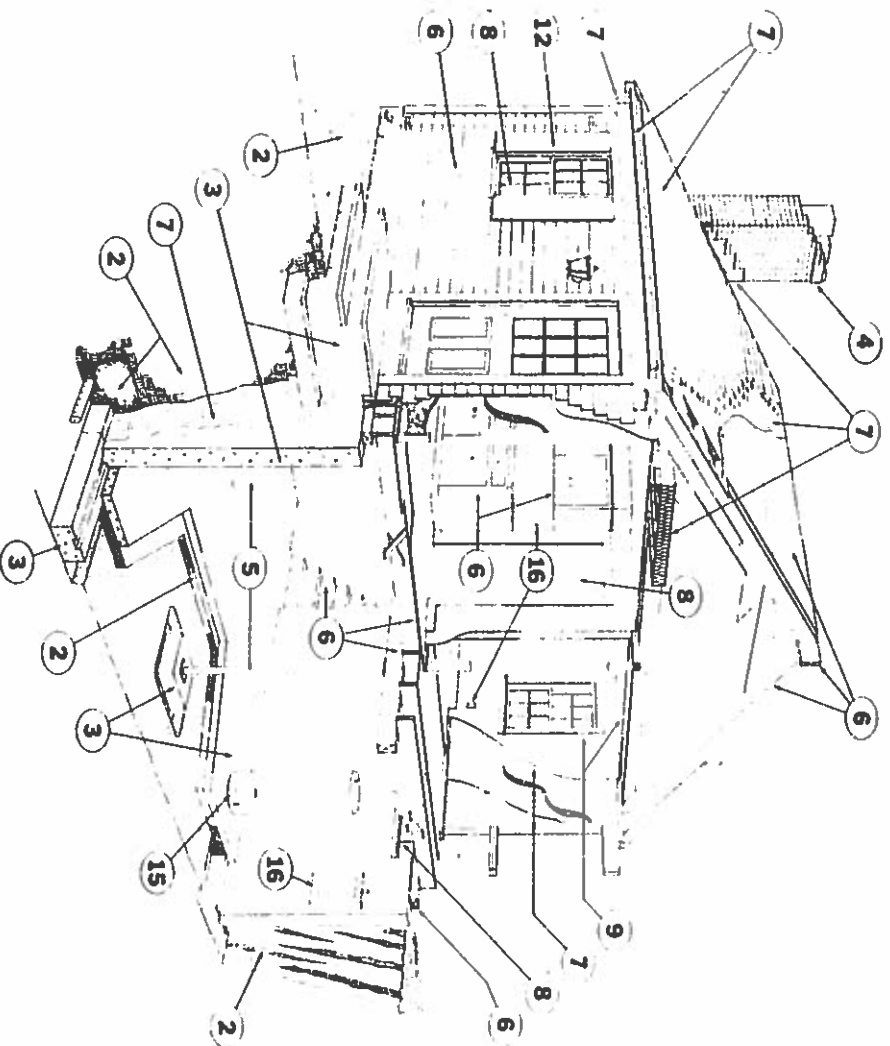


**REPORT NO. 110383**  
**LIBRARY**

# BUILDING COMPONENTS BY SYSTEM



System numbering adapted from the Construction Specification Institute (CSI)

BUILDING  
SYSTEM  
EVALUATION

20 N. Baldwin Avenue  
Sierra Madre, CA 91024  
(213) 355-4164, 355-0818

GENERAL REQUIREMENTS	1
SITE WORK	2
CONCRETE	3
MASONRY	4
METALS	5
WOOD & PLASTICS	6
MOISTURE PROTECTION	7
DOORS, WINDOWS & GLASS	8
FINISHES	9
SPECIALTIES	10
EQUIPMENT	11
FURNISHINGS	12
SPECIAL CONSTRUCTION	13
CONVEYING SYSTEMS	14
MECHANICAL	15
ELECTRICAL	16



BUILDING SYSTEM EVALUATION • 20 NORTH BALDWIN AVENUE, SIERRA MADRE, CA 91024 • 213 / 355-0818

July 28, 1983

Sam Shwetz  
Finance Director  
City of Glendora  
116 E. Foothill Blvd.  
Glendora, CA 91740

RE: REPORT NO. 110383, LIBRARY

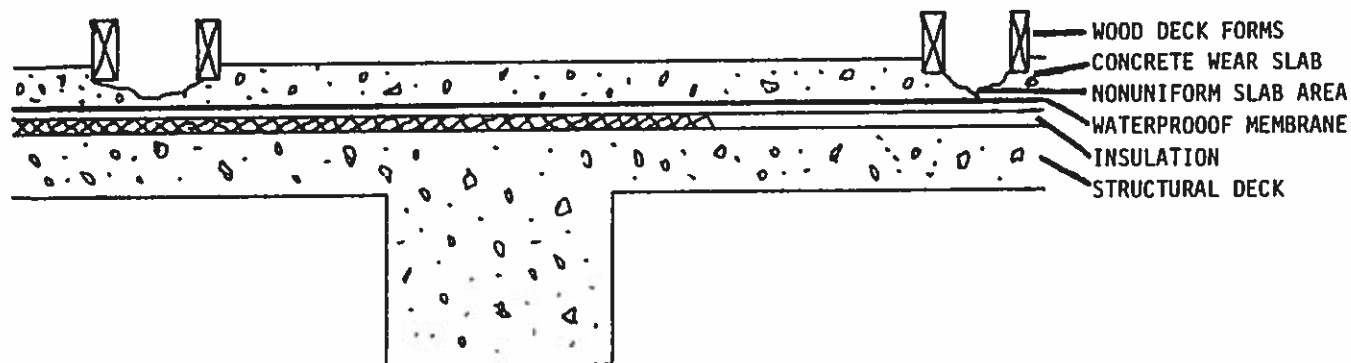
Dear Mr. Shwetz:

As you are aware we conducted a thorough investigation of the deck (wear slab) over the Library. The investigation consisted of the following: (1) review of the original contract documents (blue prints) of the facility, (2) field observation of the deck, (3) demolition and sampling of portions of the deck, and (4) analysis of 3 core samples taken from the deck.

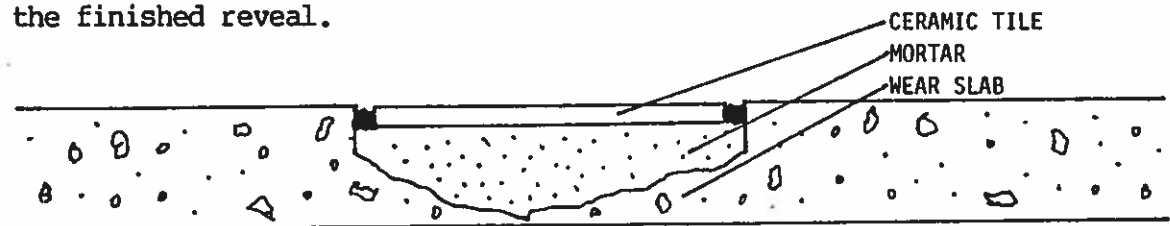
The problem seems to be multifaceted and breaks down into the following general categories:

Item 1. The primary problem called to our attention was the cracking of the wear slab and consequent leaks at the upper level of the library. The construction drawings loosely indicate a 1" insulation over the structural concrete slab, capped with a waterproofing membrane. A 2½" concrete wear slab with rows of tiles was poured over the membrane. The wear slab has numerous hairline cracks which are caused by shrinkage of the concrete. There is no evidence that steel reinforcing was used. Removal of some of the tile showed that at three locations, at least, the concrete wear slab was not poured uniformly underneath the 1" reveal used to set the tile. The reveal was then filled (leveled) with mortar.

The illustration below illustrates the forming method for the wear slab squares.



The illustration below illustrates the mortar infill and tile placed in the finished reveal.



The mortar under the tile had a compressive strength so low that in some instances it could be crushed by hand pressure. This has resulted in the checking and cracking of many of the ceramic tiles which form the deck's pattern.

Item 2. Long breaks in the wear slab could have caused the slab's shrinkage movement to tear the waterproofing membrane. Breaks in the membrane could also have been caused by the workmen during the forming and placement of the slab. Deteriorated or faulty caulking of the joints aggravated the situation.

Item 3. There are two sections where the deck extends beyond the area of the library: one, west of the Public Works Dept. of City Hall, and two, where the steps descend from the deck to the rear of City Hall. In both these areas the deck was built over compacted fill. From observations made at the site it is our opinion that these areas have settled, in some areas substantially. The settled areas are adjacent to the exterior walls of the Library. Consequently reservoirs of water build up after rains and waterings. The water in these reservoirs then either evaporates over a period of time or seeps to some lower level. Evidence of this can be seen in water seeping down the rear wall of the Library or along the steeps descending into City Hall where water weeps for long periods after rains and deck planting irrigation.

Conclusion: No place in the drawings we reviewed was there a detail of the wear slab. This indicates that the detailing of the deck was left up to the contractor. Unfortunately we were not able to locate As-built drawings for the building. These would tell us how the contractor completed details, like those involved in the decking.

With the information now available it would be BSE's recommendation to remedy the situation by removing the existing wear slab, waterproofing membrane, and insulation and installing a new mesh-reinforced wear slab with caulked control joints about 10' to 12' on center each way, over a water proofing membraned equipped with a "slip sheet" to break the bond between the slab and the membrane, over new 1" rigid insulation. As an alternate, a urethane synthetic rubber (elastomeric) membrane with a glazed sand finish coat could be installed over the existing wear slab.



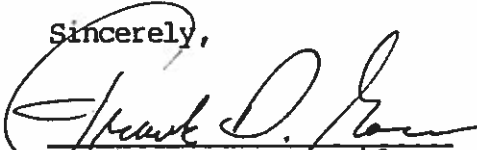
Conceptual Costs:

Remove and replace deck (16,350 SF x \$10/SF = \$163,500.00  
Install elastomeric membrane (16,350 x \$4/SF = \$57,225.00

The elastomeric membrane would have approximately a ten year life span.

If we can be of any further service to you in this matter please contact this office.

Sincerely,

  
Frank D. Goss, President

mt/FDG



BUILDING SYSTEM EVALUATION  
GENERAL BUILDING PROFILE  
LIBRARY AND CULTURAL CENTER

OWNER: CITY OF GLENDORA  
BUILDING: LIBRARY AND CULTURAL CENTER  
ADDRESS: 140 S. GLENDORA, GLENDORA

\*\*\*\*\* GENERAL \*\*\*\*\*

\*\*\*\*\* SITE \*\*\*\*\*

BUILDING STATUS.....OCCUPIED  
DATE OF CONSTRUCTION.....1972  
GROSS AREA (SQUARE FEET).....27,000  
DATE OF ADDITION(S).....0  
GROSS AREA OF BLDG. ADDITIONS.....0  
CONSTRUCTION COST(S).....850,000  
ORIGINAL USE.....LIBRARY  
CURRENT USE.....LIBRARY  
DATE BLDG. ACQUIRED BY OWNER.....1972  
OPEN TO PUBLIC.....YES  
HISTORICAL/ARCHITECTURAL PRESERVATION POTENTIAL.....NO  
ORIGINAL LIFE EXPECTANCY.....50  
ANTICIPATED LIFE EXPECTANCY.....40

TOTAL SITE SQUARE FOOTAGE.....N/A  
TOTAL LANDSCAPED SQUARE FOOTAGE.....N/A

\*\*\*\*\* STRUCTURAL \*\*\*\*\*  
BUILDING TYPE.....CONCRETE, III  
FOUNDATION.....CONC. SLAB AND SPRD FT.  
STRUCTURAL SYSTEM.....BEARING WALL  
WALL CONSTRUCTION.....CONCRETE AND FRAME  
ROOF CONSTRUCTION.....CONCRETE TRUSS

\*\*\*\*\* OCCUPANCY \*\*\*\*\*

\*\*\*\*\* FLOORS \*\*\*\*\*

NORMAL BUILDING STAFF LOAD.....7  
NORMAL ADDITIONAL OCCUPANCY.....35  
HOURS/DAYS OF OPERATION PER DAY/WEEK.....10/6

TOTAL NUMBER OF FLOORS.....2  
FLOORS ABOVE GROUND.....2  
FLOORS BELOW GROUND.....0  
FLOOR CONSTRUCTION.....SLAB  
HEIGHT OF BUILDING ABOVE GROUND.....32

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\*\*\*\*\*

BUILDING SYSTEM EVALUATION  
GENERAL BUILDING PROFILE  
LIBRARY AND CULTURAL CENTER

\*\*\*\*\* ELECTRICAL \*\*\*\*\*

LIGHTING SERVICE.....277/480 V, 3P, 4W

\*\*\*\*\* ROOFING \*\*\*\*\*

TYPE.....60% BUILT-UP, 40% TILE

POWER.....480V, 3P, 120/208V, 3P, 4W

YEAR INSTALLED.....N/A

\*\*\*\*\* MECHANICAL \*\*\*\*\*

HEAT.....GAS FIRED BOILER

\*\*\*\*\* RESTROOMS \*\*\*\*\*

MALE.....2

FEMALE.....2

PRIVATE.....0

HANDICAPPED.....0

FIRE ALARM SYSTEM.....NONE

\*\*\*\*\* GENERAL NOTES \*\*\*\*\*

FIRE SPRINKLER SYSTEM.....NONE

STANDPIPE SYSTEM.....NONE

NUMBER OF EXITS AT STREET LEVEL.....4

FORCED ENTRY WAS ATTEMPTED WITH PRY BAR AT ROOF TOP  
ACCESS HATCH OVER "FRIENDS" STORAGE ROOM. THIS SHOULD  
BE CHECKED PERIODICALLY FOR FURTHER SIGNS OF ATTEMPTED  
ENTRY.

\*\*\*\*\* PARKING \*\*\*\*\*

NUMBER OF COVERED PARKING SPACES.....0

NUMBER OF UNCOVERED PARKING SPACES.....COM. LOT

HANDICAPPED PARKING SPACES.....2

MOTORCYCLE PARKING SPACES.....0

BICYCLE PARKING SPACES.....11

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REPORT NUMBER : 110383  
 SENIOR EVALUATOR : F. GOSS  
 ENGINEERING : A. HOLMBERG

BUILDING SYSTEM EVALUATION  
 WORK ITEM INVENTORY  
 LIBRARY AND CULTURAL CENTER

REF. NO	TASK	YEAR	AUTH. AMT	RATING	DESCRIPTION	'83 COST
WORK ITEM NO. 1 REF. DWG. NO. 0 SYSTEM NO. 1.1-04	DESIGN CONSTRUCT	N/A 83	\$ _____	1	REMOVE ALL FLAMMABLES FROM CLOSET ADJACENT TO ROOF ACCESS LADDER. A FIRE HERE WOULD QUICKLY SPREAD TO THE AIR CONDITIONING PLENUM.*	\$ 100
WORK ITEM NO. 2 REF. DWG. NO. 1 SYSTEM NO. 1.1-04	DESIGN CONSTRUCT	N/A 83	\$ _____	3	REATTACH BRASS DEDICATION PLAQUE WHICH IS NOW ONLY HELD BY ONE FASTENER.*	\$ 50
WORK ITEM NO. 3 REF. DWG. NO. 0 SYSTEM NO. 1.1-04	DESIGN CONSTRUCT	N/A 83	\$ _____	6	TIGHTEN AND RECAULK ALL WALL MOUNTED WATER CLOSETS FOR BETTER SANITATION AND TO PREVENT DAMAGE.*	\$ 175
WORK ITEM NO. 4 REF. DWG. NO. 0 SYSTEM NO. 1.1-04	DESIGN CONSTRUCT	N/A 83	\$ _____	6	REPLACE CEILING TILE THROUGHOUT THE LIBRARY (ESPECIALLY THE LOWER FLOOR). THESE MUST BE IN PLACE FOR THE A/C SYSTEM TO FUNCTION PROPERLY AND EFFICIENTLY AS THEY REGULATE THE RETURN AIR PLENUM.*	\$ 100
WORK ITEM NO. 5 REF. DWG. NO. 0 SYSTEM NO. 1.1-04	DESIGN CONSTRUCT	N/A 83	\$ _____	6	REATTACH TOILET COMPARTMENT PARTITIONS IN THE MEN'S RESTROOM TO PREVENT THE TEMPTATION TO FURTHER VANDALIZE.*	\$ 75
WORK ITEM NO. 6 REF. DWG. NO. 2 SYSTEM NO. 1.1-04	DESIGN CONSTRUCT	N/A 83	\$ _____	6	REMOVE SMALL CONCRETE RAMP FROM IN FRONT OF EXTERIOR STORAGE LOCKERS. THE CONCRETE RAMP HAS BROKEN LOOSE AND PRESENTS A TRIPPING HAZARD. NO NEED TO REPLACE.*	\$ 25
WORK ITEM NO. 7 REF. DWG. NO. 3 SYSTEM NO. 1.1-04	DESIGN CONSTRUCT	N/A 83	\$ _____	6	REATTACH BATHROOM FIXTURES IN RESTROOMS UPSTAIRS OFF HALL.*	\$ 25
WORK ITEM NO. 8 REF. DWG. NO. 0 SYSTEM NO. 1.1-04	DESIGN CONSTRUCT	N/A 84	\$ _____	6	CLEAN LINEAR DIFFUSERS IN ENTRY FOYER. IF THEY HAVE BEEN SUBJECT TO RUST: SCRAPE, SAND, PRIME AND PAINT WITH RUST INHIBITIVE PAINT.*	\$ 225

REPORT NUMBER : 110383  
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BUILDING SYSTEM EVALUATION  
 WORK ITEM INVENTORY  
 LIBRARY AND CULTURAL CENTER

REF. NO	TASK	YEAR	AUTH.AMT	RATING	DESCRIPTION	COST
WORK ITEM NO. 9 REF. DWG. NO. 4 SYSTEM NO. 1.1-04	DESIGN CONSTRUCT	N/A 84	\$ _____	6	REATTACH BROKEN LOUVER AT LOCATION SHOWN ON DRAWING.*	\$ 25
WORK ITEM NO. 10 REF. DWG. NO. 0 SYSTEM NO. 2.3-22	DESIGN CONSTRUCT	N/A 87	\$ _____	6	REGRADE THE EARTH ALONG THE WEST AND SOUTHWEST EXTERIOR WALLS OF THE LIBRARY. THE DAMPNESS WILL CAUSE A GRADUAL DETERIORATION TO THE CONCRETE WALLS, SLAB AND ALUMINUM SASH.*	\$ 875
WORK ITEM NO. 11 REF. DWG. NO. 5 SYSTEM NO. 2.8-40	DESIGN CONSTRUCT	N/A 86	\$ _____	10	REPLANT PLANTER AREA ADJACENT TO BOOKDROP AT UPPER LEVEL. SUGGEST USE OF "CATALINA CURRENT", A NATIVE MOUNDING SCRUB WHICH WILL SURVIVE ON NATURAL RAINFALL AFTER ESTABLISHMENT PERIOD. THIS WILL PREVENT FURTHER WATER DAMAGE TO THE AREAS BELOW.*	\$ 175
WORK ITEM NO. 12 REF. DWG. NO. 0 SYSTEM NO. 7.1-20	DESIGN CONSTRUCT	83 84	\$ _____	3	RECAULK AT BASE OF ALL EXTERIOR WALLS WHERE WALL MEETS DECK SLAB TO PREVENT FURTHER WATER DAMAGE. A PROPER SPECIFICATION FOR THE APPLICATION METHOD AND CAULK TYPE SHOULD BE PREPARED.*	\$ 1600
WORK ITEM NO. 13 REF. DWG. NO. 0 SYSTEM NO. 7.4	DESIGN CONSTRUCT	N/A 83	\$ _____	3	REATTACH FLASHING, RECAULK AND REPLACE MISSING CLAY TILES AT EACH LIGHT TOWER AND THE CLOCK TOWER.*	\$ 600
WORK ITEM NO. 14 REF. DWG. NO. 0 SYSTEM NO. 7.4-15	DESIGN CONSTRUCT	N/A 87	\$ _____	3	THE ROOF IS COMPOSED OF APPROX. 60% CLAY TILE AND 40% BUILT-UP. TILE APPEARS TO BE IN GOOD CONDITION EXCEPT AS MENTIONED ELSEWHERE. THE ONLY DAMAGE IS FROM PEOPLE WALKING ON THEM. THE BUILT-UP ROOF OVER THE EAST PORTION IS IN GOOD CONDITION AND APPROXIMATELY 11-12 YEARS OLD. WITH MINOR REPAIRS IT SHOULD GIVE SERVICE BEYOND THE FIVE YEARS OF THIS REPORT FORMAT. THE WEST ROOF HAS NO ACCESS EXCEPT OVER THE BREAKABLE TILE. IT WAS THEREFORE NOT INSPECTED AND IS CONSIDERED TO BE IN THE SAME CONDITION AS THE EASTERN ROOF.*	\$ 600

' 83 COST

REPORT NUMBER : 110383  
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BUILDING SYSTEM EVALUATION

WORK ITEM INVENTORY  
 LIBRARY AND CULTURAL CENTER

REF. NO	TASK	YEAR	AUTH. AMT	RATING	DESCRIPTION	'83 COST
WORK ITEM NO. 15 REF. DWG. NO. 6 SYSTEM NO. 7.8-20	DESIGN CONSTRUCT	N/A 83	\$ _____	8	REPAIR DAMAGE TO ROOF ENTRY HATCH OVER "FRIENDS" STORAGE ROOM. REINFORCE HATCH IF NECESSARY.*	\$ 50
WORK ITEM NO. 16 REF. DWG. NO. 0 SYSTEM NO. 8.4	DESIGN CONSTRUCT	86 87	\$ _____	10	REPLACE SIMULATED WOOD FORMICA INTERMEDIATE HORIZONTAL TRIM WHICH IS USED THROUGHOUT EXTERIOR OF LIBRARY AS A WINDOW GUARD DETAIL. FORMICA CAN NOT TAKE EXPOSURE TO EXTERIOR ELEMENTS. IT IS IN VARIOUS STATES OF DETERIORATION. REPLACE WITH EXTRUDED ALUMINUM WHICH HAS AN ANODIZING WITH THE SAME COLOR VALUE.*	\$ 2900
WORK ITEM NO. 17 REF. DWG. NO. 0 SYSTEM NO. 8.4-60	DESIGN CONSTRUCT	86 87	\$ _____	6	ENTRY DOORS AT THE MAIN BASEMENT ENTRY TO THE LIBRARY ARE OF IMPROPER DESIGN OR MANUFACTURE. NEW DOORS WITH MORE SUBSTANTIAL INTERNAL BRACING, BETTER SECURITY, AND GREATER BASE OF OPERATION (HANDICAPPED - 7 POUNDS ENTRY PRESSURE) SHOULD BE DESIGNED AND INSTALLED.*	\$ 4800
WORK ITEM NO. 18 REF. DWG. NO. 0 SYSTEM NO. 8.7-15	DESIGN CONSTRUCT	N/A 83	\$ _____	6	SERVICE CLOSERS AT MAIN BASEMENT ENTRY DOOR SO THAT THEY CAN BE OPERATED WITH 10 POUNDS PRESSURE.*	\$ 150
WORK ITEM NO. 19 REF. DWG. NO. 0 SYSTEM NO. 9.5-15	DESIGN CONSTRUCT	N/A 85	\$ _____	10	MAKE NECESSARY REPAIRS TO DROP CEILING ACCOUSTICAL PANEL SYSTEM WHERE IT HAS BEEN FORCED INTO DISTENDED POSITION BETWEEN PARALLEL CONCRETE BEAMS IN MAIN STACK/READING AREA.*	\$ 875
WORK ITEM NO. 20 REF. DWG. NO. 0 SYSTEM NO. 9.5-15	DESIGN CONSTRUCT	85 86	\$ _____	6	SEVERAL ACCOUSTIC MEASURES COULD BE TAKEN TO REDUCE AMBIENT NOISE: 1. REPLACE EXISTING 2'X4' ACCOUSTICAL PANELS WITH A PANEL DESIGNED FOR MORE SOUND ABSORPTION.....\$12,000 2. REPLACE WALL COVERING AREAS AND DISPLAY BOARDS WITH SOUND ABSORBING WALL COVERING.....\$1,800 3. PLACE ACCOUSTICAL BATTS ABOVE EXISTING ACCOUSTICAL PANELS.....\$3,500	\$ 17600

REPORT NUMBER : 110383  
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 ENGINEERING : A. HOLMBERG

BUILDING SYSTEM EVALUATION  
 WORK ITEM INVENTORY  
 LIBRARY AND CULTURAL CENTER

REF. NO	TASK	YEAR	AUTH.AMT	RATING	DESCRIPTION	'83 COST
WORK ITEM NO. 20	DESIGN CONSTRUCT	N/A	\$ _____	6	PROPER SOLUTION WOULD REQUIRE A BRIEF ANALYSIS BY AN ACCOUSTICAL ENGINEER (APPROXIMATE FEE \$400).*	
REF. DWG. NO. 7						
SYSTEM NO. 9.8-20						
WORK ITEM NO. 21	DESIGN CONSTRUCT	N/A	\$ _____	6	PATCH, PREPARE AND PAINT EXTERIOR FLAKING STUCCO REVEAL AT RAMP AND BACK LIBRARY WALL. RECAULK ALONG BASE.*	\$ 225
REF. DWG. NO. 0						
SYSTEM NO. 9.8-20						
WORK ITEM NO. 22	DESIGN CONSTRUCT	N/A	\$ _____	6	PATCH AND PAINT HOLES DRILLED FOR ACCESSORIES IN ALL RESTROOMS; PATCH AND PAINT AREA BEHIND JANITOR'S SINK IN ELECTRICAL VAULT AND PAINT ROOM AS NEEDED.*	\$ 400
REF. DWG. NO. 0						
SYSTEM NO. 9.8-20						
WORK ITEM NO. 23	DESIGN CONSTRUCT	N/A	\$ _____	6	PREPARE AND PAINT THE FOLLOWING METAL SURFACES TO PREVENT FURTHER RUSTING: LIGHT FIXTURE TRIM FOR EXTERIOR FIXTURES LOCATED UNDER EAVES; EXTERIOR SPEAKER GRILLS; METAL GATES AT REAR OF LIBRARY.*	\$ 175
REF. DWG. NO. 0						
SYSTEM NO. 9.8-20						
WORK ITEM NO. 24	DESIGN CONSTRUCT	N/A	\$ _____	3	REPAINT EXTERIOR STUCCO AT ALL EXTERIOR LOCATIONS.*	\$ 2300
REF. DWG. NO. 8						
SYSTEM NO. 9.8-20						
WORK ITEM NO. 25	DESIGN CONSTRUCT	N/A	\$ _____	6	PREPARE AND PAINT ALL EXTERIOR METAL GUARD AND HANDRAILS. THE TYPE OF PAINT AND APPLICATION SPECIFICATION SHOULD BE PREPARED JUST PRIOR TO PAINTING.*	\$ 1100
REF. DWG. NO. 0						
SYSTEM NO. 9.8-20						
WORK ITEM NO. 26	DESIGN CONSTRUCT	N/A	\$ _____	10	REPLACE STREET NUMBERS BELOW BRASS LIBRARY SIGN WITH NUMBERS MORE APPROPRIATE IN SIZE AND DESIGN.*	\$ 150
REF. DWG. NO. 0						
SYSTEM NO. 10.1-77						
WORK ITEM NO. 27	DESIGN CONSTRUCT	N/A	\$ _____	6	SERVICE BACKFLOW PREVENTER TO ELIMINATE LEAK AT NORTHWEST CORNER OF SITE.*	\$ 50
REF. DWG. NO. 0						
SYSTEM NO. 15.1-04						

REPORT NUMBER : 110383  
 SENIOR EVALUATOR : F. GOSS  
 ENGINEERING : A. HOLMBERG

BUILDING SYSTEM EVALUATION  
 WORK ITEM INVENTORY  
 LIBRARY AND CULTURAL CENTER

REF. NO	TASK	YEAR	AUTH. AMT	RATING	DESCRIPTION	83 COST
WORK ITEM NO. 28 REF. DWG. NO. 0 SYSTEM NO. 15.1-80	DESIGN CONSTRUCT	N/A 83	\$ _____	2	INSTALL A NEW COVER FOR THE VALVE ACCESS ABOVE THE URINALS IN THE MEN'S ROOM ON THE LOWER FLOOR.*	\$ 50
WORK ITEM NO. 29 REF. DWG. NO. 0 SYSTEM NO. 15.1-80	DESIGN CONSTRUCT	N/A 83	\$ _____	6	REPAIR LEAKING COLD WATER VALVE ON AIR HANDLER #1 IN MECHANICAL ROOM.*	\$ 75
WORK ITEM NO. 30 REF. DWG. NO. 0 SYSTEM NO. 15.2-54	DESIGN CONSTRUCT	N/A 83	\$ _____	3	CLEAN OUT SUMP AND SERVICE SUMP PUMP IN NORTHEAST EXTERIOR STAIR- WELL.*	\$ 75
WORK ITEM NO. 31 REF. DWG. NO. 0 SYSTEM NO. 15.7-70	DESIGN CONSTRUCT	N/A 83	\$ _____	3	INSTALL A FAN BELT ON THE ROOF MOUNTED EXHAUST SYSTEM FOR TOILET CORE AND ELECTRICAL ROOM. SYSTEM IS NOT PRESENTLY WORKING.*	\$ 50
WORK ITEM NO. 32 REF. DWG. NO. 0 SYSTEM NO. 15.7-73	DESIGN CONSTRUCT	N/A 83	\$ _____	6	SERVICE AND REPAIR CHEMICAL FEED SYSTEM IN MECHANICAL ROOM.*	\$ 75
WORK ITEM NO. 33 REF. DWG. NO. 0 SYSTEM NO. 15.7-73	DESIGN CONSTRUCT	N/A 85	\$ _____	9	HVAC EVALUATION:	\$29000

THE PRESENT SYSTEM IS A DOUBLE-DUCT, CONSTANT VOLUME SYSTEM USING THE MECHANICAL ROOM AS A PLENUM (PARTIALLY) FOR RETURN AND OUTSIDE AIR MIXING. OUTSIDE AIR IS DRAWN IN THROUGH A FIXED WEATHER LOUVER. SUPPLY AIR IS PROVIDED BY TWO AIR HANDLERS; ONE FOR THE FIRST FLOOR AND ONE FOR THE SECOND FLOOR. TEMPERATURES ARE CONTROLLED BY MIXING BOXES DRAWING HOT AND COLD AIR FROM THE HOT AND COLD DUCTS. THE SYSTEM IS TYPICAL OF PRE-TITLE 24 SYSTEMS COMMONLY SPECIFIED AT THE TIME THIS BUILDING WAS DESIGNED. IT IS VERY INEFFICIENT!

REPORT NUMBER : 110383  
 SENIOR EVALUATOR : F. GOSS  
 ENGINEERING : A. HOLMBERG

BUILDING SYSTEM EVALUATION  
 WORK ITEM INVENTORY  
 LIBRARY AND CULTURAL CENTER

REF. NO	TASK	YEAR	AUTH.AMT	RATING	DESCRIPTION	'83 COST
WORK ITEM NO. 33					RECOMMENDATIONS:	

IN ORDER TO UPGRADE THIS HVAC SYSTEM TO PRESENT DAY STANDARDS, THE FOLLOWING CHANGES ARE RECOMMENDED:

1. CONVERT THE DOUBLE DUCT SYSTEM TO A SINGLE DUCT SYSTEM BY ELIMINATING THE HOT DUCT AND DELETING THE DOUBLE-DUCT MIXING BOXES.
2. REPLACE THE DOUBLE DUCT MIXING BOXES WITH TERMINAL FAN UNITS, WITH HEATING COILS ONLY ON THE PERIMETER ZONE.
3. CHANGE THE AIR HANDLER MOTORS AND CONTROLS TO CONVERT THE CONSTANT VOLUME AIR SYSTEM TO A VARIABLE VOLUME SYSTEM THROUGH USE OF MOTOR SPEED CONTROL.
4. PROVIDE FOR ECONOMIZER OPERATION DURING COOLER DAYS. THIS WILL REQUIRE A LARGER OUTSIDE AIR OPENING AND AUTOMATIC LOUVER CONTROLS.

POTENTIAL SAVINGS PER YEAR: \$2,600  
 POTENTIAL SAVINGS PER YEAR: \$2,500

HVAC ESTIMATED CONSTRUCTION COST

1. DUCTWORK CHANGES.....\$2,000
2. MIXING BOX REPLACEMENTS.....\$5,000
3. MOTOR SPEED CONTROLS.....\$12,000
4. ECONOMIZER INSTALLATION AND DAMPERS.....\$7,000
5. MISC. CONTROLS AND REBALANCING, ETC.....\$3,000

TOTAL RETORFIT COST.....\$29,000  
 SIMPLE PAYBACK IN 5.7 YEARS.  
 IF THIS PROJECT WERE DEFERRED FOR 2 YEARS THE INCREASED COST OF ENERGY OVER MATERIAL AND LABOR MAY REDUCE SIMPLE PAYBACK TO 3-4 YEARS.\*

REPORT NUMBER : 110383  
 SENIOR EVALUATOR : F. GOSS  
 ENGINEERING : A. HOLMBERG

BUILDING SYSTEM EVALUATION

WORK ITEM INVENTORY

LIBRARY AND CULTURAL CENTER

REF. NO	TASK	YEAR	AUTH.AMT	RATING	DESCRIPTION	'83 COST
WORK ITEM NO. 34 REF. DWG. NO. 0 SYSTEM NO. 16.0-20	DESIGN CONSTRUCT	N/A 84	\$ _____	6	PROVIDE PERMANENT CONDUIT AND WIRE FOR EXTERIOR SPEAKER SYSTEM ON NORTH SIDE OF BUILDING.*	\$ 150
WORK ITEM NO. 35 REF. DWG. NO. 0 SYSTEM NO. 16.2-10	DESIGN CONSTRUCT	N/A 83	\$ _____	2	PROVIDE PROPER FITTING HANDHOLE COVER FOR SPRINKLER WIRING BOX AT SOUTHWEST CORNER OF SITE ADJACENT TO WALKWAY.*	\$ 50
WORK ITEM NO. 36 REF. DWG. NO. 0 SYSTEM NO. 16.2-10	DESIGN CONSTRUCT	N/A 83	\$ _____	3	INSTALL THE EXISTING BOOK DETECTION SYSTEM IN PERMANENT ENCLOSURE AT THE EXIT NEAR THE MAIN LIBRARY DESK.*	\$ 150
WORK ITEM NO. 37 REF. DWG. NO. 0 SYSTEM NO. 16.2-30	DESIGN CONSTRUCT	N/A 83	\$ _____	1	PROVIDE NEW WEATHERPROOF RECEPTACLE COVERS AROUND EXTERIOR OF BUILDING AND ON PATIO (10 LOCATIONS).*	\$ 100
WORK ITEM NO. 38 REF. DWG. NO. 0 SYSTEM NO. 16.2-30	DESIGN CONSTRUCT	N/A 83	\$ _____	2	PROVIDE SWITCH PLATE FOR SWITCHES MOUNTED ON SIDE OF AIR HANDLER #1.*	\$ 20
WORK ITEM NO. 39 REF. DWG. NO. 0 SYSTEM NO. 16.2-30	DESIGN CONSTRUCT	N/A 83	\$ _____	6	REINSTALL ZONE 2 THERMOSTAT ON EAST WALL OF LIBRARY. THERMOSTAT IS PRESENTLY HANGING BY ITS WIRES.*	\$ 25
WORK ITEM NO. 40 REF. DWG. NO. 0 SYSTEM NO. 16.3-53	DESIGN CONSTRUCT	N/A 83	\$ _____	3	PROVIDE PROPER CLEARANCE AROUND TRANSFORMERS, SWITCHBOARD AND PANELBOARDS IN ELECTRICAL ROOM.*	\$ 25
WORK ITEM NO. 41 REF. DWG. NO. 0 SYSTEM NO. 16.5-10	DESIGN CONSTRUCT	N/A 83	\$ _____	1	SERVICE ONAN EMERGENCY GENERATOR SET AND ADJUST GOVERNOR FOR 60 CYCLE OPERATION. IT APPEARS THAT THE GENERATOR HAS NOT BEEN SERVICED FOR SOME TIME.*	\$ 150

REPORT NUMBER : 110383  
 SENIOR EVALUATOR : F. GOSS  
 ENGINEERING : A. HOLMBERG

BUILDING SYSTEM EVALUATION

PAGE 11  
 AS OF 06/20/81

WORK ITEM INVENTORY  
 LIBRARY AND CULTURAL CENTER

REF. NO	TASK	YEAR	AUTH.AMT	RATING	DESCRIPTION	'83 COST
WORK ITEM NO. 42 REF. DWG. NO. 0 SYSTEM NO. 16.6-10	DESIGN CONSTRUCT	N/A 83	\$ _____	6	CLEAN ALL LIGHTING FIXTURES, AIR DIFFUSERS AND EXHAUST VENTS WITHIN THE INTERIOR OF THE LIBRARY TO IMPROVE LIGHTING AND AIR CONDITIONING.*	\$ 1000
WORK ITEM NO. 43 REF. DWG. NO. 0 SYSTEM NO. 16.6-50	DESIGN CONSTRUCT	N/A 83	\$ _____	2	REPAIR POST TOP LUMINAIRE. PROVIDE NEW TOP AND SECURE LENS AT SOUTHEAST STAIRWAY FROM PARKING LOT. PROVIDE NEW LENS AND SHIELD AT NORTHWEST STAIRWAY.*	\$ 200
WORK ITEM NO. 44 REF. DWG. NO. 0 SYSTEM NO. 16.6-50	DESIGN CONSTRUCT	N/A 83	\$ _____	6	RELAMP QUARTZ SECURITY LIGHT MOUNTED UNDER BUILDING OVERHANG ON NORTH SIDE OF BUILDING.*	\$ 50
WORK ITEM NO. 45 REF. DWG. NO. 0 SYSTEM NO. 16.6-50	DESIGN CONSTRUCT	N/A 83	\$ _____	6	CLEAN, SERVICE AND REPAIR (14) EXTERIOR FLUSH MOUNTED DECK LIGHTS AROUND BUILDING TO PUT BACK IN GOOD OPERATING CONDITION. TRIM PLANTING AT SOUTHWEST CORNER OF BUILDING.*	\$ 400
WORK ITEM NO. 46 REF. DWG. NO. 0 SYSTEM NO. 16.6-50	DESIGN CONSTRUCT	N/A 83	\$ _____	6	REINSTALL EXISTING EXTERIOR STAIRWAY LIGHTING FIXTURE AND PROVIDE NEW LENS AND WATERPROOF GASKET AT NORTHEAST STAIRWAY FROM LIBRARY.*	\$ 100
WORK ITEM NO. 47 REF. DWG. NO. 0 SYSTEM NO. 16.8	DESIGN CONSTRUCT	N/A 83	\$ _____	6	SERVICE CLOCKS AND SET CLOCKS IN SYNCHRONOUS OPERATION IN CLOCK TOWER.*	\$ 150
WORK ITEM NO. 48 REF. DWG. NO. 0 SYSTEM NO. 16.8-81	DESIGN CONSTRUCT	N/A 83	\$ _____	3	REMOVE EXISTING TEMPORARY CLOCK AND 25' EXTENSION CORD ON WEST WALL OF LIBRARY IN CHILDREN'S AREA. REPLACE WITH PERMANENT CLOCK WHICH HAS NUMBERS CHILDREN CAN READ.*	\$ 100

BUILDING SYSTEM EVALUATION  
SUMMARY BUDGET REPORT FY-83 TO FY-87  
LIBRARY AND CULTURAL CENTER

REPORT/WORK ITEM NO.	RATING NO.	OVERDUE	CURRENT	1984	1985	1986	1987	UNSCHEDULED
110383--	1		100					
110383--	2		50					
110383--	3		175					
110383--	4		100					
110383--	5		75					
110383--	6		25					
110383--	7		25					
110383--	8							
110383--	9			243				
110383--	10			27				
110383--	11	10					1190	
110383--	12					220		
110383--	13		600	1728				
110383--	14						816	
110383--	15		50					
110383--	16						3945	
110383--	17	10					6530	
110383--	18		150					
110383--	19							
110383--	20	10			1020			
110383--	21					22170		
110383--	22		225					
110383--	23			432				
110383--	24			189				
110383--	25				2682			
110383--	26	10			1283			
110383--	27					188		
110383--	28		50					
110383--	29		50					
110383--	30		75					
110383--	31		75					
110383--	32		50					
110383--	33		75					
					33825			

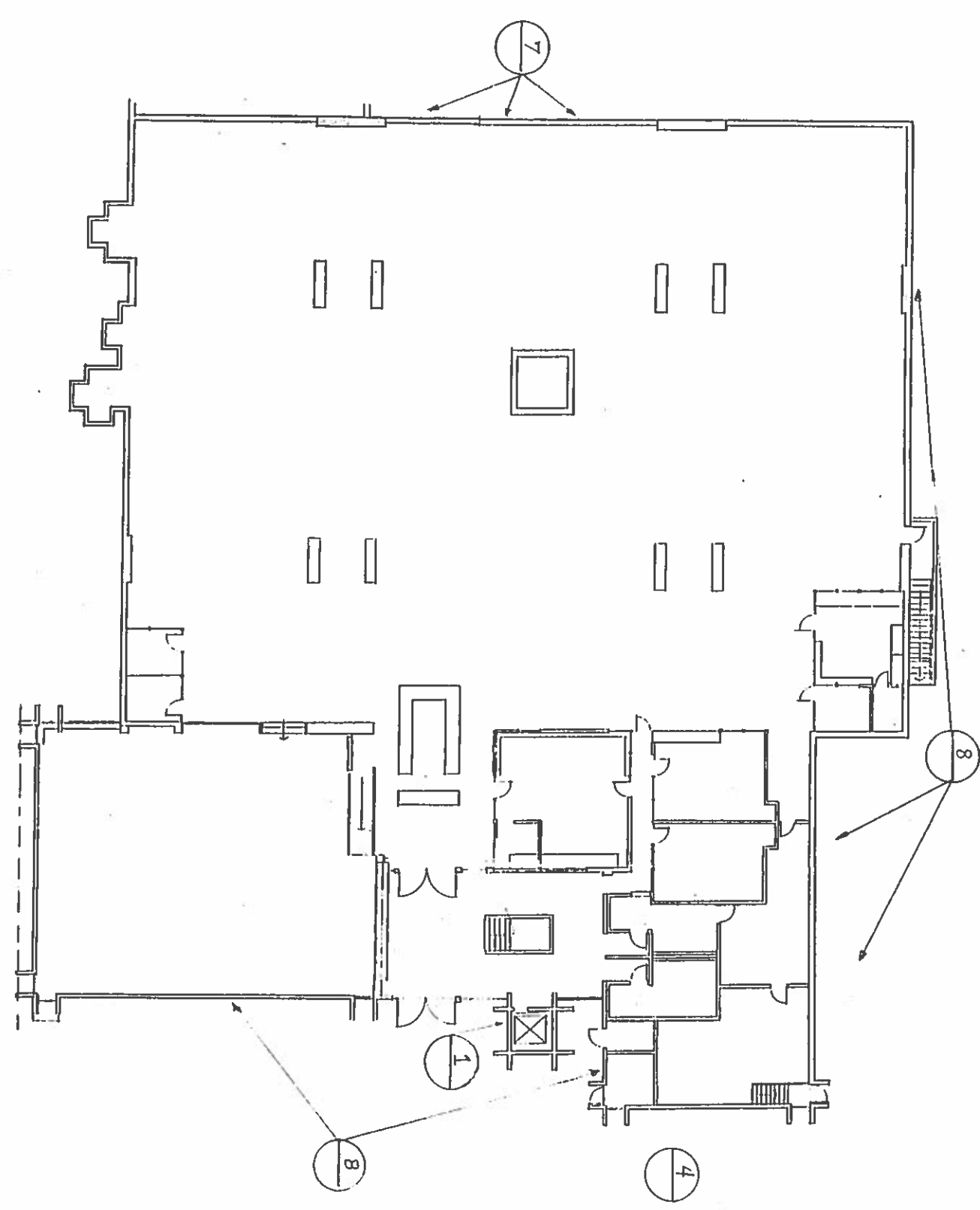
BUILDING SYSTEM EVALUATION

SUMMARY BUDGET REPORT FY-83 TO FY-87

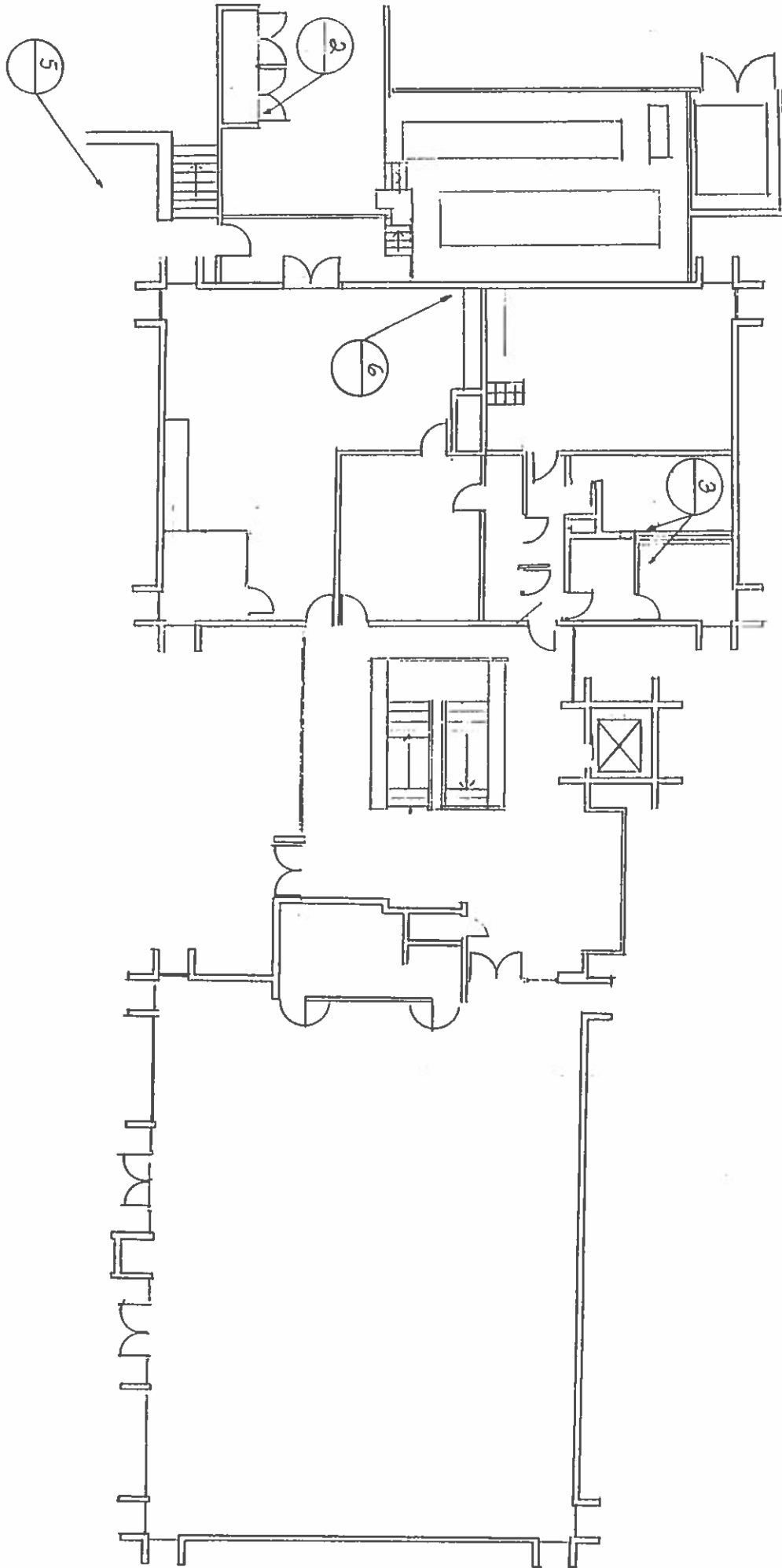
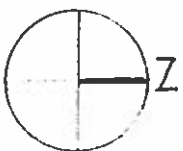
LIBRARY AND CULTURAL CENTER

REPORT/WORK ITEM NO.	RATING NO.	OVERDUE	CURRENT	1984	1985	1986	1987	UNSCHEDULED
110383-	34	6						
110383-	35	2	50	162				
110383-	36	3	150					
110383-	37	1	100					
110383-	38	2	20					
110383-	39	6	25					
110383-	40	3	25					
110383-	41	1	150					
110383-	42	6	1000					
110383-	43	2	200					
110383-	44	6	50					
110383-	45	6	400					
110383-	46	6	100					
110383-	47	6	150					
110383-	48	3	100					
ANNUAL TOTALS \$			4470	2781	38810	22578	12481	0

FIRST FLOOR PLAN



UPPER FLOOR PLAN



# PRIORITY RATING

1. Hazard to Life
2. Hazard to Limb, or Sanitation Requirement
3. Hazard to Building
4. Handicapped Compliance
5. Hazard to Building Contents
6. Necessary for Good Working Order of Bldg.
7. Maintenance Cost Reduction
8. Security Measure
9. Energy Efficiency Measure
10. Cosmetic

# SYSTEM IDENTIFICATION NUMBERING

- 1.1 General Requirements
- 2.1 Architectural Fees
- 3.1 General Maintenance
- 4.1 Management Fees
- 5.1 Contingencies
- 6.1 Engineering Fees
- 7.1 Factors
- 8.1 Insurance
- 9.1 Job Conditions
- 10.1 Man Office Expense
- 11.1 Overhead & Profit
- 12.1 Permits
- 13.1 Renting
- 14.1 Scalloping
- 15.1 Small Tools
- 16.1 Surveying
- 17.1 Temporary Staging
- 18.1 Tarpaulins
- 19.1 Taxes
- 20.1 Temporary Construction
- 21.1 Testing
- 22.1 Weathering
- 23.1 Winter Protection
- 24.1 Contractor Equipment Rental
- 25.1 Erector Equipment Rental
- 26.1 General Equipment Rental
- 27.1 Housing Equipment Rental
- 28.1 Expeditious
- 29.1 Core Drilling
- 30.1 Demolition
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