

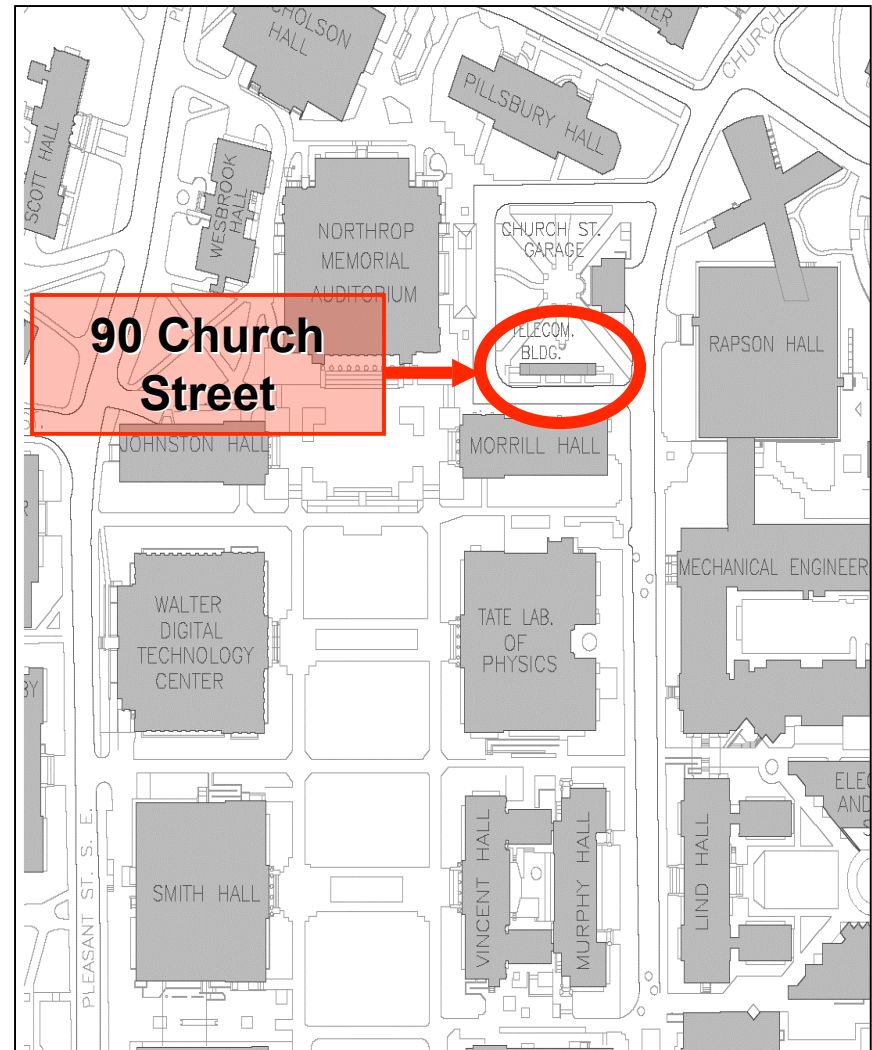
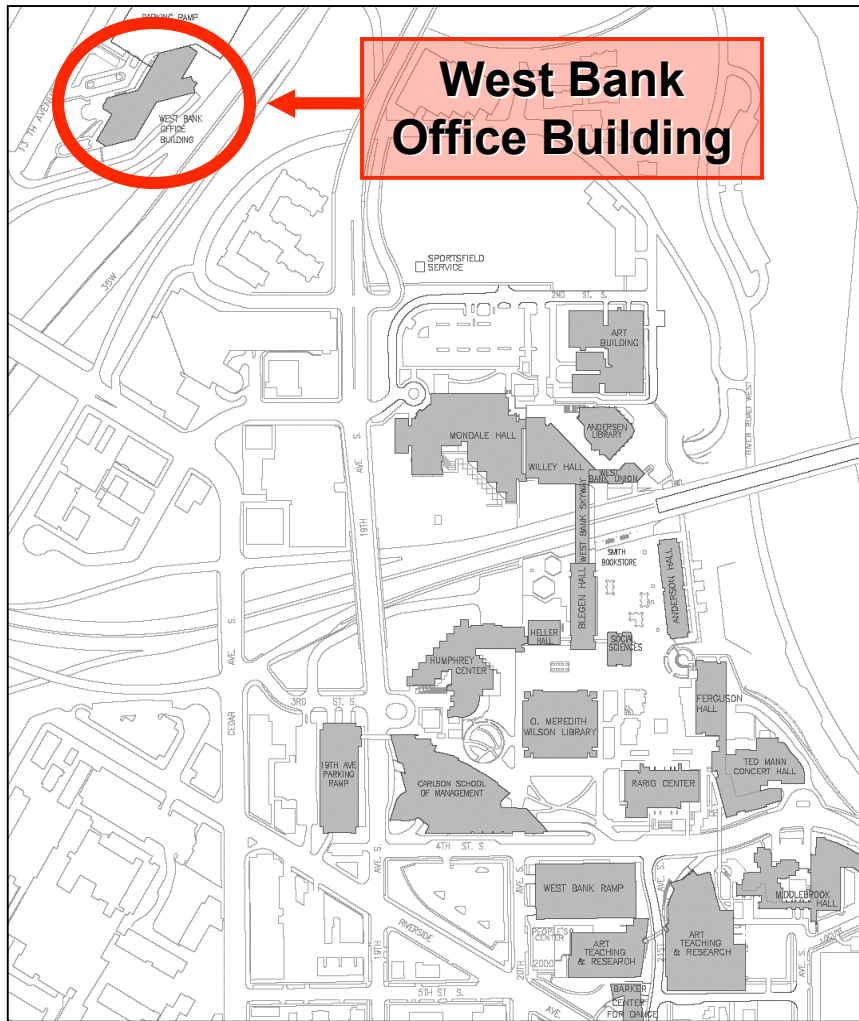


UNIVERSITY OF MINNESOTA

West Bank Office Building & 90 Church Street Data Centers

West Bank Twin Cities Campus

LOCATION PLAN





PROJECT RATIONALE

- Data centers are used to support the telecommunications systems and central computing services for the University of Minnesota
 - The Heating Ventilation and Air Conditioning (HVAC) systems are aged, lack redundancy and need expansion to handle environmental demands.
 - Office of Information Technology (OIT) identified a three-year program to upgrade the data centers environmental and electrical needs
 - System upgrades will increase system efficiency, reliability and redundancy

PROJECT SCOPE (West Bank)

- Built in 1988 to support 60 watts per square foot in this 6,500 square foot facility
- An additional 80 tons of cooling will be needed within the next 36 months
 - Replace the seven chilled water-cooled Liebert units
 - Four additional units will be required over a three-year period
 - Two new cooling units will be added
 - Existing 140 ton electrical chiller will be replaced with a new 240 ton electrical chiller
 - 240 ton dry cooler heat rejection system will be added for winter operation

PROJECT SCOPE (90 Church St)

- Built in 1984 to support 30 watts per square foot of computer equipment in 3,000 square foot facility

- Work will ensure reliability of the existing system
 - Replace the existing (3) 20 ton Liebert cooling units with (4) 20 ton dual cool units connected to the Northrop chiller loop

 - Replace existing dry coolers to provide 60+ tons of capacity for essential backup

 - Connecting to the Northrop Chilled Water Plant will result in energy savings & reduce CO2 emissions

PROJECT DESCRIPTION

- Preliminary Estimated Cost: West Bank 90 Church
- Totals
- Construction Cost \$ 581,000 \$ 646,000
- \$ 1,227,000
- Non Construction Cost 145,000 114,000
- Capital Funding: 259,000
- Office of Information Technology \$ 726,000 \$ 726,000
- Office of Information Technology \$ 486,000 \$ 760,000
- Schedule (same dates for both projects)
- Begin construction February 2007
- Complete construction June 2007
- Engineer/Architect: (same engineer/architect for both projects)
- Hypertect, Inc., Roseville, Minnesota



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