



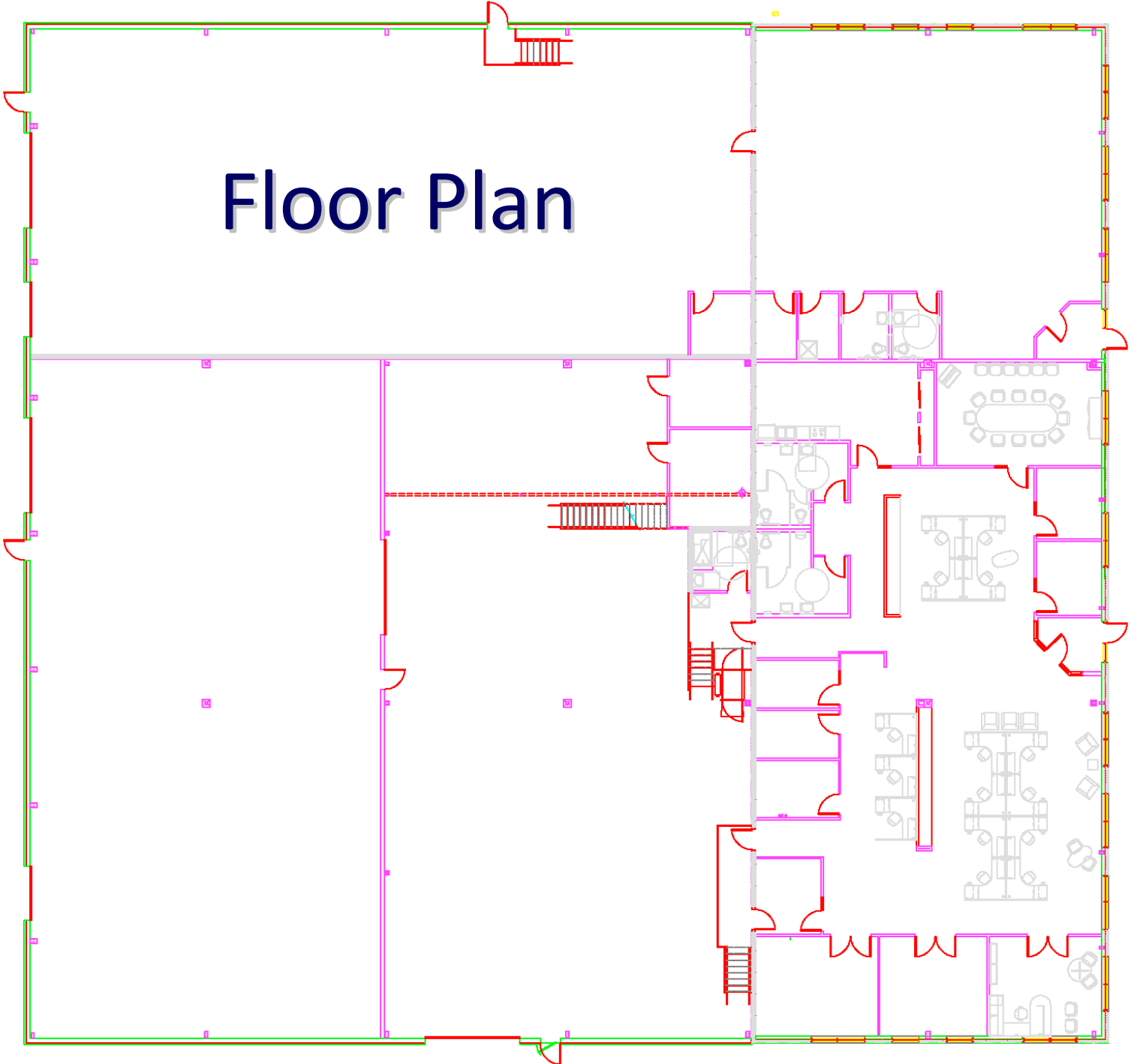
Aztech
Technologies, Inc.



Fil L. Fina, III, PE

Aztech Technologies, Inc.

Floor Plan



Aztech Building

- Total 24,000 sq. ft.
 - Aztech 16,000 sq. ft.
 - Office 5,000 sq. ft.
 - Shop 5,500 sq. ft.
 - Warehouse 5,500 sq. ft.
 - Tenant 8,000 sq. ft.
 - Office 3,750 sq. ft.
 - Warehouse 4,250 sq. ft.

HOW WE ARE DIFFERENT

- Insulation

	Typical	Aztech	Energy Loss Reduction
Walls	R-13	R-24	85%
Roof	R-19	R-25	31%
Windows	R-1	R-3	200%
Overhead Doors	R-12.76	R-17.5	37%
Sub-slab	None	R-5	-----

HOW WE ARE DIFFERENT

- Roofing
 - Typical: Black Asphalt or Membrane
 - Aztech: White Membrane – Energy Star

- Air Conditioning Load Reduction – 40%
- Spaces not air conditioned stay cooler

HOW WE ARE DIFFERENT

- Heating & Air Conditioning
 - Geothermal System
 - Bed Rock Wells provide heat source and sink
 - Seven 500 foot Standing Column Wells
 - Water is pumped from each well and flows back to the same well
 - Open Loop Wells isolated by Heat Exchangers
 - Heat Exchangers protect the heat pumps from contamination

HOW WE ARE DIFFERENT

- Heating and Air Conditioning (continued)
 - Office Heating and Cooling by Water Source (water to air) Heat Pumps
 - Two stage compressors and ECM variable speed fans and microprocessor controllers
 - Shop and Warehouse Radiant Floor heating by water to water heat pumps
 - High efficiency compressors with microprocessor controllers
 - Office warm-up time controlled by indoor /outdoor temperature differential

HOW WE ARE DIFFERENT

- Heating and Air Conditioning (continued)
 - Energy conserving variable frequency drives on well pumps and circulator pumps
 - ECM – Electronically Commutated Motors – ultra high efficiency DC motors save average of 67%
 - Computer based internet accessible controls monitor occupancy and temperature inside and out
 - Natural gas overhead door heaters come on when the door opens and remains on for 5 minutes after the door closes

HOW WE ARE DIFFERENT

- Lighting
 - Fluorescent T-5 High Output Lamps with Electronic Ballast throughout
 - Occupancy Sensor Control throughout
 - Compact Fluorescent
 - Emergency Lighting 12 Watt Halogen
 - Exit Lights – LED
 - Exterior Lights – Metal Halide

Sustainability in Construction

- Insulation
 - Under Floor Extruded Polystyrene – may or may not be ozone depleting in manufacture
 - Roof Polyisocyanurate – 0% ozone depleting manufacture – panels
 - Non CFC Polyurethane foamed in place metal panels
 - Fiberglass – Limited office soffets and walls

Sustainability

- Designed building to fit site
 - Created wetlands
 - Building Orientation – North
 - Split Level
 - Used existing site contours
- Waste Stream Controls

Programs Utilized

- NYSERDA New York Energy Smart New Construction Program PON913
 - Incentive Payment \$21,155
- NYSERDA New York Energy Smart Loan Fund
 - Total Energy Savings Improvements \$568,091.64
- NYSERDA New York Energy Smart Equipment Choices Program PON968
 - Incentive Payment \$739

THE RESULTS

- From May 18, 2007 to May 19, 2008
 - Actual Annual Energy Cost
 - Heat, Air Conditioning, Light and Power
 - Our 24,000 square foot building cost **\$1.00/square foot**
 - Actual Energy Consumption
 - Electricity: 135,599 kWh
 - Natural Gas: 297 therms

Thank You!

Questions?

