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April 13, 2020

VIA ELECTRONIC FILING

Hon. Michelle L. Phillips
Secretary
New York State Public Service Commission
Three Empire State Plaza
Albany, New York 12223-1350

Re: Case _____ - Notice of Intent of QPP LLC to Submeter Electricity at 29-59 Northern Boulevard, Queens, New York 11101, Located in the Territory of Consolidated Edison Company of New York, Inc.

Dear Secretary Phillips:

On behalf of QPP LLC, attached please find a Notice of Intent to Submeter Electricity at 29-59 Northern Boulevard, Queens, New York. Please contact me with any questions.

Respectfully submitted,

COUCH WHITE, LLP

Adam T. Conway

Adam T. Conway

ATC
Attachment
cc: Kerri Ann Kirschbaum, Esq. – Con Edison (via email; w/att.)
Mr. Won Choe – Con Edison (via email; w/att.)

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

Notice of Intent of QPP LLC to Submeter Electricity at 29-59 Northern Boulevard, Queens, New York 11101, Located in the Territory of Consolidated Edison Company of New York, Inc.	**)**	**Case No. _____**

NOTICE OF INTENT TO SUBMETER ELECTRICITY

QPP LLC ("Applicant"), the developer of a new multi-unit residential building, known as Sven and located at 29-59 Northern Boulevard, Queens, New York 11101 (the "Building"), hereby requests authorization to submeter the 958 residential apartments to be located in the Building. Applicant currently anticipates that the Building will be ready for occupancy in August 2021.

Because Applicant is seeking authorization to submeter at a new, master-metered multi-unit residential premises that will not utilize electric heat, Applicant hereby provides the information required in a Notice of Intent to Submeter pursuant to Section 96.3(a) of the NYS Public Service Commission's ("Commission") Rules and Regulations (16 NYCRR § 96.3(a)). Furthermore, none of the units at the Building are occupied as of the date of this Notice of Intent. Therefore, the notice requirements in 16 NYCRR §§ 96.3(a) and (c) are not applicable to Applicant. However, as described in more detail below, Applicant will include a Submetering Lease Rider with all leases for units at the Building. This lease rider will provide prospective residents with notice, prior to signing a lease agreement, that electricity will be supplied on a submetered basis and the residents will be responsible for electric charges. Furthermore, each year Applicant will provide every resident with the Annual Notification of Rights required by the Home Energy Fair Practices Act ("HEFPA").

INFORMATION REQUIRED BY 16 NYCRR § 96.3(A)

A. Description of the type of submetering system to be installed

Applicant will utilize Triacta Power Technologies, Inc.'s PowerHawk Model 6312 electric submeters to measure electricity consumption at the residential apartments. These meters have been approved by the Commission for use in residential electric submetering applications.[1] Applicant will have the capability to terminate electric service to individual units.

B. Description of methods to be used to calculate bills

The monthly bills will be based on Consolidated Edison Company of New York, Inc.'s ("Con Edison") rates and charges for direct-metered, residential electric service, specifically Service Classification ("S.C.") No. 1, Rate I. In no event will the total bill for a billing period for any unit (including any monthly administrative charge) exceed Con Edison's rates and charges for delivery and commodity in that billing period for similarly situated, direct-metered residential customers. Each billing period, Applicant's billing agent will read submetered usage data, utilizing the billing cycle dates on the Con Edison master meter. For example, if the master meter billing cycle is March 1 – March 31, Applicant's billing agent will process submetered usage data from March 1 – March 31 for each submeter. Applicant's billing agent will then confirm and update all applicable charges under S.C. No. 1, Rate I, utilizing the most recent information in Con Edison's tariff and any relevant tariff statements. Applicant's billing agent will sum all applicable S.C. No. 1 charges and multiply the summed charges by the kWh usage data pulled from the submeter. Once bills are generated with the appropriate rates, Applicant's billing agent will run the final bills through Con Edison's online submetering billing calculator to confirm that the

[1] *See* Case 15-E-0133, Petition of Triacta Power Technologies, Inc. for Approval of PowerHawk Models for 6312, 6303, 6112, 6103, Staff Recommendation of Case Closure (issued August 7, 2015).

submetered charges do not exceed Con Edison's charges for delivery and commodity during the relevant billing period. A copy of a sample submetered bill is attached hereto as **Exhibit A.** Consistent with the Commission's rules and regulations, the meter reading data and billing calculations will be documented and retained for a six year period for each unit.

C. Plan for Complying with the Provisions of HEFPA

Attached hereto as **Exhibit B** is a HEFPA Implementation Plan containing, among other things: (i) sample forms to be used to determine residents' assets; (ii) sample budget and quarterly billing forms; (iii) sample past due reminder notice; (iv) sample notice to social services of a resident's inability to pay; (v) final notice to terminate service; (vi) annual resident notification of rights; (vii) description of bill contents; (viii) sample budget or levelized payment plans; (ix) sample deferred payment agreement; and (x) complaint handling procedures.

D. Submeterer Identification Form

The Submeterer Identification Form is attached as **Exhibit C** hereto.

E. Description of the method to be used to back out electric charges from rent

This section is not applicable. The Building is new construction and submetered electric charges will be billed separately from rent.

F. Submetering Lease Rider

Attached to this Notice of Intent at **Exhibit D** is a Submetering Lease Rider that Applicant will include with all residential leases at the Building. As noted above, this Lease Rider will provide prospective residents with notice, prior to signing a lease agreement, that electricity will be supplied on a submetered basis and the residents will be responsible for electric charges and includes, among other things, summaries of the submetering complaint procedures and the HEFPA rights and responsibilities of residents.

G. Proof of service

Simultaneously with the filing of this Notice of Intent, a copy was sent via electronic mail to Con Edison, the utility company providing service to the premises to be submetered.

H. Refrigerators

The Building is new construction and each residential rental unit will be initially equipped with a new refrigerator that is less than 10 years old.

I. Description of electric energy efficiency measures to be installed

Applicant is incorporating several energy efficiency measures in Building. Overall, Applicant will adhere to The Durst Organization's "Sustainability Guidelines," a comprehensive set of energy efficiency measures designed to result in lower energy consumption and CO_2 emissions. A copy of the "Sustainability Guidelines" is included as **Exhibit E**.

The Building will utilize one of the most cost-effective and efficient methods of space heating and cooling for multi-family buildings and use a fraction of the energy required for heating and cooling compared to traditional HVAC systems.

Specifically, the Building will produce hot water using centrally-located, high efficiency, gas-fired condensing boilers. From the centrally-located boilers, Applicant will pump hot water to Dual Temperature Fan Coil Units ("FCUs") with dual temperature water coils located in each apartment. During the heating season (i.e., from October 1st to May 31st), an electric fan will be activated by a thermostat in each unit. When the fan blows across the heated coils, hot air will be produced and distributed throughout each unit.

In the summer, the building will produce chilled water using centrally-located, high efficiency, electrically driven chillers. From the centrally-located chillers, Applicant will pump

chilled water to the Dual Temperature FCUs with dual temperature water coils located in each apartment. In the summer, an electric fan will be activated by a thermostat in each unit. When the fan blows across the chilled coils, cold air will be produced and distributed throughout each unit.

Each FCU will also be equipped with a supplemental electric resistance heater that can be turned on at the tenant's discretion if the room becomes cool. These supplemental heaters will have limited heating capability to maintain indoor dry bulb temperature at 70 degrees when the outdoor dry bulb temperature is at least 55 degrees. These supplemental heaters will be disabled during the heating season, such that during the heating season the units will be solely heated by the hot air produced by the electric fan blowing across the heated coils. Furthermore, if the supplemental heater is activated during non-heating months, the FCU will disable the dual temperature water coil to avoid simultaneous heating and cooling. All residential units in the Building will be equipped with 7-day programmable thermostats that will allow residents to control electricity consumption for heating and cooling.

The Building will also incorporate air-to-air recovery HVAC units that enable Applicant to re-use the heat in the building exhaust. Before exhaust air leaves Building, the air will pass through the air-to-air recovery unit and the heat from the exhaust air will be transferred to the incoming fresh air, without transferring the impurities in the exhaust.

Finally, in addition to the measures described above, Applicant will utilize the following energy efficiency measures:

- Energy Star rated residential applicances;
- Variable frequency drives on all large pumps and fans;
- High efficiency motors;
- LED lighting throughout the building; and
- Lighting occupancy sensors in amenity rooms and "back-of-house" spaces (i.e., service hallways and maintenance and refuse areas).

J. Description of information and education programs to be provided to residents

Utilizing a combination of electonic visual displays in common areas and elevators, as well as hard copies included in the tenant handbook for the Building, Applicant intends to continually disseminate information to residents on energy reduction measures that residents can take, including:

- Replace incandescent or flourescent bulbs with LED bulbs.
- Turn your computer off or use sleep mode when not in use.
- Unplug phone chargers when away from home.
- Unplug your cell phone when charged. They use electricity when they are not charging.
- Clean the lint trap in the dryer frequently to increase efficiency and limit energy use.
- Use appliances such as ovens, washing machines, dryers, and dishwashers in the early morning or late evening to reduce peak electrical loads.
- Shut off all the lights when you leave a room.
- Lower your shades and keep terrace doors/windows closed during the summer days to block out heat.
- Use daylight to light a room in the winter.
- Program your thermostat to allow the temperature to rise when you are away from home in the summer.
- Program your thermostat to allow the temperature to decrease when you are away from home or sleeping in the winter.

K. Information regarding income-based housing assistance

Applicant will utilize the 421-a (16) Affordable New York Housing Program, Affordability Option G. Under this program, 30% of the units at the Building must be income-based, rather than market-based. The income-based units will be available to families earning at or below 130% percent of area median income.

The provisions of 16 NYCRR § 96.5(k)(3), which contain energy audit and energy efficiency plan requirements when 20% or more of residents receive income-based housing assistance, do not apply to the Building. Although 16 NYCRR Part 96 does not define the term "income-based housing assistance," the Commission has in the past required compliance with the

provisions of § 96.5(k)(3) when either of two conditions apply: "(a) the resident receives a direct subsidy to assist a low-income household in paying housing costs, *e.g.*, a Section 8 housing voucher; or (b) rental units are offered by the Owner at a reduced rate to residents whose income is below the area median, *e.g.*, the 421-a Affordable Housing Program."[2]

The Commission has determined, however, that the provisions of § 96.5(k)(3) do not apply where units are reserved for residents earning up to 130% of the area median income, because in that instance "participants may earn up to and somewhat above the area median income."[3] Because the income-based units at the Building are similarly reserved for residents earning up to 130% of area median income, the provisions of § 96.5(k)(3) do not apply to the Building.

L. Information pertaining to property utilizing electric heat

The Building will not be an "electric heat property." As described in Section I above, space heat at the Building will be produced by centrally-located, high efficiency, gas-fired condensing boilers. The residential apartments are heated and cooled by the Dual Temperature FCUs. The Commission has previously determined that similar systems do not meet the definition of "electric heat."[4] While the Building will also incorporate supplemental electric resistance

[2] Case 19-E-0499, Notice of Intent and Waiver Request of 123 Linden LLC to Submeter Electricity at 123 Linden Boulevard, Brooklyn, New York, Located in the Territory of Consolidated Edison Company of New York, Inc., Order Authorizing Submetering (issued November 20, 2019) at 4.

[3] Id.

[4] *See* Case 14-E-0126, Petition of EBNB 70 Pine Owner LLC to Submeter Electricity at 70 Pine Street, New York, NY, Located in the Territory of Consolidated Edison Company of New York, Inc., Order Authorizing Submetering (issued January 14, 2015), at 2 n.2 (noting that a heating systems that requires tenants to pay for the electricity necessary to operate the heat pump's compressors and fans "will not have electric heat.").

heaters into each unit, the Commission has previously determined that an identical system designed to provide discretionary, supplemental heat did not meet the definition of "electric heat." Specifically, in Case 18-E-0001, the building at issue utilized an identical heating system to what will be utilized in this Building, including: centrally-located, high efficiency, gas-fired condensing boilers; Dual Temperature FCUs; and identical supplemental electric resistance heaters to those that will be incorporated in this Building. In Case 18-E-0001, the Commission determined that the building did not utilize electric heat.[5] As such, the Building here will not be an "electric heat property." However, to ensure that residents are fully informed of their obligation to pay for electricity utilized by the supplemental electric resistance heaters, Applicant has incorporated a statement into its Submetering Lease Rider clarifying that submetered billing will include charges for any electricity utilized by the supplemental heaters incorporated into each unit.

[5] *Halletts Building 1 Order* at 2 and 3, fn 2.

CONCLUSION

For all of the foregoing reasons, Applicant's submetering plan satisfies the requirements of 16 NYCRR Part 96; is in the public interest; and is consistent with the provision of safe and adequate service to residents. Accordingly, Applicant respectfully requests that the Commission approve this Notice of Intent to Submeter.

Dated: April 13, 2020
Albany, New York

Respectfully submitted,

Adam T. Conway

Adam T. Conway, Esq.
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EXHIBIT A
SAMPLE BILL

Sven

Prepared On: 4/9/2020

Invoice Number :	**2410657**

For information only. This amount is already reflected on your rent statement.

Tenant : 0001

John Doe
SVEN
Queens, NY 11354

Energy/Demand Details

Service Period	**February 12, 2020 - March 12, 2020 (29 Days)**	
Service Class:	SC1R1	
Total Energy (kWh):	77	
Daily Usage:	2.65552 kWh/Day	
Max Demand (kW):	1.32	Load Factor: 8.38%

Supply Charges

Index Energy Charge:	77 @ $0.040514	$3.12
MSC/MFC Adjustment:	77 @ $0.030431	$2.34
Commodity GRT:	2.406600%	$0.13
Total Supply Charges:		**$5.59**

Delivery Charges

Basic Service Charge:		$16.75
*Delivery Usage Charge:	77 @ $0.137850	$10.65
GRT & Other Tax Surcharges:	4.908900%	$1.34
Total Delivery Charges:		**$28.74**

Supply & Delivery Subtotal :		$34.30
Sales Tax :	4.500%	$1.54
Total Due		**$35.87**

*Delivery Usage Charges Includes SBC/RPS Charges & Temporary NY State Surcharges

Your Electric use in this period resulted in the release of 0.02 metric tons of carbon equivalent into the atmosphere.

For Payment Related Questions

To pay this bill and for payment related questions, Please visit:

www.clickpay.com/royal

To avoid a late payment charge, please pay the total amount due by: **Friday, May 1, 2020**

For Electric and Usage Related Questions

Contact SourceOne either via phone (1-800-478-9500) or e-mail support@s1inc.com

A late payment charge of 1.5% per month, compounded, may be imposed on any unpaid balance of any bill not paid within 20 days of the date payment is due from the original due date to the date of payment.

SourceOne
A Veolia Energy Company

Sven

Prepared On: 4/9/2020

Invoice Number :	**2410657**

For information only. This amount is already reflected on your rent statement.

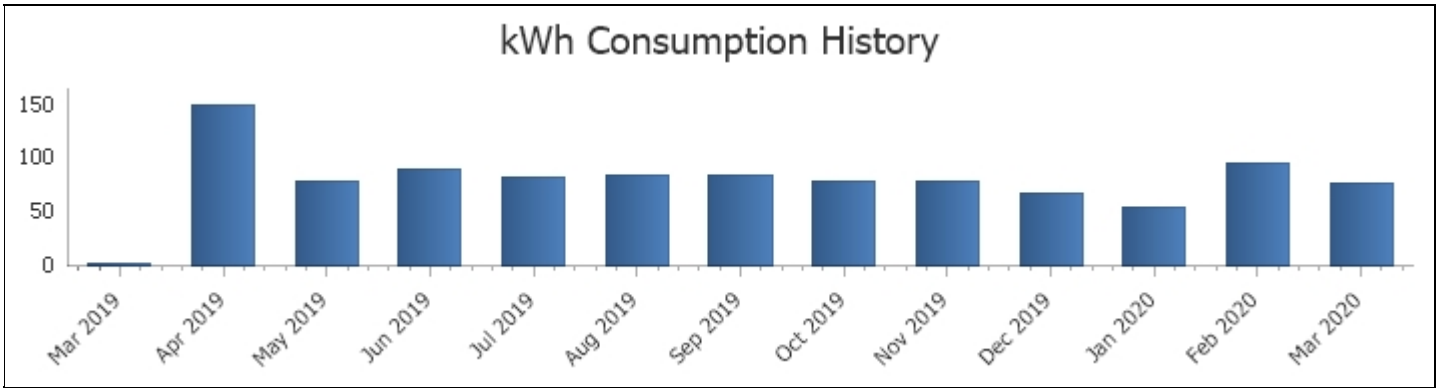
Tenant : 0337

John Doe
SVEN
Queens, NY 11354

Meter Details For: 0001

Meter Summary

Meter Number	Multi	Previous	Current	Total Usage	Demand
TCT-LV-3-1A_M11	1.0	961.64	1,038.65	77	1.3
			Total	**77**	**1.3**



SourceOne
A Veolia Energy Company

EXHIBIT B
HEFPA IMPLEMENTATION PLAN

HEFPA IMPLEMENTATION PLAN

SVEN

1. **Procedure To Pursue Collection of Utility Charges**
2. **Deferred Payment Agreement Package**
3. **Budget Billing Agreement**
4. **Late Payment Procedures**
5. **Complaint Resolution Plan**
6. **Final Termination Notice**
7. **Disclosure Statement**
8. **Annual Notification of Rights**

1. PROCEDURE TO PURSUE COLLECTION OF UTILITY CHARGES

Step 1: Receive Master Utility Invoice

Staff for Sven, or its billing agent acting on its behalf, (collectively, "Submeterer" or "Staff") shall process the master invoice received from the utility (*e.g.*, Consolidated Edison Company of New York, Inc.) and note the date it was received.

Step 2: Mail Utility Bill to Residents

Within 10 days after receipt of the master utility invoice, Submeterer shall calculate and distribute a submetered utility statement to each resident. Payment is due within 30 days from receipt of the submetered bill.

Step 3: Identify Past Due Accounts

Twenty (20) days after the due date of the submetered utility bill, Submeterer will generate a report from its computer system that will list all past due utility accounts. If Staff deems necessary, Staff will review this list and contact each resident with a past due utility account. Staff will provide the following documents to each such resident: *Deferred Billing Agreement Option Form* and the *Deferred Payment Agreement – Required Information and Documents Form*.

Step 4: Negotiation of Deferred Payment Agreement

If a resident expresses interest in a Deferred Payment Agreement, Staff will enter into good faith negotiations with the person regarding the terms of a Deferred Payment Agreement. A meeting between Staff and the resident must be scheduled within five (5) days to review the resident's income, assets and monthly financial obligations for the purpose of determining an equitable and fair payment agreement considering the financial circumstances of the resident. A *Deferred Payment Agreement Appointment Letter* will be immediately hand-delivered and mailed to the resident. The contents of that letter will include:

- Appointment date and time.
- A listing of all information that must be provided during the meeting.
- A copy of the *Deferred Payment Agreement Worksheet* that will be used to determine the monthly amount that will be paid under the Deferred Payment Agreement. It is important to remember that the *Deferred Payment Agreement Worksheet* is NOT the Deferred Payment Agreement.

During the meeting, Staff and the resident will:

- Review the resident's income, assets and reasonable monthly expenses.

- Complete the *Deferred Payment Agreement Worksheet* for the purposes of determining an equitable and fair monthly payment amount based on the resident's financial circumstances. The minimum payment will not be less than $10.00 per month.
- As appropriate, negotiate and complete the Deferred Payment Agreement.

If an agreement is reached, the Deferred Payment Agreement will be signed by both parties during the meeting. Provided that the resident then adheres to the terms of the Deferred Payment Agreement, no further action is needed other than monitoring the resident's compliance with the terms of the Deferred Payment Agreement.

If the resident fails to attend the meeting, Staff will contact the resident by phone to reschedule the meeting. If the resident is unable to reschedule the meeting, Staff will attempt to negotiate the terms of a Deferred Payment Agreement during the call. If the terms of a Deferred Payment Agreement are agreed to by phone, Staff will send the resident the Deferred Payment Agreement for his/her signature.

Step 5: Default of a Deferred Payment Agreement Obligation

If a resident with a Deferred Payment Agreement misses a payment, certain actions must be taken before Submeterer can seek to terminate the resident's electricity. These actions include:

- Within ten (10) days after a Deferred Payment Agreement payment is due but not made, Staff will hand-deliver or mail a *Deferred Payment Agreement Reminder Notice* to the resident. The resident then has ten (10) days to make the payment or enter into a Revised Deferred Payment Agreement, if applicable.
- If the resident contacts Submeterer within the ten (10) day period regarding an inability to pay, Staff will meet with the resident to determine whether the resident can demonstrate a substantial and/or significant change in his/her financial circumstances beyond his/her control.
    1. If the resident is able to demonstrate a significant change in his/her financial status, Staff will negotiate a Revised Deferred Payment Agreement with the resident. As with the original Deferred Payment Agreement, we expect that the Revised Deferred Payment Agreement will be signed by both parties at the meeting.
    2. If the resident is unable to demonstrate a significant change in his/her financial status, Staff should explain that determination and demand payment of the missed payment.
- If, within twenty (20) days after the date of the *Deferred Payment Agreement Reminder Notice*, Submeterer does not receive payment or enter into a

Revised Deferred Payment Agreement, Staff shall send the resident a demand for the full amount of the outstanding charges and a *Final Termination Notice.*

Step 6: Final Termination Notice with Executed Deferred Payment Agreement

In the event Submeterer and the resident do not enter into a Deferred Payment Agreement, or if a default under Step 5 is not cured, the next step is to issue a *Final Termination Notice* along with an executed Deferred Payment Agreement or Revised Deferred Payment Agreement, as appropriate.

The *Final Termination Notice* will be mailed out by Staff: (i) ten (10) days after the date Submeterer contacted a resident with a past due utility account and received no response from the resident; or (ii) the day after negotiations cease between Staff and the resident over the terms of a Deferred Payment Agreement.

Staff will include with the *Final Termination Notice* two copies of a Deferred Payment Agreement or Revised Deferred Payment Agreement, as appropriate, that has been executed by Staff. The terms of payment in this document may be the same as those calculated from the *Deferred Payment Agreement Worksheet*, if available, or as otherwise determined by Staff. The resident shall be advised that it may sign the proffered Deferred Payment Agreement or Revised Deferred Payment Agreement in order to avoid termination of electricity service, and that the executed document must be returned to Submeterer prior to the date set forth in the *Final Termination Notice*.

Step 7: Review for Special Procedures

On the same date that a *Final Termination Notice* is sent to a resident, Staff will review the status of the resident to determine if he/she qualifies for special procedures under HEFPA. If the resident so qualifies, additional steps will be undertaken before Submeterer can complete the HEFPA process and seek to terminate the resident's electricity service.

Step 8: Termination of Electricity Service

If, after 15 days, the resident has failed to pay his/her electricity bill or failed to pay amounts due under a Deferred Payment Agreement and Submeterer have taken the required steps if special protections are applicable, Submeterer may terminate such resident's electricity service as required by New York State Public Service Commission regulations.

Staff should advise residents that bills and notices can be prepared in both English and another language if a resident is not proficient in English.

2. Deferred Payment Agreement Package

A. Deferred Billing Agreement Option Offer Letter
B. Deferred Payment Agreement Appointment Letter
C. Deferred Payment Agreement
D. Payment Past Due Reminder Notice

A. Deferred Billing Agreement Option Offer Letter

Date

Resident
Street Address
City, State, Zip Code

Re: Deferred Billing Agreement Option Offer

In accordance with the Home Energy Fair Practices Act, we are required to provide you an opportunity to visit the management office and meet with our designated staff member, or call the management office at 212-257-6500, for the purpose of discussing your right to a Deferred Payment Agreement for the outstanding electric charges on your account. Should you decide to accept this offer, you must return (1) signed copy of this letter to the management office on or before five (5) days from the date of this letter indicating your request for an appointment to negotiate a Deferred Payment Agreement with us.

Two copies of this offer are included.

- One for signature and return to office.
- One for your records

Once we receive your request for an appointment, you will receive an appointment letter confirmation from the management office within five (5) days.

☐ **YES,**
I would like to schedule an appointment to discuss a Deferred Payment Agreement.

Resident Signature: _____

Apt #: _____ Date: _____

OR

☐ **NO,**
I would not like to schedule an appointment to discuss a Deferred Payment Agreement.

Resident Signature: _____

Apt #: _____ Date: _____

Date

Resident
Street Address
City, State, Zip Code

Re: Deferred Payment Agreement Appointment

Dear Resident:

You recently requested an appointment to review your eligibility for a Deferred Payment Agreement for your unpaid electric charges totaling $_____.

We have scheduled your appointment for:

Date:_____ Time:_____

It is vital that you attend this appointment so that we can determine your eligibility for a Deferred Payment Agreement. Your failure to attend this appointment will leave us no choice but to issue a *Final Termination Notice*.

We have enclosed the following for your review:

- A copy of the *Deferred Payment Agreement Worksheet.*

In accordance with the Home Energy Fair Practices Act, we hereby provide you the following information with respect to your rights and responsibilities regarding the formation of a Deferred Payment Agreement.

- You must provide the designated staff member with supporting documentation for all the applicable income, asset and expense information noted on the enclosed list. **The information provided to us is for the sole purpose of determining your eligibility for a Deferred Payment Agreement and/or the development of the Deferred Payment Agreement will be maintained in your resident file with the strictest of confidence and will not be released or shared with any other person.**
- The designated staff member will negotiate with you in good faith to develop a Deferred Payment Agreement that is fair and equitable and considers your financial circumstances that are not within your control.
- Your payment agreement may not require a deposit.

CONFIDENTIAL

Deferred Payment Agreement Worksheet

Date:_____ **Apt #:**_____

Resident Name:_____

Monthly Income Calculation

Income Source:

Employment: Average monthly income from 5 consecutive paystubs	
Child Support Documentation	
Alimony Documentation	
Social Security or SSI Award Letter	
Pension Statements	
Public Assistance	
Unemployment	
All other sources of verifiable income	
Avg. Monthly Income:	

Asset Calculation:

Asset Source:

Avg Checking and Savings Accounts Balance: (4) Consecutive Statements	
Other verifiable assets	
Other verifiable assets	
Total Assets:	

Applicable Monthly Expense:

Rent:	
Grocery Expense:	
Basic Telephone Expense:	
Medical Expenses:	
Medicare / Medicaid Contributions	
Prescriptions	
Other verifiable medical expenses	
Childcare expenses	
Other verifiable monthly expenses (e.g., food, telephone)	
Total Expenses:	

Avg. Monthly Income:	
Avg. Expenses:	
Avg. Monthly Disposal Income:	

Down payment may be required

Monthly Payment	
Number of Payments	
Total Amount Due	

Resident Signature:

By my signature above I hereby certify that the documents provided to landlord in the calculations of this worksheet are correct and accurate.

C. DEFERRED PAYMENT AGREEMENT

Resident Name:_____

Apt No.:_____

The total amount owed to Sven for this account as of MM/DD/YYYY is **$XX.XX.**

Sven is required to offer a payment agreement that you are able to pay considering your financial circumstances. **This agreement should not be signed if you are unable to keep the terms.** Alternate terms may be available if you can demonstrate financial need. Alternate terms may include no down payment and payments as low as $10 per month above your current bills. **If you sign and return this form, along with the down payment by MM/DD/YYYY, you will be entering into a payment agreement and by doing so will avoid possible termination of service.**

Assistance to pay utility bills may be available to applicants or recipients of public assistance or supplemental security income from your local social services office. This agreement may be changed if your financial circumstances change significantly because of conditions beyond your control. If after entering into this agreement, you fail to comply with the terms, Sven may terminate service. If you do not sign this agreement or pay the total amount due of **$XX.XX** by **MM/DD/YYYY**, Sven may seek to terminate your service. **If you are unable to pay these terms, if further assistance is needed, or if you wish to discuss this agreement please notify the management company by mail at Sven, One Bryant Park, 49th Floor, New York, New York 10036, or by phone at 212-257-6500.**

Payment of Outstanding Balance:

Your current monthly budget amount is: $XX.XX

If you are not already enrolled in our Budget Billing Program, which allows you to pay for your service in equal monthly installments, and wish to enroll, check the box below and we will start you on our program immediately.

[ ] Yes! I would like Budget Billing

This agreement has been accepted by Sven. If you and Sven cannot negotiate a payment agreement, or if you need any further assistance, you may contact the Public Service Commission at 1-800-342-3355.

Return one copy of this agreement signed, with the down payment, by MM/DD/YYYY. If it is not signed and returned, your service may be terminated.

Acceptance of Agreement

Company Acceptance: By this statement, Sven verifies that the specific terms offered in this document constitute an acceptable agreement for payment of monies owing.

Signature: _____
Print Name: _____
Date: _____

Resident Acceptance: To indicate acceptance; sign, date and print name.

I have read, understand and accept the terms of this agreement.

Signature: _____
Print Name: _____
Date: _____

D. Past Due Reminder Notice

Date

Resident
Street Address
City, State, Zip Code

Re: Payment Past Due Reminder Notice

Dear Resident:

On MM/DD/YYYY you signed a Deferred Payment Agreement which obligated you to make a down payment of $XX.XX by MM/DD/YYYY and regular payments of $XX.XX in addition to your current charges, in order to avoid a *Final Termination Notice.*

You have failed to comply with the terms of the Deferred Payment Agreement. We are notifying you that you must meet the terms of the Deferred Payment Agreement by making the necessary payment within 20 calendar days of the date payment was due MM/DD/YYYY, or a *Final Termination Notice* may be issued.

If you are unable to make payment under the terms of the Deferred Payment Agreement because your financial circumstances have changed significantly due to events beyond your control, you should immediately contact us at 212-257-6500 because a new Deferred Payment Agreement may be available. If further help is needed, you may call the New York State Public Service Commission at 1-800-342-3355, 7:30 A.M. to 7:30 P.M., Monday through Friday.

Assistance to pay utility bills may be available to applicants or recipients of public assistance or supplemental security income from your local social services office by calling (718) 557-1399.

The total amount owed to Sven for this account as of **MM/DD/YYYY is: $XX.XX.**

Sincerely

(Your Name)
Title

3. Budget Billing Agreement

Resident Name: _____
Address: _____
Account #: _____

Under this Plan, Sven agrees to provide services in return for your agreement to make payments according to the terms of this Budget Billing Plan ("Plan"). This Plan requires that you pay $ XX.XX per month for the 12-month period starting with the billing cycle commencing on MM/DD/YYYY and ending on MM/DD/YYYY.

The monthly payment is based on an estimate of your annual billing, which has been calculated by multiplying the average monthly consumption by the current estimate of commodity prices over the above-referenced 12-month period. Your average monthly consumption is _____ kwh, based on your last 12 months actual consumption. If 12 months of customer billing data are not available then the submeterer shall estimate consumption over the next 12-month period using billing data for the premises.

The Plan shall be subject to regular review (every 3-6 months) for conformity with actual billings. Sven reserves the right to recalculate such monthly payment to reflect either an increase or decrease in the average monthly consumption and/or commodity prices.

Each month, you will be billed an equal monthly payment and you are required to pay that amount. Your bill will inform you of your consumption for the period, as well as the charge you would have incurred if you were not on the Plan. If you fail to pay the bill when due, you may be subject to a *Final Termination Notice* pursuant to the Home Energy Fair Practices Act.

In the last month of the Plan, Sven shall true up your account based on a comparison of the billing under this billing plan and the amount you would have been charged for the 12-month period if you were not on the plan. If you owe Sven a sum of money due to the true up, you will be billed for the amount due. If you have been over billed you will be issued a credit to be applied to the next plan year.

[ ] Yes! I would like Budget Billing.

Acceptance of Agreement

Customer Signature: _____ **Date:** _____

Building Signature: _____ **Date:** _____

Return one signed copy to Sven's management company at Sven, One Bryant Park, 49th Floor, New York, New York 10036 by MM/DD/YYYY.

HEFPA Quarterly Billing Agreement

Customer Name: _____

Address: _____

Account #: _____

Under this plan, Sven agrees to provide services in return for your agreement to make payments according to the terms of this Quarterly Billing Plan ("Plan").

You confirm that you are greater than 62 years old, and that your bills in the preceding 12 months, starting on MM/DD/YY and ending on MM/DD/YY, did not exceed $150.

Under this Plan, you will receive the first bill on MM/DD/YY covering actual charges incurred during the 3-month period MM/DD/YY to MM/DD/YY, and you will receive quarterly bills thereafter on or before MM/DD/YY, MM/DD/YY, and MM/DD/YY for actual charges incurred during each such preceding 3-month period.

On the dates specified above, you will be billed for the actual charges incurred and you will be required to pay the amount stated on the bill. If you fail to pay the bill when it is due, you may be subject to a *Final Termination Notice* pursuant to the Home Energy Fair Practices Act.

[ ] Yes! I would like Quarterly Billing.

Acceptance of Agreement

Customer Signature: _____
Date: _____
Building Signature: _____
Date: _____

Return one signed copy to Sven's management office at Sven, One Bryant Park, 49th Floor, New York, New York 10036 by MM/DD/YYYY.

4. Late Payment Procedures

Sven reserves the right to charge a late payment fee. The late payment fee will not exceed one and one-half percent per month on the unpaid balance of any bill including any interest thereon. The bill to each resident will provide the following:

1. the amount billed
2. late payment charge, if applicable, for past unpaid bills
3. due date for payment after which a late payment charge will be applicable

No late payment fee will be imposed for a minimum of 30 days beyond a bill's payment due date.

Late payment fees shall not apply to any charges that are the subject of a pending complaint before Sven or the Public Service Commission.

5. Complaint Resolution Plan

To resolve a complaint involving a resident's electric charges, the resident shall first present to the management company, an oral or written complaint, which shall include the action or relief requested. To make a complaint orally, please contact the managing agent at 212-257-6500. If you would like to file a complaint in writing, please send the complaint to us at Sven, One Bryant Park, 49th Floor, New York, New York 10036. Your managing agent or its representative shall investigate and respond to the complaint in writing within thirty days of the receipt of the complaint. The managing agent may utilize a third party vendor, where appropriate, to assist in the investigation of the complaint. The complainant shall be advised, in writing, of the disposition of the complaint and the reasons therefore.

If the complainant is dissatisfied with the managing agent's or its representative's response, he or she may request a review of said determination by filing a written protest within fourteen days from the date of the response from the managing agent or its representative. No particular form of protest is required. If necessary, an inspection of the resident's meter may be ordered and/or a conference may be scheduled with management and the complainant. Management shall, within a reasonable period of time, prepare a written report containing a disposition of the matter. A copy of this report shall be sent to the complainant. If the complaint pertains to a billing dispute, the complainant is not required to pay the amount in dispute during the pendency of the complaint. However, the complainant is required to specify the amount in dispute and the complainant remains responsible for paying all undisputed bills in a timely manner.

At all times, the complainant may contact the New York State Department of Public Service and file an oral or written complaint at 1-800-342-3355 or, 90 Church Street, New York, NY 10007. Residents of Sven are afforded all of the rights and remedies available under the Home Energy Fair Practice Act ("HEFPA").

SPECIAL PROTECTIONS
REGISTRATION FORM

Please complete this form if any of the following applies. Return this form to:

Sven
One Bryant Park
49th Floor
New York, New York 10036

ACCOUNT INFORMATION
(Be sure to complete before mailing or submitting)

_____
Name

_____
Address Apartment

_____
Town/City Zip

_____
Telephone # Daytime Evening

_____
Account Number (as shown on bill)

I would like to be considered for Special Protections.

In my household (Check):

Customer is 62 years of age or over, and any and all persons residing therewith are either 62 years of age or under 18 years of age

Customer is blind (Legally or Medically)

Customer has a permanent disability

Customer/resident of my house has a Medical Hardship that requires special protection
_____

_____

Customer/resident of my house has a Life Support Hardship (type):

_____

_____

I receive government assistance.

I receive Public Assistance (PA). My case number is:

_____

I receive Supplemental Security Income (SSI). Note: SSI benefits are not the same as Social Security Retirement Benefits. My Social Security Number is **(providing a Social Security Number is optional)**:

_____

Please send me more information about Balanced Billing: ____

To be completed by Third Party

Please let me know if this customer's bill is overdue or if the service might be turned off. As "Caregiver" I understand that I am not responsible for payment of this bill.

_____

Caregiver/Agency

_____

Address Apartment

_____

Town/City Zip

_____

Telephone Number Daytime Evening

_____

Designee Signature

DOCUMENTATION OF INABILITY TO PAY UTILITY BILLS

We have received an initial certificate of medical emergency, under which we must continue to provide you with utility service for 30 days, starting _____ and continuing until the beginning of business on _____.

At the expiration of that period, we can, under the provisions of law (sec. 32 [3][a], Public Service Law) and Public Service Commission's regulations (16 NYCRR 11.5[a]), terminate your utility service UNLESS the medical condition persists AND you do not have enough ready cash or income to meet your past due and current utility bills and still meet your other necessary expenses such as food, housing and medical treatment.

Please use this form to provide the information we need to make a determination, as required by law, whether you are unable to pay past due and current bills. We will continue to provide you with utility service while we consider the information you provide.

If we determine that you have NOT demonstrated that you are unable to pay past due and current bills, we will notify you in writing and inform you how you can seek review of our determination by the Public Service Commission. If we determine that you have NOT shown that you have a financial hardship, we will offer you a deferred payment agreement, so that you can pay past due bills and installments while you meet all current bills. And if you DO show a financial hardship, we will try to work out an arrangement so that you will not accumulate substantial past due bills.

If you have any questions, you can call the Managing Agent at 212-257-6500. If you are not satisfied with our response, you also can call the Public Service Commission, Monday through Friday, 7:30 A.M. to 7:30 P.M., at 1-800-342-3355.

A. INFORMATION ON LIQUID ASSETS AND CURRENT INCOME

1. Liquid assets, such as cash, bank savings or checking accounts, etc. should be listed:

Cash on hand $_____
Bank checking account No. _____ Amt. presently in account $____
Bank savings account No._____Amt. presently in account $ ____
Name and address of Banks

2. Income information:

Source of Income:	Work	Yes _____	No _____	Amt. _____ (week) (month)
	SSI	Yes _____	No _____	Amt. _____ per mo.
	Public Assistance	Yes _____	No _____	Amt. _____ per 2 weeks

If you are a recipient of Public Assistance, have you requested your local Social Services office to guarantee future payments?

Yes _____No _____

B. EXPENSES	MONTHLY PAYMENT	AMT. OWING
Housing: Rent_____ Own_____		
Food:Food Stamps: Yes_____ No_____		
Medical expenses: (incl. prescriptions)		
Utility: (gas and electric)		
Heating: (if not gas or electric)		
Telephone:		
Installment payments: (credit card)		
Transportation:		
Car expense: (loan, gas, etc.)		
Education:		
Other:		

I, the undersigned, do hereby certify that the above information provided is the truth, to the best of my knowledge.

_____
(Signature)

_____
(Date)

6. Final Termination Notice

Date

Resident
Street Address
City, State, Zip Code

Re: Final Termination Notice

Dear Resident:

By letter dated MM/DD/YY, Sven notified you that your failure to remit the past due amount of $XX.XX by MM/DD/YY would result in Sven terminating your service. Our records indicate that we have not received your payment. Please remit $XX.XX or your service will be terminated after MM/DD/YY.

If you disagree with the amount owed, you may call or write us at Sven, One Bryant Park, 49th Floor, New York, New York 10036, 212-257-6500 or you may contact the Public Service Commission at 1-800-342-3377.

THIS IS A FINAL TERMINATION NOTICE. PLEASE BRING THIS NOTICE TO THE ATTENTION OF SVEN'S MANAGING AGENT AT THE ADDRESS INDICATED ABOVE WHEN PAYING THIS BILL.

PLEASE REMIT $XX.XX BY MM/DD/YY TO AVOID TERMINATION OF YOUR SERVICE.

If you are unable to make payment because your financial circumstances have changed significantly due to events beyond your control, please contact us at 212-257-6500. If you or anyone in your household meets any of the following conditions please contact us: medical emergency; elderly, blind or disabled.

Sincerely,

Your Name
Title

NOTIFICATION TO SOCIAL SERVICES OF CUSTOMERS INABILITY TO PAY

Sven
One Bryant Park, 49th Floor
New York, New York 10036

Customer Name: _____

Address: _____

City, State, Zip: _____

Account#: _____

Customer has been sent a final notice of termination. If the total payment due of $XX.XX is not paid by MM/DD/YYYY, termination of service may occur any time after MM/DD/YYYY.

7. Disclosure Statement

Sven certifies that the method of rate calculation, rate cap, complaint procedures, tenant protections and the enforcement mechanism will be incorporated in plain language in all current and future leases for Sven.

Rates and charges paid by the residents will be based on the rate that Consolidated Edison Company of New York, Inc. charges to Sven. In no event will the total charges (including administrative fees) exceed the Consolidated Edison residential rate, SC-1.

Each submeter will be read monthly and each resident will be billed monthly for electric service. Billing information will be in plain language and will include the billing period, amount of consumption, taxes, service charges, charge for the period and the total amount due.

8. ANNUAL NOTIFICATION OF RIGHTS
Home Energy Fair Practices Act (HEFPA)

The electricity at **Sven** is submetered. As a residential customer of electricity you have certain rights under the Home Energy Fair Practices Act (HEFPA).

A full copy of HEFPA rules is available at http://www.dps.ny.gov/HEFPA_Brochure_12-08.pdf

Complaint process

If you have questions about your electric bill or believe your bill is inaccurate, you should contact Sven's Property Manager at Sven, One Bryant Park, 49th Floor, New York, New York 10036 or call the Managing Agent at 212-257-6500. Your Property Manager will then investigate and respond to your complaint in writing within thirty (30) days of receipt of the complaint. If you are dissatisfied with the response, you may request a review of the outcome by sending management a written or verbal protest within fourteen (14) days from the date of the response from the property manager. If only a portion of your electric charges are in dispute, please be advised that you are responsible for paying all undisputed electric charges in a timely manner. If the complaint pertains to a billing dispute, you are not required to pay the amount in dispute while the complaint is pending. However, you are required to specify the amount in dispute. If only a portion of your electric charges are in dispute, please be advised that you are responsible for paying all undisputed electric charges in a timely manner.

You may contact the Department of Public Service at any time regarding a complaint about submetered service.

PSC Helpline - toll free number: **1-800-342-3377**

Online: www.dps.ny.gov

Mailing address:

NYS Public Service Commission
Office of Consumer Services
90 Church Street
New York, NY 10007

NYS Public Service Commission
Office of Consumer Services
3 Empire State Plaza, 4th Floor
Albany, NY 12223

Termination or Disconnection of Service:

Owner shall afford you all notices and protections available to you pursuant to HEFPA before any action(s) is commenced based on non-payment of your electric bill, including termination of service.

A Submeterer may disconnect service under the following conditions if the customer:

- fails to pay charges for services rendered; or

- fails to pay amounts due under a deferred payment agreement;
- fails to pay a lawfully required deposit; and
- is sent a final disconnection notice no less than 15 days before the disconnection date shown on the notice.

A final disconnection notice shall clearly state or include:

- the earliest date on which disconnection may occur;
- the reasons for disconnection, including the total amount required to be paid, and the manner in which disconnection may be avoided;
- the address and phone number of the office of the submeterer that the customer may contact in reference to his/her account;
- the availability of procedures for handling complaints;
- a summary of protections available under HEFPA; and
- in a size type capable of attracting immediate attention a statement that reads, "THIS IS A FINAL DISCONNECTION NOTICE. PLEASE REFER TO THIS NOTICE WHEN PAYING THIS BILL."

Reconnecting service

If your service has been shut off for non-payment, the submeterer must turn service back on within 24 hours, where possible, in the following situations:

- you have paid the amount due or signed a payment agreement and made the down payment, if required,
- the local Department of Social Services agrees to make a direct payment on your behalf or provides a written guarantee of payment,
- the service provider is notified that serious harm to health or safety is likely to result if service is not reconnected, or
- the PSC directs the service provider to restore service.

Special Procedures:

Notify Sven's Property Manager at One Bryant Park, 49th Floor, New York, New York 10036 or call the Property Manager at 212-257-6500 if any of these conditions exist.

- Medical Emergencies

No submeterer shall disconnect or refuse to restore service when a medical emergency exists. You must provide a medical certificate from a doctor or local board of health.

- Life Support Systems

If a customer or a resident of the customer's premises suffers from a medical condition requiring utility service to operate a life-sustaining device, certification by a medical doctor or qualified official of a local board of health shall remain effective until terminated by the commission or its designee,

provided the residential customer demonstrates an inability to pay charges for service. You must have life support equipment and provide a medical certificate from a doctor or local board of health.

- Customers Who Are Elderly, Blind or Disabled

No submeterer shall disconnect or refuse to restore service where a residential customer is known to or identified to the submeterer to be elderly, blind, disabled or 62 years of age or older, and all remaining residents of the household are 62 years of age or older, 18 years of age or under, or blind or disabled, without complying with the procedures specified in HEFPA.

- Cold Weather Periods

Every submeterer shall develop and maintain methods to identify all residential households in its buildings whose utility service is heat related. During the period beginning November 1st of each year and ending April 15th of the following year, every submeterer shall observe, at a minimum, the procedures in HEFPA Section 11.5 (c) (2), which prevent submeterers from terminating, disconnecting, suspending or refusing to restore service when a medical emergency, as certified by a medical doctor or local board of health, exists; provided, however, that a demonstration of the customer's inability to pay charges for service shall be required before a certificate of medical emergency can be renewed. A medical emergency exists when a resident of a customer's residence suffers from a serious illness or a medical condition that severely affects his or her well-being. An inability to pay charges for service is demonstrated when a customer is unable to pay past due and current utility bills because of insufficient liquid assets and current income, considering other necessary and reasonable expenses of the customer such as food, shelter and medical expenses as documented by provision of the information required in the form titled "Documentation of Inability to Pay Utility Bills," a copy of which will be provided upon request.

- Special Notification of Social Services

After the submeterer has sent a final notice of termination to a residential customer who it knows is receiving public assistance, supplemental security income benefits or additional State payments pursuant to the Social Services Law, and for whom the submeterer has not received a guarantee of future payment from the local social services commissioner, it shall, not more than five days nor less than three days before the intended termination or disconnection, notify an appropriate official of the local social services district that payment for submeterer services has not been made.

Voluntary Third-Party Notice: Every submeterer shall permit a residential customer to designate a third party to receive all notifications relating to disconnection of service or other credit actions sent to such residential customer, provided that the designated third party agrees in writing to receive such notices. The submeterer shall inform the third party that the authorization to receive such notices does not constitute acceptance of any liability on the third party for service provided to the customer. The submeterer shall promptly notify the residential customer

of the refusal or cancellation of such authorization by the third party.

If you are interested in Voluntary Third-Party Notice notify Management at Sven, One Bryant Park, 49th Floor, New York, New York 10036 or call 212-257-6500 with the party's contact information and written agreement of the third party to receive copies of all notifications relating to disconnection of service or other credit actions sent to you.

Deferred Payment Agreements: A deferred payment agreement is a written agreement for the payment of outstanding charges over a specific period of time, signed by both the submeterer and customer. A submeterer must make reasonable efforts to contact eligible customers or applicants by phone, mail or in person for the purpose of offering a deferred payment agreement and negotiating terms tailored to the customer's financial circumstances when payment of a bill or arrears is owed on an account. You may not be eligible for a deferred payment agreement if you have broken an existing payment agreement or if the Public Service Commission determines that you have the resources available to pay the bill.

You may contact **Management at Sven, One Bryant Park, 49th Floor, New York, New York 10036 or call 212-257-6500** to discuss details if interested.

Budget or Levelized Payment Plans: A submeterer shall offer residential customers a voluntary budget billing or levelized payment plan for the payment of charges. The plan shall be designed to reduce fluctuations in customers' bills due to seasonal patterns of consumption. The plan shall be based on a customer's recent 12-month billing data and if not available then 12 months of billing data for the premises shall be used. If 12 months of billing data are not available for the premises then the submeterer shall estimate consumption over the next 12-month period. Bills should clearly identify consumption and state the amounts that would be due without levelized or budget billing. In addition each plan shall provide that bills will be subject to regular review for conformity with actual billings.

You may contact **Management at Sven, One Bryant Park, 49th Floor, New York, New York 10036 or call 212-257-6500** to discuss details if interested.

Deposits: Deposits for submetered accounts may be required if:

- Tenant is a seasonal or a short-term customer.
- Customer accumulates two consecutive months of arrears without making reasonable payment. A submeterer shall provide a customer written notice, at least 20 days before it may assess a deposit.
- Customer had electric service terminated, disconnected or suspended for nonpayment during the preceding six months.
- Submeterer permits the customer to pay the deposit in installments over a period not to exceed 12 months.

Deposits for submetered accounts shall not be required or held if:

- Submeterer knows customer to be a recipient of public assistance, supplemental security income, or additional State payments.
- Submeterer knows customer is 62 years of age or older unless such customer has had service terminated, disconnected or suspended by the submeterer for nonpayment of bills within the preceding six months.

Requirement:

- Deposits should be a reasonable amount not greater than twice the average monthly bill except in cases of centrally-provided electric heat, where it may not exceed twice the estimated average monthly bill for the heating season.
- Interest must be paid on deposits at a rate prescribed annually by the Commission, but in no event will the interest rate exceed the rate provided by institutional banks at the time the deposit is collected. Interest will be applied to the bill when the deposit was held for a period of one year. If the customer is not delinquent in payment of bills during the one year period, the deposit and the interest is refunded promptly.

Late Payment Charges: A submeterer may impose a one-time or continuing late payment charge, not in excess of 1 1/2 percent per month, on the unpaid balance of any bill for service provided the bill clearly shows the amount billed, whether any charge will be imposed for late payment, when the late payment charge becomes applicable, and the time period during which tie bill may be paid without the imposition of the late payment charge. Residential customers on fixed incomes shall be offered the opportunity to pay their bills on a reasonable schedule that is adjusted for such customer's periodic receipt of income without such customers incurring late payment charges provided that the offer may prescribe a late payment charge where payment is not made within 20 days of the scheduled due date.

Contents of bills: Each submetering bill to a residential customer shall provide, in clear and understandable form and language, the charges for service. The residential bills shall include:

(a) The name, address and account number of the customer, dates of the present and previous meter readings, whether estimated or actual amount consumed between present and previous readings, amount owed for the latest period, the date by which payments for the latest period may be paid without penalty, the penalty charge for late paid bills, credits from past bills and any amounts owed and unpaid from previous bills;
(b) If the bill is issued under a budget or levelized billing plan, an identification of the type of plan, the total of the year's budget or levelized amounts billed to the end of the period covered by the current bill, the dollar amount billed for tariff items during such period, and the debit or credit balances; and
(c) An explanation of how the bill may be paid, including one or more offices at which it may be paid, and a statement that bills may be paid at other authorized offices or payment agencies.

EXHIBIT C
SUBMETERING IDENTIFICATION FORM

New York State Public Service Commission
Office of Consumer Policy

Submetering Identification Form

Name of Entity: QPP LLC			Corporate Address: One Bryant Park, 49th Floor		
City: New York	State: NY	Zip: 10036	Web Site:		
Phone: 212-257-6600			Utility Account Number: ***T.B.D***		
Chief Executive:			Account Holder Name: ***T.B.D***		
Phone: 212-257-6600			E-mail:		
DPS Case Number: ***T.B.D***					

Primary Regulatory Complaint Contact

Secondary Regulatory Complaint Contact

Name: Dan Mogolesko			Name: Jaz Radoncic		
Phone: 212-257-6618			Phone: 929-373-5552		
Fax: 212-257-6272			Fax: 212-257-6272		
E-mail: dmogolesko@durst.org			E-mail: jradoncic@durst.org		
Address: One Bryant Park, 49th Fl.			Address: One Bryant Park, 49th Fl.		
City: New York	State: NY	Zip: 10036	City: New York	State: NY	Zip: 10036

We do not send complaints to personal e-mail addresses. A shared e-mail address must be provided or the transmission will default to the fax number listed above. Please enter the e-mail address, if any, to which we should send complaints: _____

Name of Property: Sven			Service Address: 29-59 Northern Boulevard		
City: Queens	State: NY	Zip: 11101			
Electric Heat? NO			Electric Hot Water? NO		
# Units Occupied by: Sr. Citizens TBD Disabled TBD			Total # of Units 958		
Rent Stabilized NO	# Rent Controlled NO		# Rent-Regulated 288	# Market Rate 670	
Rental: YES	Condo: NO		Co-Op: NO		
# Low Income 0	# Section 8 0		# Landlord Assist Program 0	# Other 0	
Submeter: Source One			Address: 53 State Street, 14th Floor		
City: Boston	State: MA	Zip: 02109			
Contact Name: James Panico		Contact Phone: 617-399-6137		Contact Fax: 617-399-6186	

Please return this form within 5 days to:

Hon. Kathleen H. Burgess, Secretary to the Commission
NYS Public Service Commission
3 Empire State Plaza
Albany, NY 12223-1350

E-mail: secretary@dps.ny.gov

(Rev. 9/20/13)

Changes in contact information should be submitted within 5 days of any personnel change.

EXHIBIT D
SUBMETERING LEASE RIDER

ADDITIONAL CLAUSES ATTACHED AND FORMING A PART OF THE LEASE DATED [LEASE DATE] BETWEEN QPP LLC (OWNER) AND [TENANT] (TENANT) REGARDING APARTMENT [APT #] IN THE PREMISES LOCATED AT 29-59 NORTHERN BOULEVARD, QUEENS, NEW YORK, 11101 (BUILDING). IN THE EVENT OF ANY INCONSISTENCY BETWEEN THE PROVISIONS OF THIS RIDER AND THE PROVISIONS OF THE LEASE TO WHICH THIS RIDER IS ANNEXED, THE PROVISIONS OF THIS RIDER SHALL GOVERN AND BE BINDING. THE PROVISIONS OF THIS RIDER SHALL BE CONSTRUED TO BE IN ADDITION TO AND NOT IN LIMITATION OF THE RIGHTS OF THE OWNER AND THE OBLIGATIONS OF THE TENANT.

Electric Submetering Rider

1. Tenant acknowledges that the New York State Public Service Commission has approved Owner's petition to submeter electricity to residential tenants located at the Building.

2. Tenant acknowledges that rates and charges paid by the tenant will be based on the rates charged by Con Edison, the electric company, and in no event will the total charges (including any administrative fees) exceed the rates for directly metered residential electric service. Refunds will be credited to any submetered tenant affected by the Owner's actions that led to such refunds, provided that Owner has contact information for such resident.

3. Tenant acknowledges that each submeter will be read and the tenant will be billed monthly for electric service. This billing will include charges for any electricity that is utilized by the supplemental electric heaters incorporated into Purchaser's unit. Each tenant's submetering statement will show the service dates tenant is being billed for, the present and previous meter readings, the kwh's consumed, the cost per kwh, and the cost for the energy consumed. Tenant's failure to pay the electrical charges entitles Owner to ultimately terminate electrical service. **HOWEVER OWNER SHALL AFFORD YOU ALL NOTICES AND PROTECTIONS AVAILABLE TO YOU PURSUANT TO THE HOME ENERGY FAIR PRACTICES ACT ("HEFPA") BEFORE ANY ACTION(S) BASED ON SUCH NON-PAYMENT, INCLUDING TERMINATION OF SERVICE IS COMMENCED.**

4. Among other protections, HEFPA provides that:

   (i) Tenant may request balanced billing. Balanced billing divides tenant's electric costs into twelve (12) equal monthly payments. Periodically (every 3-6 months), the tenant's account will be reviewed and balance billing adjusted as necessary. At the end of one year, tenant shall be responsible to pay for any electricity costs in excess of the balanced billing amount paid. If tenant has paid more than its actual electricity costs, tenant will be provided with a credit on its next electric bill equal to the overpayment. If the overpayment exceeds the next submetered electric bill, any excess credits will be carried forward to subsequent months and offset against electric charges until the full credit is exhausted.

   (ii) If tenant has difficulty paying the electric bill, tenant may contact the management office by telephone or by letter to arrange for a deferred payment agreement, whereby tenant will be

able to pay the balance owed over a period of time. If tenant can show financial need, Owner can work with tenant to determine the length of agreement and the amount of each monthly payment. Tenant may not have to make a down payment, and installment payments may be as little as $10.00 per month. Owner will make reasonable efforts to help the tenant find a way to pay their bill.

(iii) If a health or safety hardship is demonstrated, management can refer tenant to a local social service agency. Tenant should notify management if the following conditions exist:

(a) Medical Emergencies: Tenant must provide a medical certificate from their doctor or local board of health; or
(b) Life Support Equipment: Tenant must notify management if they have life support equipment and a medical certificate.
(c) Any medical certificate must be signed by a physician and include the physician's license number.

(iv) Anyone subject to special protections is required to notify Owner. The applicable forms are available in the leasing office or you may call 212-257-6600.

(v) Special protections may be available if tenant and/or other persons living with tenant are age eighteen (18) or younger or sixty-two (62) and older, or blind, or disabled.

(vi) Tenant may designate a third party as an additional contact to receive notices of past due balances. Any third party designated by the tenant will not become responsible for payment of electric charges; all such charges will remain the responsibility of the tenant.

(vii) If tenant has any complaints regarding electrical service that are not satisfied after speaking with the management company, tenant may present to Owner a written or verbal complaint that includes the action or relief requested. It can be in letter form and sent to Sven, One Bryant Park, 49th Floor, New York, New York 10036. The Owner shall investigate and respond to the complainant within thirty (30) days of receipt of complaint. If the complaint is regarding a submeter malfunction, management will arrange for the testing of the submeter within thirty (30) days. A resident may request and receive one submeter test at no cost during a twelve month period when the request is made pursuant to a complaint. A resident may request more than one meter test during a twelve month period and may request that the test be witnessed by Department of Public Service staff; however, if the submeter is not out of the limits as prescribed by 16 NYCRR Part 92, the person requesting more than one annual test will bear the cost of such additional meter tests. To investigate the complaint, the managing agent may utilize an outside vendor to assist in the investigation of the complaint. Tenant shall then be advised of the disposition of the complaint and the reason therefore. If tenant is dissatisfied with Owner's response; tenant may request a review of this determination by filing a written or verbal protest with management within fourteen (14) days from the date of the response by Owner. No particular form is required.

At any time, the tenant can also contact the Public Service Commission at New York State Department of Public Service, 90 Church Street, New York, NY 10007 or call their toll free

HELPLINE at 1-800-342-3377 and file a complaint seeking to have the issue resolved by the Public Service Commission, or if the tenant is dissatisfied with the decision of the management company regarding a complaint about electrical charges, or to learn more about the protections provided by HEFPA. The website for the Public Service Commission is www.dps.ny.gov.

OWNER:

QPP LLC

By: _____

TENANT:

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Date

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Date

EXHIBIT E
DURST SUSTAINABILITY GUIDELINES

SUSTAINABILITY GUIDELINES

ENERGY WATER IEQ

Last update: March 16, 2020

The Durst Organization

TABLE OF CONTENTS

INTRODUCTION

This design guide is intended to provide a framework for the design team to build upon, particularly during the schematic and design development phases of work. While intuition and experience has influenced the information included in this document, it is understood that every project differs from the next in its nuances, and the design team should always provide their expertise and apply this information in the context of each specific project. The three areas of focus are Energy Benchmarking/Carbon Reduction, Water Efficiency, and Indoor Environmental Quality (IEQ).

This design guide has been developed to provide suggestions and shall not replace or supersede professional judgement. Nothing contained herein modifies any contract terms between The Durst Organization (TDO) and its consultants.

INTRODUCTION

ENERGY BENCHMARKING/CARBON REDUCTION

Establish Energy Performance Target for the project. The target will be a percentage improvement of Whole Building Source CO2 emissions of the As-Designed Building over a building with identical usage and floor area designed in accordance with an invariant baseline: ASHRAE 90.1 – 2004. Site and source improvements over ASHRAE 90.1-2004 and current energy code compliance requirements should be provided to the project team.

Calculate source CO2 emissions using Whole Building EUI as determined by energy modeling and calculated using Egrid Emissions Factors published by the US EPA. Factors to be used will be "marginal" using the Egrid "Non-Base Load" factors for utility peak hours (8am -10pm M-F) and Egrid "Base Load" factors for all other times. Whole Building loads will be normalized based on "best practice" estimates of non-regulated parameters using the following factors:

- SF/pp
- Hours of operation
- IT equipment density
- Other factors related to tenancy as experience may suggest

For commercial buildings: An Absolute Energy Utilization Intensity (EUI, in kBTU/SF-yr) target was considered but is not used because it does not account for high intensity tenants.

For multifamily buildings: Both EUI (to assess overall design efficiency) and source CO2 Emissions reduction (to capture environmental impact) should be tracked. Breakouts of individual uses that contribute to building EUI are vital to understanding building performance.

ENERGY MODELING

Predictive energy modeling relies on a number of assumptions to deliver estimated energy use. TDO performs energy modeling for the following purposes:

- Budget breakouts for operation of the building
- Alternative design verification
- LEED Certification
- Code compliance

Checking assumptions early in the process will help to deliver more consistent modeling results across projects. The following assumptions should be verified with energy modelers:

- Metering: Verify that the model has been designed with the project metering scheme in mind to deliver on budget estimates that TDO desires and to facilitate post-occupancy evaluation.
- Air infiltration rates: For recent projects, we have been assuming that makeup and exhaust air are balanced and additional air infiltration is minimal.
- Domestic hot water use: This can vary greatly by fixture type specified. Instruct modeler to assume all low-flow fixtures per LEED standards. Update assumptions to fixtures specified once fixture schedule is available.

- Unregulated (plug) loads: Should be based on ENERGY STAR MFHR modeling guidelines.
- Fan and pump energy: Will depend on system design and should be discussed prior to initial model run.
- Lighting Power Density
- Cogeneration operating schedule if the project is equipped with a cogeneration plant.

WATER EFFICIENCY

- Set water criteria/goals based on existing codes/regulations/standards.
- Conduct early stage (SD level) life cycle water conservation and reuse feasibility assessments for all new developments to ensure the TDO business case is maintained from a TBL standpoint. The SF/Flow criteria metric should reflect current water/wastewater/stormwater costs, technology advancements and incentives.
- Ensure that all fixture SF/Flow rates meet current WaterSense criteria and any Green Building Certification requirements, if project is pursuing certification.

INDOOR ENVIRONMENTAL QUALITY (IEQ)

Consider and design for occupant and tenant sense of vision, hearing, smell, thermoception, and engagement.

Meet requirements of code, but avoid unilateral maximization of prescriptive non-mandatory measures with disputable value and detrimental influence on other facets of sustainability (e.g. pre-occupancy air purge and over-ventilation). Understand which IEQ components are dynamically-versus statically-controlled and develop strategies appropriate to each

For example:

- Static factors are essentially the DNA of a building and for the most part need to be optimized during the building's design (e.g. daylight, views, sound attenuation, ventilation rates, etc).
- Dynamic factors vary with the occupants and present an opportunity to offer real-time direct control and engagement with the user and foster a sense of controlling one's own destiny.
- Ensure a high quality indoor environment through careful product selection and installation. Ensure that all products are vetted against applicable criteria to ensure that unwanted pollutants, irritants, and contaminants are not introduced.
- Anticipate that Indoor Air Quality testing will occur after construction but prior to occupancy to ensure that IAQ levels meet criteria.

ENERGY

HVAC SYSTEM

CHILLED WATER PLANT

High-efficiency, flooded-shell, oil-free magnetic bearing, centrifugal electric drive chillers:

- Compressor efficiency to meet a maximum kw/ton of .57kw/ton at full load, with a maximum NPLV of .3.
- Chillers should be selected with low ΔP (<14') and large ΔT (>15°F) through evaporator and condenser shells to limit bhp/gpm required of the pumping system.
- Entering and leaving evaporator conditions will be dictated by end use equipment, which should be selected for as high a leaving water temp from the chiller as possible, while maintaining high ΔT in the system.
- Focus should be placed on high part-load efficiencies over full-load efficiencies, unless the equipment is expected to consume more energy on an annual basis at full load, than part load.

Vertical inline pumps with high efficiency motors and integrated variable frequency drives:

- Unnecessary trim should be avoided on pumps to reduce ΔP of the system, limiting the bhp/gpm required of the pumping system.
- Motorized shutoff valves on the discharge piping can function in lieu of a check valve when operated with pump start/stop.
- Balancing valves at the pump discharge should never be required on variable speed pumping systems. End-of-line balancing devices should be responsible for hydronic balancing.

CONDENSING HOT WATER BOILER PLANT

HIGH EFFICIENCY NATURAL GAS CONDENSING HOT WATER BOILERS

- An emphasis must be placed on low boiler entering water temperatures to take full advantage of the higher efficiency rates.
- Intelligent sequence of operations should encourage multiple boilers operating at low load over reducing runtime on components.
- The domestic hot water system, if a significant part of the building's load, should be designed either as:
  - an instantaneous system to allow for depressed entering water temperatures back to the boiler plant; or
  - a standalone gas-fired plant where space does not allow for an enlarged boiler plant required by the firing capacity increase of instantaneous hot water production, and a second flue path does not interrupt the building programming significantly.

HEAT RECOVERY (EACH TO BE STUDIED)

AIR SIDE

Study heat energy saved verses fan energy losses due to added static pressure.

- Energy recovery units with enthalpy wheels
- Energy recovery ventilator with membrane plate type heat exchanger
- Passive heat pipe

WATER SIDE

Study heat energy saved verses pumping energy losses due to added heat exchangers.

- On mixed-use wheel commercial condenser water to residential occupancy – winter only
- Domestic water preheat using condenser water

AIR HANDLING UNIT COILS

- Dual temperature coils should be utilized for all air coils (chilled water and hot water duty, no chance of simultaneous heating and cooling).
- 100 percent outside air economizer.
- Sized to limit fan static energy losses and incorporated in a hydraulically balanced system (e.g. pressure drop at the most remote point should be lower than an intermediate point).

INSULATION FOR HVAC EQUIPMENT

Insulation and vapor barriers for mechanical equipment, particularly equipment subject to sweating should be balanced between performance longevity and sustainability criteria, with particular attention to the latter given for insulation in contact with a ventilation airstream.

- Tnemec Aerolon insulation should be provided for field applied vapor barriers to equipment having odd form factors (pumps, chillers, expansion tanks, etc.) with elastomeric, mineral wool, or fiberglass insulation as recommended by the engineer conforming to the 018113 specification. Provide a removable cover for maintenance access. For insulation in the airstream (fan coil insulation, air handlers, etc.) care should be taken to provide an insulation that conforms to the 018113 specification, with preference for a self-adhering elastomeric type insulation for longevity.

BMS SYSTEM

The BMS System shall be capable of the following:

- Control of all HVAC sequences
- Demand management
- Time of day use couple with occupancy
- The outside air dampers and spill dampers will remain closed until scheduled occupancy in any of the zones served by the system
- Trending
- Operational startup/shutdown

AIR FLOW MANAGEMENT:

Stack Effect Air Flow Control: When the units are operating in the normal mode, a DDC software program will reset the amount of outside air supplied to positively pressurize the zone served by the system.

Dynamic Reset Outdoor Airflow Quantity Control: The system shall be designed to reset the outdoor air intake airflow based on either supply or return air CO2 concentrations to a user selectable offset above outdoor air CO2 concentrations. An AirCuity or other real-time IAQ monitoring system shall be integrated with the DDC system via a BACnet IP interface.

OPTIMIZE CONTROL OF SYSTEMS CONTAINING COMPONENTS IN PARALLEL:

Heat exchangers: Heat exchangers shall be utilized in parallel when both the primary and secondary flow create the required turbulence to maintain effective heat transfer.

Pumps: Pumps shall be utilized in parallel to maintain the best efficiency point on a parallel basis to serve the required flow when it is greater than the minimum flow required for a single pump

Chillers: The energy input into the chiller system shall be analyzed to determine the most economic means of chilled water production while accounting for pumping and frictional losses.

Boilers: Modulating condensing boilers shall be staged to maintain firing at the minimum firing rate required.

OPTIMIZE COMPONENT SELECTIONS:

Control valves: Control valves shall be v-ported and selected to not require the use of a balancing device to control from the minimum required flow to the maximum required flow.

System differential pressures: System differential pressures shall be set to the lowest possible value while maintaining the required pressure at the most hydraulically distant point in the system.

LIGHTING

- All lighting shall be designed as LED with replaceable drivers/light engines
- Controls shall be in accordance with the prescriptive requirements of the latest NYCECC

ON-SITE GENERATION (TO BE STUDIED)

- Cogen
- Wind
- Solar
- Fuel cell
- Energy storage

METERING FOR DASH-BOARDING AND ENERGY MANAGEMENT

Must be aligned with budget, energy modeling, and energy management requirements.

The following list should serve as a guide for what services should be sub-metered:

- Full Building Electric
- Residential Electric (Apartments Only)
- Common Area Electric
- Full Building Natural Gas (tie in to Con Ed meter)
- Residential Cooking Natural Gas (tie in to Con Ed meter)
- Boiler Plant Natural Gas (tie in to Con Ed meter)
- Full Building Cooling Load
- Cooling Load Served by Chiller Plant
- Residential Cooling Load (Apartments Only)
- Amenities Cooling Load
- Amenities Electric Load
- Common Area Cooling Load

To help facilitate the design of an appropriate sub-metering system for our residential properties, the Sub-Metering Matrix attached as Appendix A is to be utilized as a guide for all new and modified residential buildings. The matrix further breaks down the sub-metered services listed above and discusses the most efficient way to sub-meter Electric (Power), Water, and Thermal Energy (BTUs) for each. Users of this Sustainability Guide should complete the Sub-Metering Matrix by replacing the suggested scheme descriptions and methodologies with the actual design parameters, as well as noting which drawing(s) the sub-metering design was covered. Additional information such as the power source for the sub-metered load(s) and any additional notes that may be helpful should be added to the matrix.

This matrix shall be utilized throughout the project's design phase and included in the final design drawings. After construction and commissioning of the sub-metering system, the Contractor shall update the matrix drawing(s) to reflect the as-built conditions. The as-built Sub-Metering Matrix shall be retained by The Durst Organization for the purposes of energy management, billing, and operations.

ENERGY STAR® APPLIANCES

All appliances shall be selected as ENERGY STAR® eligible products including but not limited to refrigerators, residential clothes washers and dryers, dish washers, ice machines, recirculating hoods and all commercial food service equipment.

INSULATION

- Prioritize UL Certified formaldehyde free products and Greenguard Gold certified options
- Avoid spray polyiso foam products
- Preferred options are mineral wool or fiberglass for interior partitions, and mineral wool or k-13 spray cellulose for exterior wall (as appropriate)
- Minimize use of EPS, XPS or other plastic foam insulation

PAST EXAMPLES OF PREFERRED PRODUCTS

Location	Thermal Resistance	Product	Manufacturer	Project
Exterior Wall	2.5pcf density = R-Value of 3.7 4.0 pcf density = R-Value of 4.3	Mineral Wool Sound Attenuation Blankets (SAFB)	Owens Corning Thermafiber	VIA 57W
Exterior Wall	R13	3 1/2" R13 Mineral Wool Thermal Insulation	Owens Corning	VIA 57W
Exterior Wall	4.5 lbs/ft^3= R-Value of 4.2 per inch	SAFE (Mineral Wool Insulation)	Roxul	600 W58th
Exterior Wall	8.0 pcf density = R-value of 4.2 per inch	Firespan90 Thermafiber Mineral Wool	Owens Corning	VIA 57W
Exterior Wall	R-Value = 3.75 per inch	K-13	International Cellulose Corporation	1155, HLP1 (in specific areas)
Roof	R-Value = 5 per inch	Foamular 604	Owens Corning	600 W58th
Pipe		Earthwool 1000 Degree	Knauf	
Duct Wrap		Atmosphere Duct Wrap with ECOSE Technology	Knauf	
Duct Liner		Atmosphere Duct Board with ECOSE Technology	Knauf	

ENVELOPE

Design options to consider and detailing to pay attention to, in order to achieve a higher performance curtain wall include:

- Unitized Glass
- Less exposed metals
- Highly thermally broken mullions
- Continuous Insulation
- High thermal performance penetrations
- Higher R-value Firestopping Product
- Additionally insulated areas that are often forgotten or difficult to insulate without proper detailing (Cutainwall consultant to suggest)

WINDOW U VALUE

	% Vision Glazing	U-Value Vision Glazing	U-Value Overall Curtain Wall
Currently Achievable Values (U-Value spandrel = 0.18)	40%	0.40 – 0.44	0.27 – 0.28
	45%	0.40 – 0.44	0.28 – 0.30
	50%	0.40 – 0.44	0.29 – 0.31
Aspirational Values (U-Value spandrel = 0.12)	40%	0.38 – 0.44	0.23 – 0.25
	45%	0.38 – 0.44	0.24 – 0.26
	50%	0.38 – 0.44	0.25 – 0.28

VALUES FROM PAST PROJECTS:

Project	Wall Type	Insulation	Insulation Thickness and Glass Makeups	U-values	Glass SHGC
OBP	Curtainwall (PNA)	Mineral Wool R4.2/in	3-1/2" +2" mullion wraps	-	-
		IGU	1/4" VE13-2M Solarscreen 2000 on Starphire with gradiated frit pattern_5/8" air space_1/4" starphire	0.46-0.51 (specified)	0.39
New School	Curtainwall (Gamma)	Thermafiber Firespan 90 R4.2/ in	4"	0.2822 (Weighted between vision and opaque)	-
		IGU	3/8" VE13-85 on Starphire_1/2" air space_ 1/4" clear		0.59
HELENA	Window Wall (EFCO)	R13 Batt	3-1/2" between stud framing inboard of window wall	0.51 (specified vision)	0.31

Project	Wall Type	Insulation	Insulation thickness and glass makeups	U-values	Glass SHGC
VIA	Sloped Wall (Enclos)	Roxul CavityRock DD R4.3/in	6″ + 1″ mineral wool wrap at steel frames	0.05	-
	Curtainwall (Enclos/ ESWindows)	IGU	1/4″ Solarban 70XL #2_1/2″ air space_1/4″ clear	0.46-0.47 (vision)	0.27
		Roxul CavityRock DD R4.3/in	3″ + 1″ mineral wool mullion wrap at spandrel glass. 6″ at slab edge covers	0.08 - 0.13 (opaque)	-
FRANK	Curtainwall (ERIE)	Roxul CurtainRock 40	4″ Mineral Wool	0.25	-
		IGU	1/4″ SN68 on #2 Clear_1/2″ Airspace_1/4″ Clear+0.060 PVB+1/4″ Clear	0.47 (Vision)	0.35
	Window Wall (Wausau)	IGU	1/4″ SN68 on #2 Clear_1/2″ Airspace Argon fill_3/16″ Clear+0.030 PVB +3/16″ Clear	0.48	0.39
	Rainscreen System (Rheinzink)	Roxul CavityRock DD R4.3/in	4″	0.054	
EOS	Curtainwall (PNA) - Tower	Thermafiber Firespan 90 R4.2/ in	3″+1″ Mineral Wool at Mullion Wrap	0.16(Opaque)	
		IGU	1/4″ VE24-2M on #2 OptiWhite_1/2″ Airspace_1/4″ OptiWhite	0.41 (Vision)	0.38
	Curtainwall (PNA) - Podium	Thermafiber Firespan 90 R4.2/ in	3″+1″ Mineral Wool at Mullion Wrap	0.22 (Opaque)	
		IGU	1/4″ VE24-2M on #2 OptiWhite_1/2″ Airspace_1/4″ OptiWhite	0.38 (Vision)	0.38
HLP1	Window Wall (BVG)	IGU	1/4″ SN62/27_1/2″ air space argon fill_1/4″ clear	0.323 (fixed) 0.451 (operable)	0.27
		ROXUL CurtainRock 40 R4.2/in	4″ at metal panel, 3″ at shadowbox, 2″ at slab edge	0.070-0.076, 0.208 (slab edge)	

BENCHMARKING

DESIGN

Achieve 25 percent better than ASHRAE 2004 based on energy model.

VERIFICATION

- After construction and operating with full occupancy or one full year
- Test actual measured data against the design model

BLOWER DOOR TESTING

Decide if Blower Door Testing will be included in the project scope prior to development of façade bid set. If included, follow Appendix B, TDO Blower Door Testing Protocol for New Multi-Family High Rise Residential Buildings.

WATER

FIXTURE AND APPLIANCE REQUIREMENTS, INC. MAXIMUM FLOW RATES

Fixture	Maximum Flush or Flow Rate	Certification Requirement & Notes
Toilet (Water Closet)	1.28 gpf*	WaterSense
Urinal	0.125 gpf**	WaterSense
Public Lavatory Faucet	0.50 gpm	N/A
Private Lavatory Faucet	0.50 gpm	WaterSense
Kitchen Faucet	1.75 gpm	N/A
Showerhead	1.5 gpm	WaterSense
Pre-Rinse Spray Valve	1.3 gpm	WaterSense
Residential Clothes Washer		ENERGY STAR®
Ice Machine		ENERGY STAR®, Must also use air-cooled or closed-loop cooling (chilled or condenser water system)
Commercial Clothes Washer		CEE Tier 3A
Drinking Fountains		Avoid models with built-in compressors / refrigerated systems
Slop Sinks		24x24

* Do not install toilets with a flush rate lower than 1.28 gpf; Do not install dual flush toilets; If specifying a flushometer-valve toilet—select flushometers with the ability to operate on solar power provided by artificial indoor light and a back-up battery source. The flushometer should have a sensor and a manual override button. Do not specify flushometers activated by a wave-like motion.

**Do not install Waterless Urinals

METERING REQUIREMENTS

- Tenant metering
  - Retail/ commercial
- Service metering
- CT makeup for sewer credit
- Plant makeup
- Water re-use
- Irrigation
- Pool makeup
- Any supplemental use

FILTRATION

CENTRAL POINT OF ENTRY FILTRATION

- Tekleen duplex auto back wash screen filter with 10 micron screen

WATER REUSE

GRAY WATER

- When DEP storm detention is required

BLACK WATER

- To be studied for each building

IEQ

AIR QUALITY

Outside Air – Air Handling Units, Energy Recovery Units

- Provide MERV 8A Pre Filter and a MERV 15 Final Filter

RECIRCULATION

Large AHUs

- Provide MERV 15 Final Filter

Fan Coils, Terminal Units, & Supplemental ACUs

- Provide MERV 13 Final Filter (MERV 8 minimum)

MAGNAHELIC – ASHCROFT GL42

BOTH PRE-FILTERS AND FINAL FILTERS SHALL BE REPLACED WHEN PRESSURE ACROSS FILTER EXCEEDS 1" W.C.

INDOOR AIR QUAILITY TESTING

In the event Indoor Air Quality testing will occur, follow the protocol outlined in Appendix C: TDO Indoor Air Quality Testing Protocol for New Residential Buildings with Phased Occupancy. Contaminants shall not exceed the thresholds listed in Table 1 of Appendix C.

MONITORING/OA REQUIREMENT

- Demand control ventilation for common areas monitoring CO2 in breathing zone with local combination temperature, humidity, CO2 sensor (lobby, amenities).
- Design team to encourage to bring new technology to ownership for review and consideration

ACOUSTICS

FAÇADE

Minimum attenuation values for composite building attenuation (window/wall/ventilation components) shall be established as OITC-28. More robust performance may be required depending on specific project location, nearby noise sources, and whether or not the parcel has been cited with an E-designation for noise.

INTERIOR PARTITIONS

- Demising partitions between apartments, as well as between apartments and public, service, stairs, or mechanical spaces, must meet STC-50 (45 if tested) for airborne sound, per NYC Building Code. These partitions will require insulation in stud cavities.
- Partitions within apartments have no requirement per code. Insulation is optional and should be confirmed early in project.

FLOOR/CEILING ASSEMBLIES

Demising constructions between residences must meet STC-50 (45 if tested) for airborne sound, and IIC-50 (45 if tested) for impact sound. Architect shall coordinate with project acoustician to determine appropriate measures.

RESIDENTIAL AREAS

Background noise levels shall not exceed the listed values outlined in the table below for the various space types. The particulars of how this measure is to be achieved (Façade improvements, insulated partitions, underlayment, etc.) should be determined by the end of SD, and detailed through the design phases.

Space Type	Allowable Value, NC-Level*
Dwelling Units	NC-35 (target), NC-40 (maximum)
Front-of-House Corridors	NC-40
Amenities	NC-40
Lobbies	NC-45

** NC level based on the sound pressure levels in each of eight octave bands defined in the ASHRAE standard, with the applicable data the L90 metric (noise level exceeded 90% of the measurement period, known as the relative minimum noise level.).*

SPECIAL USE SPACES

- Special use spaces should be analyzed by the acoustician once an amenities program is established and a scoped interiors package with space finishes, partition construction, and ceiling construction are scoped.
- The acoustician's recommendations should be incorporated into the designated consultant's (base architect, interior designer, etc.) specification and drawing set to allow for accurate purchasing.
- Fitness centers are noted as a specific concern, and to the greatest extent possible should be located at grade level / far from residences to avoid the need for isolated floor slabs (together with ramps or depressed structural slabs) and other acoustic treatments.

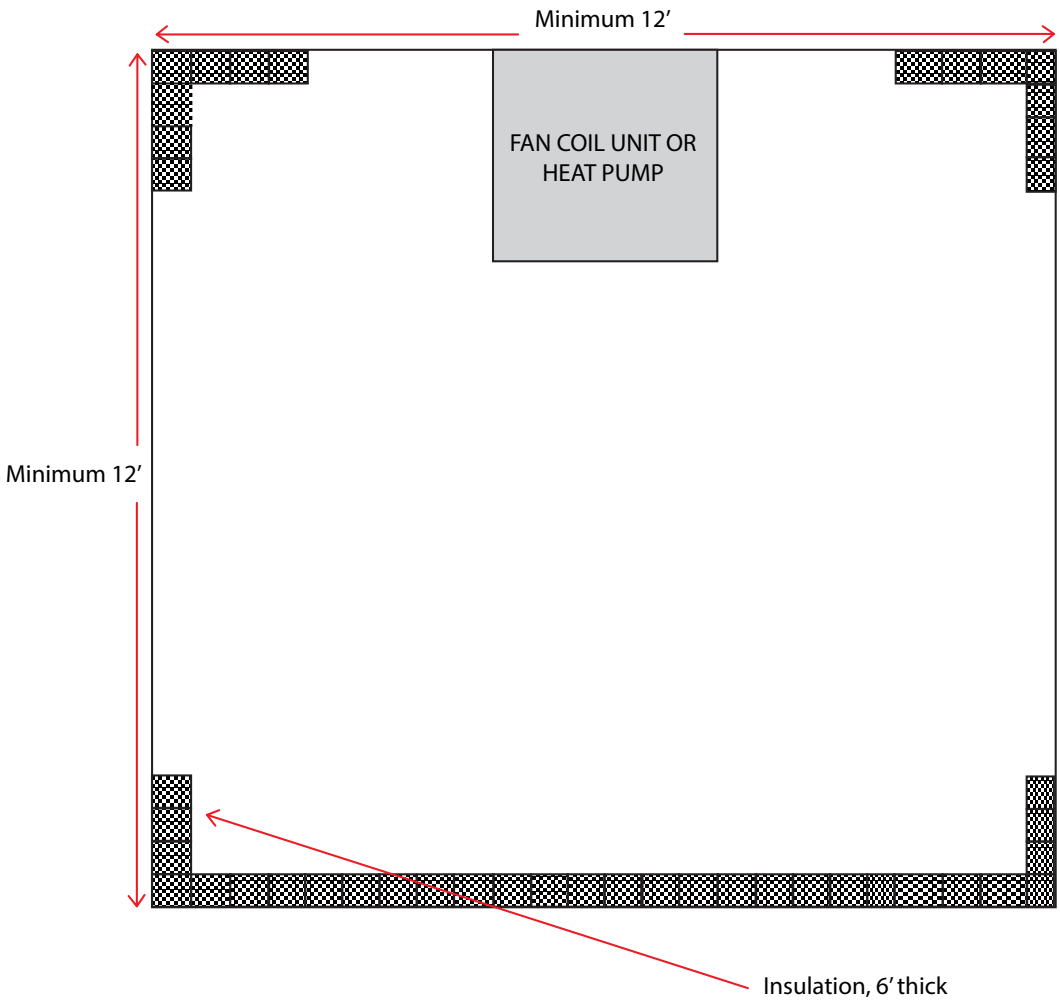
MECHANICAL EQUIPMENT

Indoor:

- Sound criteria performance for interior mechanical equipment, both in-residence and in mechanical rooms, should be provided with early and detailed sound criteria for incorporation in the MEP engineer's specifications. Residential units shall be tested as per the "Residential HVAC Unit Acoustic Mockup Guidelines" below, repeated for each size unit proposed for use on the project. Sound data for central station units and equipment serving amenity spaces, shall be included in specifications per industry standard testing, and acoustic data provided during submittals.
- Any acoustic measures external to the units themselves (acoustic lagging, sound lining, sound traps, mufflers, etc.) should be identified early in the project schedule (review after 100 percent SDs) to facilitate the design team's incorporation.

RESIDENTIAL HVAC UNIT ACOUSTIC MOCKUP GUIDELINES

- Test room dimensions shall be 12’ wide x 12’ long x 8’ tall, minimum.
- Test room shall have acoustic ceiling or office grade carpet, but not both.
- Locate fan coil unit or heat pump so it is centered on one wall, facing out to center of room.
- Fiberglass/batt/mineral wool insulation, 6” thick, affixed (stick pin, glue, etc.) to all four corners and wall opposite equipment being tested. Width of insulation shall be 2’ on each wall at corner. Insulation should extend from ceiling to top of floor.
- Measurements shall be conducted with the unit off, then at each of the available operating speeds.
- Measurements shall be conducted using an octave band sound level meter, type I, with calibration conducted at the start and conclusion of the measurements.
- Measurements shall be of three minute duration, minimum. Reported data shall be L90, or statistically averaged minimum, for the measurement period, and include eight octave bands, and overall dB(A).
- Repeat measurements and testing for each size unit scheduled for project.



OUTDOOR

- Any acoustic measures the outdoor mechanical equipment (screen walls, low noise fan blades, mufflers, etc.) should be identified early in the project schedule (review after 100 percent SDs) to facilitate the design team's incorporation. Per NYC Noise Code, each individual piece of equipment must generate no more than 42 dB(A) measured 3' inside an open window of any residence. This applies to residential windows of the subject project, or any neighboring buildings, as applicable.
- Emergency generators are not exempt from meeting NYC Noise Code requirements. While ownership may choose to manage potential issues regarding sound transmission to occupants of the subject, sound transmission through ventilation paths, etc. must meet NYC Noise Code when considering neighboring residential buildings.

WINDOW TREATMENT

Use of automated shades to optimize daylighting.

LIGHTING

CRI

Lighting fixtures shall be specified with a Color Rendering Index of not less than 85.

COLOR TEMPERATURES

- Residential front-of-house fixtures shall be selected between 2700K and 3000K.
- Back-of-house fixtures shall be selected between 3000K and 3500K.
- MERs shall be selected at 4000K.

LEVELS

Lighting levels shall be designed based on Illuminating Engineering Society standard. Where appropriate, based on high percentage of glazing and daylighting, levels shall be selected as close to the lower limit as possible.

APPENDIX A

SUB-METERING MATRIX FOR SUSTAINABILITY GUIDELINE

SYSTEM/AREA/LOAD TO METER	"METER TYPE (BTU, WATER, POWER)"	DESCRIPTION OF PROPOSED SUB-METERING SCHEME	METHODOLOGY	NOTES
AMENITY AREAS				
Amenities Cooling	BTU	Bulk BTU meter on Dual Temp branch that serves all Amenity Area Water Cooled Packaged AC Units. Separate BTU meters on other areas such as the Lobby and Tentant branches.	Program the sub-metering software to calculate the Amenity Area BTUs by pulling out the BTUs for other loads such as the Lobby and Tenant loads.	
Amenities Electric	Power	Amenity Area Lighting and Receptacle loads shall be sub-metered from separate power panels.	Utilize multi-circuit meters for specific Amenity Area loads that are not on separate Amenity Area power panels.	Plug loads, HVAC equipment & lighting should be metered separately for energy code compliance (energy code allows a 10% overlap).
Swimming Pool Electric	Power	All electrical loads associated with the Swimming Pool shall be metered from sub-metered power panels.	Program the sub-metering software to calculate the overall swimming pool electric load if on various power panels.	Include the Pool Deck/Terrace loads, Swimming Pool equipment loads, and all other electric loads associated with the Swimming Pool Amenity. Exterior pool lighting can't be combined with interior lighting.
Swimming Pool Heating	BTU	BTU meter on the Pool Heater.		
Swimming Pool Makeup Water	Water	Water meter on Swimming Pool Makeup line.		
BACK OF HOUSE				
Blackwater Plant Equipment	Power	Blackwater plant distribution system should have its main feeder monitored by a sub-meter.		Plug loads, HVAC equipment & lighting should be metered separately for energy code compliance (energy code allows a 10% overlap).
Blackwater Plant Input/Output	Water	Water meters on treated water to storage tank and treated water bypass (blakwater plant output).		
Blackwater Plant Makeup	Water	Water meter on blackwater plant make up line.		
Boiler Plant Output	BTU	BTU meters on the dual temp loop and secondary condenser water loop.	Program sub-metering software to sum up the dual temp loop btus and secondary condenser water loop btus, which equal to boiler plant output.	
Boiler Plant Makeup	Water	Water meter on boiler water make-up line.		
Chiller Plant Output	BTU	BTU meters on individual chillers as well as the dual temp line.		
Chiller Plant Electric	Power	All pumping associated with the chiller plant should have vfds capable of feeding data to the sub-metering system. Power all other electrical loads associated with the chiller plant off same sub-metered power panel.	Utilize a multi-circuit meter to meter specific chiller plant loads that are not on separate chiller plant power panel.	Include lighting as well for a Comprehensive Chiller Plant power consumption. Individual chillers should have their feeders monitored by sub-meters. Plug loads, HVAC equipment & lighting should be metered separately for energy code compliance (energy code allows a 10% overlap).
Cogen Plant Electric (Support Equipment)	Power	Cogen Switchboard and Utility Panels shall have their feeders monitored by sub-meters.	Utilize a multi-circuit meter to meter specific Cogen Plant loads that are not on separate Cogen Plant power panel.	Include lighting as well for a Comprehensive Cogen Plant power consumption. Plug loads, HVAC equipment & lighting should be metered separately for energy code compliance (energy code allows a 10% overlap).
Cogen Plant Output	Power	Output of Cogen Control System to feed data to sub-metering system and sub-meter monitoring feeder for Cogen-SS.		
Cogen Plant Output	BTU	BTU meter on HW Return Main to Boilers.		
Cooling Tower Makeup	Water	Water meter on the Cooling Tower Make Up Pumps and Manual Fill line.		Must be a DEP certified water meter for sewer credit.
Irrigation	Water	Water meter on the Irrigation Pump.		
Greywater Plant Makeup (Treated Water System)	Water	Water meter on the line From Domestic Cold Water System to the Treated Water Tank.		
Water Reuse	Water	Water meter on Greywater Transfer Pumps, as well as individual water meters all on Greywater Booster Pumps for all zones and irrigation pumps.	Program sub-metering software to sum up the individual Greywater meters.	
BUILDING UTILITY				

Excel spreadsheet is available for project use

SUB-METERING MATRIX FOR SUSTAINABILITY GUIDELINE

Continued

SYSTEM/AREA/LOAD TO METER	"METER TYPE (BTU, WATER, POWER)"	DESCRIPTION OF PROPOSED SUB-METERING SCHEME	METHODOLOGY	NOTES
Full Building Cooling	BTU	Full Building Cooling BTUs should be equivalent to the BTU meter on the Dual Temp loop.	Equivalent to the Chiller Plant BTU Output.	Does not include power consumption from associated cooling equipment.
Full Building Electric	Power	Sub-meters shall monitor the incoming feeders to the main service switches.	The Full Building Electric consumption can also be derived from monitoring the Con Edison Meter Pulse Output.	Plug loads, HVAC equipment & lighting should be metered separately for energy code compliance (energy code allows a 10% overlap).
Full Building Natural Gas	Gas	Gas meter connections to Data Gathering Panels (DGPs).	Configure sub-metering software to sum up individual Con Edison direct gas meters as indicated for monitoring below.	
Boiler Plant Gas	Gas	Gas meter connection to DGP for monitoring of gas usage.		Request a special monitoring module from the Con Edison CPM that duplicates the gas meter pulse output for monitoring by the sub-metering system.
Cogen Plant Gas	Gas	Gas meter connection to DGP for monitoring of gas usage.		Request a special monitoring module from the Con Edison CPM that duplicates the gas meter pulse output for monitoring by the sub-metering system.
Em. Generator Gas	Gas	Gas meter connection to DGP for monitoring of gas usage.		Request a special monitoring module from the Con Edison CPM that duplicates the gas meter pulse output for monitoring by the sub-metering system.
Residential Gas (Cooking)	Gas	Gas meter connection to DGP for monitoring of gas usage.		Request a special monitoring module from the Con Edison CPM that duplicates the gas meter pulse output for monitoring by the sub-metering system.
Full Building Water	Water	DEP Water Meters provide Data to DGP.		Coordinate monitoring of DEP Water meters with the NYC DEP.
COMMON AREAS				
All Stairwells (Lighting)	Power	Common Area Lighting loads shall be sub-metered.		Separate meter for lighting required for energy code compliance.
All Cooridors (Lighting)	Power	Common Area Lighting loads shall be sub-metered.		Separate meter for lighting required for energy code compliance.
Elevators Equipment	Power	Sub-meter on feed to primary elevator power panel.		For Con Ed load shedding program and for additional visibility into when an elevator goes down.
Lobby (Residential & Shared) & Mail Room Electric	Power	All electrical loads associated with the Lobby and Mail Room off the same sub-metered power panels.	Utilize a multi-circuit meter to meter specific Lobby loads that are not on separate Lobby power panel.	Non-static load since lighting controls vary levels based on daylighting. Plug loads, HVAC equipment & lighting should be metered separately for energy code compliance (energy code allows a 10% overlap).
Lobby (Residential & Shared) & Mail Room Cooling	BTU	BTU meters on Lobby Area Air Handlers. BTU meter shown on Dual Temp loop (if required).	Program sub-metering software to totalize.	
RESIDENTIAL				
Residential Cooling	BTU	BTU sub-meters on all residential unit Fan Coil Units.		Utilize and configure the same BTU meter to monitor heating BTUs.
Residential Electric	Power	Apartment Distribution Panels are fitted with multi-circuit sub-meters to meter individual Apartment Power Panels.		
RETAIL TENANTS				
Retail Tenant Cooling	BTU	BTU sub-meters on the individual branches for Dual Temp water serving the individual retail spaces (if any).		We do not meter secondary condenser water for supplemental cooling or heating hot water to retail spaces. Check with ownership regarding the monitoring of these retail services.
Retail Tenant Electric	Power	Retail tenants take secondary service directly from Con Edison and will have their own Utility Meters.		
Retail Tenant Water	Water	Retail meters on water lines to tenant spaces.		

Excel spreadsheet is available for project use

APPENDIX B

THE DURST ORGANIZATION BLOWER DOOR TESTING PROTOCOL FOR NEW MULTI-FAMILY HIGH RISE RESIDENTIAL BUILDINGS

OVERVIEW

Assessment of air-leakage rates through a building envelope under controlled pressurization and de-pressurization are required by some building energy codes and various building rating systems such as ENERGY STAR®, LEED, PHIUS, etc.

This Protocol outlines Air leakage Characterization Tests aka Blower Door Testing procedures that will be followed for The Durst Organization's new construction multi-family high rise residential projects. The Protocol outlines the number of sampling locations, timing of testing, contaminant thresholds, and required remediation for failed tests.

Due to the nature of the Blower Door Testing requirements, a decision to include Blower Door Testing in a project should be made early on in order to:

- Engage a consultant to provide air sealing guidelines during construction and develop a sampling approach. Consultant may also be able to conduct Blower Door Testing.
- Coordinate testing requirements with the CM for inclusion during procurement and project schedule development.
- Include Blower Door Testing sealing guidelines, including details in drawings and notes, and test protocols in construction documents.

Preliminary and Final Blower Door Testing are required. Preliminary Blower Door Testing will help verify the performance of the air barrier detailing and installation and identify areas of air leakage that have not been sealed.

TEST METHOD

For LEED and ENERGY STAR® Multi-Family High Rise Projects:

In accordance with ENERGY STAR® MFHR Testing and Verification Protocols, Version 1.0 – Protocol 8.1 – Building Envelope Air Sealing and Compartmentalization Testing - Fan Pressure Testing Method in accordance with ASTM E779 2010.

For PHIUS+ Projects:

Follow the Guidelines outlined in the PHIUS+ Certification for Multifamily Performance Requirements (v2.1).

TARGET MAXIMUM THRESHOLD

For ENERGY STAR® Multi-Family High Rise Projects:

The target maximum air leakage rate is 0.3 CFM per square foot of the enclosure bounding the apartment at an induced pressure difference of 50 Pascals. The exact targeted CFM for each unit will depend on a calculation performed of the samples using the perimeter, area, and volume of the unit.

For LEED Projects:

The target maximum air leakage rate is 0.23 CFM per square foot of the enclosure bounding the apartment at an induced pressure difference of 50 Pascals. The exact targeted CFM for each unit will depend on a calculation performed of the samples using the perimeter, area, and volume of the unit.

For PHIUS+ Projects:
Follow the Guidelines outlined in the PHIUS+ Certification for Multifamily Performance Requirements (v2.1) for both Whole-Building Air Tightness (≤0.50 CFM@50 Pa (0.080 CFM@75 Pa)/ sq ft of building shell) and Dwelling Unit Compartmentalization (0.30 CFM@50 Pa/sq ft of dwelling unit shell).

SAMPLING LOCATIONS

Preliminary Blower Door Testing:
Include at least one corner unit and one middle unit.

Final Blower Door Testing:
Select units that are a sample representation of the variety of apartment types in the building, including end/corner units and middle units; units on lower, middle, and upper floors; and at least one unit of each type (i.e., studios, 1-bed, 2-bed, etc.).

To determine the number of units to be tested, follow the sampling protocol outlined in the ENERGY STAR® MFHR Testing and Verification Protocols Version 1.0, currently, the RESNET 2006 Mortgage Industry National Home Energy Rating Systems Standard Sampling Protocol.

TIMING OF TESTING, RESULTS, AND RE-TESTING

Preliminary Blower Door Testing should be conducted at the earliest time in the construction process as possible, before building-wide air sealing of units is completed, but after a unit is completely air sealed and drywall is installed and patched.

Any findings from this test should be implemented across the entire building in order to pass final blower door testing. If a unit fails to meet the maximum air leakage rate during preliminary testing, deficiencies in the air barriers should be identified and corrected until all apartments in the preliminary test set have passed.

The results of the test should be shared with the project team and used to develop a punch list of details to be modified as construction continues. The inspection checklist should be modified to incorporate the lessons learned from the preliminary tests.

Final Blower Door Testing should be conducted once flooring, lighting, plumbing fixtures, HVAC and plumbing escutcheons including WD hook ups, electrical outlet gaskets and general finishes have been installed. Units must be air sealed using the means and methods observed during the mock-up blower door test at a minimum in order to pass.

Prior to beginning the sampling protocol, first test seven (7) units from a variety of apartment sizes and wide range of locations. All seven (7) units must meet the Target Maximum Threshold. Once compliance has been demonstrated, the sampling protocol may begin.

Sampling: Group the units into groups of up to seven (7) similar type units (i.e., studios, 1-bed, 2-bed, etc.). Select and test one (1) apartment from each group.

Results and Re-Testing:
If the randomly selected test unit passes, all units in that set are deemed to pass.

If the randomly selected test unit fails, air barrier deficiencies must be corrected and re-tested until the unit passes the test. Two (2) additional units in the group must also be tested. If either of these two units fails, re-assess air barrier deficiencies and take additional corrective action. Re-test the unit(s) which failed and test the remaining four (4) units.

REPORTING REQUIREMENTS

Executive Summary
Provide a description of the project, date of testing, methodology followed for the test (including sampling procedure, if applicable), table with unit numbers and test results.

Test Procedure & Observations
Provide date of testing, exterior conditions at time of testing (temperature, wind speed and direction), taping/sealing procedures, note any observations which may cause failure (air leakage pathways) or inability to conduct test in accordance with methodology. Provide photographs of installed test apparatus and taping/sealing conducted to prepare for the test.

Results & Conclusions
Provide an overall summary of results for all units tested along with detailed results for each unit tested, including calculations and values used for determining calculations If required, identify units which require re-testing and suggestions for corrective action.

APPENDIX C

THE DURST ORGANIZATION INDOOR AIR QUALITY TESTING PROTOCOL FOR NEW RESIDENTIAL BUILDINGS WITH PHASED OCCUPANCY

This Plan outlines Indoor Air Quality Testing procedures that will be followed for The Durst Organization's new construction residential projects. The Protocol outlines the number of sampling locations, timing of testing, contaminant thresholds, and required remediation for failed tests.

Sampling Locations:
Test sampling locations will be identified such that the following minimum criteria will be met:

- One location per ventilation system including the worst-case zones, defined as the location with the least ventilation but highest concentrations of chemicals of concern
- One location per regularly occupied space type
- One location per floor with at least one regularly occupied space

However, a sampling protocol may be used to reduce the number of testing locations for spaces that are similar in construction, finishes, configuration, size, and HVAC systems. The minimum number of sampling locations for similar, regularly occupied residential spaces will be determined as follows:

1. Identify types of similar, regularly occupied spaces (i.e. 1-bedroom apartments)
2. Determine the quantity of spaces per type
3. Determine sampling locations per type:
   - If <21 spaces, select one (1) sampling location for every seven (7) spaces
   - If >21 spaces, select three (3) total sampling locations
4. Sampling locations should be spread throughout the owner-controlled spaces of the building (low-floor, mid-floor, high-floor, corner unit, middle unit, etc.)

This sampling protocol will be used to identify the spaces to test. In a typical TDO residential building, space types would be apartment units, corridors, fitness rooms, children's rooms, library, leasing office, etc.

Sampling locations for each phase of occupancy will be determined by TDO Sustainability PM, Engineering Consultant, and Sustainability Consultant. Once outlined, a meeting will be held with TDO Sustainability PM, TDO Project Manager, TDO Engineering Manager, TDO Property Manager, TDO Operations Manager, Construction Manager, Construction Superintendent, and Sustainability Consultant to review proposed locations, agree upon sampling locations, and determine test dates.

Sampling locations which may be impacted by ongoing construction should be avoided. For example, locations near an operating hoist, non-electric equipment use, material delivery locations, ongoing construction immediately exterior to test location, etc.

All sampling locations must be unoccupied at the time of testing.

Timing of Testing:
Testing shall occur in identified sampling locations within 30 days of the first occupancy per phase turnover.

Indoor air quality testing will occur after all major air pollution generating construction activities are completed and prior to the tested space being occupied.

Major air polluting construction activities include sanding drywall, cutting or sanding wood, painting or other wet production application, installing of furnishings, cleaning of any kind, commissioning, smoke test, fire damper testing or TAB work. Acceptable activities include unpacking boxes and nonpolluting punch-list work.

Furniture provided by owner must be installed prior to testing.

Testing will occur during normal occupied hours with the building ventilation system running at the minimum outdoor airflow rate for the occupied mode throughout the test.

Tested Contaminants and Baseline Concentrations:
Contaminants tested will include PM2.5, PM10, ozone, carbon monoxide, ammonia, formaldehyde, and target VOCs from the California Department of Public Health Standard Method for Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chamber version 1.2-2017, in alignment with the LEEDv4 Indoor Air Quality Assessment credit.

Based on previous IAQ testing at new residential buildings constructed by TDO, more stringent baseline concentrations have been established for all contaminants tested. These are outlined in Table 1.

Results and Re-Testing:
If IAQ test results exceed either the "Allowable Concentration per LEEDv4" levels (including CDPHv1.2 2017 full CRELs) or the "Expected Concentration Based on Past IAQ Tests" levels listed in Table 1, the contractor will be required to take corrective action.
This may include a temporary flush out. Project will retest the failed space(s) and additional sampling locations.

As new residential projects undergo IAQ Testing, the new test results will be compared to the established thresholds. If new chemical categories start being detected, investigation will be done to try to equate the new chemical categories to different materials that were unique to the project.

Table 1

Compound	Casn	Allowable Concentration Per CDPH & LEEDV4 (Ug/M3 Unless Specified Otherwise)	Expected Concentration Based On Past Testing (% Of Allowable Concentration)	Highest Concentration From Past Testing (% Of Allowable Concentration)
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH VERSION 1.2-2017 TARGET VOLATILE ORGANIC COMPOUNDS				
tVOC	--	500	≤ 75%	≤ 50%
Formaldehyde	50-00-00	33	within 10%	≤ 75%
Acetaldehyde	75-07-0	140	≤ 50%	ND
Benzene	71-43-2	3	≤ 50%	within 10%
Carbon disulfide	75-15-0	800	≤ 50%	ND
Carbon tetrachloride	56-23-5	40	≤ 50%	ND
Chlorobenzene	108-90-7	1000	≤ 50%	ND
Chloroform	67-66-3	300	≤ 50%	≤ 10%
Dichlorobenzene (1,4-)	106-46-7	800	≤ 50%	ND
Dichloroethylene (1,1-)	75-35-4	70	≤ 50%	ND
Dimethylformamide (N,N-)	68-12-2	80	≤ 50%	ND

Dioxane (1,4-)	123-91-1	3000	≤ 50%	ND
Epichlorohydrin	106-89-8	3	≤ 50%	ND
Ethylbenzene	100-41-4	2000	≤ 50%	ND
Ethylene glycol	107-21-1	400	≤ 50%	ND
Ethylene glycol monoethyl ether	110-80-5	70	≤ 50%	ND
Ethylene glycol monoethyl ether acetate	111-15-9	300	≤ 50%	ND
Ethylene glycol monomethyl ether	109-86-4	60	≤ 50%	ND
Ethylene glycol monomethyl ether acetate	110-49-6	90	≤ 50%	ND
Hexane (N-)	110-54-3	7000	≤ 50%	ND
Isophorone	78-59-1	2000	≤ 50%	ND
Isopropanol	67-63-0	7000	≤ 50%	≤ 1%
Methyl chloroform	71-55-6	1000	≤ 50%	ND
Methylene chloride	75-09-2	400	≤ 50%	≤ 10%
Methyl t-butyl ether	1634-04-4	8000	≤ 50%	ND
Naphthalene	91-20-3	9	≤ 50%	ND
Phenol	108-95-2	200	≤ 50%	≤ 10%
Propylene glycol monomethyl ether	107-98-2	7000	≤ 50%	ND
Styrene	100-42-5	900	≤ 50%	ND
Tetrachloroethylene	127-18-4	35	≤ 50%	ND
Toluene	108-88-3	300	≤ 75%	≤ 1%
Trichloroethylene	79-01-6	600	≤ 50%	ND
Vinyl acetate	108-05-4	200	≤ 50%	ND
Xylenes-total (m-,o-,p-)	108-38-395-47-6-106-42-3	700	≤ 50%	ND
ADDITIONAL LEEDV4 COMPOUNDS				
Ammonia	7664-41-7	---	WITHIN 10%	≤ 75%
Carbon Monoxide	630-08-0	9 (ppm)	≤ 75%	≤ 50%
Particulate Matter 2.5	--	15	≤ 75%	≤ 50%
Particulate Matter 10	--	50		
Ozone	10028-15-6	147 (0.075 ppm)	≤ 50%	ND