

**Capital GREEN**  
**Project Summary**



Date Entered:

<b>Project Name:</b>	<b>Seattle Project</b>	Project No.:	<b>1097</b>
Department:	<b>fas</b>	Project Manager:	tr
Brief Description:	4,500 SF Tenant Improvement.		
Address:	700 5th Avenue, Suite xxx		

Step One: Capture the scope of your project below  
 Step Two: On the Simple Checklist remove strategies that don't apply by selecting NA  
 Step Three: Use the Expanded Checklist as your ongoing project checklist throughout design and construction  
 Step Four: Use separate toolkit file calculators for relevant strategies  
 Step Five: Tally results on the Final Checklist and make PDF with the Final Summary for reporting

<b>Design Team:</b>		
Architect:	<b>123 Design</b>	Other Consultant:
Mechanical Engineer:	<b>HVAC Design-Build</b>	Other Consultant:
General Contractor:	<b>ABC Contractor</b>	Other Consultant:

**SCOPE OF WORK:** *(select as many of the elements below as apply to your scope of work)*

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Demolition            | <input checked="" type="checkbox"/> Furnishings |
| <input type="checkbox"/> Sitework                         | <input checked="" type="checkbox"/> HVAC        |
| <input type="checkbox"/> Building Structure               | <input checked="" type="checkbox"/> Plumbing    |
| <input type="checkbox"/> Building Envelope                | <input checked="" type="checkbox"/> Electrical  |
| <input checked="" type="checkbox"/> Interior Construction | <input type="checkbox"/> Fire Suppression       |
| <input checked="" type="checkbox"/> Interior Finishes     | <input type="checkbox"/> Parks Project          |
| <input type="checkbox"/> Specialties & Equipment          |   |

[More information](#)



Project Name: **Seattle Project**  
Department: **fas**

Project No.: **1097**  
Project Manager: **tr**

Number	Strategies	Scope	Select
S.1.1.A	Clearly define construction limits from building perimeter, roads, utilities and stormwater detention facilities.	Demo, Site	N/A
S.1.1.G	Remediate environmentally hazardous material in soil and/or building	Demo, Site	N/A
S.2.2.A	Limit trespass of exterior lighting over site boundary and upward into night sky by using shielded fixtures	Elec	N/A
W.2.1.A	Use rainwater for cooling tower make-up water	HVAC	N/A
W.2.2.A	Install low flow plumbing fixtures	Plumb	?
W.2.2.B	Install low volume flush fixtures	Plumb	?
W.2.3.A	Submeter high water use operations like irrigation or domestic hot water	Plumb	N/A
W.3.3.A	Provide above ground fuel tanks with secondary containment	Plumb, S&E	N/A
W.3.3.B	Provide leak detection system for tanks and piping	Plumb, Elec	N/A
W.4.1.B	Collect rainwater or graywater for irrigation	Site, Plumb	N/A
W.5.1.A	Provide on-site wastewater treatment infrastructure	Site, Plumb	N/A
E.1.1.A	Commission building energy systems	HVAC, Elec	?
E.1.2.A	Provide demand control ventilation (DCV) to respond to variable occupancy loads	HVAC	?
E.1.2.B	Provide building automation system	HVAC	?
E.1.3.A	Submeter all major energy end uses	Elec, HVAC	?
E.1.4.A	Use efficient gas heating equipment	HVAC	N/A
E.1.4.B	Increase motor efficiency for fans and pumps	HVAC	?
E.1.4.D	Use efficient cooling equipment	HVAC	N/A
E.1.4.E	Use efficient domestic water heating equipment	HVAC	N/A
E.1.4.F	Use efficient boiler equipment	HVAC	N/A
E.2.2.A	Size lighting control zones as small as feasible	Elec	?
E.2.2.B	Reduce lighting energy use through use of automatic lighting controls	Elec	?
E.2.2.C	Reduce lighting power density	Elec	?
E.2.2.D	Use efficient lighting fixtures	Elec	?
C.1.1.A	Use low-emission boilers and furnaces	HVAC	N/A
C.1.2.A	Phase out CFCs in existing buildings and replace with new equipment or refrigerants	HVAC, FireSuppr	N/A
C.1.2.B	Provide leak detection and remote alarm where refrigerants are used	HVAC	N/A
C.1.2.C	Select equipment with refrigerants that have low ozone depleting potential & low global warming potential	S&E, HVAC, FireSuppr	N/A
C.2.1.A	Provide on-site renewable energy	Elec, HVAC	N/A
C.3.1.B	Provide secure bike parking and shower/changing rooms	Site, Constr	N/A
C.3.2.B	Provide Level 2 electric vehicle charging stations (240v).	Struct, Elec	N/A

1. This form is only intended to remove strategies which do not apply to your scope of work  
2. Strategies which have been selected as N/A will not show up in the Expanded Checklist.  
3. Provide explanation of why a strategy is N/A on Summary Tab

M.1.1.A	Use materials manufactured within 500 miles of site	Struct, Env, Constr, Finish, Furnish	?
M.1.1.B	Use materials harvested or extracted within 500 miles of site	Struct, Env, Constr, Finish, Furnish	?
M.1.2.A	Use wood from Forest Stewardship Council (FSC) sources	Struct, Env, Constr, Finish, Furnish	?
M.1.2.B	Use rapidly renewable materials, i.e., materials that are harvested within a 10 year or shorter timeframe	Finish, Furnish	?
M.2.1.A	Implement a construction waste management plan to divert recyclable waste from the landfill	Demo, Site, Struct, Env, Constr, Finish,	?
M.2.2.A	Provide convenient and appropriately sized recycling collection and storage	Constr, Finish, S&E, Furnish	?
M.3.1.A	Retain non-structural interior elements of existing building	Struct, Constr, Finish	?
M.3.1.B	Retain structural components of existing building	Struct, Env, Constr	N/A
M.3.2.A	Use demountable floor-to-ceiling partitions and non-demising walls	Struct, Constr	?
M.3.2.B	Select building assemblies based on life-cycle cost analysis	Struct, Env, Constr, Finish	?
M.3.2.C	Select building assemblies based on life-cycle assessment	Struct, Env, Constr, Finish	?
M.3.2.D	Use building materials that contain recycled content	Site, Struct, Env, Constr, Finish, Furnish	?
M.3.2.E	Re-use furniture and furnishings	Furnish	?
M.3.2.F	Select well built furnishings for durability	Furnish	?
IE.1.1.A	Use low-emitting interior adhesives and sealants	Struct, Env, Constr, Finish, Plumb	?
IE.1.1.B	Use low-emitting interior paints and coatings	Struct, Constr, Finish	?
IE.1.1.C	Use low-emitting systems furniture and seating	Furnish	?
IE.1.1.D	Use wood and agrifiber products that contain no added urea-formaldehyde	Struct, Constr, Finish, Furnish	?
IE.1.1.E	Use low-emitting flooring systems	Finish	?
IE.1.1.F	Locate outdoor air intakes away from outdoor pollution sources	HVAC	?
IE.1.2.A	Provide thermal comfort controls to occupants	HVAC	?
IE.1.2.B	Implement thermal comfort survey	HVAC	?
IE.1.3.A	Provide appropriate daylight levels	Env, Constr	?
IE.1.3.B	Install automatic daylight controls	Elec	?
IE.1.3.C	Maximize occupied floor area with access to daylight	Struct, Constr	?
IE.1.3.D	Provide efficient task lighting at individual workstations in open office areas with limited lighting controls	Elec, Constr	?
IE.1.4.A	Select interior materials to provide appropriate amount of sound absorption for application	Constr, Finish	?
IE.1.4.B	Provide speech privacy between enclosed spaces	Struct, Constr	?
IE.1.4.C	Mitigate noise from HVAC equipment & plumbing	Struct, Constr, HVAC, Plumb	?
IE.1.5.A	Implement job-site indoor air quality plan during construction	Struct, Env, Constr, Finish, S&E, Furnish,	?
IE.1.5.B	Perform building flush out prior to occupancy	Constr, Finish	?
IE.1.6.A	Use a raised floor system or provide flexible ducts for air diffusers	Struct, HVAC, Constr	N/A
IE.1.6.B	Provide sufficient volume of outside air	HVAC	?
IE.1.6.C	Provide effective zone ventilation distribution	HVAC	?
IE.1.6.D	Meet code ventilation requirements with natural ventilation or a combination of both mechanical and natural ventilation, regardless of project size.	Env, HVAC	N/A



Project Name: **Seattle Project**  
Department: **fas**

Project No.: **1097**  
Project Manager: **tr**

Number	Comments	Selection
S.1.1.A	No site work in scope	N/A
S.1.1.G	No site work in scope	N/A
S.2.2.A	No exterior lighting in scope	N/A
W.2.1.A	No building systems in scope	N/A
W.2.3.A	No building level metering	N/A
W.3.3.A	Not applicable to this building	N/A
W.3.3.B	Not applicable to this building	N/A
W.4.1.B	No building level systems in scope	N/A
W.5.1.A	No building level systems in scope	N/A
E.1.4.A	No gas equipment in scope	N/A
E.1.4.D	No cooling equipment in scope	N/A
E.1.4.E	No water heating equipment in scope	N/A
E.1.4.F	No boilers in scope	N/A
C.1.1.A	No boilers in scope	N/A
C.1.2.A	No CFC's in building	N/A
C.1.2.B	No cooling equipment in scope	N/A
C.1.2.C	No cooling equipment in scope	N/A
C.2.1.A	No building level systems in scope	N/A
C.3.1.B	Showers and changing rooms provided in building health club - not in our scope	N/A
C.3.2.B	No parking area improvements included in building scope	N/A
M.3.1.B	No changes to structural systems being made	N/A
IE.1.6.A	Building can not accommodate a raised floor system	N/A
IE.1.6.D	Building can not accommodate natural ventilation	N/A

Number	Comments	Selection
E.1.3.A+	Submetering is not required by code. Project cannot afford additional meter expense.	N
M.3.1.A+	Will save demising walls and some doors, but probably not enough.	N
M.3.2.B+	Not in project budget.	N
M.3.2.C+	Not in project budget.	N
IE.1.1.F+	Project does not have control of locations for outdoor air intakes.	n/a
IE.1.4.C+	Not in project budget.	N

Number	Comments	Selection
W.2.2.B+	No flush fixtures in project scope.	n/a
E.1.3.A+	Submetering is not required by code. Project cannot afford additional meter expense.	N
M.3.1.A+	Will save demising walls and some doors, but probably not enough.	N
M.3.2.B+	Not in project budget.	N
M.3.2.C+	Not in project budget.	N
IE.1.1.F+	Project does not have control of locations for outdoor air intakes.	n/a
IE.1.4.C+	Not in project budget.	N

Please add additional comments to Summary  
at the end of the Final Checklist

Note: Expanded Checklist is abbreviated



Project Name:   
Department:

Project No.:   
Project Manager:

The 'toolkit'

Number	Links	Goal	Strategies	Selection
W.2.2.A		<b>Install low flow plumbing fixtures</b>		Y
		A. Install low flow plumbing fixtures including lavatory faucets, showerheads and kitchen sink faucets.		<div style="border: 1px solid red; padding: 5px; display: inline-block;">                     Select pursuit option - Y, N or N/A                 </div>
		Baseline:	Exceed Seattle Plumbing Code with 2.0 gpm kitchen sink and showerhead	
		Target:	Exceed Seattle Plumbing Code with 1.75 gpm kitchen sink and showerhead plus 0.5 gpm lavatory w/auto sensor	
		Comments:	<Please provide explanation if strategy was not achieved or other comments as desired>	
W.2.2.B		<b>Install low volume flush fixtures</b>		n/a
		B. Install low volume flush fixtures for water closets and urinals.		<div style="border: 1px solid red; padding: 5px; display: inline-block;">                     Only select N/A if not in your scope. Strategy will be eliminated from the final tally.                 </div>
		Baseline:	Exceed Seattle Plumbing Code with dual flush or low flush WC: 1.28 gpf and urinal: 0.5 gpf.	
		Target:	Exceed Seattle Plumbing Code with dual flush or low flush WC: 1.28/ and urinal: 0.125 gpf	
		Comments:	No flush fixtures in project scope.	
E.1.1.A		<b>Commission building energy systems.</b>		Y
	<a href="#">Seattle 2009 Energy Code</a>	A. Seattle Energy Code requires all mechanical work and lighting controls be commissioned. This strategy expands the requirement to include electrical systems.		
		Baseline:	Commission all mechanical and electrical work, regardless of project size, to meet the Seattle Energy Code.	
		Target:	Increase Cx scope to include peer review of design and construction documents, specifications and submittals. Cx to participate in operator training and provide post occupancy review between 6-18 months after occupancy.	
		Comments:	<Please provide explanation if strategy was not achieved or other comments as desired>	
E.1.2.A		<b>Provide demand control ventilation (DCV) to respond to variable occupancy loads.</b>		Y
		A. Provide demand control ventilation (DCV) to respond to varying occupancy loads.		
		Baseline:	Ventilation controls respond to occupancy levels in densely occupied spaces (25 people/1000 SF - i.e. conference rooms, training rooms, break rooms).	
		Target:	Ventilation controls respond to occupancy in any space with varying occupancy (i.e. open and private offices).	
		Comments:	<Please provide explanation if strategy was not achieved or other comments as desired>	
E.1.2.B		<b>Provide building automation system</b>		Y
	<a href="#">Seattle 2009 Energy Code</a>	B. Seattle Energy Codes requires a 7-day programmable thermostat as a minimum. For buildings with a cooling load over 65 tons more complex control systems are required. The system must be capable of trending and demand response setpoint adjustment. This strategy requires a building automation system regardless of system complexity. Controls can be expanded to include lighting and hot water.		

Baseline: Direct Digital Controls (DDC) for building HVAC.  
Expand DDC system to control lighting, and  
Target: domestic hot water.

Comments: <Please provide explanation if strategy was not achieved or other comments as desired>

E.1.3.A

**Submeter all major energy end uses**

N

[Seattle 2009 Energy Code](#)

A. SEC requires all buildings over 20,000 SF to have energy metering for all major end uses. There are exceptions for existing buildings. This strategy encourages existing buildings to upgrade and for buildings below the 20,000 SF threshold to meet the requirements of the code.

Baseline: Install measurement devices with remote communication capability for each energy source regardless of project size.

Target: Install measurement devices with remote communication capability for each energy source AND end use regardless of project size. See SEC Ch. 12 for end use definitions.

Comments: Submetering is not required by code. Project cannot afford additional meter expense.

E.1.4.B

**Increase motor efficiency for fans and pumps**

Y

B. Increase motor efficiency using variable speed drives

Baseline: Use variable speed drives for fans and pumps with a motor horsepower of 5 hp or larger  
Target: Use variable speed drives for all fans and pumps serving a variable flow or variable volume system.

Comments: All VAV boxes have VSD's

E.2.2.A

**Size lighting control zones as small as feasible.**

Y

A. Size lighting control zones as small as feasible.

Baseline: Regardless of project size or scope

Target: n/a

Comments: Provide lighting control zone for each individual office, and each conference room. For open office areas, separate zones will be provided for each building orientation.

E.2.2.B

**Reduce lighting energy use through use of automatic lighting controls**

Y

[Seattle 2009 Energy Code](#)

B. Reduce lighting energy use via daylight controls and occupancy sensors in spaces with intermittent use.

Baseline: Provide occupancy sensors for 50% of lighting load and daylight controls as prescribed by SEC.

Target: Provide occupancy sensors for 75% of lighting load . Provide daylight controls for 50% or more of lighting load.

Comments: Daylight controls will be provided in accordance with SEC. All other spaces will be provided with occupancy sensors.

E.2.2.C

**Reduce lighting power density**

Y

[Seattle 2009 Energy Code](#)

C. Reduce lighting power density and supplement w/task lighting or daylighting.

Baseline: 5% reduction from current Seattle Energy Code  
Target: 10% or more reduction from current Seattle Energy Code

Comments: Office areas not to exceed 0.8 W/SF

Use comment area to communicate expectations to design team.

E.2.2.D

**Use efficient lighting fixtures**

Y

D. Use efficient electric lighting.

Baseline: Use lamps with high efficacy (Lumen/Watt) such as T8 or T5. Use Energy Star CFL's



Note: Final Checklist is abbreviated

Project tally

Date Entered: 2/9/2013

Available	36
Achieved	28
Baseline	18
Target	10

Project Name: Seattle Project  
Department: fas

Project No.: 1097  
Project Manager: tr

Number	Links	Goal	Select Level of Achievement
W.2.2.A		<b>Install low flow plumbing fixtures</b>	Y
		A. Install low flow plumbing fixtures including lavatory faucets, showerheads and kitchen sink faucets.	
		Baseline: Exceed Seattle Plumbing Code with 2.0 gpm kitchen sink and showerhead	Baseline Achieved?: N
		Target: Exceed Seattle Plumbing Code with 1.75 gpm kitchen sink and showerhead plus 0.5 gpm lavatory w/auto sensor	Target Achieved?: Y
		Comments: Only kitchen sink is in scope. Installed 1.5 gpm.	
		<b>Commission building energy systems.</b>	Y
	<a href="#">Seattle 2009 Energy Code</a>	A. Seattle Energy Code requires all mechanical work and lighting controls be commissioned. This strategy expands the requirement to include electrical systems.	
		Baseline: Commission all mechanical and electrical work, regardless of project size, to meet the Seattle Energy Code.	Baseline Achieved?: Y
		Target: design and construction documents, specifications and submittals. Cx to participate in operator training and provide post occupancy	Target Achieved?: N
		Comments: Baseline commissioning was performed.	
E.1.2.A		<b>Provide demand control ventilation (DCV) to respond to variable occupancy loads.</b>	Y
		A. Provide demand control ventilation (DCV) to respond to varying occupancy loads.	
		Baseline: Ventilation controls respond to occupancy levels in densely occupied spaces (25 people/1000 SF - i.e. conference rooms, training rooms, break rooms).	Baseline Achieved?: Y
		Target: Ventilation controls respond to occupancy in any space with varying occupancy (i.e. open and private offices).	Target Achieved?: N
		Comments: Conference rooms and break rooms have CO2 sensors.	
E.1.2.B		<b>Provide building automation system</b>	Y
	<a href="#">Seattle 2009 Energy Code</a>	B. Seattle Energy Codes requires a 7-day programmable thermostat as a minimum. For buildings with a cooling load over 65 tons more complex control systems are required. The system must be capable of trending and demand response setpoint adjustment. This strategy requires a building automation system regardless of system complexity. Controls can be expanded to include lighting and hot water.	
		Baseline: Direct Digital Controls (DDC) for building HVAC.	Baseline Achieved?: Y
		Target: Expand DDC system to control lighting, and domestic hot water.	Target Achieved?: N
		Comments: Base building includes DDC controls.	
E.1.4.B		<b>Increase motor efficiency for fans and pumps</b>	N
		B. Increase motor efficiency using variable speed drives	
		Baseline: Use variable speed drives for fans and pumps with a motor horsepower of 5 hp or larger	Baseline Achieved?: N
		Target: Use variable speed drives for all fans and pumps serving a variable flow or variable volume system.	Target Achieved?: n/a
		Comments: All VAV boxes have VSD's	
E.2.2.A		<b>Size lighting control zones as small as feasible.</b>	Y
		A. Size lighting control zones as small as feasible.	

Comments will carry over from Expanded Checklist, but may be edited here.

Select performance level achieved - Strategy achievement is counted at either the baseline OR target performance levels. If both are selected, the target level will be tallied.

Baseline: Regardless of project size or scope      Baseline Achieved ? : Y  
 Target: n/a      Target Achieved ? : n/a  
 Comments: Provide lighting control zone for each individual office, and each conference room. For open office areas, separate zones will be provided for each building orientation.

E.2.2.B      **Reduce lighting energy use through use of automatic lighting controls**      N  
[Seattle 2009 Energy Code](#)      B. Reduce lighting energy use via daylight controls and occupancy sensors in spaces with intermittent use.

Baseline: Provide occupancy sensors for 50% of lighting load and daylight controls as prescribed by SEC.      Baseline Achieved ? : N  
 Target: Provide occupancy sensors for 75% of lighting load . Provide daylight controls for 50% or more of lighting load.      Target Achieved ? : N  
 Comments: Daylight controls will be provided in accordance with SEC. All other spaces will be provided with occupancy sensors.

E.2.2.C      **Reduce lighting power density**      Y  
[Seattle 2009 Energy Code](#)      C. Reduce lighting power density and supplement w/task lighting or daylighting.

Baseline: 5% reduction from current Seattle Energy Code      Baseline Achieved ? : N  
 Target: 10% or more reduction from current Seattle Energy Code      Target Achieved ? : Y  
 Comments: Office areas not to exceed 0.8 W/SF

E.2.2.D      **Use efficient lighting fixtures**      Y  
 D. Use efficient electric lighting.

Link to calculator to provide final performance level

Baseline: Use lamps with high efficacy (Lumen/Watt) such as T8 or T5. Use Energy Star CFL's      Baseline Achieved ? : Y  
 Target: n/a      Target Achieved ? : n/a  
 Comments:

M.1.1.A      **Use materials manufactured within 500 miles of site.**      Y  
[calculator](#)      A. Source materials manufactured within 500 miles of the project site.

Baseline: 20% cost of materials      Baseline Achieved ? : Y  
 Target: 40% cost of materials      Target Achieved ? : N  
 Comments: Steel framing, drywall and casework to be locally manufactured.

M.1.1.B      **Use materials harvested or extracted within 500 miles of site.**      Y  
[calculator](#)      B. Source materials harvested or extracted within 500 miles of the project site.

Baseline: 5% cost of materials      Baseline Achieved ? : Y  
 Target: 10% cost of materials      Target Achieved ? : N  
 Comments: Casework to be locally harvested.

M.1.2.A      **Use wood from Forest Stewardship Council (FSC) sources**      N  
[calculator](#)      A. Use wood from Forestry Stewardship Council (FSC) sources

[FSC](#)

Baseline: 20% cost of wood products      Baseline Achieved ? : N  
 Target: 50% cost of wood products      Target Achieved ? : N  
 Comments: Not in project budget.

M.1.2.B      **Use rapidly renewable materials, i.e., materials that are harvested within a 10 year or shorter timeframe**      Y  
[calculator](#)      B. Materials include cork, linoleum, wheatgrass, bamboo, cellulose insulation, etc.



Target: Conduct acoustic comfort survey after completion. Take corrective action if significant speech privacy issues exist. Target Achieved?: N

Comments: Meet Baseline compliance level.

**IE.1.5.A Implement job-site indoor air quality plan during construction** N

A. Implement job-site indoor air quality (IAQ) plan during construction, regardless of code threshold.

Baseline: ✓ Baseline Achieved?: N

Target: n/a Target Achieved?: n/a

Comments: Provide in specification

**IE.1.5.B Perform building flush out prior to occupancy.** Y

B. Flush out building with outside air prior to occupancy.

Baseline: 3,500 CFM/SF at 60 degrees F and 60% humidity Baseline Achieved?: N

Target: 14,000 CFM/SF at 60 degrees F and 60% humidity Target Achieved?: Y

Comments: Perform full flush out.

**IE.1.6.B Provide sufficient volume of outside air** Y

[Seattle 2009 Mechanical Code](#)

B. Provide sufficient volume of outside air in accordance with 2009 Seattle Mechanical Code and ASHRAE 62.1-2007

Baseline: For new buildings, use ASHRAE 62.1-2007 VPR calculation or 2009 Seattle Mechanical Code to determine minimum outside air to each occupied space. Baseline Achieved?: Y

Target: Provide permanently mounted outdoor air flow measurement device. OR for Constant Volume air supply systems; provide a damper position feedback system. Target Achieved?: N

Comments: Mechanical engineer performed calculations for baseline compliance. No OA measurement device on rooftop unit.

**IE.1.6.C Provide effective zone ventilation distribution.** Y

[Seattle 2009 Mechanical Code](#)

C. The effectiveness of the ventilation distribution is based on the configuration: ie Ceiling supply of warm air with a ceiling return is less effective than a ceiling supply of warm air with a floor return. In addition, the distribution effectiveness change on the operating condition of the system (heating or cooling). The 2009 Seattle Mechanical Code and ASHRAE 62.1 take this into account in the minimum outside air requirement by applying a factor to less effective configurations. The less effective configurations require a higher volume of outside air which in turn increases energy use.

Baseline: Provide a system with a worst case operating condition ventilation distribution effectiveness (Ez) of at least 0.8 as determined by 2009 SMC Table 403.3.1.2. Baseline Achieved?: Y

Target: Provide a system with a worst case operating condition ventilation distribution effectiveness (Ez) of at 1.0 as determined by 2009 SMC Table 403.3.1.2. Target Achieved?: N

Comments: Heating condition is worst case and Ez is 0.8 during heating.

\*\*\*\*\*

Number	Comments	Selection
S.1.1.A	No site work in scope	N/A
S.1.1.G	No site work in scope	N/A
S.2.2.A	No exterior lighting in scope	N/A
W.2.1.A	No building systems in scope	N/A
W.2.3.A	No building level metering	N/A
W.3.3.A	Not applicable to this building	N/A
W.3.3.B	Not applicable to this building	N/A
W.4.1.B	No building level systems in scope	N/A
W.5.1.A	No building level systems in scope	N/A
E.1.4.A	No gas equipment in scope	N/A
E.1.4.D	No cooling equipment in scope	N/A
E.1.4.E	No water heating equipment in scope	N/A
E.1.4.F	No boilers in scope	N/A
C.1.1.A	No boilers in scope	N/A

Comments for N/A strategies provided in Summary tab will print here, or can be entered/edited on this sheet.

C.1.2.A	No CFC's in building	N/A
C.1.2.B	No cooling equipment in scope	N/A
C.1.2.C	No cooling equipment in scope	N/A
C.2.1.A	No building level systems in scope	N/A
C.3.1.B	Showers and changing rooms provided in building health club - not in our scope	N/A
C.3.2.B	No parking area improvements included in building scope	N/A
M.3.1.B	No changes to structural systems being made	N/A
IE.1.6.A	Building can not accommodate a raised floor system	N/A
IE.1.6.D	Building can not accommodate natural ventilation	N/A

Number	Comments	Selection
E.1.3.A+	Submetering is not required by code. Project cannot afford additional meter expense.	N
M.3.1.A+	Will save demising walls and some doors, but probably not enough.	N
M.3.2.B+	Not in project budget.	N
M.3.2.C+	Not in project budget.	N
IE.1.1.F+	Project does not have control of locations for outdoor air intakes.	n/a
IE.1.4.C+	Not in project budget.	N

Comments from Summary Tab, may also be entered/edited here.

Number	Comments	Selection
W.2.2.B+	No flush fixtures in project scope.	n/a
E.1.3.A+	Submetering is not required by code. Project cannot afford additional meter expense.	N
M.3.1.A+	Will save demising walls and some doors, but probably not enough.	N
M.3.2.B+	Not in project budget.	N
M.3.2.C+	Not in project budget.	N
IE.1.1.F+	Project does not have control of locations for outdoor air intakes.	n/a
IE.1.4.C+	Not in project budget.	N

Capital GREEN  
Final Summary



Date Entered:

<b>Project Name:</b>	<b>Seattle Project</b>	Project No.:	<b>1097</b>
Department:	<b>fas</b>	Project Manager:	tr
Brief Description:	4,500 SF Tenant Improvement		
Address:	700 5th Avenue, Suite xxx		

Building Area (for building project only):	<input type="text"/>	OR Building Area Undergoing Work:	<input type="text" value="4,500 SF"/>
Site Area:	<input type="text"/>	OR Site Area Undergoing Work:	<input type="text" value="None"/>
Budget (Const. Cost):	\$ 300,000.00	(exclude labor, equipment, mechanical, electrical and plumbing):	
Project Material Cost	\$ 140,000.00		

<b>Design Team:</b>		Other Consultant:	<input type="text"/>
Architect:	123 Design	Other Consultant:	<input type="text"/>
Mechanical Engineer:	HVAC Design-Build	Other Consultant:	<input type="text"/>
General Contractor:	ABC Contractor	Other Consultant:	<input type="text"/>

Strategies Available:	<input type="text" value="36"/>
Strategies Achieved:	<input type="text" value="28"/>
at Baseline:	<input type="text" value="18"/>
at Target:	<input type="text" value="10"/>
% Achieved:	<input type="text" value="78%"/>

SUMMARY OF METRICS:

<input type="text" value="34.29%"/>	% Materials manufactured w/in 500 miles of project site
<input type="text" value="6.83%"/>	% Materials harvested w/in 500 miles of project site
<input type="text" value="0.00%"/>	% Wood from sustainable sources
<input type="text" value="1.89%"/>	% Rapidly renewable materials
<input type="text" value="90.00%"/>	% Construction Waste Diverted
<input type="text" value="16.30%"/>	% Recycled Content Materials



**Capital GREEN**  
**Building Flush-Out Calculator**

Date Completed: 2/12/2013

Project Name: **Seattle Project**  
 Department: fas

Project No.: 1097.00  
 Project Manager: tr

**IE.1.5.B - Perform building flush-out prior to occupancy:** Fill in highlighted cells with information from mechanical plans. Required time for building flush-out will calculate at bottom for both the baseline and target performance options. Compliance is also based on the heating capacity of the equipment. If the heating capacity is insufficient, reduce amount of outside air (OSA). When flush-out has been performed, enter dates at the bottom of the form. This form calculates results for one air handling unit. If project has multiple air handlers, create a copy of this sheet and enter values for each air handling unit.

**Baseline: 3,500 CF/SF                    YES**  
**Target: 14,000 CF/SF                    YES**

**Mechanical Unit Data for <enter air handling unit number>**

**Instructions**

Total Square footage:	5000	SF	Enter area served by a single main air handling unit. For example - a VAV system with two roof top units would have two flush-out calculations.
Required Outside Air (OSA) - Baseline	17,500,000	CF	
Required OSA - Target	70,000,000	CF	
Total Supply Air for Building/Space	5000	CFM	From Mechanical Schedules
Amount of OSA available	5000	CFM	OA provided during flush-out NOT design OA
Month of Flushout	August	°F	Select month of flush-out from drop down
Expected OSA Low temp	58	°F	From National Climatic Data Center for Boeing Field
Minimum thermostat setpoint	68	°F	Setpoint during flushout can be higher than this value, but should not be lower.
Expected Return Air temp	68	°F	Approximation - change if expectation varies
Expected Mixed Air temp	58	°F	
Unit heating (KW)	40	KW	If heat source is electric then enter heat capacity from mechanical schedule.
Unit heating (btu/hr)		btu/hr	If heat source is fossil fuel then enter heat capacity here.
Heat btuH	136,520	btu/hr	If heat source is fossil fuel then enter heat capacity here.
Average Heat Rise	25	°F	Formula
Expected Max Room Temperature	83	°F	Is Capacity Sufficient? <b>YES</b>
Time required for baseline flush out	<b>2.4</b>	<b>Days</b>	Baseline Compliance Test: <b>TRUE</b>
Time required for target flush out	<b>9.7</b>	<b>Days</b>	Target Compliance Test: <b>TRUE</b>

**Actual Flush-Out Dates:**

Flush out start	8/12/2012	Enter dates as 00/00/00
Flush out finish	8/22/2012	Enter dates as 00/00/00
<b>Total Days</b>	<b>10</b>	



**Capital GREEN**  
**Recycled Material Calculator**

Date Completed: 2/12/2013

Project Name: **Seattle Project**  
Department: fas

Project No.: 1097.00  
Project Manager: tr

Project Material Cost: (exclude labor, equipment and mechanical, electrical, plumbing): \$ 140,000.00

**M3.2.D - Use building materials that contain recycled content:** Fill in highlighted cells for each product which contains pre-consumer and/or post-consumer recycled content. White cells will calculate results. Do not include mechanical, electrical, plumbing or equipment.

**Baseline: 5%                        YES**  
**Target: 20%                        NO**

Product	Material Cost	% Pre-consumer	% Post-consumer	Pre-consumer Value	Post-consumer Value
Steel Framing	\$ 26,000.00	97.00%	0.00%	\$ 12,610.00	\$ -
Drywall	\$ 14,000.00	53.00%	23.00%	\$ 3,710.00	\$ 3,220.00
Casework	\$ 8,000.00	82.00%	0.00%	\$ 3,280.00	\$ -
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Subtotals:		14.00%	2.30%	\$ 19,600.00	\$ 3,220.00

**Total Recycled Material Value: \$ 22,820.00**  
**Total Percentage Recycled Content: 16.30%**



Regional Material Calculator

Date Completed: 2/12/2013

Project Name: **Seattle Project**  
 Department: fas

Project No.: 1097.00  
 Project Manager: tr

Project Material Cost (from Final Summary): \$ 140,000.00

**M1.1.A and M1.1.B - Use materials manufactured and/or harvested within 500 miles of project site:** Fill in highlighted cells for each product which contains locally manufactured and/or harvested content. White cells will calculate results. Material cost is considered the cost to the project and should include taxes and transportation expenses to the jobsite. Once the material is on the jobsite, all labor and equipment associated with the material should be excluded. Products with multiple components should be broken into components. The percentage of each component is based on weight (see example at bottom of sheet). Do not include Mechanical Electrical or Plumbing systems.

**M1.1.A Compliant?**

**M1.1B Compliant?**

<b>Baseline:</b> 20%	<b>YES</b>	<b>Baseline:</b> 5%	<b>YES</b>
<b>Target:</b> 40%	<b>NO</b>	<b>Target:</b> 10%	<b>NO</b>

Product	Material Cost	% Manufactured w/in 500 miles	% Harvested w/in 500 miles	Manufactured Value	Harvested Value
Steel frame	\$ 26,000.00	100.00%	0.00%	\$ 26,000.00	\$ -
Drywall	\$ 14,000.00	100.00%	30.00%	\$ 14,000.00	\$ 4,200.00
Casework	\$ 8,000.00	100.00%	67.00%	\$ 8,000.00	\$ 5,360.00
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<b>Totals:</b>		<b>34.29%</b>	<b>6.83%</b>	<b>\$ 48,000.00</b>	<b>\$ 9,560.00</b>



Capital GREEN  
Sustainably Harvested Wood and  
Rapidly Renewable Material Calculator

Date Completed: 2/12/2013

Project Name: **Seattle Project**  
Department: fas

Project No.: 1097.00  
Project Manager: tr

Project Material Cost (from Final Summary): \$ 140,000.00

**M1.2.A - Use wood from Forest Stewardship Council (FSC) Sources:** Fill in highlighted cells for each product which contains FSC wood and/or rapidly renewable materials. White cells will calculate results.

Baseline: 20% NO  
Target: 50% NO

Product	Material Cost	% Product that is Wood	% FSC	Product Wood Value	Sustainably Sourced Wood Value
Casework	\$ 8,000.00	67%	0.00%	\$ 5,360.00	\$ -
	\$ -			\$ -	\$ -
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<b>Totals:</b>			<b>0.00%</b>	<b>\$ 5,360.00</b>	<b>\$ -</b>

**M1.2.B - Use rapidly renewable materials.** Instructions: Use this calculator to demonstrate compliance. Fill in highlighted cells for each product which contains rapidly renewable materials. White cells will calculate results.

Baseline: 1% YES  
Target: 2.5% NO

Product	Material Cost	Rapidly Renewable Material	% Rapidly Renewable	Rapidly Renewable Value	Total % Rapidly Renewable
Casework	\$ 8,000.00	Bamboo Doors	33.00%	\$ 2,640.00	1.89%
	\$ -			\$ -	0.00%
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	\$ -			\$ -	0.00%
<b>Totals:</b>				<b>\$ 2,640.00</b>	<b>1.89%</b>







Capital GREEN  
Heat Island Calculator

Date Completed: 2/12/2013

Project Name: **Seattle Project** Project No.: 1097.00  
 Department: fas Project Manager: tr

Instructions: Use this calculator to demonstrate compliance with S2.1.B - Use light colored or open grid pavement for pedestrian hardscape; S.2.1.C - Provide shade for parking areas; and E2.1.C - Select light colored roofing material. Fill in highlighted cells with area and SRI for each roof or hardscape element. White cells will calculate results.

**S2.1.B - Use light colored or open grid pavement for pedestrian hardscape.** In the table below enter area for all pedestrian hardscape material. For materials with a default SRI provided do not enter an SRI. For other materials, enter the actual SRI. Use the value for new materials, not aged.

Baseline: 30% YES  
 Target: 50% YES

Pedestrian Hardscape Material	Area Provided	Default SRI	Actual SRI	Required SRI	Area Weighted Avg	% of Total
Sidewalks - Natural Gray Concrete	500.00	35		29	603.45	121%
Concrete Pavers - Natural Gray		35		29	0.00	0%
Asphalt		0		29	0.00	0%
Other				29	0.00	0%
Other				29	0.00	0%
Open Grid Pavement (50% open)					0.00	0%
<b>Totals:</b>	<b>500.00</b>				<b>603.45</b>	<b>121%</b>

**S2.1.C - Provide shade for parking areas.** Use any combination of the following - 1) tree shading; 2) shade from structures or architectural elements with an SRI of at least 29; 3) shade from structure covered with solar panels; 4) paving material with an SRI of at least 29 and 5) open-grid paving system that is a minimum of 50% pervious. In the table below enter area of surface parking lot, the tree types and spread diameter from the Seattle Master Tree List. Click on Link Below to go to list. Use Shade Coverage Diagram to the right to determine the percentage of shade coverage offered by each tree.

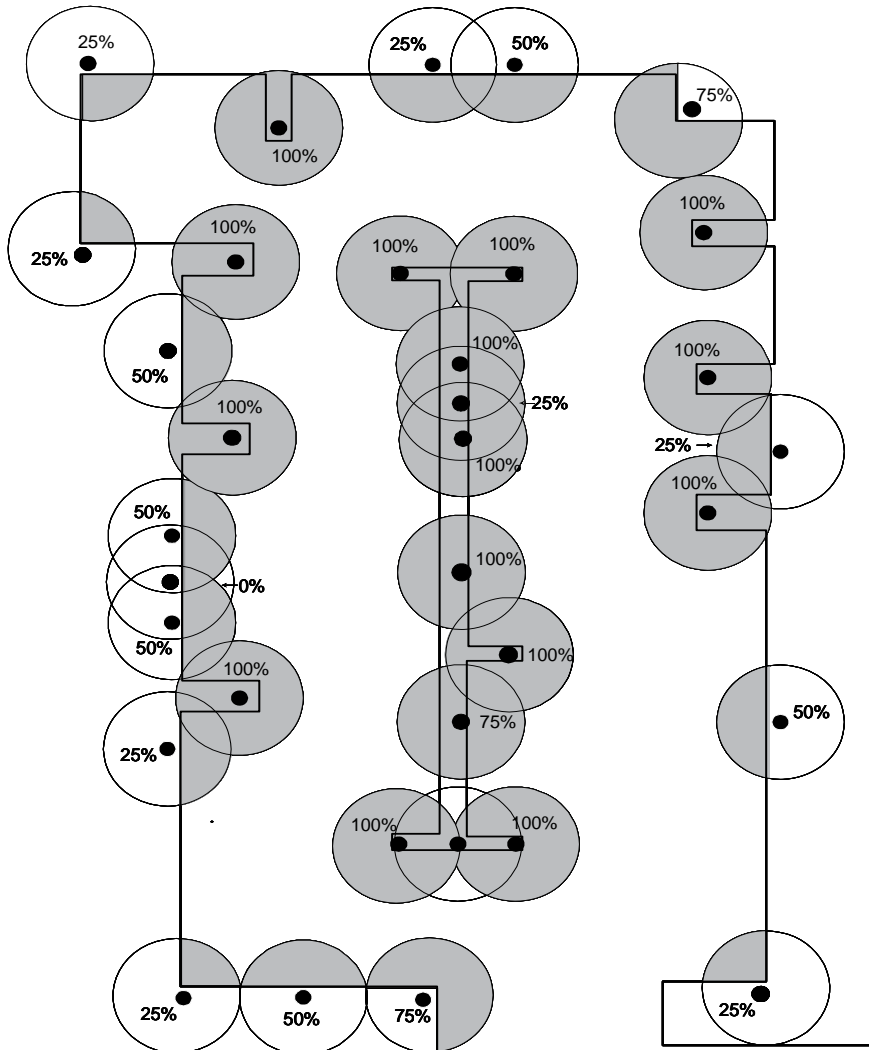
**Baseline:** 50%                      **YES**  
**Target:** 80%                      **NO**

[Seattle Master Tree List](#)

Covered Parking Area Material	Area Provided	Default SRI	Actual SRI	Required SRI	Area Weighted Avg	% of Total
Roof membrane and/or shingles				29	0.00	#DIV/0!
Other				29	0.00	#DIV/0!
Structure covered with solar panels						0.00
Subtotal:		0.00			0.00	#DIV/0!
Uncovered Parking Area Material	Area Provided	Default SRI	Actual SRI	Required SRI	Area Weighted Avg	% of Total
Concrete - Natural Gray		35		29	0.00	0%
Asphalt	7,000.00	0		29	0.00	0%
Other				29	0.00	0%
Other				29	0.00	0%
Open Grid Pavement (50% open)						0.00
Subtotals:		7,000.00			0.00	0%
Tree Scientific or Common Name	Spread in ft (from Seattle Master Tree List)	Quantity @ 100% Coverage	Quantity @ 75% Coverage	Quantity @ 50% Coverage	Quantity @ 25% Coverage	Total (SF)
<i>example: Acer nigrum</i>	10	1	1	2	2	255.3
Bald Cypress	35	3	2	2	1	5532.1
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
						0.0
Total Tree Shade						5532.1

**Total Parking Area: 7,000.00                      Total Compliant: 5,532.15                      79%**

**Shade Coverage Diagram:** Use this diagram to determine the percentage of shade coverage under various conditions. Each tree should be counted as having 25%, 50%, 75% coverage as shown. Shade overlap is not counted twice.



Parking Lot Diagram

**E2.1.C -Select light-colored roofing materials.** Enter area and SRI (Solar Reflectance Index) in the table below for each roofing material. Exclude mechanical equipment, solar panels, green roof, and skylights. For roof materials that have unknown SRI enter 0 (zero) in actual SRI column.

**Baseline: 75% YES**  
**Target: 100% NO**

Low Slope Roofing Material (≤2:12)	Area	Actual SRI	Required SRI	Area Weighted Avg	% of Total
Single Ply Membrane	9,000.00	75	78	8,653.85	96%
Material #2			78	0.00	0%
Material #3			78	0.00	0%
Material #4			78	0.00	0%
Subtotal:	9,000.00			8,653.85	96%

Steep Slope Roofing Material (>2:12)	Area	Actual SRI	Required SRI	Area Weighted Avg	% of Total
Asphalt Shingles	500.00	0	29	0.00	0%
Material #2			29	0.00	0%
Material #3			29	0.00	0%
Material #4			29	0.00	0%
Subtotal:	500.00			0.00	0%

**Total Non-Vegetated Roof Area: 9,500.00      Total Compliant: 8,653.85      91%**

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