

Date: 06/05/2020

Proposed BuiltGreen® Verification – 4 Star level  
Builder: Xin Yang  
Project Address: 4303 7<sup>th</sup> Ave NE, Seattle, WA 98103  
Permit #: 3034239-LU  
Built Green Enrollment ID #: 2020MF222  
Description: 8 Story, 48-unit multifamily apartment

To Whom It May Concern:

Xin Yang has contracted with Balderston Associates, LLC for verification services, and we have done a preliminary review of the checklist and energy model. I will be inspecting the project above at foundation, framing, and finish stages as a Built Green® third party verifier. I will confirm the points and credits claimed by the builder on the attached preliminary checklist.

I will complete performance testing for whole house air leakage, combustion safety, lighting, water and ventilation fan flows as required for the points assigned. This project is expected meet the prerequisites for the 4-star level of the Built Green® program. Preliminary model shows 21% energy improvement over WSEC 2015. Systems include: Panasonic WhisperGreen WHF, 96% condensing gas water heater, WaterSense plumbing fixtures, 100% LED lighting, and cadet wall heaters. Balderston Associates will be working with the architect and builder through the construction phases to help them achieve the targeted score.

PROJECT SUMMARIES	
4	SECTION 1: BUILT GREEN TEAM
155	SECTION 2: SITE & WATER
81	SECTION 3: ENERGY
98	SECTION 4: HEATH & INDOOR AIR QUALITY
63	SECTION 5: MATERIALS EFFICIENCY
25	SECTION 6: OPERATION, MAINTENANCE & TENANT EDUCATION
426	GRAND TOTAL

Signed,

Tom Balderston  
Senior Green Building Specialist, Balderston Associates, LLC  
Built Green® Verifier / ENERGY STAR® Verifier / HERS Rater / PHIUS+ Rater and Verifier

**ENERGY MODEL SUMMARY REPORT**

BALDERSTON ASSOCIATES, LLC



PROJECT: 4340 7TH Ave NE  
Seattle WA  
PROGRAM: BUILT GREEN MF 2017

23455.31 sf

SOFTWARE: eQUEST 3-65

BY: Tom Balderston  
DATE: 5/28/2020

MODEL GUIDELINES: SEATTLE ENERGY CODE 2015

**BUILDING DESCRIPTION**

4340 7TH Ave NE is a new 48 unit mixed use Apartment building with 7 levels above grade and 1 below in Seattle WA. Level 1 is the main entry and commercial level at the street front. Level -1 is below grade except for the window well area on the N side. It is planned for construction to start in 2021. The construction consists of concrete slab and basement walls below grade, with wood frame above. Levels 1 through 7 are wood frame construction. The units consist of SEDUs (small efficiency dwelling unit). There are two stairwells and a lobby, elevator, mechanical, and storage spaces areas. The elevator reaches the roof level where a roof deck may be developed.

Heating systems include electric resistance heaters for the units and central gas hot water, with a recirc loop and high efficiency water tanks. Unit fresh air ventilation is by Panasonic Whisper Green bathroom fans or equal set to run continuously at 30 cfm. The building has a small solar PV array on the roof.

The specifications are not final at the time of this writing, but the intended systems have been described to the energy modeler by the team in an initial design meeting and in the plans. Where assumptions have been made, the builder has been notified that these features need to be included to maintain the modeled savings under the BuiltGreen program. The apartments will be provided with electric resistance zone heaters and no cooling. Units will have spot ventilation fans combined with the whole house fan, so there is one fan in each bathroom. The fans are modeled as ultra efficient DC variable speed fans, such as the Panasonic WhisperGreen series or equal. Each fan has a boost setting operated either by the wall switch or a motion control. The fan energy of the boost settings is calculated at 2hrs/day per the ENERGY STAR modeling guidelines. Lighting will be modeled as 100% LED, but without occupancy sensors. Parking garage ventilation is modeled with CO controls for reduced run time.

**MODELING APPROACH**

The building model was constructed in eQUEST 3-65 with the dimensions and layout from the plans provided by the verifier. Some of fine details of shapes may be simplified to reduce the complexity of the model. Windows and doors are entered from the window schedule in approximately the same location as shown on the elevations. Spaces and Zones were created for each thermal zone in the building. Units on the same level with the same exposure may have been grouped into a single zone, but common areas are each separated by zone. The building has loft spaces above some of the top floor units. The lofts were grouped on each building, and attached to the largest zone. The lofts were modeled with heating and ventilation, but without separate lighting from the space directly below them.

The baseline model was then created with all the inputs for insulation levels lighting and mechanical systems shown on the "eQUEST inputs" tab. The details of inputs and alternate excel calculations are shown on other tabs, including "APPLIANCE CALCS", Lighting Tabs, "DHW Demand", Infiltration/Ventilation, and "Cooling Calcs". Baseline inputs are based on 2015 Seattle Energy Code and the July, 2017 Built Green Simulation Guidelines.

The Proposed model inputs are based on the plans and documents provided by the design team. The Lighting is not fully designed, so some of those inputs are estimated based on standard layouts. The exterior lighting was not designed at this time. The window schedule was also not completed, so the windows were measured off the elevations. These values, along with the details of final mechanical systems need to be checked by the green rater and revised in the final model if different.

The entire workbook is interlinked, so changes on sheets will change the formulas or results. The results are shown on "Energy Performance" tab, with the Baseline Building results being the average of 4 rotations of the building to North, South, East, and West. The SEATTLE GREEN BUILDING INCENTIVE requires a minimum of 15% improvement over the baseline SEC15 code PER C407, based on total energyuse. The C407 calculation translates to 21% saving under the director's rule if the baseline includes 2 C406 options.

The modeler has included C406.3 Reduced lighting power, and C406.9 reduced air infiltration in the model

**SUMMARY OF ENERGY FEATURES**

ENVELOPE			
- FLOORS	R10 CONTINUOUS under slab at slab on grade in heated areas WITH R10 BEVELED THERMAL BREAK AT EDGE		
- FLOORS OVER EXT	R38 I JOIST AT FLOOR OVER TRASH ROOM		
- WALLS	2X6, 16" oc, Insulated headers and wall intersections, 2 studs each side of windows doors, R21 Batt +R5 exterior foam sheathing	R26	u= .043
- WALLS BELOW GRADE	CONC W 1.5" STEEL STUD W R15 BATT, R5 CI + BATT THERMAL BREAK BEHIND STUD	R21	0.049
- ROOF	TJI W R30 BATT, +R24 CI	R 55	0.019
- WINDOWS	VPI 2 pane	U = .27 Average	
- EXT OPAQUE DOORS	Insulated steel or FG doors R5 minimum	U=-.20	
- INFILTRATION	.25 cfm/sf is at C406 option level in baseline - project must achieve .25 cfm/sf		NO CREDIT TAKEN FOR INFILTRATION IMPROVENTS
HEATING	Electric Resistance wall heaters or Baseboards in units		
COOLING	cooling assumed per C407 guidelines, no cooling actually installed (AC ports allowed)		
HOT WATER	Commercial 96% condensing water tank on central recirc loop (or equivalent) Shower heads are 1.5 gpm, lav faucets 1.0 gpm commercial space on same system		HOT WATER SAVINGS FROM EFFICIENT EQUIPMENT AND LOW F
VENTILATION	Panasonic Whisper Green whole house fan in each bathroom, Std microwave range hood		
CORRIDOR VENTILATION	Central gas 80% efficient + AC rooftop unit for corridors with electronic ignition		
LIGHTING IN UNITS	100 % LED or Fluorescent, fixtures at average density, power density .40 W/SF		no occupancy sensors
LIGHTING EXTERIOR	100 % LED or Fluorescent, "dark sky" rated fixtures at average density		
COMMON AREA LIGHTING	100 % LED or Fluorescent, fixtures at average density, Occ sensors in stairwells only		LIGHTING DESIGNER SHOULD REFER TO "IN UNIT LIGHTING" AND " INTERIOR LIGHTING" AND " EXTERIOR LIGHTING" TABS FOR LIGHTING POWER DENSITY AND FIXTURES.
APPLIANCES	ENERGYSTAR Full sized refrigerator / electric range, 18" dishwasher, condensing dryer, ESTAR washer in all of units		NO APPLIANCE SAVINGS MODELED PER C407
ELEVATORS	traction elevator - not energy recovery but more efficient than standard units.		FOR BUILT GREEN, APPLIANCES CAN BE INCLUDED IN WEC model
PV SYSTEM			Small PV system can be credited in Built Green model - not for SEC dir

<b>CALCULATED SAVINGS ( total energy)</b>	<b>21.0%</b>	<b>BUILDING EUI (KBTU/SF/YEAR)</b>	<b>40.2</b>
		EUI per bedroom (kbtu/sf/yr/person)	0.84

PROPOSED BUILDING QUALIFIES FOR GREEN BUILDING INCEN MUST PERFORM AT 79% OF SEATTLE ENERGY CODE 2015 C40; BASELINE, WITH TWO C406 OPTIONS INCLUDED. 21% IS THE M CALCULATED SAVINGS FOR THE MODEL

		ELECTRICITY		NAT GAS	BASELINE		PROPOSED	
		BASELINE	PROPOSED		BASELINE	PROPOSED		
interior fans	kWh	18,100	8,060					
space heating	kWh	10,820	48,060	Hot Water	Mbtu	462.97	224.26	
space cooling		390	340					
hot water		-	-				0	
interior lighting	kWh	22,520	11,550					
exterior lighting		2,760	410					
appliances	kWh	61,752	61,752					
plug loads	kWh	17,268	17,268					
elevators	kWh	7,268	7,268					
other (list below)		-	-					
heat pump supplement	kWh	4,470	-					
<b>Total Energy Use</b>	<b>kwh</b>	<b>152,616</b>	<b>161,976</b>		<b>Mbtu</b>	<b>463</b>	<b>224</b>	
<b>PV System</b>	<b>kwh</b>							
1.5 kW system array								
6 modules @ approx 17 sf		152,616	161,976					
102 sf approx	Mbtu	521	553		984		777	

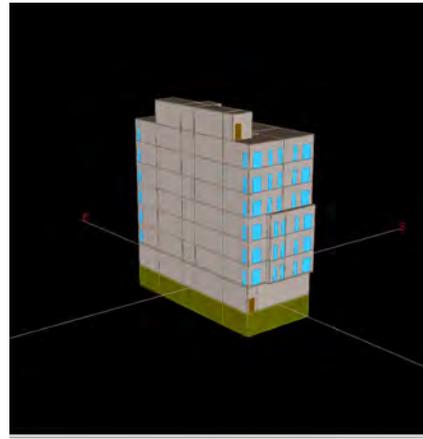
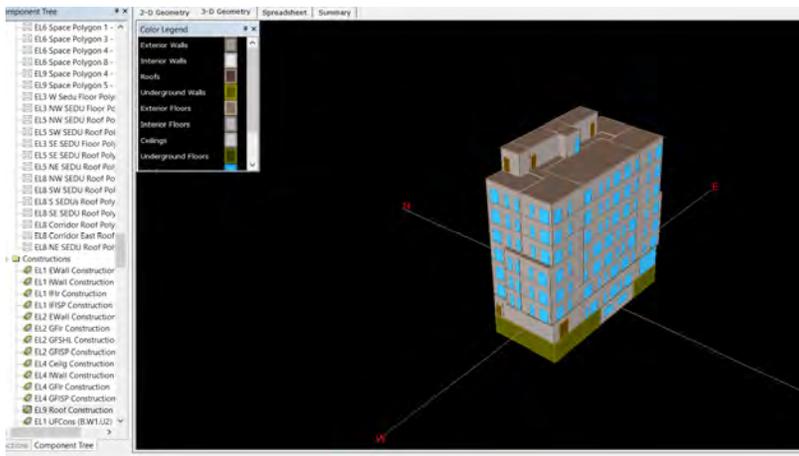
NOTES  
Savings from Panasonic Whisper Green fans - all fans require Comm slight increase in load from less waste heat from lighting and appl COOLING LOADS RELATIVELY SMALL...  
SAVINGS FROM 100% LED- HIGH EFFICACY. DESIGNER TO FOL REPORTED ON "INTERIOR LIGHTING" TAB

BASELINE HEAT PUMPS OPERAT WITH STRIP HEAT BELOW 40 F proposed bulding does not have HP supplemental

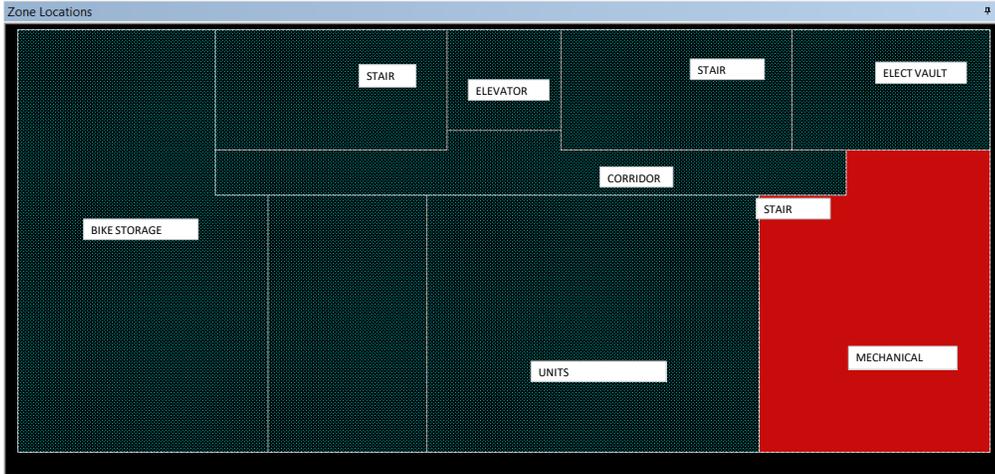
**SUMMARY NOTES** Overall this building is a simple shape and has no glazing at all on the north side. The density and low glass area keep the heating loads relatively small the hot water savings is significant with very low flow fixtures and high efficiency boilers

	INT LIGHTING	EXT LIGHTING	MISC EQ	SPACE HEAT	SPACE COOL	PUMPS /AUX	VENT FANS	HP SUPPL	TOTAL kWh	SOLAR	TOT GAS MBTU	TOT MBTU	TOTAL SAVINGS
BASELINE	22,520	2,760	79,020	10,820	390		18,100	4,470	152,616		462.97	984	21.0%

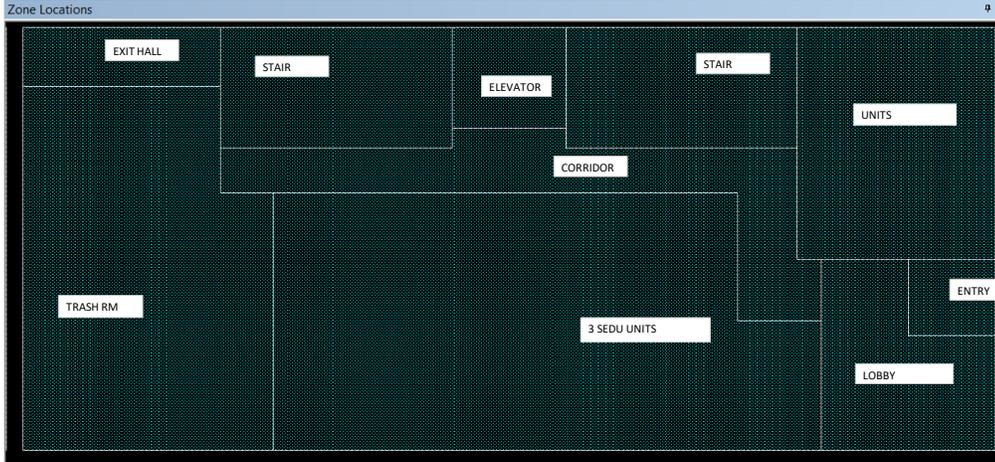
MODEL 3D IMAGES



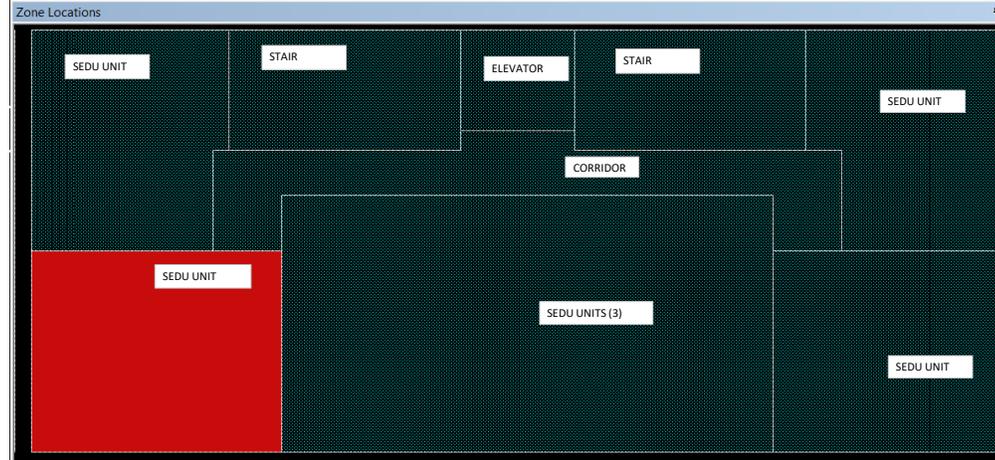
LEVEL BASEMENT



LEVEL 1



TYPICAL LEVELS 2-7





Please indicate:

- Preliminary checklist**  
(for own or verifier's use)
- Final checklist**  
(for certification review)

## Multi-Family Residential New Construction Certification Checklist

Company Name	Xin Yang
Project Address	4303 7th Ave NE, Seattle WA 98103
Number of Units	48

Last updated March 13, 2018

### REQUIRED CREDITS

Action Item No.	Possible Points	Credit	Total Points	Comments
<b>THREE-STAR REQUIREMENTS (300 points minimum)</b>				
	<i>required</i>	Built Green assumes building meets local code regulations	★	Submitting in City of Seattle
	<i>required</i>	Third-party verification	★	By Tom Balderston
	<i>required</i>	Achieve a minimum of 50 points from sections 2-5	★	Targeting 4-Star certification which requires 60 points per section
<b>Energy</b>	<i>required</i>	All spot exhaust fans must be ENERGY STAR (See Action Item 3-50)	★	panasonic whispergreen
<b>Energy</b>	<i>required</i>	Install ENERGY STAR refrigerators, dishwashers and clothes washers (if provided by builder) (See Action Items 3-42, 3-47, 3-48)	★	ok
<b>Energy</b>	<i>required</i>	Ventilation system flow rates are tested and within 20% of design flows. Controls and settings are consistent with design	★	Tom to test a minimum of 20% of units
<b>Energy</b>	<i>required</i>	Building modeled to have 10% better performance than the Washington State Energy Code cycle under which the project is permitted OR achieves additional credits in Section R406 (two credits) or C406 (two options) (above the WSEC requirements) (See Action Items 3-1 and 3-2)	★	Targeting 4-Star which requires 20% improvement
<b>IAQ</b>	<i>required</i>	Use only low-VOC/low-toxic interior paints, primers, and finishes for ALL surface areas (See Action Item 4-15)	★	OK
<b>IAQ</b>	<i>required</i>	Do not install a wood-burning fireplace inside unit or building	★	No fireplaces designed
<b>Materials</b>	<i>required</i>	Post jobsite recycling plan on site and maintain at least two bins (one for waste, one for recyclables)	★	OK
<b>Materials</b>	<i>required</i>	Recycle all clean wood, cardboard, new gypsum scrap, metal, asphalt paving/brick/concrete, electronics, and batteries (See Action Item 5-6, 5-25)	★	OK - Take to Built Green approved facility
<b>Materials</b>	<i>required</i>	Use no endangered species or old growth wood (See Action Item 5-36)	★	OK

### FOUR-STAR REQUIREMENTS (400 points minimum)

	<i>required</i>	Meet 3-Star requirements	★	OK
	<i>required</i>	Achieve a minimum of 60 points from sections 2-5	★	
<b>Site &amp; Water</b>	<i>required</i>	Amend disturbed soil with compost to a depth of min. 10 inches to restore soil environmental functions (See Action Item 2-16)	★	OK
<b>Site &amp; Water</b>	<i>required</i>	Landscape with plants appropriate for site topography and soil types, emphasizing use of plants with low watering requirements (drought tolerant) (See Action Item 2-41)	★	GreenFactor Score required
<b>Site &amp; Water</b>	<i>required</i>	Install ALL bathroom faucets with gpm 1.5 or less, must be WasterSense labelled	★	WATERSENSE LABELED REQUIRED
<b>Site &amp; Water</b>	<i>required</i>	Install ALL showerheads with 1.75 gpm or less, must be WaterSense labelled (See Action Item 2-50)	★	WATERSENSE LABELED REQUIRED
<b>Site &amp; Water</b>	<i>required</i>	Install ALL toilets with 1.28 gpf or less average flush rate, must be WasterSense labelled (See Action Item 2-54)	★	WATERSENSE LABELED REQUIRED

<b>Energy</b>	<i>required</i>	Building modeled to have 20% better performance than the Washington State Energy Code cycle under which the project is permitted (See Action Item 3-1)	★	Preliminary Model shows 21 %
<b>Energy</b>	<i>required</i>	Set up automatic energy benchmarking in Portfolio Manager and share data with Built Green	★	OK
<b>Energy</b>	<i>required</i>	Design for solar readiness (See handbook for details)	★	OK - see list to the right
<b>Energy</b>	<i>required</i>	80% of installed lighting shall be high efficacy AND listed on an approved "Qualified Products List" (See Action Item 3-40)	★	100% LED
<b>IAQ</b>	<i>required</i>	Provide track-off mats, carpets, and/or shoe grates at principal entryways to building (See Action Item 4-69)	★	OK, 10' in direction of travel at main entrance
<b>IAQ</b>	<i>required</i>	Use CARB II and/or NAUF composite wood products for indoor applications	★	NAUF products will get the project points on the checklist, whereas CARB II simply meets the requirement and no points are awarded
<b>IAQ</b>	<i>required</i>	Provide range exhaust hood directly over cooking appliance. Exhaust hood shall vent directly to the exterior of the building. General kitchen exhaust or recirculating hoods shall not meet this requirement.	★	ok
<b>Materials</b>	<i>required</i>	Achieve minimum recycling rate of 50% by weight (See Action Items 5-13 through 5-29)	★	Priority Green requires 75% recycling rate. Builder will select a Built Green Facility that meets this rate

#### FIVE-STAR REQUIREMENTS (600 points minimum)

	<i>required</i>	Meet 4-Star requirements	★	Not targeting
	<i>required</i>	Achieve a minimum of 90 points from sections 2-5	★	Not targeting
<b>Site &amp; Water</b>	<i>required</i>	Install ALL bathroom faucets with gpm 1.0 or less, must be WaterSense labelled (See Action Item 2-48)	★	Not targeting
<b>Site &amp; Water</b>	<i>required</i>	Install ALL showerheads with gpm 1.5 or less, must be WaterSense labelled (See Action Item 2-50)	★	Not targeting
<b>Site &amp; Water</b>	<i>required</i>	Install ALL toilets with 1.1 gpf or less average flush rate, must be WaterSense labelled (See Action Item 2-54)	★	Not targeting
<b>Site &amp; Water</b>	<i>required</i>	Manage 50% of stormwater on site	★	Not targeting
<b>Energy</b>	<i>required</i>	Building modeled to have 30% better performance than the Washington State Energy Code cycle under which the project is permitted (See Action Item 3-1)	★	Not targeting
<b>Energy</b>	<i>required</i>	Install solar PV producing 150 kWh for every 1000 sq ft OR install solar hot water producing 500 kBtu for every 1000 sq ft (See Action Items 3-54 and 3-55)	★	Not targeting
<b>IAQ</b>	<i>required</i>	All hard surface flooring must contain no orthophthalates (See Action Item 4-22)	★	Not targeting
<b>IAQ</b>	<i>required</i>	All carpet must contain no fly ash (See Action Item 4-26)	★	Not targeting
<b>Materials</b>	<i>required</i>	Achieve a minimum recycling rate of 90% of waste by weight	★	Not targeting

#### NET ZERO ENERGY LABEL (OPTIONAL)

	<i>required</i>	Meet any star-level requirements plus point minimum	★	
<b>Energy</b>	<i>required</i>	Demonstrate net zero energy performance over the course of a year	★	
<b>Energy</b>	<i>required</i>	Provide an energy performance disclosure waiver	★	

Check items included this project to qualify for a BUILT GREEN star rating. 2017 version

### QUALIFYING CREDITS

Action Item No.	Possible Points	Credits	Total Points	Comments
<b>SECTION 1: BUILT GREEN TEAM</b>				
1-1	1-10	Use Built Green member subcontractors, vendors, service providers, and real estate agents	3	Typically projects can get at least 3 points here
1-2	5	a) Incorporate Built Green early in the design by conducting an eco-charrette with the development team and owner to determine Built Green features to be included in the project b) Identify team member roles and how they relate to various phases of green lot design, prep and development c) Create a mission statement that includes the project's goals and objectives		
1-3	1	Provide all documentation/copies to third-party verifier electronically	1	Standard Operating Procedure for Verifier
<b>BUILT GREEN TEAM SECTION TOTALS</b>			<b>4</b>	

#### SECTION 2: SITE & WATER

##### SITE PROTECTION

Overall

2-1	10	Build on an infill lot to take advantage of existing infrastructure and reduce development of virgin sites	10	Infill lot just east of Aurora Ave
2-2	10	Build in a planned Built Green development or certified Built Green Community		
2-3	20	Build on a greyfield or brownfield site		
2-4	30	Create a Low Impact Development as defined in handbook		
2-5	5-25	Meet or exceed City of Seattle's Green Factor standards (point tiers in handbook)	15	0.885 - Must be 0.6 or better to achieve points here
2-6	1-5	Bonus points: Use of Green Factor where it is not part of the project's jurisdictional development requirements		
2-7	20	For each acre of development, set aside an equal amount of land as a conservation easement or transfer of development rights		
<b>Subtotal</b>			<b>25</b>	
<b>Protect Site's Natural Features</b>				
2-8	3	Avoid soil compaction by limiting heavy equipment use to building footprint and construction entrance	3	
2-9	3	Preserve existing native vegetation as landscaping (min. 25% preserved)		
2-10	1-5	Retain trees on site (1 pt per 20% preserved)	?	
2-11	10 or 12 or 15	Restore percentage of site outside the footprint for the life of the building (10%, 20%, 30%)		
<b>Subtotal</b>			<b>3</b>	
<b>Protect Natural Processes On-Site</b>				
2-12	2	Install and maintain temporary erosion control devices that significantly reduce sediment discharge from the site beyond code requirements		
2-13	3	Use compost to stabilize disturbed slopes during construction		
2-14	2 or 5	Retain all native topsoil in-situ, or stockpile and protect from erosion		Confirm this on site
2-15	3	Balance cut and fill, while minimizing change to original topography		
2-16	4	Amend disturbed soil with compost to a depth of min. 10 inches to restore soil environmental functions	4	REQUIRED
2-17	2	Replant or donate removed vegetation for immediate reuse	?	Will this happen
2-18	2	Use plants salvaged from another site		
2-19	3	Grind land clearing wood and stumps for reuse on site		
2-20	10 or 20 or 30	Manage specified percentage of stormwater from roof and site on site by 60%, 80%, or 100%	10	Likley to achieve this, possibly more.
<b>Subtotal</b>			<b>14</b>	
<b>Hardscapes</b>				
2-21	5 or 10 or 15	Design to achieve 50%, 75%, or 90% effective pervious surface outside of building footprint	15	at least 90% is pervious.
2-22	10 or 15 or 25	Install vegetated roof system (e.g. green roof) to reduce impervious surface on 25%, 50%, or 90%+ of total roof surface		Roof is 2,560 sf / 0.25=641sf. Vegetated roof is only 65sf
2-23	1	Integrate landscaping with parking area beyond code		No parking on site
<b>Subtotal</b>			<b>15</b>	
<b>Reduce Urban Heat Island Effect</b>				
2-24	5	Install an ENERGY STAR Qualified roof	5	Confirm TPO/roofing is white or very light gray
2-25	5	Provide shading for 30% of hardscapes by using landscape, landscape features, or overhangs	5	296sf of overhangs / 820sf Hardscape paving = 36% covered
2-26	5	For all exterior hardscape, including surface parking, use only light-colored pavement for 90% of project area (Solar Reflective Index of .28 or better)		Confirm paver spec
<b>Subtotal</b>			<b>10</b>	

Eliminate Water Pollutants				
2-27	1	Wash out concrete trucks in slab or pavement subbase areas, or use washout boxes	1	
2-28	3	Establish and post clean up procedures for spills to prevent illegal discharges	3	
2-29	1	Reduce hazardous waste through good jobsite housekeeping	1	
2-30	2	Construct tire wash, establish and post clean up protocol for use		
2-31	2	Use slow release organic fertilizers to establish vegetation		Confirm
2-32	2	Use less toxic form release agent		Confirm with Builder
2-33	8-10	Use non-toxic (10 pts) or low-toxic (8 pts) outdoor materials for all landscaping	10	all materials for landscaping are stone/concrete
2-34	5	Use only "Low Hazard" pesticides and herbicides for landscape installation and in Operations & Maintenance Plan		Confirm
2-35	5	Do not use galvanized metal, EPDM, or PVC roofing materials	5	Confirm with Builder / on-site
2-36	2	Use a modified bitumen built-up or TPO membrane roof	2	TPO
2-37	5	No clearing or grading during wet weather periods (November - April)	5	confirm start of construction
2-38	40 or 50	On-site wastewater treatment for greywater only (40 pts) or for blackwater and greywater (50 pts), min. 50% captured		
<b>Subtotal</b>			<b>27</b>	
WATER CONSERVATION				
Outdoor Conservation				
2-39	2	Mulch landscape beds with 4 inches of organic mulch	2	
2-40	3-12	Limit use of turf grass, or use no turf grass (3 pts per 25%)	12	No turf grass
2-41	5	Landscape with plants appropriate for site topography and soil types, emphasizing use of plants with low watering requirements (drought tolerant)	5	native and drought tolerant. Planter boxes of hydrozoned plantings
2-42	2	Install sub-surface or drip systems for irrigation with controls for each zone, including weather or soil moisture-based modulation		
2-43	5	Install a WaterSense irrigation system		
2-44	3	Irrigation system commissioned by a professional to ensure no leaks, efficient system		
2-45	10	Install landscaping that requires no potable water for irrigation whatsoever after initial establishment period (approximately 2 years)	10	
2-46	5-20	Install rainwater collection system (cistern) that reduces water consumption for irrigation (5 pts for each 25% of irrigation needs met by cistern)		
2-47	50	Provide 100% of building and landscaping water use with captured precipitation or reused water purified without the use of chemicals		
<b>Subtotal</b>			<b>29</b>	
Indoor Conservation				
2-48	1-3	Install ALL bathroom faucets with 1.0 gpm (1 pt), 0.5 gpm or less (3 pts), must be WaterSense labelled	1	MUST BE WATERSENSE / 1gpm modeled
2-49	3	Install ALL kitchen faucets with 1.8 gpm or less	3	MUST BE WATERSENSE / Confirm Flow
2-50	5-7	Install ALL showerheads with 1.75 gpm (5 pts), 1.5 gpm or less (7 pts), must be WaterSense labelled	7	MUST BE WATERSENSE / 1.5gpm modeled
2-51	10	Stub-in plumbing to use greywater for toilet flushing (must test for leaks)		
2-52	20	Use greywater or rainwater for toilet flushing		
2-53	3	Provide water sub-metering for each unit		
2-54	4-12	Install WaterSense labelled toilets (1.28 gpf = 4 pts, 1.1 gpf = 8 pts, 0.8 gpf = 12 pts. All toilets must comply.)	4	Confirm toilets are 1.28 or better. More points awarded for lower flush toilets
2-55	4	Install no-cartridge waterless urinals or 1/8 gallon urinals and 1.28 gpf maximum (WaterSense if not flushometer) toilets in all common areas		
2-56	3-5	Limit pipe volume between water heat source and furthest fixture. Pipe run should store no more than than 0.5 gallons (3 pts) or 0.3 gallons (5 pts)		
<b>Subtotal</b>			<b>15</b>	
Eliminate Water Pollutants				
2-57	1	Do not install garbage disposal	1	confirm
<b>Subtotal</b>			<b>1</b>	

DESIGN ALTERNATIVES				
2-58	10	Follow comprehensive integrated design plan for site and structure (as described in the handbook)		
2-59	5	Provide community common areas accessible to all building occupants	5	confirm accessible roof deck
2-60	2	Take advantage of parking reduction credits that are available in your jurisdiction		No parking required
2-61	5 or 10	Provide structured parking within the proposed building footprint at a 50% minimum or 100%		no parking provided
<b>Subtotal</b>			<b>5</b>	
TRANSPORTATION				
2-62	15	Create a Transit-Oriented Development		
2-63	4	Build within ¼ miles of a transit stop or Park and Ride	4	On Rapid Ride E Line
2-64	15	Create a mixed-use building		
2-65	6-10	Provide subsidized bus passes (25% or 50% subsidized)		
2-66	2	Provide bicycle lockers or bicycle storage beyond code	2	28 of the 48 long term bike storage is in the secure building.
2-67	2	Provide bus shelters		
2-68	6-12	Provide dedicated parking spots for carpool or car-share vehicles (6 pts for first stall above code, 2 pts for each additional)		
2-69	2	Provide a link to community trails		
2-70	5-20	Provide EV charging station (5 pts for one station, 3 pts for each additional)		
<b>Subtotal</b>			<b>6</b>	
BENCHMARKING				
2-71	5	Commit to annual benchmarking of building water consumption using ENERGY STAR Portfolio Manager and to sharing this information with Built Green	5	REQUIRED FOR Built Green
2-72	7	Install a prominent water use display in high traffic common area		
<b>Subtotal</b>			<b>5</b>	
EXTRA CREDIT/INNOVATION for Site and Water				
2-73	1-10	Extra credit / innovation for Site and Water		
<b>Subtotal</b>			<b>0</b>	
<b>SITE &amp; WATER TOTAL</b>			<b>155</b>	

SECTION 3: ENERGY				
ENERGY IMPROVEMENT				
3-1	1-70	Document energy improvements beyond code using approved energy modeling software (1 pt per % improvement above code)	21	21% improvement on preliminary mode
3-2	1-20	Document building improvements beyond code using a prescriptive approach (see handbook for how to calculate points)		
3-3	50	Bonus points: build a net zero energy building that draws zero outside power or fuel on a net annual basis		
<b>Subtotal</b>			<b>21</b>	
SYSTEMS COMMISSIONING				
3-4	5 or 10 or 15	Provide Fundamental Commissioning of building systems (see handbook for point tiers)		Will this happen?
<b>Subtotal</b>			<b>0</b>	
AIR SEALING				
3-5	3	Airtight drywall approach for framed structures	3	BEE is the envelope consultant. Confirm details
3-6	10	Use airtight building method, such as SIP or ICF for all walls		
3-7	3	Eliminate or airtight seal all air pathways between floors and units	3	
3-8	5	Use a dense packed blown-in wall insulation system		batt insulation
3-9	5 or 10 or 15	Conduct blower door test for the whole building with results better than base code requirement (see handbook for point tiers)	5	Confirm BEE is doing this. 3.0 ACH = 5 points / 2 ACH / 1.5 ACH (must be less than 0.25cfm/sf per model & code credit taken)
<b>Subtotal</b>			<b>11</b>	

PASSIVE DESIGN FEATURES				
3-10	6 or 12	Passive solar: three of the below strategies (6 pts), or five (12 pts)		
3-10a		East/west orientation		
3-10b		Optimal glazing - majority within 22 degrees of due south		
3-10c		Proper overhang sizing		
3-10d		Glazing with Solar Heat Gain Coefficient of less than .40		
3-10e		Natural shading on south side (trees)		
3-11	7	Model solar design features using approved modeling software		
3-12	2	Operable window area greater than code		CONFIRM on final
<b>Subtotal</b>			<b>0</b>	
HEATING/COOLING				
Distribution				
3-13	3	Install ENERGY STAR ceiling fans in all units - minimum one per unit		
3-14	5 or 10	Third-party total duct leakage performance test (see handbook for point tiers)		
3-15	2	All ducts are in conditioned space		
3-16	3	Locate heating/cooling equipment inside the conditioned space	3	
<b>Subtotal</b>			<b>3</b>	
Controls				
3-17	2	Install programmable thermostats for all individual heating zones	2	Confirm programmable T-stats / SEDUs
3-18	1	Provide separate switching for bathrooms fan/heat lamp and fan/light combination fixtures	1	Likely, but confirm at final
3-19	3	Provide electricity and/or natural gas direct metering for each unit	3	electric meter each unit
3-20	5	Install heat systems with separate zones for sleeping and living areas (not including electric resistance heating)		Electric resistance installed
3-21	3	Black or smart switches in all units for turning off associated outlets		
<b>Subtotal</b>			<b>6</b>	
Heat Recovery				
3-22	5 or 10	Install a heat recovery ventilator (HRV) or an energy recovery ventilator (ERV)		panasonic whisper green fans
3-23	10	If HRV or ERV installed, commission and make sure system is balanced, includes fan power		
<b>Subtotal</b>			<b>0</b>	
Space Heating/Cooling Equipment				
3-24	3 or 5 or 8	Select heat pumps with performance better than ENERGY STAR (see handbook for point tiers)		electric resistance
3-25	2-4	Select heating system efficiency (natural gas): 96% AFUE (2 pts) or 96% AFUE + Variable Speed/ECM blower motor (4 pts)		
3-26	3	Select ENERGY STAR heating/cooling equipment		
3-27	2	No gas fireplaces, or use direct vent gas or propane hearth product (AFUE rating)	2	<b>REQUIRED</b>
3-28	5	Do not install infrastructure for temporary/portable air conditioners		Confirm no AC ports
<b>Subtotal</b>			<b>2</b>	
WATER HEATING				
Overall				
3-29	5	Install drainwater heat recovery system (DHR)		
3-30	2	Install whole building "smart" variable-speed recirculation pump		
3-31	2 or 4	Install ultra-high efficiency central (gas) water heater with 92% (2 pts) or 96% (4 pts) thermal efficiency	4	96% efficient gas boiler
3-32	2	Install the water heater inside the heated space (electric, direct vent, or sealed venting only)	2	mechanical spaces are in conditioned rooms in the basement
3-33	8	Install one or more Heat Pump Water Heaters with EF 2.0 or greater		
3-34	25	Install a centralized Heat Pump or Reverse Cycle Chiller to heat the domestic hot water		
<b>Subtotal</b>			<b>6</b>	
Distribution				
3-35	10	Insulate all hot water recirculation lines		
3-36	1	Install heat traps on cold inlet pipes at hot water storage tank		
<b>Subtotal</b>			<b>0</b>	
LIGHTING				
Natural Light				
3-37	1	Light-colored interior finishes	1	
<b>Subtotal</b>			<b>1</b>	

Efficient Lighting				
3-38	1-2	Install lighting dimmer, photo cells, timers, and/or motion detectors for high efficiency fixtures - common areas and in-unit lighting		
3-39	2	Install motion detectors for minimum 90% of exterior fixtures		
3-40	2 or 5 or 7	Install high efficacy lighting that is listed on an approved "Qualified Products List" (see handbook for point tiers)	7	80 lumens/watt for LED bulbs (100%)
3-41	5	Avoid excessive outdoor light levels while maintaining adequate light for security and safe access, meet IESNA Levels	5	
<b>Subtotal</b>			<b>12</b>	
APPLIANCES				
3-42	2	Install ENERGY STAR clothes washers in all units	2	<b>REQUIRED</b>
3-43	3	Install ENERGY STAR clothes washers in common laundry facilities instead of in each unit		
3-44	1	Install ENERGY STAR clothes dryers in all units	?	This is optional for ESTAR, but Clothes Washers must be ESTAR
3-45	2	Install ENERGY STAR clothes dryers in common laundry facilities instead of in each unit		
3-46	5	Provide clotheslines to each tenant and "wet room" or outside space in unit or common area for hang drying clothes		
3-47	1	Install an ENERGY STAR dishwasher in all units		<b>Are dishwashers in units</b>
3-48	2 or 4	Install ENERGY STAR, or better, refrigerator in all units	2	REQUIRED ENERGY STAR: CEE Tier 1 = 2 points / Tier 3 = 4 points
3-49	2	Install induction cooktop in all units		
3-50	2	Install ENERGY STAR exhaust fans in all units, with fan sone rating of 0.3 or less at or above the design CFM		sone rating is 0.8
<b>Subtotal</b>			<b>4</b>	
ALTERNATIVE ENERGY				
3-51	7	Participate in the local utility's electricity program for renewable electricity sources (covers minimum 25% of energy used)		
3-52	4	Develop incentive program for tenants to purchase Green-e certified RECs		
3-53	1	Solar-powered or low-voltage walkway or outdoor area lighting		
3-54	5-25	Install photovoltaic system (excluding solar hot water): 5 pts for 300 W/1000 sq ft and 5 pts for each additional 150 W/1000 sq ft.		<b>5 panels installed</b>
3-55	5-25	Install solar thermal for space heating or hot water: 5 pts for 1000 kBtu/1000 sq ft and 5 pts for each additional 500 kBtu/1000 sq ft		
<b>Subtotal</b>			<b>0</b>	
BENCHMARKING				
3-56	5	Include provisions in tenant leases releasing utility consumption and billing data to building owner and authorized agents	5	<b>This is required for the required benchmarking</b>
3-57	10	Commit to performing a post-occupancy comparison of modeled vs. actual energy performance and to sharing with Built Green	10	<b>This is required for the required benchmarking</b>
<b>Subtotal</b>			<b>15</b>	
EXTRA CREDIT/INNOVATION for Energy				
3-58	1--10	Extra credit / innovation for Energy		
<b>Subtotal</b>			<b>0</b>	
<b>ENERGY TOTAL</b>			<b>81</b>	

SECTION 4: HEALTH & INDOOR AIR QUALITY				
OVERALL				
4-1	5	Builder or architect certified to have taken a minimum 8 hour IAQ training approved by Program Manager		
4-2	15	Certify building under an IAQ program approved by Program Manager		
4-3	1	Building is designated non-smoking	1	required for MF apartments in Seattle
<b>Subtotal</b>			<b>1</b>	

JOBSITE OPERATIONS				
4-4	1	Use less-toxic cleaners		Confirm with builder/GC
4-5	1	Require workers to use VOC-safe masks when applying VOC containing wet products and N-95 dust masks when generating dust	1	
4-6	1-5	Take measures during construction operations to avoid moisture problems later (see handbook for examples; 1 pt per action)	5	Just in time delivery / Moisture under 15% / Dimple drainage mats installed / Flashing above windows & doors / no combustion
4-7	2-4	Take measures to avoid problems due to construction dust (see handbook for point tiers)		not likely, but confirm with GC
4-8	3	Ventilate during all new wet finish applications	3	
4-9	2	No use of unvented combustion heaters during construction	2	<b>REQUIRED</b>
4-10	3	Clean duct, furnace, and filter thoroughly before occupancy		
4-11	3	Institute a jobsite anti-idling program for construction vehicles		confirm with GC
4-12	3-12	Use non-diesel alternative fuels in construction equipment: electricity, propane, or natural gas (3 pts per 25% of equipment using alternative fuels)		
4-13	4	Require healthy jobsite plan for workers' compliance		Must be in subcontractor contracts
4-14	4	Implement construction management plan to ensure healthy jobsite plan is implemented optimally and adhered to		
<b>Subtotal</b>			<b>11</b>	
LAYOUT AND MATERIAL SELECTION				
4-15		Inside the building envelope use only low-VOC products for various applications when wet-applied on site:		
4-15a	2	Tiling		Confirm with GC
4-15b	2	Framing	2	
4-15c	4	Flooring	4	review flooring sealants
4-15d	4	Plumbing	4	
4-15e	2	HVAC	2	
4-15f	2	Insulating	2	Confirm any spray foam
4-15g	2	Drywalling	2	confirm drywall sealant
4-16	3	Use urea formaldehyde-free insulation or Greenguard Gold certified insulation product	3	Confirm spec
4-17	1	Do not install insulation or carpet padding that contains brominated flame retardant (BFR)		
4-18	3	Use plywood and composites of exterior grade that is NAF, NAUF, or ULEF (for interior use)		CARB II Required, NAUF gets points awarded
4-19	5	Use only shelving, window trim, door trim, base molding, etc., that is NAF, NAUF, or ULEF		CARB II Required, NAUF gets points awarded
4-20	5	Install cabinets made with board that is NAF, NAUF, or ULEF and has low-toxic finish		CARB II Required, NAUF gets points awarded
4-21	1	Use pre-finished flooring	1	
4-22	5	Use hard surface flooring without orthophthalate plasticizers		Confirm spec
4-23	10	No carpet in units	10	Confirm
4-24	2	Limit use of carpet to one-third of unit's square footage		
4-25	1	If installing carpet system (carpet, pad, and adhesive), specify and use CRI Green Label Plus or Greenguard certified products		
4-26	5	If installing carpet system (carpet, pad, and adhesive), specify and use carpet that does not contain fly ash filler in backing		
4-27	1	If using carpet, install by dry method		
4-28	1	Install low pile or less allergen-attracting carpet and pad		
4-29	2	Install untreated natural fiber carpet		
4-30	1	Avoid carpet in environments where it can get wet (kitchen, bathroom, near entries)		

4-31	50	Select materials such that the building is free from all of the materials and chemicals listed in the handbook. Please discuss with Program Manager before claiming this point		
<b>Subtotal</b>			<b>30</b>	
<b>MOISTURE CONTROL</b>				
<b>Overall</b>				
4-32	5	Use Building Envelope Consultant during design	5	BEE Consulting
4-33	5	Envelope inspection at various stages of envelope installation by a qualified professional	5	confirm BEE is inspecting
4-34	1	Grade to drain away from buildings	1	
<b>Subtotal</b>			<b>11</b>	
<b>Roof</b>				
4-35	6 or 10	Provide 2:12 (9.5 degree) pitch sloped roof surface -for at least 50% of roof (6 pts), or 100% (10 pts)		
<b>Subtotal</b>			<b>0</b>	
<b>Walls - Above Grade</b>				
4-36	3	Provide continuous air- and weather resistive barrier installed to manufacturer's requirements	3	
4-37	3	Use prefabricated, liquid applied, or self-adhering flashing at siding transitions and penetrations		will this be done
4-38	6	Install rainscreen siding	6	confirm
4-39	3	In wood-framed structures, use low-toxic mold-inhibitor product		
<b>Subtotal</b>			<b>9</b>	
<b>Below Grade</b>				
4-40	3	For slab on grade, use 10 mil polyethylene vapor barrier or equivalent performance, directly under slab		likely to be 6 mil, but confirm
4-41	2	Perform moisture test for any slab on grade prior to installing any finish to manufacturer's specifications		confirm with GC
4-42	2	Install mechanical ventilation system to control moisture in crawl space		
4-43	1	Install a rigid perforated footing drain at foundation perimeter, not connected to roof drain system	1	
4-44	3	Install moisture management system for below grade walls beyond code, i.e., drainage mat	3	drainage mat
<b>Subtotal</b>			<b>4</b>	
<b>Openings</b>				
4-45	1	Properly seal building openings and penetrations against moisture and air leaks		
4-46		Install additional moisture control measures:		
4-46a	5	sill pans with back dams or slope at windows		confirm
4-46b	3	door pans with back dams at doors		confirm
4-46c	5	sill flashing extending up sides of windows	5	
4-46d	3	threshold protection at doors	3	
4-46e	1	metal head flashing at windows	1	
4-46f	1	metal head flashing at doors	1	
4-46g	1	min. 18" overhangs at entryways	1	
4-47	3	Provide hose testing or negative pressurization testing to pre-installed sample of each window type to test assembly for moisture control protection - ASTM E1105 or equal		Confirm with BEE whether this will be done
<b>Subtotal</b>			<b>11</b>	
<b>AIR DISTRIBUTION AND FILTRATION</b>				
4-48	2	No stud or joist cavities used for air conveyance	2	
4-49	2	Do not install electronic, metal mesh, horse hair, or non-pleated fiberglass filters	2	
4-50	1	Make sure air intakes are placed to avoid intake from air pollutant sources (beyond code)	1	
4-51	1	No parking within 40 feet of building air intakes	1	
4-52	2 or 5	Use effective media air filter, ensuring the HVAC system is designed for the static pressure drop of the filter: MERV 8 (2 pts) or MERV 12+ (5 pts)		
4-53	2	Install operable windows in all occupied spaces, minimum 4% of floor area		12sf of operable windows or more
4-54	2	Install CO <sub>2</sub> detectors in community rooms	2	
4-55	2	Demand controlled ventilation in all rooms designed for high occupancy		
4-56	10	Utilize a balanced ventilation approach (supply + exhaust/return) in residential units		exhaust only
<b>Subtotal</b>			<b>8</b>	

HVAC EQUIPMENT				
4-57	1	Design to ensure accessibility of all system components	1	
4-58	1	Design to prevent standing water in ducted HVAC systems		
4-59	3	Commission all spot ventilation fans in all units		<b>Minimum 20% of units required. Points awarded for testing all units</b>
4-60	1	Use heating system controls that are free of mercury	1	confirm programmable t-stat
4-61	1	Range exhaust hoods shall be ENERGY STAR rated and have a maximum flow rate less than or equal to 300 cfm	1	
4-62	2	Install an automatic fan control with 20-minute delay timer, motion sensor, or humidistat for bath exhaust fans	2	panasonic whispergreen
4-63	2	Install quiet bath exhaust fan with smooth ducting, minimum 4 inch, with a fan sone rating of .3 or less at or above the design CFM		confirm design flows against panasonic specs
4-64	1	No sound insulation or other fibrous materials installed inside ducting	1	
4-65	3	Install sealed combustion heating and hot water equipment	3	sealed combustion
4-66	3 or 5	Compartmentalization testing of sampling of units (see handbook for point tiers)		can be done by Tom Balderston, but not in scope
<b>Subtotal</b>			<b>9</b>	
HEALTH AND INDOOR AIR QUALITY				
4-67	1	Install biodegradable carbon filter at sink		
4-68	1	Install showerhead filter in all units, include information in the tenant handbook		
4-69	3	Provide track-off mats, carpets, and/or shoe grates at principal entryways to building	3	<b>REQUIRED / must be 10' long at main entrance. Units with exterior doors must have 4' matt</b>
4-70	2	Provide a shoe removal and storage area at the entrance to each unit		
4-71	1	Do not install gas-burning appliances inside unit or building	1	all electric
4-72	1	Install floor drain or catch basin with drain under washing machines (and condensing/heat pump dryers if applicable)		
4-73	1-2	Use radon resistant construction using EPA standards (passive) (1 pt) or test for radon and install active system after building is complete (2 pts)		
<b>Subtotal</b>			<b>4</b>	
EXTRA CREDIT / INNOVATION for Health and Indoor Air Quality				
4-74	1-10	Extra credit / innovation for Health and Indoor Air Quality		
<b>Subtotal</b>			<b>0</b>	
<b>HEALTH &amp; INDOOR AIR QUALITY TOTAL</b>			<b>98</b>	

SECTION 5: MATERIALS EFFICIENCY				
OVERALL				
5-1	10 or 15 or 20	Design and build for deconstruction concept - 50% (10 pts), 75% (15 pts), or 90% (20 pts)		
5-2	1-5	Eliminate materials and systems that require finishes or finish materials on a minimum of 100 square feet in common areas (1 pt per 100 sqft)		<i>Will this be done?</i>
<b>Subtotal</b>			<b>0</b>	
JOBSITE OPERATIONS				
5-3	1	Provide weather protection for stored and installed materials		confirm
5-4	15	Purchase a one-time carbon offset to account for carbon footprint of materials, minimum of 50% of project footprint		
5-5	2	Use suppliers who offer reusable or recyclable packaging		
<b>Subtotal</b>			<b>0</b>	
REDUCE				
5-6	5	Implement comprehensive construction waste reduction and management plan	5	<b>REQUIRED</b>
5-7	5-20	Reduce total waste generated on site (see handbook for point tiers)		<b>This requires tracking per load</b>
<b>Subtotal</b>			<b>5</b>	
REUSE				
5-8	15-30	Use deconstruction to dismantle and reuse existing building components on site (see handbook for point tiers)		
5-9	1	Sell, give away, or reuse wood scraps, lumber and land clearing debris		<i>will this be done</i>
5-10	1	Donate, sell, or give away reusable finish items		will this be done
5-11	1-20	Reuse salvaged materials (1 pt per material, examples listed in handbook)		<b>will this be done</b>
5-12	1-20	Use salvaged lumber, 1 pt per 100 board feet		
<b>Subtotal</b>			<b>0</b>	

RECYCLE				
<b>Source Separation Recycling - if points are claimed here, none may be claimed under Commingle Recycling</b>				
5-13	1	Recycle cardboard by source separation, 90% minimum recycling rate		
5-14	2	Recycle metal scraps by source separation, 90% minimum recycling rate		
5-15	5	Recycle clean scrap wood and broken pallets by source separation, 90% minimum recycling rate		
5-16	2	Recycle package wrap and pallet wrap by source separation, 90% minimum recycling rate		
5-17	3	Recycle drywall by source separation, 90% minimum recycling rate		
5-18	2	Recycle concrete/asphalt rubble, masonry materials, or porcelain by source separation, 90% minimum recycling rate		
5-19	1	Recycle paint by source separation, 90% minimum recycling rate		
5-20	4	Recycle asphalt roofing by source separation, 90% minimum recycling rate		
5-21	2	Recycle carpet padding by source separation, 90% minimum recycling rate		
5-22	2	Recycle carpet by source separation, 90% minimum recycling rate		
5-23	1	Recycle glass by source separation, 90% minimum recycling rate		
5-24	3	Recycle land clearing and yard waste, food waste, soil and sod by source separation, 90% minimum recycling rate		
5-25	3	Recycle electronics and batteries		
5-26	1	Provide bin for miscellaneous household waste		
			<b>Subtotal</b>	<b>0</b>
<b>Commingle Recycling - if points are claimed here, none may be claimed under Source Separation Recycling</b>				
5-27	10	Send at least 90% of jobsite recyclables (by weight excluding concrete) to an approved commingled recycling facility with 50% recycling rate		
5-28	18	Send at least 90% of jobsite recyclables (by weight excluding concrete) to an approved commingled recycling facility with 75% recycling rate	18	<b>REQUIRED FOR PRIORITY GREEN</b>
5-29	24	Send at least 90% of jobsite recyclables (by weight excluding concrete) to an approved commingled recycling facility with 90% recycling rate		
			<b>Subtotal</b>	<b>18</b>
<b>DESIGN AND MATERIAL SELECTION</b>				
<b>Overall</b>				
5-30	1	Use standard dimensions in design of structure		
5-31	10	Design and install recycling stations on each floor, including a maintenance service plan		
5-32	8	Design and install food waste management system on each floor, including a maintenance service plan		
5-33	1-3	Install materials with longer life cycles		<b>confirm during procurement phase and verify on site inspections</b>
5-34	1-10	Install locally/regionally produced materials (1 pt per material)	5	framing lumber, drywall, windows, doors, MDF trim...CONFIRM
5-35	2-6	Use rapidly renewable building materials and products made from plants harvested within a ten-year cycle or shorter (2 pts per material)		
5-36	3	Use no endangered species or old growth wood	3	confirm specs
5-37	3	Use no PVC, CPVC, or ABS piping for plumbing or sprinklers within the building envelope		
			<b>Subtotal</b>	<b>8</b>
<b>Framing</b>				
5-38	2	Create detailed take-off and provide as cut list to framer		will this be done
5-39	2	Use central cutting area or cut packs	2	
5-40	6 or 10	Use dimensional lumber that is third-party certified sustainably harvested wood that meets the Tier 1 (10 pts) or Tier 2 (6 pts) requirements outlined in the handbook, 50% minimum		
5-41	4 or 7	Use sheathing that is third-party certified sustainably harvested wood that meets the Tier 1 (7 pts) or Tier 2 (4 pts) requirements outlined in the handbook, 50% minimum		
5-42	3 or 5	Use beams that are third-party certified sustainably harvested wood that meets the Tier 1 (5 pts) or Tier 2 (3 pts) requirements outlined in the handbook, 50% minimum		
5-43	6	Use factory framed wall panels (panelized wall construction)		
5-44	5	Use advanced wall framing - 24-inch OC, with double top plate		
5-45	3	Use engineered structural products and use no 2xs larger than 2x8, and no 4xs larger than 4x8	3	<b>Likely</b>
5-46	4-8	Use structural insulated panels (SIPs) (see handbook for point tiers)		
5-47	5	Use insulated concrete forms (ICFs)		
5-48	1	Use finger-jointed framing material (e.g. studs)		
5-49	8	Use Cross Laminated Timber in place of steel or concrete		
			<b>Subtotal</b>	<b>5</b>

Foundation				
5-50	6	Use fly ash or blast furnace slag for 25% by weight of cementitious materials for all concrete		Confirm with GC
5-51	2	Use recycled concrete, asphalt, or glass cullet for base or fill	2	
<b>Subtotal</b>			<b>2</b>	
Sub-Floor				
5-52	1	Use recycled content sub-floor		
<b>Subtotal</b>			<b>0</b>	
Finish Floor				
5-53	2	If using vinyl flooring, use product with recycled content		
5-54	4	No vinyl flooring		<i>Will this be done</i>
5-55	1	Use recycled content carpet pad		
5-56	2	Use recycled content carpet		
5-57	2 or 4	Use replaceable carpet tile for 50% of carpeted area (2 pts) or 100% of carpeted area (4 pts) (minimum of 50 sqft)		
5-58	5	If using tile, use hard surface tile that is 40% recycled content		
5-59	5	Use natural linoleum		
5-60	3 or 5	Use flooring that is third-party certified sustainably harvested wood for at least 50% of hard surface flooring (see handbook for point tiers)		
5-61	1	Use spot repairable floor finish		
<b>Subtotal</b>			<b>0</b>	
Interior Walls				
5-62	2	Use drywall with a minimum of 95% recycled content synthetic gypsum or 10% if non-synthetic gypsum		
5-63	2 or 3	Use recycled or "reworked" paint and finishes on main surfaces or all surfaces		
<b>Subtotal</b>			<b>0</b>	
Ceilings				
5-64	1	If installing acoustical ceiling tiles, select a recycled content product		
<b>Subtotal</b>			<b>0</b>	
Windows				
5-65	8	Use all wood, composite, or fiberglass windows		confirm windows, likely vinyl
<b>Subtotal</b>			<b>0</b>	
Trim				
5-66		If using wood trim:		
5-66a	2 or 3	Use trim that is third-party certified sustainably harvested wood, 50% minimum (see handbook for point tiers)		
5-66b	3	Use finger-jointed or MDF trim with no added urea formaldehyde, 90% minimum		<b>MUST BE CARB II or Better, NAUF gets points for this credit</b>
5-66c	1 or 2	Use wood veneers that are third-party certified sustainably harvested woods, 50% minimum (see handbook for point tiers)		
<b>Subtotal</b>			<b>0</b>	
Cabinetry and Counters				
5-67		For cabinets:		
5-67a	1 or 2	Use third-party certified sustainably harvested wood for at least 75% of cabinet casework (see handbook for point tiers)		
5-67b	3	Use recycled-content cabinet casework for at least 75% of all casework		
5-67c	1	Use cabinet casework and shelving made with agricultural fiber that is NAUF, NAF, or ULEF for at least 75% of all cabinetry		<b>MUST BE CARB II or Better, NAUF gets points for this credit</b>
5-68	1 or 4	Use resource efficient countertop material in lobby/reception areas (1 pt) or in all areas (4 pts)		
<b>Subtotal</b>			<b>0</b>	
Roof				
5-69	2	Use recycled content roofing material		confirm spec
5-70	2	Use a modified bitumen built-up roof	2	
5-71	5	Protect at least 90% of built-up and membrane roofing with ballast, pavers, or vegetated roof systems		confirm
<b>Subtotal</b>			<b>2</b>	
Insulation				
5-72	4	All cavity insulation to have a minimum of 40% post-consumer recycled content	4	Knauf Ecobatt, Certainteed, Owens Corning all have 40% or more.
5-73	5	Use environmentally friendly foam building products (CFC-, HFC-, HCFC-free)	5	<b>confirm on site</b>
<b>Subtotal</b>			<b>9</b>	

Exterior Walls				
5-74	2	Use recycled content sheathing (OSB does not apply)		
5-75	3	Use exterior cladding with reclaimed or recycled material on at least 20% of solid wall surface		<i>will this be the case?</i>
5-76	4	No vinyl siding or exterior trim	4	
5-77	3	Use 50-year siding product (minimum 20% of solid wall surface)		
5-78	3 or 5	Use wood siding that is third-party certified sustainably harvested wood on at least 20% of solid wall surface (see handbook for point tiers)		
<b>Subtotal</b>			<b>4</b>	
Other Exterior				
5-79	2 or 3	Use 100% recycled content HDPE or lumber that is third-party certified sustainably harvested wood for decking and porches (see handbook for point tiers)		
5-80	2	Use post-consumer recycled content plastic lumber for decking		
5-81	5	If lumber is used, use no pressure treated lumber	5	confirm at soffits/fencing
<b>Subtotal</b>			<b>5</b>	
BENCHMARKING				
5-82	5	Commit to annual tracking of building trash using ENERGY STAR Portfolio Manager and to sharing with Built Green	5	<b>REQUIRED</b>
<b>Subtotal</b>			<b>5</b>	
EXTRA CREDIT / INNOVATION for Materials Efficiency				
5-83	1-10	Extra credit / innovation for Materials Efficiency		
<b>Subtotal</b>			<b>0</b>	
<b>MATERIALS EFFICIENCY TOTAL</b>			<b>63</b>	

SECTION 6: OPERATION, MAINTENANCE & TENANT EDUCATION				
6-1	7	Provide educational materials designed for the public that highlight the green building features and their performance that are included in the project		
6-2	5	Prepare an environmentally friendly operations and maintenance plan for common area facilities	5	
6-3	5	Prepare an environmentally friendly landscape operations and maintenance plan	5	
6-4	6	Develop and provide a building-wide food waste disposal strategy	6	
6-5	7	Require tenants to sign an energy consumption data release form (if separately metered)	7	<b>required to meet benchmarking requirement</b>
6-6	5	Require tenants to sign a water consumption data release form (if separately metered)		
6-7	7	Conduct training sessions for maintenance staff and/or residents		
6-8	5	Give individual feedback to all tenants about their energy consumption in comparison to others and/or building average		
6-9		Provide tenants with materials including information on:		
6-9a	1	Where to dispose of food waste (compost)	1	
6-9b	1	Where to dispose of recycleables	1	
6-9c	1	General practices to conserve water and energy		
6-9d	1	Transportation options and resources		
6-9e	3	EVs, their benefits, and where to charge them		
6-9f	2	Green features and benefits of the buildings		
6-9g	3	Maintenance checklists for their unit		
<b>OPERATION, MAINTENANCE &amp; TENANT EDUCATION TOTAL</b>			<b>25</b>	

PROJECT SUMMARIES	
<b>SECTION 1: BUILT GREEN TEAM</b>	<b>4</b>
<b>SECTION 2: SITE &amp; WATER</b>	<b>155</b>
<b>SECTION 3: ENERGY</b>	<b>81</b>
<b>SECTION 4: HEATH &amp; INDOOR AIR QUALITY</b>	<b>98</b>
<b>SECTION 5: MATERIALS EFFICIENCY</b>	<b>63</b>
<b>SECTION 6: OPERATION, MAINTENANCE &amp; TENANT EDUCATION</b>	<b>25</b>
<b>GRAND TOTAL 426</b>	