



AEI Consultants

April 14, 2020

HUD MAP CAPITAL NEEDS ASSESSMENT

Property Identification:

Franklin Towers
50 White Street
Tarrytown, New York 10591

AEI Project No. 419363
Site Inspection Date: 3/10/2020

Prepared For:

Tarrytown Municipal Housing Authority
50 White Street
Tarrytown, New York 10591

Prepared By:

AEI Consultants
30 Montgomery Street, Suite 220
Jersey City, New Jersey 07302-3829
(201) 332-1844
AEI Main Contact: Douglas A. Olson

Environmental
Due Diligence

Building Assessments

Site Investigation
& Remediation

Energy Performance
& Benchmarking

Industrial Hygiene

Construction
Risk Management

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Reports & ALTA
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National Presence

Regional Focus

Local Solutions



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Tarrytown Municipal Housing Authority
50 White Street,
Tarrytown, New York 10591

Subject: HUD MAP CAPITAL NEEDS ASSESSMENT
Franklin Towers
50 White Street, Tarrytown, New York 10591
AEI Project No. 419363

Dear Wilfredo Gonzalez:

AEI's Capital Needs Assessment (CNA) (the Physical Inspection Report) has been prepared for the above-mentioned asset (the Property). During the property assessment and research, our needs assessor met with agents representing the Property, or agents of the owner, and reviewed the property and its history. This assessment and Physical Inspection Report have been prepared in accordance with ASTM-2018 "Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process", and HUD protocols, including the use of MAP Guide, revised January 29, 2016. This Physical Inspection Report is written to meet the Multifamily Accelerated Processing (MAP) guidelines pursuant to the U.S. Department of Housing and Urban Development (HUD) mortgage insurance programs.

The purpose for which this report shall be used shall be limited to the use as stated in the contract between the Client and AEI.

The CNA was performed at the Client's request using the methods and procedures consistent with good commercial or customary practice designed to conform to acceptable industry standards. The Report may be relied upon by Tarrytown Municipal Housing Authority, their respective successors and assigns, and by the United States Department of Housing and Urban Development (HUD).

In expressing the opinions stated in this report, AEI has exercised the degree of skill and care ordinarily exercised by a reasonably prudent capital needs assessor in the same community and in the same time frame given the same or similar facts and circumstances. Documentation and data provided by the Client, designated representatives of the Client or other interested third



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parties, or from the public domain, and referred to in the preparation of this assessment, have been used and referenced with the understanding that AEI assumes no responsibility or liability for their accuracy.

The independent conclusions represent our professional judgment based on information and data available to us during the course of this assignment. AEI's evaluations, analyses and opinions are not representations regarding the design integrity, structural soundness, or actual value of the property. Factual information regarding operations, conditions and test data provided by the Client or their representative has been assumed to be correct and complete. The conclusions presented are based on the data provided, observations and conditions that existed on the date of the on-site visit.

Should you have any questions or require additional information, please contact Jeb Bonnett at 804-955-8373 or jbonnett@aeiconsultants.com.

Sincerely,

Douglas A. Olson
Vice President
AEI Consultants

Jeb Bonnett
Vice President - HUD Building Assessments
AEI Consultants

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1.0 EXECUTIVE SUMMARY AND PROPERTY DESCRIPTION

AEI was retained by Tarrytown Municipal Housing Authority on February 18, 2020 to conduct a Capital Needs Assessment (CNA) at Franklin Towers located at 50 White Street in Tarrytown, New York. The property features 81 dwelling units within 1 building, which was built in 1963/64 and is situated on 9.6 acres. The property was observed in Good physical condition.

According to property management recent property improvements include:

- Roof replacement in 2016
- Boiler overhaul in February, 2020

According to property management planned property improvements include:

- Voluntary conversion of common area lighting to LED
- Turnkey upgrades to elevators with an estimated budget of \$600,000
- Upgrades to all tenant kitchens and bathrooms and replacement of circuit breakers with a reported budget of \$1,000,000

A summary of the Property improvements is provided in the following table.

Item	Description
Property Type	Multifamily
Number of Floors	10
Number of Apartment Units	81
Total Number of Buildings	1
Number of Apartment Buildings	1
Ancillary Buildings	Not Applicable
Parking	67 total spaces 67 of Regular Spaces 5 of Accessible Spaces Source: Owner or Property Manager
Gross Floor Area	76,145 per Appraisal District
Net Rentable Floor Area	63,002 per Owner or Property Manager
Site Area	9.6 acres per Client provided
Year of Construction	1963/64 per Site Inspection

1.1 OVERALL CONDITION OF THE PROPERTY

Code Compliance and Design

Subject property improvements appear to have been carried out in compliance with contemporary building codes and standard building practices at the time of their construction. The Project Manager did not observe any obvious building code violations, nor did management or City report any violations. The quality of planning and design provided for site improvements appears to be suitable, reflecting a relatively efficient use of space and an acceptable use of building materials and systems.

Overall Condition of the Property

Based on AEI's observation of the Property and improvements, the Property appears to be in overall Good condition.

Assuming the level of maintenance currently being provided at the subject property is continued and deferred maintenance specified herein is corrected, the property should continue to retain its ability to perform and compete in the local market in the future.

Recommendations in this Report

The recommendations in this report are based upon ASTM guidelines and are limited to visual observations. Testing of systems was not performed and no invasive or destructive testing was undertaken. No recommendations for immediate, further investigation have been included in the Assessment and Recommendation sections of this report.

1.2 REMAINING USEFUL LIFE

Based on the general condition of the Property reported above, it is AEI's opinion that the Remaining Useful Life (RUL) of the Property is estimated to be not less than 50 years barring any natural disasters. This opinion is based on its current condition and maintenance status, assuming any recommended Immediate Repairs or Replacement Reserves are completed and appropriate routine maintenance and replacement items are performed on an annual or as-needed basis. AEI's building RUL estimate is a subjective opinion based on observed and reported conditions obtained as part of the CNA assessment and is not an estimate of the Remaining Economic Life (REL) of the property.

AEI will identify items addressed as operating expenses as opposed to capital replacements that would be included in our Reserves for Replacement when sufficient documentation has been provided by the borrower.

No documentation regarding the differentiation between operating expenses and capital replacements was provided by the borrower.

1.3 LIST OF COMMONLY USED ACRONYMS

ADA	The Americans with Disabilities Act
AHU	Air Handling Unit

ASTM	American Society for Testing and Materials
BOMA	Building Owners & Managers Association
BUR	Built-up Roof System
BTU	British Thermal Unit (a measurement of heat)
DWV	Drainage, Waste, Ventilation
EIFS	Exterior Insulation and Finish System
EMS	Energy Management System
EPDM	Ethylene Propylene Diene Monomer (rubber membrane roof)
EUL	Expected Useful Life
FCU	Fan Coil Unit
FEMA	Federal Emergency Management Agency
FFHA	Federal Fair Housing Act
FHA	Forced Hot Air
FHW	Forced Hot Water
FIRMS	Flood Insurance Rate Maps
FOIA	U.S. Freedom of Information Act (5 USC 552 et seq.) and similar state statutes.
FOIL	Freedom of Information Letter
GFI	Ground Fault Interrupt (circuit)
GPNA	Green Physical Needs Assessment
GWB	Gypsum Wall Board
HVAC	Heating, Ventilating and Air Conditioning
IAQ	Indoor Air Quality
IM / IR	Critical or Non-Critical Repair
MEP	Mechanical, Electrical & Plumbing
MDP	Main Distribution Panel
NA	Not Applicable
NFPA	National Fire Protection Association
PCA	Property Condition Assessment
PCR	Property Condition Report
PML	Probable Maximum Loss
PTAC	Packaged Through-wall Air Conditioning (Unit)
R&M	Repair and Maintain - Routine Maintenance
RR	Replacement Reserve
RTU	Rooftop Unit
SF	Square Feet
TPO	Thermoplastic Polyolefin Roof Membrane
VAV	Variable Air Volume Box
WDO	Wood Destroying Organisms

2.0 PURPOSE AND SCOPE

Cost Calculation Methodology

Estimates are based on construction costs developed by construction resources such as Marshall & Swift, RS Means, AEI's Commercial Inspectors' experience with past costs for similar projects, city cost indexes, consulting with local specialty contractors, client provided information, and assumptions regarding future economic conditions.

Actual costs may differ from AEI's cost estimates. Actual cost estimates are determined by many factors including but not limited to: choice and availability of materials, choice and availability of a qualified contractor, regional climate zone, quality of existing materials, site compatibility, and access to the subject property and buildings. Costs are solely based on material replacement and do not account for soft costs.

Critical Repairs

Items which will need to be performed as Critical Repairs (before loan closing) are included in the Critical Repairs Cost Estimate Table 7.2. Critical repairs are identified as either Life Safety or Accessibility. Those identified as "Life Safety" are needed to address hazards to life and health while those identified as "Accessibility" are needed to correct accessibility deficiencies. While these are not mutually exclusive, only one designation may be applied to each repair or alteration.

Life Safety repairs must be completed prior to Endorsement.

Accessibility repairs must be completed as soon as possible; and the CNA e Tool requires that the time estimated to complete each accessibility repair be identified as a number of months. If "as soon as" possible exceeds twelve months for any Accessibility repair, the corrective action plan must be referred to HUD headquarters to the attention of the Director of Technical Support in the Office of Multifamily Housing Production, who will determine whether the proposed corrective action plan is acceptable.

Non-Critical Repairs

Each of the Non-Critical (within 1 year of loan closing) Repair items noted during the survey is listed Table 7.3. Non-Critical Repairs are recommended for deferred maintenance that could result in physical depreciation or loss of property value. Non-critical repairs must be promptly and timely executed and completed within twelve months of endorsement, provided that the MF Regional Center/Satellite Office Director may approve an extended period not to exceed six additional months for unusual circumstances (e.g. work constrained by weather conditions or work requiring temporary relocation of elderly or disabled tenants.). A program of repairs and alterations which because of scale or quantity is reasonably expected to require more than a year to complete should be reconsidered as substantial rehabilitation.

Replacement Reserves

Items that will most likely need to be performed over the length of the evaluation period (20 years) such as repairs, replacements and significant maintenance items are listed in the Replacement Reserves Table (Table 7.4).

Items included in the Replacement Reserve Table are determined based upon the estimated useful life (EUL) of a system or component, the effective age (EA) of the system, and the remaining useful life (RUL) of that system. Factors that may affect the age and condition of a system include, but are not limited to, the frequency of use, exposure to environmental elements, quality of construction and installation, and amount of maintenance provided. Based on these factors, a system may have an effective age that is greater or less than its actual chronological age. Routine maintenance costs are not included as part of this assessment.

The Effective Useful Life (EUL) is the average amount of time in years that a system, component or structure is estimated to function when installed new and assuming that routine maintenance is practiced. It is based upon site observations, research, and judgment, along with referencing EUL tables from the United States Department of Housing and Urban Development guidelines. Accurate historical replacement records, if provided, are typically the best source of information. Exposure to the elements, initial quality and installation, extent of use, the quality and amount of preventive maintenance exercised, etc., are all factors that impact the effective age of a system or component. As a result, a system or component may have an effective age that is greater or less than its actual chronological age. The Remaining Useful Life (RUL) of a component or system equals the EUL less its effective age.

The Remaining Useful Life (RUL) is a subjective estimate based upon observations, or average estimates of similar items, components, or systems, or a combination thereof, of the number of remaining years that it is estimated to be able to function in accordance with its intended purpose before requiring replacement. Such period of time is affected by the initial quality of the system or component, the quality of the initial installation, the quality and amount of preventive maintenance, climatic conditions, extent of use and other factors.

The RUL estimate is an expression of a professional opinion and is not a guarantee or warranty, expressed or implied. This estimate is based upon the observed physical condition of the property at the time of the visit and is subject to the possible effect of concealed conditions or the occurrence of extraordinary events such as natural disasters or other unforeseen events that may occur subsequent to the date of the site visit. The RUL estimate is made only with regard to the expected physical or structural integrity of the improvements on the Property. Based upon observations during our site visit and information received from our interviews with building management and service personnel, which for the purpose of the CNA was deemed reliable, AEI prepared general-scope, Opinions of Probable Cost based on appropriate remedies for the deficiencies noted. Such remedies and their associated costs were considered commensurate with the Property's position in the market and prudent expenditures. These opinions are for components of systems exhibiting significant deferred maintenance, and existing deficiencies requiring major repairs or replacement. Repairs or improvements that could be classified as (i) cosmetic, (ii) decorative, (iii) part or parcel of a building's renovation program or to reposition the asset in the marketplace, (iv) routine or normal preventative maintenance, or (v) that are the responsibility of the tenants were not included.

2.1 PURPOSE

The purpose of this survey and related report is to assist Tarrytown Municipal Housing Authority and HUD in the evaluation of the physical aspects of the subject property and how its condition may affect the soundness of their financial decisions over time. For this assessment, the Project Manager has performed a reconnaissance assessment of the subject property and its improvements, evaluated the apparent physical conditions, reviewed available documentation, assessed the expected useful life (EUL), and estimated the cost for repairs, replacements, and significant maintenance items. The Project Manager assessed a representative sample of the building/s; the assessment typically included roofs, operational components, parking structures, and all common areas and exteriors.

The CNA is not, and should not be construed as, a warranty or guarantee about the condition of the improvements. Neither is the Assessment intended to assure clear title to the property in question. This investigation was prepared for the sole use and benefit of Tarrytown Municipal Housing Authority and HUD. Neither this report, nor any of the information contained herein shall be used or relied upon for any purpose by any person or entity other than Tarrytown Municipal Housing Authority and HUD.

We have performed our services and prepared this Report in accordance with applicable, generally accepted engineering, environmental or appraisal consulting practices. We make no other warranties, either expressed or implied, as to the character and nature of such services and product.

2.2 SCOPE OF WORK

AEI was retained by Tarrytown Municipal Housing Authority on February 18, 2020 to conduct a Capital Needs Assessment (CNA) to fulfill the due diligence requirements of a pending real estate transaction. The CNA was performed in conformance with the scope and limitations of ASTM Standard Practice E2018-15 and the U.S. Department of Housing and Urban Development Multifamily Accelerated Processing (MAP) Guide, Chapter 5 and related Appendices, revised January 29, 2016. The CNA was performed at Franklin Towers property located at 50 White Street in Tarrytown, New York. The scope of work included the following:

- The inspection of at least 25% of each unit type;
- The visual examination of the property's components, including MEP equipment, exterior walls, roofing, foundations, landscaping, utilities, and interior elements;
- The interviewing of property management and tenants;
- The information gathering from Freedom of Information request letters from the local Building, Zoning, and Fire departments;
- The data population of HUD's CNA E-Tool;

Any exceptions to, or deletions from, this practice are described in Section 7 of this report.

2.2.1 ASSESSMENT METHODOLOGY

The CNA meets the specifications of the lender and has included the following:

Preliminary Due Diligence

Prior to the site visit by the Property Evaluator, the pre-survey questionnaire was provided to the managers of the Property with a request that the questionnaire be completed prior to the visit.

Site Reconnaissance

The CNA findings are based on the visual, non-intrusive and non-destructive evaluation of various external and internal site and building systems and components as noted during a site walk-through survey conducted by AEI representatives. The survey included access and observation of representative tenant spaces and common areas.

Interviews and Research

AEI representatives conducted limited research to identify and review available maintenance procedures, available drawings, and other readily available documentation concerning the property. AEI representatives also conducted interviews with available management and maintenance staff. As conditions warranted, contractors for the property were contacted for pertinent information. AEI requested readily available records with public agencies familiar with the property to gather historical property information. A summary of findings have been included in the narrative sections of this report.

Report

The evaluation covered readily apparent conditions at the property. Upon completion of the site reconnaissance, interviews, and research, AEI produced this summary report. This report includes a discussion of topics related to the property condition and outlines the costs to correct the deficiencies noted. AEI formulates and presents the Critical Repairs, Non-Critical Repairs, and Replacement Reserves Schedule in Tables 1, 2, and 3 of this report. The content in these tables is generated from the HUD CNA E-Tool.

Based upon observations during our site visit and information received from our interviews with building management and service personnel, which for the purpose of the CNA was deemed reliable, AEI prepared general-scope, Opinions of Probable Cost based on appropriate remedies for the deficiencies noted. Such remedies and their associated costs were considered commensurate with the Property's position in the market and prudent expenditures. These opinions are for components of systems exhibiting significant deferred maintenance, and existing deficiencies requiring major repairs or replacement. Repairs or improvements that could be classified as (i) cosmetic, (ii) decorative, (iii) part or parcel of a building's renovation program or to reposition the asset in the marketplace, (iv) routine or normal preventative maintenance, or (v) that are the responsibility of the tenants were not included.

It is the intent of the CNA to reflect material physical deficiencies and the corresponding opinion of probable costs that are (i) commensurate with the complexity of the Property and (ii) not minor or insignificant.

Standard Estimated Useful Life (EUL)

The EUL is the average amount of time in years that a system, component or structure is estimated to function when installed new and assuming that routine maintenance is practiced. HUD has hard coded an EUL associated with every component in the HUD CNA E-Tool. Neither AEI, nor any other provider can use different EULs for components in the CNA E-Tool.

Assessed Remaining Useful Life (ARUL)

This is the Needs Assessor’s best professional judgment of the actual RUL of the Component ID based on observed conditions that may not agree with the auto-populated value in the Standard Remaining Useful Life field. Needs Assessors must provide a comment each time the ARUL field is populated in the CNA E-Tool.

Standard Remaining Useful Life (SRUL)

The SRUL Displays the RUL based on the Standard EUL less the current age of the component. This is an auto-populated field that is strictly math based.

2.3 SITE VISIT INFORMATION

Site Visit Facts

Date of Site Visit	3/10/2020
Time of Site Visit	10 a.m.
Weather Conditions	54° F and Cloudy
Site Assessor	Fauzia Ansari
Site Escorts	Wilfredo Gonzalez
Point of Contact	Benita Maceyak
Total Units Inspected	22

Dwelling Units Inspected

Building Identification	Unit Type	Unit Identification	Unit Status
Franklin Towers- 50 White Street	2 Bed / 1 Bath	Unit 103	Occupied
Franklin Towers- 50 White Street	3 Bed / 1 Bath	Unit 104	Occupied
Franklin Towers- 50 White Street	2 Bed / 1 Bath	Unit 108	Occupied
Franklin Towers- 50 White Street	3 Bed / 1 Bath	Unit 101	Occupied
Franklin Towers- 50 White Street	3 Bed / 1 Bath	Unit 91	Occupied
Franklin Towers- 50 White Street	2 Bed / 1 Bath	Unit 82	Occupied
Franklin Towers- 50 White Street	1 Bed / 1 Bath	Unit 88	Occupied
Franklin Towers- 50 White Street	1 Bed / 1 Bath	Unit 25	Vacant
Franklin Towers- 50 White Street	2 Bed / 1 Bath	Unit 22	Occupied
Franklin Towers- 50 White Street	4 Bed / 1.5 Bath	Unit 21	Occupied
Franklin Towers- 50 White Street	1 Bed / 1 Bath	Unit 29	Occupied
Franklin Towers- 50 White Street	1 Bed / 1 Bath	Unit 28	Occupied
Franklin Towers- 50 White Street	1 Bed / 1 Bath	Unit 35	Occupied
Franklin Towers- 50 White Street	1 Bed / 1 Bath	Unit 36	Occupied
Franklin Towers- 50 White Street	1 Bed / 1 Bath	Unit 37	Occupied
Franklin Towers- 50 White Street	1 Bed / 1 Bath	Unit 38	Occupied
Franklin Towers- 50 White Street	2 Bed / 1 Bath	Unit 62	Occupied
Franklin Towers- 50 White Street	2 Bed / 1 Bath	Unit 63	Occupied
Franklin Towers- 50 White Street	2 Bed / 1 Bath	Unit 65	Occupied
Franklin Towers- 50 White Street	2 Bed / 1 Bath	Unit 69	Occupied

Building Identification	Unit Type	Unit Identification	Unit Status
Franklin Towers- 50 White Street	3 Bed / 1 Bath	Unit 84	Occupied
Franklin Towers- 50 White Street	1 Bed / 1 Bath	Unit 56	Occupied
Franklin Towers- 50 White Street	2 Bed / 1 Bath	Unit 55	Occupied

2.4 RELIANCE

The CNA is not, and should not be construed as, a warranty or guarantee about the condition of the improvements. Neither is the Assessment intended to assure clear title to the property in question. The investigation was conducted on behalf of and for the exclusive use of Tarrytown Municipal Housing Authority (Client) and HUD solely for use in a property condition evaluation of the subject property. The report has been prepared only for the purpose of securing mortgage financing/re-financing and/or loan securitization. This report and findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, nor used by any other party, in whole or in part without prior written consent of AEI. AEI acknowledges and agrees that the report may be conveyed to and relied upon by the Client, their successors and assigns, rating agencies and bond investors.

Reliance is provided in accordance with AEI's Proposal and Terms and Conditions executed by Tarrytown Municipal Housing Authority on February 18, 2020. The limitation of liability defined in the Terms and Conditions is the aggregate limit of AEI's liability to the client and all relying parties.

3.0 OVERALL GENERAL DESCRIPTION

3.1 BUILDING AND UNIT SUMMARY

The Project Manager's findings are derived from a thorough review of all available resources, including but not limited to, construction drawings, rent rolls, interviews with property management, and field inspection observations. Please note that the building and unit matrices were populated in the CNA E-Tool and the Building Unit Mix report generated from that effort is attached below:

Building Unit Mix for Franklin Towers

Assessment ID: 2020-012051

SITE: Franklin Towers

BUILDING: Franklin Tower

Unit Type	Unit Type Sq. Ft.	No. Units/Spaces	Square Footage	# Garage Spaces
1 Bed/ 1 Bath	550	31	17,050	0
4 Bed/ 1.5 Bath	1,300	4	5,200	0
2 Bed/ 1 Bath	822	32	26,304	0
3 Bed/ 1 Bath	1,032	14	14,448	0
Unit Totals		81	63,002	0
Common Space			13,143	0
Totals		81	76,145	0

RESIDENTIAL BUILDINGS

Unit Type	Unit Type Sq. Ft.	No. Units/Spaces	Square Footage	# Garage Spaces
2 Bed/ 1 Bath	822	32	26,304	0
1 Bed/ 1 Bath	550	31	17,050	0
3 Bed/ 1 Bath	1,032	14	14,448	0
4 Bed/ 1.5 Bath	1,300	4	5,200	0
Unit Totals		81	63,002	0
Common Space			13,143	0
Residential Buildings Totals		81	76,145	0

PROPERTY TOTALS		UFAS Accessible Units	
		Mobility	Sensory
# Units	81	2	0
Total Sq. Ft. Units	63,002		
Total Common Space	13,143		
Total All Sq. Ft.	76,145		
Total # Garage Pkg Spaces	0	# Accessible	0
Total In Unit Garage Spaces	0	# Accessible	0
Total # Surface Pkg Spaces	62	# Accessible	5

3.2 SITE

3.2.1 SITE TOPOGRAPHY

Slope of site is 1:12

3.2.2 STORMWATER DRAINAGE

Item	Description	Action	Condition
Topography	Gentle slopes throughout Property.	R&M	Good
Retaining Walls	Concrete retaining near parking along Franklin Court	R&M	Good
Adjoining Properties	Roughly at similar elevation to the Property	R&M	Good
Storm Water Collection System	Underground municipal drainage system	R&M	Good
Landscape Drainage System	Landscaped areas sloped towards area drains	R&M	Good
Pavement Drainage System	Storm water area drains	R&M	Good
Foundation Drainage System	Not applicable	NA	Not applicable

ASSESSMENT / RECOMMENDATION

No notable deficiencies or indications of deferred maintenance of topography, drainage or retaining wall features were observed or reported.

Photographs



South Topography



Landscape Storm Drain



Topography Facing North



Retaining Wall and Parking Along Franklin Court



Site Topography and Landscaping

3.2.3 ACCESS & EGRESS

Items	Description	Action	Condition
Site Access	Access to the property is provided by two entrances from adjoining municipal streets.	R&M	Good
Signalization at Site Access	No traffic lights are provided at the entrances to the Property.	NA	Not applicable
Easement or Alley Way	Not applicable	NA	Not applicable

Photographs



Property Entrance Facing Franklin Street

3.2.4 PAVING, CURBING, & PARKING

Items	Description	Action	Condition
Asphalt Pavement	Asphalt pavement is provided for on-site parking and drive lanes	IM/RR	Good/Fair Poor
Concrete Pavement	Concrete pavement is provided at dumpster locations and in the patio areas	R&M	Good
Curbing	Concrete	R&M	Good
Seal Coating	Seal coating is worn and has a grayish appearance.	IM/RR	Fair
Striping	Striping for parking spaces is faded	IM	Good/Fair
Total Number of Parking Spaces	67 spaces in open lots	NA	Not applicable
Number of ADA Spaces	5	NA	Not applicable

Photographs



Parking Lot



Pothole Repair for Asphalt Parking Lot (Non-Critical Repair)



Pothole Repair for Asphalt Parking Lot
(Non-Critical Repair)



Pothole Repair for Asphalt Parking Lot
(Non-Critical Repair)



Trash Enclosure by Parking Lot



Outdoor Seating Enclosure

3.2.5 FLATWORK (WALKS, PLAZAS, TERRACES, PATIOS)

Item	Description	Action	Condition
Sidewalks	Concrete	IM/RR	Good/Fair
Ramps	Poured in place concrete	IM	Good/Fair
Exterior Steps	Raised concrete landing located at the main entrance	R&M	Good
Handrails	Exterior stairs are protected by steel handrails	R&M	Good
Loading Docks	Not applicable	NA	Not applicable

Photographs



Concrete Sidewalk Near Leasing Office



Concrete Sidewalk Near Playground



Concrete Ramp



Outdoor Steps and Metal Handrail



Cracking Ramp Concrete (Critical Repair)

3.2.6 LANDSCAPING & APPURTENANCES

Item	Description	Action	Condition
Landscaping	Trees, shrubbery, and manicured lawn.	RR	Good
Irrigation	Not applicable	NA	Not applicable

Item	Description	Action	Condition
Perimeter Fencing	Some areas of the perimeter were observed with aluminum chain-link fence	RR	Good
Entry Gates	Not applicable	NA	Not applicable
Patio Fencing	Chain-link fence	RR	Good
Refuse Area Fencing	CMU (concrete masonry unit) wall	R&M	Good
Site/Building Lighting	Exterior building mounted high intensity lights	R&M	Good
Parking Area Lighting	Pole-mounted fixtures	R&M	Good
Signage	Wood post sign	RR	Good
Water Features	Not applicable	NA	Not applicable

Photographs



Exterior Signage



Exterior Lighting



Fencing Around Patio Area



Bare Ground

3.2.7 RECREATIONAL FACILITIES

Item	Description	Action	Condition
Swimming Pool Filtration Equipment	Not applicable	NA	Not applicable
Swimming Pool / Spa / Pool Decking	Not applicable	NA	Not applicable
Barbecue	None	NA	Not applicable
Picnic Areas	Benches and tables on concrete patio	R&M	Good
Sport Courts	One basketball court	RR	Good
Tennis Courts	Not Applicable	NA	Not applicable
Playground	Playground with miscellaneous playground equipment on sand	RR	Good

Photographs



Outdoor Playground



Playground Swings



Outdoor Seating Enclosure



Outdoor Playground



Basketball Court



Outdoor Picnic Area

Other Structures

Item	Description	Action	Condition
Garages	Not Applicable	NA	Not applicable
Carports	Not applicable	NA	Not applicable
Maintenance Shed	Not applicable	NA	Not applicable
Porte Cochere	Not applicable	NA	Not applicable
Landscaping Structures	Fencing	R&M	Good

3.2.8 SITE UTILITIES

Utility Provider	Provider
Natural Gas	Con Edison
Electricity	Con Edison
Potable Water	Village of Tarrytown
Sanitary Sewerage	Village of Tarrytown
Storm Sewer	Municipal
Fuel Oil	Not Applicable

Photographs



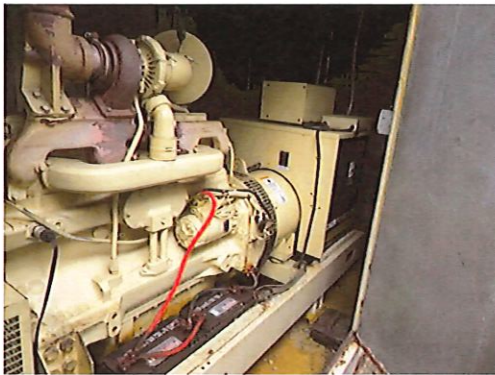
Electric Meter



Gas Meter

Item	Description	Action	Condition
Domestic Water Supply Lines	Copper pipe	R&M	Good
Waste Service Lines	Cast Iron and PVC	R&M	Good
Lift Stations	Not applicable	NA	Not applicable
Waste Water Treatment System	Not applicable	NA	Not applicable
Water Wells	Not applicable	NA	Not applicable
Emergency Generator	One 125 kW Kohler Diesel-fired generator	RR	Good
Transformers	Overhead lines and pole-mounted transformers.	R&M	Good
Alternative Energy Systems	Solar panel system and wind energy system powering pole-mounted light fixtures	R&M	Good

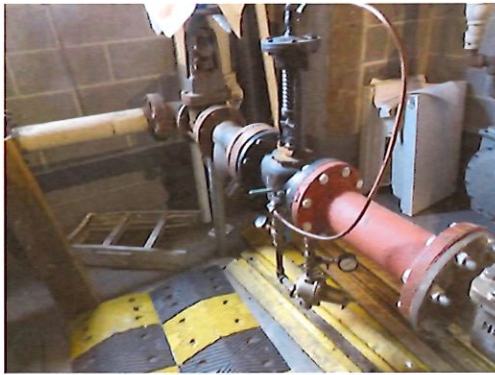
Photographs



Emergency Generator



Diesel Tank for Emergency Generator



Water Main



Solar and Wind Generation for Parking Light Fixtures

3.3 STRUCTURAL FRAME & BUILDING ENVELOPE

3.3.1 FOUNDATION

Item	Description	Action	Condition
Foundation Type	Concrete slab-on-grade	R&M	Good
Foundation Walls	Shallow foundation (thickened and reinforced concrete slab)	R&M	Good
Building Slab	Concrete slab-on-grade	R&M	Good
Moisture Control	Waterproofing of basement walls could not be confirmed	NA	Not applicable
Uniformity	The foundation is considered to be generally uniform, but this could not be confirmed.	R&M	Good

ASSESSMENT / RECOMMENDATION

No notable deficiencies or indications of deferred maintenance of foundations were observed or reported.

3.3.2 FRAMING

3.3.2.1 FRAMING SYSTEM, FLOORS & WALLS

Item	Description	Action	Condition
Wall Structure	Steel framing with poured concrete floor	R&M	Good
Secondary Framing Members	Not applicable	R&M	Good
Mezzanine	Not applicable	NA	Not applicable
Walls and Floors Plumb, Level and Stable	No unusual problems were observed or reported.	R&M	Good
Significant Signs of Deflection, Movement	No unusual problems were observed or reported.	R&M	Good

3.3.2.2 CRAWL SPACES, ENVELOPE PENETRATIONS

There are no crawl spaces at the apartment buildings.

3.3.2.3 ROOF FRAME & SHEATHING

Item	Description	Action	Condition
Roof Design	Low-slope with no attic space	R&M	Good
Roof Framing	Steel framing	R&M	Good
Roof Deck or Sheathing	Metal deck with lightweight concrete	R&M	Good
FRT Plywood	FRT plywood was not observed in the attic area.	NA	Not applicable
Significant Signs of Deflection, Movement	No unusual problems were observed or reported.	R&M	Good

Photographs



View of Roof



Lightweight Concrete Ceiling



View of Exterior Elevator Maintenance Room

3.3.2.4 FLASHING & MOISTURE PROTECTION

Roof flashing appeared to be in overall good

Photographs



Roof Flashing



View of Roof



Typical Roof Drain

3.3.2.5 ATTICS & EAVES

This property does not contain attic space.

3.3.2.6 INSULATION

The building features low slope roofs covered with a roof membrane. The type, depth, and R-value of the insulation is unknown.

3.3.2.7 EXTERIOR STAIRS, RAILS, BALCONIES/PORCHES, CANOPIES

Item	Description	Action	Condition
Balcony Framing	Not applicable	NA	Not applicable
Balcony Deck Material	Not applicable	NA	Not applicable
Balcony Railing	Not applicable	NA	Not applicable

Item	Description	Action	Condition
Patio Construction	Concrete patio	R&M	Good
Terraces	Not applicable	NA	Not applicable
Fire Escapes	Not Applicable	NA	Not applicable
Elevated Walkway	Not applicable	NA	Not applicable
Exterior Stairs	Not applicable	NA	Not applicable

Photographs



Outdoor Picnic Area

3.3.2.8 EXTERIOR DOORS & ENTRY SYSTEMS

Item	Description	Action	Condition
Unit Entry Doors	Metal clad unit entry doors. Property management reported all exterior doors were replaced in 2005.	RR	Good
Service Doors	Steel clad insulated service doors.	RR	Good
Sliding Glass Doors	Not applicable	NA	Not applicable
Overhead Doors	Not applicable	NA	Not applicable
Common Entrance Doors	Aluminum storefront system with double doors and sidelights with transom above.	RR	Good

Photographs



Main Entrance



Leasing Office Lobby



Leasing Office Entrance



Back Door

3.3.3 SIDEWALL SYSTEM

Item	Description	Action	Condition
Primary Exterior Wall Finishes and Cladding	Unpainted masonry brick veneer	IM/RR	Good/Fair Poor
Trim Finishes	Not applicable	NA	Not applicable
Soffits/Eaves	Concealed soffits.	NA	Not applicable
Sealants	Sealed Brick on exterior 2015	R&M	Good
Painting	Not applicable.	NA	Good/Fair

Photographs



Site Overview



South Elevation

3.3.3.1 WINDOWS

Item	Description	Action	Condition
Window Type	Double hung windows. Windows were replaced in 2004 according to property management.	RR	Good/Fair
Window Frame	Aluminum frame	RR	Good/Fair
Window Panes	Double pane insulated	RR	Good/Fair

Photographs



Typical windows

3.3.4 ROOFING FINISH

Roof ID	Construction Type	Approx. Area	Reported Age	RUL	Warranty	Action	Condition
All	Low slope with TPO (white) and BUR	7,600 SF	4 years	16 years	Yes	RR	Good

Roof ID	Drainage	Coping (parapet)	Skylights	Action	Condition
All	Internal drains	Not applicable	Not applicable	R&M	Good

3.4 MECHANICAL & ELECTRICAL SYSTEMS

3.4.1 PLUMBING

Item	Description	Action	Condition
Hot and Cold Water Distribution	Copper pipe	R&M	Good
Polybutylene Water Piping	No polybutylene piping was observed or reported	NA	Not applicable
Sanitary Waste and Vent	Cast iron pipe	R&M	Good
Domestic Water Circulation Pumps	Not applicable	NA	Not applicable
Domestic Water Heaters	Central gas-fired, commercial- grade water heaters manufactured by AO smith in 2018 and rated for 399,000 BTU with a 1,000 gallon storage tank.	RR	Good/Fair
Domestic Water Boilers	Not applicable	NA	Not applicable
Boiler Peripherals	Not applicable	NA	Not applicable
Water Softening / Treatment	Not applicable	NA	Not applicable

Photographs



AO Smith Water Heater

3.4.2 HVAC SYSTEMS

Item	Description	Action	Condition
Cooling Equipment	Air conditioners are supplied by tenants and are window mounted Split-system heat pump for maintenance room on rooftop	RR	Good
Heating Equipment	Fire tube boiler manufactured by Federal Boiler in 1986. Unit one has a capacity of 5,230 MBH, unit two has a capacity of 4,315 MBH Two split-system heat pumps for maintenance rooms manufactured by Mitsubishi and rated for 24,000 BTU and appear to be manufactured in 2012. Steam heating system driven by vacuum heat pump for main lobby heating. The pump is manufactured by National Pump & Controls Inc. in 1998.	RR	Good
Cooling Tower	Not applicable	NA	Not applicable
Terminal Units	Not applicable	NA	Not applicable
Refrigerant	Puron	R&M	Good
Tonnage of Cooling Equipment	Approximately 162 window mounted air conditioning units, averaging 1.5 tons. Heat pumps are rated for 2 tons.	RR	Good/Fair
Distribution System	Ducted forced-air system	R&M	Good
Controls	Local thermostats	R&M	Good
Supplemental Systems	Not applicable	NA	Not applicable
Corridor and Stair-tower Ventilation	Not applicable	NA	Not applicable
Toilet Room Ventilation	Direct vent bathroom fans	R&M	Good

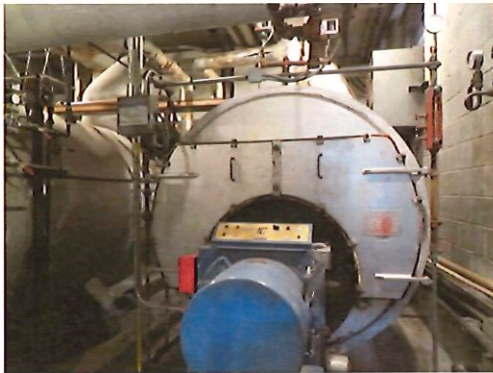
Photographs



Outdoor Heat Pump Unit



Boiler Room



AL Eastmond & Sons Boilers



Rooftop Heat Pump Condensing Unit



Vacuum Heating Pump



Air Conditioning Units

3.4.3 ELECTRICAL SYSTEM

Item	Description	Action	Condition
Service Type	Overhead lines and pole-mounted transformers.	R&M	Good

Item	Description	Action	Condition
Building Service	1,000-Amp, 120/240-Volt, three-phase, four-wire, alternating current (AC)	R&M	Good
Typical Tenant Service Amperage	100 Ampere breaker panel	R&M	Good
Panel Manufacturer	Delta Metal Products	R&M	Good
Overload Protection	Screw in plug fuses (TL & SL)	RR	Good/Fair
Service Wire	Copper wiring	R&M	Good
Branch Wiring	Copper wiring	R&M	Good
Ground Fault Circuit Interrupter	Observed in kitchen, bathrooms, and wet areas	R&M	Good

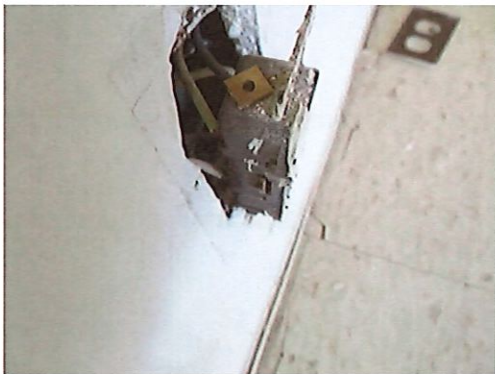
Photographs



Unit 82 Two Bedroom One Bathroom (occupied): Bathroom GFCI



Main Switch Board In Electrical Room



Copper Wiring



Screw-in Fuse (SL/TL) Panel

ASSESSMENT / RECOMMENDATION

The power to the property was reportedly sufficient, however TL and SL fuses were observed. The concern with fused subpanels stems from the configuration of the fuses themselves, which allow for fuses of different ratings to fit into a traditional Edison fuse socket.

The replacement of a blown fuse with a fuse rated for higher amps may result in an unprotected branch circuit, followed by an overload and potential fire. The second concern with Edison sockets is that shunting of open fuses can allow for the insertion of metal objects into the socket as a means to reconnect the circuit. This can create both a life safety concern as well as fire hazard.

Due to the age and it being unknown if all dwelling unit panels have S-type fuses installed, AEI recommends inspection of all dwelling unit panels to assure that S-type fuses are in place. (Critical Repair)

In addition, due to the age of the fuse panels, upgrading to breaker panels is expected to occur early in the evaluation period.

3.5 ELEVATORS

Elevator Summary

Elevator/ Escalator ID	Type	Brand	Capacity	Floors/ Stops	Install/ Modernize Date	Action	Condition
Elevator 1	One traction elevator	Could not be verified	2,000	10	1964	IM/RR	Fair
Elevator 2	One traction elevator	Could not be verified	2,000	10	1964	IM/RR	Fair

Elevator Inspection

Elevators/ Escalators	Inspection/ Certificate Type	Last Inspection/ Certification Date	Inspection Entity	Action	Condition
Elevators	Annual	12/31/19	N/A	NA	Good

ASSESSMENT / RECOMMENDATION

Based on the RUL of the elevator finishes and machinery, replacement is anticipated during the reserve.

According to Property Management, planned improvements include turnkey upgrades to elevators, with an estimated budget of \$600,000. (Non-Critical Repair)

Photographs



Elevators



Elevator Cab Interior



Elevator Cab Interior



Elevator Weight Capacity



Elevator Brakes/Machinery

3.6 LIFE & FIRE SAFETY

Item	Description	Condition	Action
Fire Suppression Systems	Central Standpipe	Good	R&M

Item	Description	Condition	Action
Fire Suppression System Inspection Date	Not Applicable	Not applicable	NA
Other Equipment and Devices	Strobe light alarms, battery back up light fixtures and illuminated exit signs featured in common areas Hard-wired smoke detectors with battery back-up featured in bedrooms and living rooms. The dwelling units feature carbon monoxide detectors.	Good	RR
Fire Extinguishers	Mounted on interior walls Last inspection completed on October 2019	Good	R&M
Fire Alarms	Hard-wired central alarm panel in the maintenance room with live monitoring	Good	RR
Fire Alarm Inspection Date	December, 2019	Good	R&M
Fire Hydrants	There are fire hydrants located along the drive lanes	Good	R&M
Fire Egress Stairs	The building features interior staircase towers	Good	R&M

Photographs



Unit 29 One Bedroom One and a Half Bathroom (occupied): Typical Smoke Alarm



Fire Pull Station



Fire Panel



Typical Fire Extinguisher



Typical Fire Exit Sign

3.7 INTERIOR ELEMENTS

3.7.1 COMMON AREA INTERIOR ELEMENTS

Item	Description	Action	Condition
Fitness Center	There is no fitness center at the property.	NA	Not applicable
Club Room	There is no club room at the property.	NA	Not applicable
Leasing Office	A leasing office was observed. The leasing office features a community room, conference area, office, bathroom, and kitchen. The office is furnished with carpet flooring, and painted masonry walls with the community room, conference, kitchen and bathroom featuring vinyl flooring with painted gypsum walls and ceilings.	RR	Good
Common Area Kitchen	A common area kitchen was a part of the observed leasing office. The kitchen is equipped with cabinetry and appliances installed in 2005 (Refrigerator and Microwave) according to property management.	RR	Good
Common Area Laundry	First floor common laundry was observed. Machines are rented according to property management. Room is furnished with an unfinished ceiling, painted masonry walls, and vinyl flooring.	RR	Good

Photographs



Laundry Room Washers and Dryers



Security Systems Room



Leasing Office Restroom



Leasing Office



Leasing Office Conference Room



Leasing Office Conference Room

3.7.2 DWELLING UNIT INTERIOR ELEMENTS

Unit Finishes

Item	Description	Action	Condition
Carpet	No carpet was observed in any of the units.	NA	Not applicable
Resilient Flooring (vinyl)	Vinyl tile is the primary flooring in all units.	RR	Good
Other	Ceramic tile is in the unit bathrooms.	R&M	Good
Walls	Gypsum board with painted finish	R&M	Good
Ceilings	Gypsum board with painted finish	R&M	Good
Window Coverings	Window blinds are provided	R&M	Good

Photographs



UFAS Unit 103 Two Bedroom One Bathroom (occupied): View of Living Room



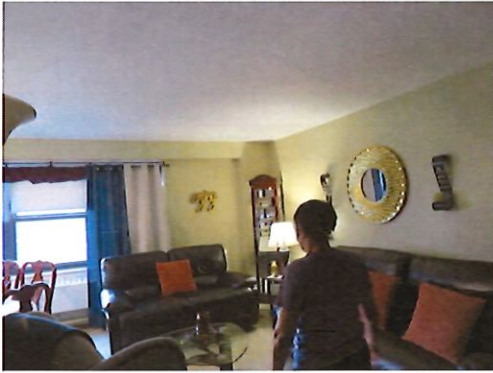
UFAS Unit 103 Two Bedroom One Bathroom (occupied): Bedroom One



UFAS Unit 103 Two Bedroom One Bathroom (occupied): Bedroom Two



Unit 104 Three Bedroom One Bathroom (occupied): Front Door



Unit 104 Three Bedroom One Bathroom (occupied): View Of Living Room



Unit 104 Three Bedroom One Bathroom (occupied): Bedroom One



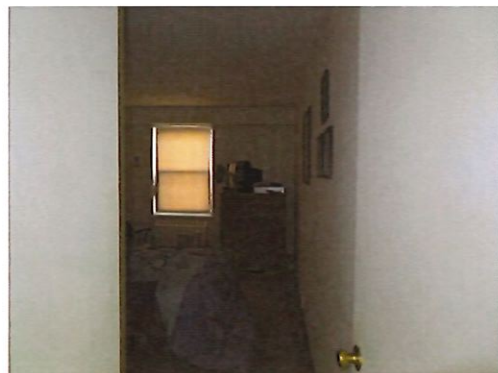
Unit 104 Three Bedroom One Bathroom (occupied): Bedroom Two



Unit 108 One Bedroom One Bathroom (occupied): Front Door



Unit 108 One Bedroom One Bathroom (occupied): View of Living Room



Unit 108 One Bedroom One Bathroom (occupied): Bedroom



Unit 101 Three Bedroom One Bathroom
(occupied): Front Door



Unit 91 Three Bedroom One Bathroom
(occupied): Front Door



Unit 91 Three Bedroom One Bathroom
(occupied): Bedroom One



Unit 91 Three Bedroom One Bathroom
(occupied): Bedroom Two



Unit 82 Two Bedroom One Bathroom
(occupied): Front Door



Unit 82 Two Bedroom One Bathroom
(occupied): View of Living Room



Unit 82 Two Bedroom One Bathroom
(occupied): Bedroom One



Unit 82 Two Bedroom One Bathroom
(occupied): Bedroom Two



Unit 88 One Bedroom One Bathroom
(occupied): Front Door



Unit 88 One Bedroom One Bathroom
(occupied): Bedroom



Unit 88 One Bedroom One Bathroom
(occupied): View of Living Room



Unit 25 One Bedroom One Bathroom
(vacant): Front Door



Unit 25 One Bedroom One Bathroom
(vacant): Bedroom



UFAS Unit 22 Two Bedroom One Bathroom
(occupied): Front Door



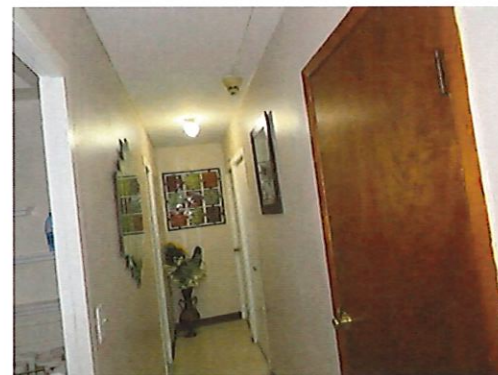
UFAS Unit 22 Two Bedroom One Bathroom
(occupied): View of Living Room



Unit 21 Four Bedroom One and a Half
Bathroom (occupied): Front Door



Unit 21 Four Bedroom One and a Half
Bathroom (occupied): View of Living Room



Unit 21 Four Bedroom One and a Half
Bathroom (occupied): Hallway



Unit 21 Four Bedroom One and a Half Bathroom (occupied): Bedroom One



Unit 21 Four Bedroom One and a Half Bathroom (occupied): Bedroom Two



Unit 29 One Bedroom One and a Half Bathroom (occupied): Front Door



Unit 29 One Bedroom One and a Half Bathroom (occupied): View of Living Room



Unit 29 One Bedroom One and a Half Bathroom (occupied): Bedroom



Unit 28 One Bedroom One and a Half Bathroom (occupied): Front Door



Unit 28 One Bedroom One and a Half Bathroom (occupied): View of Living Room



Unit 28 One Bedroom One and a Half Bathroom (occupied): Bedroom

Appliances

Item	Description	Action	Condition
Refrigerators	According to property management refrigerators were all replaced in 2005.	IM/RR	Good/Fair
Ranges	According to property management all ranges were replaced in 2005.	IM/RR	Good/Fair
Range hoods	Not applicable	NA	Not applicable
Dishwashers	Not applicable	NA	Not applicable
Microwaves	Not applicable	NA	Not applicable
Garbage Disposals	Not applicable	NA	Not applicable
Dryers	Not applicable	NA	Not applicable
Washers	Not applicable	NA	Not applicable

Cabinets & Fixtures

Item	Description	Action	Condition
Kitchen Sink & Countertop	Plastic laminated particle board countertops with drop-in stainless steel single-bowl sinks.	IM/RR	Fair
Bathroom Sink and Countertop	In non-UFAS units a vanity unit with plastic laminated particle board base cabinet with a solid surface countertop with integrated bowl and knob handles. In UHAS units it was a porcelain wall-mounted sink with integral bowl and knob handles.	IM/RR	Fair
Kitchen Cabinetry	Kitchen cabinetry was wood frame with particle board doors, covered with plastic laminate.	IM/RR	Fair
Bathroom Cabinetry	Vanity units are wood frame with particle board doors, covered with plastic laminate in all non-UFAS units.	IM/RR	Fair
Bathtub/Shower and Enclosure	Metal frame and glass shower enclosure and enamel over steel bathtub with ceramic tile tub surround	IM R&M	Fair
Toilet	Tank top toilet with large capacity tank	IM R&M	Fair
Accessories	Bathroom accessories include wall-mounted mirrors.	IM R&M	Fair

Photographs



UFAS Unit 103 Two Bedroom One Bathroom (occupied): Kitchen



UFAS Unit 103 Two Bedroom One Bathroom (occupied): Bathroom Needs Grab Bars (Critical Repair)



Unit 104 Three Bedroom One Bathroom (occupied): Kitchen



Unit 104 Three Bedroom One Bathroom (occupied): Bathroom



Unit 108 One Bedroom One Bathroom (occupied): Kitchen



Unit 108 One Bedroom One Bathroom (occupied): Bathroom



Unit 108 One Bedroom One Bathroom (occupied): Bathtub



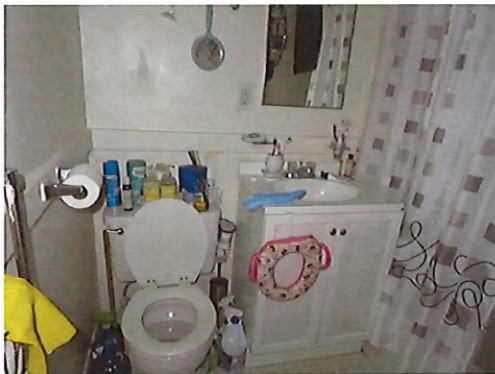
Unit 91 Three Bedroom One Bathroom (occupied): Kitchen



Unit 91 Three Bedroom One Bathroom (occupied): Bathroom



Unit 82 Two Bedroom One Bathroom (occupied): Bathroom



Unit 88 One Bedroom One Bathroom (occupied): Bathroom



Unit 88 One Bedroom One Bathroom (occupied): Kitchen



Unit 25 One Bedroom One Bathroom
(vacant): Bathroom



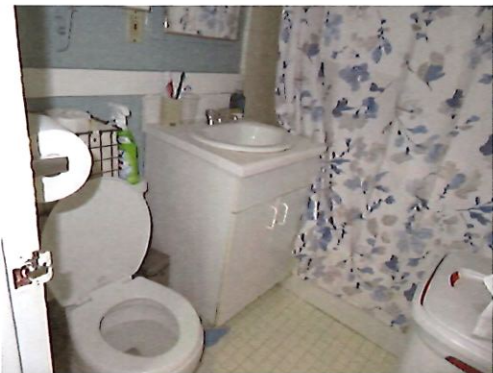
UFAS Unit 22 Two Bedroom One Bathroom
(occupied): Kitchen



UFAS Unit 22 Two Bedroom One Bathroom
(occupied): Bathroom No Grab Bars (Critical
Repair)



Unit 21 Four Bedroom One and a Half
Bathroom (occupied): Kitchen



Unit 21 Four Bedroom One and a Half
Bathroom (occupied): Bathroom



Unit 29 One Bedroom One and a Half
Bathroom (occupied): Kitchen



Unit 28 One Bedroom One and a Half Bathroom (occupied): Kitchen



Unit 28 One Bedroom One and a Half Bathroom (occupied): Bathroom

4.0 ADDITIONAL CONSIDERATIONS

4.1 MOISTURE AND MICROBIAL GROWTH

Microbial growth (e.g., mold or fungus) may occur when excess moisture is present. Porous building materials such as gypsum board, insulation in walls and ceilings, and carpeting retain moisture and become microbial growth sites if moisture sources are not controlled or mitigated. Potential sources of moisture include rainwater intrusion, groundwater intrusion, condensation on cold surfaces, and water leaks from building systems (e.g., plumbing leaks, HVAC system leaks, overflowing drains, etc.). Inadequate ventilation of clothes dryers and shower stalls may also result in excess moisture conditions. Microbial growth may be clearly visible (e.g., ceramic tile mortar in shower stalls) or may be concealed with no visible evidence of its existence (e.g., inside wall cavities). However, without proper tests, the existence of mold cannot be verified. Testing for mold is outside the scope of a base-line PNA.

AEI conducted a limited visual survey for the presence of microbial growth at the Property. Sampling or testing was not included in the scope of work for this survey. The assessment consisted of gaining entry to interior spaces, and visually evaluating the accessible areas.

Benita Maceyak reported that he was not aware of suspected mold or microbial growth at the Property and that tenant occupants have not had complaints concerning suspected mold or microbial growth. Benita Maceyak indicated that no formal indoor air quality management plan currently exists at the Property.

AEI identified no documents regarding indoor air quality or microbial concerns.

Benita Maceyak was not aware of any roof leaks, water leaks or infiltration and associated damage from pipes, fixtures, or HVAC systems at the Property. No flood drain or ground water problems were reported.

ASSESSMENT / RECOMMENDATION

No repair or reserve funding is recommended at this time.

4.2 PEST MANAGEMENT

As part of the site and property assessment, AEI conducted limited, visual, non-intrusive observations to ascertain if there was evidence of wood destroying organism (WDO) activity on the physical structures at the Property during our site visit. Our WDO assessment process included visual observation of select interior and exterior building systems for noticeable signs of WDO activity, such as damaged or deteriorated wood, noticeable remnants of deceased WDO's (termites, beetles, ants, bees, etc.), and applying hand pressure (with a hard object tool) to reachable areas where these types of organisms generally attack to determine if there is any hidden damage to such surfaces (surfaces generally limited to trim work along baseboards and around windows).

Our WDO assessment process also included a limited visual and physical assessment of easily accessible and observable site conditions. The visual assessment included looking for noticeable signs of WDO activity on the Property, such as mud tubes on walls, round or oval holes, mounded soil around building perimeters, trace insect residue, and damaged wood. Our observations of exterior materials also include the application of hand pressure to reachable areas where these types of organisms generally attack, to determine if there is any hidden damage to such surfaces. This information is provided incidental to our standard PNA assessment. WDO observations, conducted by AEI, are not intended, and may not be interpreted as a professional pest inspection, and AEI makes no representation or warranty as to these activities or observations.

Our WDO assessment did not identify any unusual problems or concerns related to WDO activity on the property.

ASSESSMENT / RECOMMENDATION

No repair or reserve funding is recommended at this time.

4.3 SEISMIC ZONE

AEI reviewed the property location in order to determine whether or not the site is located in an area that may constitute a seismic hazard as determined by the ASCE/SEI Standard ASCE 41-13 "Seismic Evaluation and Retrofit of Existing Buildings. The determination employs output from design mapping with data provided from the US Geological Survey.

Per Appendix 5C subparts B3 and B4 of the HUD MAP Guide (revised January 29, 2016), any detached or semi-detached structure where the calculated Design Earthquake Spectral Response Acceleration Parameter (S_{XS}) is less than .400g and any building where both Design Earthquake Spectral Response Acceleration Parameters (S_{XS} and S_{X1}) are less than .330g and .133g respectively, a detailed seismic hazard and building performance analysis is not required.

The values for S_{XS} and S_{X1} have been provided as output from a Design Maps Summary Report as derived from current USGS data.

A copy of the USGS data is included in the USGS Design Maps Appendix.

The value for S_{XS} was calculated at LESS than 0.330g.

The value for S_{X1} was calculated at LESS than 0.133g.

No further action recommended.

ASSESSMENT / RECOMMENDATION

There are no further recommendations.

4.4 WIND ZONE

AEI reviewed the property location in order to determine the wind zone in which the property is located. The Design Wind Speed measuring criteria are consistent with ASCE 7-05. Our judgement is that the property is located in Wind Zone II. This map also indicates that the Property is also located in a Hurricane Susceptible Region.

Wind Zones are defined as follows:

Zone I (130 MPH)

Zone II (160 MPH)

Zone III (200 MPH)

Zone IV (250 MPH)

Special Wind Zone

Hurricane Susceptible Zone

4.5 FLOOD PLAIN

AEI reviewed FEMA flood zone maps to identify the flood zone in which the property is located. According to Panel No. 36119C0253F, dated 09/28/2007, this property is located within Flood Zone X (Non-shaded).

Flood Zones are described as follows:

Flood Zone A, defined as an area of 100-year flood; base flood elevations and flood hazard factors not determined.

Flood Zone AE, defined as an area of 100-year flood; base flood elevation determined.

Flood Zone B, defined as an area between limits of the 100-year flood and 500-year flood; an area subject to 100-year flooding with average depths less than one foot or where the contributing drainage area is less than one square mile; or an area protected by levees from the base flood.

Flood Zone C, defined as an area of minimal flooding.

Flood Zone D, defined as an area of undetermined, but possible flood hazards.

Flood Zone V, defined as an area of 100-year flood with velocity (wave action); base flood elevations and flood hazard factors not determined.

Flood Zone X (shaded area), defined as an area of 500-year flood; an area of 100-year flood with average depths of less than one foot or with drainage areas less than one square mile; or an area protected by levees from 100-year flood.

Flood Zone X (non-shaded area), defined as an area outside the 500-year flood plain.

This information is provided for reference purposes only. Further Study may be undertaken at the discretion of our client.

4.6 KNOWN PROBLEMATIC BUILDING MATERIALS

The following list of Known Problematic Building Materials has been developed by Fannie Mae and is typically referenced in CNA reports as a general summary of systems or organisms that have been part of a manufacturer recalled or have been specifically identified as problematic. If these items are identified through reports or observation, the topic will be further discussed in the report sections listed in the following table:

Red Flag Material or System	Identified	Action Recommended
Fire Retardant Treated Plywood (FRTP)	No	Not applicable
Compressed Wood or Composite Board Siding	No	Not applicable
Exterior Insulation and Finishing (EIFS)	No	Not applicable
Problem Drywall (aka "Chinese Drywall")	No	Not applicable
Unit electrical capacity less than 60 amps	No	Not applicable
Electrical Overload Protection - Fused Subpanels	Yes	Repair
Federal Pacific Electric Stab-Lok panels	No	Not applicable
Polybutylene Water Distribution Lines	No	Not applicable
Galvanized Steel Water Distribution Lines	No	Not applicable
Recalled fire sprinkler heads (Central, Omega, Gem, Star)	No	Not applicable
Recalled Cadet Brand Electric in-Wall Heaters	No	Not applicable
Recalled General Electric / Hotpoint dishwashers	No	Not applicable
Microbial Growth	No	Not applicable
Wood Destroying Organisms	No	Not applicable

5.0 DOCUMENT REVIEW & INTERVIEWS

5.1 DOCUMENTS REVIEWED

Document	Source / Author	Date
Pre-Survey Questionnaire	Benita Maceyak	03/2020
Building Unit Breakdown	Benita Maceyak	2020
Site Floor Plans	Turnquist Architects	N/A
Energy Audit	Benita Maceyak	9/15/2011
Rent Roll	Benita Maceyak	03/2020
T12 Report	Benita Maceyak	2018-2019

5.2 INTERVIEWS

Contact Name	Contact Title	Contact Phone	Information Source Provided
Benita Maceyak	Senior Office Assistant	914-631-1991	Provided interview and conducted the site visit
Wilfredo Gonzalez	Executive Director	914-490-8270	Provided interview and conducted the site visit

5.3 BUILDING CODE COMPLIANCE

AEI requested a record of open violations on file for the Property from the City of Tarrytown Building Department.

The property operates under federal laws and is not within the jurisdiction of the local Building and Planning Department. See Appendix for detailed response from the local government.

5.4 FIRE CODE COMPLIANCE

AEI requested a record of open violations on file for the Property from the City of Tarrytown Fire Department.

The property operates under federal laws and is not within the jurisdiction of the local Building and Planning Department. See Appendix for detailed response from the local government.

5.5 ZONING COMPLIANCE

The property is zoned MU: Mixed Use. The property operates under federal laws and is not within the jurisdiction of the local Building and Planning Department. See Appendix for detailed response from the local government.

5.6 HUD REAL ESTATE ASSESSMENT CENTER (REAC) INSPECTION

AEI was provided with a copy of the most recent REAC inspection, dated December 16, 2019], during the site visit.

The results of the most recent REAC inspection are as follows:

Non-Life Threatening Projected Counts: **1**
Life Threatening Projected Counts: **8**
Smoke Detector Projected Counts: **1**
Final Score: **78**

Because the property received a REAC score of 60 or above, HUD requires that all Non-EH&S deficiencies be corrected as part of the property's ongoing maintenance program. The site contacts indicated that the correction of Non-EH&S deficiencies is ongoing as of the date of this Report. Accordingly, Non-Critical Repairs are recommended for the completion of the outstanding Non-EH&S deficiencies.



6.0 ACCESSIBILITY & INTRUSIVE EXAMINATIONS

6.1 ACCESSIBILITY

Determination of ADA, UFAS, FHA Applicability

Application	Yes/No	Definition
Age: Was this property constructed after July 1992? (ADAAG Question)	No	Under Title III of the ADA, all "new construction" (construction, modification, or alterations) after the effective date of the ADA (approx. July 1992) must be fully compliant with the ADAAG.
Use: Does the property feature areas of public accommodation? (ADAAG Question)	Yes, leasing office	A public accommodation is a private entity that owns, operates, leases, or leases to a place of public accommodation. Places of public accommodation include restaurants, hotels, theaters, doctor's offices, pharmacies, retail stores, museums, libraries, parks, private schools, and day care centers, and entities that offer certain examinations and courses related to educational or occupational certification.
Use: Is the property classified as a historic structure? (ADAAG Question)	No	Properties listed or are eligible for listing in the National Register of Historic Places or properties designated as historic under state or local law should comply to the "maximum extent feasible" unless the changes would destroy the historic significance of a feature of the building.
Use: Is the property classified as a private club or religious structure? (ADAAG Question)	No	Properties classified as such are exempt from complying with the ADAAG.
Use: Does the property plan a significant renovation that is at least 20% of the value of the building? (If so, the renovation budget should include upgrades to correct all ADA issues). (ADAAG Question)	No	Alterations include, but are not limited to, remodeling, renovation, rehabilitation, reconstruction, historic restoration, changes or rearrangement in structural parts or elements, and changes or rearrangement in the plan configuration of walls and full-height partitions. Normal maintenance, reroofing, painting or wallpapering, asbestos removal, or changes to mechanical and electrical systems are not alterations unless they affect the usability of the building or facility.
Use: Does the property feature federal financial assistance? (UFAS Question)	Yes	Section 504 of the Rehabilitation Act of 1973 states: No otherwise qualified individual with a disability in the United States. . .shall, solely by reason of her or his disability, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program, service or activity receiving federal financial assistance or under any program or activity conducted by any Executive agency or by the United States Postal Service. (29 U.S.C. 794). This

Application	Yes/No	Definition
		means that Section 504 prohibits discrimination on the basis of disability in any program or activity that receives financial assistance from any federal agency, including the U.S. Department of Housing and Urban Development (HUD) as well as in programs conducted by federal agencies including HUD.
Age: Was this property constructed prior to July 11, 1988? (UFAS Question)	Yes	While UFAS is still applicable for all project based properties; HUD has allowed for load bearing wall, financial, and administrative burden exceptions to retroactively achieving UFAS compliance.
Age: Was this property constructed after March 13, 1991? (FHA Question)	No	Multi-family properties constructed after March 13, 1991 should be in compliance with the Fair Housing Act Accessibility Guidelines. There are select exceptions.
Age: Was this property provided original building permits after June 15, 1990? (FHA Question)	No	Buildings where the last building permit was issued on or before June 15, 1990 are not covered by the design and construction requirements. Even if the last building permit was issued after June 15, 1990, if the property was occupied before March 13, 1991, it is not covered. HUD adopted these dates to allow time for the requirements to be considered during the design and construction phase of new properties.

Abbreviated Screening Checklist for ADAAG Compliance

	Building History	Yes	No	N/A	Comments
1.	Has an ADA survey previously been completed on the property?		✓		No previous ADA Survey for the property was provided or reported.
2.	Have any ADA improvements been made to the property?		✓		
3.	Does a Transition Plan / Barrier Removal Plan exist for the property?		✓		
4.	Has building ownership or management received any ADA-related complaints that have not been resolved?		✓		
5.	Is any litigation pending related to ADA issues?		✓		
Parking					
1.	Are there sufficient accessible parking spaces with respect to the total number of reported spaces?	✓			67 total spaces 5 designated accessible spaces
2.	Are there sufficient van-accessible parking spaces available (96" wide aisle for van)?		✓		No van accessible spaces provided. (Critical Repair)
3.	Are accessible spaces marked with the International Symbol of Accessibility? Are there signs reading "Van Accessible" at van spaces?		✓		No signage for van accessible spaces was observed. (Critical Repair)

Building History		Yes	No	N/A	Comments
4.	Is there at least one accessible route provided within the boundary of the site from public transportation stops, accessible parking spaces, passenger loading zones, if provided, and public streets and sidewalks?	✓			
5.	Do curbs on the accessible route have depressed, ramped curb cuts at drives, paths, and drop-offs?	✓			
6.	If required does signage exist directing you to accessible parking and an accessible building entrance?	✓			
Ramps					
1.	Do all ramps along accessible path of travel appear to meet slope requirements? (1:12 or less) Please note shorter ramps can be more steep than 1:12 if rise is less than 6-inches.	✓			
2.	Are ramps that appear longer than 6 ft complete with railings on both sides?	✓			
3.	Does the width between railings appear to be at least 36 inches?	✓			
4.	Are the cross slopes less steep than 1:48?	✓			
5.	Do the ramp runs rise no more than 30-inches?	✓			
6.	Are there level landings at the bottom and top of the ramp runs?	✓			
Entrances/Exits					
1.	Do all required accessible entrance doorways appear at least 32 inches wide and not a revolving door?	✓			
2.	If the main entrance is inaccessible, are there alternate accessible entrances?			✓	
3.	Is the door hardware easy to operate (lever/push type hardware, no twisting required and not higher than approximately 48 inches above the floor)?	✓			Automatic opener provided at main entrance
Paths of Travel					
1.	Are all paths of travel free of obstruction and wide enough for a wheelchair (appear at least 36 inches wide)?	✓			
2.	Are wheelchair-accessible facilities (toilet rooms, exits, etc.) identified with signage?	✓			
3.	Is there a path of travel that does not require the use of stairs?	✓			Elevators are provided.

Building History		Yes	No	N/A	Comments
Elevators					
1.	Do the call buttons have visual and audible signals to indicate when a call is registered and answered when car arrives?	✓			
2.	Are there visual and audible signals inside cars indicating floor change?	✓			
3.	Are there standard raised and Braille marking on both jambs of each hoist way entrance as well as all cab/call buttons?	✓			
4.	Do elevator doors have a reopening device that will stop and reopen a car door if an object or a person obstructs the door?	✓			
5.	Are elevator controls low enough to be reached from a wheelchair (appears to be between 15 and 48 inches)?	✓			
6.	If a two-way emergency communication system is provided within the elevator cab, is it usable without voice communication?	✓			
Toilet Rooms					
1.	Are common area public restrooms located on an accessible route?	✓			
2.	Are pull handles push/pull or lever type?	✓			Lever
3.	Are toilet room access doors wheelchair-accessible (appear to be at least 32 inches wide)?	✓			
4.	Are public restrooms large enough to accommodate a wheelchair turnaround (appear to have 60"• turning diameter)?		✓		Common area leasing office was observed to not be able to accommodate a 60-inch turning radius and has been noted as a Critical Repair.
5.	Are toilet stall doors wheelchair accessible (appear to be at least 32"• wide)?			✓	
6.	Are grab bars provided in toilet stalls?		✓		Common area leasing office was observed without complaint toilet grab bars and has been noted as a Critical Repair.
7.	Are sinks provided with clearance for a wheelchair to roll under?	✓			
8.	Are sink handles operable with one hand without grasping, pinching or twisting?	✓			
9.	Are exposed pipes under sink sufficiently insulated against contact?		✓		Common area leasing office was observed without scald and abrasion wrapping and has been noted as a Critical Repair.

Building History		Yes	No	N/A	Comments
Pools					
1.	Are public access pools provided? If the answer is no, please disregard this section.			✓	
2.	How many accessible access points are provided to each pool/spa? Provide number in comment field.			✓	

Abbreviated Screening Checklist for UFAS Compliance

Building History		Yes	No	N/A	Comments
Common Area Paths of Travel					
1.	Are all paths of travel free of obstruction and wide enough for a wheelchair?	✓			
2.	Do the common laundry rooms have a front controlled washing machine?	✓			
3.	Is there a path of travel that does not require the use of stairs to get to all common areas?	✓			
Play Area					
1.	Are the common area playgrounds accessible by wheelchair?	✓			Common area paths are accessible by wheelchair, however the sidewalk currently contains a tripping hazard and has been noted as a Critical Repair.
Designated Handicapped Dwelling Units					
1.	Do the unit entrance doors as well as the bathroom and bedroom doors feature 32" clear openings and low entrance thresholds for wheelchair access?			✓	Unit 103 and Unit 22 have been noted as Handicap units within the building.
2.	Do all accessible doors have adequate space provided at latch side of door (see UFAS Figure 25)?	✓			
3.	Are exterior balconies/decks <1/2" below interior floor level?			✓	No balconies are provided.
4.	Are all switches, controls and outlets located at between 15" and 54" above floor	✓			
5.	Accessible Kitchens: Is a 30x48 clear space provided at range/cooktop as well as front controls?	✓			
6.	Accessible Kitchens: Is 40" clearance provided between counters, cabinets, walls, or appliances and opposing item. Is a 60" turning radius available in U-shaped kitchens if sink or range/cooktop is located at base of U? Are the sinks roll-under for a 30"x48" forward approach?		✓		a 60" turning radius is not provided in Unit 103 or Unit 22 (HC units) and has been noted as a Critical Repair

	Building History	Yes	No	N/A	Comments
7.	Accessible Kitchens: Are the countertops and sinks lowered from 36" to approximately 34"?		✓		a 34" kitchen countertop is not provided in Unit 103 or Unit 22 (HC units) and has been noted as a Critical Repair
8.	Accessible Bathrooms: Do the bathrooms feature adequate clear floor space to each of the fixtures?		✓		a 60" turning radius is not provided in Unit 103 or Unit 22 (HC units) and has been noted as a Critical Repair
9.	Accessible Bathrooms: Do the bathrooms feature accessible accessories (levered hardware, shower hoses, shower chairs or benches, lowered mirrors etc)?		✓		accessible accessories were not observed in Unit 103 or Unit 22 (HC units) and has been noted as a Critical Repair

Abbreviated Screening Checklist for FHA Compliance

	Building History	Yes	No	N/A	Comments
Fair Housing Act Accessibility Review					
1.	Requirement 1. Are there accessible building entrances on an accessible route? All covered multifamily dwellings must have at least one accessible building entrance on an accessible route unless it is impractical to do so because of the terrain or unusual characteristics of the site.			✓	
2.	Requirement 2. Are the public and common use areas accessible? Covered housing must have accessible and usable public and common-use areas. Public and common-use areas cover all parts of the housing outside individual units. They include -- for example -- building-wide fire alarms, parking lots, storage areas, indoor and outdoor recreational areas, lobbies, mailrooms and mailboxes, and laundry areas.			✓	
3.	Requirement 3. Are the doors "Usable" (usable by a person in a wheelchair)? All doors that allow passage into and within all premises must be wide enough to allow passage by persons using wheelchairs (32-inch nominal clearance).			✓	
4.	Requirement 4. Is there an accessible route into and through the dwelling unit? There must be an accessible route into and through each covered unit.			✓	
5.	Requirement 5. Are the light switches, electrical outlets, thermostats and other environmental controls in accessible locations? Light switches,			✓	

	Building History	Yes	No	N/A	Comments
	electrical outlets, thermostats and other environmental controls must be in accessible locations.				
6.	Requirement 6. Are there reinforced walls in bathrooms for later installation of grab bars? Reinforcements in bathroom walls must be installed, so that grab bars can be added when needed. The law does not require installation of grab bars in bathrooms.			✓	
7.	Requirement 7. Are the kitchens and bathrooms "Usable"? Kitchens and bathrooms must be usable - that is, designed and constructed so an individual in a wheelchair can maneuver in the space provided.			✓	

These checklists do not cover all of the requirements for ADA, UFAS, and Fair Housing compliance; therefore it is not for facilities undergoing new construction, remodels or alterations. In addition, these checklist do not attempt to illustrate all possible barriers/problems or propose all possible barrier removal and modifications solutions. Not all situations are covered above.

The checklist are intended as a general screening of the existing subject property and shall not be construed as a legal "Accessibility Survey." Additionally, not all areas of the subject property may have been accessed during the Capital Needs Assessment. AEI recommendations are offered and are based upon visual observations of deficiencies that are considered to be readily achievable. Further financial study of the recommendations may be necessary in order to determine if they may constitute an undue financial burden.

RECOMMENDATIONS

AEI did observe accessibility design issues with the applicable codes detailed in the above checklists.

ADAAG Concerns:

- The leasing office was observed with a non-compliant public restroom. The toilets require the installation of rear and side grab bars as well as missing scald and abrasion wrapping below sink. (Critical Repair)
- The leasing office bathroom did not feature a 60-inch turning diameter; AEI was not provided entry into the restroom, though this information was provided by Property Management. Due to the non-compliant turning space, AEI recommends consulting with an Architect, in order to assess and address the issues by providing a compliant accessible public restroom. (Critical Repair)
- Based upon the 67 standard uncovered parking spaces available at the site, three handicapped accessible parking spaces, inclusive of one van accessible handicapped parking space are required by Americans with Disabilities Act Accessibility Guidelines

(ADAAG). The site currently features five designated handicapped spaces, none of which are van accessible, three of which do not have striped access aisles or curb cuts, and one does not have vertical signage. In order to comply with ADAAG, one of the existing accessible spaces should be converted to a van accessible space. In addition, access aisles and curb cuts should be installed where missing. Standard handicapped spaces require a 60" wide access aisles and vertical and horizontal identification. Van accessible handicapped spaces require a 96" wide access aisle, vertical signage identifying the space as van accessible, and horizontal identification. The designated handicapped parking spaces should be located at the closest accessible route to the building entrances and two (2) spaces may share a single access aisle. (Critical Repair)

UFAS Concerns:

UFAS Units were designated as Unit 103 and Unit 202

- The Property was originally constructed in 1963 and features project-based assistance. The apartments are therefore subject to the requirements of Section 504 of the Rehabilitation Act of 1973, which states that 5% or four (4) of the dwelling units must be handicapped accessible. Currently, the property features two (2) handicapped accessible units. In order to comply with UFAS, the reconfiguring of two (2) of the dwelling units to become fully UFAS compliant is required. Cost is remaining at the time being, however, HUD does not always require older project based properties to be fully compliant with UFAS due to load bearing wall exceptions pre 1988. (Critical Repair)
- The property was originally constructed in 1963 and features project-based assistance. The apartments are therefore subject to the requirements of Section 504 of the Rehabilitation Act of 1973, which states that 2% or two (2) non-designated handicapped dwelling units are required to have audio/visual smoke alarms. In order to comply with UFAS, the installation of audio/visual smoke alarms in two (2) non-designated handicapped dwelling units is required. (Critical Repair)
- The designated handicapped dwelling unit kitchens were observed to be non-compliant; the minimum 40-inches is not provided between the counters, cabinets and appliances, there is not a roll-under sink with a max. counter height of 34-inches, there is not a roll-under 30-inch work space with a max. counter height of 34-inches, and there is not at least one shelf on all cabinets and storage shelves mounted above work counters with a max. height of 48-inches. In order to comply with UFAS, repairs of these non-compliant features is required. Cost is remaining at the time being, however, HUD does not always require older project based properties to be fully compliant with UFAS due to load bearing wall exceptions pre 1988. (Critical Repair)
- The designated handicapped dwelling unit bathrooms were observed to be non-compliant; they are without proper toilet grab bars or accessories, and there is not the minimum 60-inch turn around space with the bathrooms. In order to comply with UFAS, the bathroom should be modified to provide a 60-inch turn around space, compliant grab bars should be installed, and compliant shower hose hardware should be installed. AEI recommends consulting with an Architect in order to assess and address

the issues. Cost is remaining at the time being, however, HUD does not always require older project based properties to be fully compliant with UFAS due to load bearing wall exceptions pre 1988. (Critical Repair)

- The designated handicapped dwelling unit bathrooms were observed without scald and abrasion wrapping installed at the sink piping, which is required in order to comply with UFAS and for the safety of the residents. (Critical Repair)
- The designated UFAS units bathroom and bedroom doors were equipped with knob hardware. In order to comply with UFAS, levered hardware is required to be installed. (Critical Repair)
- Concrete flatwork was observed adjacent to the play area, but no pavement was provided directly connecting to the play area, which is required in order to comply with UFAS. (Critical Repair)

Photographs



UFAS Unit 103 Two Bedroom One Bathroom (occupied): Kitchen Measurement



UFAS Unit 103 Two Bedroom One Bathroom (occupied): Kitchen Measurement



UFAS Unit 103 Two Bedroom One Bathroom (occupied): Kitchen Sink Width



UFAS Unit 103 Two Bedroom One Bathroom (occupied): Kitchen Sink Height



UFAS Unit 103 Two Bedroom One Bathroom (occupied): Sink Under Counter Not Prepped For Wheelchair (Critical Repair)



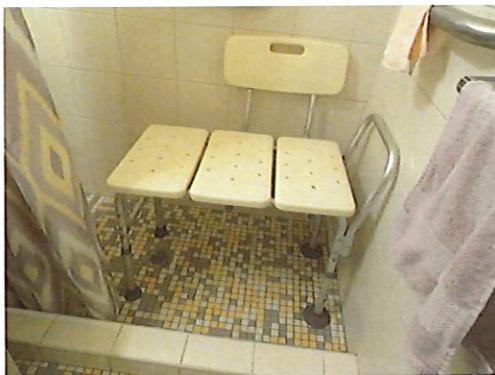
UFAS Unit 103 Two Bedroom One Bathroom (occupied): Kitchen Width is less than 40-inches (Critical Repair)



UFAS Unit 103 Two Bedroom One Bathroom (occupied): Kitchen Width



UFAS Unit 103 Two Bedroom One Bathroom (occupied): Bathroom Door Doesn't Have Levered Hardware (Critical Repair)



UFAS Unit 103 Two Bedroom One Bathroom (occupied): Bathroom Shower Seat



UFAS Unit 103 Two Bedroom One Bathroom (occupied): Shower Hose Broken (Critical Repair)



UFAS Unit 103 Two Bedroom One Bathroom (occupied): Bathroom Length



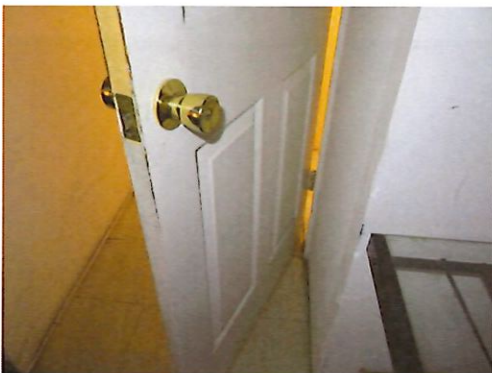
UFAS Unit 103 Two Bedroom One Bathroom (occupied): Bathroom Width



UFAS Unit 103 Two Bedroom One Bathroom (occupied): Bathroom Sink Needs Scald and Abrasion (Critical Repair)



UFAS Unit 103 Two Bedroom One Bathroom (occupied): Bedroom Does Not Have Levered Hardware (Critical Repair)



UFAS Unit 22 Two Bedroom One Bathroom (occupied): Bathroom Door Not Handicap Lever (Critical Repair)



UFAS Unit 22 Two Bedroom One Bathroom (occupied): Bathroom Sink No Scald and Abrasion (Critical Repair)



UFAS Unit 22 Two Bedroom One Bathroom (occupied): Shower Length



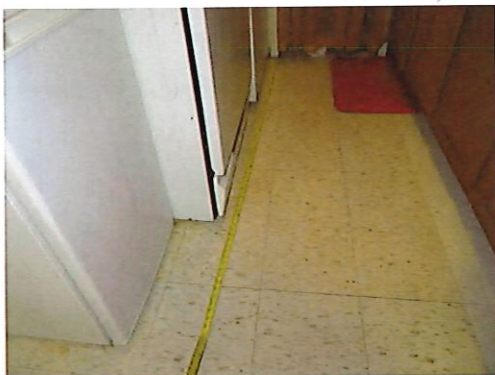
UFAS Unit 22 Two Bedroom One Bathroom (occupied): Shower Width



UFAS Unit 22 Two Bedroom One Bathroom (occupied): Bathroom Sink Height



UFAS Unit 22 Two Bedroom One Bathroom (occupied): Bathroom Width



UFAS Unit 22 Two Bedroom One Bathroom (occupied): Kitchen Length



UFAS Unit 22 Two Bedroom One Bathroom (occupied): Kitchen Distance Between Cabinets



Accessible Parking Near Leasing Office - No access aisles (Critical Repair)

6.2 INTRUSIVE EXAMINATIONS

6.2.1 SEWER INSPECTION

No sewer inspections were performed as part of this investigation.

6.2.2 ELECTRICAL INSPECTION

No electrical inspections were performed as part of this investigation.

6.3 OWNER PROPOSED IMPROVEMENTS

According to property management planned property improvements include:

- Voluntary conversion of common area lighting to LED
- Turnkey upgrades to elevators with an estimated budget of \$600,000
- Upgrades to all tenant kitchens and bathrooms and replacement of circuit breakers with a reported budget of \$1,000,000

Costs for planned improvements are included as Non-Critical Repairs.

7.0 OPINIONS OF PROBABLE COST

7.1 FINANCIAL RECAP

✓ Estimate Period Recap

	Total	\$/Unit
Immediate Repairs (Total)	\$1,696,900	
Life Safety Remedies	\$1,500	\$19
Accessibility Remedies	\$97,530	\$1,204
Non-critical Needs	\$1,597,870	\$19,727

	Total	\$/Unit
Total Deposits [all sources] to RfR Escrow	\$1,193,256	\$14,732
Years in Estimate Period	20	
Initial Deposit	\$348,000	\$4,296
Total Future Annual Deposits	\$810,000	\$10,000
Total Interest Income	\$35,256	
Total Uninflated Future Needs	\$1,697,285	\$20,954
Total Inflated Future Needs (withdrawals)	\$2,206,828	\$27,245
Estimate Period Ending Balance	(\$1,013,572)	(\$12,513)

1st Yr Annual Deposit/Unit	\$500
Lowest RfR Balance Year	20
Lowest RfR Balance \$/Unit	(\$12,513.24)
Last Year Ending Balance Deficiency \$/Unit	\$14,040
Suggested Add to ADRR \$/Unit	\$702
Highest RfR Balance Year	2
Highest RfR Balance \$/Unit	\$4,828
Lowest Withdrawal Year	8
Highest Withdrawal Year	20

Replacement Reserve Summary Table

Replacement Reserve Schedule Term/Inflation Status	Replacement Reserve Schedule Summary Costs	Replacement Reserve Schedule Summary Costs/Per Unit Per Annum
1-10 Year Un-Inflated Costs	\$584,690	\$722
1-10 Year Inflated Costs	\$640,888	\$791
11-20 Year Un-Inflated Costs	\$1,112,595	\$1,374
11-20 Year Inflated Costs	\$1,565,940	\$1,933
1-20 Year Un-Inflated Costs	\$1,697,285	\$1,048
1-20 Year Inflated Costs	\$2,206,828	\$1,362

7.2 CRITICAL REPAIRS

CRITICAL REPAIRS							
Need Category	Component	Repair or Replacement Location	Quantity	Unit of Measure	Unit Cost	Total	Comments
Concrete Pavement	Repair ramp damage (Critical Repair)	Concrete ramp to the southwest corner of the building, leading from the parking area to the rear of the building.	1	Each	\$ 1,500.00	\$ 1,500.00	The ramp leading from the parking lot to the rear of the property was observed with cracking that may pose a trip hazard. Repair is recommended to address this hazard. (IBC Level 1 Alteration)
Concrete Pavement	Provide Accessible Route to Playground (Critical Repair)	Near the playground area to the south of the property.	1	Each	\$ 1,500.00	\$ 1,500.00	No paved path of travel was observed directly leading to the playground area. Paving of sidewalk to connect the existing flatwork directly to the playground area is required in order to comply with UFAS. (IBC Level 1 Alteration)
Striping and Marking	Reconfigure Handicapped Parking (Critical Repair)	Designated handicapped parking	1	Each	\$ 1,850.00	\$ 1,850.00	Based upon the 67 standard uncovered parking spaces available at the site, three handicapped accessible parking spaces, inclusive of one van accessible handicapped parking space are required by Americans with Disabilities Act Accessibility Guidelines (ADAAG). The site currently features five designated handicapped spaces, none of which are van accessible, three of which do not have striped access aisles or curb cuts, and one does not have vertical signage. In order to comply with ADAAG, one of the existing accessible spaces should be converted to a van accessible space. In addition, access aisles and curb cuts should be installed where missing. Standard handicapped spaces require a 60" wide access aisles and vertical and horizontal identification. Van accessible handicapped spaces require a 96" wide access aisle, vertical signage identifying the space as van accessible, and horizontal identification. The designated handicapped parking spaces should be located at the closest accessible route to the building entrances and two (2) spaces may share a single access aisle. (IBC Level 1 Alteration)
Common area bath accessories (towel bars, grab bars, toilet stalls, etc.)	Create Accessible Public Restroom (Critical Repair)	Leasing Office Bathroom	1	Each	\$ 12,500.00	\$ 12,500.00	The leasing office was observed with a non-compliant public restroom. The toilets require the installation of rear and side grab bars as well as missing scald and abrasion wrapping below sink. The leasing office bathroom did not feature a 60-inch turning diameter; AEI was not provided entry into the restroom, though this information was provided by Property Management. Due to the non-compliant turning space, AEI recommends consulting with an Architect, in order to assess and address the issues by providing a compliant accessible public restroom. (IBC Level 1 Alteration)
Interior doors, solid core, wood, metal clad	Install Levered Hardware (Critical Repair)	Units 22 and 103	4	Each	\$ 150.00	\$ 600.00	The designated UFAS units bathroom and bedroom doors were equipped with knob hardware. In order to comply with UFAS, levered hardware is required to be installed. (IBC Level 1 Alteration)
Cabinets & vanities	Accessibility Dwelling Kitchen Modifications (Critical Repair)	HDCP Units 22 and 103	2	Each	\$ 10,000.00	\$ 20,000.00	The designated handicapped dwelling unit kitchens were observed to be non-compliant; the minimum 40-inches is not provided between the counters, cabinets and appliances, there is not a roll-under sink with a max. counter height of 34-inches, there is not a roll-under 30-inch work space with a max. counter height of 34-inches, and there is not at least one shelf on all cabinets and storage shelves mounted above work counters with a max. height of 48-inches. In order to comply with UFAS, repairs of these non-compliant features is required. Cost is remaining at the time being, however, HUD does not always require older project based properties to be fully compliant with UFAS due to load bearing wall exceptions pre 1988. (IBC Level 2 Alteration)

CRITICAL REPAIRS							
Need Category	Component	Repair or Replacement Location	Quantity	Unit of Measure	Unit Cost	Total	Comments
Common area bath accessories (towel bars, grab bars, toilet stalls, etc.)	Install Scald and Abrasion Sink Wrap (Critical Repair)	Units 22 and 103 Bathrooms	2	Each	\$ 40.00	\$ 80.00	The designated handicapped dwelling unit bathrooms were observed without scald and abrasion wrapping installed at the sink piping, which is required in order to comply with UFAS and for the safety of the residents. (IBC Level 1 Alteration)
Common area bath accessories (towel bars, grab bars, toilet stalls, etc.)	UFAS Unit Bathroom Modifications (Critical Repair)	Units 22 and 103 Bathrooms	2	Each	\$ 10,000.00	\$ 20,000.00	The designated handicapped dwelling unit bathrooms were observed to be non-compliant; they are without proper toilet grab bars or accessories, and there is not the minimum 60-inch turn around space with the bathrooms. In order to comply with UFAS, the bathroom should be modified to provide a 60-inch turn around space, compliant grab bars should be installed, and compliant shower hose hardware should be installed. AEI recommends consulting with an Architect in order to assess and address the issues. Cost is remaining at the time being, however, HUD does not always require older project based properties to be fully compliant with UFAS due to load bearing wall exceptions pre 1988. (IBC Level 2 Alteration)
Cabinets & vanities	Create Designated Handicapped Dwelling Units (Critical Repair)	Designated Handicapped Dwelling Units	2	Each	\$ 20,000.00	\$ 40,000.00	The Property was originally constructed in 1963 and features project-based assistance. The apartments are therefore subject to the requirements of Section 504 of the Rehabilitation Act of 1973, which states that 5% or four (4) of the dwelling units must be handicapped accessible. Currently, the property features two (2) handicapped accessible units. In order to comply with UFAS, the reconfiguring of two (2) of the dwelling units to become fully UFAS compliant is required. Cost is remaining at the time being, however, HUD does not always require older project based properties to be fully compliant with UFAS due to load bearing wall exceptions pre 1988. (IBC Level 2 Alteration)
Residential smoke detectors	Install Audio / Visual Smoke Detectors (Critical Repair)	Designated Handicapped Dwelling Units	2	Each	\$ 500.00	\$ 1,000.00	The property was originally constructed in 1963 and features project-based assistance. The apartments are therefore subject to the requirements of Section 504 of the Rehabilitation Act of 1973, which states that 2% or two (2) non-designated handicapped dwelling units are required to have audio/visual smoke alarms. In order to comply with UFAS, the installation of audio/visual smoke alarms in two (2) non-designated handicapped dwelling units is required. (IBC Level 1 Alteration)

Total: \$ 99,030.00

7.3 NON-CRITICAL REPAIRS

NON-CRITICAL REPAIRS							
Need Category	Component	Repair or Replacement Location	Quantity	Unit of Measure	Unit Cost	Total	Comments
Asphalt Pavement	Asphalt Full Depth Replacement (Non-Critical Repair)	Parking Area	300	SF	\$ 5.00	\$ 1,500.00	Although repairs were reported to have occurred in 2017, the asphalt pavement was observed with deficiencies in the form of pot holes, alligator cracking and surface depressions. The damaged areas of paving should be replaced, in order to improve the condition of the Property. (IBC Repair)
Asphalt Seal Coat	Seal Coat Asphalt Parking Lot (Non-Critical Repair)	Parking Area	26800	SF	\$ 0.15	\$ 4,020.00	Seal coating of the entire parking surface is recommended to ensure the longevity of the pavement. (IBC Repair)
Brick/block veneer	Brick Veneer - Re-pointing (Non-Critical Repair)	Brick façade	40	SF	\$ 15.00	\$ 600.00	According to Property Management, there is a specific area of the brick façade that has evidence of water infiltration. The damaged area of brick should be repointed, in order to prevent further damages. (IBC Repair)
Elevator, machinery	Elevator Machinery Upgrades (Non-Critical Repair)	Elevators	2	Each	\$300,000.00	\$ 600,000.00	According to Property Management, planned improvements include turnkey upgrades to elevators, with an estimated budget of \$600,000. (IBC Level 1 Alteration)
Earthwork, swales, drainways, erosion controls	Bare ground (Non-Critical Repair)	East end of property near leasing office	1	Each	\$ 1,500.00	\$ 1,500.00	Bare ground was observed near the Leasing Office entrance to the east. The barren areas should be resod, in order to improve the condition of the Property. (IBC Repair)
Tenant electrical panel	Upgrade Fuse Panels (Non-Critical Repair)	All dwelling unit panels	81	Each	\$ 1,250.00	\$ 101,250.00	According to Property Management, planned improvements include upgrading all fuse panels to breaker panels. No costs were provided to AEI. (IBC Level 1 Alteration)
Lighting- interior common space	Upgrade Common Area Lighting to LED (Non-Critical Repair)	Common area lighting	1	Each	\$ 20,000.00	\$ 20,000.00	According to Property Management, planned improvements include upgrading all common area lighting to LED lighting. No costs were provided to AEI. (IBC Repair)
Cabinets & vanities	Upgrade Dwelling Unit Kitchens (Non-Critical Repair)	Dwelling kitchens	79	Each	\$ 6,000.00	\$ 474,000.00	According to Property Management, planned improvements include upgrading all dwelling kitchens. Cost is included for 79 units; cost is included on a separate line item for converting two existing units to being handicapped accessible. No costs were provided to AEI. (IBC Level 1 Alteration)
Cabinets & vanities	Upgrade Dwelling Unit Bathrooms (Non-Critical Repair)	Dwelling bathrooms	79	Each	\$ 5,000.00	\$ 395,000.00	According to Property Management, planned improvements include upgrading all dwelling bathrooms. Cost is included for 79 units; cost is included on a separate line item for converting two existing units to being handicapped accessible. No costs were provided to AEI. (IBC Level 1 Alteration)

Total: \$ 1,597,870.00

7.4 REPLACEMENT RESERVES

7.5 INSURABLE VALUE - REPLACEMENT COST





Property Insurance Schedule of Replacement Cost (HUD Form 92329)



OMB Approval No. 2502-0029

(exp. 09/30/2016)

CNA Number: 2020-012051

Property Name: Franklin Towers

Date Run: 4/14/20

Residential Buildings

Building Types	Building Id	SF Cost	Total SF	100 % Insurable Value
High-Rise	Franklin Tower	\$177	76,145	\$13,485,280
				\$13,485,280

Property Total: \$13,485,280

This report is electronically generated from data provided by borrowers or lenders as part of an automated Capital Needs Assessment (CNA) where the CNA data collection has OMB Approval No. 2502-0505. When an approval date is shown the form is deemed electronically signed by HUD staff authorized to approve CNAs. Information displayed here is form HUD-92329 bearing OMB Approval No. 2502-0029. Public Reporting Burden for this collection of information is estimated to average .08 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. HUD may not conduct or sponsor, and a person is not required to respond to a collection of information unless that collection displays a valid OMB control number. This information is collected under Public Law 101-625 which requires HUD to implement mortgage insurance for mortgages under Sections 207, 221, 223, 232, or 241 of the National Housing Act. The information will be used by HUD to underwrite applications for mortgage insurance and to execute a firm commitment. Confidentiality for respondents is ensured if disclosure would result in competitive harm in accord with the Freedom of Information Act (FOIA) or if disclosure could impact HUD's ability to provide housing units under the referenced sections of the Act.

8.0 ASSESSOR QUALIFICATIONS

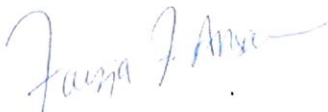
I understand that my Capital Needs Assessment will be used by Tarrytown Municipal Housing Authority to document to the U.S. Department of Housing and Urban Development that the MAP Lender's application for FHA multifamily mortgage insurance was prepared and reviewed in accordance with HUD requirements. I certify that my review was in accordance with the HUD requirements applicable on the date of my review and that I have no financial interest or family relationship with the officers, directors, stockholders, or partners of the Borrower, the general contractor, any subcontractors, the buyer or seller of the proposed property or engage in any business that might present a conflict of interest.

I am employed full time by the MAP Lender (underwriter) or under contract for this specific assignment (as Needs Assessor) and I have no other side deals, agreements, or financial considerations with the MAP Lender or others in connection with this transaction.

I hereby certify under penalty of perjury that all of the information I have provided on this form and in any accompanying documentation is true and accurate. I acknowledge that if I knowingly have made any false, fictitious, or fraudulent statement, representation, or certification on this form or on any accompanying documents, I may be subject to criminal, civil, and/or administrative sanctions, including fines, penalties, and/or imprisonment under applicable federal law, including but not limited to 12 U.S.C. § 1833a; 18 U.S.C. §§1001, 1006, 1010, 1012, and 1014; 12 U.S.C. §1708 and 1735f-14; and 31 U.S.C. §§3729 and 3802.

The site inspection was completed on 3/10/2020

A resume of the property evaluator and the senior reviewers are included in the appendix of this report.



Fauzia Ansari, Assessment Project Manager



Jeb Bonnett, Vice President - HUD Building Assessments

DRAFT
Douglas Olson, Executive Vice President

Warning: Title 18 U.S.C. 1001, provides in part that whoever knowingly and willfully makes or uses a document containing any false, fictitious, or fraudulent statement or entry, in any manner in the jurisdiction of any department or agency of the United States, shall be fined not more than \$10,000 or imprisoned for not more than five years or both.

9.0 LIMITING CONDITIONS

Capital Needs Assessments performed by AEI Consultants are based upon, but not limited to, the scope of work outlined by ASTM Standard E2018-15. Our review of the subject property consisted of a visual inspection of the site, the structure(s) and the interior spaces. Technical Assessments were made based on the appearance of the improvements at the time of this Assessment. No destructive or invasive testing was included in the scope of this review.

The recommendations and conclusions presented as a result of this Assessment apply strictly to the time the Assessment was performed. Available documentation has been analyzed using currently accepted Assessment techniques and AEI believes that the inferences made are reasonably representative of the property.

No warranty is expressed or implied, except that the services rendered have been performed in accordance with generally accepted Assessment practices applicable at the time and location of the study.

This report should not be construed as technically exhaustive. This report does not warranty or guarantee compliance with any Federal, state or local statute, ordinance or regulation including but not limited to, building codes, safety codes, environmental regulations, health codes or zoning ordinances or compliance with trade/design standards or the standards developed by the insurance industry. Local, state and federal regulations, and codes change significantly over time from when the subject property was developed and the subject building was constructed. The subject property and subject building may not meet all current regulations, and code requirements put forth on a local, state, or federal level.

AEI Consultants has made reasonable efforts to properly assess the property conditions within the contracted scope of services; however, limitations during the assessment may be encountered.

AEI Consultants' findings and conclusions were based primarily on the visual assessment of the property at the time the site visit. In addition, the assessment value is based upon comparative judgments with similar properties in the property observer's experience. The Client is herewith advised that the conditions observed by AEI are subject to change. AEI's property observations included areas that were readily accessible without opening or dismantling secure areas or components. AEI's conclusions did not include any destructive or invasive testing, laboratory analysis, exploratory probing or engineering evaluations of structural, mechanical, electrical, or other systems with related calculations.

No assessment can wholly eliminate the uncertainty regarding the presence of physical deficiencies and performances of the building system. According to the ASTM guidelines, a property condition assessment is intended to reduce the risk regarding potential building system and component failure. The ASTM standard recognizes the inherent subjective nature of the assessment regarding such issues as workmanship, quality of care during installation, maintenance of building systems and remaining useful of the building system or components.

Assessments, analysis and opinions expressed within this report are not representations regarding either the design integrity or the structural soundness of the project.

No destructive or invasive testing was included in the scope of this Assessment.

Limitations to AEI's standard site assessment protocol were encountered. Full access to the property was not made available due to the following circumstances:

Discuss any limitations encountered at the Property with the Project Manager or Senior Author and list here in bullet format. Access issues should be verbally approved by the Client (through the Project Manager) PRIOR to the site visit and PRIOR to the issuance of this report.

APPENDIX A

Dwelling Unit Photo Documentation



1. UFAS Unit 103 Two Bedroom One Bathroom (occupied): Front Door



2. UFAS Unit 103 Two Bedroom One Bathroom (occupied): View of Living Room



3. UFAS Unit 103 Two Bedroom One Bathroom (occupied): Kitchen



4. UFAS Unit 103 Two Bedroom One Bathroom (occupied): Kitchen Measurement



5. UFAS Unit 103 Two Bedroom One Bathroom (occupied): Kitchen Measurement



6. UFAS Unit 103 Two Bedroom One Bathroom (occupied): Kitchen Sink Width



7. UFAS Unit 103 Two Bedroom One Bathroom (occupied): Kitchen Sink Height



8. UFAS Unit 103 Two Bedroom One Bathroom (occupied): Sink Under Counter Not Prepped For Wheelchair (Critical Repair)



9. UFAS Unit 103 Two Bedroom One Bathroom (occupied): Kitchen Width is less than 40-inches (Critical Repair)



10. UFAS Unit 103 Two Bedroom One Bathroom (occupied): Kitchen Width



11. UFAS Unit 103 Two Bedroom One Bathroom (occupied): Bathroom Needs Grab Bars (Critical Repair)



12. UFAS Unit 103 Two Bedroom One Bathroom (occupied): Bathroom Door Doesn't Have Levered Hardware (Critical Repair)



13. UFAS Unit 103 Two Bedroom One Bathroom (occupied): Bathroom Shower Seat



14. UFAS Unit 103 Two Bedroom One Bathroom (occupied): Shower Hose Broken (Critical Repair)



15. UFAS Unit 103 Two Bedroom One Bathroom (occupied): Bathroom Length



16. UFAS Unit 103 Two Bedroom One Bathroom (occupied): Bathroom Width



17. UFAS Unit 103 Two Bedroom One Bathroom (occupied): Bathroom Sink Needs Scald and Abrasion (Critical Repair)



18. UFAS Unit 103 Two Bedroom One Bathroom (occupied): Bedroom One



19. UFAS Unit 103 Two Bedroom One Bathroom (occupied): Typical Smoke Alarm



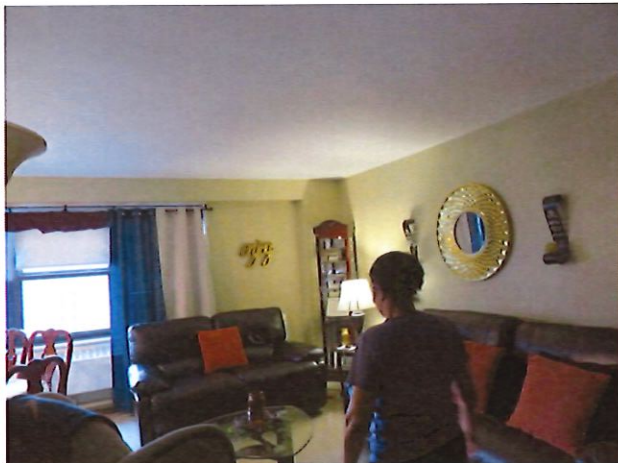
20. UFAS Unit 103 Two Bedroom One Bathroom (occupied): Bedroom Two



21. UFAS Unit 103 Two Bedroom One Bathroom (occupied): Bedroom Does Not Have Levered Hardware (Critical Repair)



22. Unit 104 Three Bedroom One Bathroom (occupied): Front Door



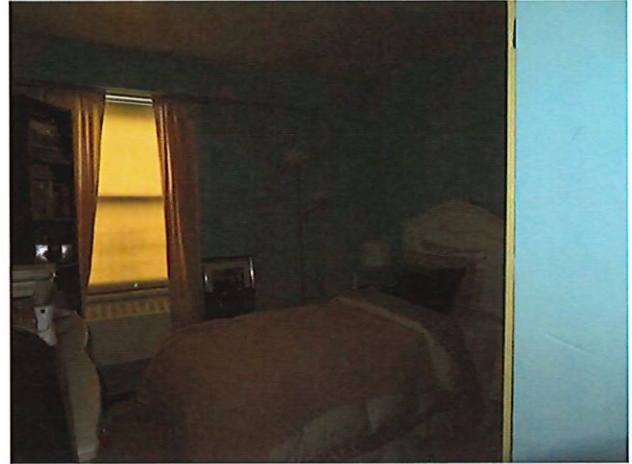
23. Unit 104 Three Bedroom One Bathroom (occupied): View Of Living Room



24. Unit 104 Three Bedroom One Bathroom (occupied): Kitchen



25. Unit 104 Three Bedroom One Bathroom (occupied): Bedroom One



26. Unit 104 Three Bedroom One Bathroom (occupied): Bedroom Two



27. Unit 104 Three Bedroom One Bathroom (occupied): Bathroom



28. Unit 104 Three Bedroom One Bathroom (occupied): GFCI in Bathroom



29. Unit 108 One Bedroom One Bathroom (occupied): Front Door



30. Unit 108 One Bedroom One Bathroom (occupied): View of Living Room



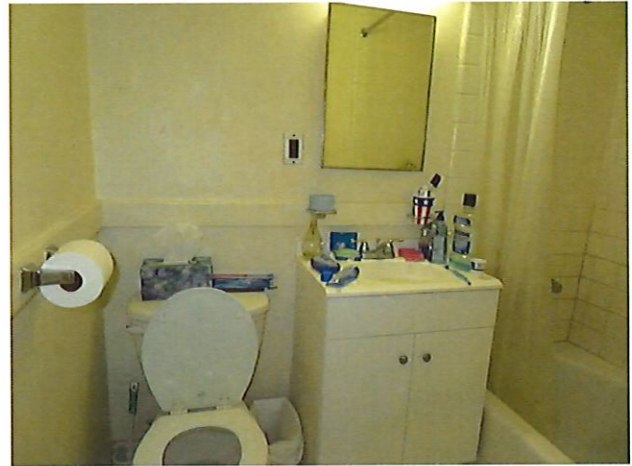
31. Unit 108 One Bedroom One Bathroom (occupied): Kitchen



32. Unit 108 One Bedroom One Bathroom (occupied): Typical Smoke Alarm



33. Unit 108 One Bedroom One Bathroom (occupied): Bedroom



34. Unit 108 One Bedroom One Bathroom (occupied): Bathroom



35. Unit 108 One Bedroom One Bathroom (occupied): Bathtub



36. Unit 101 Three Bedroom One Bathroom (occupied): Front Door



37. Unit 91 Three Bedroom One Bathroom (occupied): Front Door



38. Unit 91 Three Bedroom One Bathroom (occupied): Kitchen



39. Unit 91 Three Bedroom One Bathroom (occupied): Typical Smoke Alarm



40. Unit 91 Three Bedroom One Bathroom (occupied): Bedroom One



41. Unit 91 Three Bedroom One Bathroom (occupied): Bedroom Two



42. Unit 91 Three Bedroom One Bathroom (occupied): Bathroom



43. Unit 82 Two Bedroom One Bathroom (occupied): Front Door



44. Unit 82 Two Bedroom One Bathroom (occupied): View of Living Room



45. Unit 82 Two Bedroom One Bathroom (occupied):
Kitchen



46. Unit 82 Two Bedroom One Bathroom (occupied):
Bedroom One



47. Unit 82 Two Bedroom One Bathroom (occupied):
Bedroom Two



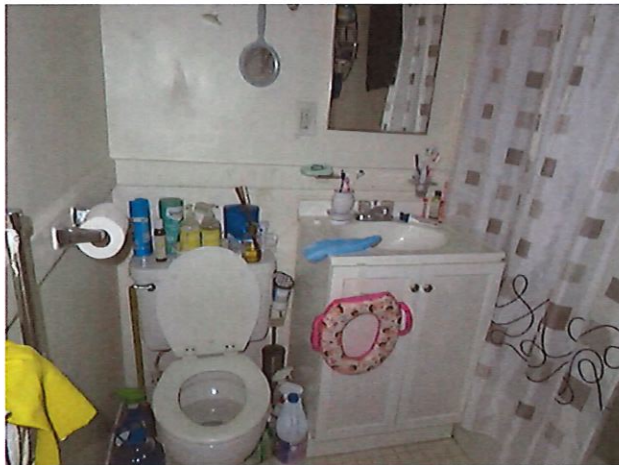
48. Unit 82 Two Bedroom One Bathroom (occupied):
Bathroom



49. Unit 82 Two Bedroom One Bathroom (occupied):
Bathroom GFCI



50. Unit 88 One Bedroom One Bathroom (occupied):
Front Door



51. Unit 88 One Bedroom One Bathroom (occupied):
Bathroom



52. Unit 88 One Bedroom One Bathroom (occupied):
Bedroom



53. Unit 88 One Bedroom One Bathroom (occupied):
View of Living Room



54. Unit 88 One Bedroom One Bathroom (occupied):
Kitchen



55. Unit 25 One Bedroom One Bathroom (vacant):
Front Door



56. Unit 25 One Bedroom One Bathroom (vacant):
Bedroom



57. Unit 25 One Bedroom One Bathroom (vacant):
Bathroom



58. UFAS Unit 22 Two Bedroom One Bathroom
(occupied): Front Door



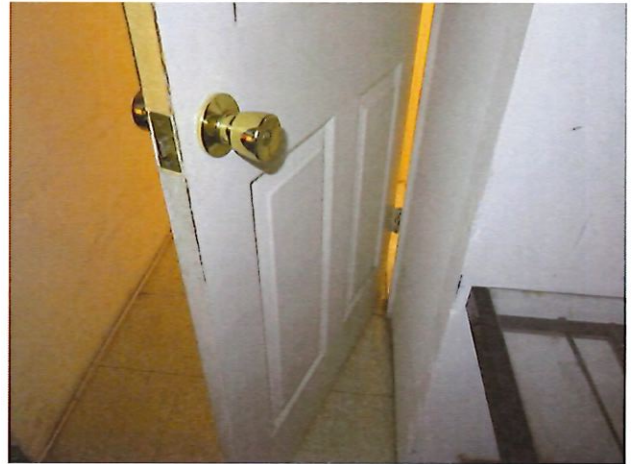
59. UFAS Unit 22 Two Bedroom One Bathroom
(occupied): View of Living Room



60. UFAS Unit 22 Two Bedroom One Bathroom
(occupied): Kitchen



61. UFAS Unit 22 Two Bedroom One Bathroom (occupied): Bathroom No Grab Bars (Critical Repair)



62. UFAS Unit 22 Two Bedroom One Bathroom (occupied): Bathroom Door Not Handicap Lever (Critical Repair)



63. UFAS Unit 22 Two Bedroom One Bathroom (occupied): Bathroom Sink No Scald and Abrasion (Critical Repair)



64. UFAS Unit 22 Two Bedroom One Bathroom (occupied): Shower Length



65. UFAS Unit 22 Two Bedroom One Bathroom (occupied): Shower Width



66. UFAS Unit 22 Two Bedroom One Bathroom (occupied): Bathroom Sink Height



67. UFAS Unit 22 Two Bedroom One Bathroom (occupied): Bathroom Width



68. UFAS Unit 22 Two Bedroom One Bathroom (occupied): Kitchen Length



69. UFAS Unit 22 Two Bedroom One Bathroom (occupied): Kitchen Distance Between Cabinets



70. Unit 21 Four Bedroom One and a Half Bathroom (occupied): Front Door



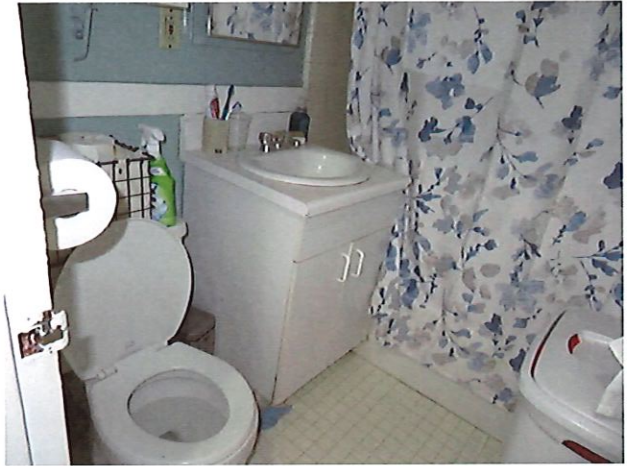
71. Unit 21 Four Bedroom One and a Half Bathroom (occupied): View of Living Room



72. Unit 21 Four Bedroom One and a Half Bathroom (occupied): Kitchen



73. Unit 21 Four Bedroom One and a Half Bathroom (occupied): Hallway



74. Unit 21 Four Bedroom One and a Half Bathroom (occupied): Bathroom



75. Unit 21 Four Bedroom One and a Half Bathroom (occupied): Bedroom One



76. Unit 21 Four Bedroom One and a Half Bathroom (occupied): Bedroom Two



77. Unit 29 One Bedroom One and a Half Bathroom (occupied): Front Door



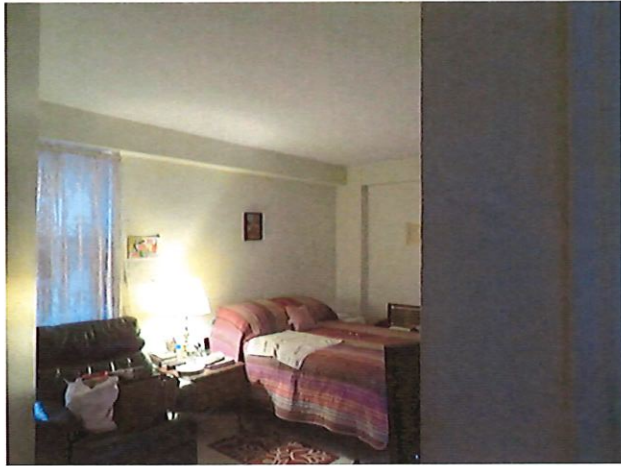
78. Unit 29 One Bedroom One and a Half Bathroom (occupied): View of Living Room



79. Unit 29 One Bedroom One and a Half Bathroom (occupied): Kitchen



80. Unit 29 One Bedroom One and a Half Bathroom (occupied): Typical Smoke Alarm



81. Unit 29 One Bedroom One and a Half Bathroom (occupied): Bedroom



82. Unit 28 One Bedroom One and a Half Bathroom (occupied): Front Door



83. Unit 28 One Bedroom One and a Half Bathroom (occupied): View of Living Room



84. Unit 28 One Bedroom One and a Half Bathroom (occupied): Kitchen



85. Unit 28 One Bedroom One and a Half Bathroom (occupied): Bedroom



86. Unit 28 One Bedroom One and a Half Bathroom (occupied): Bathroom

APPENDIX B

General Photo Documentation



1. Accessible Parking Near Leasing Office - No access aisles (Critical Repair)



2. Concrete Sidewalk Near Leasing Office



3. Site Overview



4. Exterior Signage



5. Exterior Lighting



6. Exterior Security Camera



7. Main Entrance



8. Bare Ground



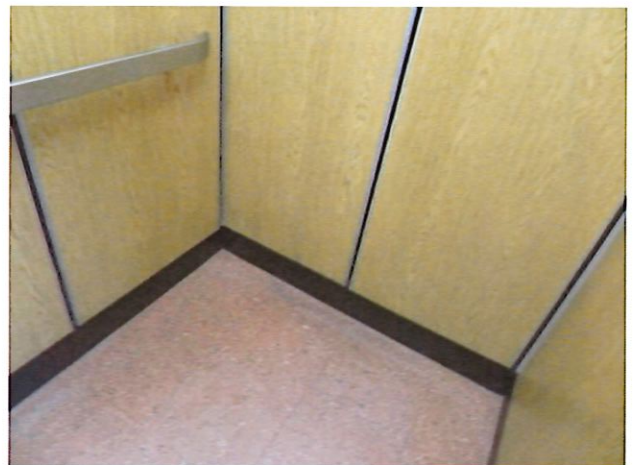
9. Buzzer Intercom System



10. Fire Pull Station



11. Elevators



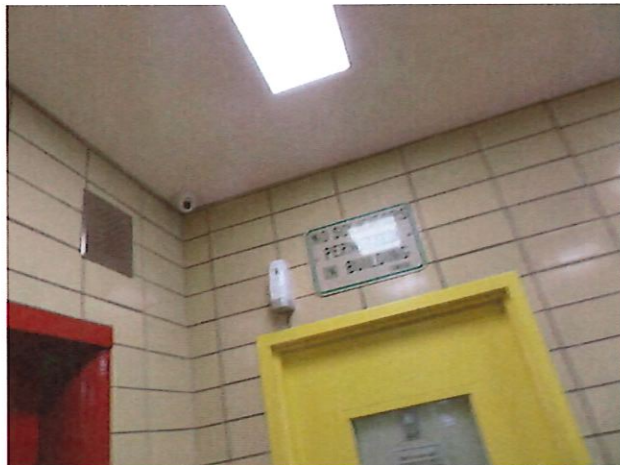
12. Elevator Cab Interior



13. Elevator Cab Interior



14. Typical Smoke Alarm



15. Interior Security Camera



16. Elevator Cab Buttons



17. Mailroom



18. Laundry Room Washers and Dryers



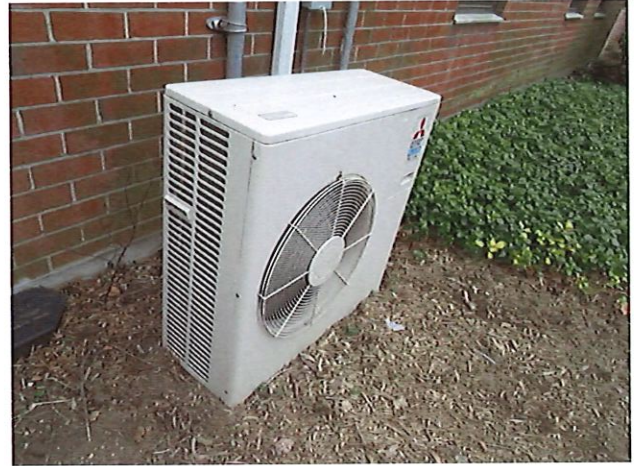
19. Laundry and Dryer Pay Machine



20. Leasing Office Entrance



21. Leasing Office Front Door



22. Outdoor Heat Pump Unit



23. Leasing Office Entrance



24. Parking Lot



25. Pothole Repair for Asphalt Parking Lot (Non-Critical Repair)



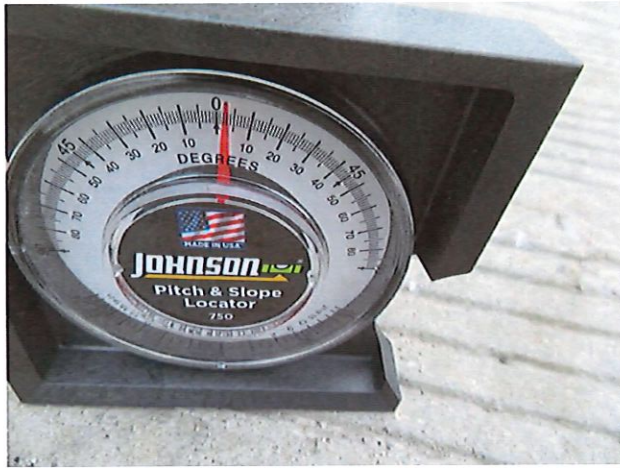
26. Pothole Repair for Asphalt Parking Lot (Non-Critical Repair)



27. Pothole Repair for Asphalt Parking Lot (Non-Critical Repair)



28. Trash Enclosure by Parking Lot



29. 2.5 Degrees Slope on Curb Ramp



30. Concrete Ramp



31. Wheelchair Access Way Needs to be Repaired
(Critical Repair)



32. Solar and Wind Generation for Parking Light
Fixtures



33. Retaining Wall and Parking Along Franklin Court



34. Property Entrance Facing Franklin Street



35. Typical Sidewalk Width



36. Outdoor Steps and Metal Handrail



37. Site Topography and Landscaping



38. Outdoor Playground



39. Playground Swings



40. Storm Drain Manhole



41. Outdoor Seating Enclosure



42. Outdoor Playground



43. Playground Needs Correct Path of Travel to Swings and Slides (Critical Repair)



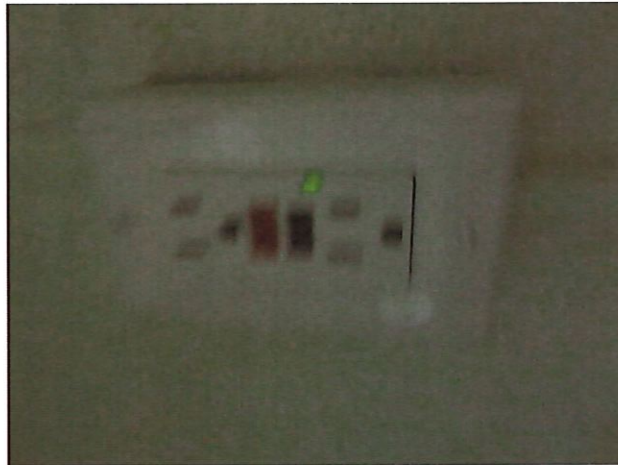
44. IMG 7046



45. Security Systems Room



46. Leasing Office Restroom



47. GFCI in Leasing Office Restroom



48. Leasing Office



49. Leasing Office Conference Room



50. Leasing Office Conference Room



51. Typical Indoor Fire Hose



52. Fire Panel



53. Boiler Room



54. Boiler Room



55. AL Eastmond & Sons Boilers



56. Typical Fire Extinguisher



57. AO Smith Water Heater



58. Well Pump Pressure Gauge



59. Typical Fire Extinguisher



60. Typical Fire Exit Sign



61. Back Door



62. Exterior Backside View of Building



63. Basketball Court



64. Landscape Storm Drain



65. Outdoor Picnic Area



66. Standpipe System



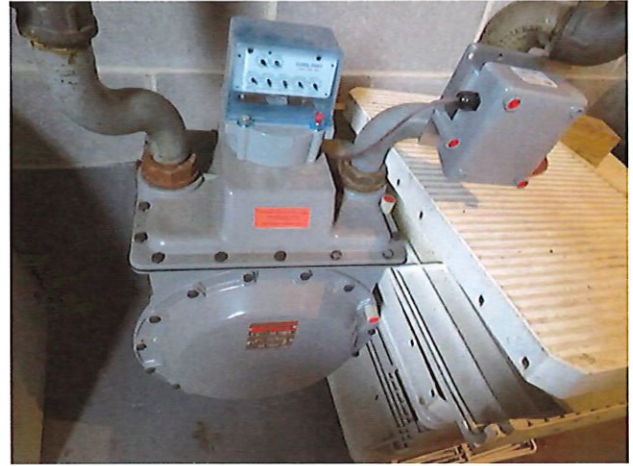
67. Transfer Switch for Generator



68. Main Switch Board In Electrical Room



69. Electric Meter



70. Gas Meter



71. Elevator Weight Capacity



72. Indoor Security Camera



73. Roof Flashing



74. View of Exterior Elevator Maintenance Room



75. Lightweight Concrete Ceiling



76. View of Roof



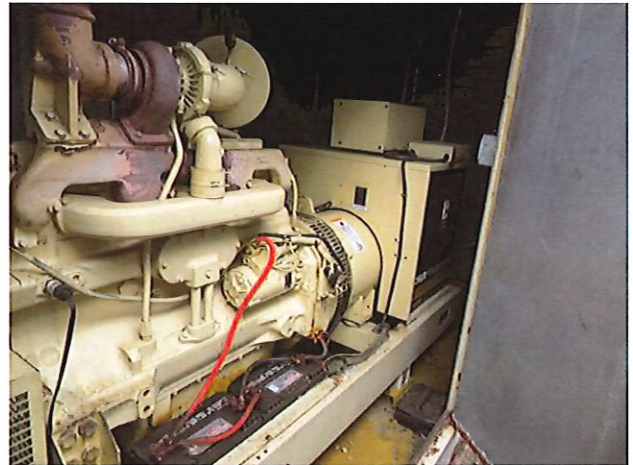
77. Typical Roof Drain



78. Rooftop Heat Pump Condensing Unit



79. Elevator Brakes/Machinery



80. Emergency Generator



81. Diesel Tank for Emergency Generator



82. Copper Wiring



83. Screw-in Fuse (SL/TL) Panel



84. Air Conditioning Units



85. Indoor Split-System Heat Pump



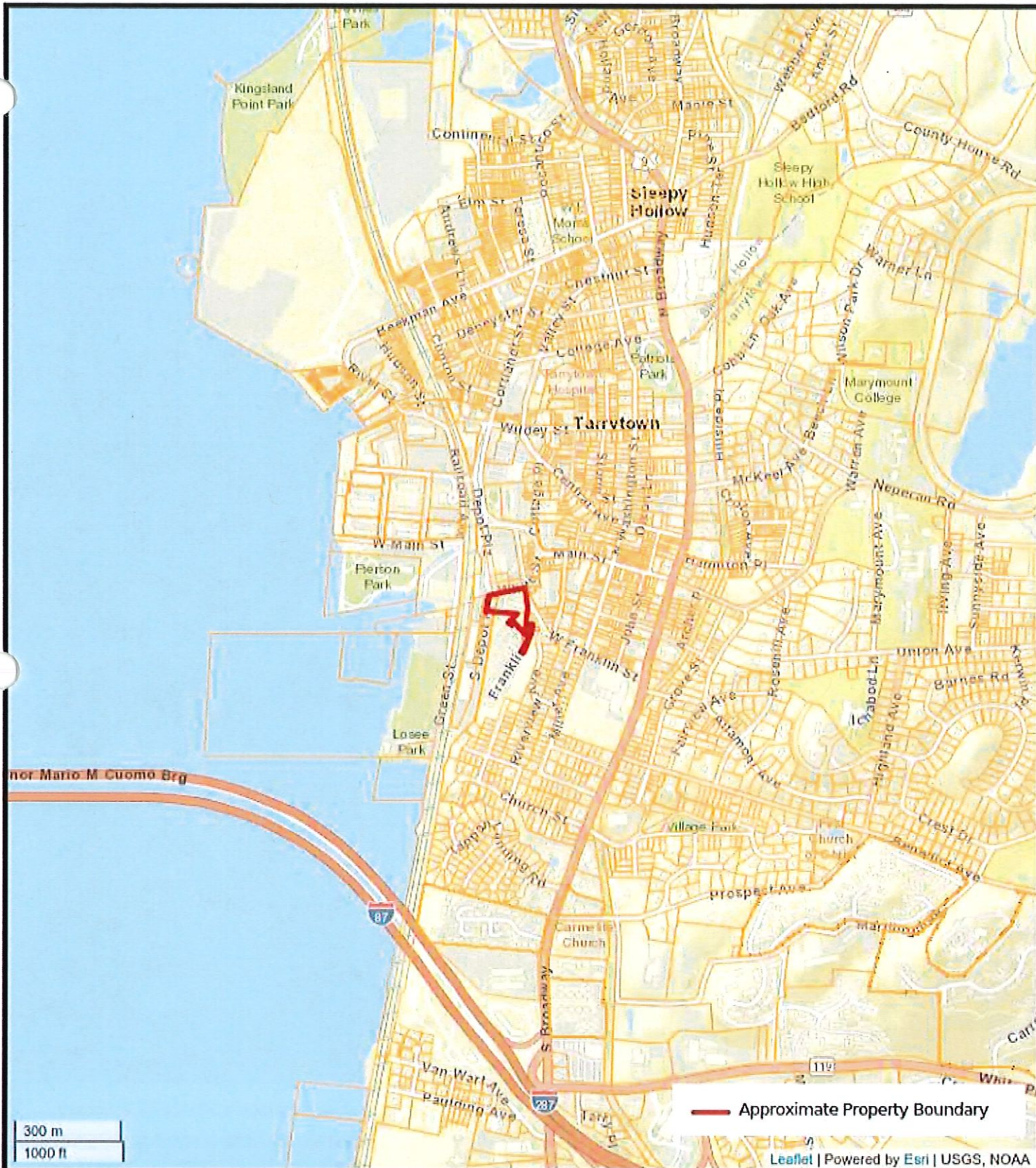
86. Water Main



87. Vacuum Heating Pump

APPENDIX C

Street Map and Aerial Photo



300 m
1000 ft

— Approximate Property Boundary

Leaflet | Powered by Esri | USGS, NOAA



STREET MAP

50 White Street, Tarrytown, 10591
AEI Project Number: 419363

AEI
Consultants



— Approximate Property Boundary

30 m

100 ft

Leaflet | Powered by Esri | DigitalGlobe, GeoEye, I-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Co...



AERIAL PHOTO

50 White Street, Tarrytown, 10591

AEI Project Number: 419363

AEI
Consultants

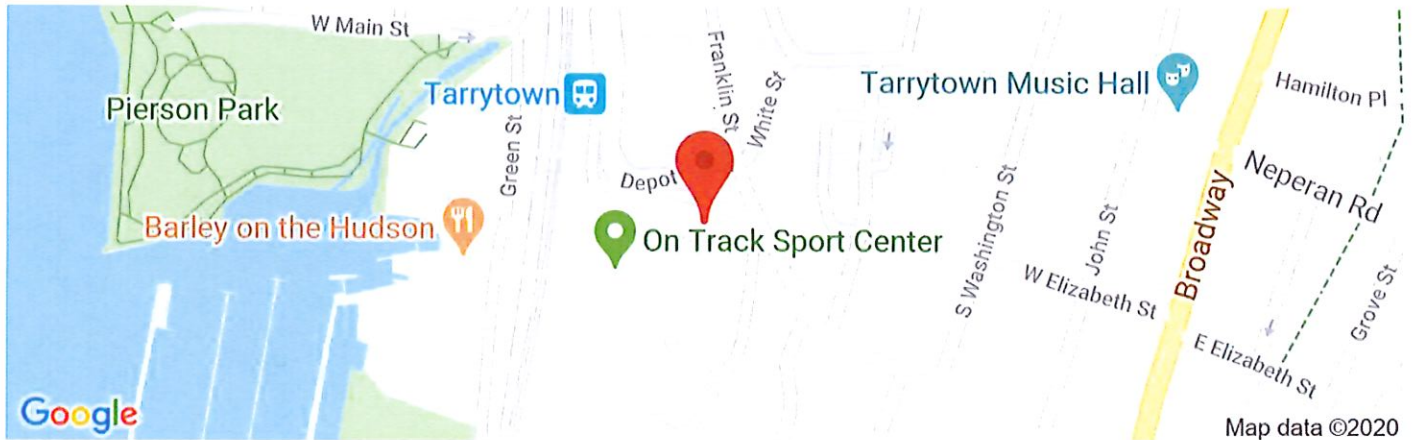
APPENDIX D

USGS Seismic Design Map



50 White St, Tarrytown, NY 10591, USA

Latitude, Longitude: 41.0756991, -73.86345399999999



Map data ©2020

Date	3/7/2020, 2:56:21 PM
Design Code Reference Document	ASCE41-13
Custom Probability	
Site Class	D - Stiff Soil

Type	Description	Value
Hazard Level		BSE-2N
S_s	spectral response (0.2 s)	0.272
S_1	spectral response (1.0 s)	0.072
S_{XS}	site-modified spectral response (0.2 s)	0.43
S_{X1}	site-modified spectral response (1.0 s)	0.173
F_a	site amplification factor (0.2 s)	1.583
F_v	site amplification factor (1.0 s)	2.4
ssuh	max direction uniform hazard (0.2 s)	0.31
crs	coefficient of risk (0.2 s)	0.876
ssrt	risk-targeted hazard (0.2 s)	0.272
ssd	deterministic hazard (0.2 s)	1.5
s1uh	max direction uniform hazard (1.0 s)	0.08
cr1	coefficient of risk (1.0 s)	0.905
s1rt	risk-targeted hazard (1.0 s)	0.072
s1d	deterministic hazard (1.0 s)	0.6

Type	Description	Value
Hazard Level		BSE-1N
S_{XS}	site-modified spectral response (0.2 s)	0.287
S_{X1}	site-modified spectral response (1.0 s)	0.115

Type	Description	Value
Hazard Level		BSE-2E
S_S	spectral response (0.2 s)	0.153
S_1	spectral response (1.0 s)	0.044
S_{XS}	site-modified spectral response (0.2 s)	0.245
S_{X1}	site-modified spectral response (1.0 s)	0.105
f_a	site amplification factor (0.2 s)	1.6
f_v	site amplification factor (1.0 s)	2.4

Type	Description	Value
Hazard Level		BSE-1E
S_S	spectral response (0.2 s)	0.043
S_1	spectral response (1.0 s)	0.015
S_{XS}	site-modified spectral response (0.2 s)	0.069
S_{X1}	site-modified spectral response (1.0 s)	0.037
F_a	site amplification factor (0.2 s)	1.6
F_v	site amplification factor (1.0 s)	2.4

Type	Description	Value
Hazard Level		TL Data
T-Sub-L	Long-period transition period in seconds	6

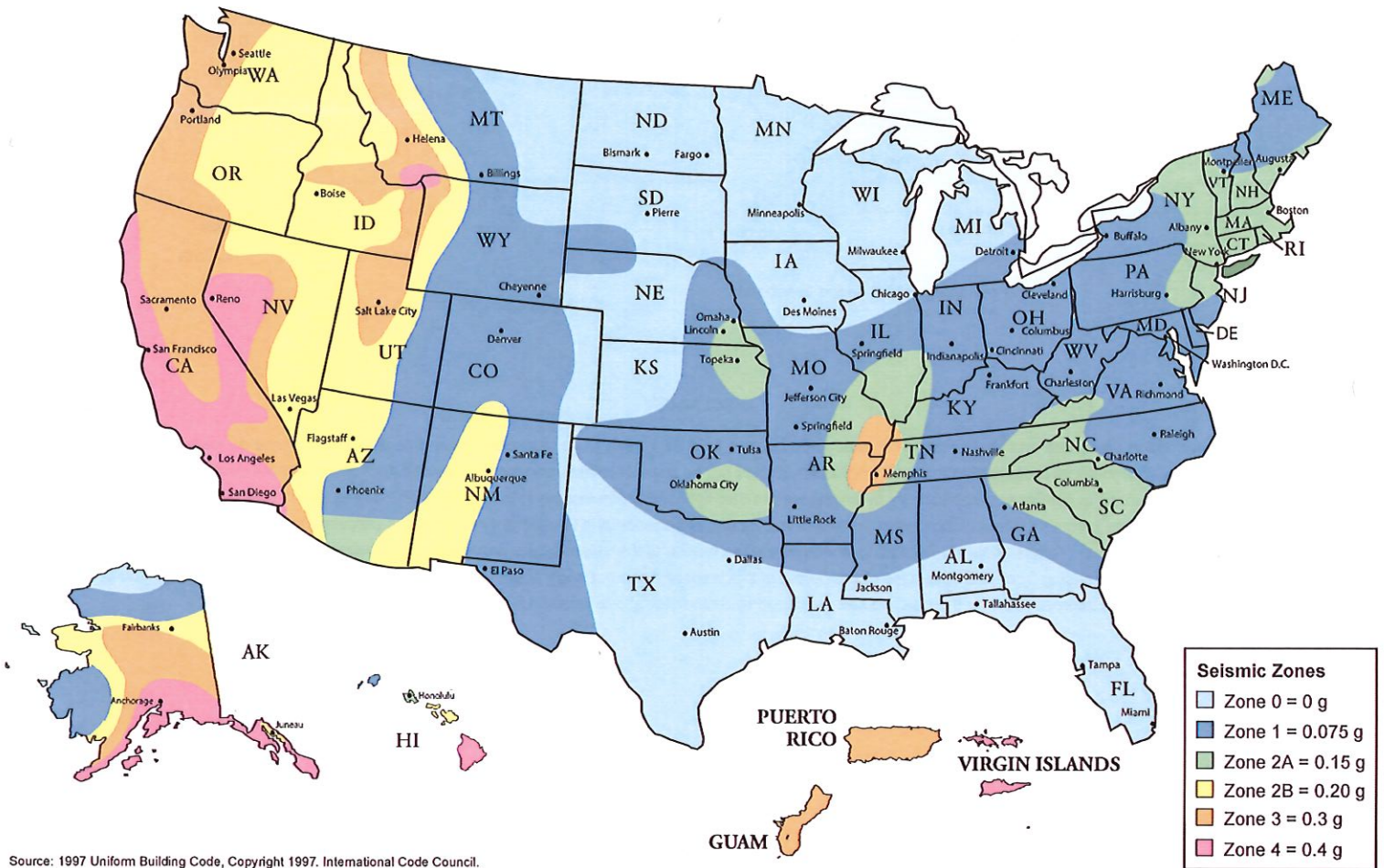
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AEI Consultants

UBC Seismic Zone Map



Source: 1997 Uniform Building Code, Copyright 1997, International Code Council. Reproduced with permission. All rights reserved. www.iccsafe.org

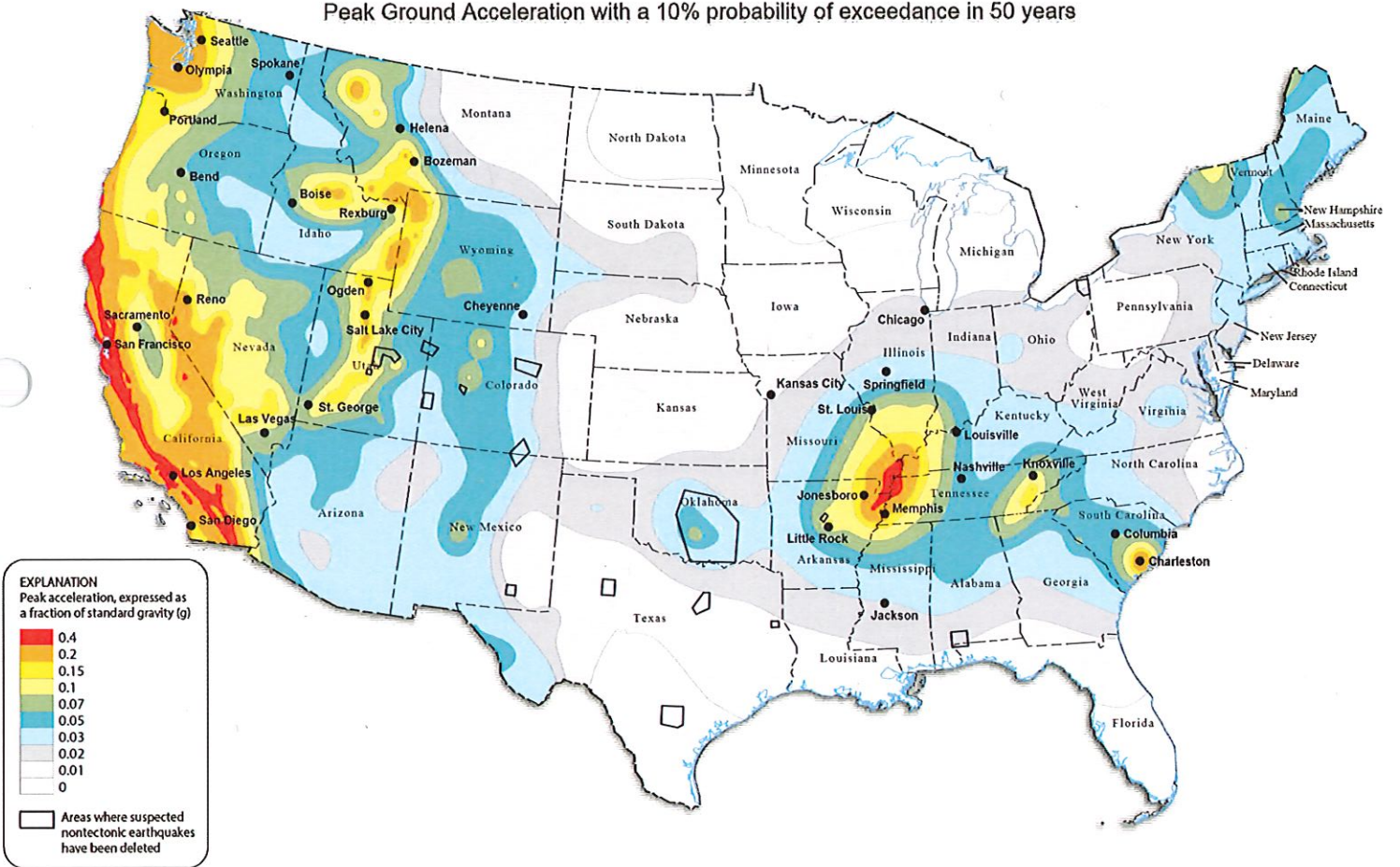
For more information about AEI Consultants or Seismic Inspections in your area, please call: 1.800.801.3224 | aeiconsultants.com



AEI Consultants

USGS Seismic Hazard Map

Peak Ground Acceleration with a 10% probability of exceedance in 50 years



Source: USGS 2014 PGA 10% Probability of Exceedence in 50 Years

For more information about AEI Consultants or Seismic Inspections in your area, please call: **1.800.801.3224** | aeiconsultants.com

APPENDIX E

Pre-Site Visit Questionnaire



HUD CNA PRE-SURVEY QUESTIONNAIRE (MF)

GENERAL INSPECTION INFORMATION

PER HUD GUIDANCE, AEI MUST BE ALLOWED ACCESS INTO 25% OF EACH DWELLING UNIT FLOORPLAN, AS WELL AS ALL COMMON AREAS, AND EXTERIORS AT THE SITE.

GENERAL PROPERTY INFORMATION

PROPERTY NAME:	Tarrytown Municipal Housing Authority - Franklin Towers				
SITE ADDRESS:	50 White Street	CITY:	Tarrytown	STATE:	NY
Number of Buildings:	1	Date of Construction:	1963-64	Number of Units:	81
Number of Stories:	10	Renovation Date(s):		Number of Vacant Units:	1
Site Area in Acres:	9.6 acres	Gross Building Area:	108,000	Number of Down Units:	0
Total Number of Parking Spaces:	67	Number of HC Parking Spaces:	5	Number of Van HC Spaces:	0

GENERAL PROPERTY INFORMATION

Please describe all pertinent building maintenance, renovation, seismic, and upgrade work within the last 3 years. If available, please attached supporting documentation, i.e. work orders, receipts, etc.:

Please describe any ongoing/current major building maintenance, renovation, seismic, and upgrade work:

Please describe any future building maintenance, renovation, seismic, and upgrade work being planned:

Please list all major vendors servicing the Property (If addition provided, please attach separate sheet):

Vendor Name			Phone No.	Vendor Name			Phone No.
Roofing	Alternative Roofing Solutions		843-645-8377	Painting	In house		
Elevator	Thyssenkrupp Elevator Corp.		914-347-3226	HVAC	n/a		
Fire Protection	Vincent Cerone		914-714-2119	Plumbing	Herlthy Plumbing & Heating		914-424-9311
Electrician	Kenneth Fiala		914-804-8145	Trash Disposal	Village of Tarrytown		914-631-8389
Landscaping	In house			Security System	Vincent Cerone		914-714-2119

Please list all utility providers for the Property:

Domestic Water	Village of Tarrytown	914-631-8389	Gas/ Oil/ Other	Consolidated Edison	800-752-6833
Sanitary Sewer	Village of Tarrytown	914-631-8389	Electricity	Consolidated Edison	800-752-6833
Storm Drainage	Village of Tarrytown	914-631-8389	Steam	n/a	

Please provide information regarding current unit mix:

Unit Type:	Occupied	Vacant	Down	Unit Type:	Occupied	Vacant	Down
Studio	n/a			3 Bedroom/ 1 Bathroom	14		
1 Bedroom/ 1 Bathroom	31	1		3 Bedroom/ 2 Bathroom	n/a		
1 Bedroom/ 1 1/2 Bath	n/a			Model Unit	n/a		
2 Bedroom/ 1 Bath	32			Manager Unit	n/a		
2 Bedroom/ 1 1/2 Bath	n/a			4 Bedroom 1 1/2 Bath	4		



Common Areas listed as:

QUESTIONNAIRE

Note to Field Observer: Answers should be verified during site interview and field observations. A YES answer should be followed up thoroughly and documented if issues are present.

YES NO UNKNOWN

	YES	NO	UNKNOWN
Are you aware of any violations the property has been cited for? (If Yes, attach citation)		✓	
Does the property feature Section 8 project based assistance?		✓	
Does the property accept Section 8 vouchers?		✓	
Was an "Accessibility Survey" ever conducted on the property? (If Yes, please attach a copy)		✓	
Have any accessibility improvements been made to the Property or does a Barrier Removal Plan exist for the Property?		✓	
Are there any unresolved accessibility related complaints or pending litigation?		✓	
Is a tenant monthly fee charged for common area maintenance (CAM)?		✓	
Does the Property experience any site drainage, ground water or flooding problems?		✓	
Is the amount of on-site parking provided inadequate?		✓	
Is there damaged or nonoperational site lighting?		✓	
Are the utilities (water, sewer, gas, electric) inadequate to meet needs of the tenants?		✓	
Does the Property have any structural issue such as settlement, cracking or deflection?		✓	
Has the Property experienced any fire related or seismic damage?		✓	
Does the Property exhibit any water/ moisture infiltration?		✓	
Does the Property have any leakage or failures at the roof, walls or cellar?		✓	
Is fire retardant plywood (FRT) installed anywhere in the structure(s)?		✓	
Are any portions of the facades covered with EIFS (synthetic stucco or Dryvit)?		✓	
Any problems regarding synthetic stucco or EIFS?		✓	
Roof is inaccessible with no on-site OSHA approved ladder or roof hatch?		✓	
Are the HVAC systems inadequate and/or non-functioning?		✓	
Are there any plumbing leaks or prevalent past leaks?		✓	
Are there any water pressure issues at any time?		✓	
Is galvanized or polybutylene "gray" piping present anywhere in the Property?		✓	
Has any active or historical leaks related to galvanized or polybutylene piping occurred?		✓	
Has retrofitting or replacement of galvanized or polybutylene piping taken place?		✓	
Are there any electrical problems or inadequate electrical service?		✓	
Electrical amperage to each unit is less than 60-amps?	✓		
Is aluminum branch wiring present anywhere in the Property?		✓	
If aluminum branch wiring is present, has retrofitting been performed?		✓	
Are there any screw-in fuses present in the Property?		✓	
Are there kitchens and bathrooms that are not equipped with GFI's/GFCI's?		✓	
Are there any elevator or escalator shutdowns or deemed out of service?		✓	
Are there elevators present not regularly serviced under a full-service maintenance contract?		✓	
Are there fire sprinkler systems present and not regularly serviced and tested?		✓	
Are there fire alarm and detection devices not regularly serviced and tested?		✓	
Is common area interior painting performed as part of routine maintenance?	✓		
Is there any mold or microbial growth at the Property?		✓	
Have any tenants or occupants complained about mold or microbial growth at the Property?		✓	
Is there a current formal indoor air quality management plan at the Property?		✓	
Are there any water leaks or damage at the Property?		✓	

Please indicate when the following systems have been last inspected:

Fire Sprinkler N/A Elevators/ Escalators 12/2019
 Fire Alarm 12/2019 Facades N/A



REPLACEMENT/ REPAIR HISTORY

Please list the approximate age (In years) of the following, as applicable:
 (Indicate "NA" if tenant-owned or not applicable; Indicate "ORIG", if from original building construction. If applicable, give an estimated range, i.e. approx. 50% are 3 yrs. in age, 25% are 10 yrs. in age, etc. - please attach additional pages for comments/ clarifications.

Paving:	<u>orig</u> Yrs.	Sealant/Striping:	<u>n/a</u> Yrs.	Exterior Lighting:	<u>as needed</u> Yrs.
Landscaping:	<u>n/a</u> Yrs.	Irrigation System:	<u>n/a</u> Yrs.	Building Signage:	<u>as needed</u> Yrs.
Pool Deck:	<u>n/a</u> Yrs.	Pool Surfaces:	<u>n/a</u> Yrs.	Other _____:	<u>n/a</u> Yrs.
Masonry Pointing:	<u>2016</u> Yrs.	Exterior Paint:	<u>n/a</u> Yrs.	EIFS:	<u>n/a</u> Yrs.
Windows:	_____ Yrs.	Doors:	<u>n/a</u> Yrs.	Building Sealants:	<u>n/a</u> Yrs.
Roofing:	<u>2016</u> Yrs.	Other Roofing:	<u>n/a</u> Yrs.	Skylights:	<u>n/a</u> Yrs.
HVAC (_____):	<u>n/a</u> Yrs.	HVAC (_____):	<u>n/a</u> Yrs.	HVAC (_____):	<u>n/a</u> Yrs.
Electric Service:	<u>as needed</u> Yrs.	Emergency Generator:	<u>n/a</u> Yrs.	Water Lines:	<u>n/a</u> Yrs.
Water Pumps:	<u>n/a</u> Yrs.	Water Heaters:	<u>as needed</u> Yrs.	Sewer Lines:	<u>n/a</u> Yrs.
Elevator Finishes:	<u>n/a</u> Yrs.	Elevator Controller:	<u>n/a</u> Yrs.	Elevator Machinery:	<u>n/a</u> Yrs.
Escalators:	<u>n/a</u> Yrs.	Fire Pump:	<u>n/a</u> Yrs.	Central Fire Alarm Panel:	<u>n/a</u> Yrs.
Common Areas:	<u>as needed</u> Yrs.	Unit Finishes:	<u>as needed</u> Yrs.	Unit Appliances:	<u>as needed</u> Yrs.

DOCUMENT REVIEW

Please provide us with the following documents prior to our site visit, indicating the availability of each. This documentation may be included as an exhibit within the Property Condition Assessment.

	Available On-site	Available Attached	Not Available
Site Plan and ALTA Survey	✓		
Certificate of Occupancy	✓		
Copy of Open Building Permits or Code Violations			n/a
Copy of Zoning Variances or Easements			n/a
Rent Roll (with unit number, tenant name, unit area and occupancy %)	✓		
Reduced Floor Plans	✓		
Original construction documents (core and shell)	✓		
List of Mechanical Equipment	✓		
List of Capital expenditures for last 5 years	✓		
List of Planned Capital expenditures	✓		
Local Law #11 Façade Inspection Reports (NYC)	✓		n/a
Roof survey and warranty	✓		n/a
Service reports and inspection certificates for (elevator, escalator, HVAC, electrical generator, fire alarm and sprinkler)	✓		
ADA Survey or Barrier Removal Plan			n/a
Previously prepared Property Condition Report or engineering studies	✓		

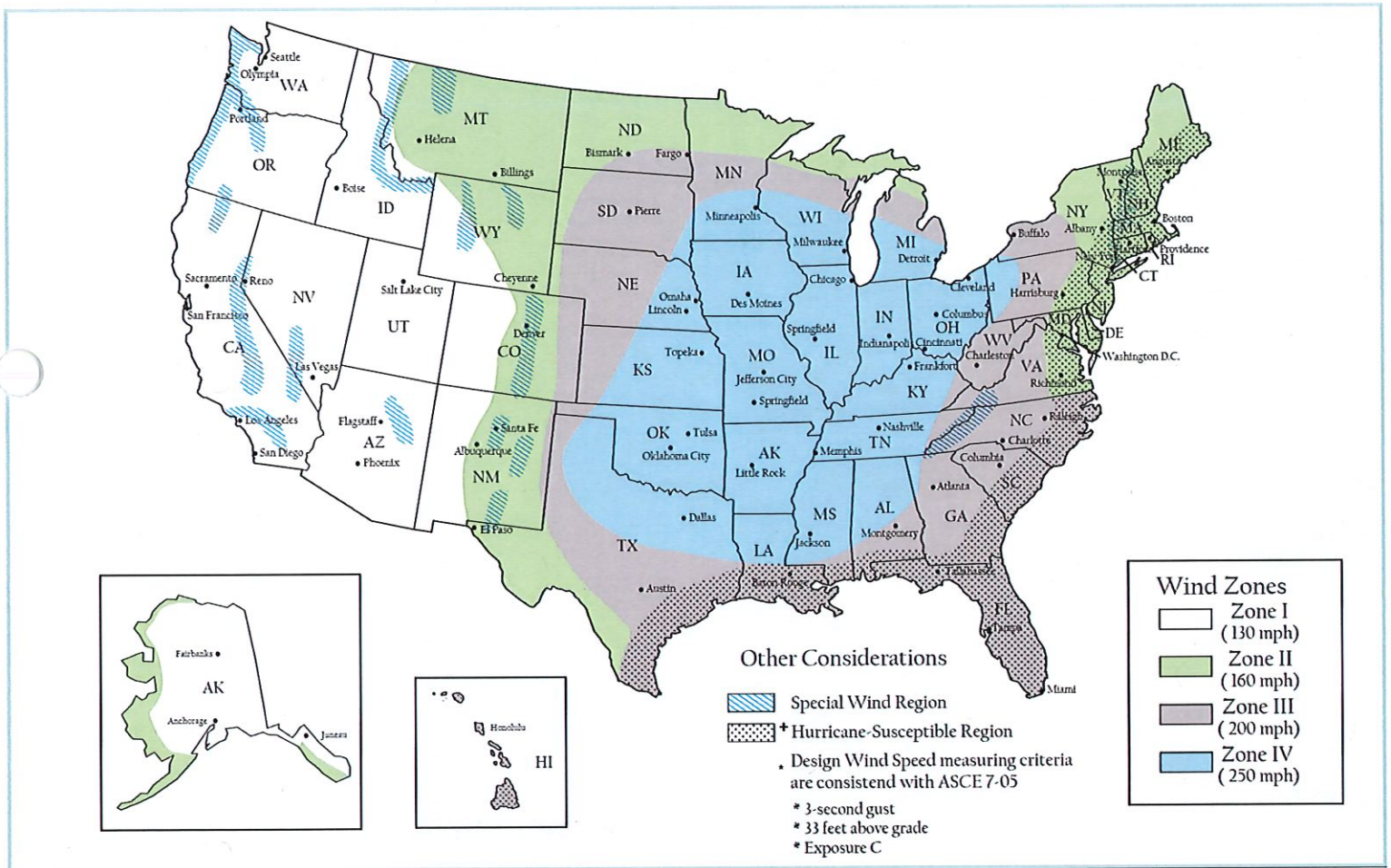
Interviewee / Title: _____ **Date:** _____

APPENDIX F

Record of all Documents Reviewed, Interviews, and Supporting Information



Wind Zone Map

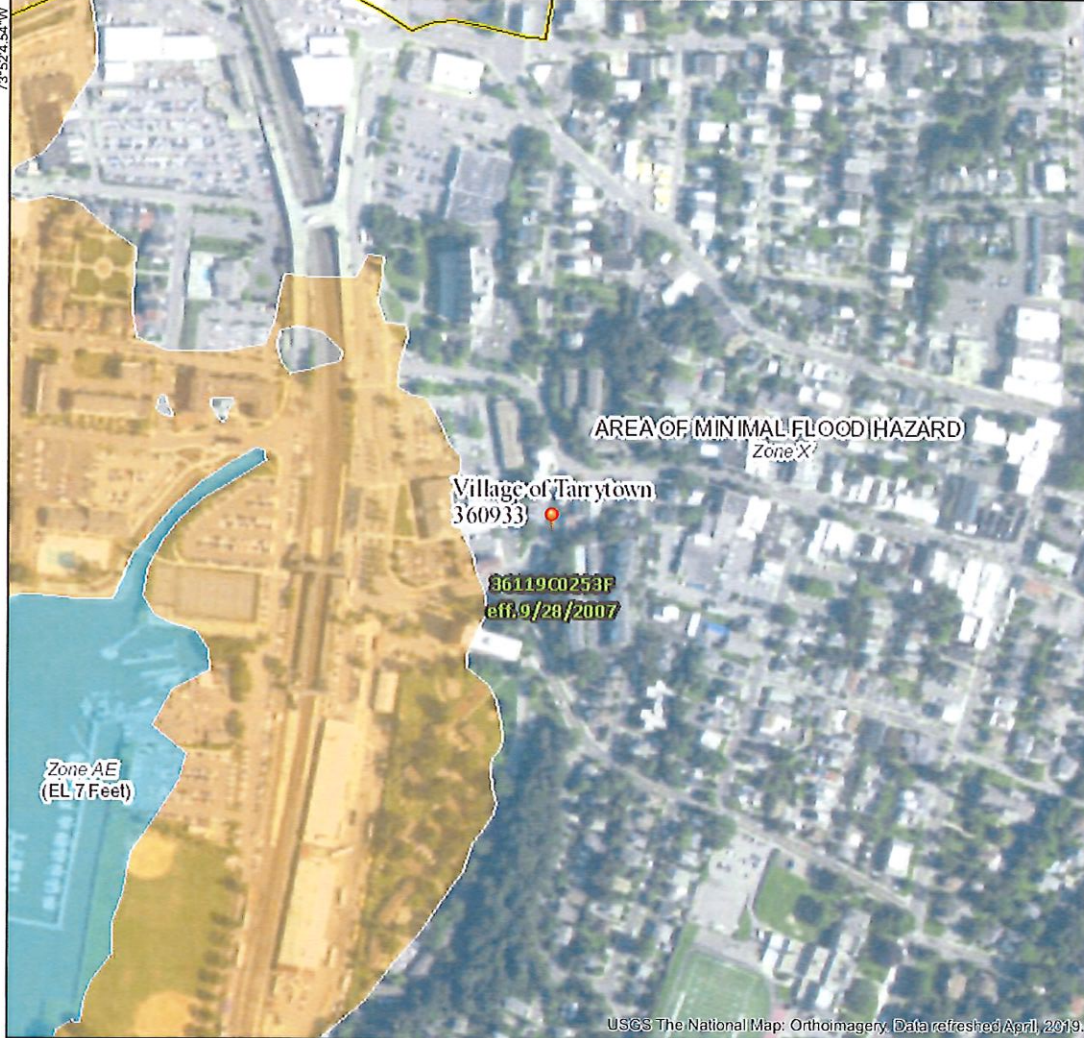


For more information about AEI Consultants or seismic inspections please call 1.800.801.3224

National Flood Hazard Layer FIRMette



41°4'49.26"N



0 250 500 1,000 1,500 2,000 Feet 1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	
	Without Base Flood Elevation (BFE) Zone A, V, A99
	With BFE or Depth Zone AE, AO, AH, VE, AR
	Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD	
	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee. See Notes, Zone X
	Area with Flood Risk due to Levee Zone D

OTHER AREAS	
	Area of Minimal Flood Hazard Zone X
	Effective LOMRs
	Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES	
	Channel, Culvert, or Storm Sewer
	Levee, Dike, or Floodwall

OTHER FEATURES	
	20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
	17.5 Water Surface Elevation
	Coastal Transect
	Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary
	Coastal Transect Baseline
	Profile Baseline
	Hydrographic Feature

MAP PANELS	
	Digital Data Available
	No Digital Data Available
	Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/28/2020 at 2:55:23 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

USCS The National Map: Orthoimagery, Data refreshed April, 2019.

73°51'27.09"W

41°4'22.13"N



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**Comprehensive Uniform Physical Condition
Standard (UPCS) Report for**

Tarrytown Housing Authority

Inspection Date:
Dec 16, 2019

*...for your annual inspections count on **US I.G.***

PROPERTY DEFICIENCY REVIEW INSTRUCTIONS



At the top of each page of the Property Deficiency Review, the name of the property and a legend is provided. The legend defines the abbreviations under the **Severity** column:

LT – Life Threatening	1 = Level 1 Minor
NHS – Not Health and Safety	2 = Level 2 Major
NLT – Not Life Threatening	3 = Level 3 Severe
SD – Smoke Detectors	

The Property Deficiency Review Report is sorted so that deficiencies are grouped by Building and Unit to enable property managers to better coordinate maintenance efforts.

Example:

Line	Area	Bldg No	Unit No	Item	Defect Type	Severity	Point Deduct	Location	Comments
1	Site	N/A	N/A	Grounds	Overgrown/Penetrating Vegetation	2-NHS	2.5	Front of building #104/106	Vegetation noted touching/rubbing the roof
2	BldgExt	A	N/A	Windows	Damaged/Missing Screens	1-NHS	.1	Rear of building	3 window screens are missing
3	DU	A	101	Walls	Damaged	2-NHS	.2	Utility closet	12 inch crack noted in wall
4	DU	A	102	Lighting	Missing/Inoperable Fixture	1-NHS	< 0.05	Hall	Light fixture is inoperable
5	DU	B	103	Smoke Detector	Missing/Inoperable	3-SD	< 0.05	Hall	Smoke detector is missing

The above example indicates that the **Unit 101** of the **A** building has Level 2 (major) damage to a wall that is not a Health and Safety concern. **Unit 103** has a Level 3 (severe) deficiency. The deficiency is a missing smoke detector located in the hall and the **Severity** indicates that it poses a Life Threatening, Health and Safety risk for the tenant.

All deficiencies (regardless of level) contain information pertaining to **location** and **comment**. US Inspection Group, Inc. has developed proprietary software that enables us to provide the most detailed reports on the market.

PROPERTY SCORE REPORT INSTRUCTIONS



Inspection Number: The inspection number is a unique number generated each time a property is inspected. USIG uses this number to track inspections. Every time a property is inspected it will receive a new inspection number.

Inspection Date: This is the date the inspector started the inspection. For properties where only a sample is being inspected, the inspection date will be the date the inspection was completed.

PIH Project: This number has been assigned by HUD as an internal method of indexing the property.

Score: This is an overall numerical grade based on a scale of 100. The score is derived by subtracting the area deductions from 100. (See scoring detail)

Health/Safety: If - according to the UPCS protocol - the property has a life threatening health and safety issue, it will be flagged here. Additionally, at the end of each inspection day the USIG inspector will provide your property manager with a list of all Life Threatening Hazards.

Smoke Detectors: If the property had at least one missing or inoperable smoke detector, it will be flagged here.

Building/Unit Counts:

This data box displays the following information:

- Total number of buildings and units associated with the property.
- If just a sampling is being inspected, then this will display the number of building and units selected by the REAC software.

Scoring Detail:

Properties are scored based on the condition of five separate areas, each given a percentage of the total points available. The percentage of points assigned to each of the five areas is automatically adjusted based on the size, condition and make up of the property.

Example:

<u>Area</u>	<u>Possible-Points</u>	<u>Area-Points</u>	<u>Deductions</u>
Site	18.7 %	5.6%	13.1%

Area: Each of the five areas is described below.

Possible Points: Points out of hundred available to this area.

Area Points: Points remaining after deficiency deductions for this area.

PROPERTY SCORE REPORT INSTRUCTIONS



Deductions: Points deducted from area possible points due to deficiencies.

Five Areas of Inspection: Each area has inspectable "items" associated with it that are highlighted below.

Site: Fencing, gates, playground equipment, mail boxes and signs, play areas, grounds, walkways, parking lots, driveways, retaining walls, drainage and refuse disposal.

Building Exterior: (BldgExt) Doors, fire escapes, roofs, walls, foundations, lighting, windows, gutters and down spouts.

Building Systems: (BldgSys) Electrical, emergency power, domestic water, HVAC, sanitary systems, elevators, exhaust systems and fire protection.

Common Area: (CA) Laundry rooms, community rooms, restrooms, swimming pools/structures, lobby, kitchen, offices, halls, stairs, corridors, porches/patios, storage areas, closets, basements and carport/garages.

Dwelling Unit: (DU) Doors, windows, walls, ceiling, electrical, smoke detectors, water heater, HVAC, lighting, patio/porch/balcony, stairs and halls, bathrooms, floors, outlets and switches, laundry area.

Observations:

This portion displays the number of recorded deficiencies list by inspectable areas and broken down into three categories:

No Observable Deficiency (NOD) Observable Deficiency (OD) Not Applicable (NA)

Example:

Area	1 - NOD	2 - OD	3 - NA
Site	4	7	0

The example shows (4) items within the site that have no deficiencies, (7) items that have observed deficiencies and (0) items that were not applicable to the property.

Deficiencies and their Severities:

Associated with each of the five areas are inspectable items. When an observed deficiency is found then the definition specifies the level of severity the deficiency falls under. There are three levels of severity:

Level 1 (Minor) -- Level 2 (Major) -- Level 3 (Severe)

Severity levels are defined within a given deficiency and do not necessarily indicate which deficiencies are the worst. For more serious deficiencies, a level 2 severity may be more of a problem and may reduce the overall score more than less serious deficiencies with a severity of level 3.

PROPERTY SCORE REPORT INSTRUCTIONS



Severe Deficiency Counts:

In addition to levels of severity, deficiencies under the HUD/REAC UPCS protocol are categorized by their affects on the Health and Safety of the residents and whether or not they are of a Life Threatening nature. This display breaks down all of the observed severe deficiencies by effect on Health and Safety and location.

Example:

Life Threatening	Actual	Percent	Projected
1 - Site	0	100%	0
2 - Building	3	100%	3
3 - Unit	6	10.0%	60

In the example above, the column labeled **actual** indicates the actual number of “severe life threatening health and safety deficiencies” identified during the inspection. The **percent** column denotes the percentage of the site or buildings that were inspected. In this case a sample was done and only 10% of the units were inspected. The **projected** column extrapolates from the actual and projects a total number of this category of deficiency that would be expected if a 100% of the units had been inspected.

On a report where 100% of the building and units were inspected the actual and projected numbers would be equal.

Note: “Building” in this display incorporates common area, building exterior and building systems.

The definitions for each inspectable item associated with the five areas are provided in the binder sent to you by USIG.

PROPERTY PROFILE REPORT INSTRUCTIONS



The top of each report provides the name of the property inspected and the USIG Inspection Number for referencing the inspection. The body of the report is broken down by building and then further by unit.

Each building is assigned a number by the UPCS software and then identified by its address, year of construction, number of units and type of building. If the building is "offline" or "uninspectable" for another reason then this information will be noted in the building information header.

Each unit in each building is further defined by unit address, number of units and occupancy standards. The HUD/REAC PASS 2.3 software does not allow vacant units to be inspected but USIG's software has the capability to inspect vacant units and include them in the overall score of the property.



U.S. Inspection Group, Inc.
(866) 863-8744
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**Comprehensive Uniform Physical Condition
Standard (UPCS) Report for**

Tarrytown Shadow (NY)
Inspection Date:
Dec 16, 2019

... for your annual inspections count on US I.G.

MASS CERTIFICATE





Tarrytown Shadow (NY)

50 White St
Tarrytown NY 10591

U.S. Inspection Group, Inc. certifies inspection of Tarrytown Shadow (NY) on the dates of Dec 16, 2019 using the Uniform Physical Condition Standards (UPCS) 4.0.

NOTE: This form has been generated by USIG for the sole purpose of the housing authority. Its purpose is informational in nature and can be used in the Housing Authority's annual MASS reporting.

Sub-Indicator #4: Annual Inspection of Dwelling Units and Systems

Component #1 Annual Inspection of Dwelling Units.										
A10000	The total number of ACC units.	23								
A10000	The sum of units exempted where the PHA made two documented attempts to inspect and is enforcing the lease.	0								
A10400	Total number of units inspected using the Uniform Physical Condition Standards (UPCS).	23								
A10550	Total number of units inspected that did not require repairs.	3								
	<table border="1"> <thead> <tr> <th>Building Name</th> <th>Unit Name</th> </tr> </thead> <tbody> <tr> <td>13 Franklin Court</td> <td>13d</td> </tr> <tr> <td>50 White St</td> <td>45</td> </tr> <tr> <td>50 White St</td> <td>59</td> </tr> </tbody> </table>	Building Name	Unit Name	13 Franklin Court	13d	50 White St	45	50 White St	59	
Building Name	Unit Name									
13 Franklin Court	13d									
50 White St	45									
50 White St	59									
A10600	The number of units where necessary repairs were completed to comply with UPCS either during the inspection, issued work orders for the repairs, or referred the deficiency to the current year's or next year's Capital Fund program.	20								
A10700	Adjusted units available.	23								
A10800	Percent of units inspected by PHA.	100%								

Component #2 Annual Inspection of Systems Including Common Areas and Non-Dwelling Space.		
A11400	Total number of buildings.	17
A11500	Total number of buildings exempted from the inspection of systems.	0
A11600	The total number of buildings where all systems were inspected in accordance with UPCS.	17
A11700	The number of buildings and sites where necessary repairs were completed to comply with UPCS either during the inspection, issued work orders for the repairs, or referred the deficiency to the current year's or next year's Capital Fund program.	10
A11900	Percentage of buildings inspected.	100%



PHAS MANAGEMENT CERTIFICATION

**Ken Pilbin, President,
U.S. Inspection Group**

DEFICIENCY REPORT



DEFICIENCY REPORT: TARRYTOWN SHADOW (NY)

Inspection Date: Dec 16, 2019



Line	Area	Bldg No	Unit No	Item	Defect Type	Severity	Point Deduct	Photo	Location	Comments
1	Site	N/A	N/A	Grounds	Overgrown/Penetrating Vegetation	2-NHS	2.8	S1	Front of building # 105	Vegetation/tree noted touching/rubbing the roof
2	Building System	3 Franklin Court	N/A	Electrical Hazards	Exposed Wires/Open Panels	3-LT	0.6	BS1	site of unit# 3A	Missing cover/exposed wires
3	Building System	50 White St	N/A	Emergency Power	Auxiliary Lighting Inoperable	3-NHS	0.1	BS2	Hall by unit 61	Auxiliary light won't test
4	Building System	Community Bldg Franklin Court	N/A	Hazards	Other	3-NLT	0	BS3	Mechanical room	Water heater missing top valve down pipe
5	Building Exterior	1 Franklin Court	N/A	Walls	Missing Pieces/Holes/Spalling	2-NHS	0.2	BE1	Right side of building	Hole noted in siding
6	Building Exterior	10 Franklin Court	N/A	Walls	Missing Pieces/Holes/Spalling	2-NHS	0.2	BE2	Front of building	Hole noted in siding
7	Building Exterior	11 Franklin Court	N/A	Walls	Missing Pieces/Holes/Spalling	2-NHS	0.2	BE3	Right side of building	Hole noted in siding
8	Building Exterior	13 Franklin Court	N/A	Walls	Missing Pieces/Holes/Spalling	2-NHS	0.2	BE4	Left side of building	Easily distinguishable repair (NIS)
9	Building Exterior	2 Franklin Court	N/A	Walls	Missing Pieces/Holes/Spalling	2-NHS	0.2	BE5	Right side of building	Hole noted in siding
10	Building Exterior	3 Franklin Court	N/A	Walls	Missing Pieces/Holes/Spalling	2-NHS	0.2	BE6	Front of building	Hole noted in siding
11	Building Exterior	50 White St	N/A	Doors	Damaged Surface (Holes/Paint/Rusting/Glass)	3-NHS	0.6	BE7	roof of building	Hole noted in door
12	Building Exterior	6 Franklin Court	N/A	Walls	Missing Pieces/Holes/Spalling	2-NHS	0.2	BE8	Front of building	Hole noted in siding
13	Building Exterior	8 Franklin Court	N/A	Roofs	Damaged Soffits/Fascia	1-NHS	0.1	BE9	Front of building	Soffit is damaged
14	Building Exterior	8 Franklin Court	N/A	Walls	Missing Pieces/Holes/Spalling	2-NHS	0.2	BE10	Front of building	Hole noted in siding



DEFICIENCY REPORT: TARRYTOWN SHADOW (NY)
 Inspection Date: Dec 16, 2019

Line	Area	Bldg No	Unit No	Item	Defect Type	Severity	Point Deduct	Photo	Location	Comments
15	Building Exterior	Community Bldg Franklin Court	N/A	Walls	Missing Pieces/Holes/Spalling	2-NHS	0.2	BELL	Front of building	Hole noted in siding
16	Common Area	50 White St	N/A	Halls/Corridors/Stairs	Doors - Damaged Hardware/Locks	3-NHS	<0.05	CA1	hallway floor 8	Fire Door - Auto closure inoperable (wont latch)
17	Common Area	50 White St	N/A	Halls/Corridors/Stairs	Doors - Damaged Hardware/Locks	3-NHS	<0.05	CA2	floor 10 slip sink	Fire Door - Auto closure inoperable (wont latch)
18	Common Area	50 White St	N/A	Laundry Room	Ceiling - Holes/Missing Tiles/Panels/Cracks	2-NHS	<0.05	-	laundry room storage	Missing panel noted at ceiling
19	Common Area	50 White St	N/A	Restrooms/Pool Structures	Doors - Damaged Hardware/Locks	3-NHS	<0.05	CA3	restroom maintenance	Fire Door - Auto closure inoperable (wont latch)
20	Common Area	Community Bldg Franklin Court	N/A	Kitchen	Plumbing - Leaking Faucet/Pipes	1-NHS	<0.05	CA4	kitchen	Sink faucet is leaking
21	Dwelling Unit	1 Franklin Court	1E	Windows	Missing/Damaged Screen	1-NHS	<0.05	UN1	Bedroom 1	Window screen is missing
22	Dwelling Unit	10 Franklin Court	10A	Smoke Detector	Missing/Inoperable	3-SD	0	UN2	Upstairs hall	Smoke detector is inoperable
23	Dwelling Unit	10 Franklin Court	10A	Windows	Missing/Damaged Screen	1-NHS	<0.05	UN3	Bedroom 1	Window screen is missing
24	Dwelling Unit	11 Franklin Court	11C	Bathroom	Lavatory Sink-Damaged/Missing	1-NHS	0.2	UN4	Bathroom	Sink stopper is inoperable
25	Dwelling Unit	11 Franklin Court	11C	Doors	Damaged Hardware/Locks	1-NHS	0.1	UN5	Living room closet	Door does not latch properly
26	Dwelling Unit	11 Franklin Court	11C	Electrical System	GFI Inoperable	3-NHS	1	UN6	Kitchen	The GFI is inoperable
27	Dwelling Unit	11 Franklin Court	11C	Emergency/Fire Exits	Blocked/Unusable	3-LT	1.5	UN7	Bedroom 1	Window is inoperable due to bars screwed in
28	Dwelling Unit	11 Franklin Court	11C	Emergency/Fire Exits	Blocked/Unusable	3-LT	1.5	UN8	Bedroom 1	Bars in window that are screwed in making inoperable



DEFICIENCY REPORT: TARRYTOWN SHADOW (NY)

Inspection Date: Dec 16, 2019

Line	Area	Bldg No	Unit No	Item	Defect Type	Severity	Point Deduct	Photo	Location	Comments
29	Dwelling Unit	11 Franklin Court	11C	Kitchen	Range/Stove-Missing/Damaged/Inoperable	3-NHS	0.7	UN9	Kitchen	All burners inoperable
30	Dwelling Unit	12 Franklin Court	12A	Bathroom	Lavatory Sink-Damaged/Missing	1-NHS	0.2	UN10	Bathroom	Sink stopper is inoperable
31	Dwelling Unit	12 Franklin Court	12G	Emergency/Fire Exits	Blocked/Unusable	3-LT	1.5	UN11	Bedroom 1	Window will not stay in the open position
32	Dwelling Unit	2 Franklin Court	2D	Bathroom	Lavatory Sink-Damaged/Missing	1-NHS	0.2	UN12	Bathroom	Sink stopper is inoperable
33	Dwelling Unit	2 Franklin Court	2D	Floors	Floor Covering Damage	3-NHS	0.2	UN13	Living room	Large amount of floor covering damaged
34	Dwelling Unit	2 Franklin Court	2D	Kitchen	Refrigerator-Missing/Damaged/Inoperable	1-NHS	0.2	UN14	Kitchen	Refrigerator gasket is damaged
35	Dwelling Unit	2 Franklin Court	2D	Windows	Missing/Damaged Screen	1-NHS	<0.05	UN15	Bedroom 1	Window screen is missing
36	Dwelling Unit	3 Franklin Court	3A	Bathroom	Lavatory Sink-Damaged/Missing	1-NHS	0.2	UN16	Bathroom	Sink stopper is inoperable
37	Dwelling Unit	3 Franklin Court	3A	Doors	Damaged Hardware/Locks	1-NHS	0.1	UN17	Bedroom 1 closet door	Closet door off tracking
38	Dwelling Unit	3 Franklin Court	3A	Doors	Damaged Surface Holes/Paint/Rusting/Glass	3-NHS	0.2	UN18	Kitchen closet	Large hole noted in door
39	Dwelling Unit	3 Franklin Court	3A	Kitchen	Refrigerator-Missing/Damaged/Inoperable	1-NHS	0.2	UN19	Kitchen	Refrigerator gasket is damaged
40	Dwelling Unit	3 Franklin Court	3A	Windows	Missing/Damaged Screen	1-NHS	<0.05	UN20	Bedroom 1	Window screen is damaged
41	Dwelling Unit	4 Franklin Court	4B	Bathroom	Plumbing-Leaking Faucet/Pipes	1-NHS	0.2	UN21	Bathroom	Sink faucet is leaking
42	Dwelling Unit	4 Franklin Court	4B	Doors	Damaged Hardware/Locks	1-NHS	0.1	UN22	Bedroom 2 closet door	Closet door off tracking



DEFICIENCY REPORT: TARRYTOWN SHADOW (NY)

Inspection Date: Dec 16, 2019

Line	Area	Bldg No	Unit No	Item	Defect Type	Severity	Point Deduct	Photo	Location	Comments
43	Dwelling Unit	4 Franklin Court	4B	Doors	Damaged/Missing Screen/Storm/Security Door	1-NHS	0.1	UN23	Rear entry	Door frame is damaged
44	Dwelling Unit	4 Franklin Court	4B	Emergency/Fire Exits	Blocked/Unusable	3-LT	1.5	UN24	Up stairs hall closet	Hasp lock noted
45	Dwelling Unit	4 Franklin Court	4B	Emergency/Fire Exits	Blocked/Unusable	3-LT	1.5	UN25	livingroom closet	Hasp lock noted
46	Dwelling Unit	4 Franklin Court	4B	Kitchen	Refrigerator-Missing/Damaged/Inoperable	1-NHS	0.2	UN26	Kitchen	Refrigerator gasket is damaged
47	Dwelling Unit	4 Franklin Court	4B	Windows	Cracked/Broken/Missing Panes	1-NHS	0.1	UN27	Living room	Window is cracked
48	Dwelling Unit	5 Franklin Court	5D	Bathroom	Plumbing-Leaking Faucet/Pipes	1-NHS	0.2	UN28	Bathroom	Sink faucet is leaking
49	Dwelling Unit	5 Franklin Court	5D	Doors	Damaged Hardware/Locks	1-NHS	0.1	UN29	Bedroom 1 closet door	Closet door off tracking
50	Dwelling Unit	5 Franklin Court	5D	Doors	Damaged/Missing Screen/Storm/Security Door	1-NHS	0.1	UN30	Front entry	Door latch is missing
51	Dwelling Unit	5 Franklin Court	5D	Kitchen	Range/Stove-Missing/Damaged/Inoperable	2-NHS	0.3	UN31	Kitchen	1 burner inoperable
52	Dwelling Unit	5 Franklin Court	5D	Kitchen	Refrigerator-Missing/Damaged/Inoperable	1-NHS	0.2	UN32	Kitchen	Refrigerator gasket is damaged
53	Dwelling Unit	5 Franklin Court	5D	Outlets/Switches	Missing/Broken Cover Plates	3-LT	0.2	UN33	Upstairs hallway	Missing switch cover noted
54	Dwelling Unit	5 Franklin Court	5D	Windows	Damaged Window Sill, Frame, Trim	1-NHS	0.1	UN34	Bedroom 2	Window sill is damaged
55	Dwelling Unit	5 Franklin Court	5D	Windows	Inoperable/Not Lockable	1-NHS	0.1	UN35	Bedroom 2	Window will not stay in the open position
56	Dwelling Unit	5 Franklin Court	5D	Windows	Missing/Damaged Screen	1-NHS	<0.05	UN36	Bedroom 2	Window screen is damaged



DEFICIENCY REPORT: TARRYTOWN SHADOW (NY)

Inspection Date: Dec 16, 2019

Line	Area	Bldg No	Unit No	Item	Defect Type	Severity	Point Deduct	Photo	Location	Comments
57	Dwelling Unit	50 White St	103	Doors	Damaged Hardware/Locks	3-NHS	0.2	UN37	Bathroom 1 entry	Door does not latch properly
58	Dwelling Unit	50 White St	23	Bathroom	Lavatory Sink-Damaged/Missing	1-NHS	0.2	UN38	Bathroom	Sink stopper is inoperable
59	Dwelling Unit	50 White St	23	Bathroom	Plumbing-Leaking Faucet/Pipes	1-NHS	0.2	UN39	Bathroom	Shower head leak noted
60	Dwelling Unit	50 White St	29	Kitchen	Plumbing-Leaking Faucets/Pipes	1-NHS	0.2	UN40	Kitchen	Sink faucet is leaking
61	Dwelling Unit	50 White St	37	Kitchen	Range/Stove-Missing/Damaged/Inoperable	2-NHS	0.3	UN41	Kitchen	2 burners inoperable
62	Dwelling Unit	50 White St	37	Kitchen	Refrigerator-Missing/Damaged/Inoperable	1-NHS	0.2	UN42	Kitchen	Refrigerator gasket is damaged
63	Dwelling Unit	50 White St	52	Bathroom	Lavatory Sink-Damaged/Missing	1-NHS	0.2	UN43	Bathroom	Sink stopper is inoperable
64	Dwelling Unit	50 White St	52	Doors	Damaged Hardware/Locks	2-NHS	0.1	UN44	Bedroom 1 entry door	Door needs adjustment (hits frame)
65	Dwelling Unit	50 White St	52	Kitchen	Refrigerator-Missing/Damaged/Inoperable	1-NHS	0.2	UN45	Kitchen	Refrigerator gasket is damaged
66	Dwelling Unit	50 White St	66	Ceiling	Water Stains/Water Damage/Mold/Mildew	2-NHS	0.1	UN46	Bathroom	Water damage noted he noted as level 3
67	Dwelling Unit	50 White St	66	Kitchen	Plumbing-Leaking Faucets/Pipes	1-NHS	0.2	UN47	Kitchen	Sink faucet is leaking
68	Dwelling Unit	50 White St	66	Kitchen	Range/Stove-Missing/Damaged/Inoperable	2-NHS	0.3	UN48	Kitchen	1 burner inoperable
69	Dwelling Unit	50 White St	74	Ceiling	Peeling/Needs Paint	2-NHS	<0.05	UN49	Bedroom 1	Large area of peeling paint
70	Dwelling Unit	50 White St	74	Doors	Damaged Hardware/Locks	3-NHS	0.2	UN50	Front entry	Self-closing hardware not working correctly

DEFICIENCY REPORT: TARRYTOWN SHADOW (NY)

Inspection Date: Dec 16, 2019



Line	Area	Bldg No	Unit No	Item	Defect Type	Severity	Point Deduct	Photo	Location	Comments
71	Dwelling Unit	50 White St	81	Bathroom	Lavatory Sink-Damaged/Missing	1-NHS	0.2	UN51	Bathroom	Sink stopper is inoperable
72	Dwelling Unit	50 White St	81	Doors	Damaged Hardware/Locks	3-NHS	0.2	UN52	Front entry	Self-closing hardware not working correctly
73	Dwelling Unit	50 White St	81	Emergency/Fire Exits	Blocked/Unusable	3-LT	1.5	UN53	Bedroom 2	Lock on backwards - blocked egress
74	Dwelling Unit	50 White St	88	Bathroom	Plumbing-Leaking Faucet/Pipes	1-NHS	0.2	UN54	Bathroom	Tub faucet is leaking
75	Dwelling Unit	50 White St	95	Bathroom	Lavatory Sink-Damaged/Missing	1-NHS	0.2	UN55	Bathroom	Sink stopper is inoperable
76	Dwelling Unit	50 White St	95	Kitchen	Refrigerator-Missing/Damaged/Inoperable	1-NHS	0.2	UN56	Kitchen	Refrigerator gasket is damaged
77	Dwelling Unit	7 Franklin Court	7B	Bathroom	Plumbing-Leaking Faucet/Pipes	1-NHS	0.2	UN57	Bathroom	Shower head leak noted
78	Dwelling Unit	7 Franklin Court	7B	Kitchen	Refrigerator-Missing/Damaged/Inoperable	1-NHS	0.2	UN58	Kitchen	Refrigerator gasket is damaged

DEFICIENCY REPORT: TARRYTOWN SHADOW (NY)

Inspection Date: Dec 16, 2019



LT DEFICIENCY REPORT



**U.S. INSPECTION GROUP, INC.**

Corp Office: 848 Livingston Road, Suite 101 PMB 53, Crossville, TN 38555
 West Coast Office: 3652 Lake Park Road, Fallbrook, CA 92028
 PH: 866/863-8744 FX: 866/673-3280 E-mail: hazards@usinspectiongroup.com

NOTIFICATION OF EXIGENT & FIRE SAFETY HAZARDS

Property Name: Tarrytown Shadow (NY) Property ID#: NY Inspection Date: Dec 20, 2019
 Property Address: 50 White St. City: Tarrytown State/Zip: NY/10591

PART 1: EXIGENT HEALTH AND SAFETY HAZARDS

Air Quality A-- Propane/Natural Gas/Methane Gas Detected Electrical Hazards B-- Exposed Wires/Open Panels C-- Water Leaks On or Near Electrical Equipment	Emergency Equipment/Fire Exits/Fire Escapes D-- Emergency/Fire Exits/Blocked/Unusable Fire Escapes E-- Blocked Egress/Ladders Gas/Oil Hot Water Heater/Gas/Oil HVAC F-- Monoxide Hazard - Gas/Oil Fired Unit -Missing / Misaligned
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* The Offices of Housing and Public Housing require all exigent hazards be mitigated immediately. USIG also strongly recommends these hazards be mitigated immediately for the safety of the resident and the Housing Agency. During this inspection the following items were observed and noted as Exigent Health and Safety hazards requiring immediate attention.

Item#	Site or Bldg. Name	DU or CA Name	A	B	C	D	E	F	COMMENT(s)
1	3 Franklin Court								site of unit# 3A: Missing cover/exposed wires
2	5 Franklin Court	5D							Upstairs hallway: Missing switch cover noted
3	11 Franklin Court	11C							Bedroom 1: Bars in window that are screwed in making inoperable
4	11 Franklin Court	11C							Bedroom 1: Window is inoperable due to bars screwed in
5	12 Franklin Court	12G							Bedroom 1: Window will not stay in the open position
6	4 Franklin Court	4B							livingroom closet : Hasp lock noted
7	4 Franklin Court	4B							Up stairs hall closet : Hasp lock noted
8	50 White St	81							Bedroom 2: Lock on backwards - blocked egress

Neither the Inspector nor U.S. Inspection Group (USIG) assume any liability whatsoever expressed or implied that the above noted health and safety hazards constitute all of the health and safety deficiencies that may be present on the property. Any and all liability for the health and safety hazards noted above, as well as any health and safety hazards that may exist on the property but were not observed by the Inspector, are the full and absolute responsibility of the property owner and not the Inspector nor USIG. A copy of this form was also sent to USIG's offices.



U.S. INSPECTION GROUP, INC.

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PH: 866/863-8744 FX: 866/573-3280 E-mail: hazards@usinspectiongroup.com

PART 2: FIRE SAFETY HAZARD

Emergency Equipment/Fire Exits/Fire Escapes G-- Window Security Bars Prevent Egress H-- Fire Extinguishers Expired	Smoke Detectors I-- Missing/Inoperative
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During this inspection the following items were observed and noted as Fire Safety hazards which require immediate attention:

Item#	Site or Bldg. Name	DU or CA Name	G	H	I	COMMENT(s)
1	10 Franklin Court	10A				Upstairs hall: Smoke detector is inoperable

NAME OF OWNER / AGENT'S REPRESENTATIVE

INSPECTOR NAME

Eric Applegate

Email To:

Email Date: Dec 20, 2019

Neither the Inspector nor U.S. Inspection Group (USIG) assume any liability whatsoever expressed or implied that the above noted health and safety hazards constitute all of the health and safety deficiencies that may be present on the property. Any and all liability for the health and safety hazards noted above, as well as any health and safety hazards that may exist on the property but were not observed by the Inspector, are the full and absolute responsibility of the property owner and not the Inspector nor USIG. A copy of this form was also sent to USIG's offices.

SCORE REPORT





PROPERTY INSPECTION SCORE REPORT: TARRYTOWN SHADOW (NY)
 Inspection Date: Dec 16, 2019

Score **78.59** **PIH Project Number:** **NY** **Inspection Date:** **Dec 16, 2019** **Scattered Site:** **No** **Property:** **50 White St . Tarrytown, NY 10591**

Building / Unit Counts		
Counts	Total	Inspected
Buildings	17	17
Units	23	23

Scoring Detail			
Area	Possible Points	Area Points	Deductions
Site	20.08%	17.26%	2.82%
BldgExt	20.08%	17.3%	2.78%
BldgSys	12.58%	11.93%	0.65%
CA	0.4%	0.39%	0.01%
Unit	46.85%	31.71%	15.14%
Total	100.00%	78.59%	21.4%

Certificate Status	
Boilers	Not Applicable
Elevator	Not Applicable
Fire Alarm	Not Applicable
Lead-based Paint Disclosure	Not Applicable
Lead-based Paint Inspection	Not Applicable
Sprinkler System	Not Applicable

Level 3 (Severe) Deficiency Counts		
Not Health & Safety	Actual	Percent
1 - Site	0	100.00%
2 - Building	5	100.00%
1 - Unit	7	100.00%
Not Life Threatening	Actual	Percent
1 - Site	0	100.00%
2 - Building	1	100.00%
1 - Unit	0	100.00%
Life Threatening	Actual	Percent
1 - Site	0	100.00%
2 - Building	1	100.00%
1 - Unit	7	100.00%
Smoke Detectors	Actual	Percent
1 - Site	0	100.00%
2 - Building	0	100.00%
1 - Unit	1	100.00%

Deficiencies			
Area	1 - Minor	2 - Major	3 - Severe
Site	0	1	0
BldgExt	1	9	1
BldgSys	0	0	3
CA	1	1	3
Unit	37	6	15
Total	39	17	22

Observations			
Area	1 - NOD	2 - OD	3 - NA
Site	15	1	0
BldgExt	227	11	0
BldgSys	151	3	101
CA	0	4	404
Unit	551	47	0
Total	944	66	505

PROPERTY PROFILE REPORT





PROFILE REPORT: TARRYTOWN SHADOW (NY)

Inspection Date: Dec 16, 2019

Building Name: 1 Franklin Court **No. of Units:** 1 50 White St
Building Type: Mid/High Rise **Year Built:** 1950 Tarrytown, NY 10591
Reason Uninspectable: None **Notes:**

Unit	Unit Type	Occupied?	Reason Uninspectable	Notes
1E	2 Bedrooms	Yes	None	

Building Name: 10 Franklin Court **No. of Units:** 1 50 White St
Building Type: Lowrise/Garden Apartment **Year Built:** 1950 Tarrytown, NY 10591
Reason Uninspectable: None **Notes:**

Unit	Unit Type	Occupied?	Reason Uninspectable	Notes
10A	3 Bedrooms	Yes	None	

Building Name: 11 Franklin Court **No. of Units:** 1 50 White St
Building Type: Lowrise/Garden Apartment **Year Built:** 1950 Tarrytown, NY 10591
Reason Uninspectable: None **Notes:**

Unit	Unit Type	Occupied?	Reason Uninspectable	Notes
11C	2 Bedrooms	Yes	None	

Building Name: 12 Franklin Court **No. of Units:** 2 50 White St
Building Type: Lowrise/Garden Apartment **Year Built:** 1950 Tarrytown, NY 10591
Reason Uninspectable: None **Notes:**

Unit	Unit Type	Occupied?	Reason Uninspectable	Notes
12A	2 Bedrooms	Yes	None	
12G	2 Bedrooms	Yes	None	

Building Name: 13 Franklin Court **No. of Units:** 1 50 White St
Building Type: Lowrise/Garden Apartment **Year Built:** 1950 Tarrytown, NY 10591
Reason Uninspectable: None **Notes:**

Unit	Unit Type	Occupied?	Reason Uninspectable	Notes
13d	2 Bedrooms	Yes	None	

**PROFILE REPORT: TARRYTOWN SHADOW (NY)**

Inspection Date: Dec 16, 2019

Building Name: 14 Franklin Court **No. of Units:** 0 50 White St
Building Type: Lowrise/Garden Apartment **Year Built:** 1950 Tarrytown, NY 10591
Reason Uninspectable: None **Notes:**

Building Name: 15 Franklin Court **No. of Units:** 0 50 White St
Building Type: Lowrise/Garden Apartment **Year Built:** 1950 Tarrytown, NY 10591
Reason Uninspectable: None **Notes:**

Building Name: 2 Franklin Court **No. of Units:** 1 50 White St
Building Type: Lowrise/Garden Apartment **Year Built:** 1950 Tarrytown, NY 10591
Reason Uninspectable: None **Notes:**

Unit	Unit Type	Occupied?	Reason Uninspectable	Notes
2D	2 Bedrooms	Yes	None	

Building Name: 3 Franklin Court **No. of Units:** 1 50 White St
Building Type: Lowrise/Garden Apartment **Year Built:** 1950 Tarrytown, NY 10591
Reason Uninspectable: None **Notes:**

Unit	Unit Type	Occupied?	Reason Uninspectable	Notes
3A	3 Bedrooms	Yes	None	

Building Name: 4 Franklin Court **No. of Units:** 1 50 White St
Building Type: Lowrise/Garden Apartment **Year Built:** 1950 Tarrytown, NY 10591
Reason Uninspectable: None **Notes:**

Unit	Unit Type	Occupied?	Reason Uninspectable	Notes
4B	2 Bedrooms	Yes	None	

Building Name: 5 Franklin Court **No. of Units:** 1 50 White St
Building Type: Lowrise/Garden Apartment **Year Built:** 1950 Tarrytown, NY 10591
Reason Uninspectable: None **Notes:**

Unit	Unit Type	Occupied?	Reason Uninspectable	Notes
5D	3 Bedrooms	Yes	None	

**PROFILE REPORT: TARRYTOWN SHADOW (NY)**

Inspection Date: Dec 16, 2019

Building Name: 50 White St **No. of Units:** 12 50 White St
Building Type: Mid/High Rise **Year Built:** 1950 Tarrytown, NY 10591
Reason Uninspectable: None **Notes:**

Unit	Unit Type	Occupied?	Reason Uninspectable	Notes
23	2 Bedrooms	Yes	None	
29	1 Bedroom	Yes	None	
37	1 Bedroom	Yes	None	
45	2 Bedrooms	Yes	None	
52	2 Bedrooms	Yes	None	
59	2 Bedrooms	Yes	None	
66	1 Bedroom	Yes	None	
74	3 Bedrooms	Yes	None	
81	3 Bedrooms	Yes	None	
88	2 Bedrooms	Yes	None	
95	2 Bedrooms	Yes	None	
103	2 Bedrooms	Yes	None	

Building Name: 6 Franklin Court **No. of Units:** 0 50 White St
Building Type: Lowrise/Garden Apartment **Year Built:** 1950 Tarrytown, NY 10591
Reason Uninspectable: None **Notes:**

Building Name: 7 Franklin Court **No. of Units:** 1 50 White St
Building Type: Lowrise/Garden Apartment **Year Built:** 1950 Tarrytown, NY 10591
Reason Uninspectable: None **Notes:**

Unit	Unit Type	Occupied?	Reason Uninspectable	Notes
7B	1 Bedroom	Yes	None	

Building Name: 8 Franklin Court **No. of Units:** 0 50 White St
Building Type: Lowrise/Garden Apartment **Year Built:** 1950 Tarrytown, NY 10591
Reason Uninspectable: None **Notes:**

Building Name: 9 Franklin Court **No. of Units:** 0 50 White St
Building Type: Lowrise/Garden Apartment **Year Built:** 1950 Tarrytown, NY 10591
Reason Uninspectable: None **Notes:**



PROFILE REPORT: TARRYTOWN SHADOW (NY)
Inspection Date: Dec 16, 2019

Building Name:	Community Bldg Franklin Court	No. of Units:	0	50 White St
Building Type:	Common Building	Year Built:	1950	Tarrytown, NY 10591
Reason Uninspectable:	None	Notes:		

Overall Property Notes:

HOUSE KEEPING REPORT





HOUSEKEEPING REPORT: TARRYTOWN SHADOW (NY)

Inspection Date: Dec 16, 2019

Line	Building Name	Unit No.	Severity	Location	Comments
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RECOMMENDED CORRECTIVE ACTION



The following deficiencies were recognized as common throughout your specific properties. In our quest to assist you in raising your physical inspection score, we have provided a definition, a repair tip, and, in some cases, a cost for each of these deficiencies. Along with this information we have included a number set in parenthesis (this number represents the criticality level assigned by REAC). This number is relative other defects in it's respective area...site, exterior, unit, etc. We also have numbered each inspection area to show the weight given each (the larger the number the more weight and criticality given it). You can also refer to the individual point deductions on the "Deficiency Report" to aid in setting priorities. We expect that this will allow you the opportunity to not only prioritize your work orders, but also repair them in a cost effective manner. The cost estimates are based on a national average and could differ in your specific location.

NOTE: Because of the new "Industry Standard Repair" rule – all repairs should be completed in a fashion that is "professional" (not easily distinguishable and using the correct materials).

Site (5)

Overgrown/penetrating vegetation (4) (Does not include roses, vines, etc. that may have been intentionally planted, so long as they do no damage to structure and aren't touching an unintended surface.)

Defect: Plant life that has infiltrated unacceptable areas and/or has grown beyond established parameters or affects ability to visually inspect building or travel walkways.

Repair: Trim back trees/bushes so that they do not damage building/fences/walks or obstruct unintended areas.

Building Exterior (4)

Wall - Cracks/missing mortar (4)

Defect: Visible split, gap or crack that exceeds 1/8th in X 1/8th in X 6 in. or sections of missing/deteriorated mortar.

Repair: Fill crack with an industry standard mortar caulk (Approx. \$2.79 - \$3.99 tube) If there appears to be substantial lateral movement, refer problem to a structural engineer.

Damaged soffit/fascia (3)

Defect: Soffits, fascia or soffit vents are damaged which may or may not provide visible opportunity for water penetration or other damage from natural elements.

Repair: Repair areas, replace material as needed.

Damaged door surfaces (4)

Defect: Damage in the door surface which may effect the surface protection, the strength of the door, or compromise security. Includes holes, peeling paint, broken glass or significant rust. An entry or fire door with any of these defects is an automatic Level 3 defect.

Repair: Scrape off peeling paint. Repaint or repair door as needed.

Building Systems (4)

Exposed wire/missing cover electric panel (5)

Defect: Exposed bare wires or openings/missing covers in electric panels. (Life Threatening Hazard)

Repair: Replace cover on electric panel or junction box. Do NOT add any foreign material (caulking, fabricated plates, etc.)

Building Common Areas (3)

Damaged walls/ceilings (2)

Defect: Punctures in wall/ceiling. May or may not penetrate completely. Panels or tiles may be missing or damaged. Does not include small holes created by hanging pictures.

Repair: Repair damage with drywall joint compound (Approx cost \$ 9.96 5gal bucket). For larger holes-replace section of drywall (Approx cost \$3.90 sheet)

Damaged Doors-Hardware (2)

Defect: The attachments to a door to provide hinging, hanging, opening, closing or security is damaged or missing.

Repair: Sometimes all that is required is a minor adjustment to the striker plate or the hinges. If not, repair or replace damaged hardware (Approx. cost- lock assy-\$6.00 - \$15.00, hinges-\$3.00 - \$5.00).

Leaking plumbing (4)

Defect: Faucet or drain connections leak/drip.

Repair: Tighten connections. Replace washers or faucet stem as required. (Approx cost \$.50 - \$3.00)

Unit (3)

Missing breakers (5)

Defect: Missing breaker/fuse or openings are noted in electric panel. (Life Threatening Hazard)

Repair: Install appropriate sized plastic knockout covers in electric panel (Approx. cost \$.50 ea). Try this trick - use tape on the inside of the panel box to hold the knockout covers in place better. This way they won't inadvertently fall out before your REAC inspection. Do NOT add any foreign material (caulking, fabricated plates, etc.)

Bathroom ventilation inoperable (3)

Defect: Bathroom ventilation is not working properly.

Repair: Most often the inoperable vent can be traced to a loose/disconnected wire, or thrown breaker (some residents do not like the noisy fan). This is one of two defects that the REAC inspector is required to allow you to repair and not record a deficiency (if, in fact, the defect is simply a disconnected wire or thrown breaker).

Call-For-Aid Inoperable (3)

Defect: The call-for-aid devices do not function properly (alarm and light where applicable) or cords are tied-up or cut shorter than originally designed.

Repair: Repair as needed. Because REAC does not have a pre-described length make sure that all your cords are approximately the same length. If this service is not longer required for the unit – remove all associated equipment (lights, pull-cords, switches, etc.) and cover junction boxes as appropriate. If removed properly no deficiency will be noted.

Improper storage of flammable materials (4)

Defect: Improperly stored materials; gas, oil, oil based paint, kerosene, lantern fuel, etc. This includes lawn mowers stored indoors (if filled with gas and oil).

Repair: Remove materials to safe storage area (exterior or fire cabinet)

Electrical Panel blocked (3)

Defect: A fixed obstruction or item of sufficient size and weight delays or prevents access to any panel board or main power switch in an emergency. One or more fixed items or items of sufficient size and weight impede access to the building system's electrical panel during an emergency ("sufficient size" – this does not mean pictures or calendars)

Repair: Permanently remove any item that would impede the ability to gain access to panel. Instruct resident on proper storage procedures.

Light fixture inoperable (2)

Defect: Light will not operate.

Repair: This is a defect that the REAC inspector is required to allow you to repair while in his/her presence. If the light fixture can be repaired by simply installing a working bulb than no deficiency will be noted. For this reason we suggest that your representative (REAC escort) carry an extra bulb with them.

Trip hazard (3 – non scorable)

Defect: This is a very general defect that includes anything that may cause tripping: phone cords/extension or electrical cords/cables running down stairwells or across walkways.

Repair: Instruct resident on proper way to place cords and cables (if running across a walkway or stairwell the cords should be securely taped to the floor or wall). Small throw rugs over cords will not suffice.

Loose handrails in stairways (3)

Defect: Loose handrail or baluster loose on landing.

Repair: Tighten loose screws or bolts. If needed install shoe brackets for support.

Damaged/missing steps (treads in stairway) (3)

Defect: The horizontal tread or stair surface is damaged or missing.

Repair: This is a defect that can cause you two separate deficiencies... 1) damaged step and 2) tripping hazard. We suggest repairing the tread to alleviate the hazard.

Inoperable or not lockable window (3)

Defect: Window not operable (won't open or won't stay open) or inoperable locks.

Repair: Replace sash cords as needed to repair window. If not lockable – replace locking mechanism. For hard to locate locking hardware a wooden pole will NOT satisfy REAC.

Missing/deteriorated caulking or seals around window (2)

Defect: Caulking or glazing compound to provide weather resistance is missing or deteriorated. This includes Thermopane windows that have failed (fogged).

Repair: Replace caulking/glazing with either caulking (Approx. \$3.99 tube) or glazing compound (Approx. \$4.49/ ½ lb. tub). For compromised double pane seals (Thermopane)...the sash will need replacing.

Missing or inoperative smoke detector (5 – non scorable)

Defect: Smoke detector is missing or will not activate.

Smoke detector is required on each level (first & second floors, if applicable) Life Threatening Hazard – This is a non-scoring defect.

Repair: If unit is hard wired, check panel box. Replace unit if indicated. If battery operated, check battery. (Approx. \$6.00 – \$12.00 ea). If you have trouble with residents removing the battery try installing a small screw in the battery tray – this will make it a little more work for them to remove the battery and they may leave it alone.

Damaged walls/ceilings (2)

Defect: Punctures in wall/ceiling. May or may not penetrate completely. Panels or tiles may be missing or damaged. Does not include small holes created by hanging pictures.

Repair: Repair damage with drywall joint compound (Approx cost \$ 9.96 5gal bucket). For larger holes-replace section of drywall (Approx cost \$3.90 sheet)

Damaged Doors-Surface (2)

Defect: Damage in the door surface which may effect the surface protection, the strength of the door, or compromise security/privacy. Includes holes, peeling paint, broken glass or significant rust. An entry, bath or fire door with any of these defects is an automatic Level 3 defect.

Repair: If door surface is damaged – replacement of the door is required. If peeling paint or minor delamination – wood putty and scraping paint then repainting is acceptable. Plastic disks are no longer acceptable as a “repair”.

Damaged Doors-Hardware (2)

Defect: The attachments to a door to provide hinging, hanging, opening, closing or security is damaged or missing.

Repair: Sometimes all that is required is a minor adjustment to the striker plate or the hinges. If not, repair or replace damaged hardware (Approx. cost- lock assy-\$6.00 - \$15.00, hinges-\$3.00 - \$5.00).

Damaged Doors-Frame/Trim (2)

Defect: The door’s frame, header, jamb, threshold, lintel, or trim is warped, split, cracked, or broken in such a way that the door no longer functions properly.

Repair: At times all that is required is a minor repair to the frame/trim to allow the door to latch/lock. As long as the door latches and locks properly no deficiency will be noted.

Damaged weatherstripping (3)

Defect: Sealant and stripping designed to resist weather is missing or deteriorated. (This applies only to entry doors that were designed with seals. If a door shows evidence that a seal was never part of its design, this is not a deficiency.)

Repair: Adjust or replace weatherstripping as needed. (Approx. \$3.00 - \$8.00).

Damaged/missing screen/storm/security doors (2)

Defect: Screen or storm door is damaged, or is missing screens or glass (as shown by an empty frame or frames).

Repair: Replace or repair damaged components (screens, glass, hardware, etc.) If door is properly removed (all hardware) by the housing provider this is not a deficiency.

Rust/corrosion on HVAC (2)

Defect: Material condition of the equipment and/or associated cabinets shows evidence of flaking, discoloration, pitting or crevices.

Repair: Remove rust with sandpaper/steel brush and repaint as needed. If warranted, replace affected part.

Infestation (3)

Defect: Health & Safety Issue. Infestation of roaches, ants, rats, or mice, especially in food preparation areas.

Repair: Contact pest control company or distribute paste/bait.

Floor covering damage (2)

Defect: Damage (including cuts, stains, burns, holes, etc.) to at least 5% of the carpet, tiles, wood, sheet vinyl or other floor covering.

Repair: Repair or replace as needed (replaced tile need to match)

Walls/ceilings need paint (2)

Defect: Paint is peeling, cracking, flaking or otherwise deteriorated.

Repair: Repaint as needed.

Damaged or missing light switch/wall receptacle (including cover plate) (4)

Defect: Broken cover plate does not expose wiring (level 1). Missing or broken cover plate exposes wiring (level 3 – Life threatening hazard). Switch or receptacle may be broken also.

Repair: Replace cover plate, switch or receptacle as needed. (Approx. cost \$.50 - \$2.00). If this is a troublesome apartment try using the much more durable “unbreakable” nylon cover plates.

Missing door (2)

Defect: Door is absent. (Note- a bedroom or closet door removed at the request of the resident is not a defect although all associated hardware, ie; hinges, striker plate, etc., must be removed and the holes puttied and painted).

Repair: Replace missing door.

Missing Stopper-sink/tub (Bathroom) (1)

This defect reads “Lavatory Sink - Damaged/Missing” – Level 1 <or> “Tub/shower – Damaged/Missing” – Level 1. The actual defect is usually a missing/inoperable stopper.

Defect: Stopper is missing or inoperable.

Repair: Install stopper – also you will need to remove the pull lever and fill the resulting small hole with appropriate plug (Approx cost \$.50).

Clogged drains (5)

Defect: Water does not drain freely in shower, tub or sink.

Repair: Use drain snake to clear stoppage.

Leaking plumbing (4)

Defect: Faucet or drain connections leak/drip.

Repair: Tighten connections. Replace washers or faucet stem as required. (Approx cost \$.50 - \$3.00)

Inoperative GFI (5)

Defect: GFI is present and inoperable when test button is pushed. (Receptacle may still be energized)

Repair: Replace GFI (Approx cost \$8.00)

Commode damaged (5)

Defect: Commode is damaged; seat, flush lever, tank cover or hinge.

Repair: Replace damaged/missing parts (Approx. cost-Seat& Cover \$15.00 - \$25.00. Flush valve kit \$7.49, Fill line \$ \$2.19 - \$3.79, Flush lever \$3.79, Flush ball \$3.29) or entire unit if necessary (Unit Approx. cost \$75.00 - \$100.00)

Laundry (3)

Defect: Dryer not properly vented.

Repair: Install dryer vent kit to vent dryer to exterior (Approx. \$5.99) or lint trap kit (Approx \$8.95) - (This kit allows the electric dryer to effectively vent into a trap without having to be vented to the exterior of the building).

Refrigerator door gasket damaged (2)

Defect: Seals around doors are deteriorated (wore, torn, loose). Most often the damaged area will be at the lower inside corner of the refrigerator door.

Repair: Replace door gasket (Approx. cost \$65.00 - \$93.00). If the damage is smaller than one inch, a neatly placed white tape repair is allowed.

Oven/burners inoperative (3)

Defect: Burners or elements do not operate as intended.

Repair: Check connections to eyes. If gas, check pilot lights and gas line for obstructions.

Kitchen Countertops damaged (2)

Defect: The countertop working surface is missing, deteriorated, or damaged--not a sanitary surface to prepare food.

Repair: Resurface or patch the top (laminite). There are several patch kits on the market and depending on your level of damage they may suffice.

Range vent hood inoperable (3)

Defect: Vent is inoperable (level 3) or an accumulation of dirt/grease threatens the free passage of air (level 1).

Repair: Repair/replace vent and/or filter or clean dirt/grease from mesh filter.

Cabinet damaged (kitchen/bathroom) (2)

Defect: Cabinets are missing/damaged or the laminate is separating. This includes cases, boxes, or pieces of furniture with drawers, shelves, or doors--primarily used for storage--mounted on walls or floors.

Repair: We suggest repairing doors and drawer fronts as these are the most noticeable.

Window Cracked (2)

Defect: Windowpane is cracked (level 1). Windowpane is broken/missing pieces (level 3). This could also constitute a sharp hazard.

Repair: Replace windowpane or entire sash as needed.

Misaligned vent on water heater (5)

Defect: The exhaust system on a gas or oil fired unit is misaligned which can cause dangerous venting of gases. (Life Threatening)

Repair: Re-align or re-attach vent pipe accordingly.

Rust/corrosion on water heater (2)

Defect: Material condition of the equipment and/or associated cabinets shows evidence of flaking, discoloration, pitting or crevices.

Repair: Remove rust with sandpaper/steel brush and repaint as needed. If warranted, replace affected part.

No Temperature/Pressure Relief (TPR) valve, or short discharge line on water heater (5)

Defect: Pressure relief valve is missing or discharge line does not extend to within 6 in. of floor or outside the building to a safe location.

Repair: If TPR valve is missing - install relief valve (Approx. \$8.00) If discharge line is short (not within 18 inches of floor) – install ¾ in plastic/copper discharge line (Approx. \$3.29 per joint)

Sharp edges (3)

Defect: This is a very general deficiency (similar to tripping hazard). This defect can be caused by anything from busted bottles in the yard to a cracked bathroom mirror.

Repair: Suggest removing any and all sharp edges. Even if replacement of broken item is not forth coming we still suggest removing the item in question to alleviate the sharp hazard.

Mold/mildew (3)

Defect: Visible evidence of mold/mildew. (If more than a sf, it will constitute an Air Quality-Hazard)

Repair: Use a mixture of water and bleach to wash down area and kill the mold/mildew.

Exposed wiring (5)

Defect: Exposed energized wiring noted (Life Threatening hazard)

Repair: Enclose wiring in conduit. Install cover on wiring junction box. Do not add any "foreign" material.

Blocked egress (windows/doors) (4)

Defect: Exterior doors or lower floor windows blocked (no egress in case of fire). The exit cannot be used or exit is limited because a door or window is nailed shut, a lock is broken, panic hardware is chained, debris, storage, personal belongings, air conditioners, etc.

Double cylinder deadbolt (keyed on both sides of lock) also is a blocked egress hazard according to REAC. The reason behind REAC's stance is once these doors are locked and the key stored safely away if a fire was to breakout the key would be extremely difficult to locate in a smoke filled room.

Repair: **For furniture** - have resident remove item. For bolted on security windows - remove and replace with breakaway type. If two windows are in the same general area (same bedroom) only 1 is required for egress.

For air conditioners - REAC has made it clear...if a room has only 1 window (and no other secondary means of egress) and it is blocked with a frame-mounted air conditioner this is a Life Threatening Hazard. For more detailed information on how to mitigate this safety risk and how to request a database adjustment visit

http://www.hud.gov/reac/pdf/PIOpsBulletin_18.pdf

For **double cylinder locks** - replace with single cylinder locks (keyed on exterior only).

SITE

INSPECTABLE ITEM:	LEVEL 1	LEVEL 2	LEVEL 3
<u>FENCES & GATES</u>	Hole <6"x6"; interior fence is missing a section.	Interior fence/gate is damaged; exterior/security fence/gate is damaged but still functions.	Exterior/security fence/gate is missing/damaged and doesn't function as intended; Hole is >6"x6".
<u>GROUNDS</u>	N/A.	Erosion has caused a degraded surface; a rut is 6" to 8" wide and 3" to 5" deep. Grass/weeds are overgrown, obstruct parking/walkways or touch any unintended structure/fence/sidewalk. Ponding 3" to 5" deep.	Runoff has moved soil and caused damage to area structure/system; rut is >8 in. wide x 5 in. deep. Plant growth has damaged structure/fence/walk or made them impassable/unusable. Ponding >5 in. deep made an area >20% unusable.
<u>MAILBOXES & SIGNS</u>	Project sign is deteriorated/damaged & can't be read from 20 feet.	N/A	Mailbox is missing or can't be locked.
<u>MARKET APPEAL</u>	Graffiti in 1 place.	Graffiti in 2 to 5 places. Litter at the property.	Graffiti in >5 places.
<u>PARKING LOTS/ DRIVEWAYS/ ROADS</u>	Potholes has exposed subsurface; heaving/ settlement.	Cracks > ¼ inch wide/ settling/ >3 inches ponding effecting >5% of all areas.	>3 inches ponding effecting >5% of all areas. Potholes/ heaving/settlement has made area unusable for vehicles/pedestrians.
<u>PLAYGROUNDS</u>	20% to 50% of equipment is damaged/deteriorated.	>50% of equipment damaged/deteriorated. 20% to 50% of play surface is damaged/deteriorated.	Equipment that is unsafe; >50% of play surface is damaged/deteriorated.
<u>RETAINING WALLS</u>	N/A	Shows some signs of deterioration.	Does not function as it should or is a safety risk.
<u>STORM DRAINAGE</u>	N/A	The system is partially blocked causing backups.	The system is completely blocked/ system failed causing backups/unintended runoffs.
<u>WALKWAYS & STEPS</u>	Spalling >5% of surface in areas <4 in. x 4 in.	Spalling >5% of surface in area >4 in. x 4 in. Cracks >3/4 in. effecting >5% of all areas.	Handrail of >3 steps is missing/damaged/loose.

BUILDING EXTERIOR

INSPECTABLE ITEM:	LEVEL 1	LEVEL 2	LEVEL 3
<u>DOORS</u>	A storm door is damaged/missing glass/screen/panel.	One door has damaged hardware, threshold/ trim/frame and cannot be locked. ¼ in. to 1 in. diameter hole.	One entry or fire door cannot be locked or closed due to damaged frame/ threshold/ lintel/ trim/ hardware; seals on entry doors damaged/ missing; ¼ in. to 1 in. diameter hole on entry or fire doors, >1 in. diameter hole on others; >half of surface with rust/peeling/ cracking that effects door structure. Security or exterior door is missing.
<u>FIRE ESCAPE</u>	N/A	N/A	Stored items or other barriers restrict/ block exits. Parts to a fire escape system are damaged/missing.
<u>FOUNDATIONS</u>	N/A	Cracks >1/8 in. x 6 in. long; large pieces or bricks missing or 10% to 50% of foundation has spalled areas.	Cracks >3/8 in. x 3/8 in. x 6 in. long; cracks the full depth of the wall; sections missing/ broken; >50% of foundation has spalled areas; spalling that exposes ANY rebar or metal.
<u>LIGHTS & OUTLETS</u>	N/A	20% to 50% of light fixtures are missing/damaged.	>50% of light fixtures are missing/damaged. Switches/ outlets/ covers are missing/damaged.

BUILDING EXTERIOR (Cont.)

<p><u>ROOFS</u></p>	<p>Damage to soffits/ fascia; splashblocks are missing/ damaged; up to one square of shingles are missing; any vents are damaged.</p>	<p>Roof drains are blocked/ damaged; ballast is deteriorated/ damaged; Gutter/ downspout components are missing/ damaged but with no damage to surroundings; 1 to 2 squares are missing.</p>	<p>Roof drains are blocked/ damaged causing ponding; soffits/fascia/vents/ ballasts/gutters/ downspouts are damaged permitting water penetration or damage to surroundings; >2 squares are missing; standing water on roof.</p>
<p><u>WALLS</u></p>	<p>Mortar is missing around one brick; caulking has failed less than 12 inches; > half of a wall is stained/ peeling.</p>	<p>Cracks >1/8 inch x 1/8 inch x 6 inches long; holes in wall larger than 1/2 inch; siding/bricks deteriorated/missing up to 8 1/2 x 11 inch section/ bricks/hole >4 x 4 inches are missing from chimney.</p>	<p>Cracks >3/8 x 3/8 x 6 inches long; cracks/ holes the full depth of the wall; siding/bricks deteriorated/missing >8 x 11 inches or ANY rebar or metal; chimney separating from wall.</p>
<p><u>WINDOWS</u></p>	<p>Cracked pane; sill damaged; peeling/ needs paint. >2 damaged/ missing screens.</p>	<p>Sill is damaged enough to expose surrounding wall; >half of windows show signs of failed caulk/seal.</p>	<p>Broken/missing pane; water damage to surrounding structure; security bar release mechanism not working.</p>

BUILDING SYSTEM

INSPECTABLE ITEM:	LEVEL 1	LEVEL 2	LEVEL 3
<u>DOMESTIC WATER</u>	N/A	N/A	Water is leaking; units do not work; improper angle/ disconnected flue; extension tube not within 18 in. of floor; Rust/ corrosion has caused a hole in piping/ducting.
<u>ELECTRICAL SYSTEM</u>	N/A	N/A	Blocked access to panel; rust/ corrosion/ burns on panels/wires; frayed wires; open breaker/fuse/slots/ socket; missing covers exposing electrical connections (except: for low voltage)
<u>ELEVATOR</u>	N/A	N/A	Elevator does not function or is misaligned with floor >3/4 inch.
<u>EMERGENCY POWER</u>	N/A	Generator operation records are not available for last 12 months, but older records are.	Emergency lights do not function; no generator operation records available.
<u>EXHAUST SYSTEM</u>	N/A	N/A	Roof exhaust fan does not work.
<u>FIRE PROTECTION</u>	<5% of fire extinguishers are missing/damaged/ expired.	5% to 10% of fire extinguishers are missing/damaged/expired.	>10% of extinguishers are missing/ damaged/ expired. There isn't one extinguisher on each floor. Missing sprinkler head.
<u>HVAC</u>	Water or steam is leaking.	Rust/corrosion has caused a hole in piping/ducting.	Water/steam/fuel is leaking to point that system should be shut down; disconnected or improper angle on flue; equipment isn't operating properly.
<u>SANITARY SYSTEM</u>	N/A	N/A	System is leaking; clogged drains; cover is missing.

UNIT

INSPECTABLE ITEM:		LEVEL 1	LEVEL 2	LEVEL 3
<u>BATHROOM</u>	<u>VANITY/ MEDICINE CABINET</u>	Missing/damaged/ rusted light shade/ cabinet/shelf/doors Not working correctly	N/A	N/A
	<u>SINK</u>	>Half of Surface Cracked/Discolored; Leaking Faucet; Slow Drain; Stopper Missing	N/A	Does Not Operate; Leaking Trap; Clogged Drain
	<u>SHOWER/TUB</u>	Leaking Faucet; Slow Drain; Stopper Missing	>Half of Surface Cracked/Discolored; Missing Parts	Does not operate; clogged drain
	<u>EXHAUST FAN</u>	N/A	Does Not Operate	N/A
	<u>TOILET</u>	N/A	Seat/Flush Handle/Hinged/Cover Parts are Missing/Broken	Toilet Flange is Loose, Does Not Operate; Clogged
<u>CALL-FOR-AID</u>		N/A	N/A	Does Not Sound and/or Light; cord tied short
<u>CEILING</u>		<3 Tiles/Panels are Missing; >8 ½ in. x 11 in. Hole that Can't See Through; 1 to 4 sq. feet on a Ceiling Peeling Paint/Mold/Water Stain	>3 Tiles/Panels are Missing; >8 ½ in. x 11 in. Hole That Can't See Through; >4 sq. feet on a Ceiling or Up to Half of Ceilings in a Unit has Peeling Paint/Mold/Water Stains; >1/8 in. Wide and 11 in. Long Crack	Bulging/Buckling/ Sagging. Hole that Penetrates Area Above; >Half of a Ceiling has Mold/Water Stains or >Half of All Ceilings Have Level 1 Defects
<u>DOORS</u>	<u>BATH & ENTRY</u>	N/A	N/A	>1/4 in. Diameter Hole; Cannot be Locked or Closed Due to Damaged Frame/Threshold/Lintel/ Trim/Hardware; Seals on Entry Doors Damaged/Missing; Door is Missing (except in handicapped units)

UNIT (cont.)

<u>DOORS</u>	<u>ROOM, CLOSET & STORM</u>	A Single Closet Door is Damaged/Missing; a Storm Door is Damaged/Missing Glass/ Screen/ Panel	>1/4 in. to 1 in. Diameter Hole; Damaged Hardware /Threshold/Trim/Frame. Two or Up to Half of Doors are Missing	>1 in. Diameter Hole; Half of Surface with Rust/Peeling/Cracking that Effects Door Structure; Broken/ Missing Glass; a Security Door is Damaged/Missing; > Half of Unit's Doors are Missing (except in handicapped units)
<u>ELECTRICAL</u>	<u>PANEL</u>	N/A	N/A	Blocked by heavy objects; burns/ melting/ corrosion; nicks/ fraying of insulation that exposes bare wires; open fuses/ breaker slots.
	<u>COVERS</u>	N/A	N/A	Any missing covers exposing wires.
	<u>GFCI</u>	N/A	N/A	GFCI's that do not trip and reset using buttons.
<u>FLOORS</u>		5% to 10% of floor is missing or has stains/burns/ tears/cuts/holes/ loose areas. 1 to 4 square feet of peeling paint.	10% to 50% of floor is missing or has stains/ burns/tears/holes/loose areas. >4 square foot of peeling paint. 1 to 4 square feet of rotted floor.	Bulging / sagging > half of floor has stain/burn/tears/cuts/ holes/ loose areas. >4 square feet of rotted floor/water stains/ mold/ mildew.
<u>HOT WATER TANK</u>		Superficial rust/ corrosion on piping/ducting.	Rust/corrosion has caused a hole in piping/ ducting.	Disconnect/ improper angle on flue; no hot water from faucets; leaking tank/ valves/ fittings; extension tube not within 18 inches of floor.
<u>HVAC</u>		Noisy/leaking/ vibrating when in use.Rust/corrosion deterioration to unit.	N/A	Disconnected/ improper angle on flue; missing radiator covers; units do not work.

UNIT (cont.)

<u>KITCHEN</u>	<u>CABINETS</u>	N/A	10% to 50% of cabinets/ doors/ shelves are missing or delaminating.	Half of shelves, cabinets, doors missing or laminate separating.
	<u>COUNTERTOPS</u>	N/A	>20% of countertop is missing/deteriorated/ damaged below the laminate.	N/A
	<u>GARBAGE DISPOSAL</u>	N/A	Does not operate.	N/A
	<u>SINK</u>	Faucet leaks; drains slow; >half of surface cracked/ discolored.	N/A	Faucet/drain parts not working; leaking or clogged.
	<u>EXHAUST FAN</u>	Partially clogged by dust/dirt.	N/A	Does not work or blocked.
	<u>RANGE</u>	Damaged doors; gas flame not even; one pilot light is out.	One burner is not working.	Two burners do not work; unit is missing; oven is not working.
	<u>REFRIGERATOR</u>	Excessive ice; damaged door seal.	N/A	Does not work; unit is missing.
<u>LAUNDRY (AREA)</u>	N/A	N/A	Dryer vent missing or blocked.	
<u>LIGHTS</u>	Light fixture is inoperable in one room that has no switched outlet.	Light fixtures are inoperable in two rooms that have no switched outlets.	>2 rooms fixtures missing or not working.	
<u>OUTLETS/SWITCHES</u>	Cracked cover plates.	N/A	Outlet/switch or cover plate is missing.	
<u>PORCH/PATIO & BALCONY</u>	N/A	N/A	Railing loose/ damaged/missing.	
<u>SMOKE DETECTOR</u>	N/A	N/A	Missing/does not operate.	
<u>STAIRS</u>	N/A	N/A	>3 steps handrail loose/damaged/ missing; broken or missing step.	

UNIT (cont.)

<u>WALLS</u>	<u>SURFACE</u>	1 x 8 ½ x 11 inch hole that cannot be seen through.	>8 ½ x 11 inch that cannot be seen through; >1/8 inch wide and 11 inch long crack.	Bulging/ buckling/ sagging. Hole that penetrates next room or two or more walls have Level 2 damage.
	<u>TRIM</u>	5% to 10% is damaged/missing.	10% to 50% is damaged/missing.	> Half of trim damaged/missing.
	<u>WATER STAINS & PEELING</u>	1 to 4 square feet peeling pain/ mold/water stains.	>4 square feet of peeling/paint/mold/ water stains.	>Half of a wall or > half of all walls have Level 1 defects.
<u>WINDOWS</u>		Cracked pane, sill damaged; sash cannot be locked; peeling/needs paint.	Sill is damaged enough to expose surrounding wall; >half of windows show signs of failed caulk/seals.	Broken/missing pane; water damage to surrounding structure; cannot be locked; security bar release mechanism not working.

Kaitlyn Kurdziel

From: Carol Booth <CBooth@tarrytowngov.com>
Sent: Wednesday, March 25, 2020 12:39 PM
To: Kaitlyn Kurdziel
Subject: FOIL response

FOIL response:

The subject site is a Federally owned and operated property that is not under the jurisdiction of the Village of Tarrytown Building Department and/or Fire Department, therefore no such records are maintained in the Village of Tarrytown. Thank you.

Description of FOIL Request

AEI Consultants has been commissioned to complete a Project Capital Needs Assessment and/or Phase I Environmental Site Assessment for the following property: Franklin Tower, located at:50 White St. As part of this assessment, and due diligence, we are required to request the following information, including, but not limited to the following: Fire Department for information on the storage, generation, usage, or spillage of hazardous substances, petroleum products, pollutants, or controlled substances, and any other environmental conditions for the property, records of fire inspections for the property, AND copies of any outstanding fire code violations. Building Department for any copies of Certificates of Occupancy, building permits from the last 10 years (year, type of permit, and owner/applicant), AND copies of any outstanding building code violations. Planning and Zoning to identify if the property has Activity and Use Limitations (AULs), defined as legal or physical restrictions or limitations on the use of, or access to the property. We are also asking for the current zoning classification of the property, AND copies of any outstanding zoning code violations. Please notify me in advance if the fees for this request are estimated to exceed \$75.

Best Regards,

Carol A. Booth
Village Clerk
Village of Tarrytown
One Depot Plaza
Tarrytown, New York 10591
914-631-1652
fax: 914-631-8770
cbooth@tarrytowngov.com

The U.S. Constitution requires that everyone living in the United States is counted every 10 years -we all count.

<https://2020census.gov/en/who-to-count.html>

Franklin Tower - 10 story high rise

Floor	Apartment	Unit Size	Bathroom	
2	21	4	1.5	
2	22	2	1	Handicap
2	23	2	1	
2	24	3	1.5	
2	25	1	1	Vacant
2	26	1	1	
2	27	1	1	
2	28	1	1	
2	29	1	1	
3	31	4	1.5	
3	32	2	1	
3	33	3	1	
3	34	4	1.5	
3	35	1	1	
3	36	1	1	
3	37	1	1	
3	38	1	1	
3	39	1	1	
4	41	3	1	
4	42	2	1	
4	43	2	1	
4	44	3	1	
4	45	2	1	
4	46	1	1	
4	47	1	1	
4	48	1	1	
4	49	2	1	
5	51	2	1	
5	52	2	1	
5	53	2	1	
5	54	3	1	

Franklin Tower - 10 story high rise

Floor	Apartment	Unit Size	Bathroom
5	55	2	1
5	56	1	1
5	57	1	1
5	58	1	1
5	59	2	1
6	61	3	1
6	62	2	1
6	63	2	1
6	64	3	1
6	65	2	1
6	66	1	1
6	67	1	1
6	68	1	1
6	69	2	1
6	71	3	1
7	72	2	1
7	73	2	1
7	74	3	1
7	75	2	1
7	76	1	1
7	77	1	1
7	78	1	1
7	79	2	1
8	81	2	1
8	82	2	1
8	83	2	1
8	84	3	1
8	85	1	1
8	86	1	1
8	87	1	1
8	88	1	1

Franklin Tower - 10 story high rise

Floor	Apartment	Unit Size	Bathroom	
8	89	2	1	
9	91	3	1	
9	92	2	1	
9	93	3	1	
9	94	3	1	
9	95	2	1	
9	96	1	1	
9	97	1	1	
9	98	1	1	
9	99	2	1	
10	101	3	1	
10	102	2	1	
10	103	2	1	Handicap
10	104	3	1	
10	105	2	1	
10	106	1	1	
10	107	1	1	
10	108	2	1	
10	109	2	1	

LIST of 504/ADA

FRANKLIN TOWERS

Size	APT	NAME	Size	APT	NAME	Size	APT	NAME
4	21	GUZMAN, E.	2	51	ALMONTE, J.	2	81	KEESLER, S.
2	22	POGUE, P.	2	52	GONZALEZ, O.	2	82	DEL VALLE, I.
2	23	ARMSTRONG, C.	2	53	RISS, M.	2	83	GRADY-BESS, J.
3	24	BENCOSME, G.	3	54	ANTEZANA, C.	3	84	ALMONTE, B.
1	25	DAVIS, S.	2	55	LEDESMA, J.	1	85	SMITH A.
1	26	COQUERAN, A.	1	56	BORRAS, V	1	86	MORGAN, F.
1	27	GERSHOWITZ, L.	1	57	DEL VALLE, M.	1	87	DICKENS, C
1	28	MANNING, B.	1	58	MELLENDEZ, S.	1	88	MARTINEZ, C.
1	29	BARNES, E.	2	59	LINDSAY, A.	2	89	SINGLETON, G.
4	31	HIDALGO, R.	3	61	HAWKINS, M.	3	91	ALBERT, S.
2	32	BLANCHARD, J.	2	62	TOYOS, J.	2	92	HOY, R.
3	33	DUGGAN, S.	2	63	MEDINA, B.	3	93	CYPRESS, T.
4	34	IGWE, K.	3	64	WILLIAMS, E.	3	94	RIVERA, B.
1	35	SCOTT, S.	2	65	BLACKMON, M.	2	95	KEMP, M.
1	36	BETHEA, M.	1	66	KOO, E.	1	96	UMPIERRE, B.
1	37	DIMMIE, T.	1	67	REEVES, C.	1	97	BLACKMON, R.
1	38	MARMO, S.	1	68	DEL VALLE, J.	1	98	BELLANTONI, J.
1	39	DERIVAN, D.	2	69	CALDWELL, CORA	2	99	SMITH, N.
3	41	RODRIGUEZ, B.	3	71	BAUTISTA, K.	3	101	RODRIGUEZ, I.
2	42	RODRIGUEZ, V.	2	72	SERRANO, C.	2	102	WEAVER, B.
2	43	DERIVAN, R.	2	73	COOPER, C.	2	103	BERNAL, Z.
3	44	RAMIEREZ, J.	3	74	BELLANTONI, J.	3	104	MARTINEZ, J.
2	45	GARBADE, W.	2	75	THOMPSON, C.	2	105	BONILLA, L.
1	46	SEQUIERO, H.	1	76	ARDUINO, A.	1	106	PARKER, W.
1	47	GOMEZ, M.	1	77	VARGAS, L.	1	107	RAYFORD, L.
1	48	ESPINAL, M.	1	78	TIBURCIO, M.	2	108	CHULLA, J.
2	49	URENA, M.		79	OGBU, M.	2	109	GOINS, D.

Franklin Tower - 10 story high rise

Floor	Apartment	Unit Size	Bathroom	Notes:
2	21	4	1.5	The management office is located on the first floor along with a conference room, laundry room, small meeting room. A mailbox area. Entry to the maintenance room (boiler, machine, electrical and utility rooms) There are no residential units on the first floor.
2	22	2	1	
2	23	2	1	
2	24	3	1.5	
2	25	1	1	
2	26	1	1	
2	27	1	1	
2	28	1	1	
2	29	1	1	
3	31	4	1.5	
3	32	2	1	
3	33	3	1	
3	34	4	1.5	
3	35	1	1	
3	36	1	1	
3	37	1	1	
3	38	1	1	
3	39	1	1	
4	41	3	1	
4	42	2	1	
4	43	2	1	
4	44	3	1	
4	45	2	1	
4	46	1	1	
4	47	1	1	
4	48	1	1	
4	49	2	1	
5	51	2	1	
5	52	2	1	
5	53	2	1	
5	54	3	1	

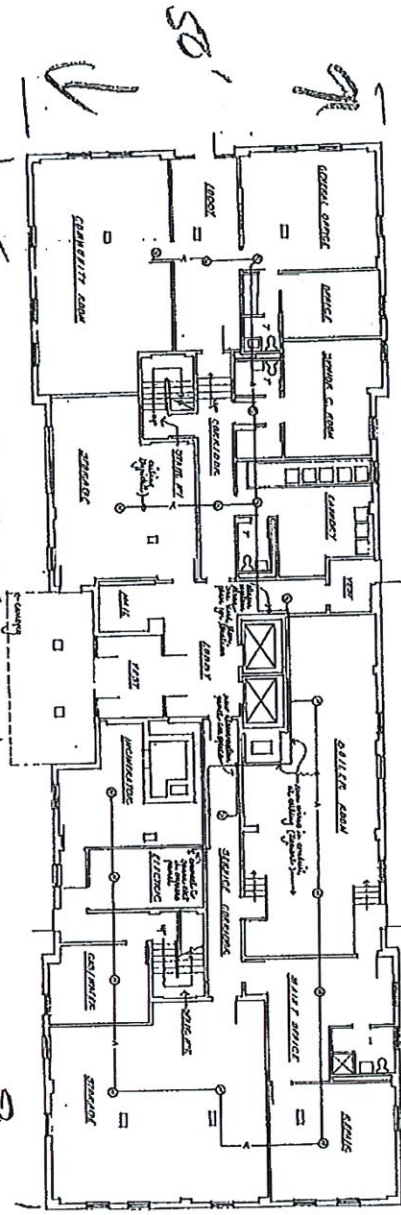
Franklin Tower - 10 story high rise

Floor	Apartment	Unit Size	Bathroom	Notes:
5	55	2	1	
5	56	1	1	
5	57	1	1	
5	58	1	1	
5	59	2	1	
6	61	3	1	
6	62	2	1	
6	63	2	1	
6	64	3	1	
6	65	2	1	
6	66	1	1	
6	67	1	1	
6	68	1	1	
6	69	2	1	
6	71	3	1	
7	72	2	1	
7	73	2	1	
7	74	3	1	
7	75	2	1	
7	76	1	1	
7	77	1	1	
7	78	1	1	
7	79	2	1	
8	81	2	1	
8	82	2	1	
8	83	2	1	
8	84	3	1	
8	85	1	1	
8	86	1	1	
8	87	1	1	
8	88	1	1	

Franklin Tower - 10 story high rise

Floor	Apartment	Unit Size	Bathroom	Notes:
8	89	2	1	
9	91	3	1	
9	92	2	1	
9	93	3	1	
9	94	3	1	
9	95	2	1	
9	96	1	1	
9	97	1	1	
9	98	1	1	
9	99	2	1	
10	101	3	1	
10	102	2	1	
10	103	2	1	
10	104	3	1	
10	105	2	1	
10	106	1	1	
10	107	1	1	
10	108	2	1	
10	109	2	1	

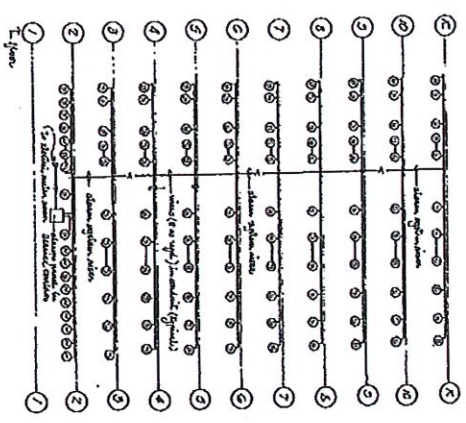
48
11' 10"



PLAN FOR FIRST FLOOR
(Consistent with - Alarm System)

GENERAL NOTES

SYMBOLS & IDENTIFICATIONS



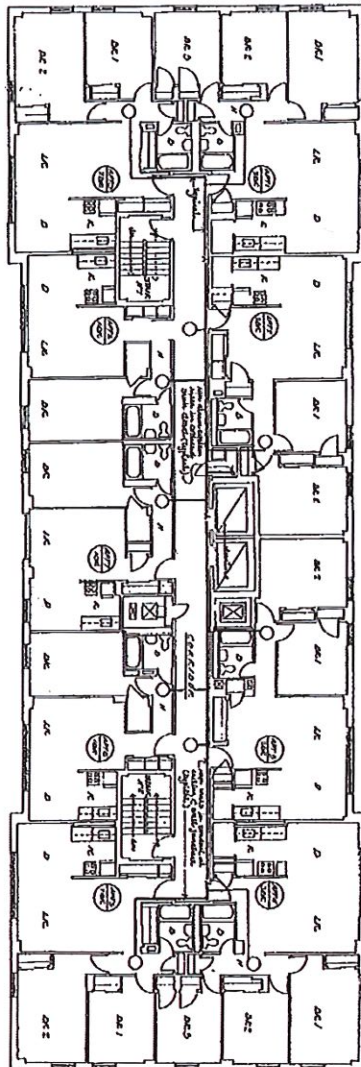
ALARM SYSTEM CABLE DIAGRAM
(Consistent with - Alarm System)

TURNQUIST ARCHITECTS
525 Broadway Ave.
New York, New York 10551
914 - 631 - 9107

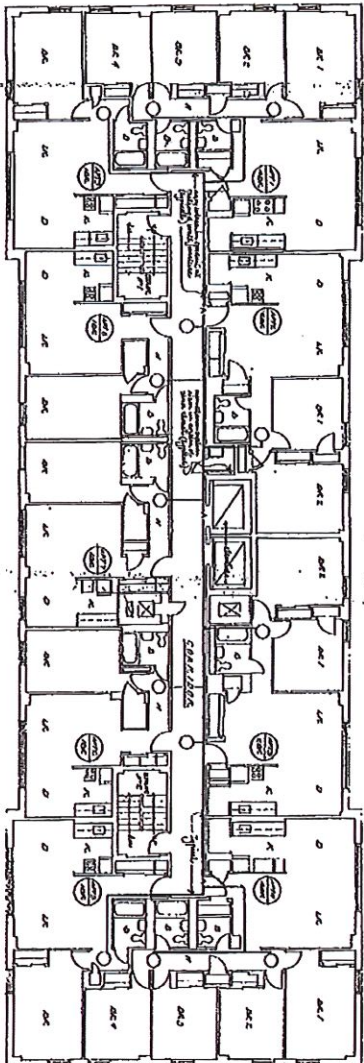
CONTACT N° - ALARM SYSTEM

FRANKLIN COURT AND TOWER
FRANKLIN AND WHITE STREET
TARRYTOWN, NEW YORK 10591

Tarrytown Municipal
Housing Authority
60 WHITE STREET
TARRYTOWN, NEW YORK 10591



TYPICAL PLAN OF 4TH THRU 10TH FLOORS
Scale: 1/8" = 1'-0"



TYPICAL PLAN OF 2ND AND 3RD FLOORS
Scale: 1/8" = 1'-0"

2	55 BOSTONIAN AVE. NORTH TARRYTOWN NEW YORK 10591 914-651-9297	TURNQUIST ARCHITECTS JOB NUMBER/OWNER DATE	CONTRACT # - ALARM SYSTEM	FRANKLIN COURT AND TOWER. FRANKLIN AND WHITE STREET TARRYTOWN, NEW YORK 10591	Tarrytown Municipal Housing Authority 60 WHITE STREET TARRYTOWN NEW YORK 10591
			PLANS OF 2ND & 3RD FLOORS, PLANS OF 4TH THRU 10TH FLOORS		

Tenant Name	Tenant ID	Address	ZIP	Payee Name	Address	ZIP	Action Type	Date	Br	CR	UML Type	Amount	Hold/Abate	Posted Date
Total \$55,953.00 Less Negative Adjustments \$0.00 Less Abated \$0.00 Less Held \$0.00 Net Receivables for Program 15 Franklin Ct \$55,953.00														

Franklin Towers
Wifredo Gonzalez, Jr.

Albert, Sheran M.	91	50 White Street Apt		Sheran M Albert	50 White Street Apt	10591	Annual Reexamination	03/01/2020	3	935.00	DR	935.00		03/02/2020
Almonte, Johaly	51	50 White Street Apt	10591	Johaly Almonte	50 White Street Apt	10591	Interim Reexamination	03/01/2020	3	1388.00	DR	1388.00		03/02/2020
ALMONTE,	84	50 White Street Apt		Beberin M ALMONTE	50 White Street Apt		Annual Reexamination	03/01/2020	3	1603.00	DR	1603.00		03/02/2020
Antezana, Carmen R.	54	50 White Street Apt		Carmen R Antezana	50 White Street Apt		Annual Reexamination	03/01/2020	3	1722.00	DR	1722.00		03/02/2020
Arduino, Anthony	76	50 White Street, Apt	10591	Anthony Arduino	50 White Street, Apt	10591	New Admission	03/01/2020	1	1240.00	DR	1240.00		03/02/2020
Armstrong, Carol R.	23	50 White Street Apt		Carol R Armstrong	50 White Street Apt		Annual Reexamination	03/01/2020	2	944.00	DR	944.00		03/02/2020
Barnes, Ethel	29	50 White Street Apt		Ethel Barnes	50 White Street Apt		Annual Reexamination	03/01/2020	1	946.00	DR	946.00		03/02/2020
Bautista, Kathleen	71	50 White Street Apt		Kathleen Bautista	50 White Street Apt		Interim Reexamination	03/01/2020	3	467.00	DR	467.00		03/02/2020
Bellantoni, John A.	74	50 White Street Apt		John A Bellantoni	50 White Street Apt		Annual Reexamination	03/01/2020	3	426.00	DR	426.00		03/02/2020
Bencosme, Gladys	24	50 White Street Apt		Gladys Bencosme	50 White Street Apt		Annual Reexamination	03/01/2020	4	1984.00	DR	1984.00		03/02/2020
Bernal, Zenaida	103	50 White Street Apt		Zenaida Bernal	50 White Street Apt		Annual Reexamination	03/01/2020	2	303.00	DR	303.00		03/02/2020
Betha, Mary	36	50 White Street Apt		Mary Betha	50 White Street Apt		Annual Reexamination	03/01/2020	1	664.00	DR	664.00		03/02/2020
Blackmon, Marnie	65	50 White Street Apt		Marnie Blackmon	50 White Street Apt		Annual Reexamination	03/01/2020	2	352.00	DR	352.00		03/02/2020
Blackmon, Rosa M.	97	50 White Street Apt		Rosa M Blackmon	50 White Street Apt		Interim Reexamination	03/01/2020	1	755.00	DR	755.00		03/02/2020
Blanchard, Josephine	32	50 White Street Apt		Josephine Blanchard	50 White Street Apt		Annual Reexamination	03/01/2020	2	314.00	DR	314.00		03/02/2020
Bonilla, Lourdes M.	105	50 White Street Apt		Lourdes M Bonilla	50 White Street Apt		Annual Reexamination	03/01/2020	2	778.00	DR	778.00		03/02/2020
Borras, Jr., Victor M.	56	50 White Street 56	10591	Victor M Borras, Jr	50 White Street 56	10591	Annual Reexamination	03/01/2020	1	830.00	DR	830.00		03/02/2020
Caldwell, Cora	69	50 White Street Apt		Cora Caldwell	50 White Street Apt		Annual Reexamination	03/01/2020	2	670.00	DR	670.00		03/02/2020
Chulla, Jr., James J.	108	50 White Street Apt		James J Chulla, Jr	50 White Street Apt		Annual Reexamination	03/01/2020	1	303.00	DR	303.00		03/02/2020
Cooper, Charleen	73	50 White Street Apt		Charleen Cooper	50 White Street Apt		Annual Reexamination	03/01/2020	2	230.00	DR	230.00		03/02/2020
Coqueran, Alice C.	26	50 White Street Apt		Alice C Coqueran	50 White Street Apt		Annual Reexamination	03/01/2020	1	356.00	DR	356.00		03/02/2020
Cypress Sr., Tony A.	93	50 White Street Apt		Tony A Cypress Sr	50 White Street Apt		Interim Reexamination	03/01/2020	2	1435.00	DR	1435.00		03/02/2020

Tenant Name	Tenant ID	Address	ZIP	Payee Name	Address	ZIP	Action Type	Date	Br	CR	UML	Type	Amount	Hold/Abate	Posted Date
Davis, Shirley	25	Shirley Davis	50 White Street Apt	Annual Reexamination	03/01/2020	1	174.00	DR					174.00		03/02/2020
Del Valle, Indiana	82	Indiana Del Valle	50 White Street Apt	Annual Reexamination	03/01/2020	2	1435.00	DR					1435.00		03/02/2020
Del Valle, Jarvis R.	68	Jarvis R Del Valle	50 White Street Apt	Annual Reexamination	03/01/2020	1	305.00	DR					305.00		03/02/2020
Del Valle, Maria P.	57	Maria P Del Valle	50 White Street Apt	Annual Reexamination	03/01/2020	1	288.00	DR					288.00		03/02/2020
Derivan, Deborah D.	39	Deborah D Derivan	50 White Street Apt	Interim Reexamination	03/01/2020	1	589.00	DR					589.00		03/02/2020
Dickens, Charlie	87	Charlie Dickens	50 White Street Apt	Annual Reexamination	03/01/2020	1	1240.00	DR					1240.00		03/02/2020
Dimmie, Jr.,	37	Theodore E Dimmie, Jr	50 White Street Apt	Interim Reexamination	03/01/2020	1	1011.00	DR					1011.00		03/02/2020
Duggan, Sharon A.	33	Sharon A Duggan	50 White Street Apt	Annual Reexamination	03/01/2020	2	678.00	DR					678.00		03/02/2020
Garbade, William	45	William Garbade	50 White Street Apt	Annual Reexamination	03/01/2020	2	600.00	DR					600.00		03/02/2020
Gershowitz, Lillian	27	Lillian Gershowitz	50 White Street Apt	Interim Reexamination	03/01/2020	1	316.00	DR					316.00		03/02/2020
Golrs, Delma	109	Delma Golrs	50 White Street Apt	Annual Reexamination	03/01/2020	2	161.00	DR					161.00		03/02/2020
Gomez, Maria M.	47	Maria M Gomez	50 White Street Apt	New Admission	03/01/2020	1	236.00	DR					236.00		03/02/2020
Gonzalez, Odalys G.	52	Odalys G Gonzalez	50 White Street Apt	Annual Reexamination	03/01/2020	2	224.00	DR					224.00		03/02/2020
Grady-Bess, Janice	83	Janice W Grady-Bess	50 White Street Apt	Annual Reexamination	03/01/2020	2	1435.00	DR					1435.00		03/02/2020
Guzman, Esperanza	21	Esperanza Guzman	50 White Street Apt	Interim Reexamination	03/01/2020	4	1184.00	DR					1184.00		03/02/2020
Hawkins, Manny	61	Manny Hawkins	50 White Street, Apt	Annual Reexamination	03/01/2020	3	1599.00	DR					1599.00		03/02/2020
Hidalgo, RandoIn	31	RandoIn Hidalgo	50 White Street Apt	Interim Reexamination	03/01/2020	4	479.00	DR					479.00		03/02/2020
Keesler, Sharon	81	Sharon Keesler	50 White Street Apt	Interim Reexamination	03/01/2020	3	962.00	DR					962.00		03/02/2020
Kemp, Michelle A.	95	Michelle A Kemp	50 White Street Apt	Annual Reexamination	03/01/2020	2	625.00	DR					625.00		03/02/2020
Koo, Nim Chee	66	Nim Chee Koo	50 White Street Apt	Annual Reexamination	03/01/2020	1	150.00	DR					150.00		03/02/2020
Ledesma, Josefa A.	55	Josefa A Ledesma	50 White Street Apt	Annual Reexamination	03/01/2020	2	1435.00	DR					1435.00		03/02/2020
Lindsay, Jr., Darrell	59	Darrell Lindsay, Jr	50 White Street Apt	Interim Reexamination	03/01/2020	2	711.00	DR					711.00		03/02/2020
Manning, Bernard J.	28	Bernard J Manning	50 White Street Apt	Annual Reexamination	03/01/2020	1	454.00	DR					454.00		03/02/2020
Marmo, Shirley M.	38	Shirley m Marmo	50 White Street Apt	Other Change of Unit	03/01/2020	1	235.00	DR					235.00		03/02/2020
Martinez, Carmen	88	Carmen Martinez	50 White Street Apt	Annual Reexamination	03/01/2020	1	421.00	DR					421.00		03/02/2020
Martinez, Juana M.	104	Juana M Martinez	50 White Street Apt	Annual Reexamination	03/01/2020	3	399.00	DR					399.00		03/02/2020
Medina De La Cruz,	63	Bianca Medina DE LA	50 White Street Apt	Annual Reexamination	03/01/2020	2	212.00	DR					212.00		03/02/2020
Melendez, Sonia E.	58	Sonia E Melendez	50 White Street Apt	Annual Reexamination	03/01/2020	1	203.00	DR					203.00		03/02/2020

Tenant Name	Tenant ID	Address	ZIP	Payee Name	Address	ZIP	Action Type	Date	Br	CR	UML Type	Amount	Hold/Abate	Posted Date
Morgan, Felicia	86	50 White Street Apt		Felicia Morgan	50 White Street Apt	10591	Annual Reexamination	03/01/2020	1	271.00	DR	271.00		03/02/2020
Parker, William	106	50 White Street Apt		William Parker	50 White Street Apt	10591	Annual Reexamination	03/01/2020	1	1240.00	DR	1240.00		03/02/2020
Pogue, Patricia	22	50 White Street Apt		Patricia Pogue	50 White Street Apt	10591	Annual Reexamination	03/01/2020	2	963.00	DR	963.00		03/02/2020
Ramirez, Jhon F.	44	50 White Street 44		Jhon F Ramirez	50 White Street 44	10591	Annual Reexamination	03/01/2020	3	1172.00	DR	1172.00		03/02/2020
Rayford, Linda D.	107	50 White Street Apt		Linda d Rayford	50 White Street Apt	10591	Annual Reexamination	03/01/2020	1	221.00	DR	221.00		03/02/2020
Reeves, Celeste	67	Franklin Towers, Apt		Celeste Reeves	Franklin Towers, Apt	10591	Annual Reexamination	03/01/2020	1	471.00	DR	471.00		03/02/2020
Riss, Mary L	53	50 White Street Apt		Mary L Riss	50 White Street Apt	10591	Annual Reexamination	03/01/2020	2	1259.00	DR	1259.00		03/02/2020
Rivera, Brunilda	94	50 White Street Apt		Brunilda Rivera	50 White Street Apt	10591	Interim Reexamination	03/01/2020	3	400.00	DR	400.00		03/02/2020
Rodriguez, Brenda L.	41	50 White Street		Brenda L Rodriguez	50 White Street	10591	Annual Reexamination	03/01/2020	3	1593.00	DR	1593.00		03/02/2020
Rodriguez, Irene A.	101	50 White Street Apt		Irene A Rodriguez	50 White Street Apt	10591	Annual Reexamination	03/01/2020	3	721.00	DR	721.00		03/02/2020
Rodriguez, Virgilio	42	50 White Street, Apt		Virgilio Rodriguez	50 White Street, Apt	10591	Interim Reexamination	03/01/2020	2	574.00	DR	574.00		03/02/2020
Scott, Stephanie	35	50 White Street Apt		Stephanie Scott	50 White Street Apt	10591	Annual Reexamination	03/01/2020	1	219.00	DR	219.00		03/02/2020
Sequeiro, Herminia	46	50 White Street Apt		Herminia Sequeiro	50 White Street Apt	10591	Annual Reexamination	03/01/2020	1	233.00	DR	233.00		03/02/2020
Serrano, Cecilia M.	72	50 White Street Apt		Cecilia M Serrano	50 White Street Apt	10591	Annual Reexamination	03/01/2020	2	314.00	DR	314.00		03/02/2020
Singleton, Katie	89	50 White Street Apt		Katie Singleton	50 White Street Apt	10591	Interim Reexamination	03/01/2020	2	411.00	DR	411.00		03/02/2020
Smith, Craig A.	85	50 White Street Apt		Craig A Smith	50 White Street Apt	10591	Annual Reexamination	03/01/2020	2	295.00	DR	295.00		03/02/2020
Smith, Nadyne T.	99	50 White Street Apt		Nadyne T Smith	50 White Street Apt	10591	Annual Reexamination	03/01/2020	2	836.00	DR	836.00		03/02/2020
Thompson, Claudia	75	50 White Street Apt		Claudia J Thompson	50 White Street Apt	10591	Annual Reexamination	03/01/2020	2	1435.00	DR	1435.00		03/02/2020
Tiburcio, Maria	78	50 White Street Apt		Maria Tiburcio	50 White Street Apt	10591	Annual Reexamination	03/01/2020	1	244.00	DR	244.00		03/02/2020
Toyos, Juana G.	62	50 White Street Apt		Juana G Toyos	50 White Street Apt	10591	Interim Reexamination	03/01/2020	2	811.00	DR	811.00		03/02/2020
Umpierre, Blanca	96	50 White Street Apt		Blanca Umpierre	50 White Street Apt	10591	Annual Reexamination	03/01/2020	1	235.00	DR	235.00		03/02/2020
Urena, Martha A.	49	50 White Street Apt		Martha A Urena	50 White Street Apt	10591	Annual Reexamination	03/01/2020	2	1129.00	DR	1129.00		03/02/2020
Vargas, Luis S.	77	50 White Street, Apt		Luis S Vargas	50 White Street, Apt	10591	Annual Reexamination	03/01/2020	1	796.00	DR	796.00		03/02/2020
Weaver, Byron	102	50 White Street Apt		Byron Weaver	50 White Street Apt	10591	Annual Reexamination	03/01/2020	2	293.00	DR	293.00		03/02/2020
Williams, Emily R.	64	50 White Street, Apt		Emily r Williams	50 White Street, Apt	10591	Annual Reexamination	03/01/2020	3	1291.00	DR	1291.00		03/02/2020

Tenant Name	Tenant ID	Address	ZIP	Payee Name	Address	ZIP	Action Type	Date	Br	CR	UML Type	Amount	Hold/Abate	Posted Date
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Count 75

Total	\$53,833.00
Less Negative Adjustments	\$0.00
Less Abated	\$0.00
Less Held	\$0.00
Net for User Wilfredo Gonzalez, Jr.	\$53,833.00

Tenant Name	Tenant ID	Address	ZIP	Payee Name	Address	ZIP	Action Type	Date	Br	CR	UML Type	Amount	Hold/Abate	Posted Date
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Count	75
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Net Receivables for Program Franklin Towers

Total	\$53,833.00
Less Negative Adjustments	\$0.00
Less Abated	\$0.00
Less Held	\$0.00
Total	\$53,833.00

Net for Agency Tarrytown Municipal Housing Authority

Count	147
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Count Payables:	0	Count Receivables	147
Total Payables	\$0.00	Total Receivables	\$109,786.00
Less Negative Adjustments	\$0.00	Less Negative Adjustments	\$0.00
Less Abated	\$0.00	Less Abated	\$0.00
Less Held	\$0.00	Less Held	\$0.00
Net Payables	\$0.00	Net Receivables	\$109,786.00

Total	\$109,786.00
Less Negative Adjustments	\$0.00
Less Abated	\$0.00
Less Held	\$0.00
Total	\$109,786.00



PROPERTY INFORMATION	
SWIS S/B/L	552611 1.70-29-32
OWNER	TARRYTOWN MUNICIPAL HOUSING AUTH.
ADDRESS	50 WHITE ST
MAILING ADDRESS	FRANKLIN TWRS FRANKLIN ST TARRYTOWN, NY 10591
MUNICIPALITY	Greenburgh
SCHOOL DISTRICT	TARRYTOWN USFD
PARCEL TYPE	411, Apartment
ROLL SECTION	8
PARCEL DIMENSIONS	Acreage = 6.65
BANK CODE	
ACCOUNT NUMBER	1249200
LAND VALUE	3,681,300
TOTAL VALUE	7,982,700

TAX STATUS AND HISTORY INFORMATION

This site reports taxes received during the Tax Receiver authorized tax collection period only. To obtain information regarding payments made after the Tax Receiver authorized tax collection periods, please contact:

Village of Tarrytown: James J. Hart, Treasurer

INFORMATION IS AVAILABLE FOR THE FOLLOWING TAXING PERIODS

Click the [-] symbols below to hide that collection's payment information.
Click the [+] symbols below to show that collection's payment information.

Collection	Base	Fees	Penalty	Status	Amt Paid	Curr Bal	Base Details
- 2019 Village Pay Details	0.00	0.00	0.00	Paid	0.00	0.00	Bill Detail
Due Date 6/30/2019					Paid 1st Installment		0.00
					Total Installment Due		0.00
Due Date 12/31/2019					Paid 2nd Installment		0.00
					Total Installment Due		0.00

Village of Tarrytown Tax Status

2019 Village Tax Total 0.00
 Total Paid 0.00
Total Due 0.00

+ 2018 Village Pay Details	0.00	0.00	0.00	Paid	0.00	0.00	<input type="button" value="Bill Detail"/>
+ 2017 Village Pay Details	0.00	0.00	0.00	Paid	0.00	0.00	<input type="button" value="Bill Detail"/>
+ 2016 Village Pay Details	0.00	0.00	0.00	Paid	0.00	0.00	<input type="button" value="Bill Detail"/>
+ 2015 Village Pay Details	0.00	0.00	0.00	Paid	0.00	0.00	<input type="button" value="Bill Detail"/>

Penalty and additional fees in prior year collections (if any) may not reflect actual adjustments.

Penalty Schedule

Village 1st Installment

from 7/1/2019 to 7/31/2019 5 %	from 8/1/2019 to 8/31/2019 6 %	from 9/1/2019 to 9/30/2019 7 %	from 10/1/2019 to 10/31/2019 8 %	from 11/1/2019 to 11/30/2019 9 %	from 12/1/2019 to 12/31/2019 10 %	from 1/1/2020 to 1/31/2020 11 %	from 2/1/2020 to 2/29/2020 12 %	from 3/1/2020 to 3/31/2020 13 %
--	--	--	--	--	---	---	---	---

Village 2nd Installment

from 1/1/2020 to 1/31/2020 5 %	from 2/1/2020 to 2/29/2020 6 %	from 3/1/2020 to 3/31/2020 7 %
--	--	--



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Village Offices
One Depot Plaza
 Tarrytown, NY 10591-3199
 Phone: (914) 631-7873

This service is maintained by
 >Software Consulting Associates

Square Foot Cost Estimate Report

Date: 4/14/2020

Estimate Name	Franklin Towers
Building Type	Apartment, 8-24 Story with Brick Veneer / Rigid Steel
Location	MOUNT VERNON, NY
Stories Count (L.F.)	10.00
Stories Height	10.00
Floor Area (S.F.)	76,000.00
LaborType	OPN
Basement Included	No
Data Release	Year 2019 Quarter 3
Cost Per Square Foot	\$177.10
Total Building Cost	\$13,459,905.40



Costs are derived from a building model with basic components. Scope differences and market conditions can cause costs to vary significantly.

		% of Total	Cost Per SF	Cost
B Shell		26.6%	\$40.42	\$3,072,250.65
B1010	Floor Construction		\$15.50	\$1,177,927.33
	Floor, concrete, slab form, open web bar joist @ 2' OC, on W beam and wall, 25'x25' bay, 23" deep, 40 PSF superimposed load, 84 PSF total load		\$12.55	\$953,622.54
	Floor, concrete, slab form, open web bar joist @ 2' OC, on W beam and wall, 25'x25' bay, 23" deep, 40 PSF superimposed load, 84 PSF total load, for columns add		\$0.49	\$36,999.61
	Fireproofing, gypsum board, fire rated, 1 layer, 1/2" thick, 14" steel column, 2 hour rating, 18 PLF		\$2.46	\$187,305.18
B1020	Roof Construction		\$1.06	\$80,832.23

		% of Total	Cost Per SF	Cost
	Roof, steel joists, beams, 1.5" 22 ga metal deck, on columns, 25'x25' bay, 20" deep, 40 PSF superimposed load, 60 PSF total load		\$0.89	\$67,272.92
	Roof, steel joists, beams, 1.5" 22 ga metal deck, on columns, 25'x25' bay, 20" deep, 40 PSF superimposed load, 60 PSF total load, add for column		\$0.18	\$13,559.31
B2010	Exterior Walls		\$15.43	\$1,172,456.06
	Brick veneer wall, standard face, 16 ga x 6" LB @ 16" metal stud back-up, running bond		\$15.43	\$1,172,456.06
B2020	Exterior Windows		\$4.24	\$322,104.92
	Windows, aluminum, sliding, standard glass, 5' x 3'		\$4.24	\$322,104.92
B2030	Exterior Doors		\$3.26	\$247,394.46
	Door, aluminum & glass, without transom, wide stile, hardware, 3'-0" x 7'-0" opening		\$0.12	\$9,282.46
	Door, aluminum & glass, without transom, non-standard, double door, hardware, 6'-0" x 7'-0" opening		\$0.12	\$9,485.06
	Door, aluminum & glass, sliding patio, tempered glass, premium, 6'-0" x 7'-0" opening		\$3.01	\$228,626.94
B3010	Roof Coverings		\$0.94	\$71,535.65
	Roofing, single ply membrane, EPDM, 60 mils, loosely laid, stone ballast		\$0.20	\$14,984.39
	Insulation, rigid, roof deck, extruded polystyrene, 40 PSI compressive strength, 4" thick, R20		\$0.46	\$34,800.40
	Roof edges, aluminum, duranodic, .050" thick, 6" face		\$0.18	\$13,305.59
	Flashing, aluminum, no backing sides, .019"		\$0.04	\$2,763.56
	Gravel stop, aluminum, extruded, 4", mill finish, .050" thick		\$0.07	\$5,681.71
C Interiors		30.2%	\$45.85	\$3,484,347.67
C1010	Partitions		\$13.85	\$1,052,389.50
	Concrete block (CMU) partition, light weight, hollow, 6" thick, no finish		\$3.27	\$248,171.41
	Metal partition, 5/8" fire rated gypsum board face, 1/4" sound deadening gypsum board, 2-1/2" @ 24", same opposite face, no insulation		\$4.99	\$378,980.72
	Furring 1 side only, steel channels, 3/4", 16" OC		\$1.73	\$131,244.91
	Gypsum board, 1 face only, exterior sheathing, fire resistant, 1/2"		\$0.63	\$48,182.38
	Add for the following: taping and finishing		\$0.45	\$34,028.14
	1/2" fire rated gypsum board, taped & finished, painted on metal furring		\$2.79	\$211,781.94

		% of Total	Cost Per SF	Cost
C1020	Interior Doors		\$8.96	\$681,210.32
	Door, single leaf, kd steel frame, hollow metal, commercial quality, flush, 3'-0" x 7'-0" x 1-3/8"		\$8.96	\$681,210.32
C1030	Fittings		\$5.38	\$409,084.92
	Cabinets, residential, base, hardwood, 1 top drawer & 1 door below x 24" W		\$2.73	\$207,698.12
	Cabinets, residential, wall, two doors x 48" wide		\$1.82	\$138,591.61
	Cabinets, residential, counter top-laminated plastic, stock, economy		\$0.83	\$62,795.19
C2010	Stair Construction		\$3.81	\$289,854.13
	Stairs, steel, pan tread for conc in-fill, picket rail, 12 risers w/ landing		\$3.81	\$289,854.13
C3010	Wall Finishes		\$2.69	\$204,701.71
	Painting, interior on plaster and drywall, walls & ceilings, roller work, primer & 2 coats		\$1.85	\$140,866.37
	Ceramic tile, thin set, 4-1/4" x 4-1/4"		\$0.84	\$63,835.34
C3020	Floor Finishes		\$5.54	\$421,095.17
	Carpet tile, nylon, fusion bonded, 18" x 18" or 24" x 24", 24 oz		\$2.50	\$189,627.00
	Carpet tile, nylon, fusion bonded, 18" x 18" or 24" x 24", 35 oz		\$1.32	\$100,685.00
	Vinyl, composition tile, maximum		\$0.40	\$30,051.59
	Tile, ceramic natural clay		\$1.33	\$100,726.45
C3030	Ceiling Finishes		\$5.61	\$426,011.92
	Gypsum board ceilings, 1/2" fire rated gypsum board, painted and textured finish, 7/8" resilient channel furring, 24" OC support		\$5.61	\$426,011.92
D Services		42.2%	\$64.10	\$4,871,747.73
D1010	Elevators and Lifts		\$14.21	\$1,079,710.51
	Traction, geared passenger, 3500 lb, 15 floors, 10' story height, 2 car group, 350 FPM		\$14.21	\$1,079,710.51
D2010	Plumbing Fixtures		\$7.41	\$562,891.17
	Kitchen sink w/trim, countertop, PE on CI, 24" x 21", single bowl		\$1.45	\$110,097.52
	Laundry sink w/trim, PE on CI, black iron frame, 24" x 20", single compt		\$0.17	\$12,705.89
	Service sink w/trim, PE on CI, corner floor, 28" x 28", w/rim guard		\$0.38	\$28,556.57

		% of Total	Cost Per SF	Cost
	Bathroom, three fixture, 2 wall plumbing, lavatory, water closet & bathtub, stand alone		\$5.41	\$411,531.19
D2020	Domestic Water Distribution		\$9.14	\$694,743.36
	Electric water heater, commercial, 100< F rise, 50 gallon tank, 9 KW 37 GPH		\$9.14	\$694,743.36
D2040	Rain Water Drainage		\$0.29	\$21,917.96
	Roof drain, DWV PVC, 4" diam, diam, 10' high		\$0.06	\$4,317.74
	Roof drain, DWV PVC, 4" diam, for each additional foot add		\$0.23	\$17,600.22
D3010	Energy Supply		\$9.34	\$709,490.40
	Apartment building heating system, fin tube radiation, forced hot water, 30,000 SF area, 300,000 CF vol		\$9.34	\$709,490.40
D4020	Standpipes		\$3.54	\$269,234.63
	Wet standpipe risers, class III, steel, black, sch 40, 6" diam pipe, 1 floor		\$3.49	\$265,022.63
	Fire pump, electric, for jockey pump system, add		\$0.06	\$4,212.00
D5010	Electrical Service/Distribution		\$4.48	\$340,828.70
	Underground service installation, includes excavation, backfill, and compaction, 100' length, 4' depth, 3 phase, 4 wire, 277/480 volts, 2000 A		\$1.68	\$127,988.60
	Feeder installation 600 V, including RGS conduit and XHHW wire, 2000 A		\$1.60	\$121,471.60
	Switchgear installation, incl switchboard, panels & circuit breaker, 120/208 V, 3 phase, 2000 A		\$1.20	\$91,368.50
D5020	Lighting and Branch Wiring		\$11.31	\$859,344.25
	Receptacles incl plate, box, conduit, wire, 10 per 1000 SF, 1.2 W per SF, with transformer		\$5.21	\$395,916.68
	Wall switches, 2.5 per 1000 SF		\$0.84	\$63,713.08
	Miscellaneous power, 2 watts		\$0.79	\$59,873.56
	Central air conditioning power, 3 watts		\$0.83	\$62,816.28
	Motor installation, three phase, 460 V, 15 HP motor size		\$0.18	\$13,461.14
	Motor feeder systems, three phase, feed to 200 V 5 HP, 230 V 7.5 HP, 460 V 15 HP, 575 V 20 HP		\$0.08	\$6,321.75
	Incandescent fixtures recess mounted, type A, 1 watt per SF, 8 FC, 6 fixtures per 1000 SF		\$3.38	\$257,241.76
D5030	Communications and Security		\$4.39	\$333,586.75

		% of Total	Cost Per SF	Cost
	Communication and alarm systems, fire detection, addressable, 100 detectors, includes outlets, boxes, conduit and wire		\$1.24	\$94,433.13
	Fire alarm command center, addressable with voice, excl. wire & conduit		\$0.17	\$13,196.48
	Communication and alarm systems, includes outlets, boxes, conduit and wire, intercom systems, 100 stations		\$1.64	\$124,895.69
	Communication and alarm systems, includes outlets, boxes, conduit and wire, master TV antenna systems, 30 outlets		\$0.51	\$38,949.32
	Internet wiring, 2 data/voice outlets per 1000 S.F.		\$0.82	\$62,112.13
E Equipment & Furnishi		1.0%	\$1.52	\$115,312.10
E1090	Other Equipment		\$1.52	\$115,312.10
	Architectural equipment, appliances, range, 30" free standing, 1 oven, gas, average		\$1.01	\$77,094.70
	Architectural equipment, appliances, dish washer, built-in, 2 cycles, economy		\$0.50	\$38,217.40
F Special Construction		0.0%	\$0.00	\$0.00
G Building Sitework		0.0%	\$0.00	\$0.00
Sub Total		100%	\$151.89	\$11,543,658
Contractor's Overhead & Profit		10.0 %	\$15.19	\$1,154,365
Architectural Fees		6.0 %	\$10.02	\$761,881.44
User Fees		0.0 %	\$0.00	\$0.00
Total Building Cost			\$177.10	\$13,459,905.40

Audit Trail Notes

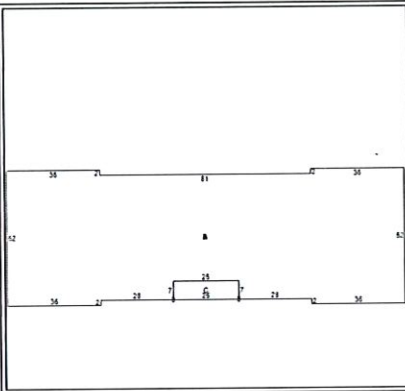
Date Time	Action	Description	User Name
04/14/2020 18:49:36	Assembly Removed	D40204103650 Fire pump, electric, with controller, 5" pump, 100 HP, 1000 GPM - quantity: 1	jbonnett@aeiconsultants.com
04/14/2020 18:49:24	Assembly Removed	D40104108950 Standard High Rise Accessory Package 16 story - quantity: 0.50317	jbonnett@aeiconsultants.com
04/14/2020 18:49:16	Assembly Removed	D40104100740 Wet pipe sprinkler systems, steel, light hazard, each additional floor, 10,000 SF - quantity: 70908	jbonnett@aeiconsultants.com
04/14/2020 18:49:05	Assembly Removed	D40104100620 Wet pipe sprinkler systems, steel, light hazard, 1 floor, 10,000 SF - quantity: 5016	jbonnett@aeiconsultants.com
04/14/2020 18:46:09	Assembly Removed	D30301103280 Packaged chiller, air cooled, with fan coil unit, medical centers, 40,000 SF, 93.33 ton - quantity: 76000	jbonnett@aeiconsultants.com
04/14/2020 18:44:59	Assembly Removed	A20101106911 Excavate and fill, 100,000 SF, 4' deep, sand, gravel, or common earth, on site storage - quantity: 7600	jbonnett@aeiconsultants.com
04/14/2020 18:44:54	Assembly Removed	A10301202240 Slab on grade, 4" thick, non industrial, reinforced - quantity: 7600	jbonnett@aeiconsultants.com
04/14/2020 18:44:49	Assembly Removed	A10202104620 Grade beam, 30' span, 52" deep, 14" wide, 12 KLF load - quantity: 416	jbonnett@aeiconsultants.com
04/14/2020 18:44:45	Assembly Removed	A10201403780 Steel H piles, 100' long, 800K load, end bearing, 12 pile cluster - quantity: 18.34483	jbonnett@aeiconsultants.com
04/14/2020 18:44:40	Assembly Removed	A10102506600 Pile caps, 14 piles, 11' - 6" x 10' - 9" x 55", 80 ton capacity, 29" column size, 2155 K column - quantity: 10.48276	jbonnett@aeiconsultants.com
04/14/2020 18:44:36	Assembly Removed	A10102506350 Pile caps, 12 piles, 11' - 6" x 8' - 6" x 49", 40 ton capacity, 19" column size, 900 K column - quantity: 7.86207	jbonnett@aeiconsultants.com
04/14/2020 18:44:32	Assembly Removed	A10101051560 Foundation wall, CIP, 4' wall height, direct chute, .148 CY/LF, 7.2 PLF, 12" thick - quantity: 416	jbonnett@aeiconsultants.com



TOWN OF GREENBURGH
 177 Hillside Ave
 Greenburgh, NY 10607
 (914) 989-1520

PROPERTY DATA CARD (Online)

Location: 50 WHITE ST UNIT 70-29-34		Parcel ID: 1.70-29-34		Class: 411 - Apartments, Condo & Co-ops					
Location		General Information		Special Districts		NO PHOTO AVAILABLE			
50 WHITE ST TARRYTOWN, NY 10591		Living Units 81 Alternate ID 1248900 School District TARRYTOWN Former SBL 01/09/0030/1 Additional Lots 4 4B 5A 5A2 5B Zoning MU		SM001 - SAWMILL VALLEY DIST					
Land Information		Assessment Information							
Total Acres: 1.15 Square Feet: 50,094		Land Building Total Yr 2,465,300 2,770,700 5,236,000 19							
Property Notes				Tax Data		Assessment		Exemptions	
				County/Town Tax \$2,604.29 (2020) 5,236,000 '19 School Tax \$0.00 (2019) 8,773,700 '18 * Village Tax \$70,751.99 -2019 8,773,700 '18		Total \$75,277.72		County / Town School Star YES YES 0	
Recent Sales/Ownership History				Total tax amount may contain exemptions * Village Tax does not apply if parcel ID begins with 7 or 8		If property contains exemptions (see above), we ask that you contact the Town (989-1550) or Village tax office (if applicable) to verify actual dollar savings or to determine full tax without any exemptions.			
Date Price Sale Type Validity Reference # Type				Recent Permit Information					
				Permit Date Permit # Price Description					

Location: 50 WHITE ST		Parcel ID: 1.70-29-34		Class: 411 - Apartments, Condo & Co-ops																								
Building Cost Detail				Interior/Exterior Information																								
Total Gross Building Area 76145				Level From	Level To	Area	Use Type	Heating	Cooling	Plumbing																		
Income Summary (all buildings on parcel)				1	1		Highrise Apartment	HOT WATER STEAM	NONE	NORMAL																		
Total Gross Rent Area 76145				2	10		Highrise Apartment	HOT WATER STEAM	NONE	NORMAL																		
Total Gross Building Area 76145																												
Building Information																												
Year Built/ Eff Year	Bldg #	Sq Ft	Structure Type	Identical Units	Total Units	Grade	# Covered Parking	# Uncovered Parking																				
1960	1	15089	212	1	81	C	0	0	Additional sketches may be available at the City office																			
																												
				<table border="1"> <thead> <tr> <th>Code</th> <th>Description</th> <th>Area</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Highrise Apartment</td> <td>76145</td> </tr> <tr> <td>B</td> <td>Highrise Apartment</td> <td>76145</td> </tr> <tr> <td>C</td> <td>Garage/Storage</td> <td>150</td> </tr> <tr> <td>D</td> <td>ELEVATOR/ELECTRIC SERVICE</td> <td>20000</td> </tr> <tr> <td>E</td> <td>Paving - Asphalt</td> <td>20000</td> </tr> </tbody> </table>							Code	Description	Area	A	Highrise Apartment	76145	B	Highrise Apartment	76145	C	Garage/Storage	150	D	ELEVATOR/ELECTRIC SERVICE	20000	E	Paving - Asphalt	20000
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APPENDIX G

Property Evaluator Qualifications

Douglas A. Olson, PE – Vice President

EDUCATION

BS, Civil Engineering – Virginia Military Institute

REGISTRATIONS AND CERTIFICATIONS

Licensed Professional Engineer – District of Columbia #10974
HUD MAP Certification – “PCNA Boot Camp” – Midwest Lender’s Association – May 2009
HUD LEAN Training - December 2008 & January 2009
HUD Green Physical Needs Assessment Tool – Webinar Training – January 2014
EPA/AHERA Asbestos Building Inspector Training
EPA Lead Based Paint Inspector Training

SUMMARY OF EXPERIENCE

As a licensed Professional Engineer, Mr. Olson has over 20 years of experience within the engineering and environmental due-diligence field. Formerly a Principal at a national consulting firm, Mr. Olson was responsible for quality control and technical review of due-diligence products. His responsibilities also included managing assessment work on portfolios ranging in size of up to 1,400 assets. Additionally, Mr. Olson developed his former firm’s consulting program for FHA/HUD insured mortgages and the National Environmental Policy Act (NEPA) consulting group for the wireless telecommunications industry. Throughout his career, Mr. Olson has completed over 1,000 Phase I Environmental Site Assessments and Property Condition Surveys/Physical Needs Assessments throughout North America. His technical experience also includes Green Physical Needs Assessments, Phase II subsurface investigations, site remediation, construction consulting, UFAS & ADA Surveys, NEPA consulting, asbestos and lead-based paint surveys, and mold investigations.

REPRESENTATIVE EXPERIENCE

Physical Needs Assessment Due-Diligence:

Woonsocket Housing Authority Portfolio, Woonsocket, RI – Completed 6 Green Physical Needs Assessments (GPNAs) on the Housing Authority’s inventory of 1,212 units spread between 4 high rise towers and 2 low-rise communities. The Scope of work also included a level II ASHRAE Energy Audit and incorporating data into HUD’s Green PCNA Tool.

Greater Marlborough Program A&B, Marlborough, MA – 28 Unit Group Home for handicapped adults. Physical Needs Assessment was conducted to HUD guidelines for mortgage underwriting/insurance purposes through HUD’s 207/223(f) program.

Harbor House Apartments, Bal Harbor, FL – Completed Property Condition Assessments (PCAs) on two adjoining oceanfront apartment buildings totaling 500 units. The scope of work also included a thorough structural assessment of deficiencies associated with parking, pool decks and deteriorated concrete balconies. The report was completed to ASTM Guidelines for mortgage underwriting purposes.

Carriage Hills Apartments, Pensacola, FL – 260-unit, multi-building garden apartment complex. Report was completed to ASTM Guidelines for mortgage financing purposes.

General Motors Building, 767 Fifth Avenue, New York, NY – 1.75M SF, 50-story (705') office tower. Report was completed to ASTM Standards for mortgage financing purposes.

Roslyn Plaza, Arlington, VA – Mixed use complex consisting of 3 office towers and 2 residential apartment buildings constructed over a 3 level parking deck. The buildings were all of concrete construction and totaled 600K SF of office space and 230 apartment units. The report was completed to S&P Guidelines for an insurance company's equity investment on same.

Myrtle Beach Mall, Myrtle Beach, SC – 522K SF regional mall set on a 61 acre parcel. The report was completed to S&P Guidelines for an insurance company's equity investment on same.

Extended Stay Hotel Portfolio (Canada) – Completed PCAs on three hotels located in Toronto, Ottawa and St. John, New Foundland. Hotels ranged in size from 90-205 rooms. Reports were conducted to ASTM Standards and were completed for mortgage financing purposes.

Sun Trust Branch Portfolio – Completed PCAs, ESAs and project management for a portfolio of 260 bank branches and office buildings throughout the Southeast United States.

Food Lion, Lynchburg, VA – 56,000 SF free-standing grocery store along with some in-line retail space. The report was completed to S&P Guidelines for an insurance company's equity investment on same.

Construction Consulting: Completed field inspections on construction projects in order to approve funding based upon the amount of work completed-to-date as well as stored materials. Reviewed (and adjusted) contractors' applications for payment and monitored construction schedule progress. Also opined on sub-contractor lien waivers and change orders. Representative projects are listed below:

Greenbrier Senior Apartments, Chesapeake, VA – 95,577 SF, 92 Unit, Senior Apartment Building. Wood frame construction - \$4.8M construction budget over a 15 month schedule.

Hampton Inn, Alexandria, VA – Gut renovation of a 6-story hotel structure into a 150 room/suite limited service hotel – concrete construction, \$3.7M construction budget over a 10 month schedule.

Taj International Hotels, Washington, DC – Fire suppression sprinkler installation of four downtown hotels. Concrete construction – \$2.2M construction budget over an 8 month schedule.

Lee Hall Apartments, Portsmouth, VA – Gut Renovation of 36 building, 2-3 story garden apartment complex. Wood frame construction - \$4.1M construction budget over a 12 month schedule.

Ocean Air Apartments, Norfolk, VA – Gut Renovation of a 71 building, 434 Unit, 2-story garden apartment complex. Wood frame construction - \$16.4M construction budget over a 38 month schedule.

Environmental & NEPA Consulting:

Orchard Hills Landings, Newburgh, NY – Phase I ESA and NEPA (HUD Section 4128). Consulting on a 50-acre parcel that was to be developed with a 260-unit apartment complex. Work was completed to ASTM and HUD Guidelines for mortgage underwriting/insurance through HUD's 221(d)4 program.

Bedford Avenue Apartments, Brooklyn, NY – Phase I ESA and NEPA (HUD Section 4128). Consulting, Phase II Sub-Slab, Soil Vapor Investigation on an 8-unit apartment building with street level retail space. Work was completed to ASTM and HUD Guidelines for mortgage underwriting/insurance through HUD's 223(f) program.

North Little Rock Housing Authority Portfolio, North Little Rock, AR – Completed Phase I Environmental Site Assessments, inclusive of asbestos surveys and Part 58 Environmental Reviews for a portfolio of 940 units spread throughout 8 apartment communities. Work was completed in accordance with ASTM and HUD Guidelines.

MacArthur Boulevard Apartments, Washington, DC – Completed a Lead Based Paint (LBP) Survey & Risk Assessment utilizing X-Ray Fluorescence (XRF) analysis and the collection of dust wipe sample and soil samples. Work was completed to HUD and District of Columbia specifications.

East Harlem Portfolio, New York, NY – Performed a City Environmental Quality Review (CEQR) associated with the development of 7 apartment buildings. This NEPA assessment work was completed to New York City Department of Environmental Protection (NYCDEP) Guidelines and New State Department of Environmental Conservation (NYSDEC) SEQR Guidelines.

277 Park Avenue, New York, NY – 1.7M SF, 50-story office tower - completed asbestos abatement project monitoring as part of a \$100M gut renovation project. Scope of work consisted of project management oversight and the approval of loan funding of abatement activities on behalf of the construction lender.

Fresh Meadows Development, Queens, NY – Completed a Phase I ESA, LBP and Asbestos Survey on a 150+ building, 3,258-unit, mixed-use development comprising over 147 acres on numerous city blocks. The complex also included a mechanical heating plant, several schools, a police precinct, a movie theater, parking garages and numerous retail buildings.

Melrose Credit Union, Queens, NY – Project Management for the demolition of the former Melrose Credit Union headquarters building. This project included the completion of a Phase I ESA, Asbestos Survey & Abatement, Phase II sub-surface investigation, Underground Storage Tank (UST), and contaminated soil removal.

Chemetals – New Johnsonville, TN & Baltimore, MD – Completed Environmental Liability Audits (ELAs) on 2 manganese ore processing facilities. The ELAs included a comprehensive review of all plant processes, hazardous material and waste storage procedures, Spill Prevention Control and Countermeasure (SPCC) plans as well as contamination assessment reports for environmental insurance underwriting.

BMW of Westchester, Elmsford, NY – Completed a Mold Investigation inclusive of bulk material and air sampling on an automotive service center formerly impacted by a flood.

Gateway Center, White Plains, NY - completed a Phase I ESA & Phase II Sub-surface investigation on a 500,000 SF office tower, associated parking lots and garages. The Phase II investigation was warranted due to historical gas stations and dry cleaning plants occupying the parcels. Soil and groundwater sampling was completed via hollow stem auger equipment and the installation of permanent groundwater monitoring wells. Groundwater modeling was also included within the scope of the investigation.

Roosevelt Hotel, Washington, DC – Served as the Engineer of Record for the removal of an Underground Storage Tank (UST) and associated petroleum impacted soil.

101 Constitution Avenue, Washington, DC – Project Engineer for the removal of petroleum impacted soils discovered during the excavation of an office building's foundation. Worked with the construction general contractor and health and safety personnel to efficiently remove environmental hazards.

Jeb Bonnett – Director of Building Assessments - HUD

Education:

B.B.A - Finance, James Madison University
Principles of Real Estate Program, James Madison University

Training/Licenses/Registrations:

HUD Multi-Family Accelerated Processing (MAP) Cost/A&E Seminar – New York City
HUD Multi-Family Accelerated Processing (MAP) PCNA Workshop – Columbus
Virginia Housing Development Authority – Universal Design Training
Fair Housing Act Accessibility Training Course– Phillip Zook
Fair Housing Act Accessibility Training Seminar– Fair Housing Act First
Elevator Training Courses – Sanjay Kamani, QEI, KP Property Advisors LLC
Building Performance Institute – Training Services
Building Specs Training Institute, Building/Design Inspection Courses

Experience:

Mr. Bonnett has worked exclusively in the niche HUD real estate due diligence consulting industry since 2005. He has performed and directed thousands of building assessment projects for HUD MAP, HUD LEAN, and Public Housing Authority clients. He has expert knowledge of HUD's Capital Needs Assessment guidelines and software reporting requirements. In addition, he has extensive experience and training on numerous accessibility standards, including, UFAS, ADA, ANSI, and the Fair Housing Act Guidelines.

As Director of Building Assessments - HUD, Mr. Bonnett is responsible for providing direction for the development of HUD Building Assessment services throughout AEI. Day to day responsibilities include, creating organizational process assets, training internal and external stakeholders, identifying and understanding industry guidelines for HUD Building Assessment services, senior reviewing, project oversight, business development and client management.

Mr. Bonnett's HUD's industry experience includes:

- Performing and directing the successful completion of over 3,000 HUD MAP and HUD LEAN compliant Capital Needs Assessments.
- Performing and directing the successful completion of RAD and GPNA projects for over 100 HUD Public Housing Authority AMPs.
- Leading the creation of software reporting platforms to efficiently populate HUD's CNA E-Tool, RAD Tool, and GPNA Tool software systems.
- Creating and performing HUD E-Tool training seminars for HUD MAP lenders and internal staff.



REPRESENTATIVE EXPERIENCE

Physical Needs Assessments & Property Condition Assessments

Richmond Redevelopment & Housing Authority, Richmond, VA – HUD RAD Physical Condition Assessments (RPCAs) and HUD Green Physical Needs Assessments (GPNA Tool) – Acted as the overall project lead organizing the field and report writing efforts of three different engineering teams and one team of energy auditors. This role required extensive collaboration with RRHA personnel to organize the PIC data, the addresses to be inspected, and the site documents to evaluate. The project efforts simultaneously created HUD compliant RAD and PHA GPNA Tool reports for the entire 4,000 unit RRHA housing portfolio. The simultaneous RAD/GPNA reporting process provided insight into the Immediate Repairs, deferred maintenance issues, and general capital needs for each address at the site. The reporting efforts created an RS MEANS based pricing library for nearly every construction component at the sites. The reports also fulfilled RRHAs mandatory 5-year capital planning requirement for HUD Public Housing, while providing flexibility and documentation for future RAD transactions and Choice Neighborhood Planning Grants applications.

Metropolitan Development & Housing Agency, Nashville, TN – HUD RAD Physical Condition Assessments (RPCAs) and ASHRAE Level Two Energy Audits – Acted as the overall project lead organizing the field and report writing efforts of three different engineering teams and one team of energy auditors. This role required extensive collaboration with MDHA personnel to organize the inspection logistics, the site documents to evaluate, and the presentation and acceptance of the final deliverable. The project efforts created HUD compliant RAD due diligence reporting for the majority of the 5,500 unit MDHA housing portfolio. The HUD RAD reporting assisted MDHAs application in earning the Choice Neighborhood Planning Grant award from HUD and provided MDHA the flexibility to convert its entire housing stock from public housing to Project Based Section 8 housing. The Section 8 housing conversion provided MDHA the financial flexibility to obtain much needed collateral to revitalize the housing assets.

Rockford Housing Authority, Rockford, IL – Data driven Physical Needs Assessments (PNAs) – Acted as the lead software project manager and overall project lead, developing a custom inspection application that was utilized to collect detailed field data from over 310 different residential sites that spanned the city of Rockford, Illinois. My responsibilities included coordinating the development of the field application, testing the application, training the engineering inspectors on use of the application, and inspecting the properties as an additional engineering inspector. Upon completion of the field survey I managed the efforts of the internal development team to create summary findings from the field data that were clear and meaningful to the leadership of the property management firm. The data reports provided insight into the Immediate Repairs, deferred maintenance issues, and general capital needs for each address at the site. The data reports grouped addresses with similar capital needs, which allowed the property management group to simulate different rehabilitation and preservation scenarios.



Prepared Project Capital Needs Assessments in compliance with the HUD Multifamily Accelerated Processing (MAP) Guide and the HUD LEAN Statement of Work on thousands of properties located throughout the United States. Representative Projects are listed below:

Facility Name	HUD Program	City	State
Arnold Gardens Apartments	HUD MAP Section 207/223(f)	Suitland	Maryland
Carmel Knoll	HUD MAP Section 207/223(f)	Indianapolis	Indiana
Ingleside Retirement Apartments	HUD MAP Section 207/223(f)	Wilmington	Delaware
Echo Ridge Apartments	HUD MAP Section 207/223(f)	Indianapolis	Indiana
Emerson Village Lakes	HUD MAP Section 207/223(f)	Indianapolis	Indiana
Northpoint Apartments	HUD MAP Section 207/223(f)	Spring Lake	North Carolina
Lake Broadway Townhomes	HUD MAP Section 207/223(f)	Columbia	Missouri
Bradley Royale Health Care Center	HUD LEAN Section 232/223(f)	Bradley	Illinois
Brentwood Place	HUD LEAN Section 232/223(f)	Denison	Texas
Cardinal Hill Healthcare	HUD LEAN Section 232/223(f)	Greenville	Illinois
Community's Hearth & Home	HUD LEAN Section 232/223(f)	Urbana	Ohio
Eden Heights of Olean	HUD LEAN Section 232/223(f)	Olean	New York
Colonial Manor	HUD LEAN Section 232/223(f)	York	Pennsylvania
Atlanta NAPFE Elderly Towers	HUD MAP Section 202/223(f)	Atlanta	Georgia
Casa Miguel Apartments	HUD MAP Section 202/223(f)	Clearwater	Florida
Columbia Hills Retirement Center	HUD MAP Section 202/223(f)	St. Helens	Oregon
Lindenwold Towers	HUD MAP Section 202/223(f)	Lindenwold	New Jersey
La Colonia	HUD MAP Section 202/223(f)	Topeka	Kansas

Fauzia Ansari – Project Manager

Bachelor of Architecture and Bachelor of Science in Civil Engineering – University of California Davis/University of California Berkeley.

Construction Document Technician (CDT), IBC and Code and life safety plans for Health Care and College campuses. RRC training for roof specialty work

Ms. Ansari has over 20 years of experience designing and evaluating buildings and campuses, along with experience in construction administration and ADA and PCA litigation. She also has experience in disaster inspections and forensics engineering.

Currently, Ms. Ansari is responsible for performing Property Condition Assessments that include identifying deficiencies, providing overall professional judgment of a property's condition and preparing cost estimates for repairs and projected replacement costs. She performs engineering evaluations to assist clients with maximizing Capital Improvement dollars, cost reduction and transition planning on a variety of commercial and residential property types.

Prior to joining AEI Consultants, Ms. Ansari did assessment per ADA litigation and PCA projects for Fannie Mae, Freddie Mac, and equity projects. This includes commercial, industrial, and multifamily residential properties. Previously Ms. Ansari had been performing forensics engineering evaluations for disaster inspections in the Greater NYC Metro Area and Louisiana. She is also a member of NCEES.

Project experience for Ms. Ansari includes:

Roof Assessments per RRC:

Property Condition Assessments:

Project Manuals & CD's:

Local Law 11 Façade inspections & Project Management:



APPENDIX H

Statement of Energy Performance (if required)

SELF-DIRECTED ENERGY PERFORMANCE PLAN & INVESTMENT GRADE ENERGY AUDIT

Prepared by

Mr. Wil Gonzales, Executive Director
Tarrytown Municipal Housing Authority
50 White Street
Tarrytown, NY 10591

September 15, 2011

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1. Executive Summary & Project Scope

The Tarrytown Municipal Housing Authority would like to initiate, develop, and implement a fifteen year Self Directed Energy Performance Plan for Franklin Towers and Franklin Courts on behalf of The Tarrytown Municipal Housing Authority, located in Tarrytown, New York.

The management team and staff of the Housing Authority have worked to prepare for the project, added licensed mechanical engineering (PE) expertise to our team to support our efforts, to assist us with carrying out an Investment Grade Energy Audit, and to provide a Design/Build solution for installation of an Energy Conservation Measure in Franklin Courts.

The proposed Energy Project Plan will consist of:

Franklin Courts – (ECM) - Install Blown-In Cellulose Insulation in Exterior Wall Cavities and Attic.

Our analysis indicates that this Energy Conservation Measure will allow the Housing Authority to realize a significant savings on annual utility consumption. These savings are sufficient to fund the financing of the installation of this Energy Conservation Measure over the anticipated fifteen year term of this plan.

While other potential lighting, water, and power reducing ECMs were evaluated, no others merit inclusion in this Energy Performance Plan at this time. They have either already been implemented, as in the case of 1.6 gallons per flush toilets and other water efficiency measures, or they do not generate savings sufficient to justify their adoption, or as is the case with existing Franklin Towers boilers, our board is not yet ready to entertain their replacement.

We are requesting that approval be granted to Freeze the Rolling Utility Base Consumption for the duration of our Self Directed Energy Project Plan. It is also our intention to undertake Measurement and Verification of these ECMs via selection of the IPMVP Option C, primarily to verify performance, as there will be no third party or Energy Services Company savings or performance guarantees involved with this plan.

We look forward to moving ahead with our project.

2. PROPERTY / BUILDINGS DESCRIPTION / UTILITY CONSUMPTION DATA

This AMP of the Tarrytown Municipal Housing Authority consists of a 10-floor brick Tower built in 1963-1964 and (14) one- to two- story multi-family structures, as well as a 1-story community building, all built in 1951.

The Tower consists of (81) units ranging from 1- to 4- bedroom apartments with approximately 230 residents. The building envelope of the tower consists of a curtain wall which is faced with a red brick. The foundation is slab-on-grade and the roof is flat. The windows are primarily double glazed double hung with aluminum frames. Exterior doors and those between conditioned and unconditioned spaces are single pane glass with aluminum frames or insulated hollow core metal doors. The Tower is heated by two low pressure Eastman 5,729,000 BTU/hr #2 fuel oil fired steam boilers, dated 1985 and 1986, with a nominal new efficiency of approximately 75%. However, given their age, they may currently have an efficiency as low as around 60%. To err on the conservative side, for comparison with proposed ECM, an efficiency of 65% was used. There is no central cooling system currently installed. Some units have resident supplied window A/C units. Domestic hot water is provided by a hybrid natural gas / geothermal system installed in 2008. The only mechanical ventilation is provided by bathroom fans that exhaust to roof mounted fan units. The kitchen appliances include natural gas ranges by Hot Point (GE) and Magic Chef. The refrigerators/freezers are Hot Point (GE) except in the conference room where there is a refrigerator by Whirlpool. Common area and fixed tenant lighting is primarily fluorescent, while lamps and other fixtures in units are as per tenant choice. Reference further sections for any recommendations.

The multi-family apartment complex consists of (70) units also ranging from 1- to 4- bedroom apartments with approximately 168 total residents. The building envelopes consist primarily of 2 x 4 framed vertical walls, faced with clapboard siding and insulated with 4" batts. The attic floor is insulated with approximately 6" batts in varying degrees of disarray. The foundations are slab-on-grade. The original windows were replaced in 2004 with a combination of new double hung, awning and fixed, double glazed vinyl frame units. Per the original building specifications, the front and rear entry doors are constructed of steel, however, these may have been modified over time. There is no central cooling. However, some units have resident supplied window A/C units. Likewise, there is no mechanical ventilation. However, all bathrooms can be ventilated via awning windows and other spaces passively via operable openings. The kitchen appliances include natural gas ranges by Hot Point (GE) and Magic Chef. Refrigerators/freezers are a combination of Hot Point (GE) and standard GE models.

Some of the apartment complex units are served by independent AO Smith Pro-Max 40,000 BTU/hr domestic hot water boilers and Galaxy 105,000 BTU/hr space heating hydronic boilers, while others are served by a single Galaxy 105,000 BTU/hr unit boiler to produce both hydronic heat as well as domestic hot water. These boilers are various ages throughout the facility, as it appears they are replaced as necessary.

Site lighting consists of 150 Watt high pressure sodium building lights and 100 Watt high pressure sodium lights for the site and street lights. Electric use associated with the site lighting is paid by the Housing Authority.

The Tower utilities are metered in total, and the Garden Apartments are likewise master metered for Housing Authority paid utilities. Garden Apartment tenants pay their own electric bills.

The Tower utilizes #2 fuel oil for steam heat generation, natural gas for both domestic hot water and stoves, and electricity for lighting, appliances or other general uses as well as to power the geothermal heat pumps part of the domestic hot water system. The Garden Apartments utilize natural gas for hydronic heating, domestic hot water, and stoves. Electricity is used for lighting, remaining appliances and other general uses.

Applicable rates and annual consumption of utilities at TMHA were obtained from the operating submission form and annual utility billing, supplemented by monthly actual use data where necessary to analyze performance over time. Said consumption and rates are as follows (see next page):

Table 2.1

Court - Gas Consumption (7/1/10-6/30/11)		
Month	Gas (CCF)	Cost (\$)
July	1,815	2,426
Aug	1,630	2,185
Sept	1,858	2,472
Oct	3,360	4,524
Nov	5,973	6,639
Dec	10,096	10,966
Jan	10,264	11,199
Feb	9,373	11,276
Mar	6,564	7,300
April	4,185	4,983
May	2,613	3,249
June	2,072	2,426
Totals	59,803	69,544

Table 2.2

Tower - Electric Consumption (7/1/10-6/30/11)		
Month	Electric (kwh)	Cost (\$)
July	81,840	10,289
Aug	65,440	9,502
Sept	53,440	7,532
Oct	53,360	5,480
Nov	55,120	4,686
Dec	58,960	4,724
Jan	51,280	4,863
Feb	53,360	5,278
Mar	47,520	4,734
April	44,560	4,539
May	49,520	6,043
June	62,800	7,036
Totals	677,200	74,706

Table 2.3

Tower - Gas Consumption (7/1/10-6/30/11)		
Month	Gas (CCF)	Cost (\$)
July	756	964
Aug	697	888
Sept	739	937
Oct	793	1001
Nov	897	1,013
Dec	1,162	1,349
Jan	1,165	1,361
Feb	1,246	1,480
Mar	1,017	1,154
April	907	1,021
May	882	985
June	786	852
Totals	11,047	13,007

To model the energy performance of the buildings, monthly data from July 1st 2010 to June 30th 2011 was used as a proportional basis, scaled to total to the base consumption figures for the period 7/1/2010 - 6/30/2011.

3. ENERGY CONSERVATION MEASURES

SUMMARY

Most building envelope components of Franklin Towers, including floors, walls, windows, doors, and the roof, are in a substantially effective and efficient condition where significant alteration or replacement with upgraded elements is not currently deemed economical, nor worth the level of impact on normal building use patterns. However, in future energy assessment and recommendation efforts, as applicable technologies continue to evolve, this should be reconsidered. Multiple cracks were noticed in the brick masonry throughout the Tower particularly at the corners of the building. They appear to have been filled in with cement. However, they should continue to be observed to make sure that they are not a result of significant structural issues. Also note that the thermal performance of cement is different than that of brick and the presence of these multiple cracks may decrease the overall thermal efficiency of the building envelope, whether due to thermal resistance differences or undetected infiltration losses.

The building envelope components of the Franklin Court apartments, particularly the exterior walls, attic floor and windows would benefit from upgrading in order to optimize building performance. New blown-in cellulose insulation to replace the existing fiberglass batt insulation within the exterior wall cavities and attic floor would provide marked enhanced building thermal performance. Also, in both Franklin Towers and Franklin Court, plumbing fixtures have been upgraded to relatively efficient and/or low-flow models, to an extent where new replacement is not attractive at this time. Finally, most fluorescent lights are T-8 or similar in efficiency, with relatively few T-12 remaining. Yet, these are still valuable to upgrade to T-8 lights where applicable; reference the general recommendations section for more regarding lighting practices. Upgrade to substantially more efficient units, such as LED or other, is not worthy to pursue at this time as a proposed energy conservation measure due to extended payback time (over 20 years, though this should be reevaluated in future energy assessments). General lighting enhancements are addressed in the following narrative and general recommendations section, directing that wherever possible, lighting should be upgraded to the most efficient, economical type when replaced.

Given the current state of these aspects and conditions, there are little if any substantial new energy conservation measures applicable to propose for Franklin Towers, besides possible upgrade of the steam boilers. It is worth noting that in the fall of 2008, Franklin Towers had a hybrid natural gas / geothermal domestic hot water system installed that has already greatly reduced the building's thermal energy consumption profile.

The areas where substantial savings may be realized for Franklin Court are focused on heat generation, but only for space heating. Also re-insulating exterior wall cavities and attic floors along with window upgrades, as feasible, will substantially improve the overall energy performance of these buildings.

Upgrading to high performance windows throughout the Garden Apartments was determined not to have an acceptable payback (greater than 20 years). However, the Housing Authority may gain substantial benefit through the DOE-sponsored Weatherization Assistance Program, which could make purchase and installation of high efficiency windows feasible. Additionally, payback analysis should be re-assessed in the future, for example when next conducting an energy audit, as the price-to-performance ratio may change favorably as glazing technologies continue to evolve, coupled with shifting utility rates.

A great deal of the rest of this report focuses on plans for ongoing operations and maintenance to achieve optimal efficiencies with systems in place, as well as upgrade and replacement options for the applicable items when they reach the end of their useful life and require replacement in any case.

Franklin Court - Bases of Calculations

New centralized high efficiency condensing gas boiler systems are here suggested to replace the existing in-unit gas boilers at Franklin Courts. To calculate payback, the 2010 operating submission form was used for the rolling base gas consumptions and rate, \$1.5932/therm. The only method to subtract domestic hot water gas consumption is via calculations based on occupancy, as such use is not otherwise tracked. Therefore, the amount of space heating gas applicable to this analysis period and basis is estimated at approximately 46,368 therms per year. While different proportions of space heating gas may be used in a given year, they are not assimilable into the baseline model on any other basis. The Franklin Court Boilers will merit consideration in the near future but not at this time.

ECM 1: Franklin Court – Install Blown-In Cellulose Insulation in Exterior Walls and Attics

The building envelope components of the Franklin Court apartments, particularly the exterior walls, attic floor and windows would benefit from upgrading in order to optimize building performance. New blown-in cellulose insulation to replace the existing fiberglass batt insulation within the exterior wall cavities and attic floor would provide marked enhanced building thermal performance.

Re-insulating the attic floors and exterior wall cavities of the Franklin Court apartment buildings with blown-in cellulose would significantly reduce the cost of space heating. It could potentially decrease the current cost of heating these units by roughly 50%. The project would cost an estimated \$335,000 with a **11 year payback** and would result in a yearly savings of approximately \$30,500 in gas consumption.

ECM 2: Franklin Court – Space Heating System Replacement and Upgrade

The following proposed measures constitute a whole space heating system, to supplant the existing independent space heating systems currently serving each individual unit. In addition to replacing this system with more efficient equipment, by proposing to separate the domestic hot water generation

function from the space heating boilers, additional benefits are realized, allowing the space heating boilers to be completely shut down during non-heating months, and serviced or replaced as necessary during such time.

The new system here proposed consists of:

- SPACE HEATING ONLY:
 - (6) 850 MMBTU Bradford White / Laars Neotherm Natural Gas Hydronic Boilers

Three (3) of the specified boilers would serve buildings numbered 1-6 and the Community Building. The other three (3) boilers would serve buildings 7-14. Reference Key Site Map in Appendix for identification of buildings.

This complete system, at an approximate estimated installed cost of \$300,000, which includes distribution piping, insulation, trenching, and construction of devoted mechanical room buildings, given the fuel rates and bases for consumption comparisons stated previously, will result in an annual savings in fuel costs of roughly \$15,800, thereby providing a **payback of about 19 years**. This ECM is also being deferred for installation at this time.

ECM 3: Franklin Towers – Upgrade Steam Boilers

A new, higher efficiency steam boiler plant may provide an appropriate payback period, presuming efficiency losses of the existing system as described in section 2 of this document (currently estimated at 65% efficiency). The following specified boiler was found to achieve nominal efficiencies as high as 85.4%. Given these figures, and the consumption and rates stated previously, (2) 28-HE-S-10 Smith Cast Iron Boilers may provide an approximate **9.7 year payback**, given an estimated installed cost of \$249,000 and associated annual savings of roughly \$25,800. The installation of this ECM is also being postponed to a date uncertain at this time.

TMHA 2012 UTILITY BASELINE

UTILITY ANALYSIS - CONSUMPTION HISTORY
DATA FOR THE 48 MONTH PERIOD 7/1/07 THRU 6/30/11

THIRTY SIX (36) MONTH CONSUMPTION HISTORY

MONTHS AS REPORTED AND BILLED - VERIFIED BY COMPARISON TO FORM HUD 52722

	<u>WATER & SEWERAGE</u>	<u>ELECTRICITY</u>	<u>GAS</u>	<u>FUEL OIL</u>
7/1/07 - 6/30/08	1,277,413 GAL	661,420 KWH	54,010 CCF	60,658 GAL
7/1/08 - 6/30/09	1,298,400 GAL	701,012 KWH	75,867 CCF	51,427 GAL
7/1/09 - 6/30/10	1,628,900 GAL	682,050 KWH	71,545 CCF	77,617 GAL

RECENT TWELVE (12) MONTH ACTUAL CONSUMPTION AND UNIT COST HISTORY

MONTHS AS TAKEN FROM AND AUDITED AGAINST BILLING DATA

<u>CONSUMPTION</u>	<u>7/1/10 - 6/30/11</u>	<u>737,334 KWH</u>	<u>70,850 CCF</u>	<u>44,382 GAL</u>
ACTUAL BILLING	1,545,500 GAL	\$76,363	\$82,552	\$127,411

THIS BASELINE ENERGY COST ANALYSIS IS BASED UPON ACCURATELY VERIFIED AND PREVIOUSLY REPORTED UTILITY AND WATER CONSUMPTION DATA SUBMITTED ON HUD FORM 52722 AS DRAWN FROM AND MATCHED AGAINST ACTUAL UTILITY BILLS.

BASELINE UTILITY CONSUMPTION

	<u>WATER /SEWERAGE</u>	<u>ELECTRICITY</u>	<u>GAS</u>	<u>OIL</u>
TOTAL CONSUMPTION - 3 YEARS ROLL BS FOR PERIOD 7/1/2006 - 6/30/2009	4,204,713 GAL	2,044,482 KWH	402,838 CCF	189,752 GAL
ROLLING BASE CONSUMPTION	1,401,571 GAL	681,494 KWH	134,729 CCF	63,251 GAL
ACTUAL 12 MONTH UTILITY COST FOR PERIOD 7/1/10 - 6/30/2011	\$79,997	\$76,363	\$82,552	\$127,411

<u>COST PER UNIT</u>	<u>\$0.0517 GAL</u>	<u>\$0.1036 KWH</u>	<u>\$1.1652 CCF</u>	<u>\$2.8707 GAL</u>
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TARRYTOWN MUNICIPAL HOUSING AUTHORITY
SINGLE ECM CASH FLOW

FIRST YEAR ENERGY SAVINGS	
ELECTRICAL SAVINGS	N/A
#2 FUEL OIL SAVINGS	N/A
WATER SAVINGS	N/A
NATURAL GAS SAVINGS	\$30,500
TOTAL ANNUAL SAVINGS	\$30,500

TMHA
CASH FLOW - 100%
AMOUNT FINANCED - \$ 335,000 FOR 15 YEARS AT AN INTEREST RATE OF 3.75%

YEAR	HUD FUNDING YEAR	ANNUAL ENERGY SAVINGS (\$335,000)	ANNUAL DEBT SERVICE	NATIONAL WHOLESALE SUPPLY ANNUAL FEES		ANNUAL CASH - FLOW	CUM CASH - FLOW
				M&V - INCLUDED	MTCE - INCLUDED		
Construction							
1	2012	\$ 30,500	\$ 29,234	\$ -	\$ -	\$ (335,000)	\$ (335,000)
2	2013	\$ 30,500	\$ 29,234	\$ -	\$ -	\$ 30,500	\$ (304,500)
3	2014	\$ 30,500	\$ 29,234	\$ -	\$ -	\$ 30,500	\$ (274,000)
4	2015	\$ 30,500	\$ 29,234	\$ -	\$ -	\$ 30,500	\$ (243,500)
5	2016	\$ 30,500	\$ 29,234	\$ -	\$ -	\$ 30,500	\$ (213,000)
6	2017	\$ 30,500	\$ 29,234	\$ -	\$ -	\$ 30,500	\$ (182,500)
7	2018	\$ 30,500	\$ 29,234	\$ -	\$ -	\$ 30,500	\$ (152,000)
8	2019	\$ 30,500	\$ 29,234	\$ -	\$ -	\$ 30,500	\$ (121,500)
9	2020	\$ 30,500	\$ 29,234	\$ -	\$ -	\$ 30,500	\$ (91,000)
10	2021	\$ 30,500	\$ 29,234	\$ -	\$ -	\$ 30,500	\$ (60,500)
				\$ -	\$ -	\$ 30,500	\$ (30,000)

TARRYTOWN MUNICIPAL HOUSING AUTHORITY
SINGLE ECM CASH FLOW

11	2022	\$	30,500	\$	29,234.00	\$	-	\$	-	\$	30,500.00	\$	500
12	2023	\$	30,500	\$	29,234.00	\$	-	\$	-	\$	30,500.00	\$	31,000
13	2024	\$	30,500	\$	29,234.00	\$	-	\$	-	\$	30,500.00	\$	61,500
14	2025	\$	30,500	\$	29,234.00	\$	-	\$	-	\$	30,500.00	\$	92,000
15	2026	\$	30,500	\$	29,234.00	\$	-	\$	-	\$	30,500.00	\$	122,500

AMORTIZATION SCHEDULE

TARRYTOWN MUNICIPAL HOUSING AUTHORITY

YEAR	INTEREST	PRINCIPAL	BALANCE
CONSTRUCTION			
2012	\$ 12,273	\$ 16,961	\$ 318,040
2013	\$ 11,626	\$ 17,608	\$ 300,430
2014	\$ 10,954	\$ 18,280	\$ 282,150
2015	\$ 10,257	\$ 18,978	\$ 263,172
2016	\$ 9,533	\$ 19,702	\$ 243,470
2017	\$ 8,781	\$ 20,453	\$ 223,017
2018	\$ 8,001	\$ 21,234	\$ 201,783
2019	\$ 7,191	\$ 22,044	\$ 179,740
2020	\$ 6,350	\$ 22,885	\$ 156,855
2021	\$ 5,476	\$ 23,758	\$ 133,097
2022	\$ 4,570	\$ 24,664	\$ 108,433
2023	\$ 3,629	\$ 24,605	\$ 82,827
2024	\$ 2,652	\$ 26,582	\$ 56,245
2025	\$ 1,638	\$ 27,596	\$ 28,649
2026	\$ 585	\$ 28,649	\$ -

LEGAL REVIEW

As counsel for the Tarrytown Municipal Housing Authority, I have reviewed and approve this Self Directed Energy Performance Plan and I find it to be in compliance with New York Statue.

Attorney of Record

Date

10. Documents for methods of M&V reports per Option C

The reporting of utility and water consumption will be recorded by taking actual meter readings from the operating meters on a monthly and/or quarterly basis.

These readings will be correlated to the monthly and/or quarterly billing data in order to verify proper billing, using the contracted rates, and to verify the anticipated rate of savings accrual.

The sum of this data will be used to verify annual consumption savings, to calculate the actual percentage of utility and water savings that is being directed to the repayment of the loan obligation, and to complete the filing of the HUD 52722.

Within 45 days of the close of the fiscal year for The Housing Authority, the Executive Director will submit signed certification of the Measurement and Verification results based upon IPMVP Option C.

11. NARRATIVE / GENERAL RECOMMENDATIONS / OPERATING & MAINTENANCE PRACTICES FOR THE AMP

Architectural Considerations

The scope of this energy audit assumes that basic architectural operation and maintenance has been completed, specifically in the areas of no broken glass, any defective or otherwise broken windows or doors replaced, all windows and doors properly weather-stripped, puttied and effectively gasketed, all building penetrations and seams properly caulked, all holes patched, and proper attic ventilation provided in place as applicable to building construction type. There was no distinct obviously visible reason observed at the site to believe this was not the case, but should such a condition exist known directly to the building management, it is to be addressed as part of the standard and routine maintenance of functional and safe building performance, outside of further consideration of this energy audit.

The existing double pane windows at Franklin Towers substantially appear to be in good working order and are not currently proposed to be replaced with upgraded higher efficiency units. However, as window performance technology continues to develop, in future energy assessment and enhancement efforts, the windows should be re-considered for upgrade with latest ultra high performance units.

The existing double pane windows at Franklin Court are in satisfactory working order. However, upgrading these windows to more contemporary double or triple pane windows with low-E and argon gas will significantly increase the overall energy efficiency of these apartments.

Due to window operability requirements, as well as condition and performance of current windows, storm windows are not proposed for either Franklin Towers or Franklin Court. Similarly, due to various functional use, building construction (high rise for Tower) and vandalism or unintentional damage considerations, storm doors are not here proposed, in addition to the fact that the payback is longer and below that of measures which are considered and proven of higher value first.

Thermal shutters and insulating window shades are not further considered due to lack of desirability by owner and low general aesthetic acceptance, in addition to installation difficulties resulting in a system that is not here deemed suitable. Their thermal insulating value is significant, but until new and fitting products become available in this realm, they will not here be considered further. Lastly, though more importantly, it is more cost effective to first seek installation of improved performance windows or storm windows, both of which are addressed above. The same analysis and conclusions not to install apply to consideration of proposal of any new window solar shades. Appropriate use of interior shades or other conventional exterior shades, in both the heating and cooling season is always recommended, though these are not officially included within the scope of proposed energy conservation measures. Additionally, tinted windows and related measures can be helpful, though typically less so than other shading devices, even while actually blocking potentially desirable passive solar gains; yet, they are not

competitively feasible to include in the measures here officially proposed. Furthermore, beyond existing southern exposure windows, passive solar heat collection is not further considered due to impracticalities in interfacing with existing building construction, site space constraints, and difficulties in connection to relevant existing building systems.

At the front (north) entry side of the Tower, there is an existing entry area that is already enclosed to form a vestibule. At the side (east) entry to the Tower, there is currently no vestibule. Constructing a vestibule in this area would help reduce heat loss during the heating months. Also, the rear (south) entry of the Tower currently has an entry area which could easily be enclosed to create an effective vestibule by installing a door at the existing framed opening leading to the common hallway and elevators. Entry vestibules save heating energy, as well as cooling energy as relevant, as deemed compliant with all applicable fire safety, egress requirements, and building or other applicable codes, rules and regulations.

Installation of additional attic insulation is not possible in the tower due to its flat roof construction. The roof already has reasonable levels of insulation in place, and is not here proposed to be upgraded at this time. However, at such time that substantial roof maintenance or repairs, especially if including replacement of areas of the roof composite construction itself, are required, enhanced insulation should be re-considered at such time for attractive energy savings payback terms.

Wall insulation would not be cost nor labor and tenant-impact effective to add, replace or upgrade in the Tower.

Heating Systems Considerations

Heating Plant Upgrade / Replacement

Replace obsolete or merely sufficiently comparatively inefficient heating plant where other improvement and maintenance measures are deemed to not offer as significant benefit and long term savings. Also, by replacing heating equipment, newer more efficient fuel and total systems may be implemented, including accurately sized capacity, providing continued future value and enhanced energy security. New high efficiency heating boilers are proposed as fitting energy conservation measures for this property. Reference the description of said measures in the introductory section of this document.

Domestic Hot Water Heating Plant

Install separate, maximally efficient domestic hot water heating plant, allowing among other benefits shut-down of space heating plant during non-heating months to allow for improved efficiency, maintenance, and replacement as necessary or valuable. Note that operation and maintenance measures to existing domestic hot water heating equipment components are addressed separately under secondary systems energy conservation measures considerations. New high efficiency domestic water heating boilers, in concert with a hybrid geothermal heat pump configuration, are proposed as fitting energy conservation measures for this property. Reference the description of said measures in the Introductory section of this document.

APPENDIX

- **Appendix A – Operations & Maintenance Procedures**
- **Appendix B – Key Site Map**
- **Appendix C – Existing Space Heating and DHW Consumption**
- **Appendix D – ECM – 1 Blown In Cellulose Insulation Upgrade**
- **Appendix E – Product Specification Sheets**
- **Appendix F – Detailed Building Description – Franklin Towers**

Appendix A – Operations & Maintenance Procedures

Operation and Maintenance

In all cases, prior to any further adjustment and upgrade to equipment to produce greater effective function, regular, complete maintenance programs should be developed and implemented to comprehensively maintain boiler heating efficiencies, following all manufacturer's specifications and instructions. The following space heating operation and maintenance points assume sufficient trained qualified staff and coordination to ensure implementation of any planned measure. All applicable to the particular heating equipment should be engaged.

- In the summer, the heating system pilot light(s) should be turned off according to manufacturer's instructions by qualified personnel, but only in conjunction with prominently posting a durable note at the relevant equipment stating that the pilot must be relit prior to unit reactivation.
- Heating temperatures should be limited to 68 degrees F, or as close thereto as possible within limits acceptable to any special occupancies with health or other needs.
- All burners should be cleaned and adjusted for unimpeded best operation. Filters should be cleaned or changed, as fitting. Gas or oil burners should be regularly cleaned and adjusted to maintain correct firing rate. Note any conditions which would necessitate burner adjustment. Also, burners should be inspected to insure proper linkage operation, tightness, and other applicable attributes.
- The waterside and fireside of any and all heaters, boilers and furnaces should be cleaned per all applicable manufacturer methods, requirements and instructions by a trained, skilled, qualified technician. The fireside should be cleaned monthly during the heating season, removing deposits of soot, fly ash, and slag. The waterside should be regularly cleaned to remove scale and sediment, during shutdown. To minimize future buildup, feed water should be appropriately treated.
- For applicable oil equipment, the oil strained should be cleaned regularly to ensure full flow, including cleaning or replacement as necessary of the screen.
- Controls for the heating system, including both manual and automatic, and those for measurement, heat generation and distribution, should be calibrated and adjusted, per all manufacturer's instructions and specifications, on a regular basis to ensure working status, accuracy and therefore efficiency as well. Only qualified technicians should perform the work, especially that on gauges, meters, thermometers, valves and other sensitive or complex components.
- All heating equipment and associated components and parts should be inspected for integrity and good working state, and immediately repaired or replaced as necessary, including items such as housings, gaskets, casings, packing, linkages, and other parts for both stationary and moving equipment.

- All applicable systems and components should be lubricated, newly and on a regular schedule, to allow optimal function, according to all manufacturer's instructions, using the appropriate lubricant, addressing parts such as blowers, motors, fans, bearings and any other applicable.
- Optimal efficiency should be realized through fitting fuel-to-air ratio adjustment, whether through manual or automatic control, only following any improvements, repairs and maintenance stated previously, as these can affect the fuel-to-air ratio.
- For oil burning heating equipment, optimal preheating of fuel oil should be assessed and maintained to realize recommended temperature that ensures specified viscosity at the burner head.
- For steam producing equipment, steam pressures should be minimized within effective range, and adjusted to match use patterns, and specifically lowered as fitting during hours of low demand and warmer weather. Lowering of steam pressure, to be consistently recorded in a maintenance log book, should only be done gradually to extent necessary to determine best lowest operating levels that satisfy distribution requirements.

Note that powering down of equipment may be required prior to any such maintenance measures. All work is to be performed by a qualified skilled technician in the field and specifically with the applicable type(s) of burner(s) and heating equipment.

Central Distribution Operation, Maintenance and Performance Upgrade

As is the case for the heating plant, in all cases, prior to any further adjustment and upgrade to equipment to produce greater effective function, regular, complete maintenance programs should be developed and implemented to comprehensively operate and maintain central distribution operation and maintenance, following all manufacturer's specifications and instructions. The following measures are predicated on the type of heating system, but as applicable should be enacted.

- Clean heating surfaces thoroughly and regularly, ensuring not to damage any components.
- Vent radiators completely at the beginning of each heating season. Check all vents for proper operation, repairing those in need.
- For steam systems: clean and refurbish steam traps to optimize performance.
- For steam systems: periodically check, maintain and improve condensate return system, including repair or restorative installation of encompassing, integral insulation.

Ensure complete and intact insulation, in compliance with temperature range specifications as well as fire, health, building and any additional applicable codes and standards, on all hot water or steam pipes running through unconditioned or under-condition-controlled spaces, via new insulation where none currently is in place or in place of portions that are substantially worn or otherwise compromised. Be sure not to insulate pipes that are intended to radiate heat to the given space. Also, include pipe fitting, valves, flanges and any other applicable component parts of the network system in the scope of properly insulated areas. However, steam traps and the first 6' of condensate discharge are not to be insulated.

Component Replacement, Upgrade, and Conversion to Higher Efficient Function of Heating Systems

Note that these measures should only be implemented after the complete maintenance and efficiency improvements stated previously have been implemented. And, most are not applicable separate from the proposed upgraded heating equipment configuration called out in the introductory section. Nevertheless, the areas for realizing potential energy and associated cost savings are here listed for reference, and general use as applicable going forward.

Installation of automatic flue dampers can save energy through stopping unintentional heat release from the boiler when off through the flue. Any such measure should be coordinated with the proposed upgraded heating plant configuration as described in the introductory section.

For projects fired with constant-burning gas or oil pilot lights, conversion to electric ignition should be implemented to save energy.

As applicable, the burner nozzle size may be reduced to accurately match heating load, which typically is oversized initially and often is substantially reduced following implementation of other energy conservation measures. Again, while this is not currently applicable due to the upgraded boiler system proposed, it may become applicable again going forward at such time that other building energy consumption reduction efforts are implemented, resulting in a reduced building heating load.

The proposed boilers will incorporate considerations to maximize heating plant efficiency, including those provided by modulating burner installations.

Implementation of a flue heat recovery system to preheat combustion air or boiler water, or to directly or indirectly to supplement space heating if flue temperatures are above 500 degrees F, will further enhance the efficiency of the proposed heating plant.

Installation of turbulators for firetubes to reduce heat lost through the flue and improve, regularize and heat transfer from combustion gases to boiler waterside represent an important possible improvement to existing applicable heating plants. The efficiency increase possible with this recommendation has been incorporated in the proposed new heating plant equipment as described in the introductory section.

As possible, install fitting radiator or zone controls to enhance heating distribution and efficiency.

Secondary Systems Considerations

Domestic Hot Water Operation, Maintenance, and Improvement

As applicable to general heating plant operation and maintenance measures, before other additional, replacement or upgraded components are considered, or at least regardless of any such proposed upgrades, enhanced operation and maintenance practices should be implemented for the domestic hot water heating system.

- Domestic hot water heating temperatures should be lowered within acceptable ranges, to produce 120 degrees F at all points of use, for adequate delivery temperatures and hygienic safety considerations for the water storage. Generally, a booster heater for specific applications that may require higher temperatures is most efficient, for example at commercial dishwashers or certain laundry applications, compared to raising the temperature at the central plant.
- Domestic hot water burners should be cleaned and adjusted, at a minimum of once annually, to optimize combustion efficiency and heat transfer capacity. Controls and electrodes should be checked and brought to specified configuration, clean operation (e.g. scale removed) and performance.
- Domestic hot water heating tanks should have bottoms drained, at a minimum of an annual basis, to remove sediment. Water should be allowed to drain until it runs clear, thus ensuring effective heat transfer in the equipment.
- Any leaks in the system should be checked regularly and fixed as needed.

Repair as necessary, upgrade, or install new insulation on all domestic hot water tanks, ensuring that insulation does not interfere with any system function, safety, air intake, access to components, valves and thermostats, temperature ranges of tank, and complies with all code and manufacturer requirements.

Solar domestic hot water generation has become more accessible and valuable as the technology has evolved. However, due to existing conditions, scale of facilities, and potential damage to components where exposed, this potential measure is not here proposed to be implemented.

Again, reference the introductory section for description of proposed upgrade to domestic hot water heating system.

Plumbing Fixtures, Water Supply and Washing Machines

Install water saving, low-flow or flow restrictor type plumbing fixtures, as applicable to the conditions at the building, throughout the facility, where will not result in unsatisfactory function, and therefore bypass / replacement with conventional fixtures by users. Additionally, regulators may be employed. However, considerations regarding effects of hard water must be balanced so as not to create maintenance difficulties or function reduction over time. Also, any code requirements must be met regarding minimum flow rates. "On-off" valves may be employed as well to save water when directly in use.

Additional water savings devices for cold water systems may be employed, or the units themselves replaced with newer, water conserving models. This measure is applicable to toilets. Sufficient maintenance of any such fixtures is essential.

In high rise projects, where water pressure is not supplied by rooftop or otherwise elevated water storage tanks, water supply pumps may be replaced with hydro-pneumatic systems that allow pump to not operate during periods without demand from uses, while maintaining adequate pressures.

Convert laundry to cold rinse, even in applications where washing cycle must be implemented with hot water.

Ventilation / Air-Distribution System

Similar to the approach for heating and hot water systems, full operation and maintenance of existing systems should be implemented first, where deemed effective for such equipment and components to remain in place, regardless of other additional improvement, upgrade or replacement measures.

- Set dead band for 68 to 78 degrees F to not heat (nor cool) air between these temperatures.
- Reduce outdoor air intake to match actual demand requirements, thereby significantly reducing heating and cooling loads caused by unnecessary volumes of unconditioned intake air. Within process limits, this applies to rooms containing combustion equipment as well. Additionally, damper seals and operating conditions should be regularly checked, maintained and repaired as necessary. Unoccupied spaces do not typically require ventilation, and therefore where applicable should not be supplied with intake air at all. Lastly, fresh air dampers may be closed during first and last hours of occupancy periods, as permitted by conditions and codes.
- Replace filters with low resistance filters to match minimum, yet functionally complete filtration requirements, thereby lowering circulation fan loads.
- Check condition of duct system and seal all leaks in ductwork with new, quality effective sealing products, thereby reducing distributive heat loss and system resistance.

Where cost effective, install ventilation warm-up cycle on applicable central air systems that do not operate 24 hours per day, keeping the dampers closed until the space achieves temperature, thereby reducing the volume of unconditioned air to be brought to targeted heat or cool ranges. Note that the warm-up cycle should only be activated during unoccupied periods when fresh air ventilation is not necessary.

Air Conditioning Measures

Since these building do not have central air conditioning, the following measures are here listed separately, to be employed where and as applicable. Note that some of the measures, such as shading of outdoor air conditioning units, may be employed to valuable effect, in some cases even for tenant-specific, seasonally installed window units.

- Shade outdoor air conditioning units to lower temperature surrounding the condenser coils, allowing increased operating efficiency, while not compromising condenser air flow, trapping hot air near air conditioning equipment, or other interfering with any system function requirements.
- Adjust chiller controls to more accurately match outdoor temperature and occupancy load, setting demand at lowest setting that will maintain sufficient cooling.
- Develop new air conditioning efficiency standards so that most efficient, effective units are selected and implemented currently and into the future wherever a unit may need replacement or upgrading.

Obsolete air conditioning equipment should be replaced, as implied above regarding new, higher air conditioner efficiency standard implementation. All air conditioners should be accurately sized to meet the design loads.

Given the above general recommendations, no equipment upgrade replacements to any existing air conditioning is here proposed in the context of this energy audit.

Electrical and Lighting Systems Considerations

Wherever bulbs require replacement at end of useful life, higher efficiency bulbs should be considered, and specifically T-12 lamps should be replaced with T-8 type lamps, as called out previously.

Improve electrical and lighting operation and maintenance generally before other related measures are considered, including the following areas to address.

- Remove bulbs and lamps that are not necessary to simply reduce the lighting electrical load, keeping within safe, functional and code-required levels in all spaces.
- Clean light fixtures to allow full transmission of produced light, ensuring the current is off while such work takes place and that the fixtures are thoroughly dry, without any problematic materials on them, prior to reactivation.
- Initiate tenant appliance review by educating occupants and users of the facility, via a distributed checklist and guide document, to operate and maintain appliances for maximum efficiency. The information of primary value is simply to become aware of and reduce use only to times when in fact necessary.
- Establish lamp replacement standards, including replacement of lower-wattage incandescent bulbs with single higher wattage bulbs wherever possible and functional to produce required light. Reduction in lumen levels, again within workable ranges, should be implemented. High-efficiency replacements should be used when bulbs require replacement regardless.
- Review elevator service to determine if there are periods which offer more elevator runs than actually required. During any such periods found, if remaining elevator meets the demand, the other elevator may be deactivated during these times to minimize electrical consumption. Also, by lengthening floor dwell time, fewer elevator trips over time will result, with increase per trip passenger load. Other measures may further fine tune elevator performance.

For buildings or portions thereof where electricity is provided and paid by the Housing Authority, convert incandescent lamps in dwellings as well as circulation and public areas to more efficient, compact fluorescent lights where possible. Additionally, full fixture conversion, including addition of required ballast, may be considered as deemed cost effective, to change to fluorescent or LED. Fluorescent bulbs should also be replaced where cost effective to do so with new, energy-efficient bulbs. Where possible, install high-efficiency ballasts, if existing are not high-efficiency fluorescent light ballasts. And, daylighting controls should be installed on lighting in spaces near windows, typically within approximately 10', or otherwise illuminated by natural lighting, where such areas have lighting that is typically kept on for extended periods otherwise.

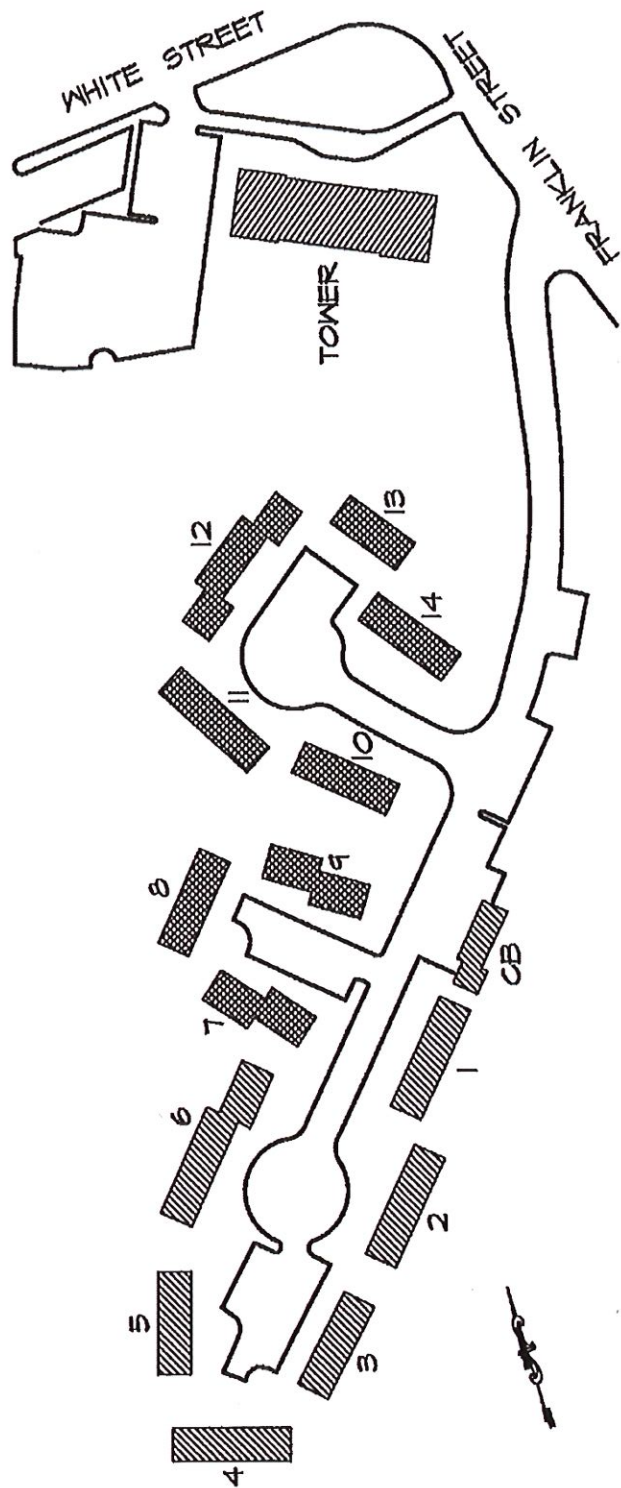
As a general approach, all appliances should be upgraded to energy star standards when replaced in routine operation and maintenance of all facilities, though specific new appliances are not here proposed as an energy conservation measure. In particular, the stoves when up for replacement, should be newer efficient models.

The site lighting is currently provided by timer-controlled energy-efficient sodium vapor fixtures, which produce substantially more light per watt of energy compared to mercury vapor and incandescent lighting.

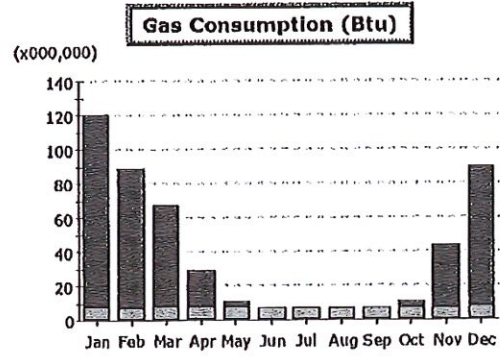
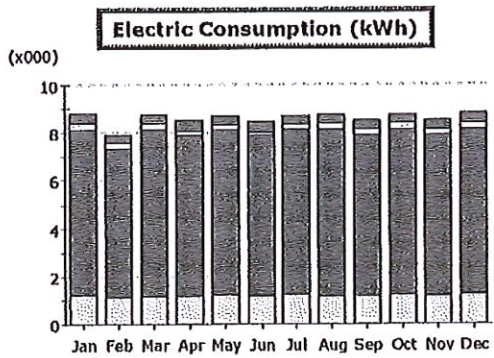
Low power factors should be corrected as applicable, which will allow lower rates from the utility given its resulting energy saving.

Install load-shedding controls to reduce the overall price of electricity by avoiding peak load demand surcharges. Applicable loads are typically in the areas of domestic hot water, heating and cooling of office, common, circulation and stairway spaces, auxiliary equipment such as office equipment, site equipment, or convenience equipment, service and additional regular elevators, and larger pumps, including water and storage tank pumps. Note that typically light, dwelling unit heating (except for very brief periods), dwelling unit cooling, cooking and one-car elevators are not applicable to address with load-shedding. Load-shedding controls may be effective both in manual or automatic forms, depending on systems for implementation. The range of automatic control equipment is quite wide and should be tailored to the specific conditions at the site.

Appendix B – Key Site Map



Appendix C – Existing Space Heating and DHW Consumption



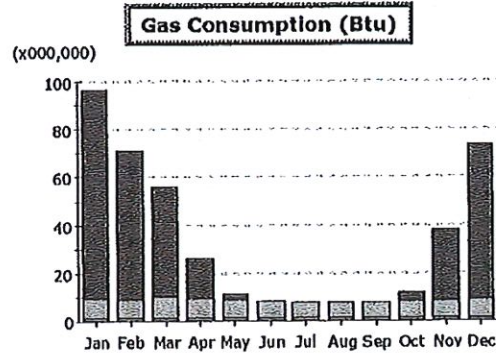
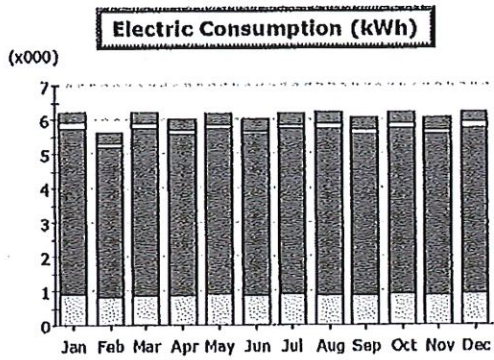
- Area Lighting
- Exterior Usage
- Water Heating
- Refrigeration
- Task Lighting
- Pumps & Aux.
- Ht Pump Supp.
- Heat Rejection
- Misc. Equipment
- Ventilation Fans
- Space Heating
- Space Cooling

Electric Consumption (kWh x000)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Space Cool	-	-	-	-	-	-	-	-	-	-	-	-	-
Heat Reject.	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigeration	-	-	-	-	-	-	-	-	-	-	-	-	-
Space Heat	-	-	-	-	-	-	-	-	-	-	-	-	-
HP Supp.	-	-	-	-	-	-	-	-	-	-	-	-	-
Hot Water	-	-	-	-	-	-	-	-	-	-	-	-	-
Vent. Fans	-	-	-	-	-	-	-	-	-	-	-	-	-
Pumps & Aux.	0.40	0.36	0.40	0.39	0.40	0.39	0.40	0.40	0.39	0.40	0.39	0.40	4.71
Ext. Usage	0.27	0.21	0.23	0.23	0.17	0.17	0.17	0.26	0.25	0.26	0.26	0.27	2.74
Misc. Equip.	6.90	6.24	6.93	6.71	6.91	6.71	6.91	6.92	6.70	6.91	6.69	6.91	81.42
Task Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Area Lights	1.23	1.10	1.20	1.17	1.22	1.17	1.22	1.21	1.17	1.22	1.18	1.22	14.31
Total	8.79	7.92	8.77	8.48	8.70	8.43	8.71	8.79	8.50	8.79	8.51	8.80	103.18

Gas Consumption (Btu x000,000)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Space Cool	-	-	-	-	-	-	-	-	-	-	-	-	-
Heat Reject.	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigeration	-	-	-	-	-	-	-	-	-	-	-	-	-
Space Heat	112.45	81.19	59.26	20.82	2.56	-	-	-	-	3.51	36.15	82.27	398.20
HP Supp.	-	-	-	-	-	-	-	-	-	-	-	-	-
Hot Water	6.49	5.99	6.67	6.38	6.19	5.66	5.54	5.48	5.39	5.85	5.92	6.33	71.88
Vent. Fans	-	-	-	-	-	-	-	-	-	-	-	-	-
Pumps & Aux.	-	-	-	-	-	-	-	-	-	-	-	-	-
Ext. Usage	-	-	-	-	-	-	-	-	-	-	-	-	-
Misc. Equip.	1.27	1.12	1.22	1.18	1.25	1.18	1.24	1.23	1.19	1.25	1.21	1.24	14.59
Task Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Area Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	120.21	88.30	67.15	28.38	10.00	6.84	6.78	6.71	6.58	10.61	43.28	89.84	484.68



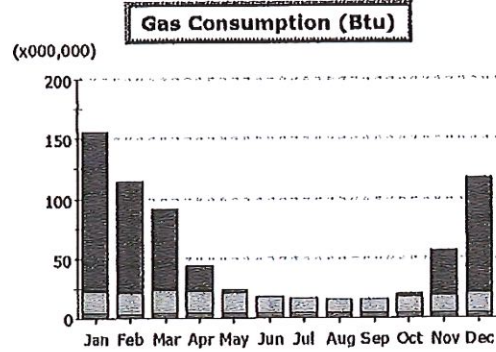
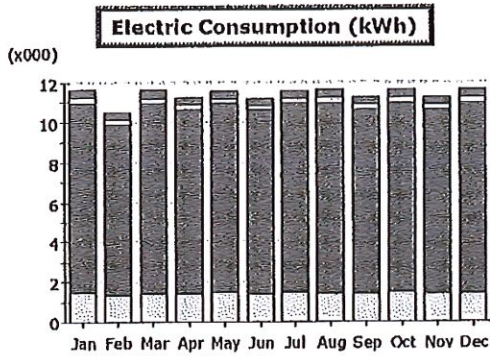
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Electric Consumption (kWh x000)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Space Cool	-	-	-	-	-	-	-	-	-	-	-	-	-
Heat Reject.	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigeration	-	-	-	-	-	-	-	-	-	-	-	-	-
Space Heat	-	-	-	-	-	-	-	-	-	-	-	-	-
HP Supp.	-	-	-	-	-	-	-	-	-	-	-	-	-
Hot Water	-	-	-	-	-	-	-	-	-	-	-	-	-
Vent. Fans	-	-	-	-	-	-	-	-	-	-	-	-	-
Pumps & Aux.	0.34	0.31	0.34	0.33	0.34	0.33	0.34	0.34	0.33	0.34	0.33	0.34	4.04
Ext. Usage	0.16	0.13	0.14	0.14	0.10	0.10	0.10	0.16	0.15	0.16	0.16	0.16	1.66
Misc. Equip.	4.83	4.37	4.85	4.69	4.83	4.69	4.84	4.84	4.69	4.83	4.68	4.84	56.99
Task Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Area Lights	0.90	0.81	0.88	0.86	0.90	0.85	0.89	0.89	0.86	0.90	0.87	0.89	10.50
Total	6.24	5.61	6.22	6.02	6.18	5.98	6.18	6.23	6.03	6.23	6.03	6.23	73.18

Gas Consumption (Btu x000,000)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Space Cool	-	-	-	-	-	-	-	-	-	-	-	-	-
Heat Reject.	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigeration	-	-	-	-	-	-	-	-	-	-	-	-	-
Space Heat	86.86	62.13	45.88	16.93	2.05	-	-	-	-	3.73	29.60	64.31	311.48
HP Supp.	-	-	-	-	-	-	-	-	-	-	-	-	-
Hot Water	7.88	7.41	8.29	7.88	7.40	6.58	6.21	6.01	5.90	6.51	6.78	7.49	84.33
Vent. Fans	-	-	-	-	-	-	-	-	-	-	-	-	-
Pumps & Aux.	-	-	-	-	-	-	-	-	-	-	-	-	-
Ext. Usage	-	-	-	-	-	-	-	-	-	-	-	-	-
Misc. Equip.	1.50	1.34	1.46	1.42	1.49	1.42	1.48	1.47	1.43	1.49	1.44	1.48	17.39
Task Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Area Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	96.24	70.87	55.63	26.23	10.93	7.99	7.69	7.48	7.32	11.73	37.81	73.28	413.19



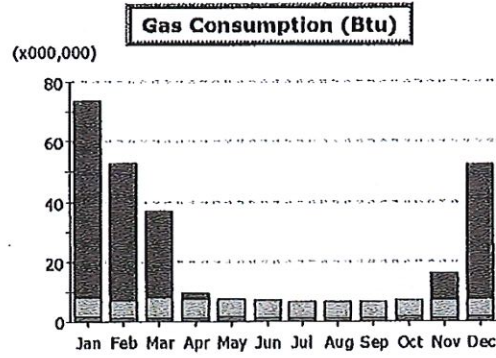
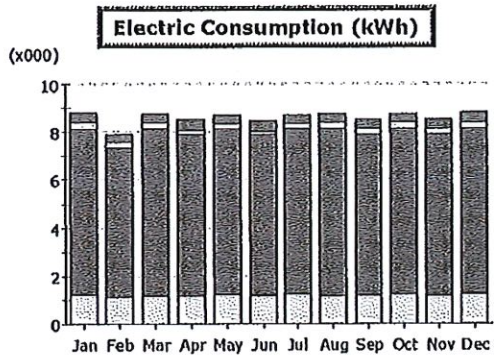
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Space Cool	-	-	-	-	-	-	-	-	-	-	-	-	-
Heat Reject.	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigeration	-	-	-	-	-	-	-	-	-	-	-	-	-
Space Heat	-	-	-	-	-	-	-	-	-	-	-	-	-
HP Supp.	-	-	-	-	-	-	-	-	-	-	-	-	-
Hot Water	-	-	-	-	-	-	-	-	-	-	-	-	-
Vent. Fans	-	-	-	-	-	-	-	-	-	-	-	-	-
Pumps & Aux.	0.41	0.37	0.41	0.39	0.41	0.39	0.41	0.41	0.39	0.41	0.39	0.41	4.79
Ext. Usage	0.26	0.20	0.23	0.22	0.17	0.16	0.17	0.25	0.24	0.25	0.25	0.26	2.64
Misc. Equip.	9.52	8.61	9.55	9.24	9.53	9.24	9.54	9.54	9.23	9.53	9.22	9.53	112.28
Task Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Area Lights	1.47	1.31	1.43	1.39	1.46	1.39	1.45	1.44	1.40	1.46	1.41	1.45	17.08
Total	11.65	10.49	11.62	11.24	11.56	11.19	11.56	11.64	11.26	11.64	11.28	11.65	136.79

Gas Consumption (Btu x000,000)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Space Cool	-	-	-	-	-	-	-	-	-	-	-	-	-
Heat Reject.	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigeration	-	-	-	-	-	-	-	-	-	-	-	-	-
Space Heat	132.52	92.86	66.41	20.35	2.81	-	-	-	-	2.72	37.28	96.05	451.00
HP Supp.	-	-	-	-	-	-	-	-	-	-	-	-	-
Hot Water	19.23	18.40	20.66	19.42	17.22	14.46	12.73	12.06	12.05	14.11	15.57	17.83	193.74
Vent. Fans	-	-	-	-	-	-	-	-	-	-	-	-	-
Pumps & Aux.	-	-	-	-	-	-	-	-	-	-	-	-	-
Ext. Usage	-	-	-	-	-	-	-	-	-	-	-	-	-
Misc. Equip.	3.30	2.99	3.25	3.15	3.34	3.15	3.31	3.28	3.18	3.34	3.22	3.31	38.92
Task Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Area Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	155.12	114.25	90.32	42.93	23.37	17.61	16.04	15.34	15.24	20.18	56.07	117.19	603.66



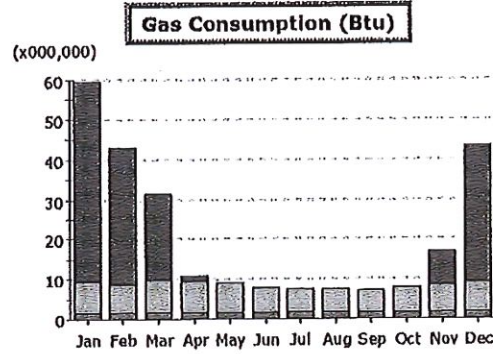
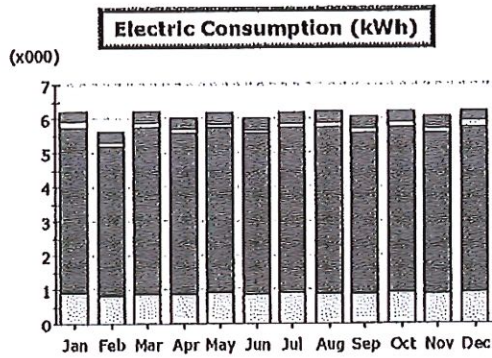
- Area Lighting
- Exterior Usage
- Water Heating
- Refrigeration
- Task Lighting
- Pumps & Aux.
- HT Pump Supp.
- Heat Rejection
- Misc. Equipment
- Ventilation Fans
- Space Heating
- Space Cooling

Electric Consumption (kWh x000)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Space Cool	-	-	-	-	-	-	-	-	-	-	-	-	-
Heat Reject.	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigeration	-	-	-	-	-	-	-	-	-	-	-	-	-
Space Heat	-	-	-	-	-	-	-	-	-	-	-	-	-
HP Supp.	-	-	-	-	-	-	-	-	-	-	-	-	-
Hot Water	-	-	-	-	-	-	-	-	-	-	-	-	-
Vent. Fans	-	-	-	-	-	-	-	-	-	-	-	-	-
Pumps & Aux.	0.40	0.36	0.40	0.39	0.40	0.39	0.40	0.40	0.39	0.40	0.39	0.40	4.71
Ext. Usage	0.27	0.21	0.23	0.23	0.17	0.17	0.17	0.26	0.25	0.26	0.26	0.27	2.74
Misc. Equip.	6.90	6.24	6.93	6.71	6.91	6.71	6.91	6.92	6.70	6.91	6.69	6.91	81.42
Task Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Area Lights	1.23	1.10	1.20	1.17	1.22	1.17	1.22	1.21	1.17	1.22	1.18	1.22	14.31
Total	8.79	7.92	8.77	8.48	8.70	8.43	8.71	8.79	8.50	8.79	8.51	8.80	103.18

Gas Consumption (Btu x000,000)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Space Cool	-	-	-	-	-	-	-	-	-	-	-	-	-
Heat Reject.	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigeration	-	-	-	-	-	-	-	-	-	-	-	-	-
Space Heat	65.84	45.56	28.92	1.75	-	-	-	-	-	-	9.05	44.43	195.55
HP Supp.	-	-	-	-	-	-	-	-	-	-	-	-	-
Hot Water	6.49	5.99	6.66	6.33	6.08	5.55	5.42	5.35	5.26	5.72	5.89	6.32	71.05
Vent. Fans	-	-	-	-	-	-	-	-	-	-	-	-	-
Pumps & Aux.	-	-	-	-	-	-	-	-	-	-	-	-	-
Ext. Usage	-	-	-	-	-	-	-	-	-	-	-	-	-
Misc. Equip.	1.27	1.12	1.22	1.18	1.25	1.18	1.24	1.23	1.19	1.25	1.21	1.24	14.59
Task Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Area Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	73.60	52.67	36.80	9.25	7.34	6.73	6.66	6.50	6.45	6.98	16.15	51.99	281.20



- Area Lighting
- Exterior Usage
- Water Heating
- Refrigeration
- Task Lighting
- Pumps & Aux.
- Ht Pump Supp.
- Heat Rejection
- Misc. Equipment
- Ventilation Fans
- Space Heating
- Space Cooling

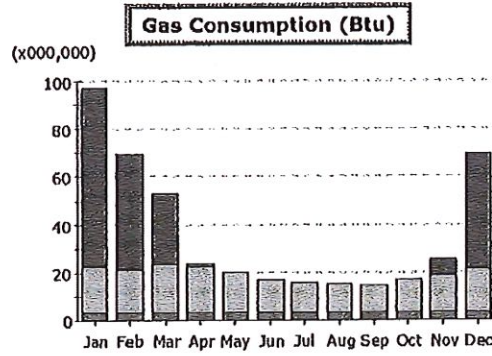
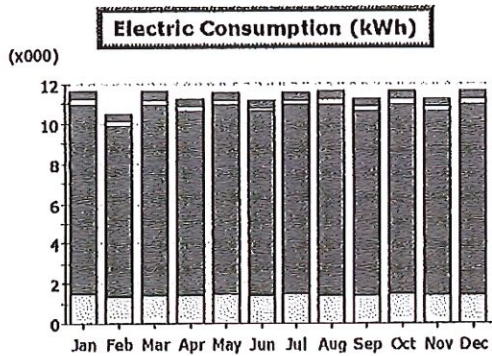
Electric Consumption (kWh x000)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Space Cool	-	-	-	-	-	-	-	-	-	-	-	-	-
Heat Reject.	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigeration	-	-	-	-	-	-	-	-	-	-	-	-	-
Space Heat	-	-	-	-	-	-	-	-	-	-	-	-	-
HP Supp.	-	-	-	-	-	-	-	-	-	-	-	-	-
Hot Water	-	-	-	-	-	-	-	-	-	-	-	-	-
Vent. Fans	-	-	-	-	-	-	-	-	-	-	-	-	-
Pumps & Aux.	0.34	0.31	0.34	0.33	0.34	0.33	0.34	0.34	0.33	0.34	0.33	0.34	4.04
Ext. Usage	0.16	0.13	0.14	0.14	0.10	0.10	0.10	0.16	0.15	0.16	0.16	0.16	1.66
Misc. Equip.	4.83	4.37	4.85	4.69	4.83	4.69	4.84	4.84	4.69	4.83	4.68	4.84	56.99
Task Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Area Lights	0.90	0.81	0.88	0.86	0.90	0.85	0.89	0.89	0.86	0.90	0.87	0.89	10.50
Total	6.24	5.61	6.22	6.02	6.18	5.98	6.18	6.23	6.03	6.23	6.03	6.23	73.18

Gas Consumption (Btu x000,000)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Space Cool	-	-	-	-	-	-	-	-	-	-	-	-	-
Heat Reject.	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigeration	-	-	-	-	-	-	-	-	-	-	-	-	-
Space Heat	50.25	34.17	21.74	1.54	-	-	-	-	-	-	8.59	34.25	150.55
HP Supp.	-	-	-	-	-	-	-	-	-	-	-	-	-
Hot Water	7.87	7.40	8.27	7.83	7.27	6.45	6.07	5.86	5.75	6.38	6.75	7.48	83.38
Vent. Fans	-	-	-	-	-	-	-	-	-	-	-	-	-
Pumps & Aux.	-	-	-	-	-	-	-	-	-	-	-	-	-
Ext. Usage	-	-	-	-	-	-	-	-	-	-	-	-	-
Misc. Equip.	1.50	1.34	1.46	1.42	1.49	1.42	1.48	1.47	1.43	1.49	1.44	1.48	17.39
Task Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Area Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	59.62	42.91	31.48	10.78	8.76	7.86	7.55	7.33	7.18	7.86	16.78	43.21	251.32

Appendix D – ECM – 1 Blown In Cellulose Insulation Upgrade



- Area Lighting
- Exterior Usage
- Water Heating
- Refrigeration
- Task Lighting
- Pumps & Aux.
- HT Pump Supp.
- Heat Rejection
- Misc. Equipment
- Ventilation Fans
- Space Heating
- Space Cooling

Electric Consumption (kWh x000)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Space Cool	-	-	-	-	-	-	-	-	-	-	-	-	-
Heat Reject.	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigeration	-	-	-	-	-	-	-	-	-	-	-	-	-
Space Heat	-	-	-	-	-	-	-	-	-	-	-	-	-
HP Supp.	-	-	-	-	-	-	-	-	-	-	-	-	-
Hot Water	-	-	-	-	-	-	-	-	-	-	-	-	-
Vent. Fans	-	-	-	-	-	-	-	-	-	-	-	-	-
Pumps & Aux.	0.41	0.37	0.41	0.39	0.41	0.39	0.41	0.41	0.39	0.41	0.39	0.41	4.79
Ext. Usage	0.26	0.20	0.23	0.22	0.17	0.16	0.17	0.25	0.24	0.25	0.25	0.26	2.64
Misc. Equip.	9.52	8.61	9.55	9.24	9.53	9.24	9.54	9.54	9.23	9.53	9.22	9.53	112.28
Task Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Area Lights	1.47	1.31	1.43	1.39	1.46	1.39	1.45	1.44	1.40	1.46	1.41	1.45	17.08
Total	11.65	10.49	11.62	11.24	11.56	11.19	11.56	11.64	11.26	11.64	11.28	11.65	136.79

Gas Consumption (Btu x000,000)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Space Cool	-	-	-	-	-	-	-	-	-	-	-	-	-
Heat Reject.	-	-	-	-	-	-	-	-	-	-	-	-	-
Refrigeration	-	-	-	-	-	-	-	-	-	-	6.83	48.25	208.32
Space Heat	74.57	48.42	29.12	1.13	-	-	-	-	-	-	-	-	-
HP Supp.	-	-	-	-	-	-	-	-	-	-	-	-	-
Hot Water	19.20	18.37	20.54	19.02	16.57	13.79	12.04	11.35	11.34	13.44	15.35	17.76	188.77
Vent. Fans	-	-	-	-	-	-	-	-	-	-	-	-	-
Pumps & Aux.	-	-	-	-	-	-	-	-	-	-	-	-	-
Ext. Usage	-	-	-	-	-	-	-	-	-	-	-	-	-
Misc. Equip.	3.38	2.99	3.25	3.15	3.34	3.15	3.31	3.28	3.18	3.34	3.22	3.31	38.92
Task Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Area Lights	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	97.15	69.78	52.91	23.30	19.92	16.95	15.35	14.63	14.52	16.78	25.39	69.33	436.00

Appendix E – Product Specification Sheets

PRODUCT DATA

PD28HE-3

Smith Steam Boilers [28HE Series] High Efficiency Pressurized Wet Base Boiler/Burner Unit

Smith

CAST IRON BOILERS

Designed to provide the highest efficiencies possible with forced draft firing. This new product line of Smith cast iron boilers is available in fifteen basic sizes, with gross output ratings from 931 to 4,622 MBH. Series 28HE boilers may be used in steam systems, and may be fired with light oil, gas or gas/light oil.

STANDARD FEATURES

- Up to 85.8% thermal efficiencies
- Cast iron wet base sections tested for 80 psi working pressure, 15 psi steam working pressure
- Insulated metal jacket (R11.7)
- Burner mounting plate with insulation block
- Front and rear flame observation ports
- Steel angle floor rails
- Ceramic fiber rope seal between sections
- Graphite port connectors
- Flue brush
- Manual reset hi-limit
- Operating control

ADDITIONAL FEATURES FOR STEAM BOILERS

- A.S.M.E. side outlet safety valve, 15 psi
- Gauge glass with cocks and guards

I B R Ratings, Burner Capacities

Designed and tested to the A.S.M.E. boiler and pressure vessel code, section IV for maximum allowable working pressure, steam 15 PSIG.

Boiler Number (Note 1)	Boiler Horsepower	I=B=R Gross Output (MBH)	Net I=B=R Ratings (Note 2)				Heating Surface (Sq. Ft.)	Furnace Volume (Cu. Ft.)	Water Contents (Gals.)	Prox. Working Weight (Lbs.)	Thermal Efficiency		Combustion Efficiency	
			Steam		I=B=R Burner Capacity						Oil	Gas	Oil	Gas
			Sq. Ft.	MBH	Oil GPH (Note 3)	Gas MBH (Note 4)								
†28HE-S-4	27	931	2908	698	7.9	1143	81.2	12.04	103.8	4215	83.9	81.4	86.2	83.6
†28HE-S-5	35	1194	3733	896	10.2	1458	105.3	16.14	125.8	5038	84.4	81.9	86.2	83.6
†28HE-S-6	43	1458	4625	1110	12.2	1773	129.4	20.24	147.8	5861	84.8	82.2	86.1	83.5
†28HE-S-7	51	1722	5542	1330	14.4	2088	153.5	24.34	169.8	6684	85.0	82.5	86.1	83.5
†28HE-S-8	59	1985	6421	1541	16.6	2403	177.6	28.44	191.8	7507	85.2	82.6	86.1	83.5
†28HE-S-9	67	2249	7275	1746	18.8	2718	201.7	32.54	213.8	8331	85.3	82.7	86.1	83.5
†28HE-S-10	75	2513	8129	1951	21.0	3033	225.8	36.64	235.8	9169	85.4	82.8	86.1	83.5
†28HE-S-11	83	2776	8979	2155	23.0	3348	249.9	40.74	257.8	9992	85.5	82.9	86.0	83.5
†28HE-S-12	91	3040	9833	2360	25.5	3663	274.0	44.84	279.8	10,815	85.6	83.0	86.0	83.5
†28HE-S-13	98	3304	10,688	2565	27.5	3978	289.1	48.94	301.8	11,649	85.6	83.0	86.0	83.5
†28HE-S-14	106	3567	11,538	2769	29.5	4293	322.2	53.04	323.8	12,467	85.7	83.1	86.0	83.5
†28HE-S-15	114	3831	12,392	2974	32.0	4608	346.3	57.14	345.8	13,511	85.7	83.1	86.0	83.4
†28HE-S-16	122	4095	13,246	3179	34.0	4923	370.4	61.24	367.8	14,375	85.7	83.2	86.0	83.4
†28HE-S-17	130	4358	14,100	3384	36.5	5238	394.5	65.34	389.8	15,239	85.8	83.2	86.0	83.4
†28HE-S-18	138	4622	14,954	3589	38.5	5553	418.6	69.44	411.8	16,103	85.8	83.2	86.0	83.4

(Note 1) Important Ordering Information

(†) Add Prefix for type of fuel to be burned. "LO" for light oil, "G" for Gas or "GO" for gas/oil.

Example: LO-28HE-S-6 is the model no. for a six section steam boiler firing light oil.

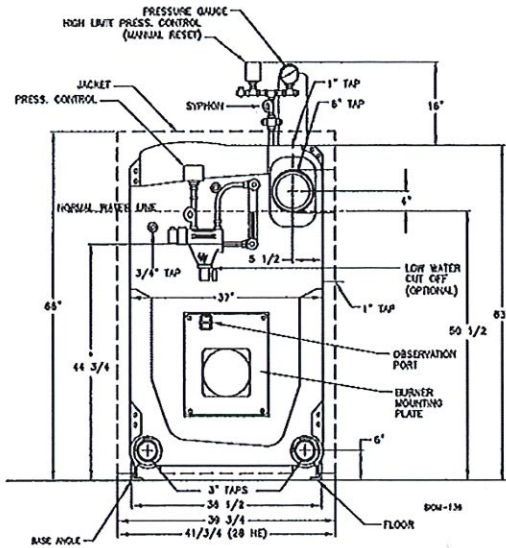
(Note 2) Net I=B=R Ratings for steam boilers are based on piping and pick-up factor as follows:

4 and 5 section = 1.333 6 section = 1.305 8 section and larger = 1.288

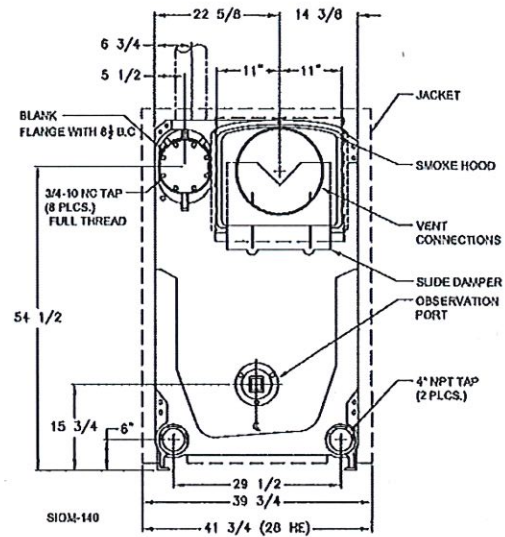
(Note 3) Light oil having a heat content of 140,000 BTU/Gal.

(Note 4) Gas having a heat content of 1,000 BTU/Cu. Ft., 0.60 specific gravity

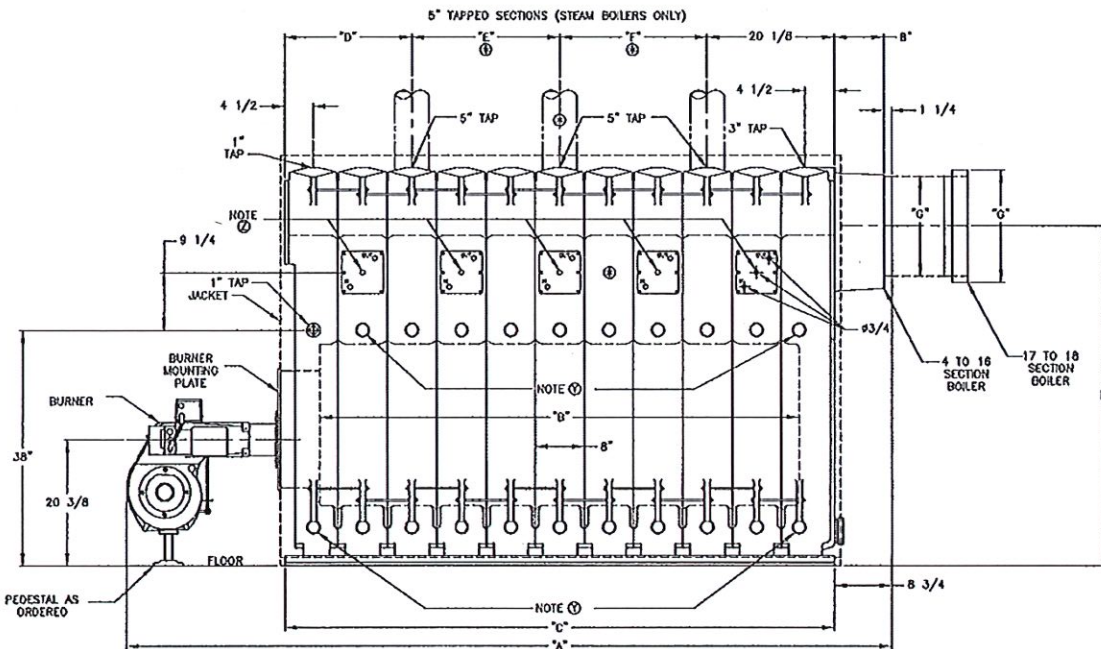
28HE Series



FRONT VIEW (Steam Boiler)



REAR VIEW



Ⓞ When 5th heater is required-relocate steam uptake and dimensions "E" = 32 in. and "F" = 16 in.

SIDE VIEW

(Note Y) 1-1/2" inspection tappings when ordered.

(Note Z) Tankless heater sections when ordered. Allow 36" clear space for heater withdrawal.

Dimensions (inches)

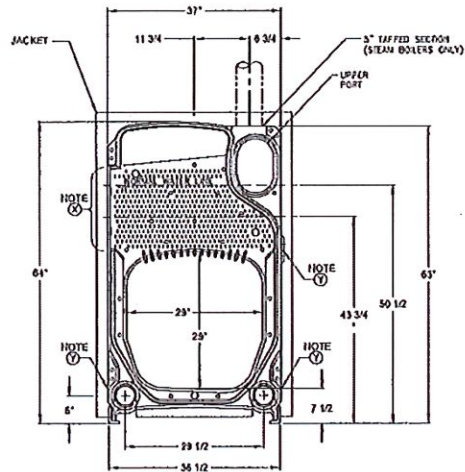
Boiler Number (Note 1)	Overall Length — "A"			Opt. Packaged Base Dimensions		Furnace Length "B"	Boiler Length "C"	Steam Uptake Locations (Note 9)			Draft Loss Ins. W.C.	Firebox Press Ins. W.C.††	Dia. Vent Conn. "G"	(Note 7) Height Vent Conn. "H"
	(Note 8)			Carlín & Beckett	Power Flame			"D"	"E"	"F"				
	Carlín	Beckett	Power Flame	"K"	"K"									
†28HE-Δ-4	62½	64	71½	83½	91½	23½	33	12½	—	—	.40	.50	10	57½
†28HE-Δ-5	70½	72	83½	91½	104½	31½	41	20½	—	—	.42	.52	10	57½
†28HE-Δ-6	80½	80½	91½	99½	112½	39½	49	12½	16	—	.44	.54	10	56½
†28HE-Δ-7	88½	88½	99½	107½	120½	47½	57	12½	24	—	.46	.56	12	56½
†28HE-Δ-8	96½	96½	107½	115½	128½	55½	65	12½	32	—	.48	.58	12	55½
†28HE-Δ-9	108½	104½	115½	123½	136½	63½	73	12½	40	—	.52	.62	14	55½
†28HE-Δ-10	116½	116½	128	135½	144½	71½	81	20½	40	—	.53	.63	14	55½
†28HE-Δ-11	125½	124½	137½	143½	157½	79½	89	20½	24	24	.55	.65	14	55½
†28HE-Δ-12	133½	132½	145½	151½	165½	87½	97	20½	24	32	.57	.67	14	54½
†28HE-Δ-13	141½	140½	153½	159½	173½	95½	105	20½	32	32	.59	.69	14	54½
†28HE-Δ-14	—	—	161½	—	181½	103½	113	20½	32	40	.61	.71	16	54½
†28HE-Δ-15	—	—	169½	—	189½	111½	121	20½	40	40	.63	.73	16	54½
†28HE-Δ-16	—	—	177½	—	198	119½	129	20½	48	40	.66	.76	16	54½
†28HE-Δ-17	—	—	191½	—	206	127½	137	20½	48	48	.69	.79	18	54½
†28HE-Δ-18	—	—	199½	—	214½	135½	145	20½	56	48	.70	.80	18	54½

(Note 7) When unit is assembled or packaged, add 6" to heights for 4-14 sect., 8" to heights for 15-18 sect.

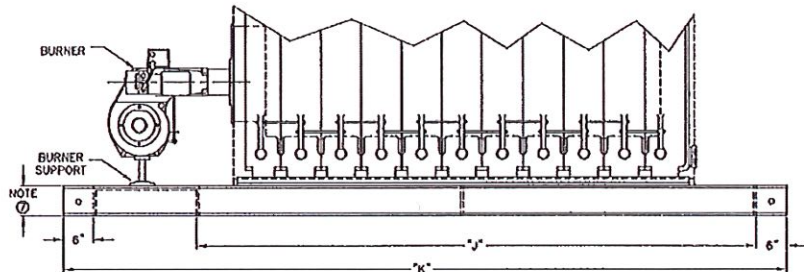
(Note 8) Add 2-3/4" to sect. 14 thru 18 for smoke hood adaptor.

†† Based on 0.10 ins. W.C. pressure at boiler outlet. If vent sizing results in a back pressure greater than 0.10 ins. W.C., consult Smith

(Note 9) These measurements are approximate. The Smith representative should be consulted before selecting boilers for installation having unusual piping and pick-up requirements, such as intermittent system operation, extensive piping systems, etc. The boiler ratings have been determined under previous governing forced draft units.



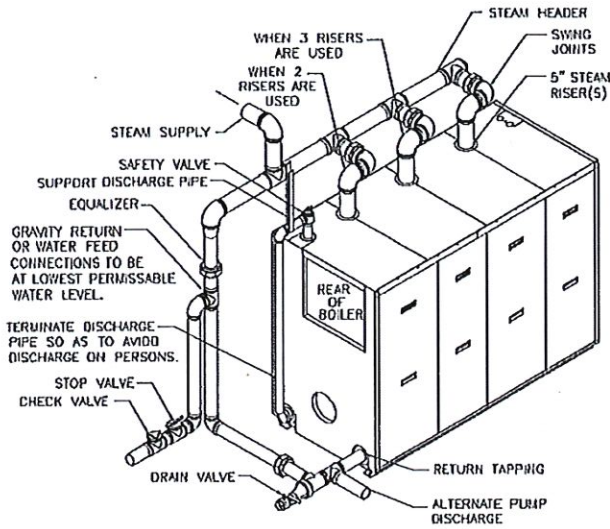
INTERMEDIATE VIEW



ASSEMBLY - SIDE VIEW

(NOTE X) Flue cleanout opening. Allow 36" clear work space for using flue brush, and for the removal of the heat transfer rods.

Recommended Steam Piping Diagram



Boiler Section	No. of		
	5" Risers	Header	Equalizer
28HE-S-4 & 5	1	5'	2-1/2'
28HE-S-6 & 7	2	5'	2-1/2'
28HE-S-8 thru 10	2	6'	4"
28HE-S-11 thru 18	3	8'	4"

Burner Specifications

Boiler Number	Burners - Light Oil						Burners - Gas		Burners - Gas/Oil	
	Carlin (Note 5)		Beckett (Note 6)		Power Flame (Note 6)		Power Flame (Note 6)		Power Flame (Note 6)	
	Model No.	H.P.	Model No.	H.P.	Model No.	H.P.	Model No.	H.P.	Model No.	H.P.
†28HE-Δ-4	702CRD	½	CF1400	½	C1-0	½	J50A-15	½	C1-G0-12	½
†28HE-Δ-5	702CRD	½	CF2300	¾	C1-0	½	J50A-15	½	C1-G0-12	½
†28HE-Δ-6	801CRD	¾	CF2300	¾	C2-0A	¾	J50A-15	½	C2-G0-15	¾
†28HE-Δ-7	801CRD	¾	CF2300	¾	C2-0A	¾	J50A-15	½	C2-G0-15	¾
†28HE-Δ-8	801CRD	¾	CF2500	2	C2-0A	¾	C2-G-20A	¾	C2-G0-20A	1
†28HE-Δ-9	1050FFD	1	CF2500	2	C2-0B	1½	C2-G-20B	1	C2-G0-20B	1½
†28HE-Δ-10	1050FFD	1	CF2500	2	C2-0B	1½	C2-G-20B	1	C2-G0-20B	1½
†28HE-Δ-11	1150FFD	1½	CF3500	2	C3-0	2	C3-G-20	1½	C3-G0-20	2
†28HE-Δ-12	1150FFD	1½	CF3500	2	C3-0	2	C3-G-25	1½	C3-G0-25	2
†28HE-Δ-13	1150FFD	1½	CF3500	2	C3-0	2	C3-G-25	1½	C3-G0-25	2
†28HE-Δ-14	—	—	—	—	C3-0	2	C3-G-25	1½	C3-G0-25	2
†28HE-Δ-15	—	—	—	—	C3-0B	3	C3-G-25B	3	C3-G0-25B	3
†28HE-Δ-16	—	—	—	—	C3-0B	3	C3-G-25B	3	C3-G0-25B	3
†28HE-Δ-17	—	—	—	—	C4-0	5	C4-G-25	3	C4-G0-25	5
†28HE-Δ-18	—	—	—	—	C4-0	5	C4-G-25	3	C4-G0-25	5

(Note 5) Burner operation: Low-High-Low (4-13 sect.).

(Note 6) Burner operation: Low-High-Low, (4-9 sect.); Modulation (10-18 sect.).

Smith
CAST IRON BOILERS

WESTCAST, INC.
260 NORTH ELM STREET WESTFIELD, MA 01085
TEL. (413) 562-9631 FAX (413) 562-3799
www.smithboiler.com

Commercial Gas Ultra High Efficiency Water Heater

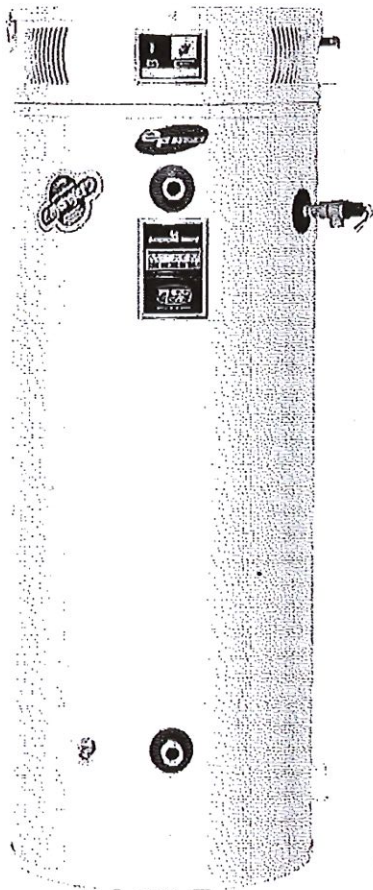


Photo Is of
EF-100T-199

The Ultra High Efficiency Water Heater Models Feature:

- Thermal Efficiency Up To 99.1%.
- 60 Gallon Tank Capacity In 125,000, 150,000 and 199,999 BTU/hr Inputs.
- 100 Gallon Tank Capacity in 150,000, 199,999, 250,000, 300,000 and 399,999 BTU/hr Inputs.
- Flexible Venting—Conventional, Through-the-Wall or Direct Vent.
- Three Pass Flue System.
- Low NOx Premix Power Burner.
- Ultra Quiet Operation.
- Submerged Combustion Chamber.
- 1" NPT Side Connection For Hydronic Applications.
- Electronic Controls.
- Zero Inch Clearance To Combustibles.
- Vitraglas® Lined Tank.
- Four Protective Magnesium Anode Rods (except EF-100T-399).
- Powered Anode Rods (only EF-100T-399).
- Hand Hole Cleanout—Allows inspection of tank interior.
- Factory Installed Hydrojet® Sediment Reduction System.
- Factory Installed Dielectric Fittings.
- Non-CFC Foam Insulation.
- 3" Optional Concentric Vent Kit.
- ASME Construction Available.
- NSF Construction Available With Optional Kit.
- Brass Drain Valve.
- T&P Relief Valve Factory Installed.
- Three Year Limited Warranty On Steel Tank.
- One Year Limited Warranty On Parts.



3 or 5-Year Limited Tank Warranties / 1-Year Limited Warranty on Component Parts.

For more information on warranty, please visit www.bradfordwhite.com

For products installed in USA, Canada and Puerto Rico. Some states do not allow limitations on warranties. See complete copy of the warranty included with the heater.

Ultra High Efficiency Water Heaters

eF Series® Standard Equipment Features:

Thermal Efficiency up to 99.1%—Fully condensing design.

Three Pass Flue System—The three pass flue system keeps the hot combustion gases moving at a high velocity. The combination of high turbulence and velocity causes an enormous rate of heat transfer into the water.

Low NOx Premix Power Burner—Developed for the eF Series®, a turbulent flame shoots down the submerged combustion chamber. This turbulence causes a thorough mixing of the gas and air for optimum combustion and high heat transfer efficiencies. — Far exceeds California emission requirements.

Submerged Combustion Chamber—Submerging the combustion chamber in the center of the water storage tank minimizes radiant heat loss and improves efficiency.

Non-CFC Foam Insulation—Surrounds the tank surface, saving energy by retarding loss of heat.

Electronic Controls—Adjustable electronic thermostat for control between 80°F and 180°F. The recycling Energy Cut Off (ECO) shuts off all gas flow in an event of an overheat condition.

Zero Inch Clearance—The eF Series® jacket is cool to the touch and is approved for zero inch clearance to combustibles for unsurpassed installation flexibility.

Vitraglas® Lined Tank—Bradford White's water heater tanks are protected from the corrosive effects of hot water by an exclusive ceramic porcelain-like coating. Our high silica Vitraglas® lining provides a tough interior surface for Bradford White's water heater tanks.

Protective Magnesium Anode Rods—Employed to provide an extra measure of corrosion protection for longer life. Each eF heater has 4 anodes, except the EF-100T-399 which has 2 powered anode rods and one non-powered anode rod.

Factory Installed Hydrojet® Sediment Reduction System—Cold inlet sediment reduction device made of stainless steel for increased durability. Helps prevent sediment build up in tank.

Factory Installed Dielectric Fittings—All heaters equipped with special water heater nipples for longer heater life. No special dielectric fittings to buy.

Flexible Venting—The eF Series® can vent vertically or horizontally with either 3" or 4" PVC, CPVC or ABS vent pipe, and is approved for direct vent closed combustion applications, or those applications that require inside air for combustion. Foam Core pipe is permitted on the entire venting system. The eF Series® is also approved for unbalanced venting, which means the air intake pipe doesn't have to be vented the same distance as the exhaust.

(NOTE: Air intake cannot exceed exhaust by more than 30 feet.)

Model Number	Max. 3" PVC, ABS & CPVC	Max. 4" PVC, ABS & CPVC
EF-60T-125	120 ft.	170 ft.
EF-60T-150	100 ft.	150 ft.
EF-60T-199	80 ft.	130 ft.
EF-100T-150	120 ft.	170 ft.
EF-100T-199	100 ft.	150 ft.
EF-100T-250	80 ft.	130 ft.
EF-100T-300	60 ft.	110 ft.
EF-100T-399	50 ft.	100 ft.

Determining required vent length

1. Determine the total length of straight vent pipe (in feet) required for both the intake and the exhaust.
2. Add 5 feet of venting for every 90° elbow.
3. Add 2 1/2 feet of venting for every 45° elbow.
4. Total vent length cannot exceed "Max Length" in the above venting table.
5. Air intake cannot exceed exhaust by more than 30 feet in any venting situation.

NOTICE: Do not include the 3" exhaust elbow or vent terminals in determining maximum vent length.

Three year limited warranty on steel tank — Heavy gauge steel automatically formed, rolled and welded to assure a continuous seam for glass lining.

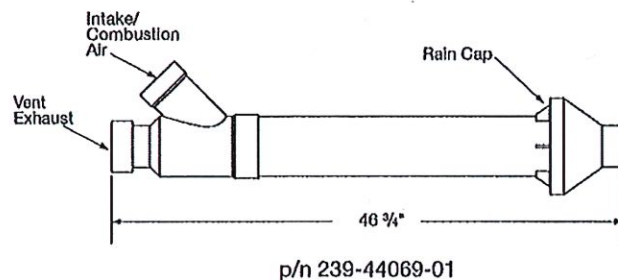
One year limited warranty on parts

eF Series® Optional Equipment Features:

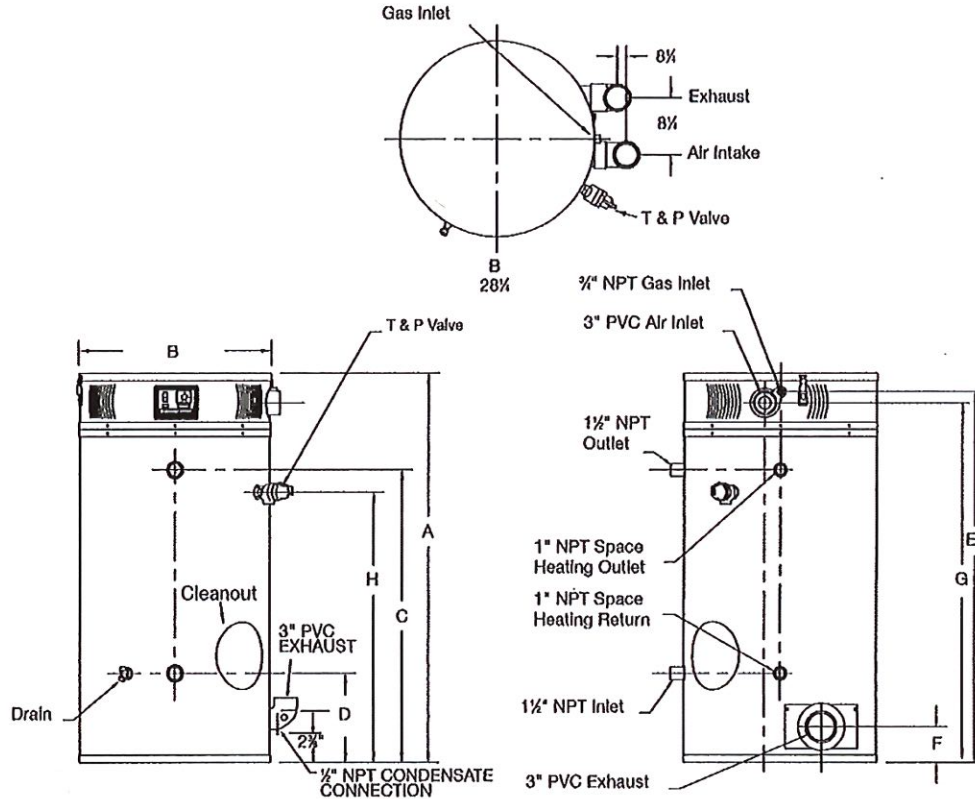
Maxitrol Gas Pressure Regulating valve—Ensures proper supply pressure to eF unit of 7" to 11" W.C. (provided incoming pressure is between 1/2 and 2 psi). This can be ordered as a separate part, or as part of the heater. For the separate part, please use p/n 243-45517-00 (not available for use with the EF-100T-399).

Concentric Vent Terminal Kit—3" termination fitting provides for only one exit opening through wall or roof (p/n 239-44069-01).

NSF Compliance Kit—p/n 265-44542-04.



Ultra High Efficiency Water Heaters



NOTE: Diagrams are for both the 60 and 100 gallon models.

eF Series® Commercial Ultra High Efficiency Water Heater

NATURAL GAS AND LIQUID PROPANE GAS

Meet or exceed ASHRAE 90.1b (current standard) C.E.C. Listed
Includes Installed T&P Valve and Electronic Ignition

V	Model Number	Input BTU	1 st Hour Delivery at 100°F Rise			Recovery GPH at Degree Rise			Stg. Capacity U.S. Gal.	Therm. Eff. %	A Floor to Top of Heater In.	B Jacket Dia. In.	C HW Out In.	D Cold In In.	E Floor to Gas Conn. In.	F Floor to Vent Outlet In.	G Floor to Air Intake In.	H Floor to T&P Conn. In.	Water Conn. Dia. In.	Gas Conn. Dia. In.	Relief Valve Open In.	Approx. Shipping Weight lbs.
			Gal.	40°F	100°F	140°F	40°F	100°F														
V	EF-60T-125E-3N(A)	125,000	187	364	145	104	60	98.0	57	28 1/4	42	13	53 1/2	5	52 1/2	40	1 1/2	3/4	3/4	570		
V	EF-60T-150E-3N(A)	150,000	211	423	169	121	60	93.0	57	28 1/4	42	13	53 1/2	5	52 1/2	40	1 1/2	3/4	3/4	570		
V	EF-60T-199E-3N(A)	199,999	285	558	223	159	60	92.0	57	28 1/4	42	13	53 1/2	5	52 1/2	40	1 1/2	3/4	3/4	570		
V	EF-100T-150E-3N(A)	150,000	250	450	180	129	100	99.1	77 1/4	28 1/4	63	13	74 1/4	5	73 1/4	60	1 1/2	3/4	3/4	900		
V	EF-100T-199E-3N(A)	199,999	309	597	239	171	100	98.5	77 1/4	28 1/4	63	13	74 1/4	5	73 1/4	60	1 1/2	3/4	3/4	900		
V	EF-100T-250E-3N(A)	250,000	364	735	294	210	100	97.0	77 1/4	28 1/4	63	13	74 1/4	5	73 1/4	60	1 1/2	3/4	1	900		
V	EF-100T-300E-3N(A)	300,000	405	836	335	239	100	92.0	77 1/4	28 1/4	63	13	74 1/4	5	73 1/4	60	1 1/2	3/4	1	900		
V	EF-100T-399E-3N(A)	399,999	521	1127	451	322	100	93.0	77 1/4	28 1/4	63	13	73 1/4	5	73 1/4	60	1 1/2	1	1	950		

V	Model Number	Input kW	1 st Hour Delivery at 56°C Rise			Recovery LPH at Degree Rise			Stg. Capacity Liters	Therm. Eff. %	A Floor to Top of Heater mm.	B Jacket Dia. mm.	C HW Out mm.	D Cold In mm.	E Floor to Gas Conn. mm.	F Floor to Vent Outlet mm.	G Floor to Air Intake mm.	H Floor to T&P Conn. mm.	Water Conn. Dia. mm.	Gas Conn. Dia. mm.	Relief Valve Open mm.	Approx. Shipping Weight kgs.
			Liters	22°C	56°C	78°C	22°C	56°C														
V	EF-60T-125E-3N(A)	36.6	708	1378	545	394	227	98.0	1448	718	1067	330	1359	128	1324	994	38	19	19	259		
V	EF-60T-150E-3N(A)	43.9	799	1601	640	458	227	93.0	1448	718	1067	330	1359	128	1324	994	38	19	19	259		
V	EF-60T-199E-3N(A)	58.6	1003	3112	844	602	227	92.0	1448	718	1067	330	1359	128	1324	994	38	19	19	259		
V	EF-100T-150E-3N(A)	43.9	946	1703	681	488	379	99.1	1972	718	1600	330	1899	128	1857	1527	38	19	19	408		
V	EF-100T-199E-3N(A)	58.6	1170	2260	905	647	379	98.5	1972	718	1600	330	1899	128	1857	1527	38	19	19	408		
V	EF-100T-250E-3N(A)	73.2	1378	2782	1113	795	379	97.0	1972	718	1600	330	1899	128	1857	1527	38	19	25	408		
V	EF-100T-300E-3N(A)	87.9	1533	3185	1268	905	379	92.0	1972	718	1600	330	1899	128	1857	1527	38	19	25	408		
V	EF-100T-399E-3N(A)	117.2	1972	4266	1707	1219	379	93.0	1972	718	1600	330	1861	128	1857	1524	38	25	25	431		

For propane gas models change suffix "N" to "X" and remove "E" from the model number.
Example: EF-100T-150-3X

V - 115V A.C. Required

• - Electronic Ignition

* - Listed with California Energy Commission

(A) ASME - All models are available with ASME construction. To order ASME construction add the (A) to the end of the model number. Example: EF-60T-125E-3NA

Note: The weight is the same for both ASME and Non-ASME models.
NSF Construction Available with optional kit

Complies with SCAQMD low NOx requirements — 10.39 ng/joule

Design certified by CSA International (formerly AGA/CGA)

Amp Draw range = 1.0 to 1.8 amps and 7.0 amps for EF-100T-399

150 PSI Working Pressure (1034 kPa), 300 PSI Test Pressure (2068 kPa)

Ultra High Efficiency Water Heaters

All models are design certified by CSA International (formerly AGA/CGA) for up to 180°F (82°C) application as an Automatic Storage Heater, and an Automatic Circulating Tank Heater.

As an Automatic Storage Heater, all models are complete self-contained water heating systems. It needs no separate storage tank, pump, wiring or elaborate piping network. When equipped with a mixing valve, it will supply 180°F (82°C) sanitizing and 140°F (60°C) general purpose hot water simultaneously. These models can be used either as a single unit or as multiples connected in parallel.

Sample Specification

The water heater shall be a Bradford White model EF-_____ with a rated storage capacity of not less than _____ gallons/liters, a minimum gas input of _____ BTU/hr, a minimum recovery of _____ GPH/LPH at 100°F (56°C) temperature rise, and a Thermal Efficiency Rating of ____%. It shall be design certified by CSA International (formerly AGA and CGA) for 180°F (82°C) application, either with or without a separate storage tank. The tank shall be lined with Vitraglas® vitreous enamel and shall have a bolted hand hole cleanout. The tank shall have four extruded magnesium anode rods installed in separate head couplings (up to 300,000 BTU/hr input) or two powered anode rods and one extruded magnesium anode rod (for 399,999 BTU/hr input). This water heater shall be equipped with stainless steel cold water inlet, Hydrojet® Sediment Reduction System. The heater shall be insulated with Non-CFC foam. This water heater shall be equipped with an electronic ignition system, an ASME rated T&P relief valve and a premix closed combustion system for direct venting using either 3" (76mm) or 4" (102mm) PVC, CPVC or ABS vent pipe. (115V AC required). The water heater shall be factory assembled and tested. The water heater shall be approved for zero inch clearance to combustibles. The control shall be an adjustable electronic thermostat to any temperature up to 180°F (82°C). A recycling Energy Cut Off (E.C.O.) shuts off all gas in the event of an overheat condition. The entire installation shall be made in compliance with state and local codes and ordinances.

Dimensions and specifications subject to change without notice in accordance with our policy of continuous product improvement.



For U.S. and Canada field service, contact your professional installer or local Bradford White sales representative.
Sales 800-523-2931 • Fax 215-641-1670 / Technical Support 800-334-3393 • Fax 269-795-1089 • Warranty 800-531-2111 • Fax 269-795-1089
International: Telephone 215-641-9400 • Telefax 215-641-9750 / Fax on Demand 888-538-7833 / www.bradfordwhite.com

BRADFORD WHITE-CANADA INC. Sales / Technical Support 866-690-0961 / 905-238-0100 • Fax 905-238-0105 / www.bradfordwhitecanada.com

Count On Bradford White
For *Everything* Hot Water™

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Commercial Large Volume Jacketed and Insulated Energy Saver Storage Tanks

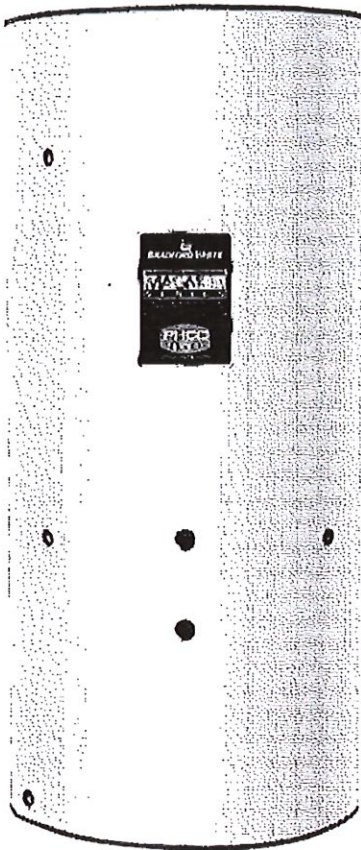


Photo Is of
NV280JG5A

The Large Volume Jacketed and Insulated Storage Tank Models Feature:

- **Vertical or Horizontal Construction**—Horizontal models require two saddles and have two additional 3" NPT fittings.
- **Steel Jacket**—Sturdy heavy gauge steel jacket.
- **2" High Density Foam Insulation**—Covers the side and top of tank, reducing the amount of heat loss. This results in less energy consumption, improved operation efficiencies and jacket rigidity.
- **Vitraglas® Lining**—Bradford White tanks are lined with a exclusively engineered enamel formula that provides superior protection from the highly corrosive effects of hot water. This formula (Vitraglas®) is fused to the steel surface by firing at a temperature of over 1600°F.
- **Water Connections**—Two female 3" NPT fittings are located on the front for ease of service and installation. Additional size fittings are available as an option.
- **Magnesium Anode Rods**—Provide added protection against corrosion for long trouble-free service.
- **One 3/4" NPT Aquastat Fitting**—Located in the lower part of the tank.
- **Optional Handhole Cleanout and Manway**—4" x 6" diameter Handhole cleanout and 12"x16" diameter Manway opening allows removal of sediment and inspection of interior surface.
- **Optional HydroJet HC®**—Stainless steel, dielectrically isolated recirculation tube minimizes turbulence and directs the hottest water to the top of the tank to maximize hot water delivery.
- **Designed for Storage of Potable Water up to 180°F (82°C).**
- **All Tanks are Constructed and Certified**—In accordance with ASME Sect. IV, Part HLW for 125 PSI (862 kPa), 150 PSI (1034 kPa) is available as an option.



5-Year Limited Tank Warranties / 1-Year Limited Warranty on Component Parts.

For more information on warranty, please visit www.bradfordwhite.com

For products installed in USA, Canada and Puerto Rico. Some states do not allow limitations on warranties. See complete copy of the warranty included with the heater.

MANUFACTURED UNDER ONE OR MORE OF THE FOLLOWING U.S. PATENTS: 5,954,492; 5,761,379; 5,943,984; 5,081,696; 5,988,117; 6,142,216; 5,199,385; 5,574,822; 5,372,185; 5,485,879; 5,277,171; (B1)5,341,770; 5,660,165; 5,598,952; 5,682,666; 4,904,428; 5,023,031; 5,000,893; 4,669,448; 4,829,983; 4,808,356; 5,115,767; 5,092,519; 5,052,346; 4,416,222; 4,628,184; 4,861,968; 4,672,919; file. 34,634; 7,270,087 B2. OTHER U.S. AND FOREIGN PATENT APPLICATIONS PENDING. CURRENT CANADIAN PATENTS: 1,272,914; 1,280,043; 1,289,832; 2,045,862; 2,112,515; 2,108,186; 2,107,012; 2,092,105; 2,409,271. HydroJet HC® and Vitraglas® are a registered trademarks of Bradford White® Corporation.

Commercial Large Volume Storage Tanks

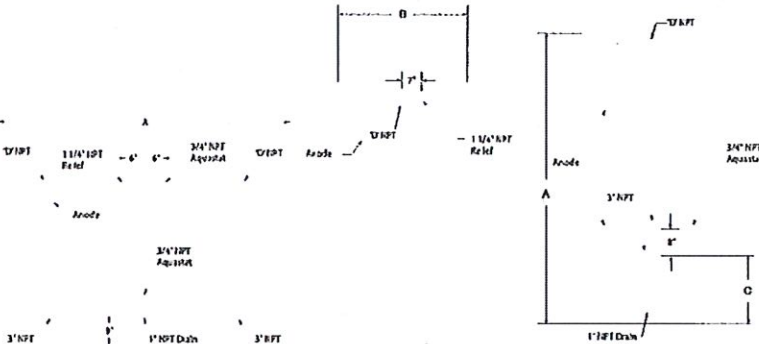
Jacketed Energy Saver Models

Model Number	Capacity		A		B	C	D	Approx. Shipping Weight @125 PSI
	Actual U.S. Gal.	Nominal U.S. Gal.	Vert. Height In.	Horiz. Length In.	Jacket Dia. In.	Floor to Return Conn. In.	Hot Water Outlet Conn. Size In.	
N†176J*5A	175	193	71	67	34	19½	2½	438
N†210J*5A	210	229	83	79	34	19½	2½	493
N†240J*5A	240	260	93	89	34	19½	2½	539
N†280J*5A	280	303	107	103	34	19½	2½	603
N†285J*5A	285	318	80	76	40	21	2½	667
N†310J*5A	310	344	86	82	40	21	2½	710
N†320J*5A	320	340	119	41	34	19½	2½	658
N†340J*5A	340	375	93	89	40	21	2½	760
N†360J*5A	360	397	98	94	40	21	2½	796
N†415J*5A	415	449	110	106	40	21	2½	881
N†435J*5A	435	486	89	53	46	22½	3	917
N†453J*5A	453	504	89	53	46	22½	3	942
N†465J*5A	465	502	122	118	40	21	2½	967
N†500J*5A	500	572	81	59	52	24	3	1176
N†505J*5A	505	558	93	53	46	22½	3	1017
N†516J*5A	515	555	134	130	40	21	2½	1053
N†575J*5A	575	630	113	109	46	22½	3	1117
N†580J*5A	580	658	92	59	52	24	3	1310
N†645J*5A	645	702	125	121	46	22½	3	1217
N†675J*5A	675	752	104	59	52	24	3	1456
N†720J*5A	720	774	137	133	46	22½	3	1317
N†765J*5A	765	846	116	59	52	24	3	1602
N†790J*5A	790	846	147	143	46	22½	3	1400
N†840J*5A	840	940	128	124	52	24	3	1748
N†1040J*5A	1040	1128	149	145	52	24	3	2003

†V = Vertical, H=Horizontal.
 *G = Glass Lined (Vitrilas®),
 D=Double Glass Lined (Vitrilas®)
 S = Stainless Steel Tank.
 Example: NV210JG5A.

Tank Options:

- Hand hole (4"x6")
- Manway (12"x16")
- Extra Tappings (1" - 4")
- Flanged Connections (3" - 10")
- 150 psi working pressure (add suffix -5)
- Hydrojet HC® (add suffix -1)



Sample Specification:

The storage tank shall be a Bradford White Jacketed and Insulated model with an actual rated storage capacity of not less than _____ gallons (_____ liters), and overall dimensions of _____ inches (_____ cm.) in height, by _____ inches (_____ cm.) in diameter. The tank shall be Vitrilas® lined, and be built in accordance with ASME Boiler and Pressure Vessel Code ASME IV, Part HLW for 125 PSI (862 kPa) and so labeled, with a working pressure of _____ PSI (_____ kPa). The storage tank shall have Non-CFC foam insulation and carry a five (5) year limited warranty (ten (10) year limited warranty available on Double Vitrilas® lining).

General

Front water connections 3" (76mm) NPT (except where noted). T&P tapping 1" (25mm) NPT. Aquastat tapping 3/4" (19mm) NPT. Most storage tanks are manufactured with convex heads and bases. Some manufacturers list the tank capacity as "Nominal". Generally, this is the theoretical capacity calculated assuming a tank was actually manufactured using a flat (instead of convex) head and base. Bradford White lists both Actual and Nominal capacity for comparison purposes.

Dimensions and specifications subject to change without notice in accordance with our policy of continuous product improvement.



For U.S. and Canada field service, contact your professional installer or local Bradford White sales representative.

Sales 800-523-2931 • Fax 215-641-1670 / Technical Support 800-334-3393 • Fax 269-795-1089 • Warranty 800-531-2111 • Fax 269-795-1089

International: Telephone 215-641-9400 • Telefax 215-641-9750 / www.bradfordwhite.com

BRADFORD WHITE-CANADA INC. Sales / Technical Support 866-690-0961 / 905-238-0100 • Fax 905-238-0105 / www.bradfordwhite.com

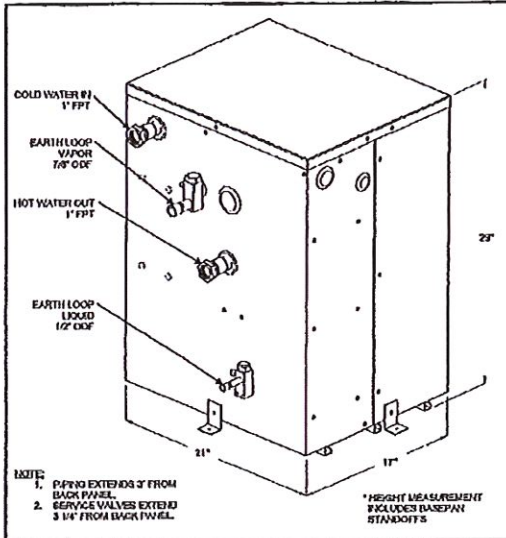
Build to be the Best™

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EarthLinked[®] Commercial Water Heating System Data Sheet



EARTHLINKED
TECHNOLOGIES



COMPRESSOR UNIT MODEL NUMBER

CWH-072-2-B

Commercial Water Heating System

Compressor Refrigerant
B = R407C

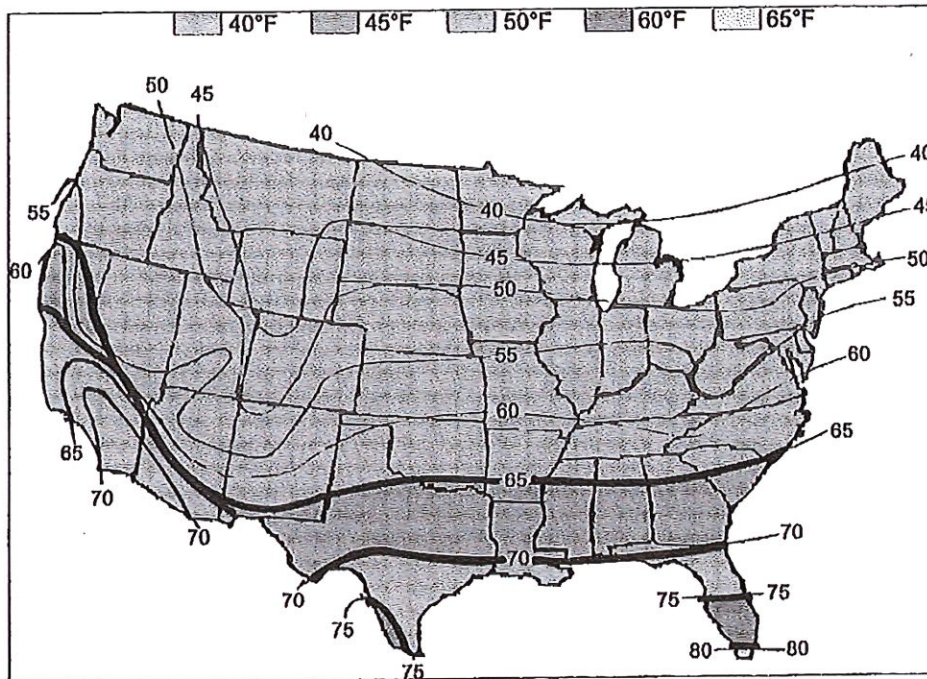
Nominal Capacity
048 = 18,000 BTUH = 4 Tons
072 = 72,000 BTUH = 6 Tons

Compressor Volts-Phase-Hz
1 = 208/230-1-60
2 = 208/230-3-60
3 = 480-3-60
B = 575-3-60

MODELS & ELECTRICAL INFORMATION

Model CWH-	Voltage/ Phase/ Hertz	Minimum	Maximum	LRA	RLA	MCA	MFS
048-1B	230-1-60	187	253	137.0	19.0	24.0	35
048-2B	230-3-60	107	253	91.0	14.7	18.0	30
048-3B	480-3-60	414	606	50.0	7.1	9.0	15
048-6B	575-3-60	518	632	37.5	5.3	7.0	10
072-1B	230-1-60	187	253	176.0	28.8	35.0	50
072-2B	230-3-60	107	253	156.0	18.6	23.0	35
072-3B	480-3-60	414	506	75.0	9.0	11.0	15
072-6B	575-3-60	518	632	54.0	7.4	9.0	15

LRA - Locked Rotor Amps RLA - Rated Load Amps
MCA - Maximum Circuit Ampacity MFS - Maximum Fuse or HACR Circuit Breaker Size (External)
AWG - Consult NEC and local codes.



Earth Temperature Lines and Lowest Municipal Water Supply Temperatures
For
Contiguous United States and Southern Canada

EarthLinked® Commercial Water Heating System Data Sheet



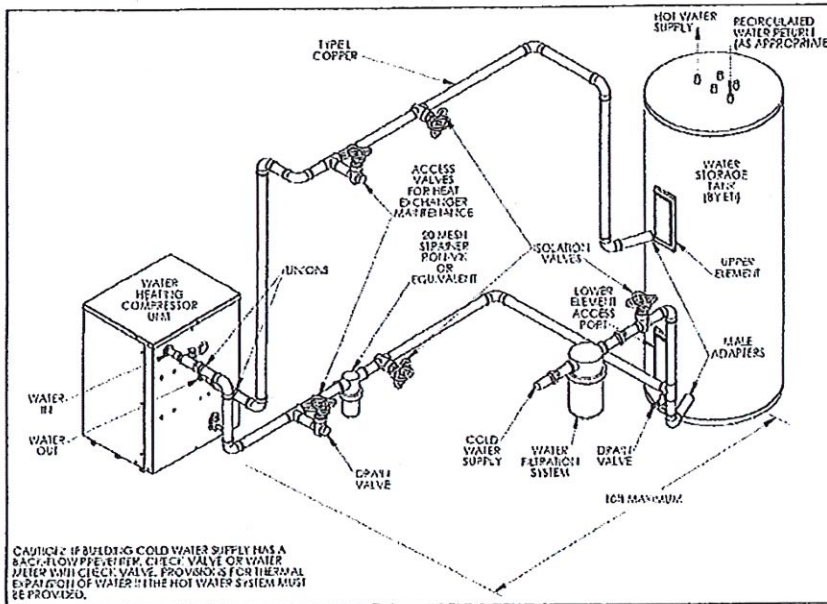
EARTHLINKED
TECHNOLOGIES

Recovery Rate, US Gall/Hour

EARTH TEMP, °F	CWH MODEL	EWT, °F WELL	EWT, °F MUNICIPAL	LWT, °F												
				60	65	70	75	80	85	90	95	100	105	110	115	120
40	-048	40	---	242	188	151	125	107	92	79	69	61	54	48	42	38
		---	40	344	267	215	179	151	130	113	98	87	76	68	60	53
45	-072	40	---	344	267	215	179	151	130	113	98	87	76	68	60	53
		---	40	259	202	163	137	115	100	87	76	67	59	53	47	42
45	-048	45	---	---	263	198	159	132	112	98	84	73	64	57	50	44
		---	40	370	290	233	195	165	143	124	108	96	85	75	67	60
50	-072	45	---	---	265	207	168	139	117	101	88	76	67	59	52	
		---	40	280	219	177	148	125	108	94	83	73	65	58	51	46
50	-048	50	---	---	382	298	240	200	169	146	126	110	97	85	76	
		---	40	403	315	254	213	180	156	135	119	105	93	83	74	66
55	-072	50	---	---	277	216	175	146	124	106	93	81	71	62		
		---	40	298	233	180	158	135	117	102	90	80	71	63	56	51
55	-048	55	---	---	401	312	253	211	180	154	134	117	102	90		
		---	40	432	337	274	229	195	169	148	131	115	103	92	82	73
60	-072	60	---	---	295	230	184	153	130	112	97	85	75			
		---	40	331	258	208	174	147	128	110	98	87	78	69	63	56
60	-048	60	---	---	427	333	267	223	189	163	141	124	108			
		---	40	480	375	303	253	214	185	160	142	126	113	100	91	81
65	-072	65	---	---	310	241	195	162	138	117	102	89				
		---	40	344	268	218	182	155	134	117	103	92	81	73	65	
65	-048	65	---	---	450	351	284	236	200	171	149	129				
		---	45	500	390	317	264	225	195	170	150	134	118	106	95	
70	-072	70	---	---	328	255	208	171	145	125	108					
		---	50	---	365	285	231	193	164	142	124	109	97	87	77	
70	-048	70	---	---	478	372	301	250	212	182	157					
		---	50	---	532	415	337	281	239	206	181	159	141	126	112	
75	-072	75	---	---	347	269	218	181	153	130						
		---	60	---	---	---	---	---	---	---	---	---	---	---	---	
75	-048	75	---	---	507	394	318	264	224	190						
		---	60	---	---	---	---	---	---	---	---	---	---	---	---	
80	-072	80	---	---	546	429	347	290	246	212	185	163	143			
		---	65	---	---	---	---	---	---	---	---	---	---	---		
80	-048	80	---	---	399	311	251	209	178	153	133	117				
		---	65	---	---	---	---	---	---	---	---	---	---			
80	-072	80	---	---	537	416	336	279	236	200	172					
		---	65	---	---	---	---	---	---	---	---	---	---			

EWT = Entering Water Temperature, °F
Well: Water supply directly from on-site well

LWT = Leaving Water Temperature, °F
Municipal: Municipal (surface) water supply from lake, river, reservoir, etc.



Typical Commercial Water Heating System with Storage Tank

Appendix F – Detailed Building Description – Franklin Towers

TMHA Franklin Tower - DETAILED
 REPORT- LV-B Summary of Spaces

DOE-2.2-47d 9/13/2010 9:19:20 · BDL RUN 1
 WEATHER FILE- New York CityNY TMY2

SPACE	NUMBER OF SPACES	10	EXTERIOR	10	INTERIOR	0	LIGHTS (WATT / SQFT)	PEOPLE	EQUIP (WATT / SQFT)	INFILTRATION METHOD	ACH	AREA (SQFT)	VOLUME (CUFT)
Spaces on floor: ELL Ground Flr													
ELL Spc (G.1)	1.0	EXT	0.0	0.94	844.6	2.01	AIR-CHANGE	4.18	7068.9	60085.5			
Spaces on floor: ELL Floor 2													
ELL Spc (M.2)	1.0	EXT	0.0	0.63	70.6	2.58	AIR-CHANGE	4.18	7068.9	60085.5			
Spaces on floor: ELL Floor 3													
ELL Spc (Mb.3)	1.0	EXT	0.0	0.63	70.6	2.58	AIR-CHANGE	4.18	7068.9	60085.5			
Spaces on floor: ELL Floor 4													
ELL Spc (Mc.4)	1.0	EXT	0.0	0.63	70.6	2.58	AIR-CHANGE	4.18	7068.9	60085.5			
Spaces on floor: ELL Floor 5													
ELL Spc (Md.5)	1.0	EXT	0.0	0.63	70.6	2.58	AIR-CHANGE	4.18	7068.9	60085.5			
Spaces on floor: ELL Floor 6													
ELL Spc (Me.6)	1.0	EXT	0.0	0.63	70.6	2.58	AIR-CHANGE	4.18	7068.9	60085.5			
Spaces on floor: ELL Floor 7													
ELL Spc (Mf.7)	1.0	EXT	0.0	0.63	70.6	2.58	AIR-CHANGE	4.18	7068.9	60085.5			
Spaces on floor: ELL Floor 8													
ELL Spc (Mg.8)	1.0	EXT	0.0	0.63	70.6	2.58	AIR-CHANGE	4.18	7068.9	60085.5			
Spaces on floor: ELL Floor 9													
ELL Spc (Mh.9)	1.0	EXT	0.0	0.63	70.6	2.58	AIR-CHANGE	4.18	7068.9	60085.5			
Spaces on floor: ELL Top Flr													
ELL Spc (T.10)	1.0	EXT	0.0	0.63	70.6	2.58	AIR-CHANGE	4.18	7068.9	60085.5			
BUILDING TOTALS													
					1480.4				70688.8	600854.9			

TMHA Franklin Tower - DETAILED
 REPORT- IV-C Details of Space

DOE-2.2-47d 9/13/2010 9:19:20 BDL RUN 1
 ELL Spc (G.1) WEATHER FILE- New York City/ NY TMY2

DATA FOR SPACE ELL Spc (G.1) IN FLOOR ELL Ground Flr

LOCATION OF ORIGIN IN BUILDING COORDINATES
 XB (FT) YB (FT) ZB (FT) SPACE AZIMUTH (DEG) SPACE*FLOOR MULTIPLIER HEIGHT (FT) AREA (SQFT) VOLUME (CUFT)

0.00	0.00	0.00	0.00	1.0	8.50	7068.88	60085.48
------	------	------	------	-----	------	---------	----------

TOTAL NUMBER OF SURFACES 7
 NUMBER OF EXTERIOR SURFACES 4
 NUMBER OF INTERIOR SURFACES 2
 NUMBER OF UNDERGROUND SURFACES 1
 DAYLIGHTING SURSPACE NO NO NO

NUMBER OF SUBSURFACES
 EXTERIOR WINDOWS 24
 INTERIOR WINDOWS 21
 DOORS 3
 0

FLOOR WEIGHT (LB/SQFT) 0.0
 CALCULATION TEMPERATURE (F) 70.0

INFILTRATION
 SCHEDULE ZG0-S1 (UVT) P-Inf Sch
 INFILTRATION CALCULATION METHOD AIR-CHANGE
 FLOW RATE (CFM/SQFT) 0.591
 AIR CHANGES PER HOUR 4.18

PEOPLE
 SCHEDULE ELL Bldg Occup Sch
 NUMBER 844.6
 AREA PER PERSON (SQFT) 8.4
 PEOPLE SENSIBLE (BTU/HR) 257.5
 PEOPLE LATENT (BTU/HR) 307.2

LIGHTING

SCHEDULE	LIGHTING TYPE	ELEC LOAD (WATTS/SQFT)	LOAD (WATTS/SQFT)	LOAD (KW)	FRACTION OF LOAD TO SPACE
ELL Bidg Inslt Sch	SUS-FLUOR	0.94	0.94	6.63	1.00

ELECTRICAL EQUIPMENT

SCHEDULE	ELEC LOAD (WATTS/SQFT)	ELEC LOAD (KW)	FRACTION OF LOAD TO SPACE SENSIBLE	FRACTION OF LOAD TO SPACE LATENT
ELL Bidg Misc Sch	1.49	10.55	1.00	0.00
ELL Bidg Cook Sch	0.00	0.00	1.00	0.00
ELL Bidg SCRfg Sch	0.00	0.00	1.00	0.00
ELL Bidg SCRfg Sch	0.52	3.67	1.00	0.00

INTERIOR SURFACES (U-VALUE INCLUDES BOTH AIR FILMS)

SURFACE	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)
ELL Ceiling (G.1.I1)	7068.88	ELL Ceilg Construction	0.520
ELL Flr (M.2.I2)	7068.88	ELL IFlr Construction	0.515
SURFACE	SURFACE-TYPE	ADJACENT SPACE	
ELL Ceiling (G.1.I1)	DELAYED STANDARD	ELL Spc (M.2)	
ELL Flr (M.2.I2)	DELAYED STANDARD	ELL Spc (M.2)	

EXTERIOR SURFACES (U-VALUE EXCLUDES OUTSIDE AIR FILM)

SURFACE	MULTIPLIER	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)	SURFACE TYPE
ELL North Wall (G.1.E1)	1.0	1237.60	ELL EWall Construction	0.397	DELAYED
ELL West Wall (G.1.E2)	1.0	412.67	ELL EWall Construction	0.397	DELAYED
ELL South Wall (G.1.E3)	1.0	1237.60	ELL EWall Construction	0.397	DELAYED
ELL East Wall (G.1.E4)	1.0	412.67	ELL EWall Construction	0.397	DELAYED
SURFACE	AZIMUTH (DEG)	TILT (DEG)	LOCATION OF ORIGIN IN BUILDING COORDINATES	LOCATION OF ORIGIN IN SPACE COORDINATES	
ELL North Wall (G.1.E1)	-180.0	90.0	XB (FT) YB (FT) ZB (FT)	XC (FT) YC (FT) ZC (FT)	
ELL West Wall (G.1.E2)	-270.0	90.0	0.00 0.00 0.00	0.00 0.00 0.00	
ELL South Wall (G.1.E3)	0.0	90.0	-145.60 -48.55 0.00	145.60 48.55 0.00	
ELL East Wall (G.1.E4)	-90.0	90.0	0.00 -48.55 0.00	0.00 48.55 0.00	

UNDERGROUND SURFACES (U-VALUE INCLUDES INSIDE AIR FILM)

SURFACE	MULTIPLIER	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)
ELL Flr (G.1.U1)	1.0	7068.88	ELL UFCons (G.1.U2)	0.04

EXTERIOR WINDOWS (U-VALUE INCLUDES OUTSIDE AIR FILM)

WINDOW	MULTIPLIER	GLASS AREA (SQFT)	GLASS WIDTH (FT)	GLASS HEIGHT (FT)	SET-BACK (FT)	NUMBER OF PANEES	CENTER-OF-GLASS U-VALUE (BTU/HR-SQFT-F)	SHADING COEFF	GLASS VISIBLE TRANS	GLASS SOLAR TRANS
ELL North Win (G.1.E1.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (G.1.E1.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (G.1.E1.W3)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (G.1.E1.W4)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (G.1.E1.W5)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (G.1.E1.W6)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (G.1.E1.W7)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (G.1.E1.W8)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL West Win (G.1.E2.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL West Win (G.1.E2.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL West Door (G.1.E2.D1)	1.0	16.25	2.50	6.50	0.00	1	1.003	1.00	0.998	0.837
ELL South Win (G.1.E3.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (G.1.E3.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (G.1.E3.W3)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (G.1.E3.W4)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (G.1.E3.W5)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (G.1.E3.W6)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Door (G.1.E3.D1)	1.0	35.75	5.50	6.50	0.00	1	1.003	1.00	0.998	0.837
ELL South Door (G.1.E3.D2)	1.0	35.75	5.50	6.50	0.00	1	1.003	1.00	0.998	0.837
ELL East Win (G.1.E4.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL East Win (G.1.E4.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705

LOCATED IN SURFACE

WINDOW	LOCATED IN SURFACE	XB (FT)	YB (FT)	ZB (FT)	LOCATION OF ORIGIN IN BUILDING COORDINATES	XB (FT)	YB (FT)	ZB (FT)	LOCATION OF ORIGIN IN SURFACE COORDINATES
ELL North Win (G.1.E1.W1)	ELL North Wall (G.1.E1)	-5.05	0.00	3.13	5.05	3.13	3.13	3.13	3.13
ELL North Win (G.1.E1.W2)	ELL North Wall (G.1.E1)	-21.23	0.00	3.13	21.23	3.13	3.13	3.13	3.13
ELL North Win (G.1.E1.W3)	ELL North Wall (G.1.E1)	-37.40	0.00	3.13	37.40	3.13	3.13	3.13	3.13
ELL North Win (G.1.E1.W4)	ELL North Wall (G.1.E1)	-53.58	0.00	3.13	53.58	3.13	3.13	3.13	3.13
ELL North Win (G.1.E1.W5)	ELL North Wall (G.1.E1)	-69.76	0.00	3.13	69.76	3.13	3.13	3.13	3.13
ELL North Win (G.1.E1.W6)	ELL North Wall (G.1.E1)	-85.94	0.00	3.13	85.94	3.13	3.13	3.13	3.13
ELL North Win (G.1.E1.W7)	ELL North Wall (G.1.E1)	-102.12	0.00	3.13	102.12	3.13	3.13	3.13	3.13
ELL North Win (G.1.E1.W8)	ELL North Wall (G.1.E1)	-118.29	0.00	3.13	118.29	3.13	3.13	3.13	3.13
ELL West Win (G.1.E2.W1)	ELL West Wall (G.1.E2)	-134.47	0.00	3.13	134.47	3.13	3.13	3.13	3.13
ELL West Win (G.1.E2.W2)	ELL West Wall (G.1.E2)	-145.60	0.00	3.13	145.60	3.13	3.13	3.13	3.13
ELL West Door (G.1.E2.D1)	ELL West Wall (G.1.E2)	-33.37	0.00	3.13	33.37	3.13	3.13	3.13	3.13
ELL South Win (G.1.E3.W1)	ELL South Wall (G.1.E3)	-23.02	0.25	3.13	23.02	0.25	3.13	3.13	3.13
ELL South Win (G.1.E3.W2)	ELL South Wall (G.1.E3)	-48.55	0.25	3.13	48.55	0.25	3.13	3.13	3.13
ELL South Win (G.1.E3.W3)	ELL South Wall (G.1.E3)	-74.08	0.25	3.13	74.08	0.25	3.13	3.13	3.13
ELL South Win (G.1.E3.W4)	ELL South Wall (G.1.E3)	-99.61	0.25	3.13	99.61	0.25	3.13	3.13	3.13
ELL South Win (G.1.E3.W5)	ELL South Wall (G.1.E3)	-125.14	0.25	3.13	125.14	0.25	3.13	3.13	3.13
ELL South Win (G.1.E3.W6)	ELL South Wall (G.1.E3)	-150.67	0.25	3.13	150.67	0.25	3.13	3.13	3.13
ELL South Door (G.1.E3.D1)	ELL South Wall (G.1.E3)	-48.55	0.25	3.13	48.55	0.25	3.13	3.13	3.13
ELL South Door (G.1.E3.D2)	ELL South Wall (G.1.E3)	-74.08	0.25	3.13	74.08	0.25	3.13	3.13	3.13
ELL East Win (G.1.E4.W1)	ELL East Wall (G.1.E4)	-30.34	0.00	3.13	30.34	0.00	3.13	3.13	3.13
ELL East Win (G.1.E4.W2)	ELL East Wall (G.1.E4)	-55.87	0.00	3.13	55.87	0.00	3.13	3.13	3.13

Ell Spc (G.1)

WINDOW	LOCATED IN SURFACE	LOCATION OF ORIGIN IN BUILDING COORDINATES			LOCATION OF ORIGIN IN SURFACE COORDINATES		
		XB (FT)	YB (FT)	ZB (FT)	X (FT)	Y (FT)	Z (FT)
ELL South Win (G.1.E3.W6)	ELL South Wall (G.1.E3)	-12.14	-48.55	3.13	133.46	3.13	
ELL South Door (G.1.E3.D1)	ELL South Wall (G.1.E3)	-80.05	-48.55	0.25	65.55	0.25	
ELL South Door (G.1.E3.D2)	ELL South Wall (G.1.E3)	-74.05	-48.55	0.25	71.55	0.25	
ELL East Win (G.1.E4.W1)	ELL East Wall (G.1.E4)	0.00	-39.45	3.13	9.10	3.13	
ELL East Win (G.1.E4.W2)	ELL East Wall (G.1.E4)	0.00	-15.18	3.13	33.37	3.13	

DATA FOR SPACE ELL Spc (M.2) IN FLOOR ELL Floor 2

LOCATION OF ORIGIN IN BUILDING COORDINATES	SPACE AZIMUTH (DEG)	SPACE*FLOOR MULTIPLIER	HEIGHT (FT)	AREA (SQFT)	VOLUME (CUFT)
XB (FT) YB (FT) ZB (FT)	0.00 0.00 0.00	1.0	8.50	7068.88	60085.48

TOTAL NUMBER OF SURFACES	NUMBER OF EXTERIOR SURFACES	NUMBER OF INTERIOR SURFACES	NUMBER OF UNDERGROUND SURFACES	DAYLIGHTING	SUNSPACE	NO	NO
12	8	4	0				

NUMBER OF SUBSURFACES

TOTAL	EXTERIOR WINDOWS	DOORS	INTERIOR WINDOWS
21	21	0	0

FLOOR WEIGHT (LB/SQFT)

CALCULATION TEMPERATURE (F)
70.0

INFILTRATION

SCHEDULE	ZG1-S1 (OVT) P-Inf Sch	INFILTRATION CALCULATION METHOD	AIR-CHANGE	FLOW RATE (CFM/SQFT)	AIR CHANGES PER HOUR
			0.591		4.18

PEOPLE

SCHEDULE	ELL Bldg Occup Sch	NUMBER	AREA PER PERSON (SQFT)	PEOPLE SENSIBLE (BTU/HR)	PEOPLE LATENT (BTU/HR)
		70.6	100.1	248.6	200.2

LIGHTING

SCHEDULE	LIGHTING TYPE	LOAD (WATTS/SQFT)	LOAD (KW)	FRACTION OF LOAD TO SPACE
ELL Bldg Inslt Sch	SUS-FLOOR	0.63	4.44	1.00

ELECTRICAL EQUIPMENT

SCHEDULE	ELEC LOAD (WATTS/SQFT)	ELEC LOAD (KW)	FRACTION OF LOAD TO SPACE SENSIBLE	FRACTION OF LOAD TO SPACE LATENT
ELL Bldg Misc Sch	0.27	1.93	1.00	0.00
ELL Bldg Cook Sch	0.00	0.00	1.00	0.00
ELL Bldg SCRfg Sch	0.00	0.00	1.00	0.00
ELL Bldg SCRfg Sch	2.31	16.34	1.00	0.00

OTHER EQUIPMENT

SCHEDULE	SOURCE TYPE	LOAD (BTU/HR)	FRACTION OF LOAD TO SPACE SENSIBLE	FRACTION OF LOAD TO SPACE LATENT
ELL Bldg Cook Sch	GAS	45000.0	0.44	0.00

INTERIOR SURFACES (U-VALUE INCLUDES BOTH AIR FILMS)

SURFACE	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)
ELL Ceiling (G.1.I1)	7068.88	ELL Ceilg Construction	0.520
ELL Flr (M.2.I2)	7068.88	ELL IFlr Construction	0.515
ELL Ceiling (M.2.I3)	7068.88	ELL Ceilg Construction	0.520
ELL Flr (M.3.I4)	7068.88	ELL IFlr Construction	0.515

EXTERIOR SURFACES (U-VALUE EXCLUDES OUTSIDE AIR FILM)

SURFACE	MULTIPLIER	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)	SURFACE TYPE
ELL Ceiling (G.1.I1)			ADJACENT SPACE		
ELL Flr (M.2.I2)			ELL Spc (G.1)		
ELL Ceiling (M.2.I3)			ELL Spc (G.1)		
ELL Flr (M.3.I4)			ELL Spc (M.3)		
ELL North Slab (M.2.S5)	1.0	72.80	ELL IFSHL Construction	0.595	DELAYED
ELL North Wall (M.2.E5)	1.0	1237.60	ELL EWall Construction	0.397	DELAYED
ELL West Slab (M.2.S6)	1.0	24.27	ELL IFSHL Construction	0.595	DELAYED
ELL West Wall (M.2.E6)	1.0	412.67	ELL EWall Construction	0.397	DELAYED
ELL South Slab (M.2.S7)	1.0	72.80	ELL IFSHL Construction	0.595	DELAYED

EXTERIOR SURFACES (U-VALUE EXCLUDES OUTSIDE AIR FILM)

SURFACE	MULTIPLIER	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)	SURFACE TYPE
EL1 South Wall (M.2.E7)	1.0	1237.60	EL1 EWall Construction	0.397	DELAYED
EL1 East Slab (M.2.S8)	1.0	24.27	EL1 IFSHL Construction	0.595	DELAYED
EL1 East Wall (M.2.E8)	1.0	412.67	EL1 EWall Construction	0.397	DELAYED

EXTERIOR WINDOWS (U-VALUE INCLUDES OUTSIDE AIR FILM)

WINDOW	MULTIPLIER	GLASS AREA (SQFT)	GLASS WIDTH (FT)	GLASS HEIGHT (FT)	SET-BACK (FT)	NUMBER OF PANEES	GLASS U-VALUE (BTU/HR-SQFT-F)	GLASS SHADING COEFF	GLASS VISIBLE TRANS	GLASS SOLAR TRANS
EL1 North Win (M.2.E5.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 North Win (M.2.E5.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 North Win (M.2.E5.W3)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 North Win (M.2.E5.W4)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 North Win (M.2.E5.W5)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 North Win (M.2.E5.W6)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 North Win (M.2.E5.W7)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 North Win (M.2.E5.W8)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 North Win (M.2.E5.W9)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 West Win (M.2.E6.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 West Win (M.2.E6.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 South Win (M.2.E7.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 South Win (M.2.E7.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 South Win (M.2.E7.W3)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 South Win (M.2.E7.W4)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 South Win (M.2.E7.W5)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 South Win (M.2.E7.W6)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 South Win (M.2.E7.W7)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 South Win (M.2.E7.W8)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 East Win (M.2.E8.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 East Win (M.2.E8.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705

LOCATION OF ORIGIN IN SURFACE COORDINATES

LOCATION OF ORIGIN IN BUILDING COORDINATES

WINDOW	LOCATED IN SURFACE	XB (FT)	YB (FT)	ZB (FT)	X (FT)	Y (FT)
EL1 North Win (M.2.E5.W1)	EL1 North Wall (M.2.E5)	-5.05	0.00	11.63	5.05	3.13
EL1 North Win (M.2.E5.W2)	EL1 North Wall (M.2.E5)	-21.23	0.00	11.63	21.23	3.13
EL1 North Win (M.2.E5.W3)	EL1 North Wall (M.2.E5)	-37.40	0.00	11.63	37.40	3.13
EL1 North Win (M.2.E5.W4)	EL1 North Wall (M.2.E5)	-53.58	0.00	11.63	53.58	3.13
EL1 North Win (M.2.E5.W5)	EL1 North Wall (M.2.E5)	-69.76	0.00	11.63	69.76	3.13
EL1 North Win (M.2.E5.W6)	EL1 North Wall (M.2.E5)	-85.94	0.00	11.63	85.94	3.13
EL1 North Win (M.2.E5.W7)	EL1 North Wall (M.2.E5)	-102.12	0.00	11.63	102.12	3.13
EL1 North Win (M.2.E5.W8)	EL1 North Wall (M.2.E5)	-118.29	0.00	11.63	118.29	3.13
EL1 North Win (M.2.E5.W9)	EL1 North Wall (M.2.E5)	-134.47	0.00	11.63	134.47	3.13
EL1 West Win (M.2.E6.W1)	EL1 West Wall (M.2.E6)	-145.60	-9.10	11.63	9.10	3.13
EL1 West Win (M.2.E6.W2)	EL1 West Wall (M.2.E6)	-139.54	-33.37	11.63	33.37	3.13
EL1 South Win (M.2.E7.W1)	EL1 South Wall (M.2.E7)	-48.55	-48.55	11.63	6.06	3.13
EL1 South Win (M.2.E7.W2)	EL1 South Wall (M.2.E7)	-121.34	-48.55	11.63	24.26	3.13
EL1 South Win (M.2.E7.W3)	EL1 South Wall (M.2.E7)	-103.14	-48.55	11.63	42.46	3.13
EL1 South Win (M.2.E7.W4)	EL1 South Wall (M.2.E7)	-84.94	-48.55	11.63	60.66	3.13
EL1 South Win (M.2.E7.W5)	EL1 South Wall (M.2.E7)	-66.74	-48.55	11.63	78.86	3.13
EL1 South Win (M.2.E7.W6)	EL1 South Wall (M.2.E7)	-48.54	-48.55	11.63	97.06	3.13
EL1 South Win (M.2.E7.W7)	EL1 South Wall (M.2.E7)	-30.34	-48.55	11.63	115.26	3.13
EL1 South Win (M.2.E7.W8)	EL1 South Wall (M.2.E7)	-12.14	-48.55	11.63	133.46	3.13
EL1 East Win (M.2.E8.W1)	EL1 East Wall (M.2.E8)	0.00	-39.45	11.63	9.10	3.13
EL1 East Win (M.2.E8.W2)	EL1 East Wall (M.2.E8)	0.00	-15.18	11.63	33.37	3.13

TMHA Franklin Tower - DETAILED
 REPORT- IV-C Details of Space

DOE-2.2-47d 9/13/2010 9:19:20 BDL RUN 1
 WEATHER FILE- New York CityNY TMY2

DATA FOR SPACE ELL1 Spc (Mb.3) IN FLOOR ELL1 Floor 3

LOCATION OF ORIGIN IN BUILDING COORDINATES
 XB (FT) YB (FT) ZB (FT) SPACE AZIMUTH (DEG) SPACE*FLOOR MULTIPLIER HEIGHT (FT) AREA (SQFT) VOLUME (CUFT)

0.00	0.00	0.00	0.00	1.0	8.50	7068.88	60085.48
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TOTAL NUMBER OF SURFACES 12
 EXTERIOR SURFACES 8
 INTERIOR SURFACES 4
 UNDERGROUND SURFACES 0
 DAYLIGHTING SURSPACE NO
 SUNSPACE NO

NUMBER OF SUBSURFACES

TOTAL EXTERIOR WINDOWS 21
 INTERIOR WINDOWS 0
 DOORS 0

FLOOR WEIGHT (LB/SQFT) 0.0
 CALCULATION TEMPERATURE (F) 70.0

INFILTRATION

SCHEDULE ZG1-S1 (UVT) P-Inf Sch
 INFILTRATION CALCULATION METHOD AIR-CHANGE
 FLOW RATE (CFM/SQFT) 0.591
 AIR CHANGES PER HOUR 4.18

PEOPLE

SCHEDULE ELL1 Bldg Occup Sch
 AREA PER PERSON (SQFT) 100.1
 PEOPLE PER SENSIBLE (BTU/HR) 248.6
 PEOPLE LATENT (BTU/HR) 200.2

EL1 Spc (Mb.3)

LIGHTING

SCHEDULE	LIGHTING TYPE	ELEC LOAD (WATTS/SQFT)	LOAD (WATTS/SQFT)	LOAD (KW)	FRACTION OF LOAD TO SPACE
EL1 Bldg Insit Sch	SUS-FLUOR	0.27	0.63	4.44	1.00

ELECTRICAL EQUIPMENT

SCHEDULE	ELEC LOAD (WATTS/SQFT)	ELEC LOAD (KW)	FRACTION OF LOAD TO SPACE SENSIBLE	FRACTION OF LOAD TO SPACE LATENT
EL1 Bldg Misc Sch	0.27	1.93	1.00	0.00
EL1 Bldg Cook Sch	0.00	0.00	1.00	0.00
EL1 Bldg SCRfg Sch	0.00	0.00	1.00	0.00
EL1 Bldg SCRfg Sch	2.31	16.34	1.00	0.00

OTHER EQUIPMENT

SCHEDULE	SOURCE TYPE	LOAD (BTU/HR)	FRACTION OF LOAD TO SPACE SENSIBLE	FRACTION OF LOAD TO SPACE LATENT
EL1 Bldg Cook Sch	GAS	45000.0	0.44	0.00

INTERIOR SURFACES (U-VALUE INCLUDES BOTH AIR FILMS)

SURFACE	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)
EL1 Ceiling (M.2.I3)	7068.88	EL1 Ceilg Construction	0.520
EL1 Flr (Mb.3.I4)	7068.88	EL1 IFlr Construction	0.515
EL1 Ceiling (Mb.3.I5)	7068.88	EL1 Ceilg Construction	0.520
EL1 Flr (Mc.4.I6)	7068.88	EL1 IFlr Construction	0.515

ADJACENT SPACE

SURFACE	MULTIPLIER	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)	SURFACE TYPE
EL1 Ceiling (M.2.I3)	1.0	72.80	EL1 Spc (M.2)	0.595	DELAYED
EL1 Flr (Mb.3.I4)	1.0	1237.60	EL1 Spc (M.2)	0.397	DELAYED
EL1 Ceiling (Mb.3.I5)	1.0	24.27	EL1 Spc (Mc.4)	0.595	DELAYED
EL1 Flr (Mc.4.I6)	1.0	412.67	EL1 Spc (Mc.4)	0.397	DELAYED
EL1 North Slab (Mb.3.S9)	1.0	72.80	EL1 IFSHL Construction	0.595	DELAYED
EL1 North Wall (Mb.3.E9)	1.0	1237.60	EL1 EWall Construction	0.397	DELAYED
EL1 West Slab (Mb.3.S10)	1.0	24.27	EL1 IFSHL Construction	0.595	DELAYED
EL1 West Wall (Mb.3.E10)	1.0	412.67	EL1 EWall Construction	0.397	DELAYED
EL1 South Slab (Mb.3.S11)	1.0	72.80	EL1 IFSHL Construction	0.595	DELAYED

EXTERIOR SURFACES (U-VALUE EXCLUDES OUTSIDE AIR FILM)

EXTERIOR SURFACES (U-VALUE EXCLUDES OUTSIDE AIR FILM)

SURFACE	MULTIPLIER	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)	SURFACE TYPE
ELL South Wall (Mb.3.E11)	1.0	1237.60	ELL EWall Construction	0.397	DELAYED
ELL East Slab (Mb.3.S12)	1.0	24.27	ELL IFSHL Construction	0.595	DELAYED
ELL East Wall (Mb.3.E12)	1.0	412.67	ELL EWall Construction	0.397	DELAYED

LOCATION OF ORIGIN IN BUILDING COORDINATES

SURFACE	AZIMUTH (DEG)	TILT (DEG)	XB (FT)	YB (FT)	ZB (FT)	X (FT)	Y (FT)	Z (FT)
ELL North Slab (Mb.3.S9)	-180.0	90.0	0.00	0.00	17.00	0.00	0.00	0.00
ELL North Wall (Mb.3.E9)	-180.0	90.0	0.00	0.00	17.00	0.00	0.00	0.00
ELL West Slab (Mb.3.S10)	-270.0	90.0	-145.60	0.00	17.00	145.60	0.00	0.00
ELL West Wall (Mb.3.E10)	-270.0	90.0	-145.60	0.00	17.00	145.60	0.00	0.00
ELL South Slab (Mb.3.S11)	0.0	90.0	-145.60	-48.55	17.00	145.60	48.55	0.00
ELL South Wall (Mb.3.E11)	0.0	90.0	-145.60	-48.55	17.00	145.60	48.55	0.00
ELL East Slab (Mb.3.S12)	-90.0	90.0	0.00	-48.55	17.00	0.00	48.55	0.00
ELL East Wall (Mb.3.E12)	-90.0	90.0	0.00	-48.55	17.00	0.00	48.55	0.00

EXTERIOR WINDOWS (U-VALUE INCLUDES OUTSIDE AIR FILM)

WINDOW	MULTIPLIER	GLASS AREA (SQFT)	GLASS WIDTH (FT)	GLASS HEIGHT (FT)	SET-BACK (FT)	NUMBER OF PANEES	CENTER-OF-GLASS U-VALUE (BTU/HR-SQFT-F)	GLASS SHADING COEFF	GLASS VISIBLE TRANS	GLASS SOLAR TRANS
ELL North Win (Mb.3.E9.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mb.3.E9.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mb.3.E9.W3)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mb.3.E9.W4)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mb.3.E9.W5)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mb.3.E9.W6)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mb.3.E9.W7)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mb.3.E9.W8)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mb.3.E9.W9)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL West Win (Mb.3.E10.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL West Win (Mb.3.E10.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mb.3.E11.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mb.3.E11.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mb.3.E11.W3)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mb.3.E11.W4)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mb.3.E11.W5)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mb.3.E11.W6)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mb.3.E11.W7)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mb.3.E11.W8)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL East Win (Mb.3.E12.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL East Win (Mb.3.E12.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705

EL1 Spc (Mb.3)

LOCATION OF ORIGIN IN SURFACE COORDINATES

LOCATION OF ORIGIN IN BUILDING COORDINATES

LOCATED IN SURFACE

WINDOW	XB (FT)	YB (FT)	ZB (FT)	X (FT)	Y (FT)
EL1 North Win (Mb.3.E9.W1)	-5.05	0.00	20.13	5.05	3.13
EL1 North Win (Mb.3.E9.W2)	-21.23	0.00	20.13	21.23	3.13
EL1 North Win (Mb.3.E9.W3)	-37.40	0.00	20.13	37.40	3.13
EL1 North Win (Mb.3.E9.W4)	-53.58	0.00	20.13	53.58	3.13
EL1 North Win (Mb.3.E9.W5)	-69.76	0.00	20.13	69.76	3.13
EL1 North Win (Mb.3.E9.W6)	-85.94	0.00	20.13	85.94	3.13
EL1 North Win (Mb.3.E9.W7)	-102.12	0.00	20.13	102.12	3.13
EL1 North Win (Mb.3.E9.W8)	-118.29	0.00	20.13	118.29	3.13
EL1 North Win (Mb.3.E9.W9)	-134.47	0.00	20.13	134.47	3.13
EL1 West Win (Mb.3.E10.W1)	-145.60	-9.10	20.13	9.10	3.13
EL1 West Win (Mb.3.E10.W2)	-139.54	-33.37	20.13	33.37	3.13
EL1 South Win (Mb.3.E11.W1)	-48.55	-48.55	20.13	6.06	3.13
EL1 South Win (Mb.3.E11.W2)	-121.34	-48.55	20.13	24.26	3.13
EL1 South Win (Mb.3.E11.W3)	-103.14	-48.55	20.13	42.46	3.13
EL1 South Win (Mb.3.E11.W4)	-84.94	-48.55	20.13	60.66	3.13
EL1 South Win (Mb.3.E11.W5)	-66.74	-48.55	20.13	78.86	3.13
EL1 South Win (Mb.3.E11.W6)	-48.54	-48.55	20.13	97.06	3.13
EL1 South Win (Mb.3.E11.W7)	-30.34	-48.55	20.13	115.26	3.13
EL1 South Win (Mb.3.E11.W8)	-12.14	-48.55	20.13	133.46	3.13
EL1 East Win (Mb.3.E12.W1)	0.00	-39.45	20.13	9.10	3.13
EL1 East Win (Mb.3.E12.W2)	0.00	-15.18	20.13	33.37	3.13

TMRA Franklin Tower - DETAILED
 REPORT- LV-C Details of Space

DOE-2.2-47d 9/13/2010 9:19:20 BDL RUN 1
 WEATHER FILE- New York CityNY TMY2

DATA FOR SPACE ELL Spc (Mc.4) IN FLOOR ELL Floor 4

LOCATION OF ORIGIN IN BUILDING COORDINATES
 XB (FT) YB (FT) ZB (FT) SPACE AZIMUTH (DEG) SPACE*FLOOR MULTIPLIER HEIGHT (FT) AREA (SQFT) VOLUME (CUFT)

0.00	0.00	0.00	0.00	1.0	8.50	7068.88	60085.48
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TOTAL NUMBER OF SURFACES 12
 EXTERIOR SURFACES 8
 INTERIOR SURFACES 4
 NUMBER OF UNDERGROUND SURFACES 0
 DAYLIGHTING SURFACES NO
 SUNSPACE NO

NUMBER OF SUBSURFACES

EXTERIOR WINDOWS 21
 INTERIOR WINDOWS 0
 DOORS 0

FLOOR WEIGHT (LB/SQFT) 0.0
 CALCULATION TEMPERATURE (F) 70.0

INFILTRATION

SCHEDULE ZG1-S1 (UVT) P-Inf Sch
 INFILTRATION CALCULATION METHOD AIR-CHANGE
 FLOW RATE (CFM/SQFT) 0.591
 AIR CHANGES PER HOUR 4.18

PEOPLE

SCHEDULE ELL Bidg Occup Sch
 AREA PER PERSON (SQFT) 100.1
 PEOPLE SENSIBLE (BTU/HR) 248.6
 PEOPLE LATENT (BTU/HR) 200.2

LIGHTING

SCHEDULE	LIGHTING TYPE	LOAD (WATTS/SQFT)	LOAD (KW)	FRACTION OF LOAD TO SPACE
ELL Bldg Inslt Sch	SUS-FLUOR	0.63	4.44	1.00

ELECTRICAL EQUIPMENT

SCHEDULE	ELEC LOAD (WATTS/SQFT)	ELEC LOAD (KW)	FRACTION OF LOAD TO SPACE SENSIBLE	FRACTION OF LOAD TO SPACE LATENT
ELL Bldg Misc Sch	0.27	1.93	1.00	0.00
ELL Bldg Cook Sch	0.00	0.00	1.00	0.00
ELL Bldg SCRfg Sch	0.00	0.00	1.00	0.00
ELL Bldg SCRfg Sch	2.31	16.34	1.00	0.00

OTHER EQUIPMENT

SCHEDULE	SOURCE TYPE	LOAD (BTU/HR)	FRACTION OF LOAD TO SPACE SENSIBLE	FRACTION OF LOAD TO SPACE LATENT
ELL Bldg Cook Sch	GAS	45000.0	0.44	0.00

INTERIOR SURFACES (U-VALUE INCLUDES BOTH AIR FILMS)

SURFACE	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)
ELL Ceiling (Mb.3.I5)	7068.88	ELL Ceily Construction	0.520
ELL Flr (Mc.4.I6)	7068.88	ELL IFlr Construction	0.515
ELL Ceiling (Mc.4.I7)	7068.88	ELL Ceily Construction	0.520
ELL Flr (Md.5.I8)	7068.88	ELL IFlr Construction	0.515

SURFACE	SURFACE-TYPE	ADJACENT SPACE	U-VALUE (BTU/HR-SQFT-F)
ELL Ceiling (Mb.3.I5)	DELAYED STANDARD	ELL Spc (Mb.3)	
ELL Flr (Mc.4.I6)	DELAYED STANDARD	ELL Spc (Mb.3)	
ELL Ceiling (Mc.4.I7)	DELAYED STANDARD	ELL Spc (Md.5)	
ELL Flr (Md.5.I8)	DELAYED STANDARD	ELL Spc (Md.5)	

EXTERIOR SURFACES (U-VALUE EXCLUDES OUTSIDE AIR FILM)

SURFACE	MULTIPLIER	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)	SURFACE TYPE
ELL North Slab (Mc.4.S13)	1.0	72.80	ELL IFSHL Construction	0.595	DELAYED
ELL North Wall (Mc.4.E13)	1.0	1237.60	ELL EWall Construction	0.397	DELAYED
ELL West Slab (Mc.4.S14)	1.0	24.27	ELL IFSHL Construction	0.595	DELAYED
ELL West Wall (Mc.4.E14)	1.0	412.67	ELL EWall Construction	0.397	DELAYED
ELL South Slab (Mc.4.S15)	1.0	72.80	ELL IFSHL Construction	0.595	DELAYED

EXTERIOR SURFACES (U-VALUE EXCLUDES OUTSIDE AIR FILM)

SURFACE	MULTIPLIER	AREA (SQFT)	CONSTRUCTION	LOCATION OF ORIGIN IN BUILDING COORDINATES			LOCATION OF ORIGIN IN SPACE COORDINATES			U-VALUE (BTU/HR-SQFT-F)	SURFACE TYPE
				XB (FT)	YB (FT)	ZB (FT)	X (FT)	Y (FT)	Z (FT)		
ELL South Wall (Mc.4.E15)	1.0	1237.60	ELL EWall Construction	0.00	0.00	25.50	0.00	0.00	0.00	0.00	DELATED
ELL East Slab (Mc.4.S16)	1.0	24.27	ELL IFSHL Construction	-145.60	0.00	25.50	145.60	0.00	0.595	0.00	DELATED
ELL East Wall (Mc.4.E16)	1.0	412.67	ELL EWall Construction	-145.60	0.00	25.50	145.60	0.00	0.397	0.00	DELATED
ELL South Slab (Mc.4.S15)	0.0	90.0	-48.55	-48.55	25.50	145.60	48.55	0.00			
ELL South Wall (Mc.4.E15)	0.0	90.0	-145.60	-48.55	25.50	145.60	48.55	0.00			
ELL East Slab (Mc.4.S16)	-90.0	90.0	0.00	-48.55	25.50	145.60	48.55	0.00			
ELL East Wall (Mc.4.E16)	-90.0	90.0	0.00	-48.55	25.50	145.60	48.55	0.00			

EXTERIOR WINDOWS (U-VALUE INCLUDES OUTSIDE AIR FILM)

WINDOW	MULTIPLIER	GLASS AREA (SQFT)	GLASS WIDTH (FT)	GLASS HEIGHT (FT)	SET-BACK (FT)	NUMBER OF PAGES	CENTER-OF-GLASS U-VALUE (BTU/HR-SQFT-F)	GLASS SHADING COEFF	GLASS VISIBLE TRANS	GLASS SOLAR TRANS
ELL North Win (Mc.4.E13.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mc.4.E13.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mc.4.E13.W3)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mc.4.E13.W4)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mc.4.E13.W5)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mc.4.E13.W6)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mc.4.E13.W7)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mc.4.E13.W8)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mc.4.E13.W9)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL West Win (Mc.4.E14.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL West Win (Mc.4.E14.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mc.4.E15.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mc.4.E15.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mc.4.E15.W3)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mc.4.E15.W4)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mc.4.E15.W5)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mc.4.E15.W6)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mc.4.E15.W7)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mc.4.E15.W8)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL East Win (Mc.4.E16.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL East Win (Mc.4.E16.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705

DATA FOR SPACE ELL Spc (Mg.5) IN FLOOR ELL Floor 5
 LOCATION OF ORIGIN IN BUILDING COORDINATES
 XB (FT) YB (FT) ZB (FT) SPACE AZIMUTH (DEG) SPACE*FLOOR MULTIFLIER HEIGHT (FT) AREA (SQFT) VOLUME (CUFT)
 0.00 0.00 0.00 0.00 0.00 1.0 8.50 7068.88 60085.48

TOTAL NUMBER OF SURFACES 12
 EXTERIOR SURFACES 8
 INTERIOR SURFACES 4
 UNDERGROUND SURFACES 0
 DAYLIGHTING NO
 SUNSPACE NO

NUMBER OF SUBSURFACES
 EXTERIOR WINDOWS 21
 INTERIOR WINDOWS 0
 DOORS 0

FLOOR WEIGHT (LB/SQFT) 0.0
 CALCULATION TEMPERATURE (F) 70.0

INFILTRATION
 SCHEDULE ZG1-S1 (UVT) P-Inf Sch
 INFILTRATION CALCULATION METHOD AIR-CHANGE
 FLOW RATE (CFM/SQFT) 0.591
 AIR CHANGES PER HOUR 4.18

PEOPLE
 SCHEDULE ELL Bldg Occup Sch
 AREA PER PERSON (SQFT) 100.1
 NUMBER 70.6
 PEOPLE SENSIBLE (BTU/HR) 248.6
 PEOPLE LATENT (BTU/HR) 200.2

REPORT- LV-C Details of Space (CONTINUED)

LIGHTING

SCHEDULE	LIGHTING TYPE	LOAD (WATTS/SQFT)	LOAD (KW)	FRACTION OF LOAD TO SPACE
EL1 Bldg InsLt Sch	SUS-FLUOR	0.63	4.44	1.00

ELECTRICAL EQUIPMENT

SCHEDULE	ELEC LOAD (WATTS/SQFT)	ELEC LOAD (KW)	FRACTION OF LOAD TO SPACE SENSIBLE	FRACTION OF LOAD TO SPACE LATENT
EL1 Bldg Misc Sch	0.27	1.93	1.00	0.00
EL1 Bldg Cook Sch	0.00	0.00	1.00	0.00
EL1 Bldg SCRfg Sch	0.00	0.00	1.00	0.00
EL1 Bldg SCRfg Sch	2.31	16.34	1.00	0.00

OTHER EQUIPMENT

SCHEDULE	SOURCE TYPE	LOAD (BTU/HR)	FRACTION OF LOAD TO SPACE SENSIBLE	FRACTION OF LOAD TO SPACE LATENT
EL1 Bldg Cook Sch	GAS	45000.0	0.44	0.00

INTERIOR SURFACES (U-VALUE INCLUDES BOTH AIR FILMS)

SURFACE	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)
EL1 Ceiling (Mc.4.I7)	7068.88	EL1 Ceilg Construction	0.520
EL1 Flr (Md.5.I8)	7068.88	EL1 IFlr Construction	0.515
EL1 Ceiling (Md.5.I9)	7068.88	EL1 Ceilg Construction	0.520
EL1 Flr (Mc.6.I10)	7068.88	EL1 IFlr Construction	0.515

ADJACENT SPACE

SURFACE	SURFACE-TYPE	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)
EL1 Ceiling (Mc.4.I7)	DELAYED STANDARD	EL1 Spc (Mc.4)	
EL1 Flr (Md.5.I8)	DELAYED STANDARD	EL1 Spc (Mc.4)	
EL1 Ceiling (Md.5.I9)	DELAYED STANDARD	EL1 Spc (Mc.6)	
EL1 Flr (Mc.6.I10)	DELAYED STANDARD	EL1 Spc (Mc.6)	

EXTERIOR SURFACES (U-VALUE EXCLUDES OUTSIDE AIR FILM)

SURFACE	MULTIPLIER	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)	SURFACE TYPE
EL1 North Slab (Md.5.S17)	1.0	72.80	EL1 IFSHL Construction	0.595	DELAYED
EL1 North Wall (Md.5.E17)	1.0	1237.60	EL1 EWall Construction	0.397	DELAYED
EL1 West Slab (Md.5.S18)	1.0	24.27	EL1 IFSHL Construction	0.595	DELAYED
EL1 West Wall (Md.5.E18)	1.0	412.67	EL1 EWall Construction	0.397	DELAYED
EL1 South Slab (Md.5.S19)	1.0	72.80	EL1 IFSHL Construction	0.595	DELAYED

REPORT- IV-C Details of Space ELL Spc (Md.5) WEATHER FILE- New York CityNY TMY2 (CONTINUED)

EXTERIOR SURFACES (U-VALUE EXCLUDES OUTSIDE AIR FILM)

SURFACE	MULTIPLIER	AREA (SQFT)	CONSTRUCTION	LOCATION OF ORIGIN IN BUILDING COORDINATES			U-VALUE (BTU/HR-SQFT-F)	SURFACE TYPE
				XB (FT)	YB (FT)	ZB (FT)		
ELL South Wall (Md.5.E19)	1.0	1237.60	ELL EWall Construction	0.00	0.00	34.00	0.397	DELAYED
ELL East Slab (Md.5.S20)	1.0	24.27	ELL IFSHL Construction	-145.60	0.00	34.00	0.595	DELAYED
ELL East Wall (Md.5.E20)	1.0	412.67	ELL EWall Construction	-145.60	0.00	34.00	0.397	DELAYED

EXTERIOR WINDOWS (U-VALUE INCLUDES OUTSIDE AIR FILM)

WINDOW	MULTIPLIER	GLASS AREA (SQFT)	GLASS WIDTH (FT)	GLASS HEIGHT (FT)	SET-BACK (FT)	NUMBER OF PANEES	CENTER-OF-GLASS U-VALUE (BTU/HR-SQFT-F)	GLASS SHADING COEFF	GLASS VISIBLE TRANS	GLASS SOLAR TRANS
ELL North Win (Md.5.E17.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Md.5.E17.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Md.5.E17.W3)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Md.5.E17.W4)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Md.5.E17.W5)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Md.5.E17.W6)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Md.5.E17.W7)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Md.5.E17.W8)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Md.5.E17.W9)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL West Win (Md.5.E18.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL West Win (Md.5.E18.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Md.5.E19.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Md.5.E19.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Md.5.E19.W3)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Md.5.E19.W4)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Md.5.E19.W5)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Md.5.E19.W6)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Md.5.E19.W7)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Md.5.E19.W8)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL East Win (Md.5.E20.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL East Win (Md.5.E20.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705

DATA FOR SPACE ELL Spc (Me.6) IN FLOOR ELL Floor 6

LOCATION OF ORIGIN IN BUILDING COORDINATES		SPACE AZIMUTH (DEG)	SPACE*FLOOR MULTIPLIER	HEIGHT (FT)	AREA (SQFT)	VOLUME (CUFT)
XB (FT)	YB (FT) ZB (FT)	0.00 0.00	1.0	8.50	7068.88	60085.48

TOTAL NUMBER OF SURFACES	NUMBER OF EXTERIOR SURFACES	NUMBER OF INTERIOR SURFACES	NUMBER OF UNDERGROUND SURFACES	DAYLIGHTING	SUNSPACE	NO	NO
12	8	4	0				

NUMBER OF SUBSURFACES

TOTAL	EXTERIOR WINDOWS	DOORS	INTERIOR WINDOWS
21	21	0	0

FLOOR WEIGHT (LB/SQFT)

0.0	CALCULATION TEMPERATURE (F)
	70.0

INFILTRATION

SCHEDULE	ZGI-S1 (UVT) P-Inf Sch	INFILTRATION CALCULATION METHOD	FLOW RATE (CFM/SQFT)	AIR CHANGES PER HOUR
		AIR-CHANGE	0.591	4.18

PEOPLE

SCHEDULE	ELL Bldg Occup Sch	NUMBER	AREA PER PERSON (SQFT)	PEOPLE SENSIBLE (BTU/HR)	PEOPLE LATENT (BTU/HR)
		70.6	100.1	248.6	200.2

LIGHTING

SCHEDULE	LIGHTING TYPE	LOAD (WATTS/SQFT)	LOAD (KW)	FRACTION OF LOAD TO SPACE
ELL Bldg InsIt Sch	SUS-FLUOR	0.63	4.44	1.00

ELECTRICAL EQUIPMENT

SCHEDULE	ELEC LOAD (WATTS/SQFT)	ELEC LOAD (KW)	FRACTION OF LOAD TO SPACE SENSIBLE	FRACTION OF LOAD TO SPACE LATENT
ELL Bldg Misc Sch	0.27	1.93	1.00	0.00
ELL Bldg Cook Sch	0.00	0.00	1.00	0.00
ELL Bldg SCRFg Sch	0.00	0.00	1.00	0.00
ELL Bldg SCRFg Sch	2.31	16.34	1.00	0.00

OTHER EQUIPMENT

SCHEDULE	SOURCE TYPE	LOAD (BTU/HR)	FRACTION OF LOAD TO SPACE SENSIBLE	FRACTION OF LOAD TO SPACE LATENT
ELL Bldg Cook Sch	GAS	45000.0	0.44	0.00

INTERIOR SURFACES (U-VALUE INCLUDES BOTH AIR FILMS)

SURFACE	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)
ELL Ceiling (Md.5.I9)	7068.88	ELL Ceilg Construction	0.520
ELL Flr (Me.6.I10)	7068.88	ELL IFlr Construction	0.515
ELL Ceiling (Me.6.I11)	7068.88	ELL Ceilg Construction	0.520
ELL Flr (Mf.7.I12)	7068.88	ELL IFlr Construction	0.515
SURFACE		ADJACENT SPACE	
ELL Ceiling (Md.5.I9)		ELL Spc (Md.5)	
ELL Flr (Me.6.I10)		ELL Spc (Md.5)	
ELL Ceiling (Me.6.I11)		ELL Spc (Mf.7)	
ELL Flr (Mf.7.I12)		ELL Spc (Mf.7)	

EXTERIOR SURFACES (U-VALUE EXCLUDES OUTSIDE AIR FILM)

SURFACE	MULTIPLIER	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)	SURFACE TYPE
ELL North Slab (Me.6.S21)	1.0	72.80	ELL IFSHL Construction	0.595	DELAYED
ELL North Wall (Me.6.E21)	1.0	1237.60	ELL EWall Construction	0.397	DELAYED
ELL West Slab (Me.6.S22)	1.0	24.27	ELL IFSHL Construction	0.595	DELAYED
ELL West Wall (Me.6.E22)	1.0	412.67	ELL EWall Construction	0.397	DELAYED
ELL South Slab (Me.6.S23)	1.0	72.80	ELL IFSHL Construction	0.595	DELAYED

REPORT- LV-C Details of Space ELL1 Spc (Me.6) WEATHER FILE- New York CityNY TMY2
 -----(CONTINUED)-----

EXTERIOR SURFACES (U-VALUE EXCLUDES OUTSIDE AIR FILM)

SURFACE	MULTIPLIER	AREA (SQFT)	CONSTRUCTION	LOCATION OF ORIGIN IN BUILDING COORDINATES			LOCATION OF ORIGIN IN SPACE COORDINATES			U-VALUE (BTU/HR-SQFT-F)	SURFACE TYPE
				XB (FT)	YB (FT)	ZB (FT)	X (FT)	Y (FT)	Z (FT)		
ELL1 South Wall (Me.6.E23)	1.0	1237.60	ELL1 EWall Construction	0.00	0.00	42.50	0.00	0.00	0.00	0.397	DELAYED
ELL1 East Slab (Me.6.S24)	1.0	24.27	ELL1 FSHL Construction	0.00	0.00	42.50	0.00	0.00	0.00	0.595	DELAYED
ELL1 East Wall (Me.6.E24)	1.0	412.67	ELL1 EWall Construction	-145.60	0.00	42.50	145.60	0.00	0.00	0.397	DELAYED
				-145.60	0.00	42.50	145.60	48.55	0.00		
				-145.60	-48.55	42.50	145.60	48.55	0.00		
				0.00	-48.55	42.50	0.00	48.55	0.00		
				-90.0	0.00	42.50	0.00	48.55	0.00		
				-90.0	-48.55	42.50	0.00	48.55	0.00		

EXTERIOR WINDOWS (U-VALUE INCLUDES OUTSIDE AIR FILM)

WINDOW	MULTIPLIER	GLASS AREA (SQFT)	GLASS WIDTH (FT)	GLASS HEIGHT (FT)	SET-BACK (FT)	NUMBER OF PANEES	CENTER-OF-GLASS U-VALUE (BTU/HR-SQFT-F)	GLASS SHADING COEFF	GLASS VISIBLE TRANS	GLASS SOLAR TRANS
ELL1 North Win (Me.6.E21.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL1 North Win (Me.6.E21.W3)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL1 North Win (Me.6.E21.W4)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL1 North Win (Me.6.E21.W5)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL1 North Win (Me.6.E21.W6)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL1 North Win (Me.6.E21.W7)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL1 North Win (Me.6.E21.W8)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL1 North Win (Me.6.E21.W9)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL1 West Win (Me.6.E22.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL1 West Win (Me.6.E22.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL1 South Win (Me.6.E23.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL1 South Win (Me.6.E23.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL1 South Win (Me.6.E23.W3)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL1 South Win (Me.6.E23.W4)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL1 South Win (Me.6.E23.W5)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL1 South Win (Me.6.E23.W6)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL1 South Win (Me.6.E23.W7)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL1 South Win (Me.6.E23.W8)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL1 East Win (Me.6.E24.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL1 East Win (Me.6.E24.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705

WINDOR	LOCATED IN SURFACE	LOCATION OF ORIGIN IN BUILDING COORDINATES				LOCATION OF ORIGIN IN SURFACE COORDINATES			
		XB (FT)	YB (FT)	ZB (FT)		X (FT)	Y (FT)		
ELL North Win (Me.6.E21.W1)	ELL North Wall (Me.6.E21)	-5.05	0.00	45.63	5.05	3.13			
ELL North Win (Me.6.E21.W2)	ELL North Wall (Me.6.E21)	-21.23	0.00	45.63	21.23	3.13			
ELL North Win (Me.6.E21.W3)	ELL North Wall (Me.6.E21)	-37.40	0.00	45.63	37.40	3.13			
ELL North Win (Me.6.E21.W4)	ELL North Wall (Me.6.E21)	-53.58	0.00	45.63	53.58	3.13			
ELL North Win (Me.6.E21.W5)	ELL North Wall (Me.6.E21)	-69.76	0.00	45.63	69.76	3.13			
ELL North Win (Me.6.E21.W6)	ELL North Wall (Me.6.E21)	-85.94	0.00	45.63	85.94	3.13			
ELL North Win (Me.6.E21.W7)	ELL North Wall (Me.6.E21)	-102.12	0.00	45.63	102.12	3.13			
ELL North Win (Me.6.E21.W8)	ELL North Wall (Me.6.E21)	-118.29	0.00	45.63	118.29	3.13			
ELL North Win (Me.6.E21.W9)	ELL North Wall (Me.6.E21)	-134.47	0.00	45.63	134.47	3.13			
ELL West Win (Me.6.E22.W1)	ELL West Wall (Me.6.E22)	-145.60	-9.10	45.63	9.10	3.13			
ELL West Win (Me.6.E22.W2)	ELL West Wall (Me.6.E22)	-145.60	-33.37	45.63	33.37	3.13			
ELL South Win (Me.6.E23.W1)	ELL South Wall (Me.6.E23)	-139.54	-48.55	45.63	6.06	3.13			
ELL South Win (Me.6.E23.W2)	ELL South Wall (Me.6.E23)	-121.34	-48.55	45.63	24.26	3.13			
ELL South Win (Me.6.E23.W3)	ELL South Wall (Me.6.E23)	-103.14	-48.55	45.63	42.46	3.13			
ELL South Win (Me.6.E23.W4)	ELL South Wall (Me.6.E23)	-84.94	-48.55	45.63	60.66	3.13			
ELL South Win (Me.6.E23.W5)	ELL South Wall (Me.6.E23)	-66.74	-48.55	45.63	78.86	3.13			
ELL South Win (Me.6.E23.W6)	ELL South Wall (Me.6.E23)	-48.54	-48.55	45.63	97.06	3.13			
ELL South Win (Me.6.E23.W7)	ELL South Wall (Me.6.E23)	-30.34	-48.55	45.63	115.26	3.13			
ELL South Win (Me.6.E23.W8)	ELL South Wall (Me.6.E23)	-12.14	-48.55	45.63	133.46	3.13			
ELL East Win (Me.6.E24.W1)	ELL East Wall (Me.6.E24)	0.00	-39.45	45.63	9.10	3.13			
ELL East Win (Me.6.E24.W2)	ELL East Wall (Me.6.E24)	0.00	-15.18	45.63	33.37	3.13			

TMHA Franklin Tower - DETAILED
 REPORT- LV-C Details of Space

DOB-2.2-47d 9/13/2010 9:19:20 BDL RUN 1
 WEATHER FILE- New York CityNY TMY2

ELL Spc (Mf.7)

DATA FOR SPACE ELL Spc (Mf.7) IN FLOOR ELL Floor 7

LOCATION OF ORIGIN IN BUILDING COORDINATES
 XE (FT) YB (FT) ZB (FT) SPACE AZIMUTH (DEG) SPACE*FLOOR MULTIPLIER HEIGHT (FT) AREA (SQFT) VOLUME (CUFT)
 0.00 0.00 0.00 0.00 1.0 8.50 7068.88 60085.48

TOTAL NUMBER OF SURFACES 12
 EXTERIOR SURFACES 8
 INTERIOR SURFACES 4
 UNDERGROUND SURFACES 0
 DAYLIGHTING SURSPACE NO
 SUNSPACE NO

NUMBER OF SUBSURFACES

EXTERIOR WINDOWS 21
 INTERIOR WINDOWS 0
 DOORS 0

FLOOR WEIGHT (LB/SQFT) 0.0
 CALCULATION TEMPERATURE (F) 70.0

INFILTRATION

SCHEDULE ZG1-S1 (UVT) P-Inf Sch
 INFILTRATION CALCULATION METHOD AIR-CHANGE
 FLOW RATE (CFM/SQFT) 0.591
 AIR CHANGES PER HOUR 4.18

PEOPLE

SCHEDULE ELL Bldg Occup Sch
 NUMBER 70.6
 AREA PER PERSON (SQFT) 100.1
 PEOPLE PER SENSIBLE PERSON (BTU/HR) 248.6
 PEOPLE LATENT (BTU/HR) 200.2

REPORT- LV-C Details of Space ELL Spc (Mf.7) WEATHER FILE- New York Cityvny TMY2 (CONTINUED)

LIGHTING

SCHEDULE	LIGHTING TYPE	LOAD (WATTS/SQFT)	LOAD (KW)	FRACTION OF LOAD TO SPACE
ELL Bidg InsIt Sch	SUS-FLOOR	0.63	4.44	1.00

ELECTRICAL EQUIPMENT

SCHEDULE	ELEC LOAD (WATTS/SQFT)	ELEC LOAD (KW)	FRACTION OF LOAD TO SPACE SENSIBLE	FRACTION OF LOAD TO SPACE LATENT
ELL Bidg Misc Sch	0.27	1.93	1.00	0.00
ELL Bidg Cook Sch	0.00	0.00	1.00	0.00
ELL Bidg SCRfg Sch	0.00	0.00	1.00	0.00
ELL Bidg SCRfg Sch	2.31	16.34	1.00	0.00

OTHER EQUIPMENT

SCHEDULE	SOURCE TYPE	LOAD (BTU/HR)	FRACTION OF LOAD TO SPACE SENSIBLE	FRACTION OF LOAD TO SPACE LATENT
ELL Bidg Cook Sch	GAS	45000.0	0.44	0.00

INTERIOR SURFACES (U-VALUE INCLUDES BOTH AIR FILMS)

SURFACE	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)
ELL Ceiling (Me.6.I11)	7068.88	ELL Ceily Construction	0.520
ELL Flr (Mf.7.I12)	7068.88	ELL IFlr Construction	0.515
ELL Ceiling (Mf.7.I13)	7068.88	ELL Ceily Construction	0.520
ELL Flr (Mg.8.I14)	7068.88	ELL IFlr Construction	0.515
SURFACE ADJACENT SPACE			
ELL Ceiling (Me.6.I11)		ELL Spc (Me.6)	
ELL Flr (Mf.7.I12)		ELL Spc (Me.6)	
ELL Ceiling (Mf.7.I13)		ELL Spc (Mg.8)	
ELL Flr (Mg.8.I14)		ELL Spc (Mg.8)	

EXTERIOR SURFACES (U-VALUE EXCLUDES OUTSIDE AIR FILM)

SURFACE	MULTIPLIER	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)	SURFACE TYPE
ELL North Slab (Mf.7.S25)	1.0	72.80	ELL IFSHL Construction	0.595	DELAYED
ELL North Wall (Mf.7.E25)	1.0	1237.60	ELL EWall Construction	0.397	DELAYED
ELL West Slab (Mf.7.S26)	1.0	24.27	ELL IFSHL Construction	0.595	DELAYED
ELL West Wall (Mf.7.E26)	1.0	412.67	ELL EWall Construction	0.397	DELAYED
ELL South Slab (Mf.7.S27)	1.0	72.80	ELL IFSHL Construction	0.595	DELAYED

EXTERIOR SURFACES (U-VALUE EXCLUDES OUTSIDE AIR FILM)

SURFACE	MULTIPLIER	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)	SURFACE TYPE
E11 South Wall (Mf.7.E27)	1.0	1237.60	E11 EWall Construction	0.397	DELAYED
E11 East Slab (Mf.7.S28)	1.0	24.27	E11 IFSHL Construction	0.595	DELAYED
E11 East Wall (Mf.7.E28)	1.0	412.67	E11 EWall Construction	0.397	DELAYED

SURFACE	AZIMUTH (DEG)	TILT (DEG)	XB (FT)	YB (FT)	ZB (FT)	LOCATION OF ORIGIN IN BUILDING COORDINATES	X (FT)	Y (FT)	Z (FT)	LOCATION OF ORIGIN IN SPACE COORDINATES
E11 North Slab (Mf.7.S25)	-180.0	90.0	0.00	0.00	51.00		0.00	0.00	0.00	
E11 North Wall (Mf.7.E25)	-180.0	90.0	0.00	0.00	51.00		0.00	0.00	0.00	
E11 West Slab (Mf.7.S26)	-270.0	90.0	-145.60	0.00	51.00		145.60	0.00	0.00	
E11 West Wall (Mf.7.E26)	-270.0	90.0	-145.60	0.00	51.00		145.60	0.00	0.00	
E11 South Slab (Mf.7.S27)	0.0	90.0	-48.55	-48.55	51.00		145.60	48.55	0.00	
E11 South Wall (Mf.7.E27)	0.0	90.0	-145.60	-48.55	51.00		145.60	48.55	0.00	
E11 East Slab (Mf.7.S28)	-90.0	90.0	0.00	-48.55	51.00		0.00	48.55	0.00	
E11 East Wall (Mf.7.E28)	-90.0	90.0	0.00	-48.55	51.00		0.00	48.55	0.00	

EXTERIOR WINDOWS (U-VALUE INCLUDES OUTSIDE AIR FILM)

WINDOW	MULTIPLIER	GLASS AREA (SQFT)	GLASS WIDTH (FT)	GLASS HEIGHT (FT)	SET-BACK (FT)	NUMBER OF PANEES	CENTER-OF-GLASS U-VALUE (BTU/HR-SQFT-F)	GLASS SHADING COEFF	GLASS VISIBLE TRANS	GLASS SOLAR TRANS
E11 North Win (Mf.7.E25.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
E11 North Win (Mf.7.E25.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
E11 North Win (Mf.7.E25.W3)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
E11 North Win (Mf.7.E25.W4)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
E11 North Win (Mf.7.E25.W5)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
E11 North Win (Mf.7.E25.W6)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
E11 North Win (Mf.7.E25.W7)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
E11 North Win (Mf.7.E25.W8)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
E11 North Win (Mf.7.E25.W9)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
E11 West Win (Mf.7.E26.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
E11 West Win (Mf.7.E26.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
E11 South Win (Mf.7.E27.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
E11 South Win (Mf.7.E27.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
E11 South Win (Mf.7.E27.W3)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
E11 South Win (Mf.7.E27.W4)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
E11 South Win (Mf.7.E27.W5)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
E11 South Win (Mf.7.E27.W6)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
E11 South Win (Mf.7.E27.W7)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
E11 South Win (Mf.7.E27.W8)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
E11 East Win (Mf.7.E28.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
E11 East Win (Mf.7.E28.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705

WINDOW	LOCATED IN SURFACE	LOCATION OF ORIGIN IN BUILDING COORDINATES			LOCATION OF ORIGIN IN SURFACE COORDINATES		
		XB (FT)	YB (FT)	ZB (FT)	X (FT)	Y (FT)	Z (FT)
ELL North Win (Mf.7.E25.W1)	ELL North Wall (Mf.7.E25)	-5.05	0.00	54.13	5.05	3.13	3.13
ELL North Win (Mf.7.E25.W2)	ELL North Wall (Mf.7.E25)	-21.23	0.00	54.13	21.23	3.13	3.13
ELL North Win (Mf.7.E25.W3)	ELL North Wall (Mf.7.E25)	-37.40	0.00	54.13	37.40	3.13	3.13
ELL North Win (Mf.7.E25.W4)	ELL North Wall (Mf.7.E25)	-53.58	0.00	54.13	53.58	3.13	3.13
ELL North Win (Mf.7.E25.W5)	ELL North Wall (Mf.7.E25)	-69.76	0.00	54.13	69.76	3.13	3.13
ELL North Win (Mf.7.E25.W6)	ELL North Wall (Mf.7.E25)	-85.94	0.00	54.13	85.94	3.13	3.13
ELL North Win (Mf.7.E25.W7)	ELL North Wall (Mf.7.E25)	-102.12	0.00	54.13	102.12	3.13	3.13
ELL North Win (Mf.7.E25.W8)	ELL North Wall (Mf.7.E25)	-118.29	0.00	54.13	118.29	3.13	3.13
ELL North Win (Mf.7.E25.W9)	ELL North Wall (Mf.7.E25)	-134.47	0.00	54.13	134.47	3.13	3.13
ELL West Win (Mf.7.E26.W1)	ELL West Wall (Mf.7.E26)	-145.60	-9.10	54.13	9.10	3.13	3.13
ELL West Win (Mf.7.E26.W2)	ELL West Wall (Mf.7.E26)	-145.60	-33.37	54.13	33.37	3.13	3.13
ELL South Win (Mf.7.E27.W1)	ELL South Wall (Mf.7.E27)	-139.54	-48.55	54.13	6.06	3.13	3.13
ELL South Win (Mf.7.E27.W2)	ELL South Wall (Mf.7.E27)	-121.34	-48.55	54.13	24.26	3.13	3.13
ELL South Win (Mf.7.E27.W3)	ELL South Wall (Mf.7.E27)	-103.14	-48.55	54.13	42.46	3.13	3.13
ELL South Win (Mf.7.E27.W4)	ELL South Wall (Mf.7.E27)	-84.94	-48.55	54.13	60.66	3.13	3.13
ELL South Win (Mf.7.E27.W5)	ELL South Wall (Mf.7.E27)	-66.74	-48.55	54.13	78.86	3.13	3.13
ELL South Win (Mf.7.E27.W6)	ELL South Wall (Mf.7.E27)	-48.54	-48.55	54.13	97.06	3.13	3.13
ELL South Win (Mf.7.E27.W7)	ELL South Wall (Mf.7.E27)	-30.34	-48.55	54.13	115.26	3.13	3.13
ELL South Win (Mf.7.E27.W8)	ELL South Wall (Mf.7.E27)	-12.14	-48.55	54.13	133.46	3.13	3.13
ELL East Win (Mf.7.E28.W1)	ELL East Wall (Mf.7.E28)	0.00	-39.45	54.13	9.10	3.13	3.13
ELL East Win (Mf.7.E28.W2)	ELL East Wall (Mf.7.E28)	0.00	-15.18	54.13	33.37	3.13	3.13

DATA FOR SPACE ELL Spc (Mg.8) IN FLOOR ELL Floor 8

LOCATION OF ORIGIN IN BUILDING COORDINATES
 XB (FT) YB (FT) ZB (FT) SPACE AZIMUTH (DEG) SPACE*FLOOR MULTIPLIER HEIGHT (FT) AREA (SQFT) VOLUME (CUFT)

0.00 0.00 0.00 0.00 0.00 1.0 8.50 7068.88 60085.48

TOTAL NUMBER OF SURFACES 12
 NUMBER OF EXTERIOR SURFACES 8
 NUMBER OF INTERIOR SURFACES 4
 NUMBER OF UNDERGROUND SURFACES 0
 DAYLIGHTING NC
 SUNSPACE NC

NUMBER OF SUBSURFACES
 EXTERIOR WINDOWS 21
 INTERIOR WINDOWS 0
 DOORS 0

FLOOR WEIGHT (LB/SQFT) 0.0
 CALCULATION TEMPERATURE (F) 70.0

INFILTRATION
 SCHEDULE ZG1-S1 (UVT) P-Inf Sch
 INFILTRATION CALCULATION METHOD AIR-CHANGE
 FLOW RATE (CFM/SQFT) 0.591
 AIR CHANGES PER HOUR 4.18

PEOPLE
 SCHEDULE ELL Bldg Occup Sch
 NUMBER 70.6
 AREA PER PERSON (SQFT) 100.1
 PEOPLE SENSIBLE (BTU/HR) 248.6
 PEOPLE LATENT (BTU/HR) 200.2

EL1 Spc (Mg.8)

LIGHTING

SCHEDULE	LIGHTING TYPE	ELEC LOAD (WATTS/SQFT)	LOAD (WATTS/SQFT)	LOAD (KW)	FRACTION OF LOAD TO SPACE
EL1 Bldg InsLst Sch	SUS-FLOOR	0.27	0.63	4.44	1.00

ELECTRICAL EQUIPMENT

SCHEDULE	ELEC LOAD (WATTS/SQFT)	ELEC LOAD (KW)	FRACTION OF LOAD TO SPACE SENSIBLE	FRACTION OF LOAD TO SPACE LATENT
EL1 Bldg Misc Sch	0.27	1.93	1.00	0.00
EL1 Bldg Cook Sch	0.00	0.00	1.00	0.00
EL1 Bldg SCRfg Sch	0.00	0.00	1.00	0.00
EL1 Bldg SCRfg Sch	2.31	16.34	1.00	0.00

OTHER EQUIPMENT

SCHEDULE	SOURCE TYPE	LOAD (BTU/HR)	FRACTION OF LOAD TO SPACE SENSIBLE	FRACTION OF LOAD TO SPACE LATENT
EL1 Bldg Cook Sch	GAS	45000.0	0.44	0.00

INTERIOR SURFACES (U-VALUE INCLUDES BOTH AIR FILMS)

SURFACE	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)
EL1 Ceiling (Mf.7.I13)	7068.88	EL1 Ceilg Construction	0.520
EL1 Flr (Mg.8.I14)	7068.88	EL1 IFlr Construction	0.515
EL1 Ceiling (Mg.8.I15)	7068.88	EL1 Ceilg Construction	0.520
EL1 Flr (Mh.9.I16)	7068.88	EL1 IFlr Construction	0.515
SURFACE		ADJACENT SPACE	
EL1 Ceiling (Mf.7.I13)		EL1 Spc (Mf.7)	
EL1 Flr (Mg.8.I14)		EL1 Spc (Mf.7)	
EL1 Ceiling (Mg.8.I15)		EL1 Spc (Mh.9)	
EL1 Flr (Mh.9.I16)		EL1 Spc (Mh.9)	

EXTERIOR SURFACES (U-VALUE EXCLUDES OUTSIDE AIR FILM)

SURFACE	MULTIPLIER	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)	SURFACE TYPE
EL1 North Slab (Mg.8.S29)	1.0	72.80	EL1 IFSHL Construction	0.595	DELAYED
EL1 North Wall (Mg.8.E29)	1.0	1237.60	EL1 EWall Construction	0.387	DELAYED
EL1 West Slab (Mg.8.S30)	1.0	24.27	EL1 IFSHL Construction	0.595	DELAYED
EL1 West Wall (Mg.8.E30)	1.0	412.67	EL1 EWall Construction	0.397	DELAYED
EL1 South Slab (Mg.8.S31)	1.0	72.80	EL1 IFSHL Construction	0.595	DELAYED

EXTERIOR SURFACES (U-VALUE EXCLUDES OUTSIDE AIR FILM)

SURFACE	MULTIPLIER	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)			SURFACE TYPE
				U-VALUE	Y (FT)	Z (FT)	
EL1 South Wall (Mg.8.E31)	1.0	1237.60	EL1 EWall Construction	0.397	0.00	0.00	DELAYED
EL1 East Slab (Mg.8.S32)	1.0	24.27	EL1 IFSHL Construction	0.595	0.00	0.00	DELAYED
EL1 East Wall (Mg.8.E32)	1.0	412.67	EL1 EWall Construction	0.397	0.00	0.00	DELAYED

LOCATION OF ORIGIN IN BUILDING COORDINATES

SURFACE	AZIMUTH (DEG)	TILT (DEG)	XB (FT)	YB (FT)	ZB (FT)	X (FT)	Y (FT)	Z (FT)
EL1 North Slab (Mg.8.S29)	-180.0	90.0	0.00	0.00	59.50	0.00	0.00	0.00
EL1 North Wall (Mg.8.E29)	-180.0	90.0	0.00	0.00	59.50	0.00	0.00	0.00
EL1 West Slab (Mg.8.S30)	-270.0	90.0	-145.60	0.00	59.50	145.60	0.00	0.00
EL1 West Wall (Mg.8.E30)	-270.0	90.0	-145.60	0.00	59.50	145.60	0.00	0.00
EL1 South Slab (Mg.8.S31)	0.0	90.0	-145.60	-48.55	59.50	145.60	48.55	0.00
EL1 South Wall (Mg.8.E31)	0.0	90.0	-145.60	-48.55	59.50	145.60	48.55	0.00
EL1 East Slab (Mg.8.S32)	-90.0	90.0	0.00	-48.55	59.50	0.00	48.55	0.00
EL1 East Wall (Mg.8.E32)	-90.0	90.0	0.00	-48.55	59.50	0.00	48.55	0.00

EXTERIOR WINDOWS (U-VALUE INCLUDES OUTSIDE AIR FILM)

WINDOW	MULTIPLIER	GLASS AREA (SQFT)	GLASS WIDTH (FT)	GLASS HEIGHT (FT)	SET-BACK (FT)	NUMBER OF PANEES	CENTER-OF-GLASS U-VALUE (BTU/HR-SQFT-F)	GLASS SHADING COEFF	GLASS VISIBLE TRANS	GLASS SOLAR TRANS
EL1 North Win (Mg.8.E29.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 North Win (Mg.8.E29.W3)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 North Win (Mg.8.E29.W4)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 North Win (Mg.8.E29.W5)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 North Win (Mg.8.E29.W6)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 North Win (Mg.8.E29.W7)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 North Win (Mg.8.E29.W8)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 North Win (Mg.8.E29.W9)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 West Win (Mg.8.E30.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 West Win (Mg.8.E30.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 South Win (Mg.8.E31.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 South Win (Mg.8.E31.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 South Win (Mg.8.E31.W3)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 South Win (Mg.8.E31.W4)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 South Win (Mg.8.E31.W5)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 South Win (Mg.8.E31.W6)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 South Win (Mg.8.E31.W7)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 South Win (Mg.8.E31.W8)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 East Win (Mg.8.E32.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
EL1 East Win (Mg.8.E32.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705

ELL Spc (Mg.8)

WINDOW	LOCATED IN SURFACE	LOCATION OF ORIGIN IN BUILDING COORDINATES				LOCATION OF ORIGIN IN SURFACE COORDINATES			
		XB (FT)	YB (FT)	ZB (FT)	ZB (FT)	X (FT)	Y (FT)	Y (FT)	X (FT)
ELL North Win (Mg.8.E29.W1)	ELL North Wall (Mg.8.E29)	-5.05	0.00	62.63	62.63	5.05	3.13	3.13	5.05
ELL North Win (Mg.8.E29.W2)	ELL North Wall (Mg.8.E29)	-21.23	0.00	62.63	62.63	21.23	3.13	3.13	21.23
ELL North Win (Mg.8.E29.W3)	ELL North Wall (Mg.8.E29)	-37.40	0.00	62.63	62.63	37.40	3.13	3.13	37.40
ELL North Win (Mg.8.E29.W4)	ELL North Wall (Mg.8.E29)	-53.58	0.00	62.63	62.63	53.58	3.13	3.13	53.58
ELL North Win (Mg.8.E29.W5)	ELL North Wall (Mg.8.E29)	-69.76	0.00	62.63	62.63	69.76	3.13	3.13	69.76
ELL North Win (Mg.8.E29.W6)	ELL North Wall (Mg.8.E29)	-85.94	0.00	62.63	62.63	85.94	3.13	3.13	85.94
ELL North Win (Mg.8.E29.W7)	ELL North Wall (Mg.8.E29)	-102.12	0.00	62.63	62.63	102.12	3.13	3.13	102.12
ELL North Win (Mg.8.E29.W8)	ELL North Wall (Mg.8.E29)	-118.29	0.00	62.63	62.63	118.29	3.13	3.13	118.29
ELL North Win (Mg.8.E29.W9)	ELL North Wall (Mg.8.E29)	-134.47	0.00	62.63	62.63	134.47	3.13	3.13	134.47
ELL West Win (Mg.8.E30.W1)	ELL West Wall (Mg.8.E30)	-145.60	-9.10	62.63	62.63	9.10	3.13	3.13	9.10
ELL West Win (Mg.8.E30.W2)	ELL West Wall (Mg.8.E30)	-145.60	-33.37	62.63	62.63	33.37	3.13	3.13	33.37
ELL South Win (Mg.8.E31.W1)	ELL South Wall (Mg.8.E31)	-139.54	-48.55	62.63	62.63	6.06	3.13	3.13	6.06
ELL South Win (Mg.8.E31.W2)	ELL South Wall (Mg.8.E31)	-121.34	-48.55	62.63	62.63	24.26	3.13	3.13	24.26
ELL South Win (Mg.8.E31.W3)	ELL South Wall (Mg.8.E31)	-103.14	-48.55	62.63	62.63	42.46	3.13	3.13	42.46
ELL South Win (Mg.8.E31.W4)	ELL South Wall (Mg.8.E31)	-84.94	-48.55	62.63	62.63	60.66	3.13	3.13	60.66
ELL South Win (Mg.8.E31.W5)	ELL South Wall (Mg.8.E31)	-66.74	-48.55	62.63	62.63	78.86	3.13	3.13	78.86
ELL South Win (Mg.8.E31.W6)	ELL South Wall (Mg.8.E31)	-48.54	-48.55	62.63	62.63	97.06	3.13	3.13	97.06
ELL South Win (Mg.8.E31.W7)	ELL South Wall (Mg.8.E31)	-30.34	-48.55	62.63	62.63	115.26	3.13	3.13	115.26
ELL South Win (Mg.8.E31.W8)	ELL South Wall (Mg.8.E31)	-12.14	-48.55	62.63	62.63	133.46	3.13	3.13	133.46
ELL East Win (Mg.8.E32.W1)	ELL East Wall (Mg.8.E32)	0.00	-39.45	62.63	62.63	9.10	3.13	3.13	9.10
ELL East Win (Mg.8.E32.W2)	ELL East Wall (Mg.8.E32)	0.00	-15.18	62.63	62.63	33.37	3.13	3.13	33.37

DATA FOR SPACE ELL Spc (Mh.9) IN FLOOR ELL Floor 9

LOCATION OF ORIGIN IN BUILDING COORDINATES		SPACE AZIMUTH (DEG)	SPACE*FLOOR MULTIPLIER	HEIGHT (FT)	AREA (SQFT)	VOLUME (CUFT)
XB (FT)	YB (FT)	ZB (FT)				
0.00	0.00	0.00	1.0	8.50	7068.88	60085.48

TOTAL NUMBER OF SURFACES	NUMBER OF EXTERIOR SURFACES	NUMBER OF INTERIOR SURFACES	NUMBER OF UNDERGROUND SURFACES	DAYLIGHTING	SUNSPACE	NO	NO
12	8	4	0				

NUMBER OF SUBSURFACES

TOTAL	EXTERIOR WINDOWS	DOORS	INTERIOR WINDOWS
21	21	0	0

FLOOR WEIGHT (LB/SQFT)

CALCULATION TEMPERATURE (F)	70.0
0.0	

INFILTRATION

SCHEDULE	ZG1-S1 (UVT) P-Inf Sch	INFILTRATION CALCULATION METHOD	AIR-CHANGE	FLOW RATE (CFM/SQFT)	AIR CHANGES PER HOUR
			0.591		4.18

PEOPLE

SCHEDULE	ELL Bldg Occup Sch	NUMBER	AREA PER PERSON (SQFT)	PEOPLE SENSIBLE (BTU/HR)	PEOPLE LATENT (BTU/HR)
		70.6	100.1	248.6	200.2

LIGHTING

SCHEDULE	LIGHTING TYPE	LOAD (WATTS/SQFT)	LOAD (KW)	FRACTION OF LOAD TO SPACE
ELL Bldg InsIt Sch	SUS-FLUOR	0.63	4.44	1.00

ELECTRICAL EQUIPMENT

SCHEDULE	ELEC LOAD (WATTS/SQFT)	ELEC LOAD (KW)	FRACTION OF LOAD TO SPACE SENSIBLE	FRACTION OF LOAD TO SPACE LATENT
ELL Bldg Misc Sch	0.27	1.93	1.00	0.00
ELL Bldg Cook Sch	0.00	0.00	1.00	0.00
ELL Bldg SCRfg Sch	0.00	0.00	1.00	0.00
ELL Bldg SCRfg Sch	2.31	16.34	1.00	0.00

OTHER EQUIPMENT

SCHEDULE	SOURCE TYPE	LOAD (BTU/HR)	FRACTION OF LOAD TO SPACE SENSIBLE	FRACTION OF LOAD TO SPACE LATENT
ELL Bldg Cook Sch	GAS	45000.0	0.44	0.00

INTERIOR SURFACES (U-VALUE INCLUDES BOTH AIR FILMS)

SURFACE	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)
ELL Ceiling (Mg.8.I15)	7068.88	ELL Ceilg Construction	0.520
ELL Flr (Mh.9.I16)	7068.88	ELL IFlr Construction	0.515
ELL Ceiling (Mh.9.I17)	7068.88	ELL Ceilg Construction	0.520
ELL Flr (T.10.I18)	7068.88	ELL IFlr Construction	0.515
SURFACE		ADJACENT SPACE	
ELL Ceiling (Mg.8.I15)		ELL Spc (Mg.8)	
ELL Flr (Mh.9.I16)		ELL Spc (Mg.8)	
ELL Ceiling (Mh.9.I17)		ELL Spc (T.10)	
ELL Flr (T.10.I18)		ELL Spc (T.10)	

EXTERIOR SURFACES (U-VALUE EXCLUDES OUTSIDE AIR FILM)

SURFACE	MULTIPLIER	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)	SURFACE TYPE
ELL North Slab (Mh.9.S33)	1.0	72.80	ELL IFSHL Construction	0.595	DELAYED
ELL North Wall (Mh.9.E33)	1.0	1237.60	ELL EWall Construction	0.397	DELAYED
ELL West Slab (Mh.9.S34)	1.0	24.27	ELL IFSHL Construction	0.595	DELAYED
ELL West Wall (Mh.9.E34)	1.0	412.67	ELL EWall Construction	0.397	DELAYED
ELL South Slab (Mh.9.S35)	1.0	72.80	ELL IFSHL Construction	0.595	DELAYED

EXTERIOR SURFACES (U-VALUE EXCLUDES OUTSIDE AIR FILM)

SURFACE	MULTIPLIER	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)	SURFACE TYPE
ELL South Wall (Mh.9.E35)	1.0	1237.60	ELL EWall Construction	0.397	DELAYED
ELL East Slab (Mh.9.E36)	1.0	24.27	ELL IFSHL Construction	0.595	DELAYED
ELL East Wall (Mh.9.E36)	1.0	412.67	ELL EWall Construction	0.397	DELAYED

LOCATION OF ORIGIN IN BUILDING COORDINATES

SURFACE	AZIMUTH (DEG)	TILT (DEG)	XB (FT)	YB (FT)	ZB (FT)	X (FT)	Y (FT)	Z (FT)
ELL North Slab (Mh.9.E33)	-180.0	90.0	0.00	0.00	68.00	0.00	0.00	0.00
ELL North Wall (Mh.9.E33)	-180.0	90.0	0.00	0.00	68.00	0.00	0.00	0.00
ELL West Slab (Mh.9.E34)	-270.0	90.0	-145.60	0.00	68.00	145.60	0.00	0.00
ELL West Wall (Mh.9.E34)	-270.0	90.0	-145.60	0.00	68.00	145.60	0.00	0.00
ELL South Slab (Mh.9.E35)	0.0	90.0	-145.60	-48.55	68.00	145.60	48.55	0.00
ELL South Wall (Mh.9.E35)	0.0	90.0	-145.60	-48.55	68.00	145.60	48.55	0.00
ELL East Slab (Mh.9.E36)	-90.0	90.0	0.00	-48.55	68.00	0.00	48.55	0.00
ELL East Wall (Mh.9.E36)	-90.0	90.0	0.00	-48.55	68.00	0.00	48.55	0.00

EXTERIOR WINDOWS (U-VALUE INCLUDES OUTSIDE AIR FILM)

WINDOW	MULTIPLIER	GLASS AREA (SQFT)	GLASS WIDTH (FT)	GLASS HEIGHT (FT)	SET-BACK (FT)	NUMBER OF PANEES	GLASS U-VALUE (BTU/HR-SQFT-F)	GLASS SHADING COEFF	GLASS VISIBLE TRANS	GLASS SOIAR TRANS
ELL North Win (Mh.9.E33.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mh.9.E33.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mh.9.E33.W3)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mh.9.E33.W4)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mh.9.E33.W5)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mh.9.E33.W6)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mh.9.E33.W7)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mh.9.E33.W8)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL North Win (Mh.9.E33.W9)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL West Win (Mh.9.E34.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL West Win (Mh.9.E34.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mh.9.E35.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mh.9.E35.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mh.9.E35.W3)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mh.9.E35.W4)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mh.9.E35.W5)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mh.9.E35.W6)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mh.9.E35.W7)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL South Win (Mh.9.E35.W8)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL East Win (Mh.9.E36.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705
ELL East Win (Mh.9.E36.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.705

REPORT- LV-C Details of Space EL1 Spc (Mh.9) WEATHER FILE- New York CityNY TMY2 (CONTINUED)

WINDOW	LOCATED IN SURFACE	LOCATION OF ORIGIN IN BUILDING COORDINATES			LOCATION OF ORIGIN IN SURFACE COORDINATES		
		XB (FT)	YB (FT)	ZB (FT)	X (FT)	Y (FT)	Z (FT)
EL1 North Win (Mh.9.E33.W1)	EL1 North Wall (Mh.9.E33)	-5.05	0.00	71.13	5.05	3.13	3.13
EL1 North Win (Mh.9.E33.W2)	EL1 North Wall (Mh.9.E33)	-21.23	0.00	71.13	21.23	3.13	3.13
EL1 North Win (Mh.9.E33.W3)	EL1 North Wall (Mh.9.E33)	-37.40	0.00	71.13	37.40	3.13	3.13
EL1 North Win (Mh.9.E33.W4)	EL1 North Wall (Mh.9.E33)	-53.58	0.00	71.13	53.58	3.13	3.13
EL1 North Win (Mh.9.E33.W5)	EL1 North Wall (Mh.9.E33)	-69.76	0.00	71.13	69.76	3.13	3.13
EL1 North Win (Mh.9.E33.W6)	EL1 North Wall (Mh.9.E33)	-85.94	0.00	71.13	85.94	3.13	3.13
EL1 North Win (Mh.9.E33.W7)	EL1 North Wall (Mh.9.E33)	-102.12	0.00	71.13	102.12	3.13	3.13
EL1 North Win (Mh.9.E33.W8)	EL1 North Wall (Mh.9.E33)	-118.29	0.00	71.13	118.29	3.13	3.13
EL1 North Win (Mh.9.E33.W9)	EL1 North Wall (Mh.9.E33)	-134.47	0.00	71.13	134.47	3.13	3.13
EL1 West Win (Mh.9.E34.W1)	EL1 West Wall (Mh.9.E34)	-145.60	-9.10	71.13	9.10	3.13	3.13
EL1 West Win (Mh.9.E34.W2)	EL1 West Wall (Mh.9.E34)	-145.60	-9.10	71.13	9.10	3.13	3.13
EL1 South Win (Mh.9.E35.W1)	EL1 South Wall (Mh.9.E35)	-33.37	-48.55	71.13	33.37	3.13	3.13
EL1 South Win (Mh.9.E35.W2)	EL1 South Wall (Mh.9.E35)	-48.55	-48.55	71.13	6.06	3.13	3.13
EL1 South Win (Mh.9.E35.W3)	EL1 South Wall (Mh.9.E35)	-121.34	-48.55	71.13	24.26	3.13	3.13
EL1 South Win (Mh.9.E35.W4)	EL1 South Wall (Mh.9.E35)	-103.14	-48.55	71.13	42.46	3.13	3.13
EL1 South Win (Mh.9.E35.W5)	EL1 South Wall (Mh.9.E35)	-84.94	-48.55	71.13	60.66	3.13	3.13
EL1 South Win (Mh.9.E35.W6)	EL1 South Wall (Mh.9.E35)	-66.74	-48.55	71.13	78.86	3.13	3.13
EL1 South Win (Mh.9.E35.W7)	EL1 South Wall (Mh.9.E35)	-48.54	-48.55	71.13	97.06	3.13	3.13
EL1 South Win (Mh.9.E35.W8)	EL1 South Wall (Mh.9.E35)	-30.34	-48.55	71.13	115.26	3.13	3.13
EL1 South Win (Mh.9.E35.W9)	EL1 South Wall (Mh.9.E35)	-12.14	-48.55	71.13	133.46	3.13	3.13
EL1 East Win (Mh.9.E36.W1)	EL1 East Wall (Mh.9.E36)	0.00	-39.45	71.13	9.10	3.13	3.13
EL1 East Win (Mh.9.E36.W2)	EL1 East Wall (Mh.9.E36)	0.00	-15.18	71.13	33.37	3.13	3.13

TMHA Franklin Tower - DETAILED
 REPORT- LV-C Details of Space

DOB-2.2-47d 9/13/2010 9:19:20 BDL RUN 1
 WEATHER FILE- New York CityNY TMY2

ELL Spc (T.10)

DATA FOR SPACE	ELL Spc (T.10)	IN FLOOR	ELL Top Flr	SPACE AZIMUTH (DEG)	SPACE*FLOOR MULTIPLIER	HEIGHT (FT)	AREA (SQFT)	VOLUME (CUFT)
XB (FT) YB (FT) ZB (FT)	0.00 0.00 0.00			0.00	1.0	8.50	7068.88	60085.48
TOTAL NUMBER OF SURFACES	9	0	0	2	0	NO	NO	NO
NUMBER OF SUBSURFACES								
EXTERIOR WINDOWS	21	0	0	0	0	NO	NO	NO
INTERIOR WINDOWS	0	0	0	0	0	NO	NO	NO
DOORS	0	0	0	0	0	NO	NO	NO
FLOOR WEIGHT (LB/SQFT)	0.0							
CALCULATION TEMPERATURE (F)	70.0							
INFILTRATION								
SCHEDULE	ZG2-S1 (UVT) P-Inf Sch							
INFILTRATION CALCULATION METHOD	AIR-CHANGE	0.591						
AIR CHANGES PER HOUR							4.18	
PEOPLE								
SCHEDULE	ELL Bldg Occup Sch	70.6						
AREA PER PERSON (SQFT)		100.1						
PEOPLE SENSIBLE (BTU/HR)		248.6						
PEOPLE LATENT (BTU/HR)		200.2						

LIGHTING

SCHEDULE	LIGHTING TYPE	LOAD (WATTS/SQFT)	FRACTION OF LOAD TO SPACE
ELL Bldg InsIt Sch	SUS-FLOOR	0.63	1.00

ELECTRICAL EQUIPMENT

SCHEDULE	ELEC LOAD (WATTS/SQFT)	ELEC LOAD (KW)	FRACTION OF LOAD TO SPACE SENSIBLE	FRACTION OF LOAD TO SPACE LATENT
ELL Bldg Misc Sch	0.27	1.93	1.00	0.00
ELL Bldg Cook Sch	0.00	0.00	1.00	0.00
ELL Bldg SCRfg Sch	0.00	0.00	1.00	0.00
ELL Bldg SCRfg Sch	2.31	16.34	1.00	0.00

OTHER EQUIPMENT

SCHEDULE	SOURCE TYPE	LOAD (BTU/HR)	FRACTION OF LOAD TO SPACE SENSIBLE	FRACTION OF LOAD TO SPACE LATENT
ELL Bldg Cook Sch	GAS	45000.0	0.44	0.00

INTERIOR SURFACES (U-VALUE INCLUDES BOTH AIR FILMS)

SURFACE	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)
ELL Ceiling (Mh.9.I17)	7068.88	ELL Ceilg Construction	0.520
ELL Flr (T.10.I18)	7068.88	ELL IFlr Construction	0.515
SURFACE		ADJACENT SPACE	
ELL Ceiling (Mh.9.I17)		ELL Spc (Mh.9)	
ELL Flr (T.10.I18)		ELL Spc (Mh.9)	

EXTERIOR SURFACES (U-VALUE EXCLUDES OUTSIDE AIR FILM)

SURFACE	MULTIPLIER	AREA (SQFT)	CONSTRUCTION	U-VALUE (BTU/HR-SQFT-F)	SURFACE TYPE
ELL North Slab (T.10.S37)	1.0	72.80	ELL IFSHL Construction	0.595	DELAYED
ELL North Wall (T.10.E37)	1.0	1237.60	ELL EWall Construction	0.397	DELAYED
ELL West Slab (T.10.S38)	1.0	24.27	ELL IFSHL Construction	0.595	DELAYED
ELL West Wall (T.10.E38)	1.0	412.67	ELL EWall Construction	0.397	DELAYED
ELL South Slab (T.10.S39)	1.0	72.80	ELL IFSHL Construction	0.595	DELAYED
ELL South Wall (T.10.E39)	1.0	1237.60	ELL EWall Construction	0.397	DELAYED
ELL East Slab (T.10.S40)	1.0	24.27	ELL IFSHL Construction	0.595	DELAYED
ELL East Wall (T.10.E40)	1.0	412.67	ELL EWall Construction	0.397	DELAYED
ELL Roof (T.10.E41)	1.0	7068.88	ELL Roof Construction	0.093	DELAYED

SURFACE	AZIMUTH (DEG)	TILT (DEG)	LOCATION OF ORIGIN IN BUILDING COORDINATES			LOCATION OF ORIGIN IN SPACE COORDINATES		
			XB (FT)	YB (FT)	ZB (FT)	X (FT)	Y (FT)	Z (FT)
EL1 North Slab (T.10.S37)	-180.0	90.0	0.00	0.00	76.50	0.00	0.00	0.00
EL1 North Wall (T.10.E37)	-180.0	90.0	0.00	0.00	76.50	0.00	0.00	0.00
EL1 West Slab (T.10.S38)	-270.0	90.0	-145.60	0.00	76.50	145.60	0.00	0.00
EL1 West Wall (T.10.E38)	-270.0	90.0	-145.60	0.00	76.50	145.60	0.00	0.00
EL1 South Slab (T.10.S39)	0.0	90.0	-145.60	-48.55	76.50	145.60	48.55	0.00
EL1 South Wall (T.10.E39)	0.0	90.0	-145.60	-48.55	76.50	145.60	48.55	0.00
EL1 East Slab (T.10.S40)	-90.0	90.0	0.00	-48.55	76.50	0.00	48.55	0.00
EL1 East Wall (T.10.E40)	-90.0	90.0	0.00	-48.55	76.50	0.00	48.55	0.00
EL1 Roof (T.10.E41)	180.0	0.0	-145.60	0.00	85.00	0.00	0.00	8.50

EXTERIOR WINDOWS (U-VALUE INCLUDES OUTSIDE AIR FILM)

WINDOW	MULTIPLIER	GLASS AREA (SQFT)	GLASS WIDTH (FT)	GLASS HEIGHT (FT)	SET- BACK (FT)	NUMBER OF PANES	CENTER-OF- GLASS U-VALUE (BTU/HR-SQFT-F)	GLASS VISIBLE TRANS		GLASS SOLAR TRANS	
								COEFF	COEFF	COEFF	COEFF
EL1 North Win (T.10.E37.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.812	0.705
EL1 North Win (T.10.E37.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.812	0.705
EL1 North Win (T.10.E37.W3)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.812	0.705
EL1 North Win (T.10.E37.W4)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.812	0.705
EL1 North Win (T.10.E37.W5)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.812	0.705
EL1 North Win (T.10.E37.W6)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.812	0.705
EL1 North Win (T.10.E37.W7)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.812	0.705
EL1 North Win (T.10.E37.W8)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.812	0.705
EL1 North Win (T.10.E37.W9)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.812	0.705
EL1 West Win (T.10.E38.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.812	0.705
EL1 West Win (T.10.E38.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.812	0.705
EL1 South Win (T.10.E39.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.812	0.705
EL1 South Win (T.10.E39.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.812	0.705
EL1 South Win (T.10.E39.W3)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.812	0.705
EL1 South Win (T.10.E39.W4)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.812	0.705
EL1 South Win (T.10.E39.W5)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.812	0.705
EL1 South Win (T.10.E39.W6)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.812	0.705
EL1 South Win (T.10.E39.W7)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.812	0.705
EL1 South Win (T.10.E39.W8)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.812	0.705
EL1 East Win (T.10.E40.W1)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.812	0.705
EL1 East Win (T.10.E40.W2)	1.0	27.85	6.08	4.58	0.00	2	0.547	0.88	0.812	0.812	0.705

LOCATED IN
SURFACE

WINDOW	XB (FT)	YB (FT)	ZB (FT)	X (FT)	Y (FT)	Z (FT)
EL1 North Win (T.10.E37.W1)	-5.05	0.00	79.63	5.05	3.13	3.13
EL1 North Win (T.10.E37.W2)	-21.23	0.00	79.63	21.23	3.13	3.13
EL1 North Win (T.10.E37.W3)	-37.40	0.00	79.63	37.40	3.13	3.13
EL1 North Win (T.10.E37.W4)	-53.58	0.00	79.63	53.58	3.13	3.13
EL1 North Win (T.10.E37.W5)	-69.76	0.00	79.63	69.76	3.13	3.13
EL1 North Win (T.10.E37.W6)	-85.94	0.00	79.63	85.94	3.13	3.13
EL1 North Win (T.10.E37.W7)	-102.12	0.00	79.63	102.12	3.13	3.13
EL1 North Win (T.10.E37.W8)	-118.29	0.00	79.63	118.29	3.13	3.13

LOCATION OF ORIGIN IN
SURFACE COORDINATES

WINDOW	XB (FT)	YB (FT)	ZB (FT)	X (FT)	Y (FT)	Z (FT)
EL1 North Win (T.10.E37.W1)	-5.05	0.00	79.63	5.05	3.13	3.13
EL1 North Win (T.10.E37.W2)	-21.23	0.00	79.63	21.23	3.13	3.13
EL1 North Win (T.10.E37.W3)	-37.40	0.00	79.63	37.40	3.13	3.13
EL1 North Win (T.10.E37.W4)	-53.58	0.00	79.63	53.58	3.13	3.13
EL1 North Win (T.10.E37.W5)	-69.76	0.00	79.63	69.76	3.13	3.13
EL1 North Win (T.10.E37.W6)	-85.94	0.00	79.63	85.94	3.13	3.13
EL1 North Win (T.10.E37.W7)	-102.12	0.00	79.63	102.12	3.13	3.13
EL1 North Win (T.10.E37.W8)	-118.29	0.00	79.63	118.29	3.13	3.13

WINDOW	LOCATED IN SURFACE	LOCATION OF ORIGIN IN BUILDING COORDINATES			LOCATION OF ORIGIN IN SURFACE COORDINATES		
		XB (FT)	YB (FT)	ZB (FT)	X (FT)	Y (FT)	Z (FT)
EL1 North Win (T.10.E37.W9)	EL1 North Wall (T.10.E37)	-134.47	0.00	79.63	134.47	3.13	3.13
EL1 West Win (T.10.E38.W1)	EL1 West Wall (T.10.E38)	-145.60	-9.10	79.63	9.10	3.13	3.13
EL1 West Win (T.10.E38.W2)	EL1 West Wall (T.10.E38)	-145.60	-33.37	79.63	33.37	3.13	3.13
EL1 South Win (T.10.E39.W1)	EL1 South Wall (T.10.E39)	-139.54	-48.55	79.63	6.06	3.13	3.13
EL1 South Win (T.10.E39.W2)	EL1 South Wall (T.10.E39)	-121.34	-48.55	79.63	24.26	3.13	3.13
EL1 South Win (T.10.E39.W3)	EL1 South Wall (T.10.E39)	-103.14	-48.55	79.63	42.46	3.13	3.13
EL1 South Win (T.10.E39.W4)	EL1 South Wall (T.10.E39)	-84.94	-48.55	79.63	60.66	3.13	3.13
EL1 South Win (T.10.E39.W5)	EL1 South Wall (T.10.E39)	-66.74	-48.55	79.63	78.86	3.13	3.13
EL1 South Win (T.10.E39.W6)	EL1 South Wall (T.10.E39)	-48.54	-48.55	79.63	97.06	3.13	3.13
EL1 South Win (T.10.E39.W7)	EL1 South Wall (T.10.E39)	-30.34	-48.55	79.63	115.26	3.13	3.13
EL1 South Win (T.10.E39.W8)	EL1 South Wall (T.10.E39)	-12.14	-48.55	79.63	133.46	3.13	3.13
EL1 East Win (T.10.E40.W1)	EL1 East Wall (T.10.E40)	0.00	-39.45	79.63	9.10	3.13	3.13
EL1 East Win (T.10.E40.W2)	EL1 East Wall (T.10.E40)	0.00	-15.18	79.63	33.37	3.13	3.13

NUMBER OF EXTERIOR SURFACES 77
(U-VALUE INCLUDES OUTSIDE FILM; WINDOW INCLUDES FRAME AND CURB, IF DEFINED)

SURFACE	-- W I N D O W S -- U-VALUE (BTU/HR-SQFT-F)	AREA (SQFT)	-- W A L L -- U-VALUE (BTU/HR-SQFT-F)	AREA (SQFT)	-- W A L L + W I N D O W S -- U-VALUE (BTU/HR-SQFT-F)	AREA (SQFT)	AZIMUTH
EL1 North Wall (G.1.E1) in space: EL1 Spc (G.1)	0.573	244.59	0.342	993.01	0.388	1237.60	NORTH
EL1 North Slab (M.2.S5) in space: EL1 Spc (M.2)	0.000	0.00	0.481	72.80	0.481	72.80	NORTH
EL1 North Wall (M.2.E5) in space: EL1 Spc (M.2)	0.573	275.17	0.342	962.43	0.394	1237.60	NORTH
EL1 North Slab (M.3.S9) in space: EL1 Spc (M.3)	0.000	0.00	0.481	72.80	0.481	72.80	NORTH
EL1 North Wall (M.3.E9) in space: EL1 Spc (M.3)	0.573	275.17	0.342	962.43	0.394	1237.60	NORTH
EL1 North Slab (M.4.S13) in space: EL1 Spc (M.4)	0.000	0.00	0.481	72.80	0.481	72.80	NORTH
EL1 North Wall (M.4.E13) in space: EL1 Spc (M.4)	0.573	275.17	0.342	962.43	0.394	1237.60	NORTH
EL1 North Slab (M.5.S17) in space: EL1 Spc (M.5)	0.000	0.00	0.481	72.80	0.481	72.80	NORTH
EL1 North Wall (M.5.E17) in space: EL1 Spc (M.5)	0.573	275.17	0.342	962.43	0.394	1237.60	NORTH
EL1 North Slab (M.6.S21) in space: EL1 Spc (M.6)	0.000	0.00	0.481	72.80	0.481	72.80	NORTH
EL1 North Wall (M.6.E21) in space: EL1 Spc (M.6)	0.573	275.17	0.342	962.43	0.394	1237.60	NORTH
EL1 North Slab (M.7.S25) in space: EL1 Spc (M.7)	0.000	0.00	0.481	72.80	0.481	72.80	NORTH
EL1 North Wall (M.7.E25) in space: EL1 Spc (M.7)	0.573	275.17	0.342	962.43	0.394	1237.60	NORTH
EL1 North Slab (M.8.S29) in space: EL1 Spc (M.8)	0.000	0.00	0.481	72.80	0.481	72.80	NORTH
EL1 North Wall (M.8.E29) in space: EL1 Spc (M.8)	0.573	275.17	0.342	962.43	0.394	1237.60	NORTH
EL1 North Slab (M.9.S33) in space: EL1 Spc (M.9)	0.000	0.00	0.481	72.80	0.481	72.80	NORTH
EL1 North Wall (M.9.E33) in space: EL1 Spc (M.9)	0.573	275.17	0.342	962.43	0.394	1237.60	NORTH
EL1 North Slab (T.10.S37) in space: EL1 Spc (T.10)	0.000	0.00	0.481	72.80	0.481	72.80	NORTH
EL1 North Wall (T.10.E37) in space: EL1 Spc (T.10)	0.573	275.17	0.342	962.43	0.394	1237.60	NORTH
EL1 East Wall (N.2.E8) in space: EL1 Spc (M.2)	0.573	61.15	0.342	351.53	0.377	412.67	EAST
EL1 East Slab (Me.6.S24) in space: EL1 Spc (Me.6)	0.000	0.00	0.481	24.27	0.481	24.27	EAST
EL1 East Wall (Me.6.E24) in space: EL1 Spc (Me.6)	0.573	61.15	0.342	351.53	0.377	412.67	EAST
EL1 East Wall (G.1.E4) in space: EL1 Spc (G.1)	0.573	61.15	0.342	351.53	0.377	412.67	EAST
EL1 East Slab (Mc.4.S16) in space: EL1 Spc (Mc.4)	0.000	0.00	0.481	24.27	0.481	24.27	EAST

REPORT- LV-D Details of Exterior Surfaces

WEATHER FILE- New York City NY TMY2
(CONTINUED)

	0.000	0.00	0.481	72.80	0.481	72.80	SOUTH
ELI South Slab (T.10.S39)	0.000	0.00	0.481	72.80	0.481	72.80	SOUTH
in space: ELI Spc (T.10)							
ELI South Wall (T.10.E39)	0.573	244.59	0.342	993.01	0.388	1237.60	SOUTH
in space: ELI Spc (T.10)							
ELI South Wall (Mf.7.E27)	0.573	244.59	0.342	993.01	0.388	1237.60	SOUTH
in space: ELI Spc (Mf.7)							
ELI South Wall (Md.5.E19)	0.573	244.59	0.342	993.01	0.388	1237.60	SOUTH
in space: ELI Spc (Md.5)							
ELI West Wall (Md.5.E18)	0.573	61.15	0.342	351.53	0.377	412.67	WEST
in space: ELI Spc (Md.5)							
ELI West Wall (Mc.4.E14)	0.573	61.15	0.342	351.53	0.377	412.67	WEST
in space: ELI Spc (Mc.4)							
ELI West Slab (M.2.S6)	0.000	0.00	0.481	24.27	0.481	24.27	WEST
in space: ELI Spc (M.2)							
ELI West Wall (M.2.E6)	0.573	61.15	0.342	351.53	0.377	412.67	WEST
in space: ELI Spc (M.2)							
ELI West Slab (Mf.7.S26)	0.000	0.00	0.481	24.27	0.481	24.27	WEST
in space: ELI Spc (Mf.7)							
ELI West Slab (Mh.9.S34)	0.000	0.00	0.481	24.27	0.481	24.27	WEST
in space: ELI Spc (Mh.9)							
ELI West Wall (Mh.9.E34)	0.573	61.15	0.342	351.53	0.377	412.67	WEST
in space: ELI Spc (Mh.9)							
ELI West Wall (Mf.7.E26)	0.573	61.15	0.342	351.53	0.377	412.67	WEST
in space: ELI Spc (Mf.7)							
ELI West Slab (Mb.3.S10)	0.000	0.00	0.481	24.27	0.481	24.27	WEST
in space: ELI Spc (Mb.3)							
ELI West Wall (Mb.3.E10)	0.573	61.15	0.342	351.53	0.377	412.67	WEST
in space: ELI Spc (Mb.3)							
ELI West Wall (G.1.E2)	0.692	82.15	0.342	330.53	0.412	412.67	WEST
in space: ELI Spc (G.1)							
ELI West Slab (Me.6.S22)	0.000	0.00	0.481	24.27	0.481	24.27	WEST
in space: ELI Spc (Me.6)							
ELI West Wall (Me.6.E22)	0.573	61.15	0.342	351.53	0.377	412.67	WEST
in space: ELI Spc (Me.6)							
ELI West Slab (T.10.S38)	0.000	0.00	0.481	24.27	0.481	24.27	WEST
in space: ELI Spc (T.10)							
ELI West Wall (T.10.E38)	0.573	61.15	0.342	351.53	0.377	412.67	WEST
in space: ELI Spc (T.10)							
ELI West Slab (Mc.4.S14)	0.000	0.00	0.481	24.27	0.481	24.27	WEST
in space: ELI Spc (Mc.4)							
ELI West Slab (Mg.8.S30)	0.000	0.00	0.481	24.27	0.481	24.27	WEST
in space: ELI Spc (Mg.8)							
ELI West Wall (Mg.8.E30)	0.573	61.15	0.342	351.53	0.377	412.67	WEST
in space: ELI Spc (Mg.8)							
ELI West Slab (Md.5.S18)	0.000	0.00	0.481	24.27	0.481	24.27	WEST
in space: ELI Spc (Md.5)							
ELI Roof (T.10.E41)	0.000	0.00	0.089	7068.88	0.089	7068.88	ROOF
in space: ELI Spc (T.10)							
ELI Flr (G.1.U1)	0.000	0.00	0.043	7068.88	0.043	7068.88	UNDERGRND
in space: ELI Spc (G.1)							

	AVERAGE U-VALUE/WINDOWS (BTU/HR-SQFT-F)	AVERAGE U-VALUE/WALLS (BTU/HR-SQFT-F)	AVERAGE U-VALUE WALLS+WINDOWS (BTU/HR-SQFT-F)	WINDOW AREA (SQFT)	WALL AREA (SQFT)	WINDOW+WALL AREA (SQFT)
NORTH	0.573	0.351	0.398	2721.08	10310.12	13031.20
EAST	0.573	0.351	0.382	611.48	3733.75	4345.22
SOUTH	0.588	0.351	0.396	2466.76	10562.44	13031.20
WEST	0.588	0.351	0.385	632.48	3712.75	4345.22
ROOF	0.000	0.089	0.089	0.00	7068.88	7068.88
ALL WALLS	0.580	0.351	0.393	6433.80	28319.07	34752.86
WALLS+ROOFS	0.580	0.299	0.342	6433.80	35387.95	41821.74
UNDERGRND	0.000	0.043	0.043	0.00	7068.88	7068.88
BUILDING	0.580	0.256	0.299	6433.80	42456.83	48890.62

TMEA Franklin Tower - DETAILED
REPORT- LV-E Details of Underground Surfaces
DOB-2.2-47d 9/13/2010 9:19:20 BDL RDN 1
WEATHER FILE- New York CityNY TMY2

NUMBER OF UNDERGROUND SURFACES 1

SURFACE NAME	MULTIPLIER	AREA (SQFT)	CONSTRUCTION NAME	U-VALUE (BTU/HR-SQFT-F)
EL1 FLZ (G.1.01)	1.0	7068.88	EL1 UFCons (G.1.U2)	0.043

REPORT- IV-F Details of Interior Surfaces

WEATHER FILE- New York CityNY TMY2

Number of Interior Surfaces 18
(U-VALUE includes both air films)

SURFACE NAME	AREA (SQFT)	CONSTRUCTION NAME	SURFACE TYPE	U-VALUE (BTU/HR-SQFT-F)
EL1 Ceiling (G.1.I1)	7068.88	EL1 Ceilg Construction	DELAYED STANDARD	0.805
EL1 Flr (M.2.I2)	7068.88	EL1 IFlr Construction	DELAYED STANDARD	0.794
EL1 Ceiling (M.2.I3)	7068.88	EL1 Ceilg Construction	DELAYED STANDARD	0.805
EL1 Flr (Mb.3.I4)	7068.88	EL1 IFlr Construction	DELAYED STANDARD	0.794
EL1 Ceiling (Mb.3.I5)	7068.88	EL1 Ceilg Construction	DELAYED STANDARD	0.805
EL1 Flr (Mc.4.I6)	7068.88	EL1 IFlr Construction	DELAYED STANDARD	0.794
EL1 Ceiling (Mc.4.I7)	7068.88	EL1 Ceilg Construction	DELAYED STANDARD	0.805
EL1 Flr (Md.5.I8)	7068.88	EL1 IFlr Construction	DELAYED STANDARD	0.794
EL1 Ceiling (Md.5.I9)	7068.88	EL1 Ceilg Construction	DELAYED STANDARD	0.805
EL1 Flr (Me.6.I10)	7068.88	EL1 IFlr Construction	DELAYED STANDARD	0.794
EL1 Ceiling (Me.6.I11)	7068.88	EL1 Ceilg Construction	DELAYED STANDARD	0.805
EL1 Flr (Mf.7.I12)	7068.88	EL1 IFlr Construction	DELAYED STANDARD	0.794
EL1 Ceiling (Mf.7.I13)	7068.88	EL1 Ceilg Construction	DELAYED STANDARD	0.805
EL1 Flr (Mg.8.I14)	7068.88	EL1 IFlr Construction	DELAYED STANDARD	0.794
EL1 Ceiling (Mg.8.I15)	7068.88	EL1 Ceilg Construction	DELAYED STANDARD	0.805
EL1 Flr (Mh.9.I16)	7068.88	EL1 IFlr Construction	DELAYED STANDARD	0.794
EL1 Ceiling (Mh.9.I17)	7068.88	EL1 Ceilg Construction	DELAYED STANDARD	0.805
EL1 Flr (T.10.I18)	7068.88	EL1 IFlr Construction	DELAYED STANDARD	0.794

ADJACENT SPACES

SURFACE NAME	SPACE-1	SPACE-2
EL1 Ceiling (G.1.I1)	EL1 Spc (G.1)	EL1 Spc (M.2)
EL1 Flr (M.2.I2)	EL1 Spc (M.2)	EL1 Spc (G.1)
EL1 Ceiling (M.2.I3)	EL1 Spc (M.2)	EL1 Spc (Mb.3)
EL1 Flr (Mb.3.I4)	EL1 Spc (Mb.3)	EL1 Spc (M.2)
EL1 Ceiling (Mb.3.I5)	EL1 Spc (Mb.3)	EL1 Spc (Mc.4)
EL1 Flr (Mc.4.I6)	EL1 Spc (Mc.4)	EL1 Spc (Mb.3)
EL1 Ceiling (Mc.4.I7)	EL1 Spc (Mc.4)	EL1 Spc (Md.5)
EL1 Flr (Md.5.I8)	EL1 Spc (Md.5)	EL1 Spc (Mc.4)
EL1 Ceiling (Md.5.I9)	EL1 Spc (Md.5)	EL1 Spc (Me.6)
EL1 Flr (Me.6.I10)	EL1 Spc (Me.6)	EL1 Spc (Md.5)
EL1 Ceiling (Me.6.I11)	EL1 Spc (Me.6)	EL1 Spc (Mf.7)
EL1 Flr (Mf.7.I12)	EL1 Spc (Mf.7)	EL1 Spc (Me.6)
EL1 Ceiling (Mf.7.I13)	EL1 Spc (Mf.7)	EL1 Spc (Mg.8)
EL1 Flr (Mg.8.I14)	EL1 Spc (Mg.8)	EL1 Spc (Mf.7)
EL1 Ceiling (Mg.8.I15)	EL1 Spc (Mg.8)	EL1 Spc (Mh.9)
EL1 Flr (Mh.9.I16)	EL1 Spc (Mh.9)	EL1 Spc (Mg.8)
EL1 Ceiling (Mh.9.I17)	EL1 Spc (Mh.9)	EL1 Spc (T.10)
EL1 Flr (T.10.I18)	EL1 Spc (T.10)	EL1 Spc (Mh.9)

NUMBER OF WINDOWS 210

(Note: u-values include outside air film)

WINDOW NAME	MULTIPLIER	GLASS AREA (SQFT)	GLASS HEIGHT (FT)	GLASS WIDTH (FT)	LOCATION OF ORIGIN IN SURFACE COORDINATES X (FT) Y (FT)	FRAME AREA (SQFT)	CURB U-VALUE (BTU/HR-SQFT-F)	FRAME CURB U-VALUE (BTU/HR-SQFT-F)
EL1 North Win (G.1.E1.W1)	1.0	27.85	4.58	6.08	5.05 3.13	2.73	0.00	0.840
EL1 North Win (G.1.E1.W2)	1.0	27.85	4.58	6.08	21.23 3.13	2.73	0.00	0.840
EL1 North Win (G.1.E1.W3)	1.0	27.85	4.58	6.08	37.40 3.13	2.73	0.00	0.840
EL1 North Win (G.1.E1.W4)	1.0	27.85	4.58	6.08	53.58 3.13	2.73	0.00	0.840
EL1 North Win (G.1.E1.W5)	1.0	27.85	4.58	6.08	85.94 3.13	2.73	0.00	0.840
EL1 North Win (G.1.E1.W6)	1.0	27.85	4.58	6.08	102.12 3.13	2.73	0.00	0.840
EL1 North Win (G.1.E1.W7)	1.0	27.85	4.58	6.08	118.29 3.13	2.73	0.00	0.840
EL1 North Win (G.1.E1.W8)	1.0	27.85	4.58	6.08	134.47 3.13	2.73	0.00	0.840
EL1 West Win (G.1.E2.W1)	1.0	27.85	4.58	6.08	9.10 3.13	2.73	0.00	0.840
EL1 West Win (G.1.E2.W2)	1.0	27.85	4.58	6.08	33.37 3.13	2.73	0.00	0.840
EL1 West Door (G.1.E2.D1)	1.0	16.25	6.50	2.50	23.02 0.25	4.75	0.00	1.163
EL1 South Win (G.1.E3.W1)	1.0	27.85	4.58	6.08	6.06 3.13	2.73	0.00	0.840
EL1 South Win (G.1.E3.W2)	1.0	27.85	4.58	6.08	24.26 3.13	2.73	0.00	0.840
EL1 South Win (G.1.E3.W3)	1.0	27.85	4.58	6.08	42.46 3.13	2.73	0.00	0.840
EL1 South Win (G.1.E3.W4)	1.0	27.85	4.58	6.08	97.06 3.13	2.73	0.00	0.840
EL1 South Win (G.1.E3.W5)	1.0	27.85	4.58	6.08	115.26 3.13	2.73	0.00	0.840
EL1 South Win (G.1.E3.W6)	1.0	27.85	4.58	6.08	133.46 3.13	2.73	0.00	0.840
EL1 South Door (G.1.E3.D1)	1.0	35.75	6.50	5.50	65.55 0.25	6.25	0.00	1.163
EL1 South Door (G.1.E3.D2)	1.0	39.75	6.50	5.50	71.55 0.25	6.25	0.00	1.163
EL1 East Win (G.1.E4.W1)	1.0	27.85	4.58	6.08	9.10 3.13	2.73	0.00	0.840
EL1 East Win (G.1.E4.W2)	1.0	27.85	4.58	6.08	33.37 3.13	2.73	0.00	0.840
EL1 North Win (M.2.E5.W1)	1.0	27.85	4.58	6.08	5.05 3.13	2.73	0.00	0.840
EL1 North Win (M.2.E5.W2)	1.0	27.85	4.58	6.08	21.23 3.13	2.73	0.00	0.840
EL1 North Win (M.2.E5.W3)	1.0	27.85	4.58	6.08	37.40 3.13	2.73	0.00	0.840
EL1 North Win (M.2.E5.W4)	1.0	27.85	4.58	6.08	53.58 3.13	2.73	0.00	0.840
EL1 North Win (M.2.E5.W5)	1.0	27.85	4.58	6.08	85.94 3.13	2.73	0.00	0.840
EL1 North Win (M.2.E5.W6)	1.0	27.85	4.58	6.08	102.12 3.13	2.73	0.00	0.840
EL1 North Win (M.2.E5.W7)	1.0	27.85	4.58	6.08	118.29 3.13	2.73	0.00	0.840
EL1 North Win (M.2.E5.W8)	1.0	27.85	4.58	6.08	134.47 3.13	2.73	0.00	0.840
EL1 North Win (M.2.E5.W9)	1.0	27.85	4.58	6.08	9.10 3.13	2.73	0.00	0.840
EL1 West Win (M.2.E6.W1)	1.0	27.85	4.58	6.08	33.37 3.13	2.73	0.00	0.840
EL1 West Win (M.2.E6.W2)	1.0	27.85	4.58	6.08	6.06 3.13	2.73	0.00	0.840
EL1 South Win (M.2.E7.W1)	1.0	27.85	4.58	6.08	24.26 3.13	2.73	0.00	0.840
EL1 South Win (M.2.E7.W2)	1.0	27.85	4.58	6.08	42.46 3.13	2.73	0.00	0.840
EL1 South Win (M.2.E7.W3)	1.0	27.85	4.58	6.08	60.66 3.13	2.73	0.00	0.840
EL1 South Win (M.2.E7.W4)	1.0	27.85	4.58	6.08	78.86 3.13	2.73	0.00	0.840
EL1 South Win (M.2.E7.W5)	1.0	27.85	4.58	6.08	97.06 3.13	2.73	0.00	0.840
EL1 South Win (M.2.E7.W6)	1.0	27.85	4.58	6.08	115.26 3.13	2.73	0.00	0.840
EL1 South Win (M.2.E7.W7)	1.0	27.85	4.58	6.08	133.46 3.13	2.73	0.00	0.840
EL1 South Win (M.2.E7.W8)	1.0	27.85	4.58	6.08	9.10 3.13	2.73	0.00	0.840
EL1 East Win (M.2.E8.W1)	1.0	27.85	4.58	6.08	33.37 3.13	2.73	0.00	0.840
EL1 East Win (M.2.E8.W2)	1.0	27.85	4.58	6.08	6.06 3.13	2.73	0.00	0.840
EL1 North Win (Mb.3.E9.W1)	1.0	27.85	4.58	6.08	5.05 3.13	2.73	0.00	0.840
EL1 North Win (Mb.3.E9.W2)	1.0	27.85	4.58	6.08	21.23 3.13	2.73	0.00	0.840
EL1 North Win (Mb.3.E9.W3)	1.0	27.85	4.58	6.08	37.40 3.13	2.73	0.00	0.840
EL1 North Win (Mb.3.E9.W4)	1.0	27.85	4.58	6.08	53.58 3.13	2.73	0.00	0.840
EL1 North Win (Mb.3.E9.W5)	1.0	27.85	4.58	6.08	85.94 3.13	2.73	0.00	0.840
EL1 North Win (Mb.3.E9.W6)	1.0	27.85	4.58	6.08	102.12 3.13	2.73	0.00	0.840
EL1 North Win (Mb.3.E9.W7)	1.0	27.85	4.58	6.08	118.29 3.13	2.73	0.00	0.840

(Note: u-values include outside air film)

WINDOW NAME	MULTIPLIER	GLASS AREA (SQFT)	GLASS HEIGHT (FT)	GLASS WIDTH (FT)	LOCATION OF ORIGIN IN SURFACE COORDINATES		FRAME AREA (SQFT)	CURB AREA (SQFT)	FRAME U-VALUE (BTU/HR-SQFT-F)	CURB U-VALUE
					X (FT)	Y (FT)				
EL1 North Win (Mb.3.E9.W8)	1.0	27.85	4.58	6.08	118.29	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mb.3.E9.W9)	1.0	27.85	4.58	6.08	134.47	3.13	2.73	0.00	0.840	0.000
EL1 West Win (Mb.3.E10.W1)	1.0	27.85	4.58	6.08	9.10	3.13	2.73	0.00	0.840	0.000
EL1 West Win (Mb.3.E10.W2)	1.0	27.85	4.58	6.08	33.37	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mb.3.E11.W1)	1.0	27.85	4.58	6.08	6.06	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mb.3.E11.W2)	1.0	27.85	4.58	6.08	24.26	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mb.3.E11.W3)	1.0	27.85	4.58	6.08	42.46	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mb.3.E11.W4)	1.0	27.85	4.58	6.08	60.66	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mb.3.E11.W5)	1.0	27.85	4.58	6.08	78.86	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mb.3.E11.W6)	1.0	27.85	4.58	6.08	97.06	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mb.3.E11.W7)	1.0	27.85	4.58	6.08	115.26	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mb.3.E11.W8)	1.0	27.85	4.58	6.08	133.46	3.13	2.73	0.00	0.840	0.000
EL1 East Win (Mb.3.E12.W1)	1.0	27.85	4.58	6.08	9.10	3.13	2.73	0.00	0.840	0.000
EL1 East Win (Mb.3.E12.W2)	1.0	27.85	4.58	6.08	33.37	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mc.4.E13.W1)	1.0	27.85	4.58	6.08	5.05	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mc.4.E13.W2)	1.0	27.85	4.58	6.08	21.23	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mc.4.E13.W3)	1.0	27.85	4.58	6.08	37.40	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mc.4.E13.W4)	1.0	27.85	4.58	6.08	53.58	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mc.4.E13.W5)	1.0	27.85	4.58	6.08	69.76	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mc.4.E13.W6)	1.0	27.85	4.58	6.08	85.94	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mc.4.E13.W7)	1.0	27.85	4.58	6.08	102.12	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mc.4.E13.W8)	1.0	27.85	4.58	6.08	118.29	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mc.4.E13.W9)	1.0	27.85	4.58	6.08	134.47	3.13	2.73	0.00	0.840	0.000
EL1 West Win (Mc.4.E14.W1)	1.0	27.85	4.58	6.08	9.10	3.13	2.73	0.00	0.840	0.000
EL1 West Win (Mc.4.E14.W2)	1.0	27.85	4.58	6.08	33.37	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mc.4.E15.W1)	1.0	27.85	4.58	6.08	6.06	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mc.4.E15.W2)	1.0	27.85	4.58	6.08	24.26	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mc.4.E15.W3)	1.0	27.85	4.58	6.08	42.46	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mc.4.E15.W4)	1.0	27.85	4.58	6.08	60.66	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mc.4.E15.W5)	1.0	27.85	4.58	6.08	78.86	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mc.4.E15.W6)	1.0	27.85	4.58	6.08	97.06	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mc.4.E15.W7)	1.0	27.85	4.58	6.08	115.26	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mc.4.E15.W8)	1.0	27.85	4.58	6.08	133.46	3.13	2.73	0.00	0.840	0.000
EL1 East Win (Mc.4.E16.W1)	1.0	27.85	4.58	6.08	9.10	3.13	2.73	0.00	0.840	0.000
EL1 East Win (Mc.4.E16.W2)	1.0	27.85	4.58	6.08	33.37	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Md.5.E17.W1)	1.0	27.85	4.58	6.08	5.05	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Md.5.E17.W2)	1.0	27.85	4.58	6.08	21.23	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Md.5.E17.W3)	1.0	27.85	4.58	6.08	37.40	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Md.5.E17.W4)	1.0	27.85	4.58	6.08	53.58	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Md.5.E17.W5)	1.0	27.85	4.58	6.08	69.76	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Md.5.E17.W6)	1.0	27.85	4.58	6.08	85.94	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Md.5.E17.W7)	1.0	27.85	4.58	6.08	102.12	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Md.5.E17.W8)	1.0	27.85	4.58	6.08	118.29	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Md.5.E17.W9)	1.0	27.85	4.58	6.08	134.47	3.13	2.73	0.00	0.840	0.000
EL1 West Win (Md.5.E18.W1)	1.0	27.85	4.58	6.08	9.10	3.13	2.73	0.00	0.840	0.000
EL1 West Win (Md.5.E18.W2)	1.0	27.85	4.58	6.08	33.37	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Md.5.E19.W1)	1.0	27.85	4.58	6.08	6.06	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Md.5.E19.W2)	1.0	27.85	4.58	6.08	24.26	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Md.5.E19.W3)	1.0	27.85	4.58	6.08	42.46	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Md.5.E19.W4)	1.0	27.85	4.58	6.08	60.66	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Md.5.E19.W5)	1.0	27.85	4.58	6.08	78.86	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Md.5.E19.W6)	1.0	27.85	4.58	6.08	97.06	3.13	2.73	0.00	0.840	0.000

(Note: u-values include outside air film)

WINDOW NAME	MULTIPLIER	GLASS AREA (SQFT)	GLASS HEIGHT (FT)	GLASS WIDTH (FT)	LOCATION OF ORIGIN IN SURFACE COORDINATES		FRAME AREA (SQFT)	CURB AREA (SQFT)	FRAME U-VALUE (BTU/HR-SQFT-F)	CURB U-VALUE (BTU/HR-SQFT-F)
					X (FT)	Y (FT)				
EL1 South Win (Md.5.E19.W7)	1.0	27.85	4.58	6.08	115.26	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Md.5.E19.W8)	1.0	27.85	4.58	6.08	133.46	3.13	2.73	0.00	0.840	0.000
EL1 East Win (Md.5.E20.W1)	1.0	27.85	4.58	6.08	9.10	3.13	2.73	0.00	0.840	0.000
EL1 East Win (Md.5.E20.W2)	1.0	27.85	4.58	6.08	33.37	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Me.6.E21.W1)	1.0	27.85	4.58	6.08	5.05	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Me.6.E21.W2)	1.0	27.85	4.58	6.08	21.23	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Me.6.E21.W3)	1.0	27.85	4.58	6.08	37.40	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Me.6.E21.W4)	1.0	27.85	4.58	6.08	53.58	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Me.6.E21.W5)	1.0	27.85	4.58	6.08	69.76	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Me.6.E21.W6)	1.0	27.85	4.58	6.08	85.94	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Me.6.E21.W7)	1.0	27.85	4.58	6.08	102.12	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Me.6.E21.W8)	1.0	27.85	4.58	6.08	118.29	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Me.6.E21.W9)	1.0	27.85	4.58	6.08	134.47	3.13	2.73	0.00	0.840	0.000
EL1 West Win (Me.6.E22.W1)	1.0	27.85	4.58	6.08	9.10	3.13	2.73	0.00	0.840	0.000
EL1 West Win (Me.6.E22.W2)	1.0	27.85	4.58	6.08	33.37	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Me.6.E23.W1)	1.0	27.85	4.58	6.08	6.06	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Me.6.E23.W2)	1.0	27.85	4.58	6.08	24.26	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Me.6.E23.W3)	1.0	27.85	4.58	6.08	42.46	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Me.6.E23.W4)	1.0	27.85	4.58	6.08	60.66	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Me.6.E23.W5)	1.0	27.85	4.58	6.08	78.86	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Me.6.E23.W6)	1.0	27.85	4.58	6.08	97.06	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Me.6.E23.W7)	1.0	27.85	4.58	6.08	115.26	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Me.6.E23.W8)	1.0	27.85	4.58	6.08	133.46	3.13	2.73	0.00	0.840	0.000
EL1 East Win (Me.6.E24.W1)	1.0	27.85	4.58	6.08	9.10	3.13	2.73	0.00	0.840	0.000
EL1 East Win (Me.6.E24.W2)	1.0	27.85	4.58	6.08	33.37	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mf.7.E25.W1)	1.0	27.85	4.58	6.08	5.05	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mf.7.E25.W2)	1.0	27.85	4.58	6.08	21.23	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mf.7.E25.W3)	1.0	27.85	4.58	6.08	37.40	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mf.7.E25.W4)	1.0	27.85	4.58	6.08	53.58	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mf.7.E25.W5)	1.0	27.85	4.58	6.08	69.76	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mf.7.E25.W6)	1.0	27.85	4.58	6.08	85.94	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mf.7.E25.W7)	1.0	27.85	4.58	6.08	102.12	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mf.7.E25.W8)	1.0	27.85	4.58	6.08	118.29	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mf.7.E25.W9)	1.0	27.85	4.58	6.08	134.47	3.13	2.73	0.00	0.840	0.000
EL1 West Win (Mf.7.E26.W1)	1.0	27.85	4.58	6.08	9.10	3.13	2.73	0.00	0.840	0.000
EL1 West Win (Mf.7.E26.W2)	1.0	27.85	4.58	6.08	33.37	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mf.7.E27.W1)	1.0	27.85	4.58	6.08	6.06	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mf.7.E27.W2)	1.0	27.85	4.58	6.08	24.26	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mf.7.E27.W3)	1.0	27.85	4.58	6.08	42.46	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mf.7.E27.W4)	1.0	27.85	4.58	6.08	60.66	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mf.7.E27.W5)	1.0	27.85	4.58	6.08	78.86	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mf.7.E27.W6)	1.0	27.85	4.58	6.08	97.06	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mf.7.E27.W7)	1.0	27.85	4.58	6.08	115.26	3.13	2.73	0.00	0.840	0.000
EL1 South Win (Mf.7.E27.W8)	1.0	27.85	4.58	6.08	133.46	3.13	2.73	0.00	0.840	0.000
EL1 East Win (Mf.7.E28.W1)	1.0	27.85	4.58	6.08	9.10	3.13	2.73	0.00	0.840	0.000
EL1 East Win (Mf.7.E28.W2)	1.0	27.85	4.58	6.08	33.37	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mg.8.E29.W1)	1.0	27.85	4.58	6.08	5.05	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mg.8.E29.W2)	1.0	27.85	4.58	6.08	21.23	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mg.8.E29.W3)	1.0	27.85	4.58	6.08	37.40	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mg.8.E29.W4)	1.0	27.85	4.58	6.08	53.58	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mg.8.E29.W5)	1.0	27.85	4.58	6.08	69.76	3.13	2.73	0.00	0.840	0.000
EL1 North Win (Mg.8.E29.W6)	1.0	27.85	4.58	6.08	85.94	3.13	2.73	0.00	0.840	0.000

(Note: u-values include outside air film)

WINDOW NAME	MULTIPLIER	GLASS AREA (SQFT)	GLASS HEIGHT (FT)	GLASS WIDTH (FT)	LOCATION OF ORIGIN IN SURFACE COORDINATES			FRAME AREA (SQFT)	CURS AREA (SQFT)	FRAME U-VALUE (BTU/HR-SQFT-F)	CURS U-VALUE (BTU/HR-SQFT-F)
					X (FT)	Y (FT)	Z (FT)				
EL1 North Win (Mg.8.E29.W7)	1.0	27.85	4.58	6.08	102.12	3.13	2.73	0.00	0.840	0.000	
EL1 North Win (Mg.8.E29.W8)	1.0	27.85	4.58	6.08	118.29	3.13	2.73	0.00	0.840	0.000	
EL1 North Win (Mg.8.E29.W9)	1.0	27.85	4.58	6.08	134.47	3.13	2.73	0.00	0.840	0.000	
EL1 West Win (Mg.8.E30.W1)	1.0	27.85	4.58	6.08	9.10	3.13	2.73	0.00	0.840	0.000	
EL1 West Win (Mg.8.E30.W2)	1.0	27.85	4.58	6.08	33.37	3.13	2.73	0.00	0.840	0.000	
EL1 South Win (Mg.8.E31.W1)	1.0	27.85	4.58	6.08	5.06	3.13	2.73	0.00	0.840	0.000	
EL1 South Win (Mg.8.E31.W2)	1.0	27.85	4.58	6.08	24.26	3.13	2.73	0.00	0.840	0.000	
EL1 South Win (Mg.8.E31.W3)	1.0	27.85	4.58	6.08	42.46	3.13	2.73	0.00	0.840	0.000	
EL1 South Win (Mg.8.E31.W4)	1.0	27.85	4.58	6.08	60.66	3.13	2.73	0.00	0.840	0.000	
EL1 South Win (Mg.8.E31.W5)	1.0	27.85	4.58	6.08	78.86	3.13	2.73	0.00	0.840	0.000	
EL1 South Win (Mg.8.E31.W6)	1.0	27.85	4.58	6.08	97.06	3.13	2.73	0.00	0.840	0.000	
EL1 South Win (Mg.8.E31.W7)	1.0	27.85	4.58	6.08	115.26	3.13	2.73	0.00	0.840	0.000	
EL1 South Win (Mg.8.E31.W8)	1.0	27.85	4.58	6.08	133.46	3.13	2.73	0.00	0.840	0.000	
EL1 East Win (Mg.8.E32.W1)	1.0	27.85	4.58	6.08	9.10	3.13	2.73	0.00	0.840	0.000	
EL1 East Win (Mg.8.E32.W2)	1.0	27.85	4.58	6.08	33.37	3.13	2.73	0.00	0.840	0.000	
EL1 North Win (Mh.9.E33.W1)	1.0	27.85	4.58	6.08	5.05	3.13	2.73	0.00	0.840	0.000	
EL1 North Win (Mh.9.E33.W2)	1.0	27.85	4.58	6.08	21.23	3.13	2.73	0.00	0.840	0.000	
EL1 North Win (Mh.9.E33.W3)	1.0	27.85	4.58	6.08	37.40	3.13	2.73	0.00	0.840	0.000	
EL1 North Win (Mh.9.E33.W4)	1.0	27.85	4.58	6.08	53.58	3.13	2.73	0.00	0.840	0.000	
EL1 North Win (Mh.9.E33.W5)	1.0	27.85	4.58	6.08	69.76	3.13	2.73	0.00	0.840	0.000	
EL1 North Win (Mh.9.E33.W6)	1.0	27.85	4.58	6.08	85.94	3.13	2.73	0.00	0.840	0.000	
EL1 North Win (Mh.9.E33.W7)	1.0	27.85	4.58	6.08	102.12	3.13	2.73	0.00	0.840	0.000	
EL1 North Win (Mh.9.E33.W8)	1.0	27.85	4.58	6.08	118.29	3.13	2.73	0.00	0.840	0.000	
EL1 North Win (Mh.9.E33.W9)	1.0	27.85	4.58	6.08	134.47	3.13	2.73	0.00	0.840	0.000	
EL1 West Win (Mh.9.E34.W1)	1.0	27.85	4.58	6.08	9.10	3.13	2.73	0.00	0.840	0.000	
EL1 West Win (Mh.9.E34.W2)	1.0	27.85	4.58	6.08	33.37	3.13	2.73	0.00	0.840	0.000	
EL1 South Win (Mh.9.E35.W1)	1.0	27.85	4.58	6.08	6.06	3.13	2.73	0.00	0.840	0.000	
EL1 South Win (Mh.9.E35.W2)	1.0	27.85	4.58	6.08	24.26	3.13	2.73	0.00	0.840	0.000	
EL1 South Win (Mh.9.E35.W3)	1.0	27.85	4.58	6.08	42.46	3.13	2.73	0.00	0.840	0.000	
EL1 South Win (Mh.9.E35.W4)	1.0	27.85	4.58	6.08	60.66	3.13	2.73	0.00	0.840	0.000	
EL1 South Win (Mh.9.E35.W5)	1.0	27.85	4.58	6.08	78.86	3.13	2.73	0.00	0.840	0.000	
EL1 South Win (Mh.9.E35.W6)	1.0	27.85	4.58	6.08	97.06	3.13	2.73	0.00	0.840	0.000	
EL1 South Win (Mh.9.E35.W7)	1.0	27.85	4.58	6.08	115.26	3.13	2.73	0.00	0.840	0.000	
EL1 South Win (Mh.9.E35.W8)	1.0	27.85	4.58	6.08	133.46	3.13	2.73	0.00	0.840	0.000	
EL1 East Win (Mh.9.E36.W1)	1.0	27.85	4.58	6.08	9.10	3.13	2.73	0.00	0.840	0.000	
EL1 East Win (Mh.9.E36.W2)	1.0	27.85	4.58	6.08	33.37	3.13	2.73	0.00	0.840	0.000	
EL1 North Win (T.10.E37.W1)	1.0	27.85	4.58	6.08	5.05	3.13	2.73	0.00	0.840	0.000	
EL1 North Win (T.10.E37.W2)	1.0	27.85	4.58	6.08	21.23	3.13	2.73	0.00	0.840	0.000	
EL1 North Win (T.10.E37.W3)	1.0	27.85	4.58	6.08	37.40	3.13	2.73	0.00	0.840	0.000	
EL1 North Win (T.10.E37.W4)	1.0	27.85	4.58	6.08	53.58	3.13	2.73	0.00	0.840	0.000	
EL1 North Win (T.10.E37.W5)	1.0	27.85	4.58	6.08	69.76	3.13	2.73	0.00	0.840	0.000	
EL1 North Win (T.10.E37.W6)	1.0	27.85	4.58	6.08	85.94	3.13	2.73	0.00	0.840	0.000	
EL1 North Win (T.10.E37.W7)	1.0	27.85	4.58	6.08	102.12	3.13	2.73	0.00	0.840	0.000	
EL1 North Win (T.10.E37.W8)	1.0	27.85	4.58	6.08	118.29	3.13	2.73	0.00	0.840	0.000	
EL1 North Win (T.10.E37.W9)	1.0	27.85	4.58	6.08	134.47	3.13	2.73	0.00	0.840	0.000	
EL1 West Win (T.10.E38.W1)	1.0	27.85	4.58	6.08	9.10	3.13	2.73	0.00	0.840	0.000	
EL1 West Win (T.10.E38.W2)	1.0	27.85	4.58	6.08	33.37	3.13	2.73	0.00	0.840	0.000	
EL1 South Win (T.10.E39.W1)	1.0	27.85	4.58	6.08	6.06	3.13	2.73	0.00	0.840	0.000	
EL1 South Win (T.10.E39.W2)	1.0	27.85	4.58	6.08	24.26	3.13	2.73	0.00	0.840	0.000	
EL1 South Win (T.10.E39.W3)	1.0	27.85	4.58	6.08	42.46	3.13	2.73	0.00	0.840	0.000	
EL1 South Win (T.10.E39.W4)	1.0	27.85	4.58	6.08	60.66	3.13	2.73	0.00	0.840	0.000	
EL1 South Win (T.10.E39.W5)	1.0	27.85	4.58	6.08	78.86	3.13	2.73	0.00	0.840	0.000	

(Note: u-values include outside air film)

WINDOW NAME	MULTIPLIER	GLASS AREA (SQFT)	GLASS HEIGHT (FT)	GLASS WIDTH (FT)	LOCATION OF ORIGIN IN SURFACE COORDINATES		FRAME AREA (SQFT)	CURB U-VALUE (BTU/HR-SQFT-F)	CURB U-VALUE (BTU/HR-SQFT-F)	GLASS SHADING COEFF	NUMBER OF PANES	CENTER-OF-GLASS U-VALUE (BTU/HR-SQFT-F)	VISIBLE TRANS	GLASS SOLAR TRANS AREA RATIO	SURFACE TO ROUGH OPEN AREA RATIO
					X (FT)	Y (FT)									
EL1 South Win (T.10.E39.W6)	1.0	27.85	4.58	6.08	97.06	3.13	2.73	0.00	0.840	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (T.10.E39.W7)	1.0	27.85	4.58	6.08	115.26	3.13	2.73	0.00	0.840	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (T.10.E39.W8)	1.0	27.85	4.58	6.08	133.46	3.13	2.73	0.00	0.840	0.88	2	0.547	0.812	0.705	1.000
EL1 East Win (T.10.E40.W1)	1.0	27.85	4.58	6.08	9.10	3.13	2.73	0.00	0.840	0.88	2	0.547	0.812	0.705	1.000
EL1 East Win (T.10.E40.W2)	1.0	27.85	4.58	6.08	33.37	3.13	2.73	0.00	0.840	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (G.1.E1.W1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	1	1.003	0.898	0.837	1.000
EL1 North Win (G.1.E1.W2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (G.1.E1.W3)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (G.1.E1.W4)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (G.1.E1.W5)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (G.1.E1.W6)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (G.1.E1.W7)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (G.1.E1.W8)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 West Win (G.1.E2.W1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 West Win (G.1.E2.W2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 West Door (G.1.E2.D1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1	1.003	0.898	0.837	1.000
EL1 South Win (G.1.E3.W1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (G.1.E3.W2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (G.1.E3.W3)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (G.1.E3.W4)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (G.1.E3.W5)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (G.1.E3.W6)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Door (G.1.E3.D1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1	1.003	0.898	0.837	1.000
EL1 South Door (G.1.E3.D2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1	1.003	0.898	0.837	1.000
EL1 East Win (G.1.E4.W1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 East Win (G.1.E4.W2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (M.2.E5.W1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (M.2.E5.W2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (M.2.E5.W3)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (M.2.E5.W4)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (M.2.E5.W5)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (M.2.E5.W6)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (M.2.E5.W7)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (M.2.E5.W8)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (M.2.E5.W9)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 West Win (M.2.E6.W1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 West Win (M.2.E6.W2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (M.2.E7.W1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (M.2.E7.W2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (M.2.E7.W3)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (M.2.E7.W4)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (M.2.E7.W5)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (M.2.E7.W6)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (M.2.E7.W7)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (M.2.E7.W8)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 East Win (M.2.E8.W1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	2	0.547	0.812	0.705	1.000

REPORT- LV-H Details of Windows WEATHER FILE- New York City NY TMY2 (CONTINUED)

WINDOW NAME	SETBACK (FT)	GLASS SHADING COEFF	NUMBER OF PANES	CENTER-OF-GLASS U-VALUE (BTU/HR-SQFT-F)	GLASS VISIBLE TRANS	GLASS SOLAR TRANS	SURFACE TO ROUGH OPEN AREA RATIO
EL1 East Win (M.2.E8.W2)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mb.3.E9.W1)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mb.3.E9.W2)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mb.3.E9.W3)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mb.3.E9.W4)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mb.3.E9.W5)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mb.3.E9.W6)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mb.3.E9.W7)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mb.3.E9.W8)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mb.3.E9.W9)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mb.3.E10.W1)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 West Win (Mb.3.E10.W2)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mb.3.E11.W1)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mb.3.E11.W2)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mb.3.E11.W3)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mb.3.E11.W4)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mb.3.E11.W5)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mb.3.E11.W6)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mb.3.E11.W7)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mb.3.E11.W8)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 East Win (Mb.3.E12.W1)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 East Win (Mb.3.E12.W2)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mc.4.E13.W1)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mc.4.E13.W2)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mc.4.E13.W3)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mc.4.E13.W4)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mc.4.E13.W5)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mc.4.E13.W6)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mc.4.E13.W7)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mc.4.E13.W8)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mc.4.E13.W9)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 West Win (Mc.4.E14.W1)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 West Win (Mc.4.E14.W2)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mc.4.E15.W1)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mc.4.E15.W2)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mc.4.E15.W3)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mc.4.E15.W4)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mc.4.E15.W5)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mc.4.E15.W6)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mc.4.E15.W7)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mc.4.E15.W8)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 East Win (Mc.4.E16.W1)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 East Win (Mc.4.E16.W2)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Md.5.E17.W1)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Md.5.E17.W2)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Md.5.E17.W3)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Md.5.E17.W4)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Md.5.E17.W5)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Md.5.E17.W6)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Md.5.E17.W7)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Md.5.E17.W8)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Md.5.E17.W9)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 West Win (Md.5.E18.W1)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 West Win (Md.5.E18.W2)	0.00	0.88	2	0.547	0.812	0.705	1.000

WINDOW NAME	SETBACK (FT)	GLASS SHADING COEFF	NUMBER OF PANES	CENTER-OF-GLASS U-VALUE (BTU/HR-SQFT-F)	GLASS VISIBLE TRANS	GLASS SOLAR TRANS	SURFACE TO ROUGH OPEN AREA RATIO
EL1 North Win (Mg.8.E29.W3)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mg.8.E29.W4)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mg.8.E29.W5)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mg.8.E29.W6)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mg.8.E29.W7)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mg.8.E29.W8)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mg.8.E29.W9)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 West Win (Mg.8.E30.W1)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 West Win (Mg.8.E30.W2)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mg.8.E31.W1)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mg.8.E31.W2)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mg.8.E31.W3)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mg.8.E31.W4)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mg.8.E31.W5)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mg.8.E31.W6)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mg.8.E31.W7)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mg.8.E31.W8)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 East Win (Mg.8.E32.W1)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 East Win (Mg.8.E32.W2)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mh.9.E33.W1)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mh.9.E33.W2)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mh.9.E33.W3)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mh.9.E33.W4)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mh.9.E33.W5)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mh.9.E33.W6)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mh.9.E33.W7)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mh.9.E33.W8)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (Mh.9.E33.W9)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 West Win (Mh.9.E34.W1)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 West Win (Mh.9.E34.W2)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mh.9.E35.W1)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mh.9.E35.W2)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mh.9.E35.W3)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mh.9.E35.W4)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mh.9.E35.W5)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mh.9.E35.W6)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mh.9.E35.W7)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (Mh.9.E35.W8)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 East Win (Mh.9.E36.W1)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 East Win (Mh.9.E36.W2)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (T.10.E37.W1)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (T.10.E37.W2)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (T.10.E37.W3)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (T.10.E37.W4)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (T.10.E37.W5)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (T.10.E37.W6)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (T.10.E37.W7)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (T.10.E37.W8)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 North Win (T.10.E37.W9)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 West Win (T.10.E38.W1)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 West Win (T.10.E38.W2)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (T.10.E39.W1)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (T.10.E39.W2)	0.00	0.88	2	0.547	0.812	0.705	1.000
EL1 South Win (T.10.E39.W3)	0.00	0.88	2	0.547	0.812	0.705	1.000

TMHA Franklin Tower - DETAILED

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REPORT- LV-H Details of Windows

WEATHER FILE- New York CityNY TMY2
(CONTINUED)

WINDOW NAME	SETBACK (FT)	GLASS SHADING COEFF	NUMBER OF PANES	CENTER-OF-GLASS D-VALUE (BTU/HR-SQFT-F)	GLASS VISIBLE TRANS	GLASS SOLAR TRANS	SURFACE TO ROUGH OPEN AREA RATIO
ELL South Win (T.10.E39.W4)	0.00	0.88	2	0.547	0.812	0.705	1.000
ELL South Win (T.10.E39.W5)	0.00	0.88	2	0.547	0.812	0.705	1.000
ELL South Win (T.10.E39.W6)	0.00	0.88	2	0.547	0.812	0.705	1.000
ELL South Win (T.10.E39.W7)	0.00	0.88	2	0.547	0.812	0.705	1.000
ELL South Win (T.10.E39.W8)	0.00	0.88	2	0.547	0.812	0.705	1.000
ELL East Win (T.10.E40.W1)	0.00	0.88	2	0.547	0.812	0.705	1.000
ELL East Win (T.10.E40.W2)	0.00	0.88	2	0.547	0.812	0.705	1.000

REPORT- LV-I Details of Constructions

WEATHER FILE- New York CityNY TMY2

CONSTRUCTION NAME	NUMBER OF CONSTRUCTIONS	D-VALUE (BTU/HR-SQFT-F)	DELATED	QUICK	SURFACE ROUGHNESS INDEX	SURFACE ABSORPTANCE	SURFACE TYPE	NUMBER OF RESPONSE FACTORS
Construction 1	9	0.282		1	3	0.70	DELAYED	17
EL1 EWall Construction		0.397			2	0.88	DELAYED	11
EL1 Roof Construction		0.093			1	0.60	DELAYED	13
EL1 Ceilig Construction		0.805			3	0.70	DELAYED	4
EL1 IWall Construction		0.491			3	0.70	DELAYED	6
EL1 IFly Construction		0.794			3	0.70	DELAYED	6
EL1 IFSEL Construction		0.595			3	0.70	DELAYED	11
EL1 UFCons (G-1.02)		0.043			3	0.70	DELAYED	44
Sgl Lyr Unins Mtl Door		2.080			3	0.70	QUICK	0