



SUSTAINABLE RE-DESIGN

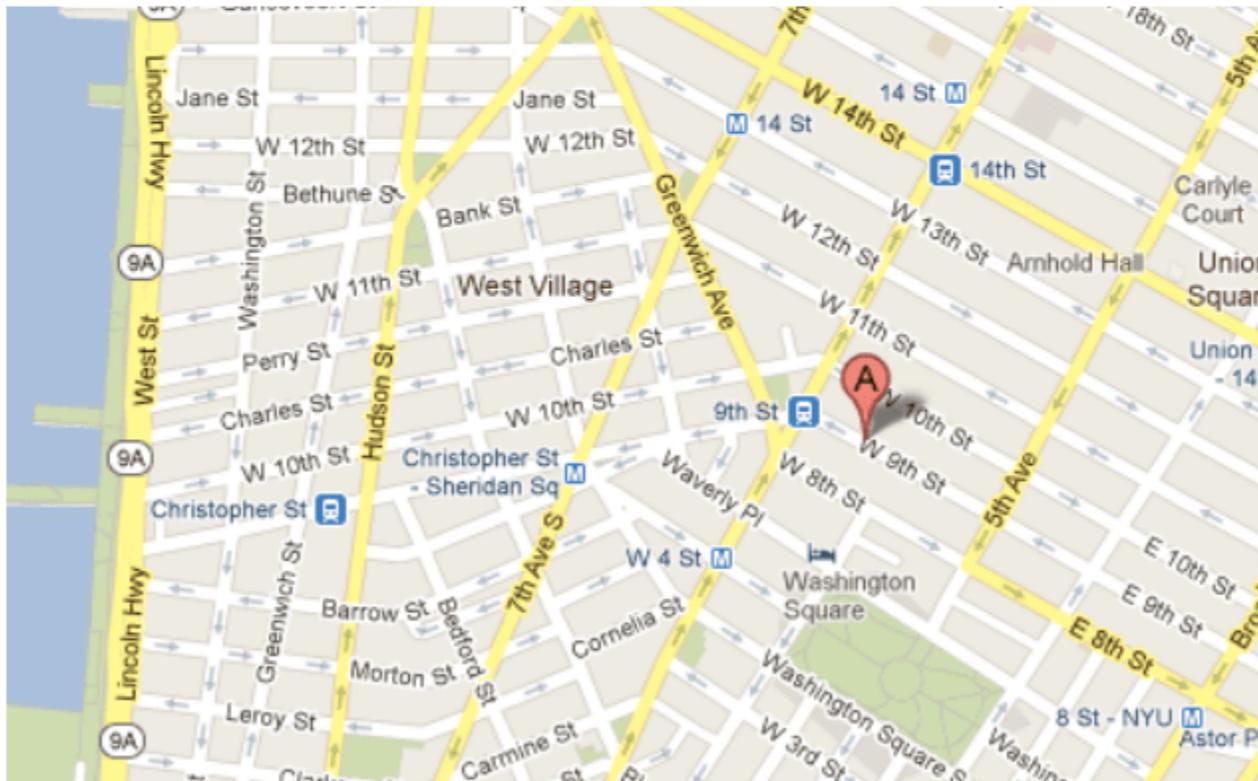
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PAID 1028

Spring 2012

W. 9th Street, NYC

Two Bedrooms, 1 bath – approximately 950 sqft.
3 resident family apartment in 1840's townhouse



CURRENT EFFICIENCY CHALLENGES

- **Appliances** (refrigerator and two AC's) were outdated and not Energy Star, with the exception of the current Kitchen Aid range.
- There is no dishwasher, which is green, but in turn, we use a lot of water from the tap. So we recently replaced the **kitchen faucet and shower head** with low-flow/efficient, ASME compliant products. And we have an ultra-low flow toilet on our wish list.
- The previous **light switches** did not have dimmers or any occupancy sensors. , To reduce our energy consumption, we replaced them with appropriate dimmers and sensors and installed CFL bulbs.
- It was time to replace our sofa and add a couple of dressers with our now-limited closet space. All of our **furnishings** were purchased on consignment or flea market finds. Previous **hardware**, which was non-functional, was replaced by locally found vintage pieces.
- A fresh coat of **paint** was necessary throughout the apartment. The floors could also have been replaced, but we chose to refinish them with a darker oil for the time being.

Water Use Reduction: WE Credit 1

To further increase water efficiency within the tenant space to reduce the burden on municipal water supply and wastewater systems.

PROPOSED TOILET MODEL

NUMI TOILET by Kohler
combines luxury with efficiency.

FLOW

1.28 gpf or .6 gpf

STANDARDS

- EPA WaterSense ®

PRICE - \$6,400



WE Credit 1 Water Use Reduction

PROPOSED SHOWER FAUCET MODEL

RAINSHOWER ICON by Grohe

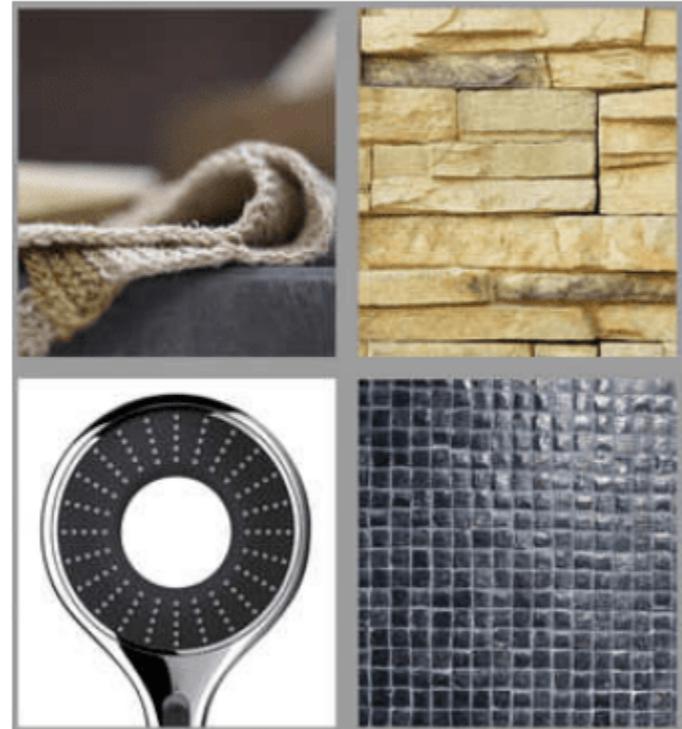
FLOW

2.5 gpm at 80 psi

STANDARDS

- GROHE EcoJoy™ reduces shower flow by 40%
- ASME/ANSI A112.18.1M compliant

PRICE - \$72



WE Credit 1 Water Use Reduction

PROPOSED KITCHEN FAUCET MODEL

LADYLUX Kitchen Faucet by Grohe

FLOW

1.5 gpm

STANDARDS

- GROHE WaterCare™ reduces flow by 30% (IAPMO Green Certified);
- ASME/ANSI A112.18.1M compliant

PRICE - \$529



WE Credit 1 Water Use Reduction



LEED-CI 2.0 Letter Template
WE Credit 1: Water Use Reduction
design

Design Case Table

Flush Fixture	Daily Uses	Flow Rate [GPF]	Duration [Flush]	Occupant Users	Sewage Generation [gal]
Ultra Low-Flow Water Closet					
Male	3	0.8	1	1	2.4
Female	3	0.8	1	2	4.8

Male		0	1		0
Female		0	1		0

Male		0	1		0
Female		0	1		0

Male		0	1		0
Female		0	1		0

Male		0	1		0
Female		0	1		0
Flow Fixture	Daily Uses	Flow Rate [GPM]	Duration [sec]	Occupant Users	Sewage Generation [gal]
Low-Flow Kitchen Sink	3	1.8	15	2	2.7
Low-Flow Shower	1	1.8	200	3	27
---		0	0		0
---		0	0		0
---		0	0		0
---		0	0		0
---		0	0		0
---		0	0		0
Total uses by all occupants					18
Total Daily Volume [gal]					36.9
Annual Work Days					365
Annual Volume [gal]					13,468.5
Graywater or Stormwater Reuse Volume [gal]					0
Total Annual Volume [gal]					13,468.5



LEED-CI 2.0 Letter Template
WE Credit 1: Water Use Reduction
design

Baseline Case Table

Flush Fixture	Daily Uses	Flow Rate [GPF]	Duration [Flush]	Occupant Users	Sewage Generation [gal]
Conventional Water Closet					
Male	3	1.6	1	1	4.8
Female	3	1.6	1	2	9.6

Male		0	1		0
Female		0	1		0

Male		0	1		0
Female		0	1		0

Male		0	1		0
Female		0	1		0

Male		0	1		0
Female		0	1		0
Flow Fixture	Daily Uses	Flow Rate [GPM]	Duration [sec]	Occupant Users	Sewage Generation [gal]
Kitchen Sink	3	2.5	15	2	3.75
Shower	1	2.5	300	3	37.5
---		0	0		0
---		0	0		0
---		0	0		0
---		0	0		0
---		0	0		0
---		0	0		0
Total uses by all occupants					18
Total Daily Volume [gal]					55.65
Annual Work Days					365
Total Annual Volume [gal]					20,312.25

Wastewater Generation Reduction [%] 33.69

Energy & Atmosphere: EA Credit 1.2

To achieve increasing levels of energy conservation beyond the prerequisite standard to reduce environmental and economic impacts associated with excessive energy use.

PROPOSED LIGHTING CONTROLS

MAESTRO Occupancy Sensor & Dimmer by Lutron

STANDARDS

Vacancy-only models meet California Title 24 reqs



**PRICE – 5 units @ \$40 each
= \$200**

One Year Incandescent/Halogen Energy Savings Chart

dimming the lights	saves electricity	bulbs last on average	annual savings†
10%	10%	3 years	\$9.70
25%	20%	3-6 years	\$17.30
50%	40%	10+ years	\$30.00

Source:



Energy & Atmosphere: EA Credit 1.4

To achieve increasing levels of energy conservation beyond the prerequisite standard to reduce environmental and economic impact associated with excessive energy use.

PROPOSED REFRIGERATOR MODEL

FFBF285SS by Summit

SPECS

- Voltage Required: 115V/60Hz
- Energy use: 440 kWh/year

STANDARDS

- Energy Star qualified

PRICE - \$1,300



Energy & Atmosphere Credit 1.4

PROPOSED AIR CONDITION MODEL

LG ELECTRONICS LW1212ER

SPECS

- 12,000 BTU
- 10.8 EER, 115V
- 12 hour on/off timer

STANDARDS

- Energy Star qualified

PRICE - \$320



Materials Reuse – Furniture & Furnishings: MR Credit 3.2

To reuse building materials and products to reduce demand for virgin materials and reduce waste, thereby reducing impacts associated with the extraction and processing of virgin resources.

REQUIREMENTS:

- Use salvaged, refurbished or used furniture and furnishings for 30% of the total furniture and furnishings budget.

SALVAGED MATERIALS, HARDWARE

- Olde Good Things, Chelsea, NYC

PROPOSED USED FURNISHING OUTLETS

- 1stdibs (local vendors), [REDACTED]
- Brooklyn Flea, Williamsburg, Brooklyn
- Décor NYC, Designer Consignment, Chelsea, NYC, [REDACTED]
- Two Jakes, Williamsburg, Brooklyn, [REDACTED]
- Center 44, NYC, [REDACTED]
- Ebay (preferably local), [REDACTED]
- Craigslist, newyork.craigslist.org

Indoor Environmental Quality: IEQ Credit 4.2

To reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants.

Proposed Paints/Coatings	VOC Levels	Standard	Material Use
Benjamin Moore Aura	Zero VOC's	GS-11	Eggshell & Semi-gloss paint for high traffic areas, ceilings, trim
Safe Paint by Milk Paint	Zero VOC's, bio-degradable	GS-11	Paint for children's room
Monocoat Natural Oil Finish – Precolor Black	Zero VOC's, rapidly renewable, plant-based	Qualifies for 1 (EQ) or 1 (MR) LEED credit, SCAM compliant	Black oil floor finish





THANK YOU

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