Existing Conditions
Existing Conditions
Existing Conditions
It works as an office project.

**Improvements**
- Typical HQ office/research and development finishes.
- Tilt-up concrete construction with aluminum storefront window entries and glazing.

**Parking**
- The 40 acre site contains 2,629 parking spaces (3.25/1,000 SF), 90% of which are shared.

**Power**
- Private Power Agreement with Constellation Energy provides power at 85% of PG&E rates.
- 3,000 amps supply a 277/480-volt main switchboard in each building.

**HVAC**
- Packaged rooftop units with per building capacity from 60 to 125 tons. Direct digital controls by Automated Logic.

**Elevators**
- Each building has one, 2,500-pound capacity elevator.

**Fire Life Safety and Security**
- Addressable fire alarm system and automatic wet-pipe fire sprinkler. Access control system and a security camera.

**Restrooms**
- Men’s and women’s restrooms on each floor with one set of lockers and showers per building.

**Dining Areas**
- Full cafeteria in 180 West Tasman and 250 West Tasman has a secondary food service area.
A New Vision
A New Vision
A New Vision
A New Vision
A New Vision
The LEED Conundrum

1. Champion Station is not LEED eligible, so far...
2. Champion Station is not a new planned project.

*So then how do we show the market this campus is a healthy alternative to a traditional business park?*
What is a Healthy Campus?

**Location**
- Walkable, mixed use neighborhood
- Adjacent housing
- Neighborhood retail
- Park/Entertainment options

**Site**
- Outdoor plazas with seating
- Dining options
- Pear orchard
- Drought-tolerant landscaping

**Architecture**
- Maximize light and air
- Open plan
- Collaborative spaces
- Authentic materials
- Wood, Galvanized metal, Concrete

**Indoor/Outdoor**
- All hands meeting areas
- Private patios and meeting spaces
- Operable glazing/fresh air

**Transportation**
- Light Rail
- Amtrak
- Bus
- Bike
- Car

**Healthy Amenities**
- EV charging stations
- Branded bicycles with storage
- Amenity maps to jogging/walking trails
- Par course
- Community garden
- Ride/walk to shopping
- Exercise/Amenity building(s)

**Concierge**
- Facebook/Google services for smaller users
- On campus amenities
Champion Station
What Types Of Infrastructure Will Envision™ Rate?

**ENERGY**
- Geothermal
- Hydroelectric
- Nuclear
- Coal
- Natural Gas
- Oil/Refinery
- Wind
- Solar
- Biomass

**WATER**
- Potable water distribution
- Capture/Storage
- Water Reuse
- Storm Water Management
- Flood Control

**WASTE**
- Solid waste
- Recycling
- Hazardous Waste Collection & Transfer

**TRANSPORT**
- Airports
- Roads
- Highways
- Bikes
- Pedestrians
- Railways
- Public Transit
- Ports
- Waterways

**LANDSCAPE**
- Public Realm
- Parks
- Ecosystem Services

**INFORMATION**
- Telecommunications
- Internet
- Phones
- Satellites
- Data Centers
- Sensors
60 Credits in 5 Categories

- **Purpose, Community, Wellbeing**
- **Collaboration, Management, Planning**
- **Materials, Energy, Water**
- **Siting, Land & Water, Biodiversity**
- **Emission, Resilience**
Levels of Achievement

QL1.1 IMPROVE COMMUNITY QUALITY OF LIFE

- Improved
- Enhanced
- Superior
- Conserving
- Restorative

No Negative Impact

Non-linear Scale

Points
Envision™ Sustainable Infrastructure Rating System

Section Menu

Please click on the links to take you to the relevant sections:

- Quality of Life
- Leadership
- Resource Allocation
- Natural World
- Climate and Risk
<table>
<thead>
<tr>
<th>Section and Objective Numbers</th>
<th>Objectives</th>
<th>Required for Project</th>
<th>Level Of Achievement</th>
<th>Score</th>
<th>Objective Available Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>QUALITY OF LIFE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QL1.1</td>
<td>Improve community quality of life. Improve the net quality of life of all</td>
<td>YES</td>
<td>Restorative</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>communities affected by the project and mitigate negative impacts to</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>communities.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>details / guidance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QL1.2</td>
<td>Stimulate sustainable growth and development. Support and stimulate</td>
<td>YES</td>
<td>Superior</td>
<td>5</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>sustainable growth and development, including improvements in job growth,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>capacity building, productivity, business attractiveness and livability.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>details / guidance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QL1.3</td>
<td>Develop local skills and capabilities. Expand the knowledge, skills and</td>
<td>Include</td>
<td>Improved</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>capacity of the community workforce to improve their ability to grow and</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>develop.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>details / guidance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
# Scoring Summary

## Section Totals Summary

<table>
<thead>
<tr>
<th>Section</th>
<th>Maximum Possible Score</th>
<th>Section Points</th>
<th>Innovation Points</th>
<th>Total Points Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>QL</td>
<td>141</td>
<td>91</td>
<td>3</td>
<td>94</td>
</tr>
<tr>
<td>LD</td>
<td>106</td>
<td>66</td>
<td>0</td>
<td>66</td>
</tr>
<tr>
<td>RA</td>
<td>162</td>
<td>71</td>
<td>0</td>
<td>71</td>
</tr>
<tr>
<td>NW</td>
<td>177</td>
<td>118</td>
<td>2</td>
<td>120</td>
</tr>
<tr>
<td>CR</td>
<td>122</td>
<td>40</td>
<td>0</td>
<td>40</td>
</tr>
<tr>
<td><strong>Total Project Points</strong></td>
<td><strong>706</strong></td>
<td><strong>386</strong></td>
<td><strong>5</strong></td>
<td><strong>391</strong></td>
</tr>
</tbody>
</table>

### Envision™ Section Scores

![Graph showing points distribution for QL, LD, RA, NW, and CR sections]
## Award Levels

<table>
<thead>
<tr>
<th>Recognition Level</th>
<th>Minimum Applicable Points</th>
<th>Minimum in Each Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bronze</td>
<td>20%</td>
<td>No minimum category percentage required</td>
</tr>
<tr>
<td>Silver Award</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td>Gold Award</td>
<td>40%</td>
<td></td>
</tr>
<tr>
<td>Platinum Award</td>
<td>50%</td>
<td></td>
</tr>
</tbody>
</table>
# Fee Schedule

**Registration Fee:** $1000

**Verification Fee**

<table>
<thead>
<tr>
<th>Project Size ($)</th>
<th>Non-Member Price</th>
<th>ISI Member Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 2M</td>
<td>$3000</td>
<td>$2400</td>
</tr>
<tr>
<td>2-5M</td>
<td>$8500</td>
<td>$7000</td>
</tr>
<tr>
<td>5-25M</td>
<td>$17,000</td>
<td>$14,000</td>
</tr>
<tr>
<td>25-100M</td>
<td>$25,000</td>
<td>$21,000</td>
</tr>
<tr>
<td>100-250M</td>
<td>$33,000</td>
<td>$28,000</td>
</tr>
<tr>
<td>Over 250M</td>
<td>$5000 per 100M above base price of $20,000</td>
<td></td>
</tr>
</tbody>
</table>

**Appeals Fee:** $500 per credit
Fannie Mae Multifamily Green Initiative
ULI Fall Meeting
October 22, 2014
Diversified participation exists in the multifamily market today and competition is increasing.

Source: Fannie Mae and Freddie Mac 10-K and 10-Q financial statements, ACLI, FDIC, Trepp & Mortgage Bankers Association, Fannie Mae Multifamily Economic Research

Notes:
1. Estimated competitive market size is an estimated subset of MF originations activity. It is not meant to be all-inclusive of total MF originations during a specific timeframe.
3. Loans securitized by Ginnie Mae include non-dedicated multifamily housing e.g., healthcare and new construction.
4. Other includes state and local credit agencies, FHLB and other financial institutions.
Multifamily Green Initiative Mission

The mission of the Fannie Mae Green Initiative is to raise the quality and to increase the affordability of Multifamily Housing in the U.S. while reducing its impact on the natural environment.

Strategy

Resolve Barriers & Friction Points
Provide Financing for Smart Improvements
Lead & Educate Market

The Green Initiative creates value for all multifamily stakeholders: owners, tenants, equity and MBS investors, and lenders.
Milestones Achieved: 2010-2014

- Conducted national survey of 1,000+ multifamily properties and created ENERGY STAR® for Multifamily Score
- Created the Multifamily Energy Audit Protocol

- Launched two innovative Green Financing Loan Products:
  - Green Preservation Plus & M-PIRE
- Created the industry standard for Green MBS
- Delivered $130M+ in Green MBS to the market

- Became the first Lender to connect financial and energy performance
- Redesigned underwriting processes to include a portion of owners and tenants’ energy and water projected cost savings in M-PIRE loans
Green Preservation Plus for Affordable Housing: 5% more

CASE STUDY: LINC TRANSFORMS AFFORDABLE HOUSING AND CUTS COSTS WITH GREEN PRESERVATION PLUS

CHALLENGE: REFINANCE AND TACKLE EXPENSE RISK
LINC Housing was ready to reduce rising energy, water and operating expenses and to refinance existing debt at City Gardens Apartments. A 274-unit Affordable Housing property, City Gardens primarily serves family and children.

SOLUTION: GREEN PRESERVATION PLUS
» $19.4M loan
» $1.5M for property improvements
» Tax-exempt bonds retired
» LIHTC equity partner bought out

ACTION: SMART INVESTMENTS FOR HIGH PERFORMANCE, LOWER OPERATING COSTS
- Reduced natural gas costs: ENERGY STAR®-rated furnaces, Passive solar domestic hot water heating system
- Reduced water costs: Low-flow plumbing fixtures, New irrigation system
- Reduced electric costs: Energy-efficient lighting in common areas and resident units
- Safeguarded long-term value by improving: Roofing and siding, Storm water drainage, Balconies

Green Preservation Plus provides up to an 85% LTV to support investment in smart property improvements.
NYC M-PIRE: Underwrites Projected Cost Savings

$9.6m M-PIRE Loan vs. $9.2m Conventional Loan

M-PIRE UNDERWRITES PROJECTED TENANT AND OWNER ENERGY AND WATER SAVINGS

<table>
<thead>
<tr>
<th></th>
<th>Standard</th>
<th>M-PIRE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resulting Pro Forma NOI</td>
<td>$765,000</td>
<td>$801,175</td>
</tr>
<tr>
<td>Total Loan Proceeds</td>
<td>$9,200,000</td>
<td>$9,680,000</td>
</tr>
<tr>
<td>DSCR</td>
<td>1.25</td>
<td>1.25</td>
</tr>
</tbody>
</table>

M-PIRE provides $480k in additional loan proceeds while maintaining DSCR.

M-PIRE assists owners overcome the split incentive by crediting the Owner’s NOI with a portion of the Tenant’s projected cost savings.

Note: Total projected savings at the property are $78,590
Multifamily’s critical knowledge barrier: Performance Data

- There is little to no national data on the long-term relationship between a multifamily property/portfolio’s financial performance and its energy and water performance.

Fannie Mae is actively working to address and resolve these knowledge barriers for the Multifamily industry.
Delivering the ENERGY STAR® Score for Multifamily

- DOE’s CBECS did not collect multifamily data as needed by EPA.
- In 2012 and 2013, Fannie Mae collected data from multifamily properties for the EPA to create the ENERGY STAR Score for Multifamily.
  - 1,000+ multifamily properties nationwide
  - High-rise to garden style, 5 units to 300+ units
  - Market Rate to Affordable to Seniors
- Score released Sept. 16, 2014.

Multifamily owners now have a simple energy metric, and can receive a nationally recognized certification if the score is 75 or more.
The least efficient properties use over three times as much energy and six times as much water per square foot as the most efficient properties.

*Calculation based on the difference between the 5th and 95th percentile values of energy cost per square foot ($0.62/ft² and $2.27/ft²) from the Fannie Mae Survey, applied to a 100,000 square foot property ($227,000 - $62,000 = $165,000).
$165K Difference between Worst & Best Energy Performers

- The least efficient property may end up spending $165,000 more in annual energy costs than a similar property operating the most efficiently.

- On average, a 100,000 square foot property spends $125,000 on energy and $33,000 on water annually.

- If this property saved 15% on energy and water costs, it would increase asset value by almost $400,000, assuming a 6% cap rate.

Fannie Mae’s white paper “Transforming Multifamily Housing” has additional key findings. www.fanniemaeegreeninitiative.com
Contact

Chrissa Pagitsas
Director, Green Initiative
Fannie Mae Multifamily

Chrissa_Pagitsas@fanniemae.com

www.FannieMaeGreenInitiative.com
“Houston Exploding”

A “lab” for rapid growth sustainable scenarios…
SDC Opportunities?

Rives T Taylor FAIA, LEED BD+C
Gensler
The Region Context: The Sustainable Challenge

Geography:
Largest land area of the Big-4 cities

Population Sprawl:
2.1 M (2010 census) in 600 square miles
Pop density of 3,553 persons/square mile

Economic Strength:
Gross Area Product (GAP) in 2006 was $325.5 billion

The City of Houston permitted $7.3 billion in construction over the 12 months from 2nd Quarter 2013 to 2nd Quarter 2014
The Energy Capital – Long Term Growth

- 5,000 energy related companies;

- Growth will accelerate with foreign companies buying up energy firms:

- Added 10+ percent more jobs since 2008, since 2000 has shot up 32 percent;

- Most ethnically diverse region in the country - foreign-born population 400,000 increase in last 10 years.
5 Districts

1. Downtown and Wards
2. Energy Corridor + Memorial City
3. Generation Park
4. Springwoods Village
5. The Woodlands

http://www.visithoustontexas.com/mapexplorer
5. The Woodlands

Sustainable community designed in tune with nature
- Opened in 1974
- Preservation of the environment

- “The Benchmark” by Mitchell and McHarg
- Planned Development now realized
- Open/ Green space, walkability and the car
- Again, expanding rapidly with infrastructure challenges
Environmentally Sensitive Practices

- Value of Nature – *Celebrate Diversity of Forest/Native Species*
- Energy Conservation
- Storm Water Reduction
- Wildlife Habitat

- Shared parking is standard with schools, churches and parks
- Natural area preserves – uplands, natural and created wetlands

*38 Environmental Awards in 30 Years*
1. Downtown

- Downtown Residential
- Downtown Convention and Hotel – New Convention District
- Downtown Green Space – Bayou Infrastructure Investment
- Light Rail Transit Oriented Development
Convention District

The Downtown Houston convention- six properties and 2,000 rooms by 2016.

Likened to Houston’s own Central Park, the ambitious $58 million project

http://buffalobayoupark.org/home/

http://buffalobayoupark.org/about-the-project/#overview