of Liner: _____ Height of Chimney: _____

Length of Connector: _____ Vent Connector Rise: _____

How does the appliance vent? [ ] Natural Draft [ ] Fan-assisted [ ] Other: _____

PLEASE SIGN ONE OF THE FOLLOWING VERIFICATION STATEMENTS

For Oil or Coal to Gas Conversions:

I have verified that the chimney/vent is in good repair and clear of obstruction and is substantially clean of residue from its previous use serving an oil or coal appliance. I have verified that the chimney/vent is appropriately lined and sized for the appliance(s) being installed.

_____ Signature _____ Date

Oil to Oil or Gas to Gas Replacements or New/Additional Appliances:

I have verified that the existing chimney/vent is in good repair and clear of obstruction. I have verified that the existing chimney/vent is appropriately lined and sized for the appliance(s) being installed and/or remaining.

_____ Signature _____ Date

Direct Vent Appliance:

I hereby verify that the appliance(s) being installed is a direct vent appliance. I further verify that the existing chimney/vent is appropriately lined and sized for any remaining appliances.

[signature] Signature 3/20/17 Date

Verification Not Submitted:

I choose not to submit verification. I understand that I will be required to be present for the inspection to remove and reinstall the chimney vent connector.

_____ Signature _____ Date

FOR MINOR AND EMERGENCY WORK, THIS FORM MUST BE PROVIDED WITH YOUR PERMIT APPLICATION. FOR ALL OTHER WORK, THIS FORM MUST BE PRESENTED TO THE CODE OFFICIAL PRIOR TO FINAL INSPECTION.

All applicable information requested on this form must be supplied.
This form may not be submitted by a homeowner in lieu of the required inspection.

RESIDENTIAL REPLACEMENT OF FURNACE/BOILER
(IN LIEU OF MANUAL S)

BOILER REPLACEMENT

OLD BTU INPUT_____OUTPUT_____ I=B=R OUTPUT_____

NEW BTU INPUT_____OUTPUT_____ OUTPUT_____

FURNACE REPLACEMENT

OLD BTU INPUT 75,000 OUTPUT 60,000

NEW BTU INPUT 66,000 OUTPUT 62,000

A/C REPLACEMENT

OLD UNIT N/A BTU

NEW UNIT_____BTU

AND/OR

HEAT LOSS/HEAT GAIN

IF YOU DON'T HAVE OLD UNIT SPECIFICATIONS, YOU WILL HAVE TO SUBMIT A HEAT LOSS/HEAT GAIN (MANUAL J & MANUAL S)

IF THE NEW UNIT BTU IS LESS THAN THE OLD UNIT BTU YOU WILL HAVE TO SUBMIT A HEAT LOSS/HEAT GAIN

WE ALSO WILL NEED
COPY OF THE BROCHURE/SPECS OF THE NEW FURNACE/BOILER /AC UNIT
(NOT THE INSTALLATION GUIDE)

CHIMNEY CERTIFICATION (CANNOT BE CERTIFIED BY HOMEOWNER)

SINGLE-ZONE | MSZ Indoor Unit | Heat Pump

Cooling *1	Rated Capacity	Btu/h	6,000	9,000	12,000	15,000	17,200
	Capacity Range	Btu/h	1,700 - 9,000	1,700-12,000	2,500-13,600	6,450 -19,000	6,450-21,000
	Rated Total Input	W	315	560	870	1,200	1,375
	Energy Efficiency	SEER	33.1	30.5	26.1	22.0	21.0
	Moisture Removal	Pints/h	0.2	0.6	1.9	4.0	4.8
	Sensible Heat Factor		0.960	0.920	0.830	0.700	0.690
Heating at 47° F *2	Rated Capacity	Btu/h	8,700	10,900	13,600	18,000	20,300
	Capacity Range	Btu/h	1,600 - 14,000	1,600-18,000	3,700-21,000	5,150 - 24,000	5,150-30,000
	Rated Total Input	W	545	710	950	1,300	1,720
	HSPF (IV)	Btu/h/W	13.5	13.5	12.5	12.0	12.0
Heating at 17° F *3	Rated Capacity	Btu/h	5,900	6,700	8,000	11,000	13,700
	Rated Total Input	W	500	600	720	1,020	1,320
	Maximum Capacity	Btu/h	10,700	12,200	13,600	18,000	20,300
Heating at 5° F	Maximum Capacity	Btu/h	8,700	10,900	13,600	18,000	20,300
Power Supply	Phase, Cycle, Voltage		1 Phase, 60Hz, 208/230V *4				
Voltage	Indoor - Outdoor S1 - S2		AC 208 / 230V				
	Indoor - Outdoor S2 - S3		DC ±24V				
	Indoor - Remote Controller		Wireless Type (Optional Wired Controller: DC12V)				
Indoor Unit	MCA	A	1.0				
	Blower Motor (ECM)	F.L.A.	0.67				
	Airflow at Cooling (Quiet-Low-Med.-High-Super Hi) *1	DRY (CFM)	137-167-221-304-381	137-167-221-304-381	137-167-221-304-398	225-262-304-355-411	225-262-304-355-459
		WET (CFM)	117-143-190-261-328	117-143-190-261-328	117-143-190-261-342	194-225-261-305-354	194-225-261-305-395
	Airflow at Heating (Quiet-Low-Med.-High-Super Hi) *2	DRY (CFM)	140-167-225-325-437	140-167-225-325-437	140-167-225-325-454	201-254-317-394-497	201-254-317-394-514
	Sound Pressure Level at Cooling (Quiet-Low-Med.-High-Super Hi) *1	dB(A)	20-23-29-36-40	20-23-29-36-40	21-24-29-36-41	27-31-35-39-47	20-23-29-36-40
	Sound Pressure Level at Heating (Quiet-Low-Med.-High-Super Hi) *2	dB(A)	20-24-29-36-42	20-24-29-36-42	21-24-29-36-42	25-29-34-39-46	20-24-29-36-42
	External Finish Color		Munsell No. 1.0Y 9.2 / 0.2				
	Dimension Unit	W: In.	36-7/16				
		D: In.	9-3/16				
		H: In.	12(+11/16)				
	Weight Unit	Lbs.	29				
	Field Drainpipe Size O.D.	In.	5/8				
Remote Controller	Type		Select from PAC-WHS01WP-E for kumo cloud™, PAC-US444CN-1, MHK1, PAR-31MAA, or PAC-YT53CRAU Remote Controllers				
Outdoor Unit	MCA	A	11			16	15
	MOCP	A	15			20	
	Fan Motor (ECM)	F.L.A.	0.50			0.93	
	Compressor	Model (Type)	DC INVERTER-driven Twin Rotary				
		R.L.A.	8.2			12.0	10.0
		L.R.A.	10.3			15.0	12.5
	Airflow (Cooling/Heating)	CFM	1,150/1,280	1,074/1,202		1,190/1,320	1,692/1,634
	Refrigerant Control		Linear Expansion Valve				
	Defrost Method		Reverse Cycle				
	Sound Pressure Level at Cooling *1	dB(A)	47	48	49	51	52
	Sound Pressure Level at Heating *2	dB(A)	48	49	51	55	55
	External Finish Color		Munsell No. 3Y 7.8 / 1.1				
	Dimensions	W: In.	31-1/2			33-1/16	
		D: In.	11-1/4			13	
		H: In.	21-5/8			34-5/8	
	Weight	Lbs.	81			124	
Refrigerant	Type		R410A				
	Charge	Lbs., Oz.	2, 9			3, 7	
	Oil	Type (cc)	FV50S (350)			FV50S (400)	
Refrigerant Pipe	Gas Side O.D.	In.	3/8			1/2	
	Liquid Side O.D.	In.	1/4				
Refrigerant Pipe Length	Height Difference (Max.)	Ft.	40			50	
	Length (Max.)	Ft.	65			100	
Connection Method	Indoor/Outdoor		Flared/Flared				

NOTES: Test conditions are based on AHRI 210/240.

*1. Rating conditions (cooling)-Indoor: D.B. 80° F (27° C), W.B. 67° F (19° C); Outdoor: D.B. 95° F (35° C), W.B. 75° F (24° C).

*2. Rating conditions (heating)-Indoor: D.B. 70° F (21° C), W.B. 60° F (16° C); Outdoor: D.B. 47° F (8° C), W.B. 43° F (6° C).

*3. Rating conditions (heating)-Indoor: D.B. 70° F (21° C), W.B. 60° F (16° C); Outdoor: D.B. 17° F (-8° C), W.B. 15° F (-9° C).

*4. Indoor units receive power from outdoor units through field-supplied interconnected wiring.

Specifications are subject to change without notice.

LIMITED WARRANTY | Five years parts and seven years compressor.

SPECIFICATIONS

General Data	Model No.	All Regions	13ACX-018	13ACX-024	13ACX-030	13ACX-036	13ACX-042	13ACX-048	13ACX-060
		Northern Region	13ACXN018	13ACXN024	13ACXN030	13ACXN036	13ACXN042	13ACXN048	13ACXN060
		Nominal Tonnage	1.5	2	2.5	3	3.5	4	5
Connections (sweat)		Liquid line o.d. - in.	3/8	3/8	3/8	3/8	3/8	3/8	3/8
		Suction line o.d. - in.	5/8	5/8	3/4	3/4	3/4	7/8	7/8
[1] Refrigerant (R-410A) furnished			3 lbs. 15 oz.	3 lbs. 15 oz.	5 lbs. 2 oz.	5 lbs. 4 oz.	6 lbs. 8 oz.	7 lbs. 12 oz.	9 lbs. 0 oz.
RFCIV Metering Orifice Size			0.051	0.057	0.065	0.072	0.076	0.082	0.090
Outdoor Coil	Net face area sq. ft.	Outer coil	11.33	11.33	13.22	13.22	16.33	18.67	16.33
		Inner coil	---	---	---	---	---	---	15.71
		Tube diameter - in.	5/16	5/16	5/16	5/16	5/16	5/16	5/16
		Number of rows	1	1	1	1	1	1	2
		Fins per inch	26	26	26	26	26	26	22
Outdoor Fan		Diameter - in.	18	18	18	18	22	22	22
		Number of blades	3	3	4	4	4	4	4
		Motor hp	1/10	1/10	1/5	1/5	1/4	1/4	1/4
		Cfm	2350	2350	2400	2400	3500	3670	3600
		Rpm	1010	1010	1090	1090	825	835	830
		Watts	165	165	185	185	300	295	285
Shipping Data - lbs. 1 package			138	138	144	151	188	195	218

ELECTRICAL DATA

		Line voltage data - 60 hz - 1ph	208/230V	208/230V	208/230V	208/230V	208/230V	208/230V	208/230V
		[2] Maximum overcurrent protection (amps)	20	25	30	35	45	50	60
		[3] Minimum circuit ampacity	12.4	14.7	18.7	22.0	28.1	31.9	34.6
Compressor		Rated load amps	9.4	11.2	14.1	16.7	21.2	24.2	26.3
		Locked rotor amps	56.6	60.8	73	70	90	100	125
		Power factor	0.98	0.98	0.98	0.99	0.99	0.99	0.99
Condenser Fan Motor		Full load amps	0.7	0.7	1.1	1.1	1.7	1.7	1.7
		Locked rotor amps	1.3	1.3	2.0	2.0	3.2	3.2	3.2

OPTIONAL ACCESSORIES - ORDER SEPARATELY

Compressor Crankcase Heater		93M04	•	•	•	•			
		93M05					•	•	•
Compressor Hard Start Kit		10J42	•						
		88M91		•	•	•	•	•	•
Compressor Low Ambient Cut-Off Switch		45F08	•	•	•	•	•	•	•
Compressor Sound Cover		69J03	•	•	•	•	•	•	•
Compressor Time-Off Control		47J27	•	•	•	•	•	•	•
Freezestat	3/8 in. tubing	93G35	•	•	•	•	•	•	•
	5/8 in. tubing	50A93	•	•	•	•	•	•	•
Indoor Blower Off Delay Relay		58M81	•	•	•	•	•	•	•
Loss of Charge Switch Kit		84M23	•	•	•	•	•	•	•
[4] Low Ambient Kit (Fan Cycling)		34M72	•	•	•	•	•	•	•
Mounting Base		69J06	•	•	•	•			
		69J07					•	•	•
Refrigerant Line Sets		L15-26-20, L15-26-25, L15-26-35, L15-26-50	•	•					
		L15-41-20, L15-41-30, L15-41-40, L15-41-50			•	•	•		
		L15-65-30, L15-65-40, L15-65-50						•	•
Unit Stand-Off Kit		94J45	•	•	•	•	•	•	•

NOTE - Extremes of operating range are plus 10% and minus 5% of line voltage.

[1] Refrigerant charge sufficient for 15 ft. length of refrigerant lines. For longer line set requirements see the Installation Instructions for information about line set length and additional refrigerant charge required.

[2] HACR type circuit breaker or fuse.

[3] Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

[4] Crankcase Heater and Freezestat are recommended with Low Ambient Kit.

SPECIFICATIONS

			Model No.	EL296UH045XV36B	EL296UH070XV36B	EL296UH090XV36C
Gas Heating Performance			[1] AFUE	96%	96%	96%
	High Fire		Input - Btuh	44,000	66,000	88,000
			Output - Btuh	42,000	62,000	84,000
			Temperature rise range - °F	35 - 65	50 - 80	60 - 90
			Gas Manifold Pressure (in. w.g.) Nat. Gas / LPG/Propane	3.5 / 10.0	3.5 / 10.0	3.5 / 10.0
	Low Fire		Input - Btuh	29,000	43,000	57,000
			Output - Btuh	28,000	41,000	55,000
			Temperature rise range - °F	20 - 50	25 - 55	30 - 60
			Gas Manifold Pressure (in. w.g.) Nat. Gas / LPG/Propane	1.7 / 4.9	1.7 / 4.9	1.7 / 4.9
High static - in. w.g.			Heating	0.8	0.8	0.8
			Cooling	1.0	1.0	1.0
Connections in.			Intake / Exhaust Pipe (PVC)	2 / 2	2 / 2	2 / 2
			Gas pipe size IPS	1/2	1/2	1/2
			Condensate Drain Trap (PVC pipe) - i.d.	3/4	3/4	3/4
			with furnished 90° street elbow	3/4 slip x 3/4 Mipt	3/4 slip x 3/4 Mipt	3/4 slip x 3/4 Mipt
			with field supplied (PVC coupling) - o.d.	3/4 slip x 3/4 MPT	3/4 slip x 3/4 MPT	3/4 slip x 3/4 MPT
Indoor Blower			Wheel nominal diameter x width - in.	10 x 9	10 x 9	10 x 9
			Motor output - hp	1/2	1/2	1/2
			Tons of add-on cooling	2 - 3	2 - 3	2 - 3
			Air Volume Range - cfm	465 - 1370	490 - 1365	520 - 1360
Electrical Data			Voltage	120 volts - 60 hertz - 1 phase		
			Blower motor full load amps	7.7	7.7	7.7
			Maximum overcurrent protection	15	15	15
Shipping Data			lbs. - 1 package	130	136	152

NOTE - Filters and provisions for mounting are not furnished and must be field provided.

[1] Annual Fuel Utilization Efficiency based on DOE test procedures and according to FTC labeling regulations. Isolated combustion system rating for non-weatherized furnaces.

SPECIFICATIONS

			Model No.	EL296UH090XV48C	EL296UH090XV60C	EL296UH110XV48C
Gas Heating Performance			[1] AFUE	96%	96%	96%
	High Fire		Input - Btuh	88,000	88,000	110,000
			Output - Btuh	85,000	85,000	105,000
			Temperature rise range - °F	45 - 75	40 - 70	60 - 90
			Gas Manifold Pressure (in. w.g.) Nat. Gas / LPG/Propane	3.5 / 10.0	3.5 / 10.0	3.5 / 10.0
	Low Fire		Input - Btuh	57,000	57,000	72,000
			Output - Btuh	55,000	55,000	70,000
			Temperature rise range - °F	30 - 60	25 - 55	36 - 65
			Gas Manifold Pressure (in. w.g.) Nat. Gas / LPG/Propane	1.7 / 4.9	1.7 / 4.9	1.7 / 4.9
High static - in. w.g.			Heating	0.8	0.8	0.8
			Cooling	1.0	1.0	1.0
Connections in.			Intake / Exhaust Pipe (PVC)	2 / 2	2 / 2	2 / 2
			Gas pipe size IPS	1/2	1/2	1/2
			Condensate Drain Trap (PVC pipe) - i.d.	3/4	3/4	3/4
			with furnished 90° street elbow	3/4 slip x 3/4 Mipt	3/4 slip x 3/4 Mipt	3/4 slip x 3/4 Mipt
			with field supplied (PVC coupling) - o.d.	3/4 slip x 3/4 MPT	3/4 slip x 3/4 MPT	3/4 slip x 3/4 MPT
Indoor Blower			Wheel nominal diameter x width - in.	11 x 11	11 x 11	11 x 11
			Motor output - hp	3/4	1	3/4
			Tons of add-on cooling	2.5 - 4	3 - 5	2.5 - 4
			Air Volume Range - cfm	680 - 1770	840 - 2195	670 - 1760
Electrical Data			Voltage	120 volts - 60 hertz - 1 phase		
			Blower motor full load amps	10.1	12.8	10.1
			Maximum overcurrent protection	15	20	15
Shipping Data			lbs. - 1 package	163	164	173

NOTE - Filters and provisions for mounting are not furnished and must be field provided.

[1] Annual Fuel Utilization Efficiency based on DOE test procedures and according to FTC labeling regulations. Isolated combustion system rating for non-weatherized furnaces.

House

Adkisson
HVAC Load Calculations

for

Mr & Mrs Adkisson
232 Circle Dr
Brick New Jersey

Elite Software

RHVAC RESIDENTIAL HVAC LOADS

Prepared By:

Michael Beaulieu
Toms River Heating & Air Conditioning
400 Corporate Circle
Toms River New Jersey 08755
732-244-2880
Monday, February 20, 2017

Rhvac is an ACCA approved Manual J and Manual D computer program.
Calculations are performed per ACCA Manual J 8th Edition, Version 2, and ACCA Manual D.

Project Report

General Project Information

Project Title:	Adkisson
Designed By:	Michael Beaulieu
Project Date:	Monday, February 20, 2017
Client Name:	Mr & Mrs Adkisson
Client Address:	232 Circle Dr
Client City:	Brick New Jersey
Client Phone:	732-703-2288
Client E-Mail Address:	Dadkis@comcast.net
Company Name:	Toms River Heating & Air Conditioning
Company Representative:	Michael Beaulieu
Company Address:	400 Corporate Circle
Company City:	Toms River New Jersey 08755
Company Phone:	732-244-2880
Company Fax:	732-244-2889

Design Data

Reference City:		Long Branch, New Jersey
Building Orientation:		Front door faces South
Daily Temperature Range:		Medium
Latitude:	40	Degrees
Elevation:	36	ft.
Altitude Factor:	0.999	

	Outdoor Dry Bulb	Outdoor Wet Bulb	Outdoor Rel.Hum	Indoor Rel.Hum	Indoor Dry Bulb	Grains Difference
Winter:	13	11.86	n/a	n/a	70	n/a
Summer:	90	73	45%	50%	75	30

Check Figures

Total Building Supply CFM:	1,362	CFM Per Square ft.:	0.946
Square ft. of Room Area:	1,440	Square ft. Per Ton:	498
Volume (ft³):	11,040		

Building Loads

Total Heating Required Including Ventilation Air:	56,267	Btuh	56.267	MBH
Total Sensible Gain:	29,925	Btuh	86	%
Total Latent Gain:	4,782	Btuh	14	%
Total Cooling Required Including Ventilation Air:	34,707	Btuh	2.89	Tons (Based On Sensible + Latent)

Notes

Rhvac is an ACCA approved Manual J and Manual D computer program.
Calculations are performed per ACCA Manual J 8th Edition, Version 2, and ACCA Manual D.
All computed results are estimates as building use and weather may vary.
Be sure to select a unit that meets both sensible and latent loads according to the manufacturer's performance data at your design conditions.

Load Preview Report

Scope	Net Ton	ft.²/Ton	Area	Sen Gain	Lat Gain	Net Gain	Sen Loss	Sys Htg CFM	Sys Clg CFM	Sys Act CFM	Duct Size
Building	2.89	498	1,440	29,925	4,782	34,707	56,267	732	1,362	1,362	
System 1	2.37	404	960	24,238	4,243	28,481	45,369	590	1,103	1,103	12x16
Supply Duct Latent					611	611					
Zone 1			960	24,238	3,632	27,870	45,369	590	1,103	1,103	12x16
1-First Floor			480	11,673	2,616	14,289	24,244	315	531	531	5–6
2-Second Floor			480	12,565	1,016	13,581	21,125	275	572	572	6–6
System 2	0.52	925	480	5,687	539	6,226	10,898	142	259	259	8x8
Zone 1			480	5,687	539	6,226	10,898	142	259	259	8x8
3-Third Floor			480	5,687	539	6,226	10,898	142	259	259	3–6

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Mel Petty
400 Corporate Cir
Toms River NJ 08755-4993

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02/07/2017 TO 03/31/2018
VALID

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Signature of Licensee/Registrant/Certificate Holder

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Cris J. Schremmer
400 Corporate Circle
Toms River NJ 08755

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Master HVACR Contractor

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Ronald M. Petty
400 Corporate Circle
Toms River NJ 08755

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

05/09/2016 TO 06/30/2018
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Ronald M. Petty
Master HVACR Contractor

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