

High Point Feasibility Study

Objective

During the course of the Fall Semester, the High Point Systems Synthesis Team examined the feasibility of utilizing the currently empty one-acre roof space of the US Steel Building as a Pittsburgh tourist attraction. The focus was to build a baseline model from which more detailed analyses can be conducted.

Methodology

The team determined four areas of focus for the High Point Feasibility Study.

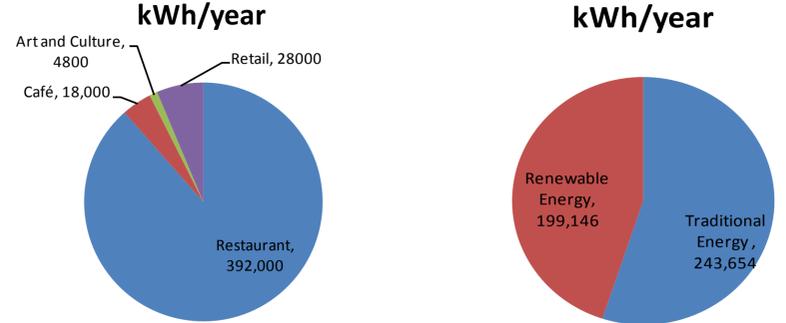


Economic Considerations

For Economics, the team evaluated the Pittsburgh market to determine ticket price and expected number of attendees and developed a baseline operating pro forma to project the first 10 years of operations.

	Operating Pro Forma										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Totals
Concessions	\$450,000	\$463,500	\$477,000	\$490,500	\$504,000	\$517,500	\$531,000	\$544,500	\$558,000	\$571,500	\$5,169,000
Ticket Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Gross Revenue	\$450,000	\$463,500	\$477,000	\$490,500	\$504,000	\$517,500	\$531,000	\$544,500	\$558,000	\$571,500	\$5,169,000
Operating Lease	\$12,500	\$12,500	\$12,500	\$12,500	\$12,500	\$12,500	\$12,500	\$12,500	\$12,500	\$12,500	\$125,000
Electricity (Lease)	\$427,500	\$440,500	\$453,500	\$467,000	\$480,500	\$494,000	\$507,500	\$521,000	\$534,500	\$548,000	\$4,900,000
Other Income (Admissions)	\$2,000,000	\$3,000,000	\$3,800,000	\$4,600,000	\$5,400,000	\$6,200,000	\$7,000,000	\$7,800,000	\$8,600,000	\$9,400,000	\$61,400,000
TOTAL REVENUES	\$3,222,500	\$3,920,500	\$4,614,500	\$5,312,500	\$6,010,500	\$6,708,500	\$7,406,500	\$8,104,500	\$8,802,500	\$9,500,500	\$66,336,000
Operating Expenses											
General Lease Payments	\$513,900	\$529,317	\$544,733	\$560,150	\$575,567	\$590,983	\$606,400	\$621,817	\$637,233	\$652,650	\$5,829,530
Cleaning (HP)	\$29,400	\$30,262	\$31,125	\$31,987	\$32,850	\$33,712	\$34,575	\$35,437	\$36,300	\$37,162	\$357,060
Maintenance & Repair (HP)	\$33,900	\$34,762	\$35,625	\$36,487	\$37,350	\$38,212	\$39,075	\$39,937	\$40,800	\$41,662	\$399,060
Utilities (HP)	\$10,500	\$10,757	\$11,013	\$11,270	\$11,526	\$11,783	\$12,040	\$12,296	\$12,553	\$12,810	\$124,860
Roofs/Landscaping (HP)	\$600	\$612	\$624	\$636	\$648	\$660	\$672	\$684	\$696	\$708	\$6,840
Security (HP)	\$70,000	\$71,400	\$72,800	\$74,200	\$75,600	\$77,000	\$78,400	\$79,800	\$81,200	\$82,600	\$768,000
Administration/Payroll (HP)	\$155,700	\$158,377	\$161,053	\$163,729	\$166,405	\$169,081	\$171,757	\$174,433	\$177,109	\$179,785	\$1,716,210
Direct Expenses/Leasing (HP)	\$28,250	\$28,825	\$29,400	\$29,975	\$30,550	\$31,125	\$31,700	\$32,275	\$32,850	\$33,425	\$324,000
Renovated Leasing (HP)	\$38,250	\$39,038	\$39,825	\$40,612	\$41,400	\$42,187	\$42,975	\$43,762	\$44,550	\$45,338	\$435,000
License/Fees/Permit (HP)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Operating Expenses (HP)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Reserves	\$22,500	\$23,175	\$23,850	\$24,525	\$25,200	\$25,875	\$26,550	\$27,225	\$27,900	\$28,575	\$279,000
TOTAL OPERATING EXPENSES											
Net Operating Income	\$3,222,500	\$3,920,500	\$4,614,500	\$5,312,500	\$6,010,500	\$6,708,500	\$7,406,500	\$8,104,500	\$8,802,500	\$9,500,500	\$66,336,000
Debt Service per year	\$4,236,234	\$4,236,234	\$4,236,234	\$4,236,234	\$4,236,234	\$4,236,234	\$4,236,234	\$4,236,234	\$4,236,234	\$4,236,234	\$42,362,340
Available Cash Flow	-\$1,013,734	-\$315,734	\$1,378,266	\$1,076,266	\$1,774,266	\$2,472,266	\$3,170,266	\$3,868,266	\$4,566,266	\$5,264,266	-\$1,013,734
Cumulated Cash Flow	-\$1,013,734	-\$1,329,468	-\$1,241,202	-\$1,152,936	-\$1,064,670	-\$976,404	-\$888,138	-\$799,872	-\$711,606	-\$623,340	-\$1,013,734
Debt Coverage Ratio	0.75	0.82	0.89	0.96	1.03	1.10	1.17	1.24	1.31	1.38	1.38
Attendance	200,000	220,000	240,000	260,000	280,000	300,000	320,000	340,000	360,000	380,000	4,150,000
Price per person	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1

For Alternative Technology, the team researched alternative energy technologies and suitability for roof top environment and cost effectiveness. The following charts show expected energy usage and generation based on our recommended programming components for 15,000 square feet of leaseable space. These components and generation would make High Point 45% sustainable.



Findings

Key findings from the various focus areas:

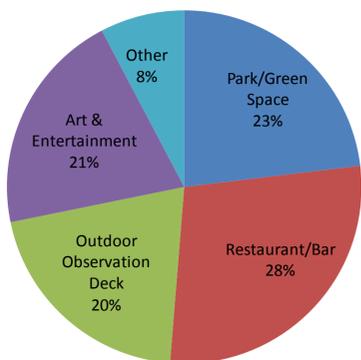
For Operations, the team researched the engineering and architectural structure of the US Steel tower, zoning, current operations and tenants, permitting and Pittsburgh's sustainability accomplishments over the past 30 years.



Golden Triangle Business District

The US Steel Tower is located in the Golden Triangle District. The Golden Triangle District is intended to maintain and enhance the Golden Triangle as the economic and symbolic core of the region while supporting and developing commercial, office and cultural uses. Furthermore the District aims to develop an attractive, pedestrian-oriented physical environment that will enhance its regional significance. The development of High Point meets the goals of this zoning district.

For Stakeholder Analysis, in addition to conducting interviews with primary, secondary and tertiary stakeholders, the team surveyed Pittsburgh residents to gauge their priorities and willingness to pay for High Point programming.



Survey results revealed preferences for programming options

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Recommendations

Based on our findings we believe High Point should be operated by a Non Profit organization using customized Triple Net Ground Lease agreement with the building's owner.

Baseline Construction and Components

- Space Frame, glass enclosed structure
- Two external elevators
- 18 Windspire Turbines
 - Avg. wind speed of 22 mph
 - 1.2 kW per unit
 - 2,000 - 3,660 kWh per year
 - 36,000 - 65,880 kWh per year
 - \$3600 - \$6588 savings
- Thin Film Solar
 - 20,000 sq. ft. available for solar
 - 1,500 sun hours/year
 - Potential for 138,000 kWh
 - Savings = \$13,860/year

Revenue and Expenses

- Rent: \$30/sq. ft. x 15,000 leaseable sq. ft.
- Ticket Sales: Average of \$14 ticket
- Attendance: 200,000 first year

- Construction Costs: \$53.9 Million
- Elevators: \$6.5 Million
- Green Technology: \$1 Million
- Total Project Cost: \$61.36 Million
- Operating Costs: \$26/sq. ft. (30,000 total sq. ft.)
- \$17/ sq. ft. ground lease payment to building

- Financing
 - Raise \$22.5 Million in upfront capital
 - Borrow \$44 Million from a mixture of sources

Programming (Leasable Space)

Restaurant/Bar

- Overwhelming stakeholder priority
- Precedent on other similar attractions

"A bar/restaurant is a must--you can sit back, relax and enjoy the view"

Cultural/Art Space

- Third most popular
- Opens possible foundation and public funding opportunities
- Fits into Downtown Arts Community

"The arts community tends to draw more people...the more art in downtown Pittsburgh, the better."

Flexible Space

- Conferences, meetings, concerts, special events...

"We have to tap into the large number of business visitors in Pittsburgh - give them a high-class venue to top off their trip to Pittsburgh."

Green Space/Park

- Second-most popular for stakeholders
- Fits with stakeholder priorities
- Glass enclosure can give park-like feel but remain all-weather
- Actual open-air space possible depending on design

"We'd really like to see something environmentally groovy. We could be part of the green roof movement"

