

CRITICAL INFRASTRUCTURE REPAIRS

GENERAL ASSEMBLY BUILDING

January 12, 2007

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BASIS OF STUDY

- MEETINGS WITH STUDY TEAM, GENERAL ASSEMBLY AND DGS REPRESENTATIVES
- BUILDING MAY REMAIN IN SERVICE ADDITIONAL 5 – 10 YEARS
- DEVELOP ACTION PLAN TO PERFORM CRITICAL REPAIRS
- CRITICAL INFRASTRUCTURE ITEMS IDENTIFIED FOR FURTHER STUDY



CRITICAL INFRASTRUCTURE NEEDS

- FIRE ALARM SYSTEM
- ELECTRICAL SWITCHGEAR – EAST BUILDING
- EMERGENCY POWER
- LIFE SAFETY CODE ISSUES
- COOLING TOWERS – EAST AND WEST BUILDING
- AIR HANDLING UNITS - EAST AND WEST BUILDING
- ROOF – EAST BUILDING
- ROOF DRAIN RISERS – EAST BUILDING



FIRE ALARM SYSTEM

- INSTALLED 1976 AS PROTOTYPE
- REPLACEMENT PARTS NOT AVAILABLE
- PROVIDE NEW STATE OF THE ART CODE COMPLIANT FIRE COMMAND CENTER
- CONSTRUCTABILITY
- ESTIMATED CONSTRUCTION COST, \$1,288,338.00



ELECTRICAL SWITCHGEAR EAST BUILDING

- INSTALLED 1955 WELL EXCEEDED LIFE EXPECTANCY
- EQUIPMENT IS AN EXTREME HAZARD TO MAINTENANCE EMPLOYEES
- REPLACEMENT PARTS NOT AVAILABLE
- PROVIDE NEW ELECTRICAL SERVICE EQUIPMENT IN NEW SERVICE ROOM
- ESTIMATED CONSTRUCTION COST, \$503,864.00



EMERGENCY POWER SYSTEM

- 2 GENERATORS INSTALLED 1955, 1976,
- NEED ADDITIONAL ELEVATOR ON EMERGENCY POWER TO SAFELY EVACUATE BUILDING
- PROVIDE NEWER LARGER GENERATOR
- ESTIMATED CONSTRUCTION COST, \$692,575.00



BACK-UP CHILLER

- BACK-UP CHILLER – EAST WING, 400 T, YORK, REBUILT 1976
- LAST MODEL STILL IN USE
- REPLACEMENT PARTS NOT AVAILABLE
- ESTIMATED CONSTRUCTION COST, \$656,064.00



COOLING TOWERS EAST AND WEST BUILDINGS

- INSTALLED 1976
- POOR CONDITION, EXCEEDED USEFUL LIFE
- PROVIDE NEW COOLING TOWER, 500 TONS, WEST BUILDING ROOF
- RELOCATE COOLING TOWER FROM WASHINGTON BUILDING, 400 TON, WEST BUILDING ROOF
- INTERCONNECT COOLING TOWERS TO PROVIDE REDUNDANCY
- ESTIMATED CONSTRUCTION COST, \$369,999.00



Air Handling Units East and West Building

- AHU'S INSTALLED 1965 – WEST BUILDING
- AHU'S INSTALLED 1976 – EAST BUILDING
- AHU'S HAVE EXCEEDED LIFE EXPECTANCY
- NEWER EQUIPMENT MORE ENERGY EFFICIENT
- DIRECT DIGITAL CONTROLS ALLOW MORE LOAD DIVERSITY



AIR HANDLING UNITS – EAST BUILDING

PRIORITY	AHU #	LOCATION	AREA SERVED
1	1 (Joy Fan)	2 nd Floor	Interior (B,1, 2, 3 rd Floors)
1	2 (Joy Fan)	5 th Floor	Interior (4 & 5 th Floors)
1	3 (Joy Fan)	12 th Floor	Interior (7, 8, 9, 10, 11 th Floors)
2	A	7 th Floor	Perimeter (All Floors)
3	13	7 th Floor	Dining Room (6 th Floor)
3	6	7 th Floor	Kitchen (6 th Floor)
3	7	7 th Floor	Interior (6 th Floor)

	9 AHU		
* LIEBERT UNIT		Computer Room	6 th Floor
* YORK UNIT		Computer Room	6 th Floor (Data Entry)

ESTIMATED CONSTRUCTION COST, \$1,242,810.00



AIR HANDLING UNITS – WEST BUILDING

PRIORITY	AHU #	LOCATION	AREA SERVED
1	5, 6, 7	Sub-Basement	Perimeter (All Floors)
3	1 & 2	Sub-Basement	Interior (B, 1, 2, 3, 4 th Floors)
2	3 & 4	9 th Floor Mechanical Room	Interior (5, 6, 7, 8, 9 th Floors)
	7 AHU		

ESTIMATED CONSTRUCTION COST \$1,009,771.00



ROOFING – EAST BUILDING

- ROOFING POOR CONDITION, NEED TO BE REPLACED 6TH, 7TH, 8TH, 12TH FLOORS
- ASBESTOS MAY BE PRESENT IN FLASHING
- INSTALL NEW ROOFING, FLASHING CURBS AND COPING



ROOF DRAIN RISERS – EAST BUILDING

- ROOF DRAINS ARE NOT SEALED, OPEN JOINTS LEAKING
- WATER ACCUMULATING SECOND FLOOR BALCONY STRUCTURE
- HOUSE ROOM D
- REPAIR ROOF DRAIN PIPING
- INSTALL SCUPPERS IN BALCONIES



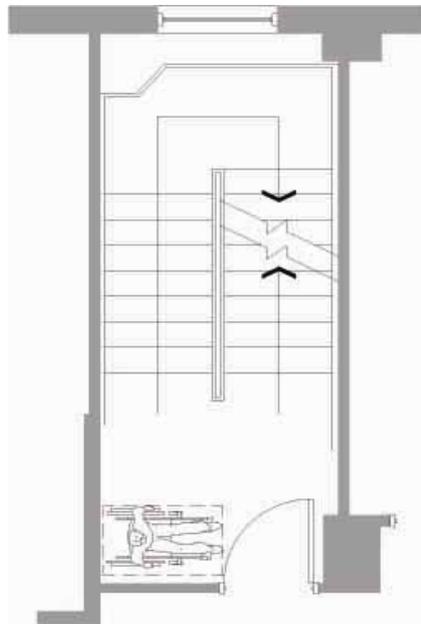
BUILDING EXTERIOR – EAST BUILDING

- 1923 BUILDING ROOF PERIMETER
- EXISTING CONCRETE BALUSTERS, RAILING MASONRY PIER DETERIORATING
- DEBRIS MAY FALL ON BROAD STREET
- REPLACE CONCRETE BALUSTERS AND RAILING WITH URETHANE BALUSTERS
- REPAIR MASONRY PIERS
- ESTIMATED CONSTRUCTION COST, \$894,009.00



LIFE SAFETY CODE ISSUES

- STAIRWELLS DO NOT HAVE 2HR RATINGS
- STAIRWELLS DO NOT HAVE AREAS OF REFUGE
- ASBESTOS ABATEMENT
- ESTIMATED CONSTRUCTION COST, \$685,706.00



PROJECT IMPACT ON OCCUPANTS

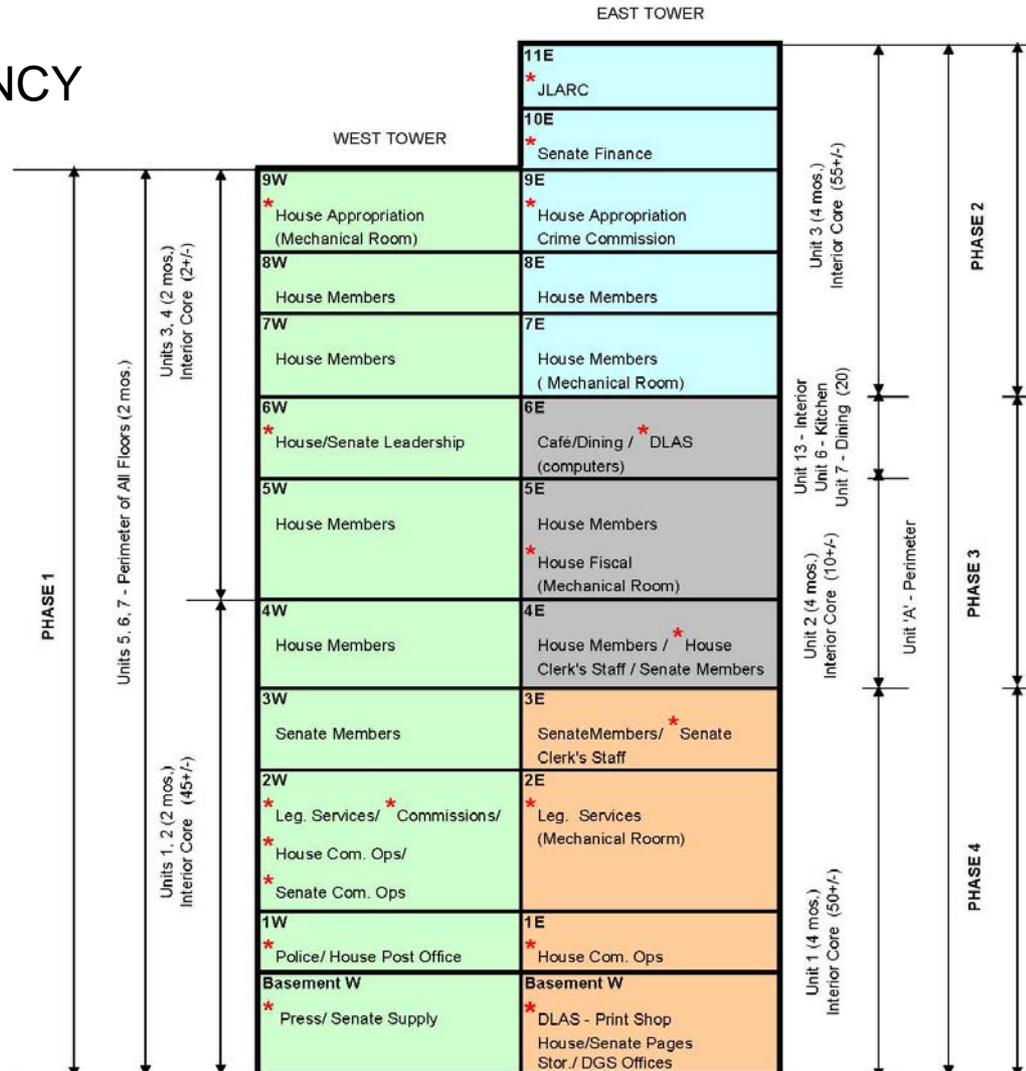
- OF ALL OF THE PROPOSED REPAIR PROJECTS, ONLY THE HVAC AIR HANDLER REPLACEMENTS IMPACT OCCUPANTS
 - DURING REPLACEMENT (2-4 MONTHS EACH AREA) AREA SERVED WILL HAVE NO HEAT, AIR CONDITIONING OR VENTILATION
- ASSUME WORK WILL NOT OCCUR DURING SESSION TO ELIMINATE MOST MEMBER AND PUBLIC IMPACT
- OUT-OF-SESSION OCCUPANCY IS ABOUT 200 PEOPLE
- RECOMMEND RENOVATING AIR HANDLERS IN FOUR 4- MONTH PHASES IMPACTING 50 +/- PEOPLE PER PHASE
- RE-LOCATING WITHIN GAB NOT FEASIBLE SO NEED TEMPORARY SPACE



HVAC PHASING STRATEGY

BUILDING OCCUPANCY

* Groups occupy all year



TEMPORARY SPACE REQUIREMENTS AND IMPACT

- CRITERIA FOR TEMPORARY SPACE FOR USE BY GAB:
 - 12-14,000 SF
 - EASY WALK TO GAB
 - IDEALLY LOCATED ON CAPITOL SQUARE
- COST IMPACT (VERY PRELIMINARY – 2007 DOLLARS)
 - COMMERCIAL RENT 14,000 SF @ \$20 x 3-YR TERM= \$840,000
 - 8 MOVES (IN/OUT) = \$ 80,000
 - FURNITURE PURCHASE (50x3,000) = \$150,000
 - TENANT IMPROVEMENTS (DATA/PHONE/MISC.) = \$200,000
 - DESIGN SERVICES/MOVE MANAGEMENT/MISC. = \$130,000
 - TOTAL \$1,400,000



COST ESTIMATE SUMMARY

PACKAGE	TOTAL	(1)CONSTRUCTION PERIOD
Roof & Roof Drains – East Building	\$894,008.80	180 Days
Life Safety Code	\$685,706.30	120 Days
Back-Up Chiller	\$656,064.32	90 Days
Air Handling Units – East Building	\$1,242,810.23	150 Days
Air Handling Units – West Building	\$1,009,771.38	120 Days
Cooling Towers	\$369,998.83	45 Days
Electrical Switchgear Replacement	\$503,863.53	120 Days
Fire Alarm System Replacement	\$1,288,337.60	360 Days
Emergency Power System Replacement	\$692,574.85	120 Days
Estimated Construction Cost	(2)\$7,343,136.00	
Design Costs, Inspection, Project Management, Testing	<u>\$1,837,784.00</u>	
Total 2007 Project Costs	\$9,178,920.00	
2008 Project Costs	\$10,308,787.00	
2009 Project Costs	\$10,824,226.00	
2010 Project Costs	\$11,365,437.00	

- (1) DOES NOT INCLUDE LEAD TIME TO ORDER AND RECEIVE EQUIPMENT
 (2) DOES NOT INCLUDE TEMPORARY RELOCATION COSTS OF \$1,400,000

