

Vancouver Convention Center and Hilton Hotel



Today's Presentation

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graph TD; A[Today's Presentation] --- B[Hilton's Experience & Public Response]; A --- C[Design, Construction & LEED Certification];
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Hilton's Experience & Public Response
Gerry Link
General Manager
Hilton

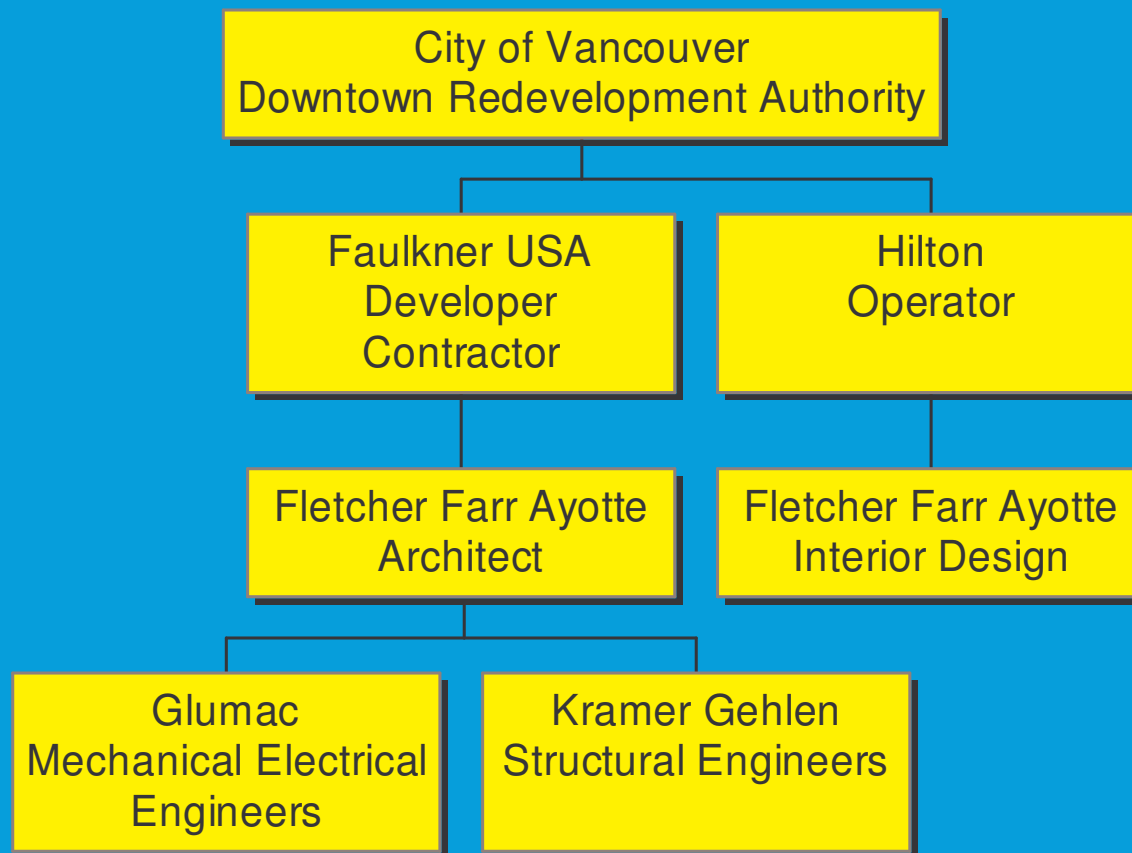
Design, Construction & LEED Certification
Mike Shea
Sustainability Manager
Fletcher Farr Ayotte

Project Completed June 2005



- 226 Room, 7 Story Hotel
- 225,000 Square Feet
- Meeting Rooms and Ballrooms
Totaling 30,000 SF
- 161 Vehicle Parking Garage
plus 35 Car Employee Parking
Lot
- LEED 'Certified' Level

Project Organization



Downtown Vancouver Washington



MapsOnline: Clark County's Digital Atlas



Legend

ROADS

- Alley
- Arterial
- DMR (Private Land)
- DuaneWay
- Interstate
- Interstate Ramp
- Primary Arterial
- Private Roads
- Private Roads w/o Name
- Public Roads
- RR Right of Way
- State Roads

Road/Highway

Aerial Photography

Water/Easements

City Boundaries

- Bath & Pond
- Clark County
- Clark County
- La Center
- Longfield
- Yamoussou
- Woodland
- Yonah

Urban Growth Boundaries

- Little Grand
- Combs
- Coality
- LaCenter
- Longfield
- Vancouver
- Washouga

Scale: 1:5,974

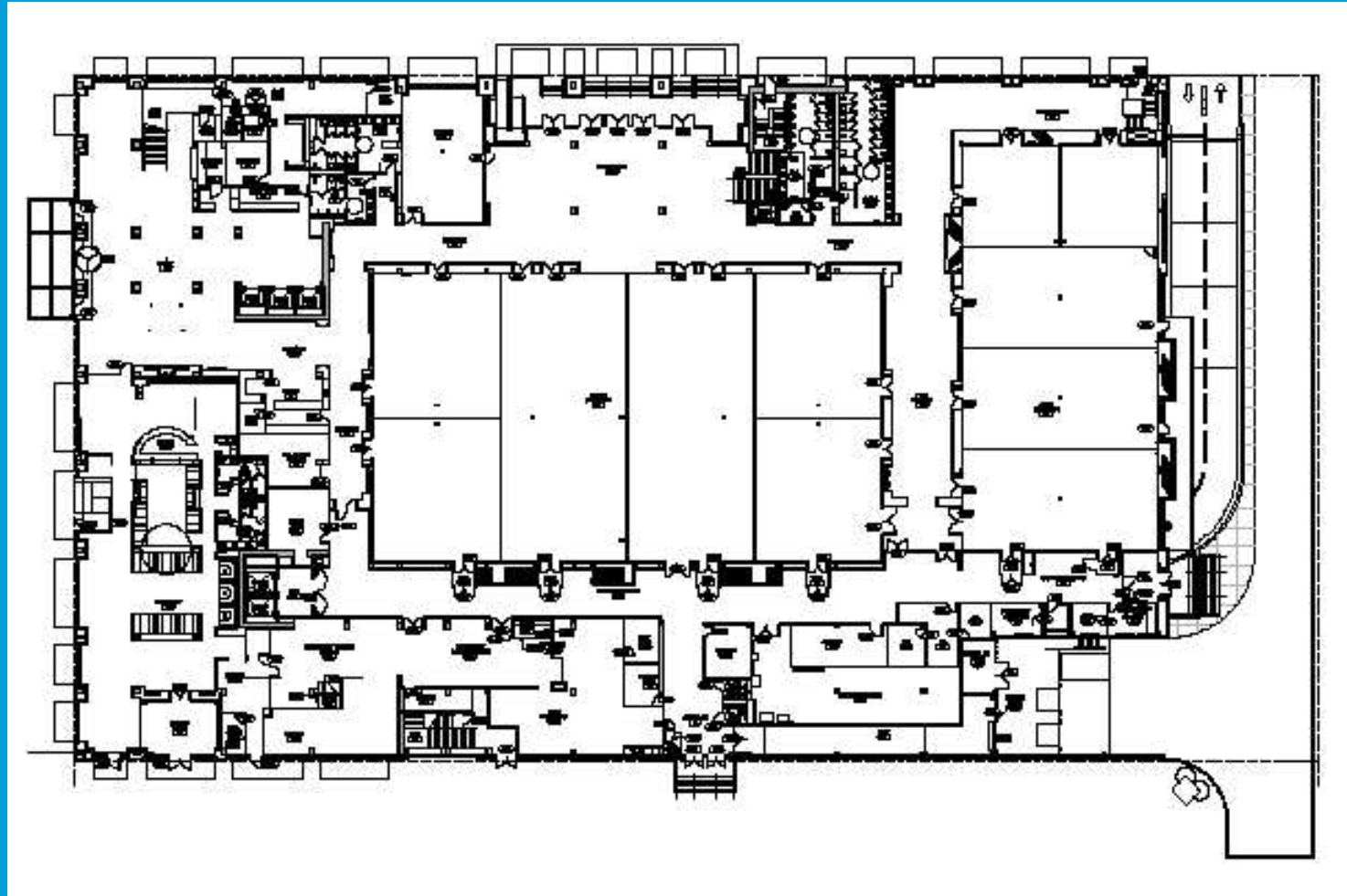
0 575 1150 1725 ft. Map center: 45° 37' 31.6" N, 122° 40' 27.1" W

This map is a user generated static output from an internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Site Plan



Ground Floor Plan







Ballroom set up for Banquet



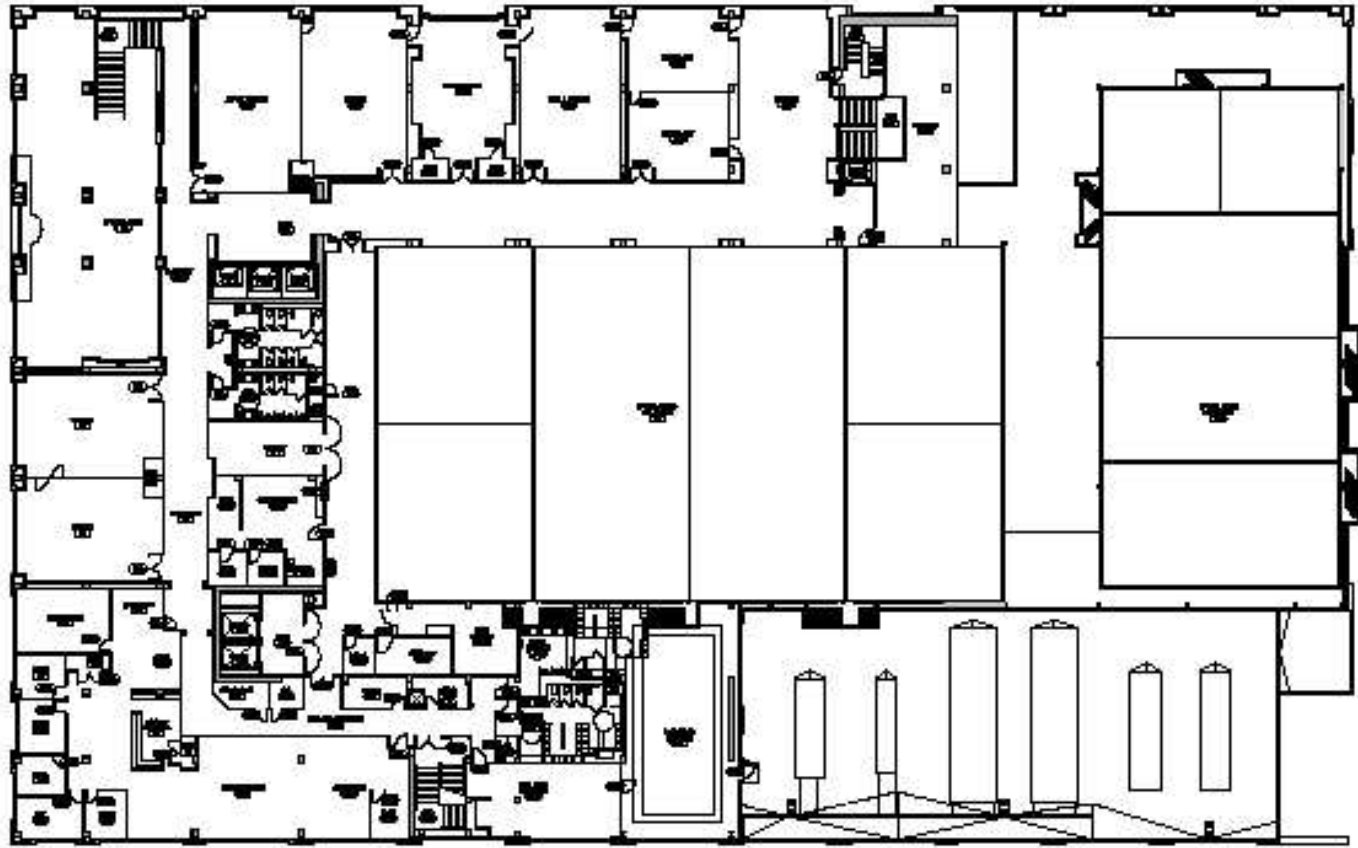
Set up for Meeting



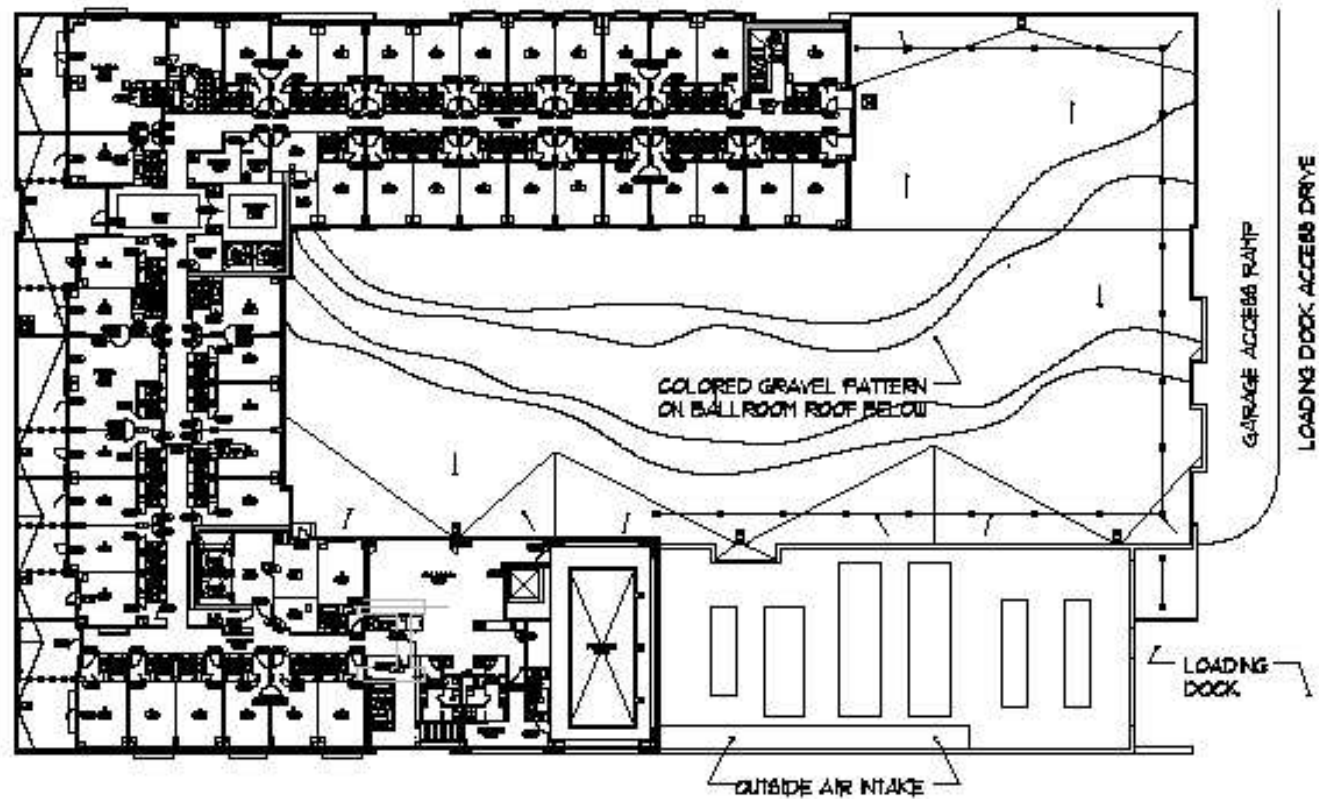
Smaller Meeting Room



Second Floor Plan



Typical Guest Room Floor



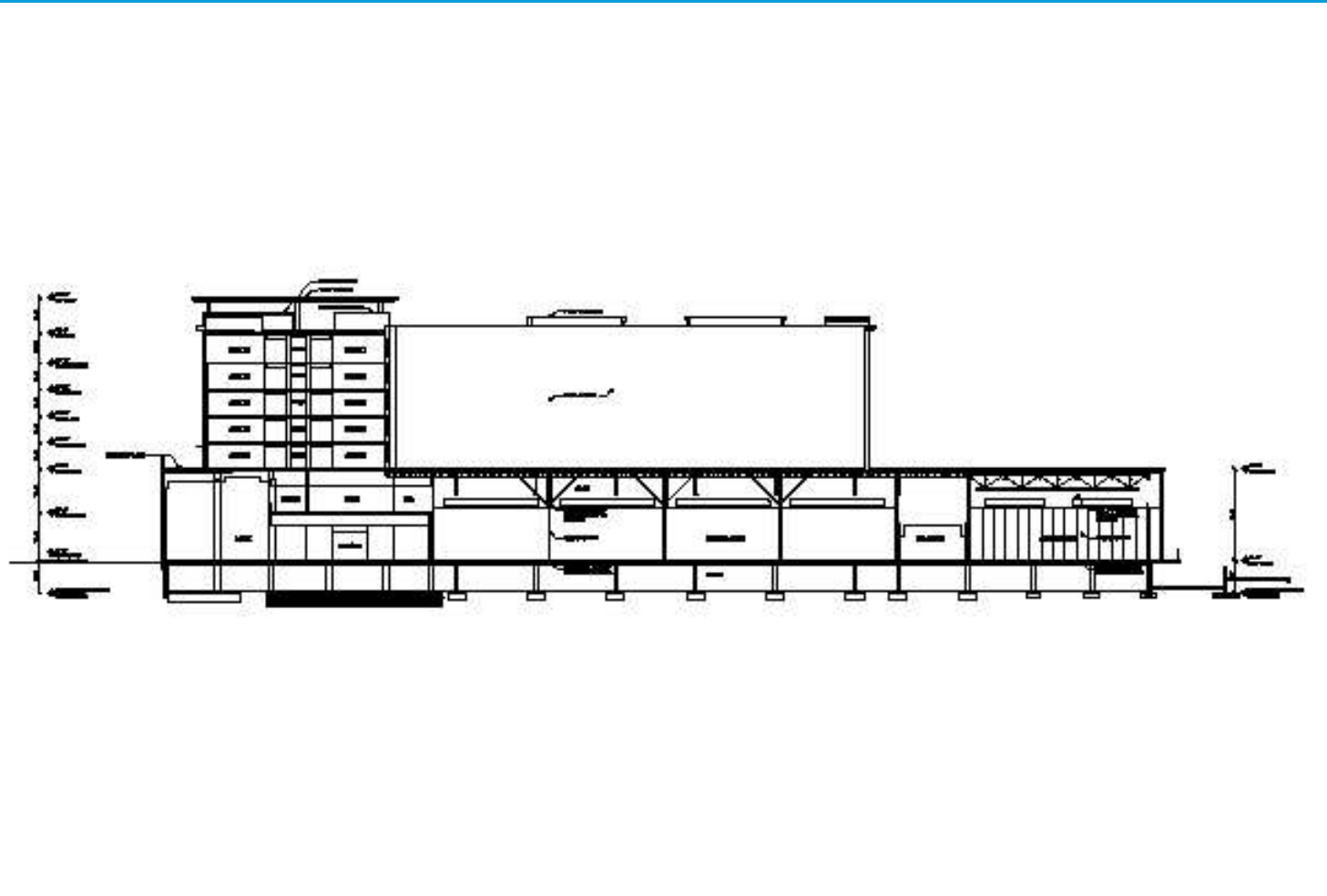
Typical Guest Room



Guest Room



Building Section













- Locally manufactured light fixtures using recycled aluminum

- Floor coverings meeting Carpet & Rug Institute Green Label

- Low VOC paints

- Locally sourced materials



LEED Credits - Sustainable Sites



- Site Selection
- Urban Redevelopment
- Public Transit
- Bike storage & showers
- Alternative fuel refueling stations
- Parking capacity below maximum
- Stormwater Management (2)
- Non-Roof Heat Island Mitigation

LEED Credits – Energy & Atmosphere

ECB Table (LEED 2.1 Reference Guide Table 7 LEED Energy Cost Budget Compliance Data)
Regulated Energy Summary by End Use

End Use	Energy Type	Proposed Building		Budget Building		Optimized Energy Performance (%)
		Energy	Fuel	Energy	Fuel	
		10 ⁶ kWh	10 ⁶ Btu	10 ⁶ kWh	10 ⁶ Btu	
Lighting - Conditioned	Electricity	4,029,000	730	6,512,400	1,130	71%
Lighting - Unconditioned						
Space Heating	Gas	11,255,500	8,300	12,540,200	7,120	81%
Space Heating	Electricity	119,800	13	102,600	26	119%
Space Cooling	Electricity	1,662,100	1,662	2,547,600	1,662	81%
Pumps	Electricity	154,800	46	94,200	11	179%
Heat Rejection						
Fans - Interior Ventilation	Electricity	4,423,300	626	4,126,600	562	137%
Fans - Interior Exhaust						
Fans - Parking Garage		147,600	17	147,600	17	100%
Service Water Heating	Gas	2,785,300	560	3,211,900	620	89%
Office Equipment (not regulated)						
Elevators & Escalators (not regulated)						
Refrigeration (food, etc.) (not regulated)						
Cooking (commercial) (not regulated)						
TOTAL BUILDING CONSUMPTION		25,396,200	26,065,200			96.2%

- Energy performance 20% better than baseline
- No HCFC's

Energy Use Strategy – Demand Controlled Ventilation



Energy Use Strategy – Fluorescent Dimming



Energy Use Strategy – Separate Guest Room Ventilation from Heating & Cooling



LEED Credits – Materials & Resources

- 85% of construction waste recycled
- 56% of construction material manufactured or assembled within 500 miles – most of this within Washington & Oregon
- 16% of construction materials extracted within 500 miles – most within Washington & Oregon
- 22% of furnishings manufactured within 150 miles of Vancouver

LEED Credits – Indoor Environmental Quality



- CO2 Monitoring – Demand Control Ventilation
- Low VOC Materials
- Indoor Pollutant Source Control
- Construction Indoor Air Quality Program
- Meet ASHRAE 55 comfort standard

LEED Status

- Binder submitted to USGBC less than 60 days ago
- GBC has responded and we are currently working on providing information for audited credits:
 - Commissioning
 - Regional Materials
 - Indoor Pollutant Source Control

Cost/Benefit of Sustainability

- Most 'green' components had no added cost
- Commissioning is required by both Faulkner & Hilton as standard procedure



Cost/Benefit of Sustainability

- Added costs of CO2 controlled ventilation, fluorescent dimming and LEED process – about \$125,000
- Annual modeled energy savings - \$86,000
- Annual ROI on this investment – 69%



Cost/Benefit of Sustainability



- Total Construction Cost - \$35,000,000 about \$155/SF
- Added costs for sustainability - \$125,000 – about .3% premium on construction cost or about \$.55/SF

Challenges

- Segregating Air Flow in Smoking Rooms
- Commissioning Large Complex Buildings

“Since it opened last July, this facility has hosted over 640 events and has served over 25,000 meals. And, although Hilton is an international corporation, thinking big for them means they are not afraid to act locally.

Hilton has created 200 new jobs in our community - 87 percent of their employees live in Clark County. Hilton uses local vendors like Boyd’s coffee and Main Street Bakery and, this Hilton...our Hilton...is the only one in the world using Pepsi products, courtesy of Corwin Beverages. The results speak for themselves.”

Mayor Royce Pollard on Feb. 1, 2006, at the Hilton Vancouver Convention Center.

