

*This document reflects the official findings by the Clark County Fire Department of the Fire that occurred at the **MGM** Grand Hotel in Las Vegas, Nevada on November 21, 1980. This report cannot be reproduced or copied without the express written permission of the Chief of the Clark County Fire Department.*

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SECTION I

PREFACE

PREFACE

The second largest life-loss hotel fire in United States history devastated the MGM Grand Hotel/Casino, Las Vegas, Nevada, On November 21, 1980. Eighty-five lives were lost as smoke filled the 26-story high rise.

The blaze occurred in Clark County, Nevada; first-in units were form the Clark County Fire Department, with immediate assistance being rendered by five other local fire departments through established mutual aid agreements. A brief outline of the Clark County Fire Department structure is presented in Section II, Clark County Fire Department.

An extensive, cooperative investigation effort ensued. Upon request, the National Fire Protection Association and the United States Fire Administration worked closely with the Clark County Fire Department to determine the cause of this fire; invaluable assistance was offered by the National Bureau of Standards and the Bureau of Alcohol, Tobacco and Firearms (a Division of the United States Treasury Department), as well as the staff of the Clark County District Attorney's Office and individuals of the Las Vegas Metropolitan Police Department. Agency acknowledgements are listed in Section III, Assisting and Support Agencies.

Section IV is a structural description of the MGM Grand Hotel/Casino, which gives the reader a general, overall picture of the size and shape of the hotel. More detailed information can be found in Section VI, Diagrams and Drawings. Numerous floor plans and detailed sketches are presented in that section to provide the reader with a better understanding of the items and areas discussed in Section V, Fire Scene Examination.

The Fire Scene Examination includes initial response information, a preliminary investigation report, information relative to area and point of origin, fire cause, flame and smoke spread.

A synopsis of Emergency Medical Services comprises Section VIII. Included in this section is a brief outline of rescue units and personnel that responded to the fire scene, a list of entities providing helicopter services, and a detailed report submitted by the Clark County Medical Examiner.

Section IX consists of statements obtained from eye witnesses. The final section, Section X, contains a preliminary report written by the National Fire Protection Association, briefly describing the hotel and summarizing the conditions surrounding and the factors contributing to the fire.

The National Fire Protection Association, the United States Fire Administration and the National Bureau of Standards are cooperatively documenting and analyzing this tragic incident. An in-depth report is expected to be available by June, 1981. The pressing time factor mandates release of this report prior to receipt of the pending documentation. The patience of the reader is requested; information made available by these agencies will be released at the earliest possible date.

SECTION II

CLARK COUNTY FIRE DEPARTMENT

SECTION II

CLARK COUNTY FIRE DEPARTMENT

A. STATISTICS

1. The Clark County Fire Department is a fully paid professional fire department, currently rated as a Class III Fire Department by the Insurance Services Office (ISO).
2. The Administration Offices of the Clark County Fire Department are located at 707 East Desert Inn Road, Las Vegas, County of Clark, Nevada, 89109.
3. Telephone services are as follows:
 - a. Emergency Alarm System (24-hour) 382-3000
 - b. Administrative Offices (0800 to 1700 hours) 732-1916
 - c. Fire Prevention Bureau (0800 to 1700 hours) 733-8882
 - d. Fire Investigations Division (24-hour) 876-2698

B. GOVERNMENT

1. The Clark County Fire Department is a uniformed, semi-military oriented fire prevention and suppression organization. The Fire Chief is appointed by the Board of County Commissioners, whose members are elected officials. Roy L. Parrish now holds the position of Fire Chief.
2. Second in command is the Deputy Fire Chief. This position is held by John Pappageorge.
3. There are three Assistant Fire Chiefs in charge of suppression activities, supplies and logistics, and fire prevention and investigation activities. They are:
 - a. Robert G. Atkinson (Fire Suppression)
 - b. Robert A. Keating (Supplies-Logistics)
 - c. James A. Barrett (Fire Prevention & Fire Investigation)
4. There are eight Battalion Chiefs: six handle structural fire suppression; one is assigned crash fire rescue activities; and one is assigned training duties.

The geographical jurisdiction of the Clark County Fire Department is divided into three areas (one encompassing McCarran International Airport). Fire Suppression personnel are divided into three 24-hour shifts (platoons). Each geographical area has one Battalion Chief assigned to each shift, totaling six structural fire suppression Battalion Chiefs:

- a. "A" Platoon
 1. Alfred Hurtado, Battalion Chief; Battalion 2
 2. Paul O. Hicks, Battalion Chief; Battalion 3
- b. "B" Platoon
 1. Joseph D. Way, Battalion Chief; Battalion 2
 2. Garry E. Hunt, Battalion Chief; Battalion 3
- c. "C" Platoon
 1. Byron W. Snider, Battalion Chief; Battalion 2
 2. Charles Seigel, Battalion Chief, Battalion 3

The third geographical division of the Clark County Fire Department encompasses McCarran International Airport. One Battalion Chief is assigned on a 40-hour week to handle crash fire rescue activities for all three platoons at this location:

- d. Thomas Alexander, Battalion Chief; Battalion 6/Platoons A,B,C

Training activities for the entire department are coordinated by one Battalion Chief on a 40-hour schedule:

- e. Kenneth F. Steele, Battalion Chief; Training Officer

C. PERSONNEL ORGANIZATION

- | | |
|---------------------------------|-------|
| 1. Administrative Officers | 5 |
| 2. Fire Suppression: | |
| a. Battalion Chiefs | 8 |
| b. Captains | 50 |
| c. Engineers | 80 |
| d. Firefighters | 146 |
| 3. Support: | |
| a. Fire Prevention Bureau | 15 |
| b. Fire Investigations Division | 9 |
| c. Hydrant Division | 2 |
| d. Maintenance Division | 9 |
| e. Training Division | 3 |
| f. Administrative | 4 |
| | <hr/> |
| | 331 |
-
- 4. Duty Assignments
 - a. During each shift, there are usually 43 men on duty in Battalion 2, and 37 men on duty in Battalion 3.
 - b. There are a total of twelve fire stations in Clark County:
 - 1. Station 11 - 88 East Flamingo Road
 - 2. Station 12 - 3001 Industrial Road
 - 3. Station 13 - McCarran International Airport
 - 4. Station 14 - 3875 East Desert Inn Road
 - 5. Station 15 - 3480 Valley View Boulevard
 - 6. Station 16 - 150 North Nellis Boulevard
 - 7. Station 17 - 5702 Missouri Street
 - 8. Station 18 - 707 East Desert Inn Road
 - 9. Station 19 - 5710 Spencer & Russell
 - 10. Station 20 - 5710 Judson & Linn
 - 11. Station 21 - 4950 Valley View Boulevard
 - 12. Station 22 - 6685 West Flamingo Road

D. EQUIPMENT

The Clark County Fire Department owns and operates the following equipment (not listed are automobiles utilized by the department):

- | | |
|----------------------------|----|
| a. Engines | 13 |
| b. Tanker | 1 |
| c. Ladders | 3 |
| d. Rescues | 6 |
| e. Hose Wagons | 2 |
| f. CFR (Crash Fire Rescue) | 5 |
| g. Portable Light Unit | 1 |
| h. Air Cascade Unit | 1 |
| i. Bus | 1 |
| j. Van | 1 |
| k. Fuel Tanker | 1 |
| l. Wrecker | 1 |

SECTION III
ASSISTING AND SUPPORT AGENCIES

PERSONNEL CHART — ASSISTING AGENCIES

TEAM COORDINATOR
WM "MIKE" PATTERSON

FEDERAL COORDINATOR
U.S.F.A.
TOM WRIGHT

C.C.F.D. INVESTIGATION TEAM
LORNE LOMPREY
WAYNE BURNS
ROBERT JAMES
WILLIAM KOLAR
VERGUS PORTER
LARRY BOUCHER
LANCY RYNESS
LLOYD JOHNSON

A.T.F.
JOHN RICE
DOUGLAS COOMBS
JAMES DEAL
RICHARD HAYNES

DISTRICT ATTORNEY'S OFFICE
JOHN WAWERNA
DAVE BELZ
DOUG McCARTHY
BEECHER AVANTS
RAY LYONS
BECKY GRISMANAUSKAS

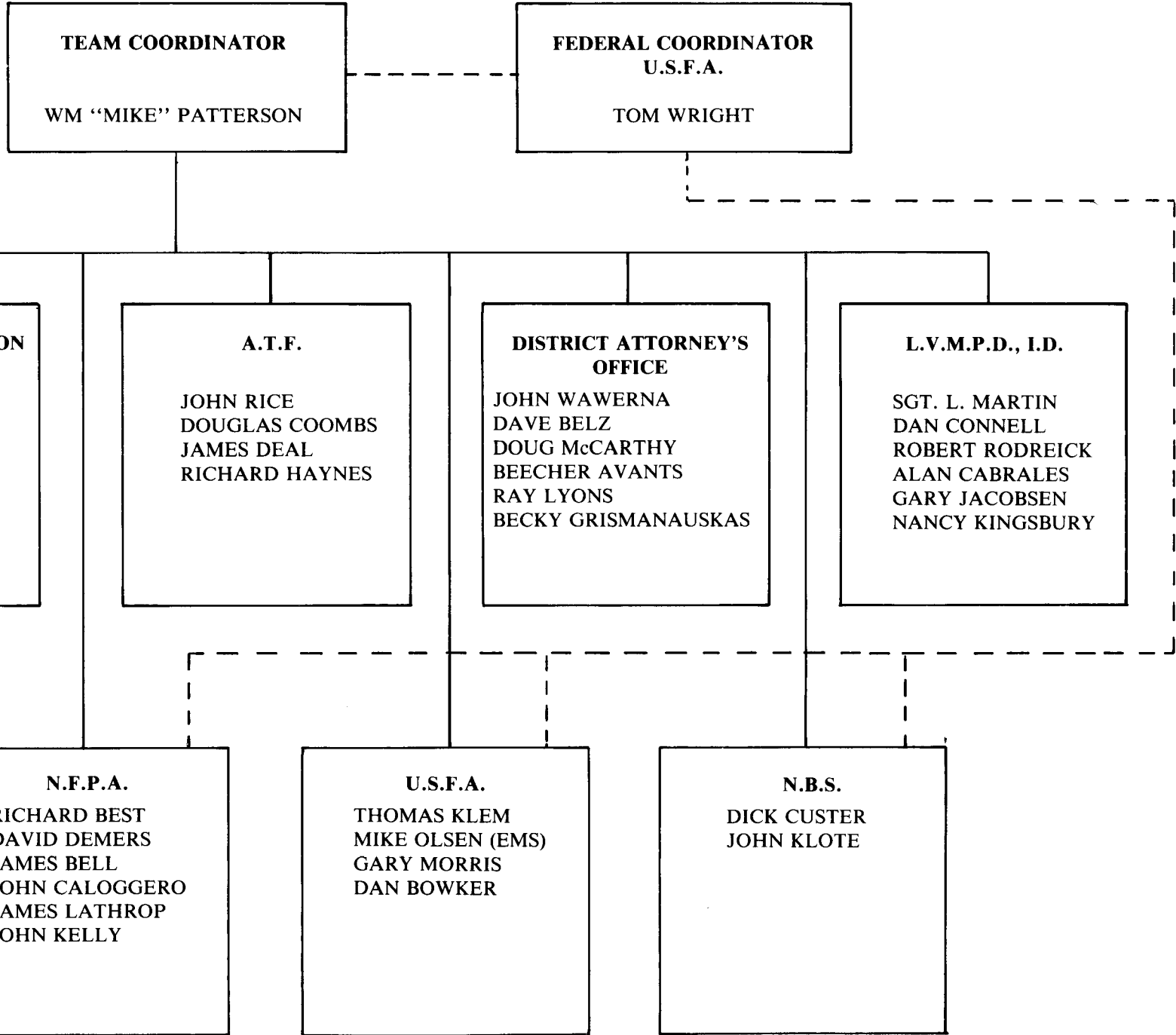
L.V.M.P.D., I.D.
SGT. L. MARTIN
DAN CONNELL
ROBERT RODREICK
ALAN CABRALES
GARY JACOBSEN
NANCY KINGSBURY

N.F.P.A.
RICHARD BEST
DAVID DEMERS
JAMES BELL
JOHN CALOGERO
JAMES LATHROP
JOHN KELLY

U.S.F.A.
THOMAS KLEM
MIKE OLSEN (EMS)
GARY MORRIS
DAN BOWKER

N.B.S.
DICK CUSTER
JOHN KLOTE

I-III



SECTION III
ASSISTING AND SUPPORT AGENCIES

A. FIRE INVESTIGATION TASK FORCE

1. Clark County Fire Department (C.C.F.D.) Fire Investigation Division.

On November 21, 1980 at 0717 hours, the Clark County Fire Investigation Division responded to a fire in a structure at the MGM Grand Hotel and Casino, 3645 Las Vegas Boulevard South, County of Clark, Las Vegas, Nevada. Upon arrival at 0720 hours, the Fire Investigation Team observed visible fire and smoke emitting from the structure. The Fire Investigation Team joined the fire suppression forces to assist with the extinguishment of the fire and evacuation of the building's occupants. Extinguishment of the fire and evacuation of the occupants ended at approximately 1500 hours.

The Clark County Fire Investigation Team consisted of:

Captain William Mike Patterson, Supervisor
Captain Lorne Lomprey, Investigator
Captain Wayne Burns, Investigator
Robert James, Investigator
William Kolar, Investigator
Vergus Porter, Jr., Investigator
Lloyd Johnson, Investigator
Lance Ryness, Investigator
Larry Boucher, Investigator

B. ASSISTING AGENCIES

1. Bureau of Alcohol, Tobacco and Firearms (A.T.F.), a Division of the United States Treasury Department.

At approximately 1000 hours on November 21, 1980, A.T.F. assisted the Clark County Fire Department in obtaining and taking written statements from witnesses who had observed the fire in its inception and/or progressive stages. A.T.F. is a recognized department within the Fire Investigation Task Force structure.

A.T.F. personnel are:

John Rice, Acting Resident Agent in Charge
Douglas W. Coombs, Special Agent
James D. Deal, Special Agent
Richard W. Haynes, Special Agent

2. City of Las Vegas Fire Department (L.V.F.D.)

At approximately 1400 hours on November 21, 1980, Steve Hampton (Fire Investigator for the City of Las Vegas Fire Department) assisted in the preliminary fire scene examination as an observer. He further assisted Mickey Pedrol (Audio-Visual Communications Specialist for the City of Las Vegas Fire Department) in taking video photographs of the area of origin.

The city of Las Vegas Fire Department is a recognized department of the Fire Investigation Task Force.

3. North Las Vegas Fire Department (N.L.V.F.D.)

On November 21, 1980 at approximately 1600 hours, the North Las Vegas Fire Department assisted the Clark County Fire Department in preliminary observation of the fire scene examination. As an observer, the North Las Vegas Fire Department furnished lighting during the fire scene examination.

The North Las Vegas Fire Department is a recognized department of the Fire Investigation Task Force. Personnel of the team are:

James Weber, Fire Inspector
Melvin Wilburn, Fire Inspector
Steve Szostek, Fire Inspector

4. Las Vegas Metropolitan Police Department (L.V.M.P.D.), Traffic and Patrol Division.

At approximately 0720 hours on November 21, 1980, the Traffic Division assisted the Clark County Fire Department in traffic control on the streets adjacent to the MGM Hotel.

The K-9 Division maintained crowd control. The Jeep Posse assisted in rescue evacuation.

5. Las Vegas Metropolitan Police Department, Criminalistics Bureau Crime Lab.

From November 21, 1980 through November 30, 1980, this division was temporarily assigned to the Clark County Fire Department for photographing the fire scene area of origin, fire progression, casualty locations, and evidence.

Under the supervision of Sgt. Lemuel Martin, personnel of this team handled the following photography assignments:

- a. Dan Connell, Identification Specialist III
Robert Rodreick, Identification Specialist III

Entire Fire Scene - November 21, 1980 through November 30, 1980

- 1) Victim location and removal;
- 2) Fire damage in casino and restaurant areas, elevator and ground floor hallways;
- 3) Possible building code violations;
- 4) Fire point of origin, evidence and collection;
- 5) Assisted Public Administrator in documenting removal of property belonging to victims;
- 6) Aerial photography (exterior condition of building).

- b. Gary Jacobsen, Identification Specialist II

From November 21, 1980 through November 22, 1980

Identification of victims following removal from building.

- c. Alan Cabrales, Identification Specialist I

November 21, 1980 only

- 1) Condition of restaurant area within the delicatessen and the New Orleans Coffee Shop;
- 2) Area surrounding point of origin.

The following Criminalistics Bureau personnel also assisted with photography assignments:

- d. Kimberly Groover, Identification Specialist I

November 25, 1980

Assisted Public Administrator in documenting removal of property belonging to victims.

- e. Nancy Kingsbury, Identification Specialist I

December 12, 1980

Photographed compressor at Station 18, 707 East Desert Inn Road, Las Vegas, Nevada.

6. Clark County District Attorney (C.C.D.A.).

At approximately 0900 hours on November 21, 1980, this division assisted the Clark County Fire Department in obtaining and taking written statements from witnesses who observed the fire in its inception and/or progressive stages.

The Clark County District Attorney's Office is a recognized division within the Fire Investigation structure. Personnel are:

Robert Miller, Clark County District Attorney
John Wawerna, Clark County Deputy District Attorney; assigned to Fire Investigation Task Force
Dave Belz, Clark County Investigator; assigned to Fire Investigation Task Force
Doug McCarthy, Clark County Deputy District Attorney; assigned to Fire Investigation Task Force
Beecher Avants, Clark County Chief Investigator
Ray Lyons, Clark County Deputy Chief Investigator

7. National Fire Protection Association (N.F.P.A.).

On November 21, 1980 at approximately 1800 hours, Captain Mike Patterson, Clark County Fire Department Fire Investigation Division, requested the assistance of the National Fire Protection Association in the overall fire scene examination. The N.F.P.A. accepted and deployed the following personnel:

- a. David P. Demers, P.E.; Manager, Fire Investigations Division
November 21, 1980 through November 30, 1980
Fire alarm, photographs, heating, ventilation and air conditioning (HVAC)
- b. Richard L. Best, Senior Fire Analysis Specialist
James R. Bell, Technical Assistant/Government Affairs - Legislative Specialist
November 21, 1980 through November 30, 1980
Samples, victim location, sketch and code stairwells
- c. John M. Calogero, Assistant Electrical Field Specialist/Engineering Division
November 21, 1980 through November 30, 1980
Fire cause and spread
- d. James K. Lathrop, Life Safety Code Specialist
November 21, 1980 through November 30, 1980
Exits

8. United States Fire Administration (U.S.F.A.).

On November 21, 1980 at approximately 1800 hours, the Clark County Fire Department requested the assistance of the United States Fire Administration in the overall fire scene examination. U.S.F.A. accepted and deployed the following personnel:

- a. Tom Wright, Fire Data System Director
November 22, 1980 through November 30, 1980
Team Coordinator
- b. Tom Klem, Fire Investigator
November 22, 1980 through November 30, 1980
Fire Cause and spread
- c. Mike Olsen, Emergency Medical Service (E.M.S.) and Disaster Planner
November 21, 1980 through November 24, 1980
Victim cause of death, location and identification
- d. Gary Morris, Disaster Plan Coordinator
November 22, 1980 through November 30, 1980
Disaster operation

- e. Dan Bowker, Fire Cause Consultant (Private); hired by United States Fire Administration
November 21, 1980 through November 23, 1980

Assistance in determining cause and origin

9. National Bureau of Standards (N.B.S.).

At approximately 0900 hours on November 25, 1980, the Clark County Fire Department requested assistance from the National Bureau of Standards in the overall fire scene examination. N.B.S. accepted and deployed the following personnel:

- a. Dick Custer, National Bureau of Standards
November 25, 1980 through November 26, 1980

Alarm systems, samples

- b. John Klote, National Bureau of Standards
November 25, 1980 through November 26, 1980

Mechanical, high volume air conditioning

Fire Chief Roy L. Parrish, of the Clark County Fire Department, wishes to extend his gratitude and personal appreciation for the combined efforts of each and every department and individual who willingly participated in the MGM fire operations and subsequent follow-up investigation. Without their assistance, positive results could not have been realized.

This fire was of such magnitude that a tremendous team effort was necessary. Words alone cannot convey our feelings of gratitude to those involved. Hopefully, we have all acquired knowledge from this experience which will enable use to be better public servants.

C. SUPPORT AGENCIES

1. Non-Suppression Personnel

- a. State of Nevada Governor's Office;
Governor Robert List
- b. State of Nevada Fire Marshal's Office;
State Fire Marshal Tom Huddleston
- c. Clark County Commissioner's Office;
Robert Broadbent, Commissioner
Thalia Dondero, Commissioner
Jack Petitti, Commissioner
Bruce Spaulding, County Manager
- d. Barbary Coast Hotel and Casino, Las Vegas, Nevada
- e. Burger King Restaurants, Las Vegas, Nevada
- f. Clark County School District, Las Vegas, Nevada
1) Buses
- g. Clark County Building Department, Las Vegas, Nevada
- h. Civil Defense Chapter, Las Vegas, Nevada
- i. Clark County Health District, Las Vegas, Nevada

- j. Church's Fried Chicken, Inc., Las Vegas, Nevada
- k. The Caterer's, Las Vegas, Nevada
- l. Construction Personnel; Contracted by Del E. Webb Corporation, Las Vegas, Nevada:
 - 1) Structural steel;
 - 2) Reinforcing steel;
 - 3) Concrete workers;
 - 4) Carpenters;
 - 5) Electricians;
 - 6) Mechanical;
 - 7) Plumbing;
 - 8) Fire Sprinklers;
 - 9) Excavation.
- m. City of Las Vegas
 - 1) Lighting Unit
- n. Hospitals, Las Vegas, Nevada
 - 1) Sunrise Hospital
 - 2) Southern Nevada Memorial Hospital
 - 3) Valley Hospital
 - 4) Desert Springs Hospital
- o. Las Vegas Convention Visitors Authority, Las Vegas, Nevada
- p. McCarran International Airport, Las Vegas, Nevada
 - 1) Lighting Unit
- q. Nevada Power Company, Las Vegas, Nevada
- r. Neptune Mobile Wash, Las Vegas, Nevada
- s. Nellis Air Force Base, Las Vegas, Nevada
- t. Imperial Palace, Las Vegas, Nevada
- u. American Red Cross, Clark County Chapter, Las Vegas, Nevada
- v. The Salvation Army, Las Vegas, Nevada
- w. Department of Occupational Safety and Health, Las Vegas, Nevada
- x. Central Telephone Company, Las Vegas, Nevada
- y. McDonald's Las Vegas District, Las Vegas, Nevada
- z. E.G. & G., Las Vegas, Nevada
 - 1) Helicopter support
 - 2) Photographs

The Clark County Fire Department realizes that the names of numerous entities and individuals who offered support services to the firefighters on November 21, 1980, do not appear here. We offer our sincere apology for these inadvertent omissions, and extend our heartfelt appreciation for the invaluable services we received.

SECTION IV
MGM GRAND HOTEL/CASINO

SECTION IV

STRUCTURAL DESCRIPTION OF MGM

The following description of the MGM Grand Hotel/Casino is intended to give the reader an idea of the size and shape of the hotel; it is not meant to be an exact scale representation.

The MGM Grand Hotel/Casino was located at 3645 Las Vegas Boulevard South, City of Las Vegas, County of Clark, Nevada (southeast corner of the intersection of East Flamingo Road and Las Vegas Boulevard South). Classified as Type 1 construction, it is a 26-story high rise hotel and casino complex. Construction of the hotel began in 1972, and the complex opened for business in December, 1973.

The high rise section was laid out in a "T" formation, the top of which ran lengthwise from east to west on the north end of the building, facing Flamingo Road. The leg of the "T" ran south from the center of the north end of the building, forming the "T" shape of the high rise. The high rise had an east wing, a west wing and a south wing.

The main high rise elevators were located in the center area of the north end of the high rise, between the east and west wings. The service elevators were located at the north end of the south wing.

There were six stairwells: three interior stairwells to the high rise; and three smokeproof towers, which were located at the outer end of each of the wings. Because the doors of the interior stairwells were locked, persons entering the stairwell enclosures could not gain access to other floors. Only the topmost floor and bottommost floor had doors which could be opened from the inside.

The casino and showroom were located on the west side of the south wing of the hotel, and encompassed an open area larger than a football field. An underground parking area, as well as the employees' kitchen and room service preparation area, was located in the basement below the casino level. A large attic area with the "eye to the sky" catwalk was located above the casino ceiling. Executive and accounting offices were also situated above the casino area in the west end of this portion of the building. Five restaurants were incorporated into the east end of the casino level almost directly below the south wing of the high rise.

There were basically two floor levels located on the east side of the south wing of this hotel. The lower level was a shop and arcade area with a movie theater and health club. The main east-west hallway in the shop and arcade area was located below the east wing of the high rise. An escalator and a stairway leading up to the casino area were located at the west end of this hallway. The east end of this hallway merged with a north-south hallway that exited to the north side of the building on Flamingo Road; the south end exited to the pool area.

The casino level was utilized as a convention hall and meeting room, and encompassed a number of offices. A large Jai Alai fronton was located at the far east end of the hotel. The main front entrance to this complex was located at the far west end of the casino. Another large entry area was located on the casino level, north side, approximate center, with access gained from Flamingo Road.

The approximate footage of the hotel/casino was 2,000,000 square feet. The gross dimensions of the casino and arcade levels were approximately 380 feet by 1,200 feet. The casino itself was approximately 175 feet by 480 feet. Each wing of the hotel was approximately 350 feet long by 75 feet wide. There were approximately 2,076 guest rooms. (An additional 780 guest rooms were under construction on the west side of the building at the time of the fire.)

There were approximately 5,000 persons, including both guest and staff, occupying the hotel at the time of the fire.

The building was partially sprinklered. Those areas protected by sprinklers included portions of the 26th floor, the showroom, arcade, Barrymore Room (restaurant), and convention areas.

A manual alarm system, with bells and public address system, existed in the MGM. It was a local system only, and was designed to be sounded by security personnel located in the security office, casino level; five minutes after signalling the security station, a general alarm would sound (no alarm was sounded during the fire).

The heating, ventilation and air conditioning (HVAC) system supplied cool or warm air through common duct works. All of the return air to the HVAC system flowed through a large return air plenum and the common attic above the casino, restaurant, showroom, and arcade areas. This was one large, undivided or uncompartimentalized area.

In the intersection of the "T", seismic joints had been constructed from the air plenum continuously to the 26th floor, thereby creating vertical shafts which were approximately 12 inches wide. The bottom seismic joints had been connected directly into the air plenum above the ceiling, thus incorporating the shafts as a part of the plenum, with no separation to retard air flow through the shafts.

EMERGENCY EVACUATION PLANS

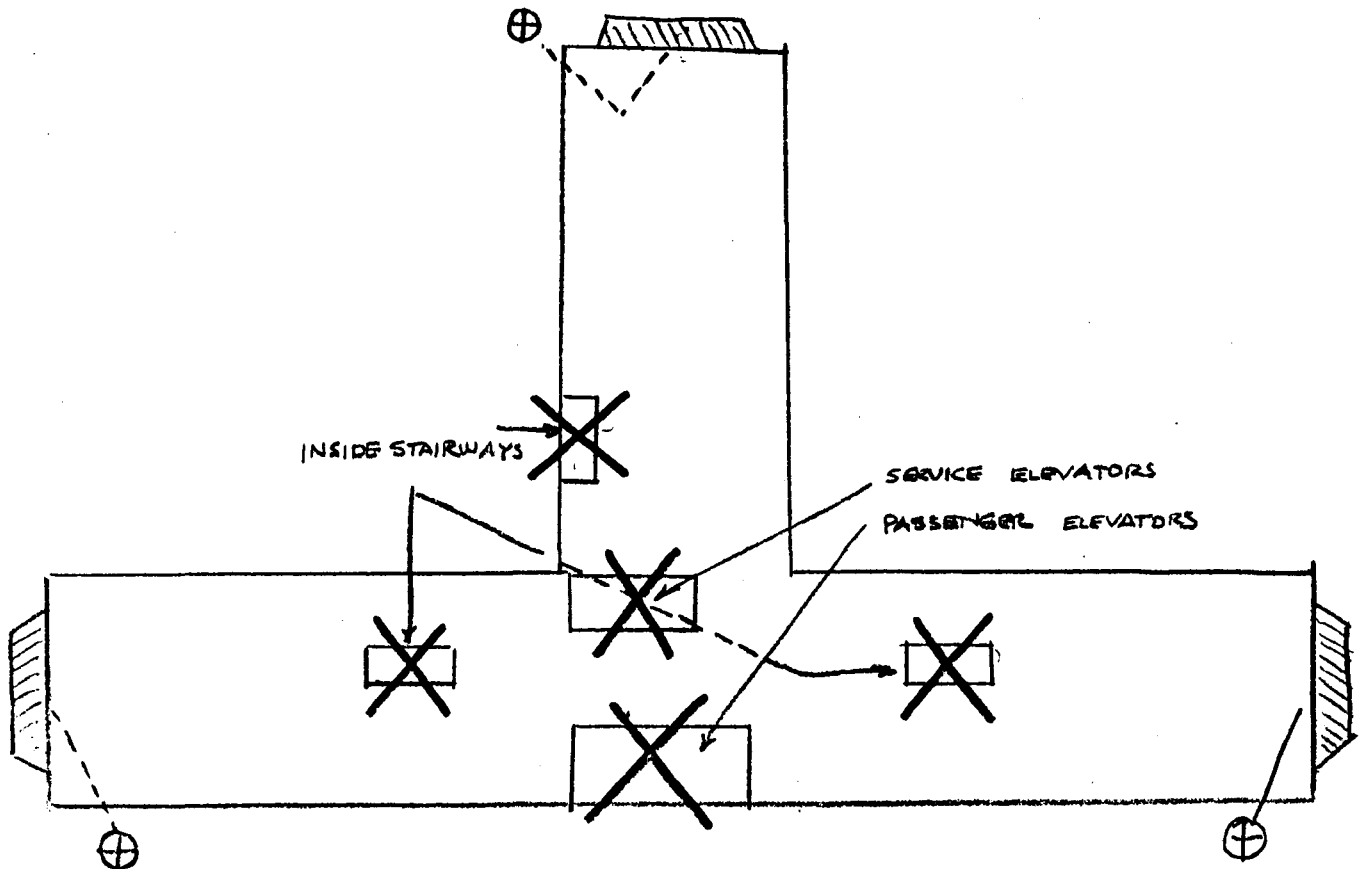
It should be noted that five pieces of printed information were observed in the hotel relating to emergency procedures in case of fire and/or bomb threat.

The information sheet entitled, "Only the Outside Stairways Will Be Used to Evacuate the Hotel", shows an overhead view of the high rise, depicting locations of the elevators and stairwells. The wording on this sheet states that none of the elevators or inside stairwells were to be used for evacuation of the hotel; only outside stairs were designated on the map to be used by employees.

This information was found by fire investigators on a bulletin board located next to the head of housekeeping door. To the best of the investigators' knowledge, these documents were not posted for public view, nor were they part of an overall public evacuation program.

The following information in this Section IV, pages IV-2, IV-3, IV-4, IV-5, IV-6, IV-8, and IV-9, are merely copies of the actual information received in this investigation. Original documents are on file with the Clark County Fire Department.

ONLY THE OUTSIDE STAIRWAYS WILL BE USED TO
EVACUATE THE HOTEL



MGM GRAND HOTEL

SAFETY RULES

In the interest of the safety of all employees, the following rules shall be followed. Any infraction of these rules may result in disciplinary action. Ignorance of any Safety Rule is no excuse.

GENERAL SAFETY RULES

1. It is mandatory that ALL ACCIDENTS, however slight, be reported immediately to your supervisor.
2. Listen carefully to your supervisor's instructions. Understand a job clearly and thoroughly before starting.
3. When working with another employee, be positive that each person knows exactly what the other is doing or is going to do at all times.
4. Notify all persons who may be endangered by the work you are doing.
5. Report any unsafe condition to your supervisor immediately, also at five-minute safety talk.
6. Never use improper or broken tools; obtain the correct tool for each job.
7. Always get help in **lifting** or **moving** heavy objects.
8. Stay clear of any moving vehicle.
- *9. Except during emergency, do not run in any area, always walk.
10. Do not obstruct aisles with material or electrical cords.
11. Horseplay and scuffling at any time while on Hotel property will not be tolerated.
12. All repair work must be reported to Maintenance Control.

*Valet parking excepted.

MACHINERY and EQUIPMENT SAFETY RULES

1. Use all safeguards provided. These safety devices are designed for your protection.
2. Work only on equipment that has been assigned to you.
3. Inspect your equipment thoroughly and be sure that it is clear of all unsafe parts before placing it in operation.
4. Do not operate any machine which you think is in unsafe operating condition. Report such a machine to your supervisor immediately.
5. Never leave equipment unattended while it is in operation.
6. Never oil or repair any machinery unless specifically instructed.
7. Do not attempt to make any electrical repairs. Qualified personnel are assigned to perform these tasks.
8. Never talk to any employee who is operating a machine.

MGM GRAND HOTEL SAFETY RULES

Page 2

PERSONAL SAFETY RULES

1. Safety glasses must be worn in specified areas in accordance with the Hotel's safety policy for eye protection.
2. Wear safety gloves and/or proper shoes for any work requiring this added protection.
3. The wearing of moccasins, tennis shoes, open-toed shoes, any soft shoes, or shoes with high heels is not permitted.
4. Do not wear loose clothing or flowing ties while operating equipment which could catch them.
5. Employees operating any machinery must have hair longer than collar-length properly covered or tied.
6. Where safety equipment is prescribed for your area, you are required to wear or use safety equipment as prescribed.

HOUSEKEEPING RULES

1. Keep all material out of aisles; do not throw any article on the floor where another person may slip or fall over it.
2. Keep the Hotel clean as your own home. You spend more awake hours in the hotel than in your house.

FIRE PROTECTION RULES

1. Take every precaution to prevent fire. Throw all cigarette butts, matches, oily rags, and any other rubbish in properly provided receptacles.
2. In case of fire, the first consideration is the safety of all guests and employees; then attention can be given to fighting the fire, and the protection of Hotel property.

REMEMBER - ALERTNESS AND SAFETY Prevent accidents!

The injury or ACCIDENT YOU PREVENT MAY BE YOUR OWN!

ALWAYS BE CAREFUL

MGM GRAND HOTEL

HOUSEKEEPING

SUBJECT: Evacuation in case of bomb threat or fire; Housekeeping administrative offices.

MGM Security will advise Housekeeping to evacuate. The Executive Housekeeper or person in charge will order all administrative personnel to evacuate. In the absence of the above supervisors, employees will take the order directly from MGM Security. The supervisors who gives the order to evacuate will ensure that all personnel:

- a. Place loose papers and records in the file cabinets.
- b. Close all drawers and cabinets.
- c. Turn off all electrical appliances, (fans, coffee makers, typewriters, raidos, etc.), or unplug if possible.

The schedule/status clerks will take the Daily Schedule Sheet, and the inspector beeper list.

The payroll clerk will carry the current payroll book with her.

Personnel will assemble in the rear of the Hotel between the tennis courts and Personnel where the supervisor will take roll, to insure that all personnel have evacuated safely.

S/Ben F. Witsell
Executive Housekeeper

Revised 09-24-80

MGM GRAND HOTEL

HOUSEKEEPING

14 September 1974

SUBJECT: Evacuation In Case of Bomb Threat Or Fire;
Linen Lockers, Guest Room Area & Houseman's Office

TO: All Housekeeping Personnel In The Guest Room Areas

1. MGM Security will advise all personnel working on the floors to evacuate.
2. Inspectresses and Head Houseman will secure Linen Lockers and Houseman's Office immediately upon notification of evacuation.
3. Maids and Houseman will place their equipment in the nearest open guest room in order to leave the hallways, and other areas free of obstacles. They then will proceed to the nearest exit, (STAIRWAY), (elevators will **NOT** be in operation) and proceed to the bottom, and assemble in the rear of the hotel opposite Taylor Construction where the Inspectresses will take roll to insure that all personnel have evacuated.
4. All employees will wait in this area until they receive further orders from Security personnel or the Department Head.

S/Ben Witsell
Executive Housekeeper

BW/rah

FIRE SCENE SECURITY

At approximately 0955 hours on November 22, 1980, Captain Wm. Mike Patterson, Calrk County Fire Department Fire Investigation Division, received written permission from Bernard Segelin, Executive Vice President of the MGM Grand Hotel/Casino, Las Vegas, Nevada, to enter said premises for the purpose of determining the cause, origin, and circumstances of this fire, which occurred on November 21, 1980 at approximately 0717 hours.

Mr. Segelin also signed a Fire Scene Release Form, relieving the Fire Department of responsibility for the security of the building upon completion of their scene examination. This allowed the owners to hire private investigators to determine the cause, origin and circumstances of the fire.

CLARK COUNTY FIRE DEPARTMENT
LAS VEGAS, NEVADA

DATE 22 Nov 80 TIME 0955 hrs CASE # 33381 DR # 80-59394

TO WHOM IT MAY CONCERN:

I, Bernard Segeln, BEING AN OWNER, OR HAVING LEGAL CONTROL OF THE PROPERTY LOCATED AT 3045 Las Vegas Blvd. So. MGM (GARD) IN THE COUNTY OF CLARK, STATE OF NEVADA, HEREBY GIVE PERMISSION TO THE CLARK COUNTY FIRE DEPARTMENT AND/OR IT'S AGENTS TO ENTER THE PROPERTY LOCATED AT same COUNTY OF CLARK, STATE OF NEVADA, AT ANY TIME OF THE DAY OR NIGHT FOR THE PURPOSE OF DETERMINING THE CAUSE AND/OR ORIGIN OF A FIRE THAT OCCURRED ON 21 Nov. 1980. ANY EVIDENCE THAT MAY BE FOUND MAY BE USED AGAINST PERSON OR PERSONS IN A COURT OF LAW WHO MAY BE RESPONSIBLE FOR SAID FIRE.

PERSON GIVING PERMISSION FOR ENTRANCE Bernard Segeln

DATE/TIME 22 Nov. 1980 0955 Hrs.

WITNESS Capt Wm Patterson

F-38A

CLARK COUNTY FIRE DEPARTMENT

FIRE SCENE RELEASE

DATE: 11/22/80

NOTICE

Bernard Seeger is advised by Investigators of the Clark County Fire Department who are conducting this investigation that the Fire Department completed their fire scene examination and are releasing the structure to the custody of the occupants or owner. You are advised that you may obtain an attorney and or private fire investigator to assist you in determining the cause and origin of this fire. The Clark County Fire Department is no longer responsible for maintaining this property in its present condition.

McCombs Grand Hotel Las Vegas, Inc
for Bernard Seeger
OCCUPANT OR OWNER

DATE OF FIRE: 21 November 1980

ADDRESS OF FIRE: 3645 Las Vegas Blvd. So. McCombs Grand Hotel

DR # 80-69394

[Signature]
SIGNATURE OF INVESTIGATOR

SECTION V
FIRE SCENE EXAMINATION

SECTION V

FIRE SCENE EXAMINATION

The following scenario is a chronological report of the MGM Grand Hotel fire which occurred on November 21, 1980, from the initial time of alarm through the preliminary conclusion of the Clark County Fire Department (C.C.F.D.) Fire Investigation Team.

For the purposes of this report, the term O/R or O/Rs designates the officer or officers reporting, terminology which is in fact applied to Clark County Fire Department Fire Investigators in all written communications.

A. INITIAL RESPONSE

On Friday, November 21, 1980, at 0717 hours, the Clark County Fire Department responded to a reported fire in a building at the MGM Grand Hotel, 3645 Las Vegas Boulevard South, Las Vegas, County of Clark, Nevada.

The initial report from the MGM Grand stated the fire was in the Deli, a restaurant located at the east end of the casino floor level. The first in engine company and rescue (paramedic) unit were from Station 11, located at 88 East Flamingo Road, which is across the street from the north entrance of the MGM Grand Hotel/Casino. Engine 11, with a total crew of four men, arrived at 0719 hours, parked the 1,500 GPM fire engine at the north entrance, Flamingo Road side, and implemented the High Rise Preplan.

Upon entering the casino, Captain Rex Smith and his crew observed black smoke, stratifying in the east portion of the casino, emitting from the Deli. The crew walked inside toward the casino pit, a distance of approximately 36 ft. to 40 ft., and observed heavy black smoke lying motionless in the atmosphere. They looked toward the Deli, stopped, and observed a fireball rolling out of the area. It spread back into the casino, and the crew began to evacuate. The smoke had now dropped down, on an angle, within 8 ft. of the floor. Firefighter Bert Sweeney later stated, "When we turned to walk back to the north entrance, it only took us approximately 12 seconds, the smoke was now down within approximately 4 ft. of the floor. We walked through the doors to the engine, a total time lapse of 25 seconds. I looked west, or towards the main entrance, and observed a fireball exiting the canopy and front entrance."

NOTE: The distance involved in this observation is approximately 336 ft. (blueprint measurement). The total length of the casino, not including the foyer in the Deli, is approximately 448 ft. (see Diagram B, Section VI).

B. PRE-FIRE WITNESSES

1. On November 21, 1980, at approximately 0705 hours, a supervisor of the marble and tile setting crew, Mr. Tim Connor (an employee of the MGM for seven years), was reporting for his normal workday. Mr. Connor entered the west set of double doors, the main entrance of the Deli. He knew the Deli was closed and he could walk through the kitchen on the Deli's east side to ascertain if any tiles were broken. As he entered the Deli, he heard what he thought to be a crackling sound in the southeast of the center column, which is a main structural support of the building. Mr. Connor smelled no unusual odors. He did, however, observe the reflection of a flickering light at side stand #2, located on the south wall, center of the Deli. Mr. Connor proceeded to that area and, not entering side stand #2 entirely but remaining in the entrance, he observed a wall of flame on the east wall, with flame traveling from the counter top to the ceiling. Mr. Connor immediately contacted MGM Security by telephone, apprised them of the situation, then proceeded back through the Deli, intending to secure a hose line near the south exit, when he was knocked backward into a booth by pressure and smoke. He exited through the double main entrance doors, still pursuing the house line. The house line was placed in position by an unknown security guard, and Mr. Connor attempted to reenter the Deli via the south service entrance with a hand extinguisher when he was knocked down again by the smoke and pressure buildup. Realizing the gravity of the situation, Mr. Connor left the area.

2. While Mr. Connor was engaged in his ordeal, unknown to him, a female employee, Ms. Velma Turner, observed a fire near the Keno board located above side stand #'s entrance in the Deli. She immediately advised the chef, Mr. Kent Oborn, of the situation; she then left the area. Mr. Oborn approached the east entrance of the Deli and observed fire in and around the Keno board area. He immediately notified the operator that a fire was in progress in the Deli; he went back into the kitchen, secured a 1 1/2 inch occupant fire hose, and returned to the Deli. Upon observing the area he believed to be the area of origin, that area being the Keno board, he heard someone state not to put water on the electrical fire. He then discarded the hose line and began evacuation of the kitchen personnel.

NOTE: The reader should be reminded that neither Mr. Connor nor Mr. Oborn had observed the other, nor did either know of the other's actions.

C. PRELIMINARY INVESTIGATION

At approximately 1145 hours on November 21, 1980, an investigation into the cause, origin and circumstances of this fire began. Because of the rapid rate of smoke and flame spread, investigation could not begin immediately. Destruction due to fire decomposition, and the removal of those persons suffering injury or death, delayed the actual investigation several hours. Personnel assigned to the Fire Investigation Division of the Clark County Fire Department were all placed in fire suppression and/or rescue operations. As the heat began to subside, Captain Wm. Mike Patterson entered the suspected area of origin for his initial observations. It was through his initial observations that the following procedures were implemented.

First, security was established around the accessible areas that had ingress and egress pathways to the Deli;

Second, the Task Force concept was implemented;

Third, assignments were given to individual Investigators for purposes of correlation, preservation and investigation. Their findings would ultimately be compiled into a single report.

First observations were directed to the total fire decomposition of the southeast and northeast portion of the Deli. This was due to partial structure collapse, fire decomposition of virtually all combustible materials, fire and char patterns, and heat distortion of metal framing and metal furnishings.

It was noted that the wall which separates the north portion of the Deli and south portion of the coffee shop was void of any coverings. It was obvious this had been a wall, but the only identifiable remains were metal studs. Fire decomposition was severe in this area, but not as total as the south wall of the Deli. By observing the interior of the coffee shop from the Deli, it initially appeared that unusual fire and char patterns were visible in the southeast corner of the coffee shop (see Diagram C, Section VI). Attention was given to this area.

Unlike the Deli, where virtually every piece of furniture had been consumed by the progress of the fire, the coffee shop sustained heavy fire decomposition primarily to the counter and, in general, the southeast portion or corner. A large worktable, constructed of stainless steel, ran the length of the south wall, turned and ran north on the east wall, forming an "L" shape. This table was, prior to the fire, affixed to the south and east walls. Under this table, the remaining portions of a wooden secondary shelf were observed; this shelf had sustained heavy to severe fire decomposition. At the east end of this shelf a fire pattern was observed at the second shelf level, where the shelf terminated into a cupboard or storage area. Concentrated efforts revealed no electrical source or mechanical source of heat in this area; it was later determined that a fire load consisting of napkins and other common combustibles normally found in a restaurant were stored in this area. The wall of the cupboard was constructed of wood or equivalent cellulose material believed to be plywood. This explained why the fire patterns appeared as they did.

A second fire pattern became obvious to the O/Rs. This fire pattern was located on the east wall, floor level of that area north of the Orleans Room counter, next to the passageway opening to the kitchen. Upon close observation and consultation, it was determined there had been a linen disposal bag containing cloth materials, which had been suspended from a metal wire cable fastened to the wall. Upon attaining that required amount of heat necessary to sustain combustion, the bag and its contents fell, and the ensuing fire consumed these articles. This lowered the fire and char patterns to floor level, which initially appeared to indicate an unknown area of origin.

It is now clear that neither of the areas described above were areas of origin, but were simply extended fire patterns from the path of the ensuing fire propagation, which extended from the Deli to the Orleans Coffee Shop. It was later determined, based upon witness interviews and the normal business routine of the MGM Grand Hotel/Casino, that the Orleans Coffee Shop had indeed been open for business, and that there had been approximately 50 guests sitting around tables and at the coffee counter. The fire did not propagate from the Orleans Room; however, it did propagate from the Deli into the Orleans Room through its south wall and ceiling area. Concentrated investigation efforts were then returned to the area of the Deli (see Diagram D, Section VI).

D. DESCRIPTION OF THE DELI

The room of origin was that room identified as the Deli (see Diagram A, Section VI). The Deli was one of five restaurants located on the casino level, and was situated in the center of the three restaurants on the east end of the casino. The design of the restaurant was basically rectangular, with the main entrance located on the west end of the restaurant. The measurements were approximately 44 ft. wide and 82 ft. long. The ceiling varied in height: the center portion was approximately 11 ft. high; the booth areas (soffits) were approximately 9 ft. high. The Deli construction

D. DESCRIPTION OF THE DELI (Continued)

was protected non-combustible and unprotected non-combustible, with 2 in. × 4 in. metal frame wall studs, and 5/8 in. gypsum wallboard, which had been covered with assorted wall coverings and ornamental trim consisting of plastics, wood, cloth, tile, veneers and wall-to-wall carpet. This restaurant would be classified as a "luxurious atmosphere" restaurant.

The Deli was not sprinklered; heat and smoke detectors were not present. At the incipient stage of this fire, the Deli was prepared for regular business hours, which would have commenced at 0800 hours on November 21, 1980. This was not a 24-hour restaurant, as was the Orleans Coffee Shop directly to the north.

NOTE: The Orleans Coffee Shop was not sprinklered; however, the Barrymore Room (the restaurant immediately to the south of the Deli) was sprinklered.

The normal hours of business for the Deli were from 0800 to 0100 hours, a total of 17 hours of each 24 hours. Typically, the restaurant was cleaned and prepared for its next day of business upon closing time. To the knowledge of the O/Rs, no person(s) were in this room between the hours of 0100 and 0630, except Mr. John Dodge (see statement, Section IX).

E. AREA OF ORIGIN

Based on initial reports from witnesses and observations by the O/Rs, followed by interviews with firefighters, it was determined that the area of origin was that portion of the MGM Grand Hotel/Casino known as the Deli.

The O/Rs entered the Deli through the west main entrance. Available information was sketchy; witnesses who could offer firsthand accounts had not yet been located. No witnesses could be found who could convey the vital information required to begin this investigation accurately. Rumors were heard everywhere. To complicate matters further, firefighting activities were, in fact, still in operation at the west end of the casino, and rescue efforts continued. Smoke, the threat of building collapse, and related dangers were constantly present.

The first information Captain Patterson was able to discern indicated the Deli had been vacant and closed for business; initial reports also alleged that the adjoining restaurant to the north (the Orleans Coffee Shop), as well as the adjoining restaurant to the south (the Barrymore Room), had been closed for business.

The kitchen was located east of and adjacent to the Deli restaurant. For service purposes, an entryway was located on the east wall of the Deli, opening into the kitchen. A wall constructed of metal studs with 5/8 in. gypsum wallboard and covered with assorted wall coverings and ornamental wood/plastic trim, separated both the north wall (the coffee shop side) and south wall (the Barrymore Room) of the Deli. There were, in fact, three separate restaurants, each having its own decor representing a different era, and each with its own passageways for purposes of egress and ingress. It was further observed that the Barrymore Room was sprinklered; the coffee shop and deli were not.

The north wall, which separated the Deli from the south wall of the Orleans Room, sustained heavy to severe fire decomposition. Examination of the wall studs, fire and char patterns, and direction of fire travel revealed that neither side of this wall was the area of origin. Mechanical or electrical sources of heat were not responsible for the fire consuming this wall. It was concluded that the fire decomposition was a result of the fire's path of progress, which preheated and consumed those common combustible materials located in and around this wall.

Concentrated efforts were then directed to the east wall of the Deli. Although the east wall of the Deli sustained severe fire decomposition, it was obvious the greatest concentration of heat was located at ceiling height, from the southeast corner of the Deli to the center of the south wall, where side stand #2 was located. The fire and char patterns observed on the east wall were consistent with that of flame spread downward, not upward. The typical fire "V" or cone patterns were not there. Booths, designed in semi-circular style, were the primary source of combustible material along the east wall, and those fire patterns observed were not consistent with those patterns common to a fire originating from chair (booth) height. The east wall and the north wall were eliminated as areas of origin.

The south wall was then established as the next area of concentration, particularly that cubicle commonly known as side stand #2 (hereinafter referred to as the side stand) of the Deli.

E. AREA OF ORIGIN (Continued)

The side stand, an appendage that protruded approximately 6 ft. to 8 ft. into the restaurant area, was rectangular in design with a single passageway on the north wall, west corner. The passageway did not have a door affixed to it. The side stand was enclosed, with its center obstructed from public view by a large built-in pastry display case. The side stand was simply a waitress station, supplemental to the primary kitchen facilities which were located in the extreme northeast corner of the Deli. It was constructed of metal studs covered with wall covering and assorted wallboards. (For details on this area, see Diagram D, Section VI, and related information compiled by Investigators Tom Klem of the United States Fire Administration, and John Calogero of the National Fire Protection Association.)

F. POINT OF ORIGIN

By directing their full attention to that area known as the side stand in the Deli, the O/Rs arrived at the following preliminary conclusions. Additional information was revealed during the subsequent investigation (which lasted approximately nine days) in the area of origin. During the course of this investigation, numerous photographic negatives were exposed not only by the O/Rs, but by the Las Vegas Metropolitan Police Department Criminalistics Identification Bureau and E. G. & G., Inc., of Las Vegas, Nevada.

In the side stand area, the O/Rs observed burn and char patterns which, similar to those observed in the Orleans Coffee Shop, at first were unexplained, particularly that area on the inside of the east wall midway from the floor area, and the area under the stainless shelf on the east wall. No depth of char indicating an area of origin was observed. Burn and char patterns appeared where unknown quantities of paper goods and other material common to a waitress station would be located. Upon close examination by the O/Rs, this area was eliminated as the area of origin, and the char patterns were attributed to fire burning and extending from and around the north wall of this side stand. The fuel load under the shelf and the coverings on the walls were not sufficient to propagate the spread of fire in this area.

There were no other visible or explainable patterns that would, in effect, indicate an area of origin in this side station, except that pattern in the northwest area of the side station. Wood panelling 1/16 in. thick, laminated plastic panelling 3/32 in. thick, vinyl wall coverings, and tile adorned the walls of the southeast section of the side stand. These thin materials did sustain fire decomposition; however, consumption was light to moderate. Burn and char patterns did not emanate from the southeast corner, or from under the shelf in that corner. It should be emphasized that plywood shelving and heavier panelling in the northeast corner of the side stand (later described as the point of origin) were observed to have sustained severe fire decomposition to the point of actually being totally consumed (vaporized) by the progress of the fire. The fact that the 5/8 in. plywood in the northwest corner was totally consumed, while the 1/16 in. wood veneer in the southeast corner was virtually unburned, both being approximately the same height from the floor, unquestionably indicated a point of origin in the northwest corner of the side stand.

The O/Rs observed a distinct char pattern emanating from the metal splash pan located on the inside of the side stand's west partition, north corner. This partition, in conjunction with the west wall of the side stand, formed an entryway and restricted the interior view of the side stand from the guests of the restaurant (see Diagram E, Section VI). The char pattern, approximately 18 in. in height above the pan, extended approximately 13 in. in width at its base, and was located adjacent to that area of a shelf which sustained severe fire decomposition. The char and fire patterns indicated fire emanating from that separation wall or partition.

In the passageway to the side stand, on the west partition approximately 45 in. from floor level, the O/Rs observed another char pattern directly in line with the pattern described above the splash pan. This pattern was also similar to that of a partition fire; no explained fire load or other contributing factor would account for its presence. The O/Rs, by the slightest touch of the hand, caused this wall to crumble in the fire pattern described on the west partition, leaving a gaping 12 in. x 18 in. hole through which one could easily view the interior. By observing in an easterly direction the interior side of the east wall at the partition, the O/Rs could see a fire pattern coinciding with the two previously explained fire patterns. All three patterns were of the same height and location of this partition. In this void or wall opening, no electrical or mechanical heat sources were observed. By removing the eastern portion of this partition, the O/Rs could observe the remains of the soffit which had been built to restrict the electrical and plumbing equipment from view. This soffit was constructed of plywood and gypsum, with wood trim for decorative purposes only.

F. POINT OF ORIGIN (Continued)

In the soffit, two copper like tubes were observed; one approximately 1/4 in. in diameter, the other 3/8 in. in diameter. These tubes extended from a hole in the cupboard housing the compressor, approximately 6 in. to 12 in. from the floor area, upward through the void between the wall and cupboard. The hole, approximately 6 in. long and 2 in. wide, led into and faced that particular space. The O/Rs observed these two copper tubes to be encased in insulation up to a point approximately 40 in. from the floor; from that point to the termination point (which was the pastry display case), the tubing lacked insulation. This condition was not due to fire decomposition; the tubing had been installed without insulation.

As stated earlier, the copper tubing extended upward toward the ceiling. It was, in fact, angled and curved around in the soffit space upward toward the bottom portion of the pastry display case. The 1/4 in. copper tubing supplied the liquid coolant from the condenser to the pastry display case; the 3/8 in. copper tubing was the return refrigerant. (This refrigerant is commonly known as "Freon 12".) There were no visible holes or punctures in either copper tubing; however, the 1/4 in. line had affixed to it a small silver colored melted globule of an unknown metal type which appeared to be aluminum or similar metal. This melted globule or bead was approximately 45 in. from floor level, in line with the fire patterns described earlier on the partition and soffit (see Diagram F, Section VI).

The O/Rs observed a 3/4 in. flexible metallic (aluminum) raceway containing two No. 12 A.W.G. copper conductors with an unknown type of electrical insulation. The raceway extended from that same hole described above, which allowed the copper tubing to extend from that same hole described above, which allowed the copper tubing to extend into the refrigeration compressor area and follow the same basic path upward toward the display case (see pastry display case, Diagrams M and N, Section VI). It was observed that this aluminum raceway was turned into and around the copper tubing, and actually made contact with it. It was at this same intersection that the above described melted globule or bead was observed. The raceway then extended upward, following the general path of the copper tube into the pastry display case.

Returning their observation to that intersection of the raceway and the copper tubing, the O/Rs noted that a section of the raceway was missing. Also missing was one single section of copper wire. The raceway had sustained heat application or chemical change to such a degree that the missing section of the raceway had vaporized or was totally destroyed for a length of approximately 36 in., beginning at a point about 42 in. above floor level. The missing copper wire within the raceway had sustained decomposition to the degree of actually vaporizing or being totally destroyed for approximately 2 1/2 in. The copper wire was void of any insulating material. It should be noted that a total of two, not three, wires were in the raceway. As with the bead observed earlier, this area was in the vicinity of the east partition of the entry of the side stand (see Diagram G, Section VI).

As stated previously, the raceway extended into the general vicinity of the pastry display case, and the copper tube extended to the bottom area of the pastry display case. At a height of approximately 58 in., the copper tube made a right angle through the soffit and extended in an easterly direction for 5 in.; it then extended upward into the pastry display case. The copper tube was completely enclosed in a wood soffit constructed of plywood with gypsum wallboard on two sides, and the entire chase was hidden from view. The shelf to which the metal splash pan was affixed was attached to the inside left soffit area (west wall of side stand), which is the probable reason why the raceway and tube chase were installed as they were.

The raceway did not turn sharply and extend eastward, but continued upward through the wall cavity of the soffit. Upon reaching that portion of the top plate, or ceiling area, above the pastry display case, it angled toward the center area in the plenum above the side stand. It terminated at a metal 4 in. x 4 in. junction box (see Diagram H, Section VI). Where the raceway turned above the pastry display case, the O/Rs observed that the flexible aluminum raceway was not melted. No globular or beaded copper was observed in the area, although the copper wire was void of insulation. (This raceway is clearly marked "AL-F1-11" on Diagram J, Section VI.)

Two 3/4 in. flexible aluminum raceways were observed originating from this junction box, in addition to the raceway that entered it. One raceway extended westward, the other eastward, both in the plenum above the side stand. The first raceway extended in the same direction (west), and was of the same construction as the raceway previously described. This raceway veered in a northwesterly direction and extended from the plenum downward over a wall top plate. It passed through the top of the pastry display case and into an off-on switch box located in the northwest corner of the

F. POINT OF ORIGIN (Continued)

pastry display case. The O/Rs believe that this switch only controlled a light within the pastry case. Where the raceway curved over to the top plate, severe decomposition had occurred. The two visible copper wires were void of insulation, thus the bare wires were exposed.

The second raceway which was attached to the junction box traversed in an easterly direction and turned downward at a sharp angle on the center of the top plate of the east wall. The raceway was inserted into a hole cut or punched (not drilled) into this metal plate (see Diagram K, Section VI). Severe heat application had occurred at this bend, causing melted metal to build up and flow. Two copper wires were exposed, void of insulation, where the raceway crossed down and came in contact with a 1/2 in. E.M.T. conduit chase. At this point of contact, the O/Rs observed that the raceway had suffered heavy decomposition to the extent that it had melted and flowed onto the 1/2 in. E.M.T. Further observation of the raceway showed that it extended down through the interior of the east wall of the side station to a point at which it was attached to a 4 in. x 4 in. junction box that was located approximately 51 in. from floor level (see Diagram L, Section VI).

The E.M.T. conduit was a separate electrical source, not connected with the raceway. It did not have as its electrical source any junction in or near the side station. It had two copper wires which in turn supplied electrical current for two ceiling or high hat recessed lights in the center ceiling area of the side station. This E.M.T. conduit was eliminated by the O/Rs as a source of ignition or electrical fault, and no other electrical sources observed in the ceiling area or plenum could have been a contributing factor to this fire. Raceways were followed and traced to great distances, as was any electrical source located in the plenum. It is the opinion of the O/Rs that the electrical equipment involved from that point of the junction box on the east wall of the side station, and that aluminum flexible raceway which extended from that box to another 4 in. x 4 in. junction box in the plenum overhead center of the side station, and, in particular, that raceway which extended to the refrigeration compressor's outlet, is the only electrical equipment which is a contributing factor to this fire. In the opinion of the O/Rs, the raceway that extended into the pastry display case did assist somewhat in the propagation and application of heat spread; however, this heat spread occurred only after the initial ground fault occurred in the area near the west side of the splash pan in the soffit adjacent to the west end of the pastry display case.

As previously indicated, the copper tube and electrical raceway extended into a 6 in. x 2 in. hole approximately 6 in. from floor level in the east partition of the passageway entrance to the side stand. The copper tubing was attached to two fittings in the refrigeration compressor, while the raceway was attached to and terminated at a 4 in. x 4 in. metal junction box containing a duplex female receptacle. Inserted into this receptacle outlet was a male plug which extended into a paragon timer. The timer was connected with a pigtail approximately 12 in. long, which had a female end into which a male plug had been inserted. The male plug was attached to an undetermined size electrical cord, which in turn was connected to the electrical components of the refrigeration compressor itself. The paragon timer was used for the defrost cycle of the refrigeration unit, which was actuated for a period of approximately 15 minutes per 24-hour cycle. More specifically, the refrigeration unit operated approximately 23 hours, 45 minutes each 24-hour day, seven days a week.

This refrigeration unit was positioned on a level plane constructed of cellulose material (believed to be particle board) in that area described as the north portion of the side stand, approximately 4 in. from floor level, under the worktable or counter top, west side. It should be noted that this cellulose material to which the refrigeration unit was affixed was not attached to the shelf itself; but remained in a free position. It could be freely moved in or out of its location by pulling the unit toward the center of the side stand. It is the opinion of the O/Rs that this free standing refrigeration unit could be moved in any direction.

Above the refrigeration unit was a tub-like fixture with a lid. This non-refrigerated tub was filled with ice and used to cool those articles normally cooled in a restaurant area. In addition, a warming apparatus was observed on the stainless steel counter top, near the northeast corner of the side stand. It is believed that this warmer was simply used to warm water for tea or other drinks for the patrons of the restaurant. This area was eliminated as an area of origin.

G. FIRE CAUSE

The following scenario describes the condition of materials and fuel load in and around the immediate area of origin. Although several factors contributed to the cause of this fire, the primary condition was related directly to an electrical fault. It is the opinion of the O/Rs that the following conditions were responsible for the fire in the MGM Grand Hotel/Casino, and the resultant 85 (as of February 7, 1981) fire deaths, as well as injury to approximately 700 human beings.

It should be noted that the order in which the scenario is transcribed does not necessarily reflect the actual sequence of the incipient fire. However, the descriptions of galvanic action and the heat buildup in the soffit area reflect occurrences which did induce and aid the actual electrical ignition which, in the opinion of the O/Rs, did in fact initiate this tragedy.

Because all practical conductors of electricity exhibit some resistance to the flow of electrical current, the production of heat within an electrical system is an inescapable result. If the heat developed within the system is allowed to build up to the point where it causes damage to some portion of the electrical system, that damage may result in failure of the system and ignition of the system itself and/or the building or its contents.

According to the Fire Investigation Handbook #134 (National Bureau of Standards) 8-80, electrical fires can be divided into two major classifications. They are:

- 1) 'Fires originating within the electrical distribution system. The electrical distribution system consists of all of the permanently-installed electrical equipment from the point where the power company's wires first terminate in or on the building (usually at an electric meter) up to and including receptacles, switches, and junction (splice) boxes to which "Utilization Equipment" is connected. "Utilization Equipment" is defined in the National Electrical Code (NEC) (1)' as: "Equipment which utilizes electrical energy for mechanical, chemical, heating, lighting, or similar purposes".'
- 2) 'Fires originating within the electrical utilization equipment. Electrical utilization equipment includes appliance and fixtures attached to the electrical distribution system. Such equipment may be permanently connected (hard-wired) or cord-connected with a plug to a receptacle.'

The only electrical utilization equipment visible from within the side stand's confines was a refrigeration compressor unit. This compressor, brand name Tecumseh, was identified by the metal identification tag attached to the metal housing of the unit. The tag bore the following sequence of numbers and letters: #8327-17 (E-F0773C 710068) CAT #34 #LRA 32.5 (amp rating); V115 H₂60; V.100 H₂50 PH1.

It should be noted that on December 8, 1980, at 0800 hours, Investigator Vergus Porter of the Clark County Fire Department did, with permission of MGM representative Mr. Pete Jasich, obtain this unit. Investigator Porter removed the tag that was attached to the unit and affixed a standard evidence tag issued by the Clark County Fire Department, which he signed and dated. The unit was transported to Clark County Fire Department Station 18, where it remained in custody of the O/Rs until the testing procedure took place on December 12, 1980. After the test, the unit was returned to the O/Rs for safekeeping until December 16, 1980, at which time it was returned to Mr. Jasich.

No other electrical sources of heat were observed in the side stand except that wiring normally located in the ceiling and walls, which the O/Rs could observe due to the decomposition of those combustible materials customarily used to cover wiring. It is the opinion of the O/Rs that no ignition occurred in or around the immediate area of the Tecumseh unit. No fire or char patterns were found in that area which would indicate any malfunction of the unit. The unit was impounded, as stated above, as a precautionary measure only. The compressor was eliminated as a source of ignition. However, because of the warm air flow over its condenser and the vibrations created by the operation of the unit, which were then transmitted by the copper wires attached to the unit, it is the opinion of the O/Rs that the compressor was, nevertheless, a contributing factor due to poor location.

At approximately 1300 hours on December 12, 1980, an electrical, hydraulic and mechanical inspection was made of the compressor unit. Mr. Phil Murphy, representing PM Mechanical, Inc. of 5216 South Pecos Road, Las Vegas, Nevada (702) 451-1743, was present at Clark County Fire Department Station 18 (located at 707 East Desert Inn Road, Las Vegas, Nevada) to conduct the examination on behalf of the Clark County Fire Department Fire Investigation Division. Present at the inspection were Roy L. Parrish, Fire Chief; Lorne L. Lompfrey, Captain; Wayne M. Burns, Captain; and Wm. Mike Patterson, Captain.

Mr. Murphy is an expert on refrigeration compressors, and has in excess of 28 years experience in this field; he is a licensed contractor in the State of Nevada. Under the observation of the O/Rs, Mr. Murphy disassembled the unit and stated that, in his opinion, there was no electrical fault emitting from the unit, nor was there any hydraulic or mechanical fault that caused any malfunction of the unit. The unit was in good operating order prior to the fire.

During this examination, interested persons also viewed additional evidence seized by the Clark County Fire Department Investigators. Photographs were taken in chronological order during the inspection by Identification Specialist Nancy Kingsbury, P#1107, Las Vegas Metropolitan Police Department. Persons in attendance were (note: illegibility of portions of the original registration sheet may have resulted in inadvertent errors or omissions in the following list):

**EXAMINATION OF REFRIGERATION UNIT
PERSONS PRESENT**

NAME	FIRM	CLIENT
Nancy Kingsbury	L.V.M.P.D.	N/A
George M. Martinsen, Jr.	I.T.S.C.	Wendell Gauthier
Will Kemp	J.J.B.C. & B.	Miscellaneous
Cal Potter	Bailey & Broder	Bailey
James E. Guesman	Bailey & Broder	Bailey
Carl L. Duncan	Plaintiffs Committee	--
Art Rabourn	Waiar, Schmeider, Bayless, Chesley	Kellers
John Shuff	Robins, Zelle, Larson, & Kaplan	Tassen
B. Armstrong	Galatz, Earl, Biggar	Tassen
Wendell Gauthier	Wendell Gauthier	(illegible)
Ira Sternberg	Cal Potter	Bailey
Michael Becker	F. Lee Bailey (Cal Potter)	Velone
S. Stewart Farnet	(illegible), Architect	Wendell Gauthier
John Primrose	Galatz, Robins, Zelle, Larson & Kaplan	Tassen
G. Crawford Wiestling	Galatz, Robins, Zelle, Larson & Kaplan	Tassen
Wayne E. Ault	Rolf Jensen & Assoc., Inc.	Peter Jones
Richard A. Daniels	Rolf Jensen & Assoc., Inc.	Peter Jones
Ed Hanford	R.L. Gresham	--
Tom Alfrey	Hall & Evans	MGM
D. Jon C. Fulfs	Galatz, Robins, Zelle, Larson & Kaplan	Tassen

At 1000 hours on December 19, 1980, evidence was again viewed at Clark County Fire Department Station 15 (located at 3480 Valley View Boulevard, Las Vegas, Nevada). In attendance were investigators and attorneys representing the MGM Grand Hotel/Casino, who had been unable to attend the viewing held on December 12, 1980.

NAME	FIRM	CLIENT
Rex Wilson	Firepro	Kemper
J. Drake	Firepro	Kemper
R. Tambley	Firepro	Kemper
Pete Jasich	A.P. Jasich	MGM
W.F. Schultheis	A.P. Jasich	MGM
Anthony Shapton	BKS & M	Property Damage (Armor)
Floyd Hale	Edwards, Hart, Pearson & Hale	Property Damage (Armor)

NAME	FIRM	CLIENT
Randy Patton	Edwards, Hart, Pearson & Hale	Property Damage (Armor)
Doug Bennett	Electrical Engineer	Property Damage (Armor)
Robert Lowe	Fire Investigator	Property Damage (Armor)
Ed Hanford	R.L. Gresham Co.	--

1. GROUND FAULT (IMPEDANCE FAULT)

* Portions of the following text are quoted from the Fire Investigation Handbook #134 (National Bureau of Standards) 8-80. All such portions are set apart from the text by single quotation marks.

'Modern residential electrical distribution systems make use of three or more wires to provide power to electrical utilization equipment. The wires are the "grounding" conductor; the "grounded", "identified", or "neutral" conductor; and one or more hot or unidentified conductors. The terms "grounding", "grounded", "identified", and "neutral" are defined in the NEC since these terms describe wires used in very specific ways in the system; all other conductors are simply described by common names such as, "hot", "lineside", and so on. The NEC also requires that those conductors given a defined name in the Code be marked but these same conductors cannot have a color which could cause them to be mistaken for the "grounding" and "grounded" conductors. To summarize these Code rules:'

- a) ' "**Grounding**" **Conductor** - This is a safety wire which is intended to carry the current which might escape due to a failure in the insulation of the hot wire (or failure of the insulation within an appliance) back to the source of the current. This wire is required to have green-colored markings (if it happens to be insulated) or it can be left bare (no insulation).'
- b) 'Some electrical wires are encased in a metal jacket (type AC armored cable, also known as BX cable) or are installed in metal conduit or tubing (rigid conduit or electrical metallic tubing, type EMT). The metal armor, conduit, or tubing can serve the same purpose as the "grounding" conductors and, under these conditions, the bare or green-colored conductor can be eliminated.'

In the case of the conductors in the side stand, both principles "a" and "b" were applied. However, in the soffit area (point of origin), only "b" applied.

'The "grounding" conductor (or metal jacket, armor, conduit or tubing) does not carry any current in a properly functioning electrical system. The "grounding" conductor carries current only if there is a breakdown of the insulation of the other conductors, or a failure within the utilization equipment which would accidentally energize metal parts of the system, the utilization equipment, or the building. The "grounding" conductor is intended to eliminate such a potential shock hazard by giving the current an alternate path to return to its supply. Since the "grounding" conductor is intended to be a low resistance path for the current to follow, and since a fault within the system or equipment to ground usually presents a lower resistance path than that through a properly operating appliance, the over-current protective device serving the hot conductor in the circuit should open, shutting off the faulted circuit when the current flows in the "grounding" conductor.'

- c) ' "**Grounded**", "**Identified**", or "**Neutral Conductor**" - This is a wire which is intentionally connected to the "grounding" wires at one, **and only one**, point in the electrical distribution system -- the point at which the electric cables first enter the building (inside the "service entrance equipment"). It can be thought of as the wire which usually returns the current to the supply by completing the circuit after the current has passed through the appliance from the hot wire. The "grounded", "identified", or "neutral" conductor must always be identified by a white or natural gray color.'
- d) ' "**Hot Conductor (any wire not a "grounding", or "grounded/identified/neutral" wire** - This is the wire which can be thought of as supplying the current to the appliance. A hot conductor **must** always be provided with "overcurrent protection" (a fuse or circuit breaker) where it receives its supply of electricity. Except in very special cases, not likely to be found in residential construction, a "grounding" or "grounded/identified/neutral" wire **must never be** connected through a fuse or circuit breaker. A hot conductor must always be insulated and may be any color other than green, white, or natural gray. In residential construction, the hot wire is usually black or red.'

1. GROUND FAULT (IMPEDANCE FAULT) (Continued)

There are exceptions to these general, summarized code rules, one of which states:

'When the equipment is supplied by an armored cable or by wires in conduit or tubing, the "grounding" conductor need not be used. In such cases, the metallic sheath of the armor, conduit, or tubing serves as the "grounding" conductor.'

The metal raceway (tubing) acted as the "grounding" conductor in the side stand. Through examination of the raceway in and over the side stand, it was determined that a ground fault condition did exist prior to the fire. The O/Rs observed several loose connections between the junction box connectors and the flexible aluminum raceway. Portions of the raceway were unwound and unconnected. Arcing was observed where the raceway and E.M.T. chase came in contact with each other and where the raceway came in contact with the metal studs.

Box connectors and the flexible raceway did not have a good contact, if any, in certain areas. Poor construction techniques, in the opinion of the O/Rs, contributed greatly to the electrical conditions observed. It was further noted that the paragon timer had stopped at 12:00 midnight. (The O/Rs observed Mr. John Caloggero, National Fire Protection Association, perform a continuity test on the timer contacts; the results indicated the contacts were in an "on" position.) The O/Rs further observed that the extension of the existing raceway was connected to circuit #24 located in panel #1 x KO in the Barrymore kitchen (according to blueprint #E-257), and circuit #24 was protected by a 20 ampere circuit breaker.

'A short circuit is an unintentional connection between a hot conductor and either a "grounding" or "grounded" conductor which results in current by-passing the utilization equipment (appliances, lighting, heating, and so on). If the hot (black or red) conductor contacts the "grounded/identified/neutral" conductor (white or natural gray), a line-to-neutral short circuit occurs. If the hot conductor contacts a "grounding" conductor (bare or green wire), the armor of a BX cable, a metal conduit, a metal water pipe or the frame of a washing machine, a line-to-ground short circuit occurs.'

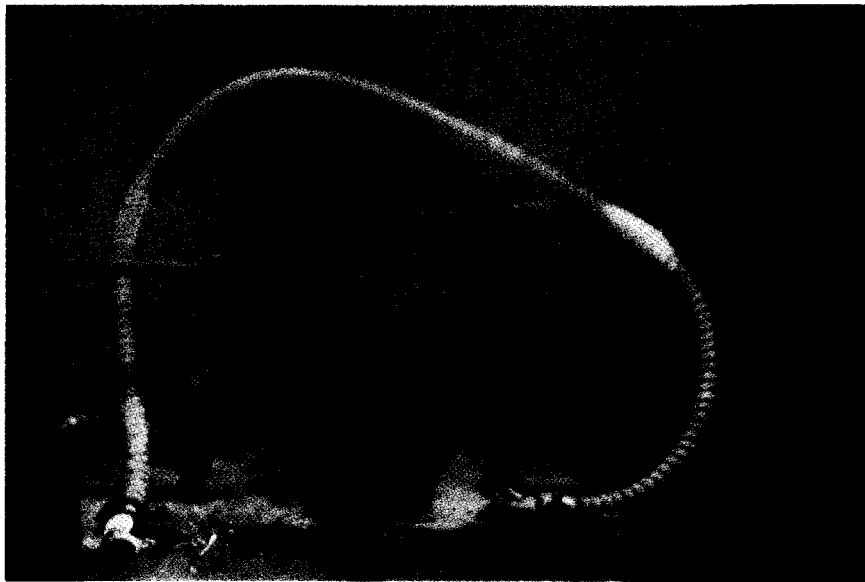
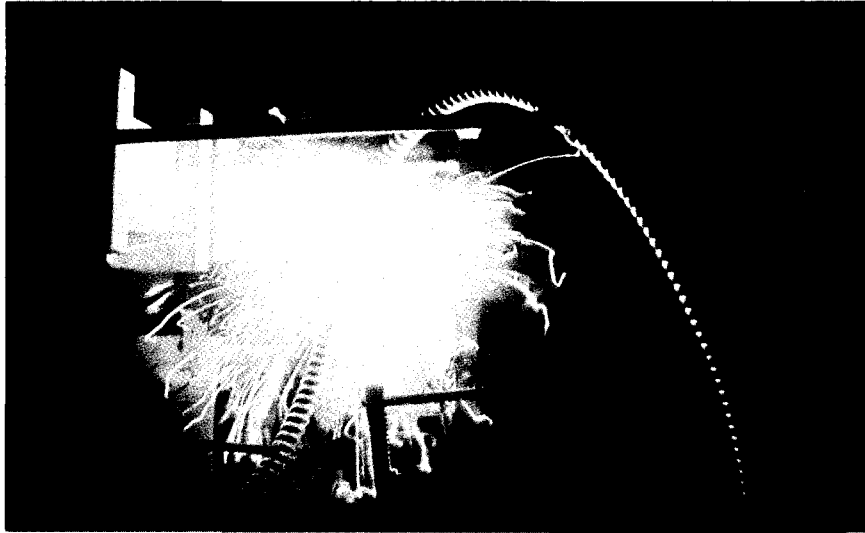
If there is little resistance at the point of the short circuit, the resulting current flow will be very large, probably far in excess of the setting of the Overcurrent Protection (fuses or breakers). Though fuses and circuit breakers open quickly under short circuit conditions, they cannot open instantaneously. As a consequence, there may be some momentary sparking due to the high current flow through poor and/or unintentional connection points in the system. Such sparking may be sufficient to ignite nearby combustibles. Sometimes the short circuit connection will be poor or the "grounding" path connections will be loose. Thus there may be enough resistance in the circuit to limit the short circuit current to a value below the rating of the fuses or breakers, in which case they will not open. Or, the short circuit current may be just at the rating of the fuses or breakers, in which case they may take a relatively long time to open. In either case, the current flow within the system will be much higher than "normal". The fault will continue until either it clears itself or gets worse and causes an ignition.

If the overcurrent protection is set too high for the size of the wiring protected, it is even more likely that the wiring system could become hot enough to cause ignition before the fuse or breaker operates. Occasionally, fuses or circuit breakers fail to perform (are defective) or have been defeated (a penny under a fuse). Under such conditions, the short circuit current will continue until something else opens the circuit, such as the melting of one of the wires or operation of the "main" breaker or fuse, if one is installed.'

It should be noted that information obtained by the O/Rs indicated the raceway in question was added after initial construction was instituted. This raceway does not appear on the original blueprint, and therefore does not reflect the original blueprint or architectural design.

1. GROUND FAULT (IMPEDANCE FAULT) (Continued)

In the opinion of the O/Rs, there is no question that a ground fault occurred. Improper installation and exposure to the warm atmosphere surrounding the raceway caused the insulation surrounding the copper conductors to loosen and deteriorate, exposing the bare copper conductors. Short circuiting occurred in the exposed copper conductors because only two conductors existed (no ground). Installation of the raceway to the junction boxes was faulty, and the ground could not function the way it was intended. The delayed action caused the electrical current to attempt to seek a ground; when it could not find a ground, it caused the copper conductor to become warm and eventually hot. This in turn caused the raceway to overheat to the point of glowing metal. This caused additional heat build up in the area approximately 45 in. from floor level in the soffit area. The lack of proper ground equipment for the conductors to provide a low impedance rate to carry the fault current to trip the breaker allowed a longer period of time for arcing to occur. This arcing produced that amount of heat needed for ignition temperature. Electrical fires can occur even when properly operating circuit protection is installed. As an example, loose connections at termination points can cause this effect.



1. GROUND FAULT (IMPEDANCE FAULT) (Continued)

As stated earlier, a ground fault did occur. As workmen were pulling the copper wires through the aluminum raceway, the wire was stretched minutely. Breaks in the form of "nicks" could have occurred during this pulling process; this small abrasive effect would cause a high impedance over a period of time. As the copper wires would cool, re-heat, cool and re-heat, deterioration would occur, which would induce an unintentional path seeking to complete a circuit, and the entire circuit would become energized.

In most cases, the only way wire can be inserted through a tubular body is by pulling. It is, therefore, common practice for workmen to pull wires through E.M.T. or metal raceways. This, in the opinion of the O/Rs, would certainly cause a minute stretching effect. Pulling the wire over jagged metal, such as those inserts in the metal framing which were not cut by saw, but simply smashed through by a blunt instrument (leaving sharp, jagged edges), would not only damage the plastic insulation on the wire (conductor), but would also pit, chip or scrape the conductor itself.

The pit in the E.M.T. or metallic flow is indicative of an unintentional electrical path.

'Overheating, which is not sufficient to melt the wire or operate the fuses or breakers, may cause breakdown of the wires' insulation. The gases given off by the decomposition of the insulation may be flammable and, if ignited and not concealed, may be the source of the colorful description of "fire racing along the electrical wires".'

As the heat generated by the fault occurred, not only was the raceway "glowing", but arcing and sparking at that point 45 in. from floor level was occurring. Within minutes, open flame appeared.

During the course of this investigation, the O/Rs did observe the raceway in its entirety, except for that portion which had vaporized. No nails, electrical clips or other driven fasteners were observed in or through the raceway. (Metal contact was made, however; details on this contact are put forth in that section below entitled, "Galvanic Action".)

The National Electric Code states that #14 A.W.G. type wire with T/W type insulation should not exceed 140°F. for normal operating temperatures. At higher temperatures, expansion and contraction will cause the insulation to deteriorate (i.e. crack, chip, etc.) and loosen, eventually failing to insulate the conductor. The National Fire Protection Association Handbook, Chapter 2, Page 6, third paragraph states:

"In summary, the science of fire protection rests upon the following principles:

- 1) An oxidizing agent, a combustible material, and an ignition source are essential for combustion.
- 2) The combustible material must be heated to its ignition temperature before it will burn.
- 3) Combustion will continue until:
 - a. The combustible material is consumed or removed;
 - b. The oxidizing agent concentration is lowered to below the concentration necessary to support combustion.
 - c. The combustible material is cooled to below its ignition temperature.
 - d. Flames are chemically inhibited.

All of the material presented in this handbook for the prevention, control, or extinguishment of fire is based on these principles."

2. GALVANIC ACTION

NOTE: The refrigeration compressor unit normally functions with a thermostat; however, it is unknown to the O/Rs whether a thermostat was actually installed or was functioning prior to the start of the fire.

2. GALVANIC ACTION (Continued)

As previously stated, the refrigeration compressor unit was not permanently secured in its compartment under the counter of the side stand. By virtue of its constant operation (excluding the daily 15 minute defrost cycle), certain vibrations occurred. These vibrations were transmitted through the copper tubing which was affixed to the unit. Although minute, the vibrations were present for a period of approximately six years. Where the copper tubing crossed or came in contact with the aluminum raceway, at that intersection approximately 45 in. from floor level, these vibrations would, over a long period of time, cause chafing or scraping of the two metals concerned. The constant motion of the fluid would add credence to the O/Rs' opinion.

Continual contact between the two metals would cause what is known as "galvanic action". The fourteenth edition of the Fire Protection Handbook, published by the National Fire Protection Association, explains the term as follows (Pages 3-127):

"Self-generated electric currents due to galvanic action between different metals in an electrically conducting medium, such as water containing salts, are responsible for corrosion of metal piping, tanks, etc. Whenever dissimilar metals are in contact in the presence of moisture, an effect is produced like an electric battery. The direction of the current depends upon the relative position of the metals in the electromotive series.

The metal higher in the series is gradually dissolved where electrolysis occurs (see table 3-9 B). Galvanic action may occur between different compounds as well as between metals and even between different parts of the same piece of metal or between different forms of the same metal."

Table 3-9 B states, in part:

"...aluminum (AL) carries +1.70 volts, and copper (CU) carries -0.34 volts."

Utilizing the quoted information, the O/Rs concluded the aluminum would corrode or dissolve prior to the copper tubing, exposing the contents of the raceway (those contents being the two copper electrical wires). The void thus caused in the raceway would expose the insulation to its immediate atmospheric temperature. Outside air and heat (atmospheric temperature) not common to the interior of the tubular raceway would be allowed to enter through the hole.

As previously indicated, hot air generated from the constant air movement over the condenser of the Tecumseh refrigeration unit was blown (forced) into a 2 in. x 6 in. hole which was cut into the wall soffit to allow the two copper tubes to penetrate the soffit for return and supply to the pastry cooler. This additional heat, which was constant except for that 15 minute defrost cycle each 24 hours, did add to the heat application into that wall soffit and affected those materials in the soffit, including the conductors, their insulation and the surrounding cellulose materials.

3. OPINION OF FIRE CAUSE

It is the opinion of the O/Rs that not one, but several factors were present which contributed to the cause of the fire, and that the primary cause was electrical.

The area of origin was determined to be the northwest interior corner of the side stand, approximately 45 in. from floor level, in the soffit of the west interior partition, or, in general, below and to the west of the pastry display case. Hot air flowing over the condenser as a result of the fan blowing across the coils, preheated those common combustibles in and around the soffit area, thus lowering their ignition temperatures. The galvanic action (which was aided by the minute vibrations caused by the normal operation of the refrigeration unit) occurring at that intersection of the raceway and the copper tubing exposed the copper insulated wires. The pulling and, therefore, stretching of copper conductors caused nicks, which in turn caused an impedance. Improper installation allowed the aluminum body to come in contact with the copper body of the energized conductor, thereby allowing the aluminum body to become a part of the energized conductor, which caused a ground fault to occur; this created the glowing (hot) effect of the raceway.

3. OPINION OF FIRE CAUSE (Continued)

There was a time factor of approximately six years, during which an endothermic condition evolved into an exothermic action. As the wood and other combustible materials began emitting those gases or vapors needed for a fuel substance, pyrolysis was occurring at a faster rate, and as the gas evolution continued, those gases did ignite from the arc caused at that defined area of origin. Inasmuch as the soffit and related areas were constantly preheated, this enabled the ignition temperature to be easily reached, not only in that small area, but in the larger area, that being the entire area presented by all materials in the soffit and partitions. When ignition did occur, it consumed those preheated combustibles, and as the fire progressed it spread upward and outward, preheating and consuming those other combustibles in its path and spreading into the ceiling area of the Deli and plenum above.

The O/Rs concur that the fire did start and propagate as a result of a ground fault caused by a combination of poor workmanship (electrical wire installation); galvanic action; failure to insulate the full length of copper tubing; allowing an aluminum raceway to come in contact with the copper tubing; the application of heat over a period of time; vibrations in the copper tubing; and improper installation of the metal raceway to the metal junction boxes.

According to witnesses, open flame did appear at approximately 0713 hours. It is the opinion of the O/Rs that actual flame was present in the wall soffit area at approximately 0700 hours, and perhaps earlier. Those products of incomplete combustion and fire were filling the atmosphere in the plenum above the Deli via the 24 in. x 24 in. air transfer grill in the Deli ceiling. (For fire and smoke spread, see related sections below.)

H. FLAME SPREAD

Oxygen and heat were present to form the fire triangle and, as with any fire, this fire sought fuel. As it spread upward and outward from the upper wall of the side stand, it preheated those combustibles with which it came in contact, igniting them and continuing to propagate throughout the Deli. It consumed the ornamental decorations which adorned the walls, and the decorative boxes (which gave the appearance of open beams) which were common throughout the Deli ceiling. The flames consumed the gypsum wallboard and acoustic tile which covered the ceiling over the booths and main floor of the Deli, as well as the gypsum wallboard and assorted wood veneer paneling and wall coverings which overlaid the metal stud construction of the walls.

Heat travels in three ways, one of which is radiation. Energy moves through space as a wave, which travels at the speed of light. Upon arrival at the combustible body, the waves are absorbed into that body. On the floor of the Deli were numerous ornamental and fixed furniture articles. These articles were constructed of wood base, covered with polyurethane material, polyvinyl plastic, and other highly volatile materials which emit large volumes of heat and thick, dense concentrations of carbon and other products found in combustion and smoke. When ignited from the radiation exposure, this surface fire load (which occurred from the ceiling downward) was equally responsible for fire propagation.

The same articles of furniture and ornamental fixtures were common throughout the casino area. The covering on the walls of the Deli consisted of several layers of wall coverings such as veneers and wood paneling, which included plywood and plastic laminated materials. Crap tables, "21" tables, and other related gaming paraphernalia were constructed of wood frames with coverings of plastics and felt. The slot machines, although mostly constructed of metal, had numerous plastic components. In lieu of money, the casino used a money exchange system which consisted of plastic type coins. The total combination of these plastics, woods, and other common combustibles at floor level constituted and developed flame spread in these areas.

Twelve inch square acoustical tiles were affixed to the wallboard of the ceiling. Assorted wall coverings, ceramic tile, wood, plastic ornamental trim, flocked wallpaper, and numerous picture frames embellished the walls. There was wall-to-wall carpeting with pad; the booths and chairs were covered with polyvinyl type material, as was the bar. Tables were butcher block type construction with laminated plastic tops. Other furniture was covered with a buttercup perforated cloth material.

H. FLAME SPREAD (Continued)

Each of the ceiling tiles were affixed to the wallboard by a glue type adhesive. This adhesive was placed on all four corners of the 12 in. square tile to a depth ranging from 1/4 in. to 5/8 in. When the tile was placed or set to the wallboard ceiling, a void or space was left between the tile and wallboard. (Open flame tests were conducted on the tile adhesive by the O/Rs. Flame propagation was supported; thick black smoke emitted as a result of this combustion.)

An article from "Operation School Burning", published by the National Fire Protection Association, based on tests conducted by the Los Angeles Fire Department, states on page 29:

"Cellulose Fiber Acoustical Tile

14. Cellulose fiber acoustical tile (classified Class C under U.S. Federal Specification SS-A-118b and commonly known as "slowburning") resulted in a very rapid fire spread when ignited. This constituted a distinct hazard in that it was the means by which fire could be readily transmitted throughout the building endangering all portions and persons therein. The rapid flame spread characteristic of the tile can be reduced with the application of a fire retardant paint (Underwriters' Laboratories, Inc., listed).

The cellulose fiber tile ignited at temperatures from 700 degrees to 800 degrees Fahrenheit and the flame progressed with a "wave-like" action for a few minutes, then suddenly developed a deep (3-foot to 5-foot) flame front that spread with such rapidity (5 to 10 feet per second) that observers fled their posts. In one demonstration fire (not included in this report because it was not part of this series) the flame spread rapidly over the surface of the cellulose fiber acoustical tile even though the ceiling was broken into bays, 5 feet by 5 feet in size, separated by ceiling beams 2 feet in depth."

NOTE: Because no other information is immediately available on typical cellulose material, the O/Rs offer the above quote as clarification of the flame spread believed to have occurred at the MGM; the cellulose fiber tile used at the MGM is believed to be the same tile as that described above. (For further details on flame spread, see report by David Demers, National Fire Protection Association, and Tom Klem, United States Fire Administration.)

As noted, the refrigeration compressor operated almost constantly. One of the principles of its operation was to allow the Freon 12 to be cooled in a condenser which was attached to the unit. This condenser was located at the west portion of the unit. This condenser was located at the west portion of the unit, or that area nearest the west wall of the passageway of that area described as the area of origin (that same area where the 2 in. x 6 in. hole in the soffit was located). The O/Rs learned that the fan which controlled the flow of air over the condenser also pushed air in a westerly direction toward this hole or cut through. The temperatures which were emitted from the condenser ranged from approximately +120° to +180°. This heat had to be dissipated into the atmosphere. The physical location of the compressor/condenser limited the freedom of air flow, and restricted most of it to the space in and under the counter, in particular that hole or cut through in the soffit. The air flowed continually upward through the soffit space, following not only the partition void, but the raceway and copper chase as well.

In order to understand the manner and probability of ignition from low temperature heat sources up to approximately +800°F, several factors must be considered. Besides the combustibility of the fuel load, there is the insulation factor created by the density and depth of the fuel (example: the thickness of the wood), the duration of the exposure to the heat application, and ignition temperature. The fuel being present, the oxygen being present, and the insulation factor being not only the combustible materials but a steady, constant flow of preheated air, only the exposure to heat and to ignition temperature have to be determined. (For these ignition temperature figures, see that information supplied by the testing laboratories to which certain sections and pieces of materials were sent for testing per request by the Clark County Fire Department.)

When constant heating is applied, the material absorbs oxygen rapidly and has a tendency to not only absorb heat (endothermic action) but to then release heat (exothermic action). This is a form of oxidation which, in fact, decomposes material, and a certain heat buildup occurs which, at the MGM, was trapped in the soffit and partition spaces. This heat buildup will continue until either flame (ignition temperature) is introduced, or all products of combustion are removed either by consumption or by physical force. This preheated condition, coupled with an ignition source (such as flame, arc, etc.) over a sustained period of time can and will propagate flame. The continuous heat causes moisture loss and a higher susceptibility to ignition and flame spread.

H. FLAME SPREAD (Continued)

An understanding of the above phenomenon reveals another factor contributing to the cause and spread of this fire. The entire wall space; the wooden enclosure of the pastry display case; the soffit area above the counter top and under the counter top in the area of the refrigeration unit; the wall soffit itself; any and all combustible materials in and on the general walls or partition areas of the side station (and including that ceiling area of the side stand) became heated to the extent which over the years reduced the ignition temperature to a point low enough to allow the continuous warm atmosphere to preheat them and cause them to remain heated, waiting for an ignition source.

The copper insulated wire located inside the exposed raceway was also preheated, breaking down slowly as oxidation took place, and its ignition temperature was reduced.

As the fire spread upward and outward from the walls of the side stand, it preheated these combustible materials, spreading throughout the ceiling area. The fire broke through the ceiling area in the plenum above the Deli. The plenum, which was nothing more than a gigantic air return measuring approximately 8 ft. to 16 ft. in height (depending upon actual ceiling height), continued not only over the Deli, but also the Orleans Coffee Shop, the Barrymore Room, into and including the casino area and the entire hotel. Total footage was approximately 1,300,000 square feet; that is, the entire length and width of the hotel and casino.

The plenum fed into numerous air handling systems. There were three air units that controlled the air flow over the area of origin; each was capable of producing 450,000 cubic feet of air per minute. These units not only controlled the air flow of the Deli, but also the coffee shop, Barrymore Room, casino, arcade level, and hallway which proceeded east to the Jai Alai area, as well as the air returned from the main floor elevator foyer and eventually the stairwells.

As the fire progressed in the Deli, the ceramic tile on the walls first became a reflective shield for open flame; it then acted as a blanket (having an oven effect), affecting the fire in the east and south areas of the Deli, and contributing greatly to the direction of fire flow. As the fire increased in magnitude, the adhesive on the ceiling tile was preheated and in turn consumed by the progress of the fire. The air space between the ceiling tile and dry wall not only was preheated, but contained normal atmospheric oxygen which supported the combustion process. The ceiling area of the Deli was approximately 44 ft. wide and 82 ft. long, or approximately 4,000 square feet. Because of the ceramic shield, air flow from the decomposed air duct work, the adhesive on ceiling tile, and combustible materials in the Deli itself, the fire progressed in a westerly direction, seeking not only fuel, but added oxygen. The fire then vented through the front doors of the Deli, which had been closed during the earlier stages of the fire, but were opened by an employee when he attempted to extinguish the fire.

With virtually all of the fuel load in the Deli being consumed, fire breached the wall separating the Deli and the Orleans Coffee Shop via the mini-bar that supplied beverages to each restaurant. This mini-bar had a door on both the south and north ends to permit ingress and egress of the employees. The fire then spread into the west foyer leading into the casino. The ceiling height in this foyer was approximately 9 ft., which had a bottle neck effect on the fire's propagation, slowing it slightly. The fire then, with full force, swept into the casino.

In that area north of the casino level, certain offices are located, which include the security offices. No fire spread or propagation entered these offices, although smoke spread was very heavy. The O/Rs concluded that the flame spread was terminated at ceiling level due to the manner in which the ceiling tile was butted up to and against the wall and the fact the fire rated door held. At that intersection of the wall and ceiling tile, it was observed the wall extended upward several inches past the ceiling tile. It did, in effect, act as a barrier; as the flame propagated across the ceiling tile consuming the available fuel and oxygen, it stopped abruptly at this wall.

As previously indicated, adhesive had been placed on each corner of every ceiling tile; each patch of adhesive weighed a minimum of 1 ounce, which would equal 4 ounces per tile. The ceiling area of the casino was approximately 15 ft. high by 176 ft. wide by 576 ft. long (approximately 101,500 sq. ft.). A total of 4 ounces of adhesive affixed to each square foot of tile throughout this area would equal 406,000 ounces, or 23,375 pounds. This is equivalent to over 12 tons of adhesive. (Note: the Deli ceiling contained approximately 1,000 pounds of adhesive.) As the fire progressed in the casino at ceiling level, vast amounts of black smoke were emitted; the fire spread vertically as well as horizontally into the casino, then spread downward to preheat and consume those combustibles in its path.

H. FLAME SPREAD (Continued)

It is the belief of the O/Rs that a phenomenon known as "flashover" occurred at this time. According to the fourteenth edition of the National Fire Protection Handbook, Chapter 6, page 45, contributing factors of flashover are:

"Flashover is now believed to be caused by thermal radiation feedback from the ceiling and upper walls, which have been heated by the fire. This radiation feedback gradually heats the contents of the fire area. When all the combustibles in the space have become heated to their ignition temperatures, simultaneous ignition occurs.

Interior finish plays an important role in the occurrence of flashover. An interior finish that absorbs heat readily and holds it, as an insulator would, might reduce the time to flashover. If the finish material is combustible, it will also be a source of fuel for the fire. Considering the nature of thermal radiation, the size and shape of the space in which the fire occurs becomes a critical factor."

Simply stated, flashover is when there is an excessive buildup of heat and gases from the fire itself, and all combustible materials are heated to their ignition temperature, simultaneous ignition occurs, and the area becomes fully involved in fire.

Within 6 minutes of the time of discovery, the total casino area was involved in fire, at a burning rate (fire spread) of approximately 15 to 19 feet per second. The fire literally blew out the west doors of the casino, preheating and consuming the combustible materials in the canopy area (that area where hotel guests are escorted to the main entrance of the casino; and where valet parking and luggage control are handled).

As the fire spread through the casino, it consumed a protective plywood covering that was constructed at the bottom level of a stairwell (identified as stairwell #W-2) which separated the plenum area above the casino level from the fifth floor landing of the smokeless stairwell, at the west end of the high rise. The consumption of this "protective" plywood covering allowed the superheated gases and smoke to travel up this stairwell, and the fire followed. The fire did not actually propagate in the stairwell past this fifth floor opening, as there were no combustibles in the smoke proof stairwell.

That area to the north of the Deli, east of the "T" intersection of the building itself, casino level, did sustain severe fire decomposition. Directly over the Deli, above the plenum, the fifth floor level of the hotel high rise begins. The fire consumed the entire ceiling of the Deli, thus exposing the entire plenum; heat from the fire spread to those combustible materials in the plenum, and portions of the roof over the Deli and Barrymore Room were decomposed. The fire extended vertically through an opening in the gravel splash guard on the west side, at roof top level (see Diagram Q, Section VI). Curtains, drapery, carpeting, and wall coverings in Rooms 575 and 577 sustained minor fire damage. Because firefighters were in the area of origin extinguishing the fire, steam from the water application followed those air currents and the path of the fire into and through the roof area, where it extinguished the fire which had extended to those guest rooms.

If extinguishment had not occurred as promptly as it did, a high rise fire would surely have ensued.

The fire also spread horizontally into those hallways which contained the passenger elevators. Heat, smoke, and fire were drawn into the elevator shafts and the elevators themselves, consuming common combustibles and extending up the elevator shafts. The metal cables were heated to such a degree that they weakened and stretched; this stretching action caused the cables to snap, resulting in the fall of two elevators from the main casino level to the basement. This released the counter weights, which then fell and crushed the elevators. The elevator doors were not tightly sealed, and a gap of approximately 1/2 in. to 3/4 in. was therefore exposed, which allowed heated gases and fire to enter the elevators and elevator shafts.

The fire spread east in the hallway which extends into the Jai Alai area; it was stopped and extinguished by activated sprinklers. Doors to the convention rooms in this area were closed, and no fire extension occurred in these rooms. That area directly above this hallway, between the ceiling and fifth floor level reinforced steel/concrete decking (which is an extension of the plenum area), sustained moderate to heavy fire and heat damage. Numerous holes in the gypsum wallboard were observed in various places approximately 9 ft. above floor level throughout this hallway. These holes or voids were man-made; they were not caused by the fire spread. It was through these construction cutouts that additional heat and smoke spread upward into the plenum and spread throughout the plenum and staircases.

H. FLAME SPREAD (Continued)

Metal trusses, which supported that roof area over the Deli and the Barrymore Room sagged, bowed and twisted from the heat of the fire. The flooring in that area had a camber of at least 18 inches.

The plenum over the casino had several large A.B.S. (Acrylonitrile-Butadiene-Styrene) plastic pipes which were used for rain drainage from the casino's flat roof. These lateral pipes, two of which were 12 in. in diameter, when exposed to heat or flame would in themselves produce products of combustion, adding to the fuel and smoke level. Copper wire insulated with plastic coating would also contribute to the fire load and generation of toxic gases. It is estimated by the O/Rs that an abundance of electrical wires were in this area; exceeding hundreds of miles.

"Crystal" chandeliers were not crystal, but plastic, as was the majority of wood grained ornamental molding and trim. These, and virtually everything that was combustible in the Deli, the Orleans Coffee Shop, the casino, elevator lobbies, and the surrounding area was consumed by the progress of this fire. It is, therefore, difficult to describe the damage done to this building by the fire; video tapes and photographs of the affected areas effectively convey the magnitude of this fire's destruction.

I. SMOKE SPREAD

The smoke spread did not follow or adhere to that path taken by the fire, but followed that path or avenue of air currents of least resistance, which would allow it to penetrate into small and large areas equally, some distance from the fire. The smoke had been slowly building for quite some time in the area of origin (see Diagram D, Section VI). Throughout years of exposure to slow heat, the oxidation and exothermic processes constantly emitted a slight odor in some form of by-products. However, due to the immense size of the plenum, the numerous air handling units, and those deodorants used in housekeeping practices, this smoke would have been virtually impossible to detect. These by-products were entering the atmosphere of the plenum through the wall void, and eventually through the air return duct in the plenum, which was located in the center ceiling of the side stand. For several hours before the actual sighting of the flame, this smoke accumulation was recycling through the plenum, gradually building in volume and pressure. The by-products were flowing toward upper levels through air currents and the exothermic atmosphere created by the smoldering fire. As the smoke filled the area above the plenum, it began to spread horizontally, seeking a place for its warm gases to escape. It is believed that the smoke filled the area above the plenum, it began to spread horizontally, seeking a place for its warm gases to escape. It is believed that the smoke filled every conceivable space and rose upward at every opportunity. As the combustion process continued, the heat and pressure build up intensified. It is difficult to state exactly where the smoke traveled first and to what degree, but it did enter those spaces in the seismic joints at the "T" of the hotel's construction on the east side as well as the west side. It followed pipe chases and open shafts, in particular those pipe chases that were not properly sealed, and open shafts that were cut through with access holes.

Since the hot combustion products from a fire are less dense than the surrounding air, they rise; in so doing they entrain cold air, which then becomes heated and contaminated. Usually, it is this mass that actually produces a pressure buildup and causes those hot gases to flow outward progressively.

Ventilating a fire, which is a planned systematic removal of smoke, heat and fire gases from the building, is an important fire department function. It involves providing openings through roofs and walls to permit the escape of heat and smoke. The fire department, upon their initial arrival, did not have any idea of the magnitude of the smoke problem. When they arrived, unknown to them, smoke was already venting from the southeast intersection of the "T" at the 24th floor area. This intersection was completely hidden from view of the first-in engine company. It should be noted that neither the intersection nor the smoke venting from that area were visible at any point between Station 11 (that station directly across the street from the MGM Grand Hotel, north entrance, from which the first-in company responded), and the point of arrival of the first-in company.

Natural air movement in any building, especially when on fire, is restricted by size, shape and natural draft conditions; it is also influenced by weather conditions. Fortunately, the wind was calm and had no direct effect on the ventilation of the MGM. Weather conditions for November 21, 1980, as posted at McCarran International Airport, Las Vegas, Nevada, were:

(Continued on following page)

I. SMOKE SPREAD (Continued)

Time	Temp. (°F)	Wind Direction	Wind (Knots)
0700	38	W/S/W	6
0800	42	NS	5
0900	52	--	calm
1000	56	--	calm
1100	58	NE	5
1200	61	E	5
1300	62	SE	5
1400	64	--	calm
1500	64	NE	5
1600	63	NW	5

During a fire in a confined space or building, the atmosphere in the room builds up pressure as the temperature increases. During a fully developed room fire, the pressure may rise by as much as 0.1 or 0.2 inches of water. The temperature in a room fire with ordinary combustibles will reach as high as +2,000°F. In this particular fire, temperatures exceeding +2,800°F were very probable. Even though the displaced gases eventually cool to the ambient temperature, the effect of the expansion does not dissipate. As that flow of hot gases continues, as in this fire, the displaced gases do not have an opportunity to cool, and as a result continue to rise, expanding throughout the building.

Smoke is matter, consisting of very fine (and in some instances, large) particles of condensed vapor. Fire gases from common combustibles contain numerous elements known to man, such as water vapor, carbon dioxide, carbon monoxide, methane, methanol, formaldehyde, formic and acetic acids. These gases are usually evolved from the combustible with sufficient velocity to carry with them droplets of flammable tars which appear as smoke. Particles of carbon (referred to as hydrocarbons by the O/Rs) develop from the decomposition of these tars.

While the heat and toxic qualities of fire gases can be injurious or fatal, the solid and liquid particles in suspension in the gases also have harmful effects. They can obscure the passage of light, thereby blocking visibility of exits and exit signs, and can render the human senses useless in an unbelievably short time. Deposits of these hydrocarbons will adhere to surfaces or drift and filter downward like falling volcanic ash. Evidence of this was quite clear throughout several of the rooms in the high rise area, as well as the casino level. Those stairwells in the center portion of the building, in particular, sustained an unusually heavy amount of deposits of this hydrocarbon material. Filters in the rooms nearest the center "T" portion of the building were saturated.

The filters in the air handling units which adjoin in the plenum area over the casino were heavily impregnated with hydrocarbons. When portions (at random) of these filters were removed for evidence and photographed by the O/Rs, piles of this black mass were visible on the floor where they had fallen from the filters.

The smoke entered wall spaces indiscriminately, as was evidenced in the fixture pipes that protruded into the shower stalls of the guests' rooms. Black carbon deposits were visible in several of the rooms at the fixture locations.

A "stack" effect is characterized by a strong draft from the ground floor to the roof of tall buildings, which, in effect, pulls the smoke and gases upward. Evidence of this effect was the tremendous volume of smoke and gases which entered the stairwells and elevators.

As the smoke rose upward, guests of the hotel became alarmed by its odor and pressure. (It should be noted that, to the guest who would have been listening to news broadcasts of the progress of the fire, it would have sounded as though the entire hotel was being consumed by fire. Certainly, some of the guests left their rooms fearing for their lives.) Some individuals left their rooms to attempt to exit into either the stairwells or elevators. By opening the stairwells, smoke was further pulled into the hallways, adding to the smoke spread.

I. FLAME SPREAD (Continued)

Contributing greatly to this problem was the fact that numerous smoke dampers in the air handling ducts of the heating, ventilation and air conditioning (HVAC) units did not function properly. When the fusible links activated (as they should at their preset heat capacity), the dampers did not close properly. Dampers in the main unit over the casino were, in fact, bolted in such a manner as to make them inoperable, thus allowing the heated gases and smoke to continue to spread throughout the entire plenum and building. An example of the smoke pressure that was definitely present and contributed to the large loss of life and the number of injuries was seen when the main doors at the west entrance of the building were literally blown outwards into the parking area under the canopy.

J. CONCLUSION

It is the conclusion of the O/Rs that the fire at the MGM Grand Hotel/Casino which claimed the lives of 85 persons and injured more than 700, and caused damage that will probably exceed \$30,000,000, originated in the wall soffit of the side stand in the Deli.

The primary source of ignition was an electrical ground fault; other contributing factors were galvanic action caused by the chafing or scraping of the two metals when the aluminum raceway continuously came in contact with the copper tubing; vibrations of the tubing due to improper installation of the compressor; failure to insulate the copper tubing; the constant preheating of flammable material, which occurred over the years as warm air was forced into the soffit cavity; poor connections of the metal junction boxes to the raceway; and those contributing factors of the ground fault itself.

Fire spread through the casino at 15 to 19 ft. per second due to a "flashover" involving plastic ornamental fixtures, wall coverings, furniture and those common combustibles located throughout the area. The adhesive utilized to affix the acoustic ceiling tile, and the tile itself, as well as the polyurethane materials and polyvinyl products, were contributing factors to the dense volume of smoke. Smoke spread via the plenum, stairwells and elevator shafts, as well as through the HVAC units and seismic joints.

Elevators fell when their doors opened at the casino level and they were exposed to rapid flame buildup; flames propagated into the cars themselves, causing the steel cables to stretch and finally fail. Their failure allowed the counter weights to fall and crush the cars.

None of the physical evidence examined or impounded by the O/Rs was tampered with, changed or altered in any way, excluding that evidence which was sent to N.B.S. and U.S.F.A. for testing purposes which obviously would be altered during testing procedures. In the professional opinion of the O/Rs, all findings put forth in this report are true and accurate.

Wm. Mike Patterson

Wm. Mike Patterson, Captain
Fire Investigation Division
Clark County Fire Department

3/30/81

Date

Lorne Lomprey

Lorne Lomprey, Captain
Fire Investigation Division
Clark County Fire Department

3/30/81

Date

Wayne Burns

Wayne Burns, Captain
Fire Investigation Division
Clark County Fire Department

3/30/81

Date

SECTION VI
DIAGRAMS AND DRAWINGS

SECTION VI

DIAGRAMS

Included in this section are those diagrams and drawings presented by the members of the Fire Investigation Task Force. These sketches are not drawn to scale; all measurements are approximate.

The diagrams should be used as reference points and for placement of items and areas described in Section V, Fire Scene Examination. They depict the area of origin, point of origin, and the MGM Grand Hotel/Casino in general.

- Drawing A Deli floor plan, with approximate measurements.
- Drawing B Casino and showrooms floor plan.
- Drawing C Restaurants and meeting rooms floor plan.
- Drawing D Deli floor plan, with seating arrangement.
- Drawing E Detail showing tubing and raceway between cupboard and west partition in side stand #2 in the Deli.
- Drawing F North wall from inside side stand #2 in the Deli.
- Drawing G A cutaway drawing of the north wall of side stand #2 in the Deli, looking in an easterly direction.
- Drawing H A top view of side stand #2 in the Deli.
- Drawing J The northwall of side stand #2 in the Deli, looking in a southerly direction.
- Drawing K The east wall of side stand #2 in the Deli, looking in a westerly direction.
- Drawing L The east wall, north wall, and ceiling area in side stand #2 in the Deli, looking down in a southwesterly direction.
- Drawing M Front and back views of pastry display case in north wall of side stand #2 in the Deli.
- Drawing N Top and bottom views of pastry display case in north wall of side stand #2 in the Deli.
- Drawing P The ceiling of the Deli, showing the approximate layout of the false beams.
- Drawing Q Typical floor plan of floors 5 through 22 in the high rise of the MGM Grand Hotel/Casino, Las Vegas, Nevada.

NOTE: *There are no drawings designated "I" or "O" in order to lessen the possibility of confusion with the Roman Numeral I (one) and the number 0 (zero).*

M.G.M. GRAND HOTEL Deli Room

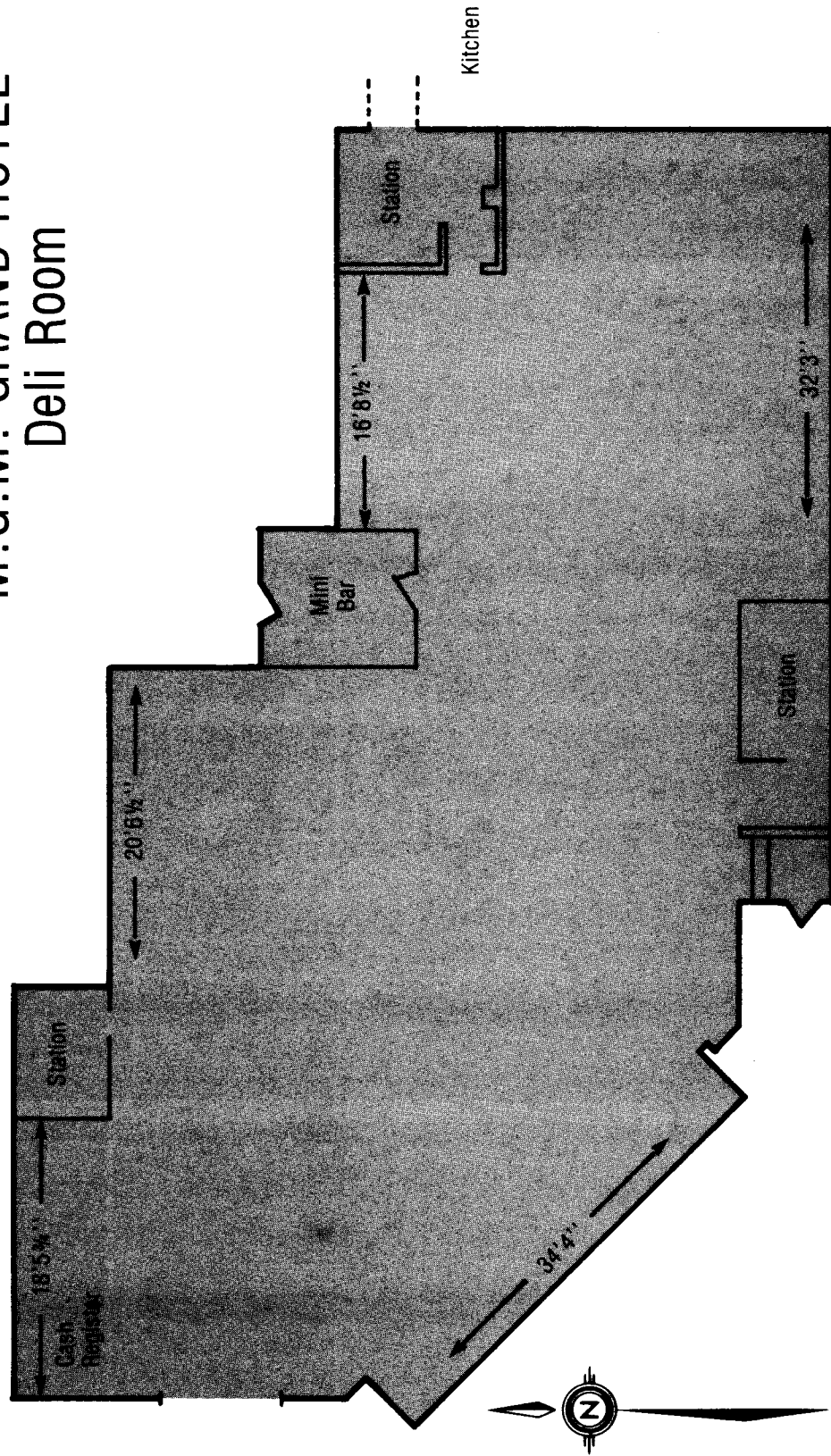
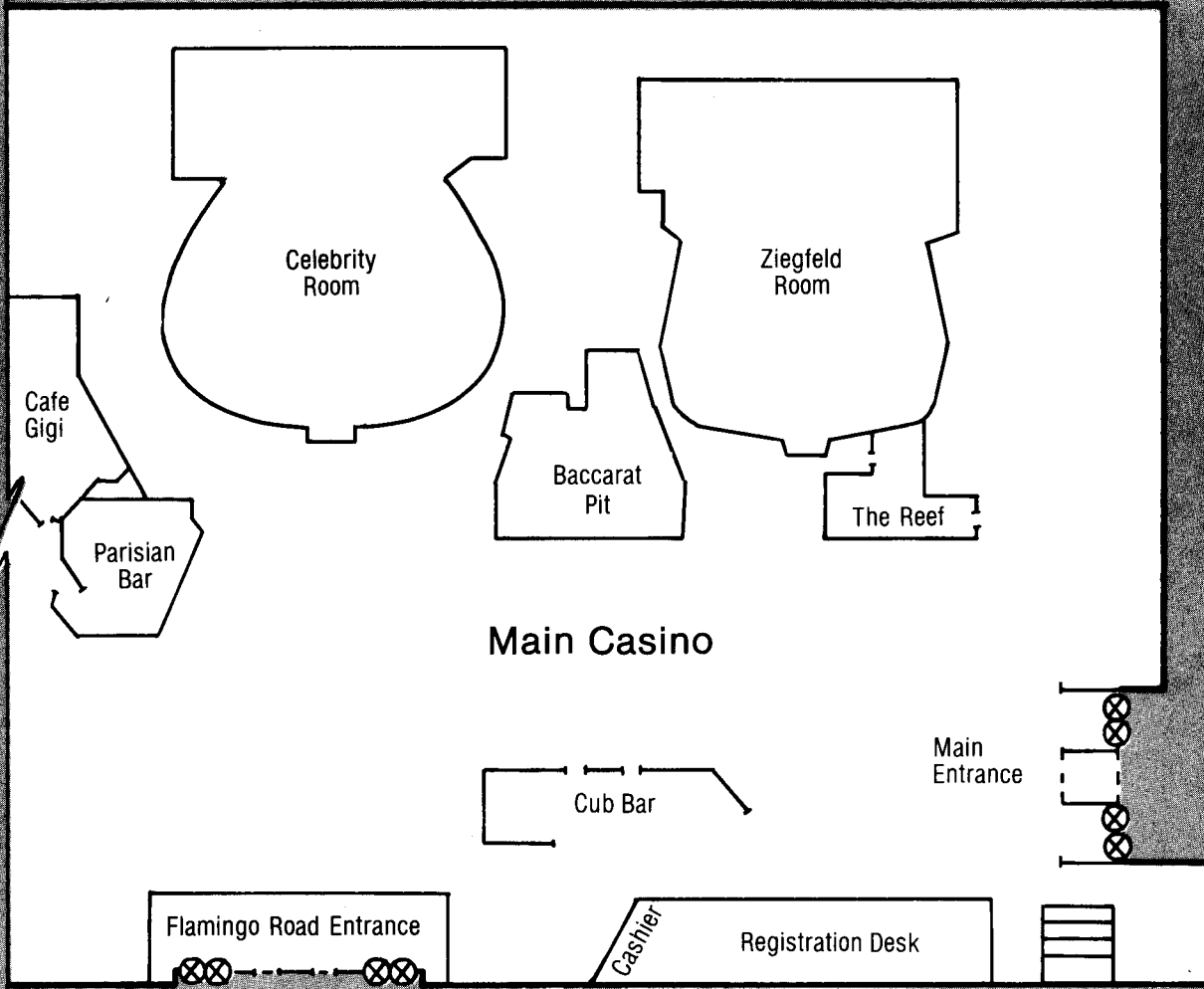


Diagram A

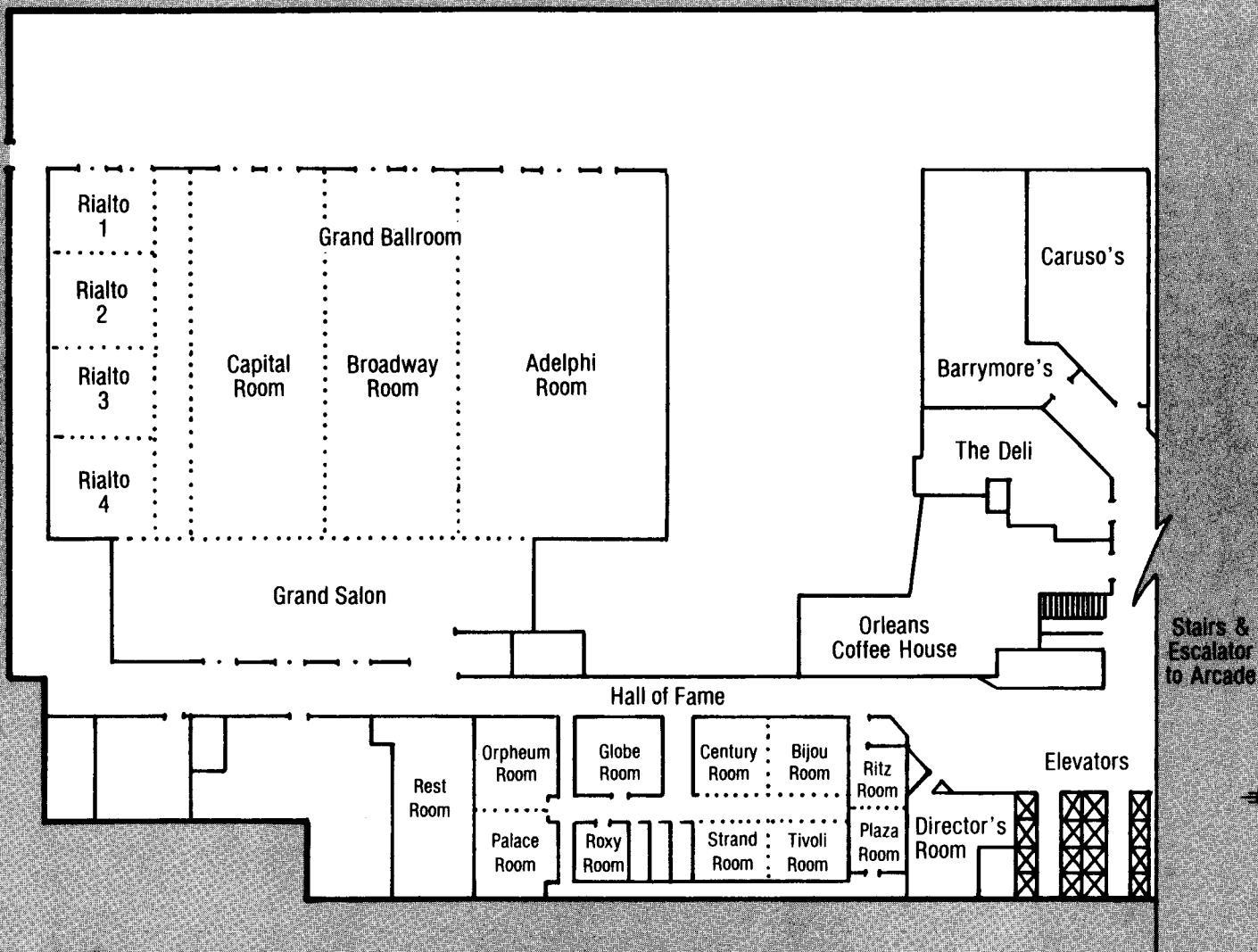
CASINO and SHOWROOMS



VI-4

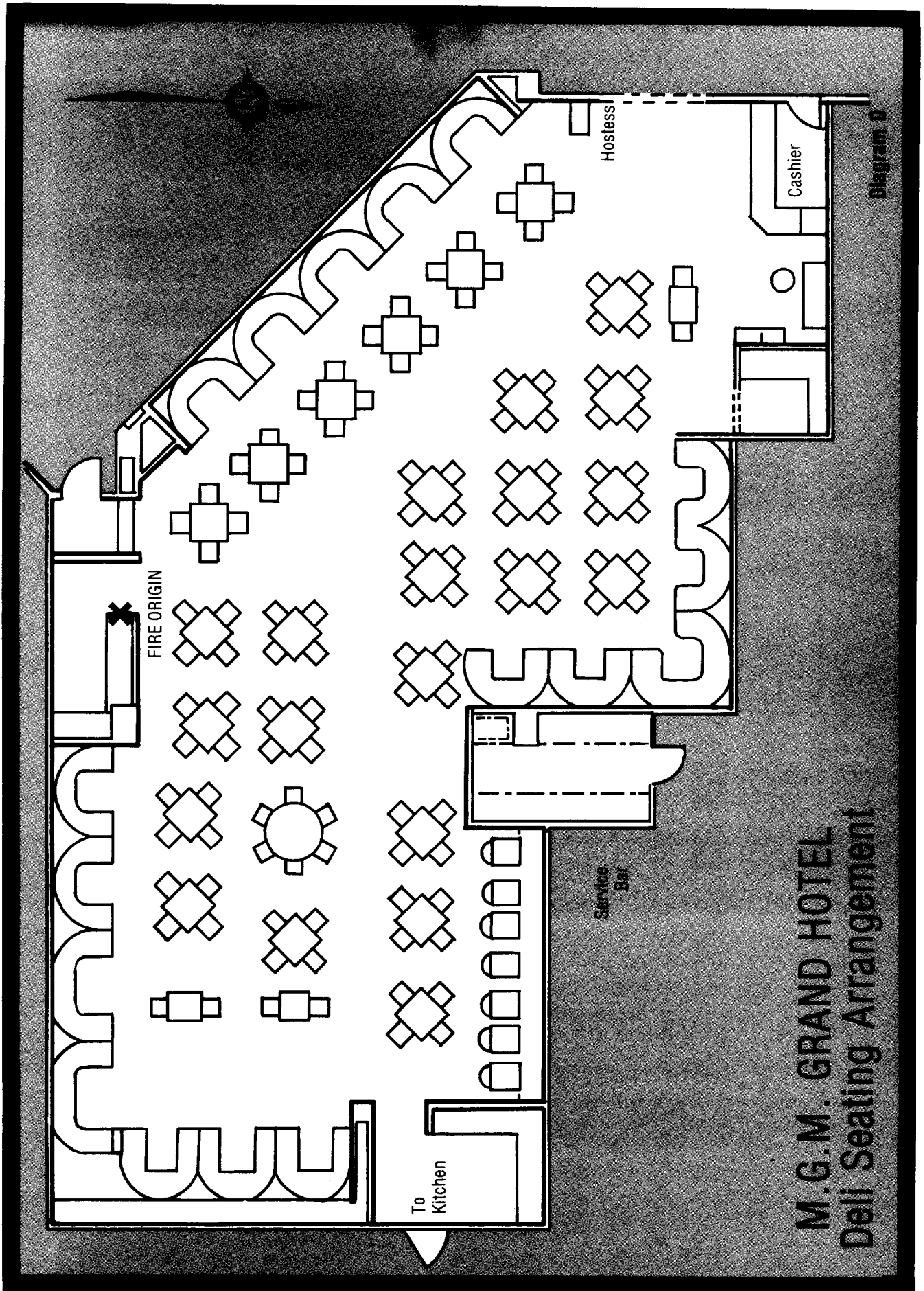
Diagram B

RESTAURANTS AND MEETING ROOMS



S-1A

Diagram C



M.G.M. GRAND HOTEL
Deli Seating Arrangement

Diagram D

DETAIL OF TUBING CASING Side Stand #2

3/4" Flexible Aluminum Raceway
disintegrated from approximately 42"
from floor to approximately 78" from floor.

Bead on 1/4" Tubing
approximately 45" from floor

Insulation encompassing both
copper refrigerant lines stops
approximately 40" from floor

COMPRESSOR

3/4" Flexible Aluminum
Raceway behind compressor

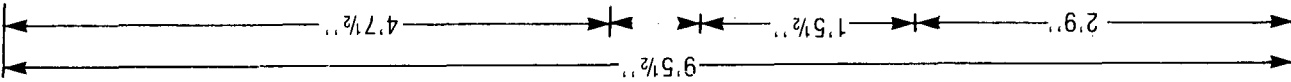
Diagram E

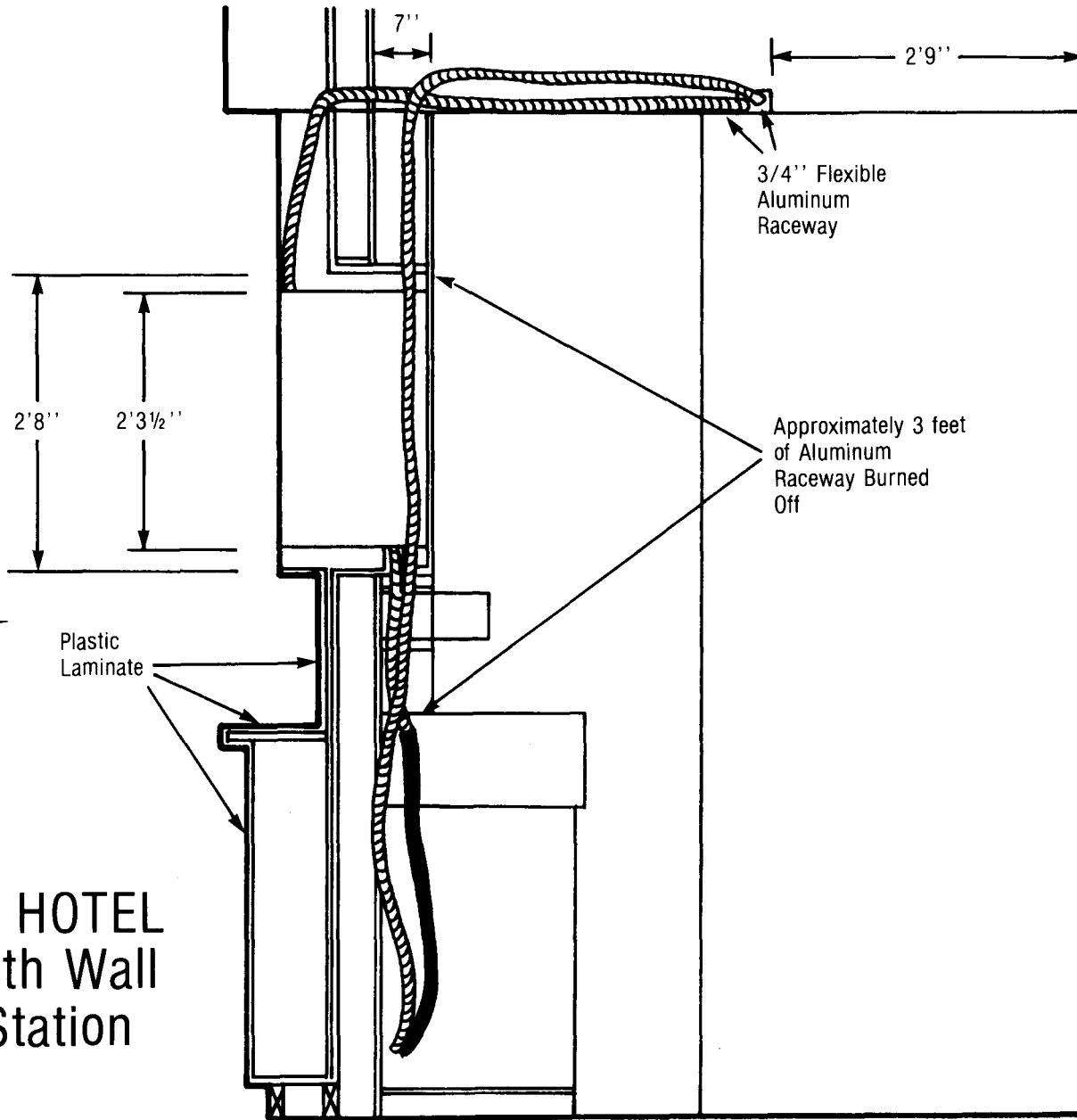
North Wall Side Stand #2

3/4" Plastic Laminated Plywood

Copper Tubing to Compressor

3/4" Aluminum Raceway





M.G.M. GRAND HOTEL
Cutaway of South Wall
Deli Bus Boy Station

Diagram G

M.G.M. GRAND HOTEL Deli Bus Boy Station Top View of Electrical Circuits

VI-10

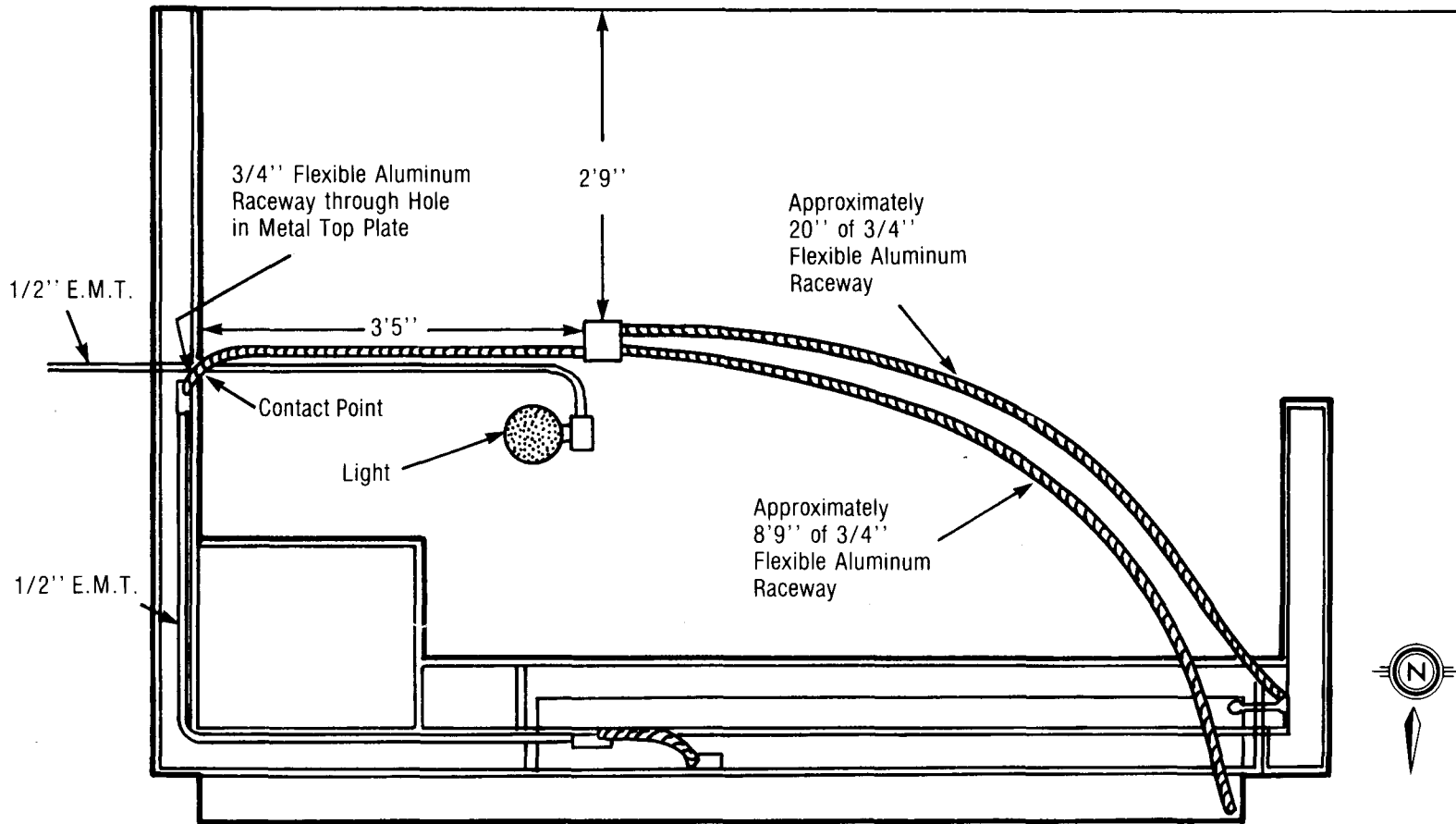
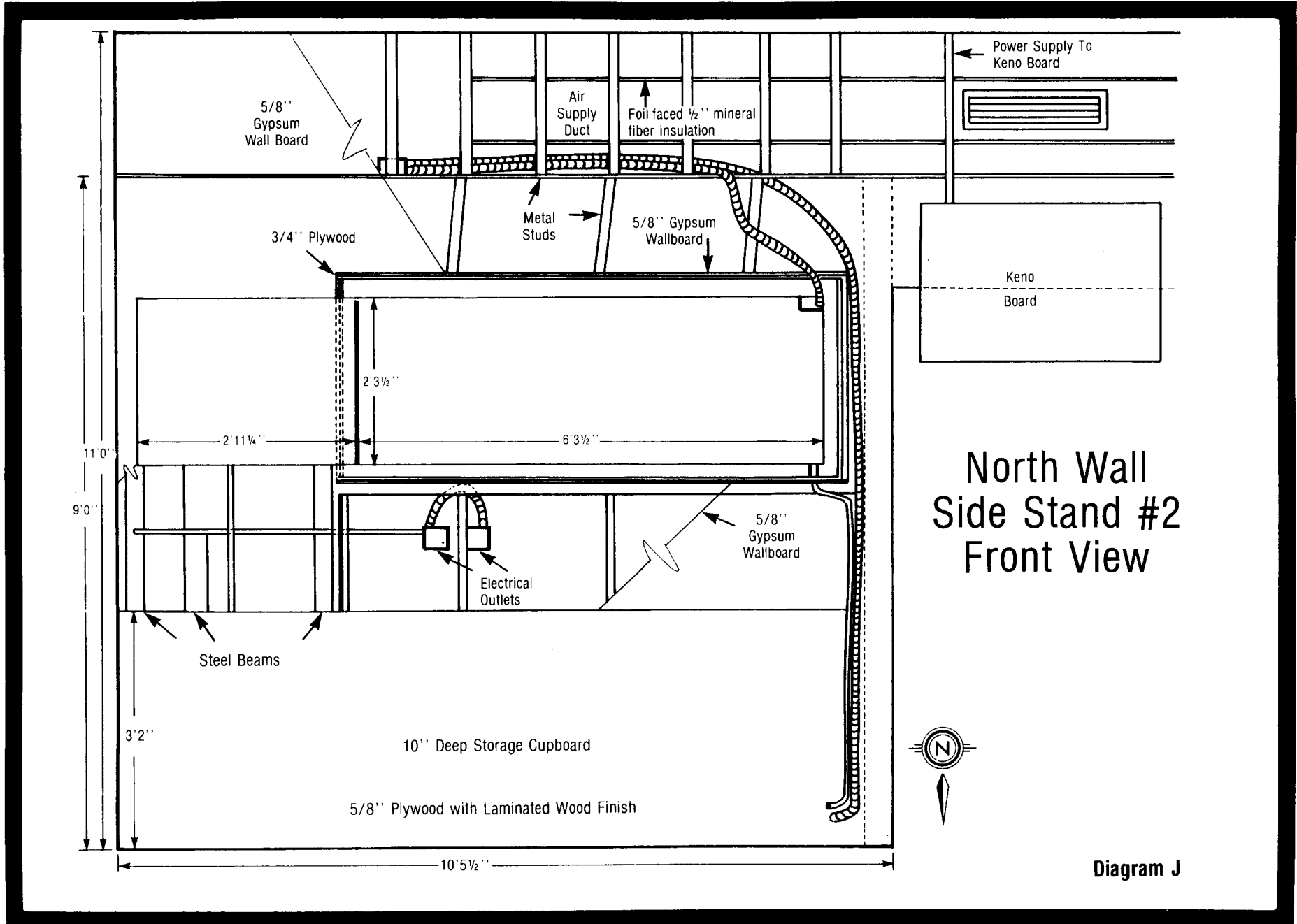
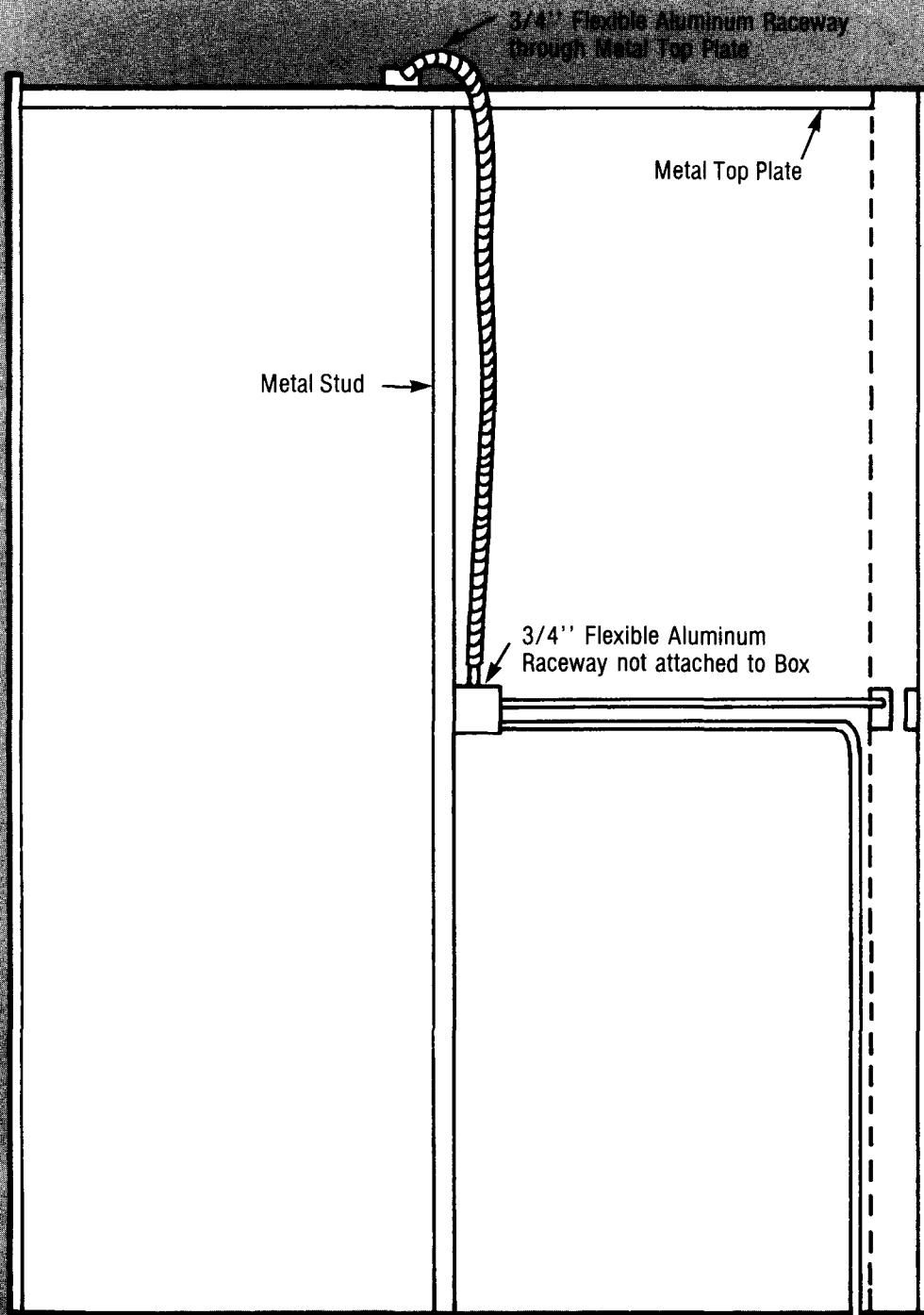


Diagram H

VI-11



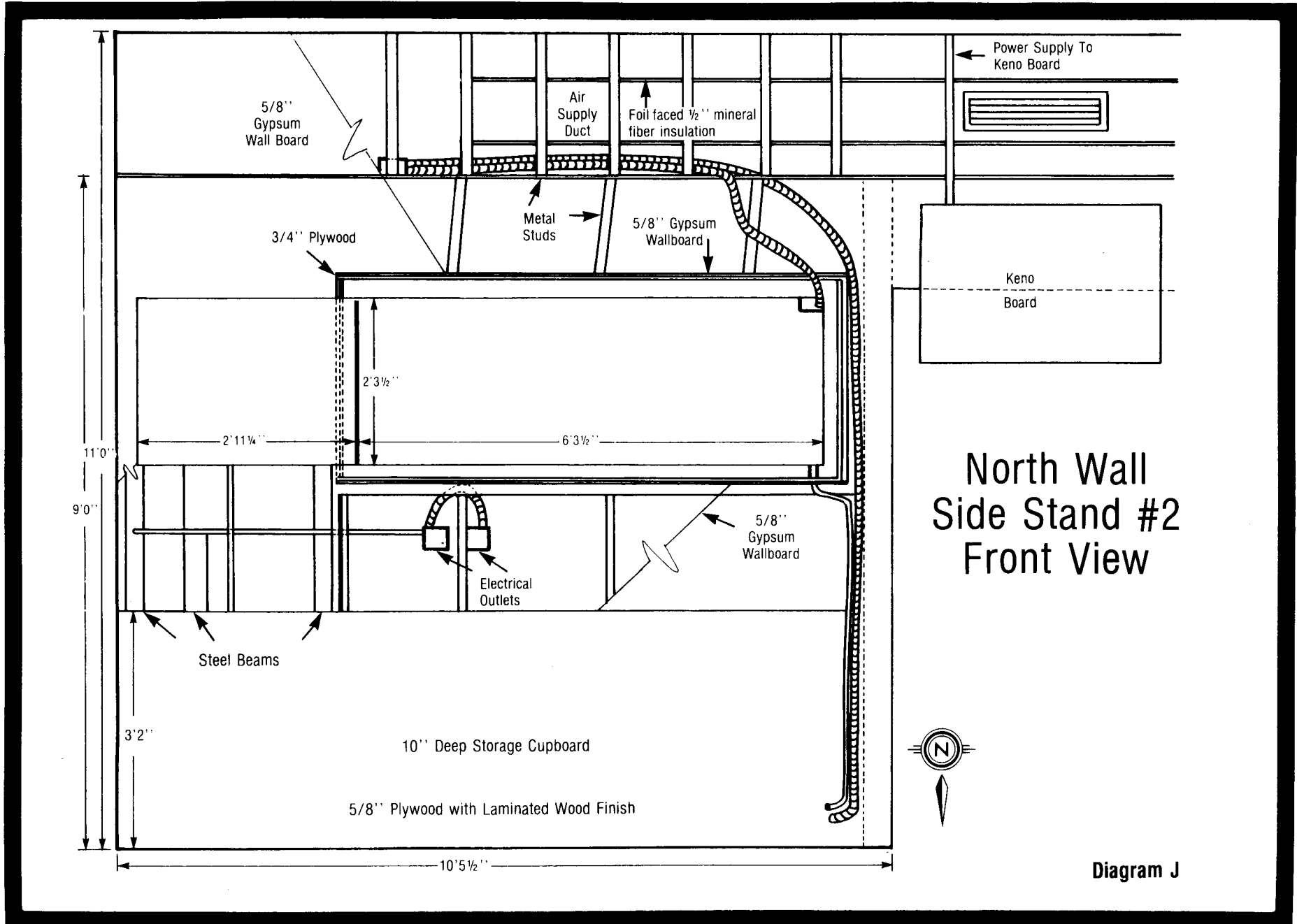


1/2" EMT - Approximately 150' to
 1500 Greater Panel

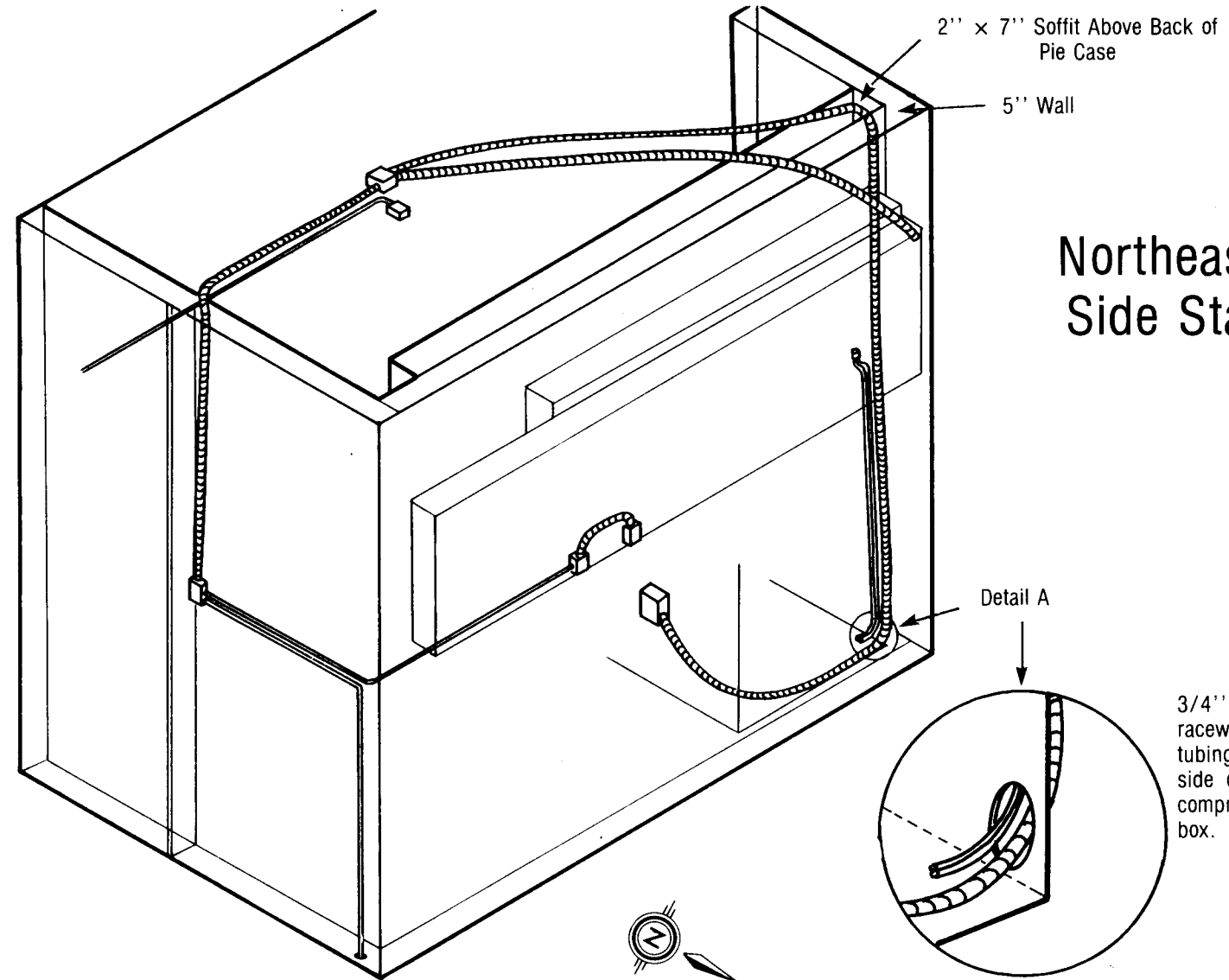
Front View East Wall
 Side Stand #2
 Dell

Diagram K

VI-11

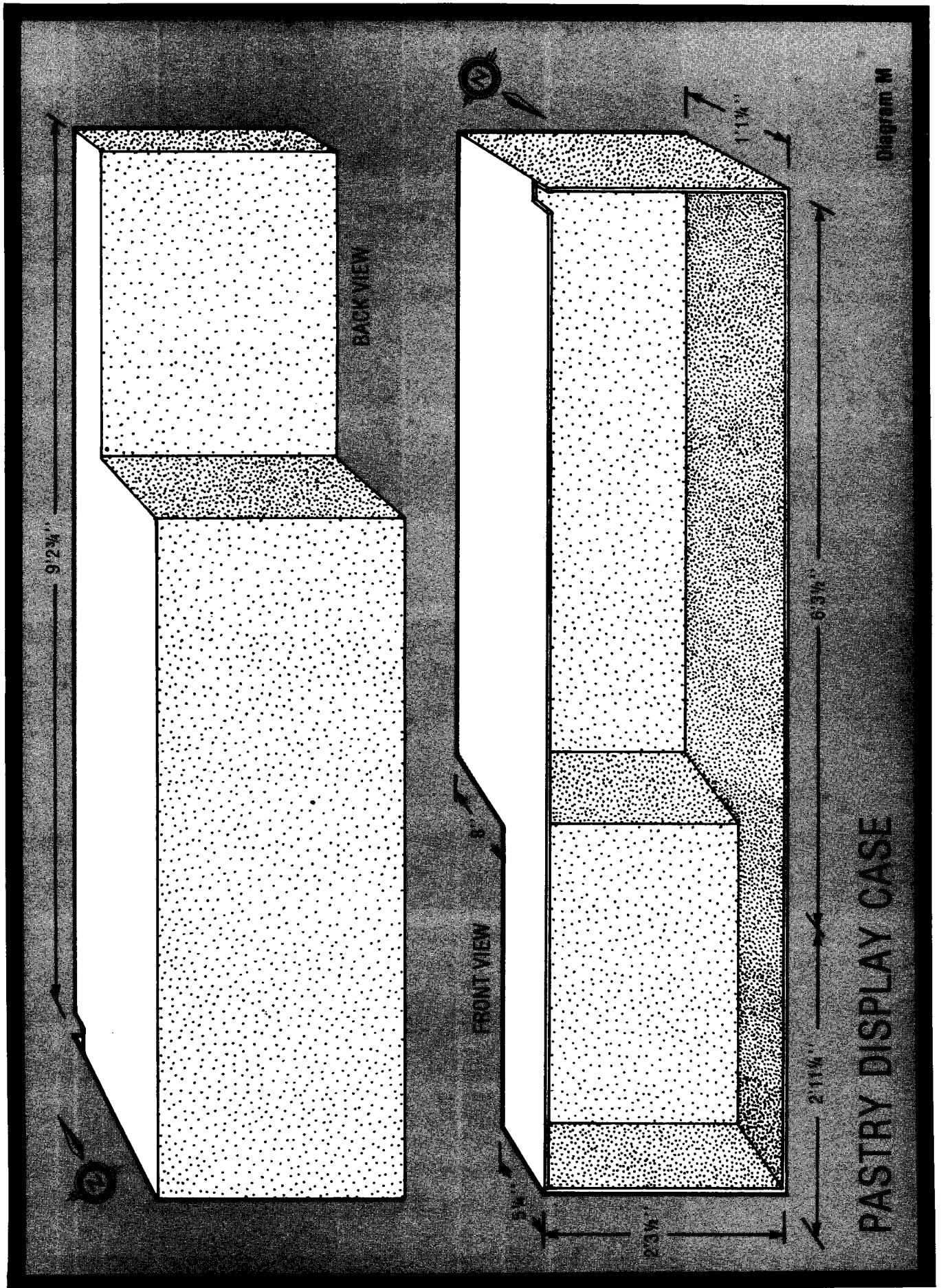


VI-13

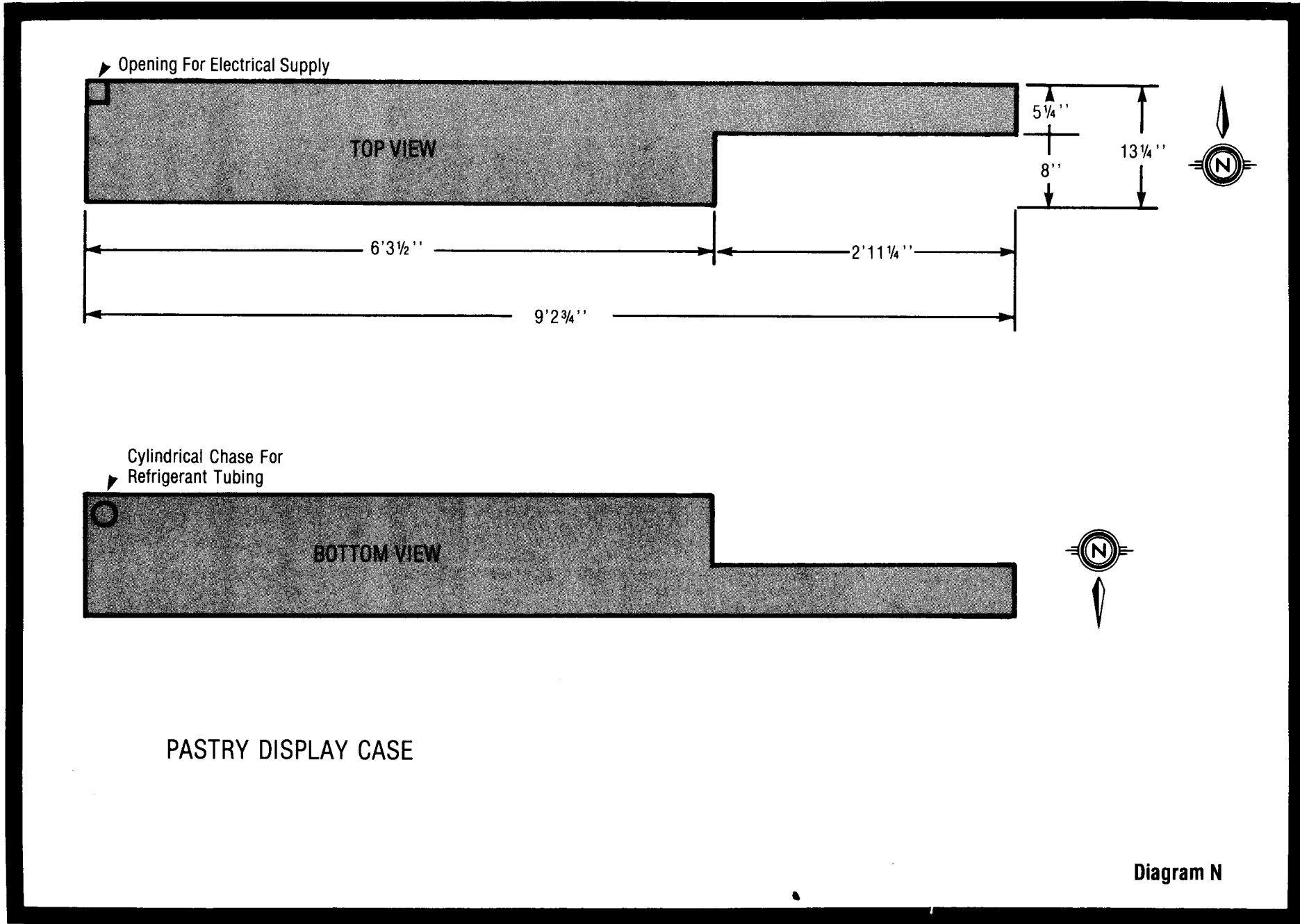


Northeast View
Side Stand #2

Diagram L



VI-15



MGM GRAND HOTEL Beam Location Deli Ceiling

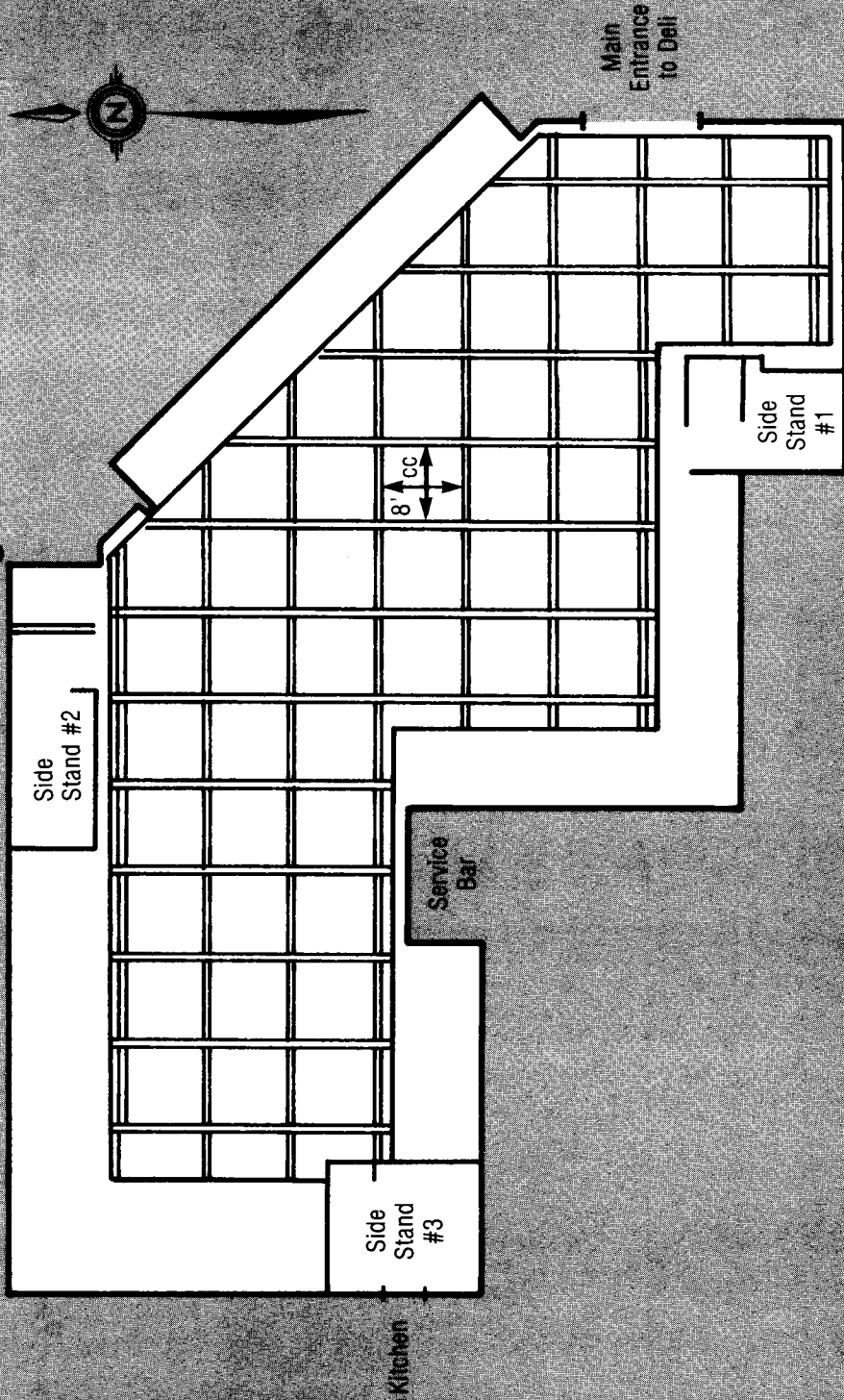
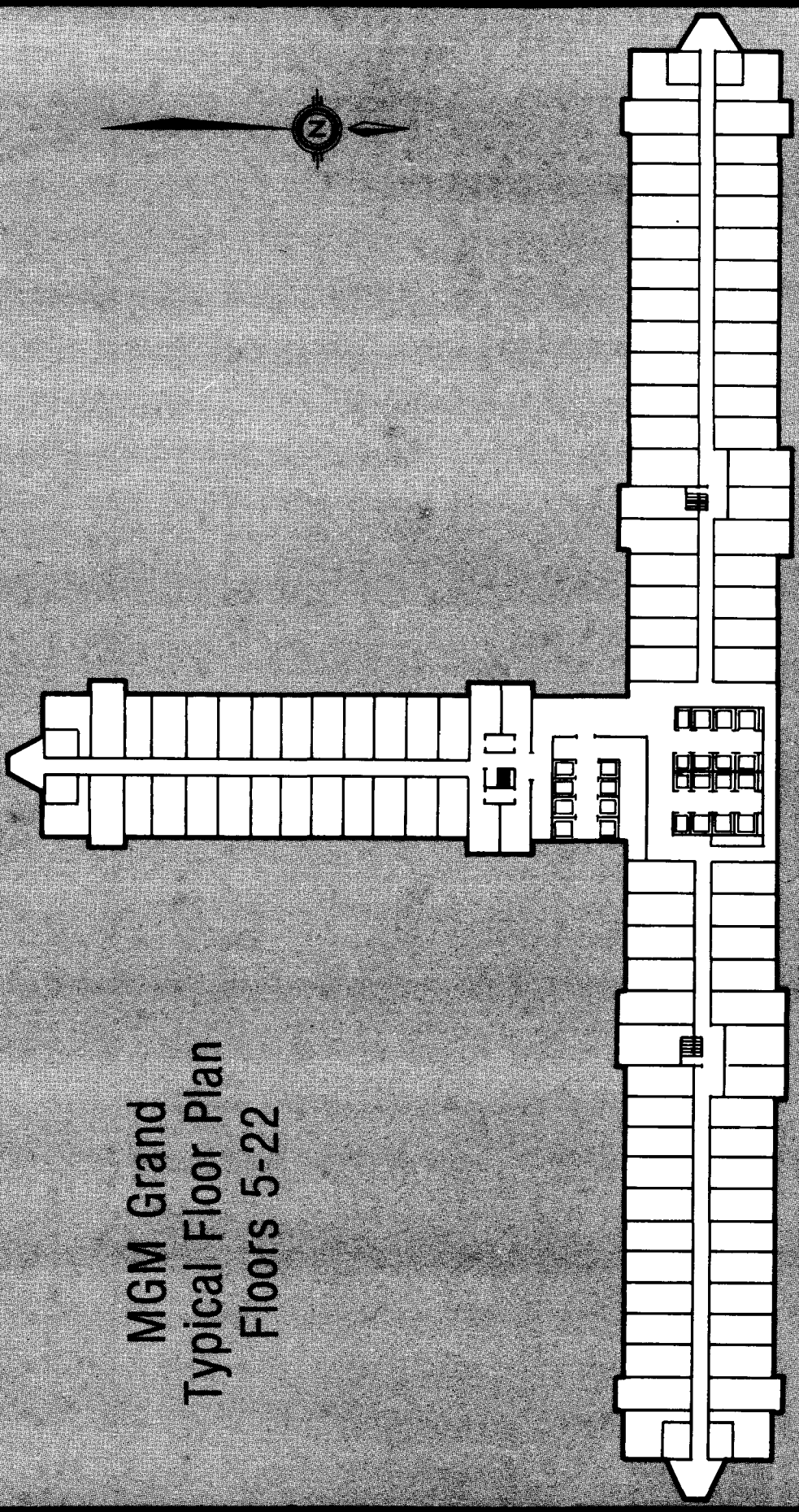
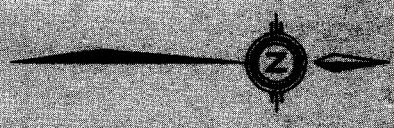


Diagram P



MGM Grand
Typical Floor Plan
Floors 5-22

Diagram 0

SECTION VII
EVIDENCE

SECTION VII

EVIDENCE

The following is a list of evidence collected and impounded by the O/Rs. Captain Wayne Burns was assigned to act as custodian of the evidence; it was impounded at a private storage vault located at 4305 South Valley View Boulevard, Las Vegas, Nevada (dba Utility Warehouse). All evidence was removed and properly tagged by the O/Rs; photographic negatives were exposed by the Las Vegas Metropolitan Police Department Criminalistics Identification Bureau. Those items identified with an asterick (*) were sent to the Bureau of Standards, Washington, D.C., for testing purposes on November 29, 1980.

The refrigeration compressor unit which was impounded on December 8, 1980, is not listed in this section. For information concerning this unit, see Section V, Fire Scene Examination.

To correlate areas from which articles were removed, see Diagrams "1", "2", "3", "4", and "5".

To correlate those items removed from the side stand (area of origin), see Items 1-14 below.

11/26/80
DR #80-89394

ITEM #	EVIDENCE TAKEN	LOCATION
1	Circuit Breaker #22	Barrymore Kitchen; Panel "IXKO"
2	Circuit Breaker #24	Barrymore Kitchen; Panel "IXKO"
3	4 in. × 1½ in. Square Box (flexible metal tubing & section of steel exterior of station)	Deli Station (east wall)
4	Copper Tubing with Insulation (refrigeration line)	Deli Station (extending from beneath pie casing)
	Copper Tubing with Insulation (refrigeration line)	Deli Station (west wall, extending downward from pie casing between wall)
5	Paragon Timer	Deli Station (interior station on shelf at floor level, west area)
6	Shelf	Deli Station (northeast wall area, interior of station)
7	Vinyl Wall Paper	Taken from Barrymore Kitchen to show the same covering as the Deli
8	Three (3) Ceiling Tiles, 12 in. × 12 in., painted	Taken from Barrymore Kitchen to show the same tile was in the Deli
9	Three (3) Ceiling Tiles, 12 in. × 12 in., burned	Deli Station (taken from northwest corner by cash register in Deli)
10	Section of Burned Paneling (masonite)	Deli Station (entrance way to Deli station, west wall)
11	Section of Vinyl Wallpaper	Deli Station (entrance way to Deli station, west wall behind paneling, #10)

EVIDENCE (Continued)

ITEM #	EVIDENCE TAKEN	LOCATION
12	Section of Carpet and Padding	Deli (typical of carpet throughout Deli area; approximately 15 ft. directly south of center beam)
13	Masonite Paneling (3 ft. 10½ in. × 3 ft. 1½ in.)	Barrymore Kitchen station, south wall
14	Gypsum Paneling (small piece)	Deli Station, east wall
11/26/80		
15	Upholstery and Padding (10 sq. ft.)	New Orleans Coffee Shop, north wall; second booth from the west wall (east side of booth)
*16	Upholstery and Padding (10 sq. ft.)	New Orleans Coffee Shop, north wall, second booth from the west wall (west side of booth)
17	Plastic Light Diffusers	New Orleans Coffee Shop; kitchen entrance way, south wall (8 ft. from south wall, on the table)
*18	Plastic Light Diffusers	New Orleans Coffee Shop; kitchen entrance way, south wall (8 ft. from south wall, on the table)
19	Foil Wallpaper	New Orleans Coffee Shop; south wall by kitchen entrance way
20	Dining Chair	New Orleans Coffee Shop; 10 ft. north of kitchen entrance way
21	Dining Chair	New Orleans Coffee Shop; 10 ft. north of kitchen entrance way
22	Carpet and Padding	New Orleans Coffee Shop; 12 ft. north of kitchen entrance way
*23	Two (2) Sections - Ceiling Material	Barrymore Room; 10 ft. from main entrance way, overhead
*24	Two (2) Sections Plastic Molding	Barrymore Room; south wall, overhead
25	One (1) Section Vinyl Wallpaper	Barrymore Room; east wall (5 ft. north of entrance way)
*26	Three (3) Sections Plastic Overhead Molding	Archway, overhead entrance way to Barrymore Lobby
*27	One (1) Section Carpet and Padding (3 ft. ×	Basement; in front of LeGrand in the corridor
28	Four (4) Ceiling Tiles, Burnt Orange; (12 in. × 12 in.)	Basement; in corridor by the south area of the LeGrand
*29	Two (2) Sections Vinyl Wallpaper	Basement; taken from south area corridor of the LeGrand

EVIDENCE (Continued)

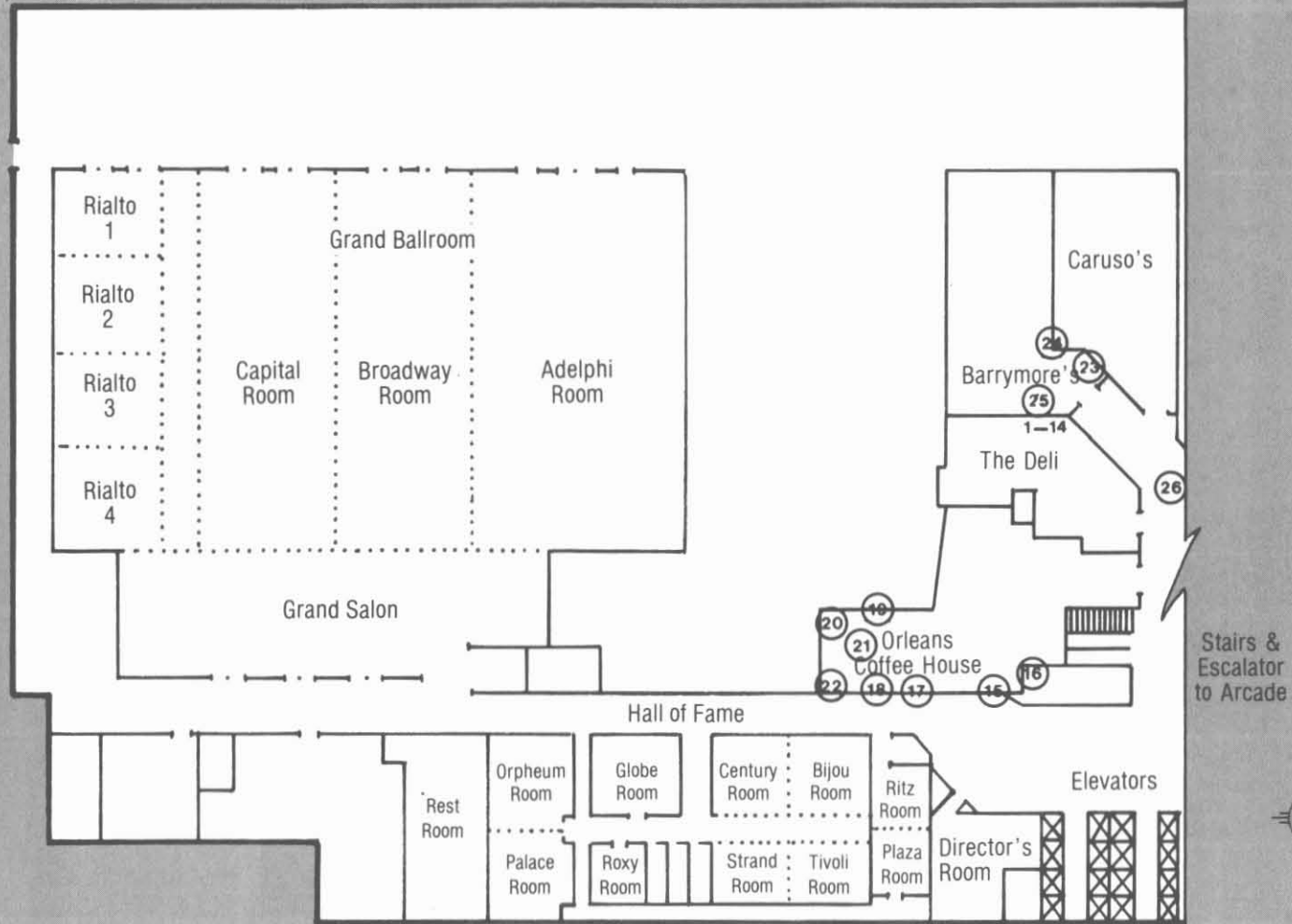
ITEM #	EVIDENCE TAKEN	LOCATION
*30	One (1) Section Vinyl Wallpaper	Basement; taken from the south wall of east end of escalator
*31	Twenty (20) Ceiling Tiles, painted Burnt Orange (14 in. × 12 in.)	Casino area; entrance way immediately west of Baccarat area
32	Two (2) Pieces of Drapery, Maroon in Color	Casino area; Baccarat section; southeast wall area
*33	Wall Covering Panel and Foam Padding	Casino area; Baccarat section; southwest wall area
*34	Padded Bumper on Crap Table	Casino area; north of Baccarat area
35	Wall Covering	Northeast wall entrance way to Ziegfreid Showroom
36	Two (2) Pieces Fiberglass Canopy Cover	Overhead entrance way to Ziegfreid Showroom
*37	Four (4) Pieces of Plastic Molding	Casino overhead, north of Baccarat room
38	Two (2) Pieces of Felt from Wheel of Fortune	Casino area; north of Baccarat room
*39	Two (2) Sections of Filter	Mechanical room above Baccarat room; southeast area
40	Carbon Deposits (smoke particles) from Filter	Mechanical room above Baccarat room; southeast area
41	Two (2) Interior Filters; 24½ in. × 19½ in. × 1-3/4 in.	Mechanical room above Baccarat room; southeast area
*42	Two (2) Interior Filters: (a) 24½ in. × 10 in. (b) 5½ in. × 6 in.)	West High Rise; Room #2205; west interior wall, north of entrance way
43	One (1) Fusible Link, and One (1) Air Damper Assembly	West High Rise; Room #2205; above entrance way
44	Two (2) Filters; (a) 24½ in. × 10 in. (b) 5½ in. × 6 in.	West High Rise; Room 2102; west interior wall south of entrance way to Room 2102
45	Fusible Link and Air Damper Assembly	West High Rise; Room #2102; above entrance way to Room 2102
46	Two (2) Filters; (a) 24 in. × 10 in. (b) 5½ in. × 6 in.	West High Rise; Room 1902; west interior wall, south of entrance way to Room 1902
47	One (1) Fusible Link and One (1) Air Damper Assembly	West High Rise; above entrance way to Room 1902
*48	Two (2) Filters; (a) 24½ in. × 10 in. (b) 5½ in. × 6 in.	Room 1675, east wall interior
49	One (1) Fusible Link and One (1) Air Damper Assembly	Above entrance way to Room 1675

EVIDENCE (Continued)

ITEM #	EVIDENCE TAKEN	LOCATION
*50	One (1) Section Drapery One (1) Section Curtain One (1) Section Carpet and Padding One (1) Section Wallpaper	Southwest High Rise; southwest corner of Room 535
51	One (1) Section Molding	Southwest High Rise; above entrance way to Room 535 (taken from Room 1675)
*52	Two (2) Filters; (a) 24½ in. × 10 in. (b) 5½ in. × 6 in.	Southwest High Rise; east wall interior of Room 521

NOTE: Items 1,2 and 5 were sent to N.B.S. for testing on March 6, 1981. Items 3 and 4 were forwarded to Mr. Tom Klem of the U.S.F.A. for testing purposes on April 6, 1981.

RESTAURANTS AND MEETING ROOMS



VII-5

Diagram #1

M.G.M. GRAND HOTEL ARCADE LEVEL

VII-6

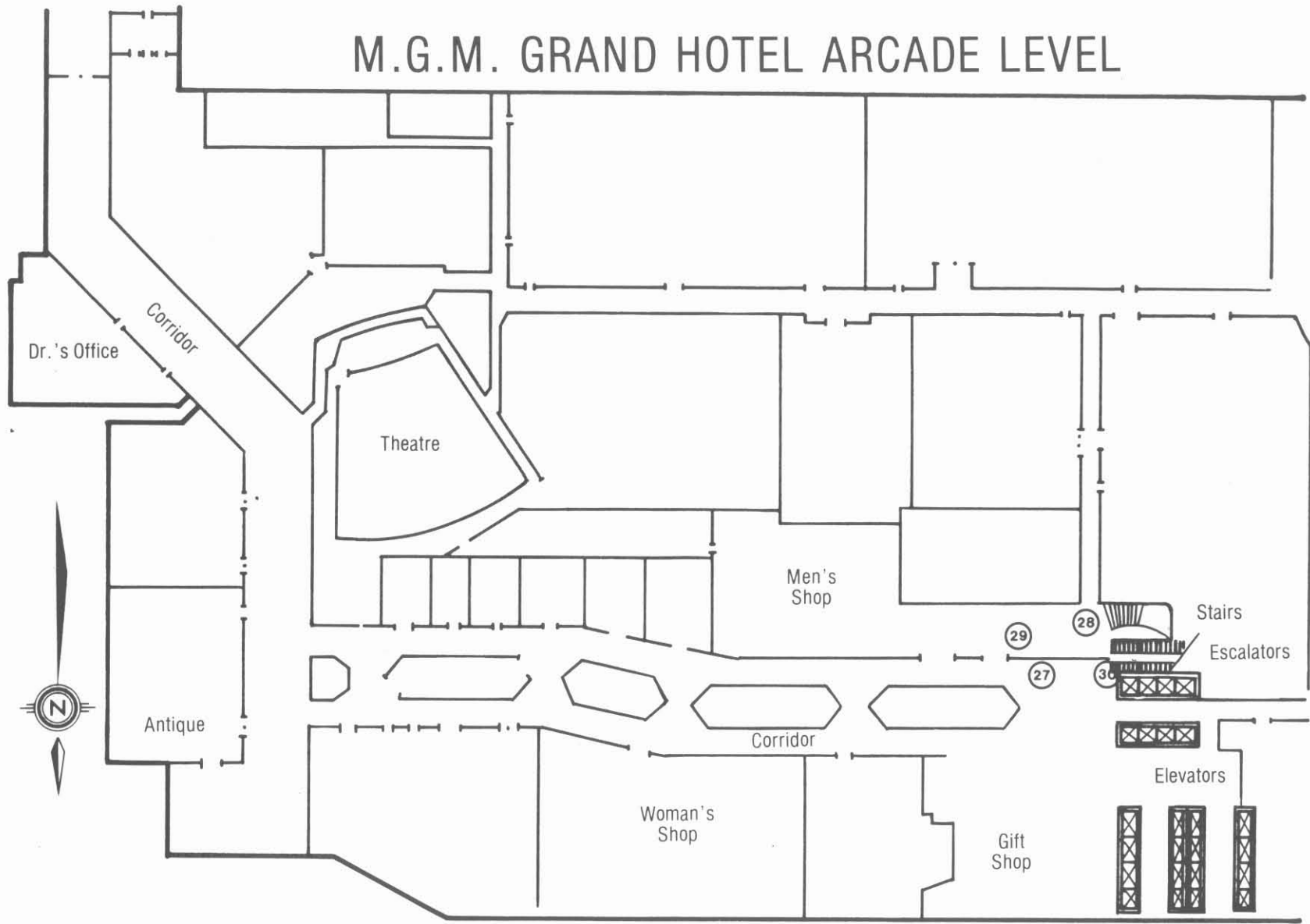


Diagram #2

CASINO and SHOWROOMS

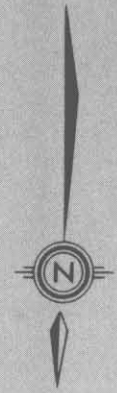
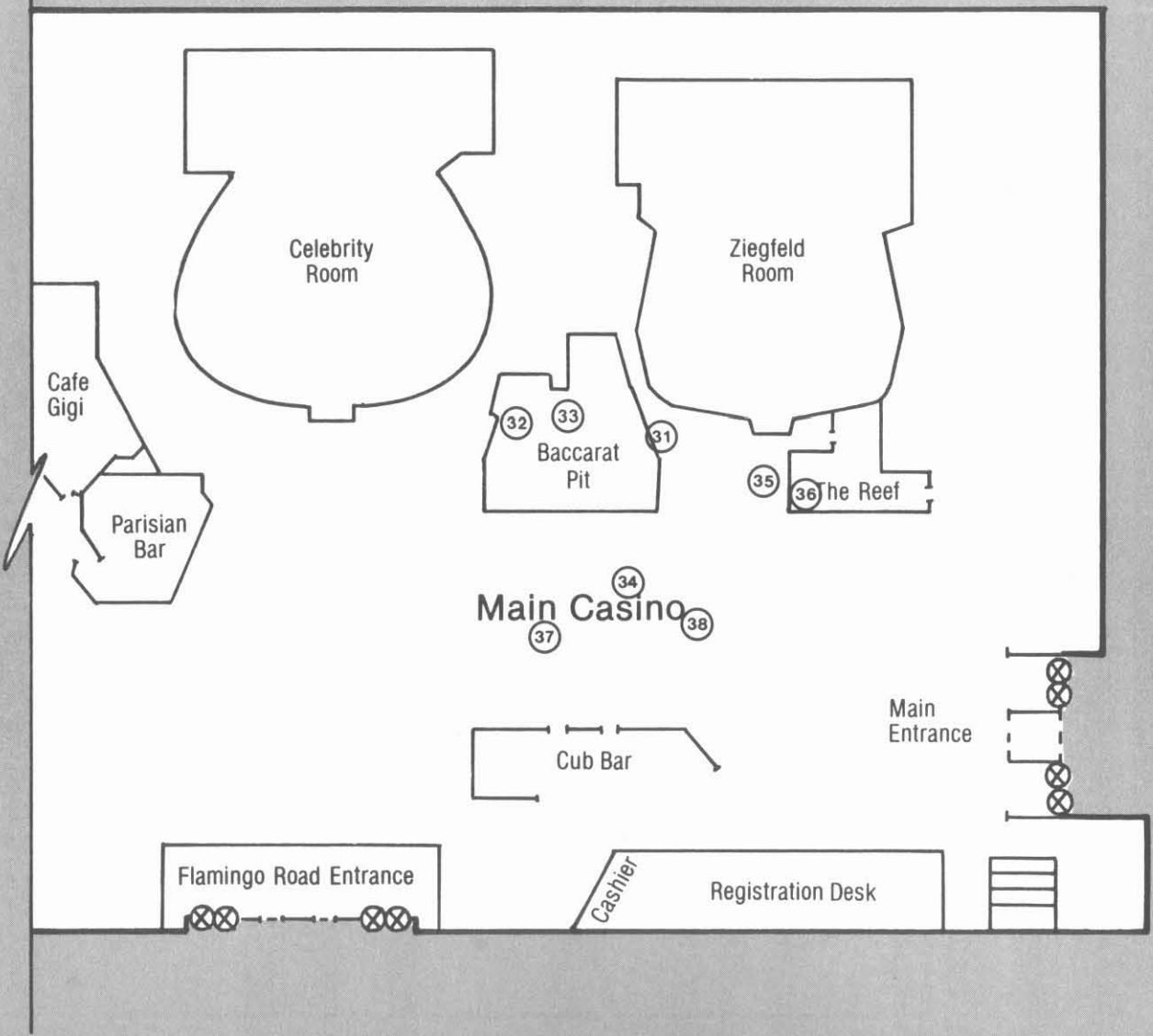


Diagram #3

VII-7

M.G.M. GRAND HOTEL Floor Plan of Second Story

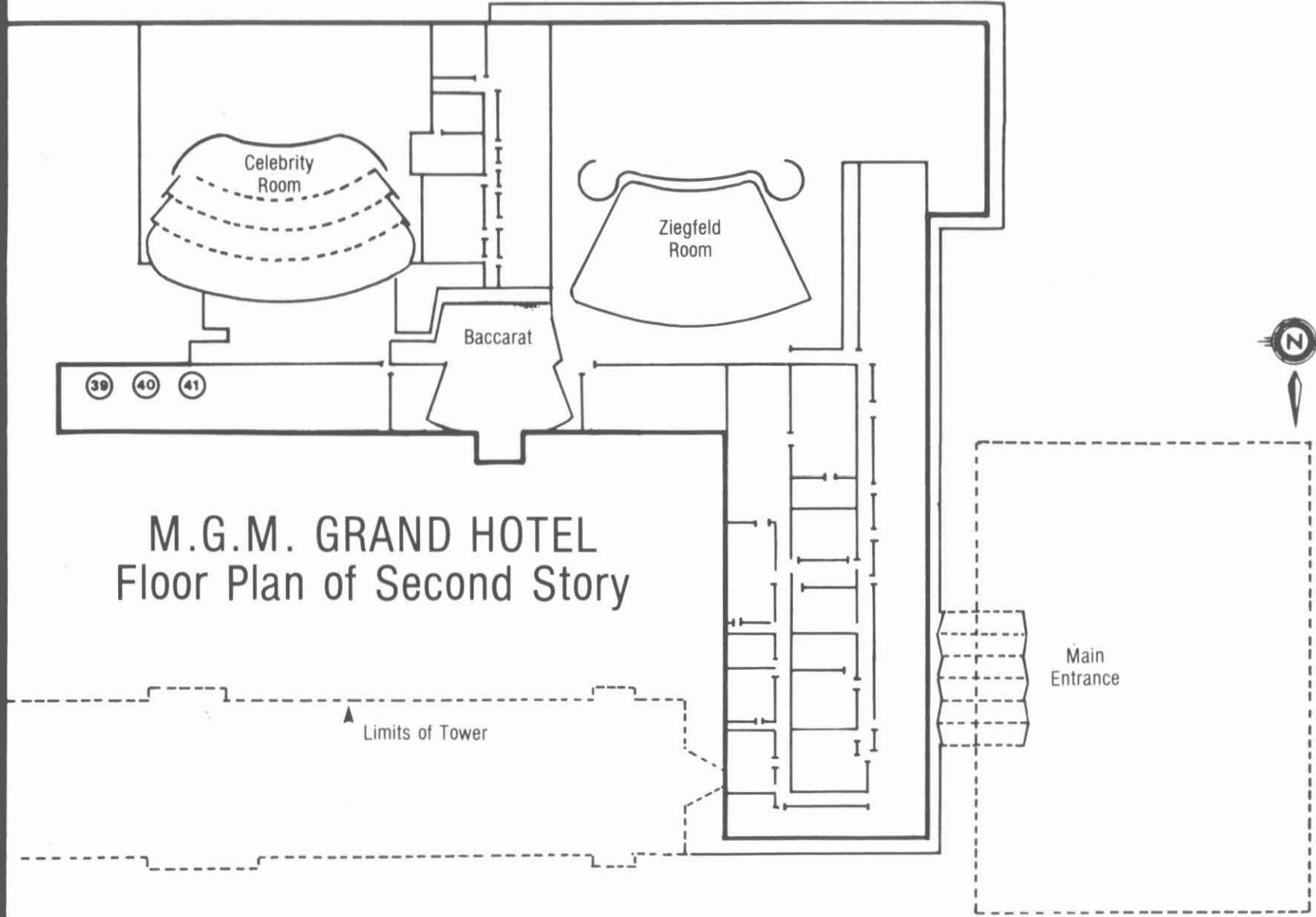
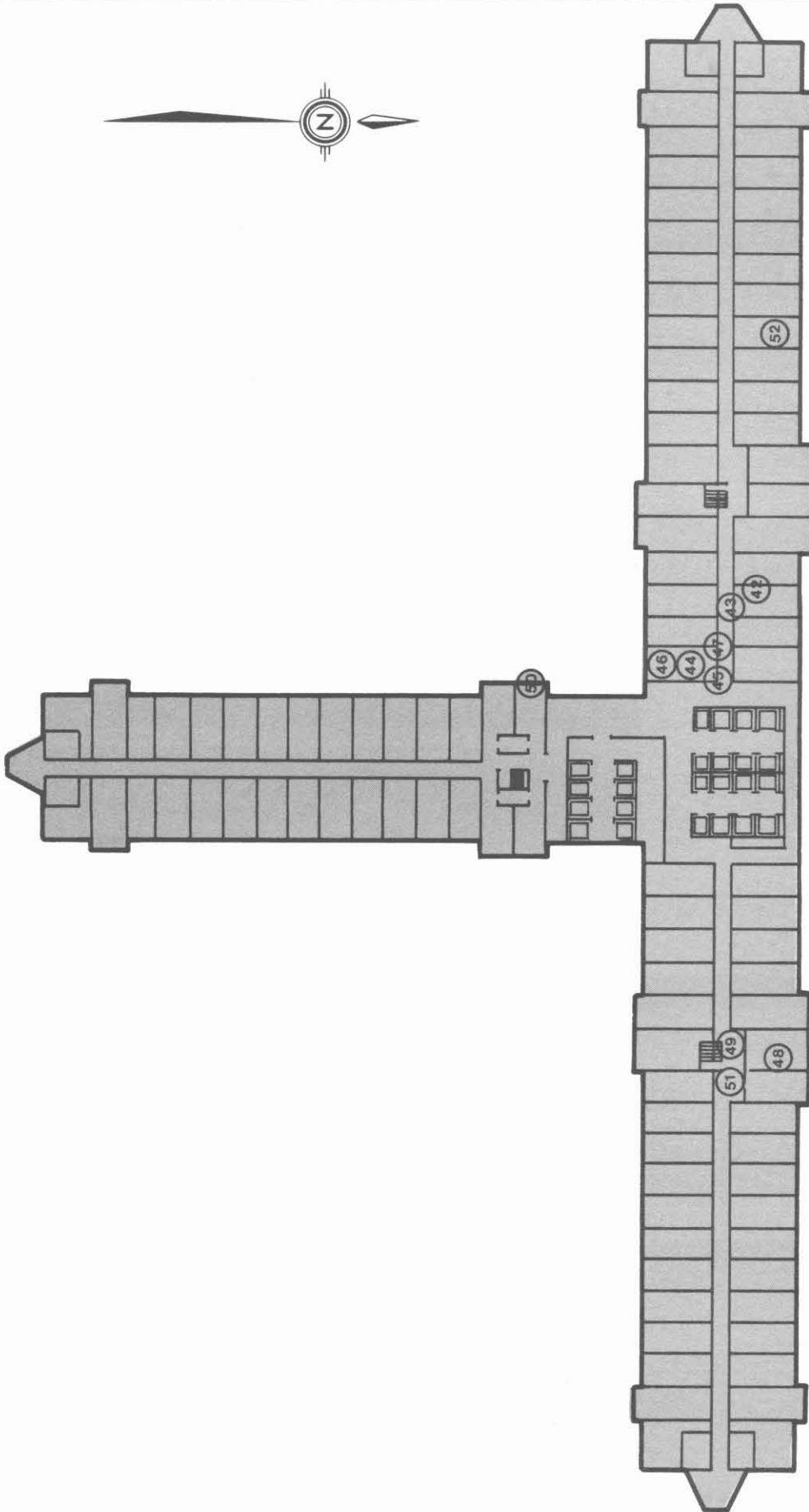


Diagram #4



MGM GRAND HOTEL Evidence

Diagram #5

SECTION VIII
FATALITIES AND EMERGENCY MEDICAL SERVICE

SECTION VIII
FATALITIES AND
EMERGENCY MEDICAL SERVICES

Emergency Medical Services activities were coordinated by the following individuals:

Bob Forbuss, Manager; Mercy Ambulance
Rex Shelburne, Captain; City of Las Vegas Fire Department
Carl Munninger, Clark County Health District
Michael J. Verrilli, Captain; Clark County Fire Department

Bob Forbuss, of Mercy Ambulance, was first to arrive on the scene. He called a Med-Alert, and established the first medical command post at the north and west entrances of the MGM Grand Hotel/Casino, on Flamingo Road. At the time of his arrival, Rescue 11 and Rescue 12 from the County were on the scene and had been set up as aid stations. (Rescue unit arrival times are noted below.)

Between 0830 and 0900 hours, Rescue 13 and Rescue 14 (both from the County) arrived. Three additional City rescue units then arrived with City fire equipment.

Two triage stations were set up on Flamingo Road; a third was located on the south side of the hotel. Air Force helicopters hovered over the building, and were subsequently utilized to transport victims to the triage areas for treatment or identification.

Mr. Forbuss requested school buses to transport the "walking wounded"; the buses were located on Las Vegas Boulevard South and Flamingo Road. Persons who were not seriously ill or injured (walking wounded) were directed to the buses for transport to the Las Vegas Convention Center. Many individuals treated at the triage stations were then directed to the buses for transport out of the area.

The south triage area was moved to the east parking lot. From this point, the search for and removal of bodies was coordinated. Contact was made with the Deputy Coroner, who explained exact procedures necessary for identifying the bodies; it was noted that a few bodies had already been removed without proper photographing and identification. Victims were moved to the roof of the south tower after photographing and identification; Air Force helicopters then removed the bodies from the roof to the east parking lot for additional photographs and transport by ground van to the morgue.

Between 1500 and 1600 hours, the City rescue personnel were relieved. At this time the command post in the east parking area was handling the body search and removal. This operation continued until 1830 hours, at which time all known fatalities had been removed from the 16th to the 26th floors. An additional check of the lower floors was organized and conducted by Battalion Chief Paul O. Hicks; that search was completed between 1940 and 2000 hours. No additional victims were located.

At approximately 2300 hours, Captain Verrilli, attempted to confirm the number of firefighters that were injured or ill. He secured lists of admissions from four local hospitals. From those lists it was determined that 14 firefighters had been admitted to the hospitals; the majority suffered from smoke inhalation, a few had sustained bruised or broken ribs, knee injuries, and chest pains. It should be noted that a large number of firefighters suffered from headache, nausea, dizziness, but did not seek medical attention.

RADIO SYSTEM

Fire Control Channels utilized were:

County -- Channels 2 and 3
City -- Channels 1 and 4

Fire Control Channel 2 was the primary channel utilized for fire communications. Channel 4 was later used to coordinate the body search and communications between the medical units remaining on the scene.

Medical Channels 1 through 10 were also utilized. Hospital updates were relayed through the medical frequencies, thereby relieving other emergency frequencies of this additional radio traffic.

RESCUE UNIT ARRIVAL TIMES

Clark County Fire Department	Rescue 12	0718 Hours
Clark County Fire Department	Rescue 11	0718 Hours
City of Las Vegas Fire Department	Rescue 2	0736 Hours
Clark County Fire Department	Rescue 13	0739 Hours
City of Las Vegas Fire Department	Rescue 4	0759 Hours
City of Las Vegas Fire Department	Rescue 3	0815 Hours
City of Las Vegas Fire Department	Rescue 1	0838 Hours
City of Las Vegas Fire Department	Rescue 6	0851 Hours
Clark County Fire Department	Rescue 14	1145 Hours
Henderson Rescue		(approx.) 0845 Hours
Boulder City Rescue		0916 Hours

RESCUE PERSONNEL

Clark County Fire Department	8 Paramedics
City of Las Vegas Fire Department	10 Paramedics
Clark County Fire Department Volunteer	3 Ambulances; 27 EMT Personnel
Boulder City (2 units)	2 EMT Personnel
Henderson (1 unit)	2 IV Personnel
Mercy Ambulance (11 units)	20 Personnel
American Ambulance (3 units)	6 Personnel

HELICOPTER OPERATIONS

The following non-military aircraft responded to the MGM Grand Hotel/Casino fire on November 21, 1980:

1. "Flight for Life" from Valley Hospital, Las Vegas, Nevada
(Second aircraft on the scene)
Pilot: Paul Kinsey; Las Vegas, Nevada
 2. Silver State Helicopters, Las Vegas, Nevada
(Third aircraft on the scene)
Pilot: Ray Poss; Las Vegas, Nevada
 3. Action Helicopters, Las Vegas, Nevada
(Fourth aircraft on the scene)
Pilot: Dennis Mack; Henderson, Nevada
 4. Bauer Helicopters
Pilot: Gene Oates; Boulder City, Nevada
Pilot: Dr. Holiday (made several trips to Glendale and Overton, Nevada, for air packs)
 5. E.G. & G., Las Vegas, Nevada
Pilot: Bob Ingales
Pilot: Marvin Wingrove; Las Vegas, Nevada
 6. Environmental Protection Agency, Las Vegas, Nevada
Pilot: Lyle Miller, Henderson, Nevada
Co-Pilot: Chet Dropp; Las Vegas, Nevada
 7. San Bernardino Sheriff's Office
c/o Sheriff Frank Bland
P.O. Box 569
San Bernardino, California 92403
Pilot: Captain Terry Jagerson
Pilot: Officer Ron Hittle
Pilot: Officer Jim Singiey
 8. Loma Linda University Medical Center
11234 Anderson Street
Loma Linda, California
Pilot: Med Cooper
Pilot: Mike Smith
 9. Air #1, Las Vegas Metropolitan Police Department
One (1) Pilot
 10. Air #2, Las Vegas Metropolitan Police Department
Two (2) Pilots
- Nellis Air Force Base, Las Vegas, Nevada, supplied nine (9) helicopters; an average of five (5) persons per helicopter assisted operations.

FATALITIES AND CASUALTIES

Primary cause of 85 fatalities:

75 deaths - Smoke inhalation and carbon monoxide*

4 deaths - Smoke inhalation only

1 deaths - Burns only

3 deaths - Burns and smoke inhalation

1 death - Massive skull fracture

1 death - Myocarditis (reported from a hospital in Houston, Texas)

*Carbon monoxide levels ranged from 25% to 66% saturation.

A total of 650 casualties were seen at local hospitals.

In the first 24 hours, 14 firefighters were hospitalized. An estimated 300 firefighters and rescue personnel experienced symptoms of smoke inhalation and carbon monoxide, but did not receive treatment. At least 10 firefighters experienced psychological problems.

CLARK COUNTY CORONER--MEDICAL EXAMINER

CASE #	NAME	BLOOD TOXICOLOGY				LOCATION
		CO.	HCN	ETOH	DRUGS	
1430	F Mack, D.A.	5.0	LO.5			Jumped apparently--N. side of MGM
1432	F McDowell, G.	24.0	"			Casino--Registration Desk--West End
1433	M Hicks, M.	28.8	"			Casino--Registration Desk--West End
1434	M Vasquez, J.L.	10.2	"			Casino--Slightly East of Center
1435	M Guidry, G.	25.5	"			Casino--Registration Desk--East End
1436	F Thomas, P.	37.3	"			Casino--Between Reg. Desk & Flamingo Entrance
1437	M Tramel, Charles	9.0 Low hemoglobin	"			DOA--Sunrise Emergency Room
1438	F Thompson, D.	30.7	"			Found on 19th Floor--South Stairwell Removed by LVFD Amb at South Triage area
1439	F Keller, B.E.	18.2	1.0- 2.0			Casino Elevator Hall East Bank (See 1451)
1440	M Thompson, T.	14.8	LO.5			(Same as 1438)
1441	M Hudgin, J.	29.2	"			Ritz Room
1442	M Pickett, S.	16.6	"			Ritz Room
1443	M Potter, D.P.	28.2	"			Ritz Room

CLARK COUNTY CORONER--MEDICAL EXAMINER

CASE #	NAME	BLOOD TOXICOLOGY				LOCATION
		CO.	HCN	ETOH	DRUGS	
1444	M Gerbosi, W.M.	37.0	1.0-2.0			Ritz Room
1445	F Peterson, R.	43.0	LO.5			1st Floor West Stairwell
1446	M Galico, L.	24.4	"	0		Delivered by chopper from rooftop
1447	Hanks, Dellum	31.6	"			25th Floor Lobby
1448	M White, C.	39.8	"			DOA at Desert Springs Emergency Room
1449	F Nose, L.A.	52.8	"			Inside Room 2501
1450	F Mayer, C.A.	No Test Low hemoglobin	"			Inside Room 2501
1451	M Keller, J.	22.2	7.0-9.0			Casino Elevator Hall East Bank (See 1439)
1452	F Middleton, B.E.	33.5	LO.5			25th Floor Lobby
1453	F Tunis, P.	29.4	"			25th Floor South Stairwell
1454	M Bell, J.	27.2	0.5-1.0			Found on roof
1455	F Duncan, W.	53.0	LO.5			25th Floor Lobby
1456	F McGaughey, C.L.	26.2	"			Inside Room 2535

9-III/6

CLARK COUNTY CORONER--MEDICAL EXAMINER

CASE #	NAME	BLOOD TOXICOLOGY				LOCATION
		CO.	HCN	ETOH	DRUGS	
1457	M Peha, D.	39.6	LO.5			24th Floor Lobby
1458	M Spagnola, T.	19.2	"			24th Floor Lobby
1459	F Pangburn, D.	47.0	"			24th Floor Lobby
1460	M Holshuh, S.J.	35.8	"			24th Floor Lobby
1461	F Sanders, C.A.	No Test Low hemoglobin	"			24th Floor Lobby
1462	M Sierra, P.	26.2	"			24th Floor Lobby
1463	F Sierra, M.	No Test Low hemoglobin	"			24th Floor Lobby
1464	M Sierra, M.	9.2	"			Immediately inside door Room 2403
1465	M Palazzolo, C.	No Test Low hemoglobin	"			Immediately in doorway Room 2418 (Half in-Half out)
1466	M Nilssen, Dr. D.	39.8	"	0		23rd floor center stairwell (on 1st step going up)
1467	F Nilssen, J.T.	No Test Low hemoglobin	"			23rd floor center stairwell (prone position--face down--heading stairs)
1468	F Barresi, E.	No Test Low hemoglobin	"			Landing between 22nd & 23rd floor stairwell (sitting position)
1469	M Bushell, R.P., MD	14.5	"			Inside Room 2338-Parallel & immediately adjacent to window

VIII-7

CLARK COUNTY CORONER--MEDICAL EXAMINER

CASE #	NAME	BLOOD TOXICOLOGY				LOCATION
		CO.	HCN	ETOH	DRUGS	
1470	M Johnson, A.O.	20.8	LO.5			Inside Room 2302 in crouching position immediately adjacent to window
1471	M Siple, R.E.	No Test Low hemoglobin	"			Inside Room 2306 at foot of bed
1472	M Hoo, J.L.	17.8	"			23rd floor hallway to East Wing
1473	F Hoo, E.	50.8	"			23rd floor hallway to East Wing
1474	F Stephens, S.L.	18.6	"			23rd floor hallway to East Wing
1475	M Stephens, G.D.	38.8	"			Inside Room 2367 at foot of bed
1476	M Unold, A.M.	30.2	"			Inside Room 2368--immediately inside door in sitting position
1477	M Knick, E.J.	18.0	"			Inside Room 2368--parallel to end of bed head to head with 78
1478	F Knick, M.E.	36.8	"			Inside Room 2368 at distant end of room Right side of room--head toward center of room
1479	F Unold, R.	35.2	"			Inside Room 2368 at distant end of room Left side of room--head toward center of room
1480	M Shaffer, D.M.	36.4	"			22nd floor center stairwell--sitting on bottom step
1481	F Rogall, P.M.	47.8	"	0		Inside Room 2237 parallel to end of bed
1482	F Leavitt, T.	28.8	"			22nd floor lobby--head near elevator door face up

8-III

CLARK COUNTY CORONER--MEDICAL EXAMINER

CASE #	NAME	BLOOD TOXICOLOGY				LOCATION
		CO.	HCN	ETOH	DRUGS	
1483	M Iadeluca, R.	38.2	LO.5	0		21st floor stairwell--kneeling position over victim 1484
1484	F Iadeluca, A.	40.0	"			21st floor stairwell--prone position, face down
1485	M McCarthy, G.A.	9.6	"			Inside Room 2139 near window--slight angle
1486	M Herring, E.	Blank	"			Inside Room 2102 parallel to wall
1487	F Herring, G.H.	32.5	"			Inside Room 2102 parallel to window in same area as 1486
1488	M Morales, F.L.	No Test Low hemoglobin	"			Hallway outside 2111
1489	M Torres, A.G.	54.0	"			Inside Room 2112 parallel to mantle
1490	M Ashton J.F.	52.0	"			Inside Room 2115--extended position on couch covered with blanket
1491	M McKinney, V.J.	41.6	"			Inside Room 2068 seated in chair in front of window with chair tipped over backwards
1492	F McKinney, E.D.	19.6	"			Inside Room 2068 parallel to bed, head to wall
1493	F Soshnik, B.P.	34.4	"			20th floor lobby
1494	M Castelazo, V.	40.4	"			20th floor lobby
1495	F Castelazo, J.	No Test Low hemoglobin	"			20th floor lobby

6-III A

CLARK COUNTY CORONER--MEDICAL EXAMINER

CASE #	NAME	BLOOD TOXICOLOGY				LOCATION
		CO.	HCN	ETOH	DRUGS	
1496	M Soshnik, A.M.	35.6	LO.5			20th floor lobby
1497	F McQuithy, E.L.	26.8	"			20th floor elevator (P15)
1498	M McQuithy, J.K.	28.4	"			20th floor elevator (P15)
1499	M Blair, D.R.	54.0	"			20th floor elevator (P15)
1500	M Thebeault, J.E.	51.4	"			20th floor elevator (P15)
1501	F Vassoughi, M.A.	30.0	"			Inside Room 2001
1502	M Vassoughi, H., MD	52.2	"			Inside Room 2001
1503	F Morales, S.E.L.	32.0	"			20th floor hallway--between 2011 and 2009
1504	M Alvarez, S.L.M.	45.2	"			20th floor hallway--between 2011 and 2009
1505	F Galico, S.	33.4	"			Removed from Room 1675 by F.D.
1506	M Littman, E.C.	No Test Low hemoglobin	"			Inside Room 1902 adjacent to window
1507	F Littman, R.E.	66.5	"			Inside Room 1902 adjacent to window
1508	F Sanders, B.J.	52.1	"			Casino elevator (P4)

01-III
10

CLARK COUNTY CORONER--MEDICAL EXAMINER

CASE #	NAME	BLOOD TOXICOLOGY				LOCATION
		CO.	HCN	ETOH	DRUGS	
1509	M Sanders, D.F.	40.0	2.0- 3.0			Casino elevator (P4)
1510	M Asher, D.	41.4	LO.5			Casino elevator (P7)
1511	M Monaweck, J.F.	40.2	''			Casino elevator (P7)
1512	F Andrews, K.	39.0	''			Casino elevator (P7)
1513	M Rogall, E.M.	No Test Low hemoglobin	''			Tagged in landing stage parking lot
1518	F Capetillo, M.	48.2	0.5- 1.0			Found Sat. 26th floor elevator (service) S8

VIII-11

11/30/80

Location of fatalities profile — shows floors 16 - 26 approximate locations excluding miscellaneous remote areas such as W-2 and S-2.

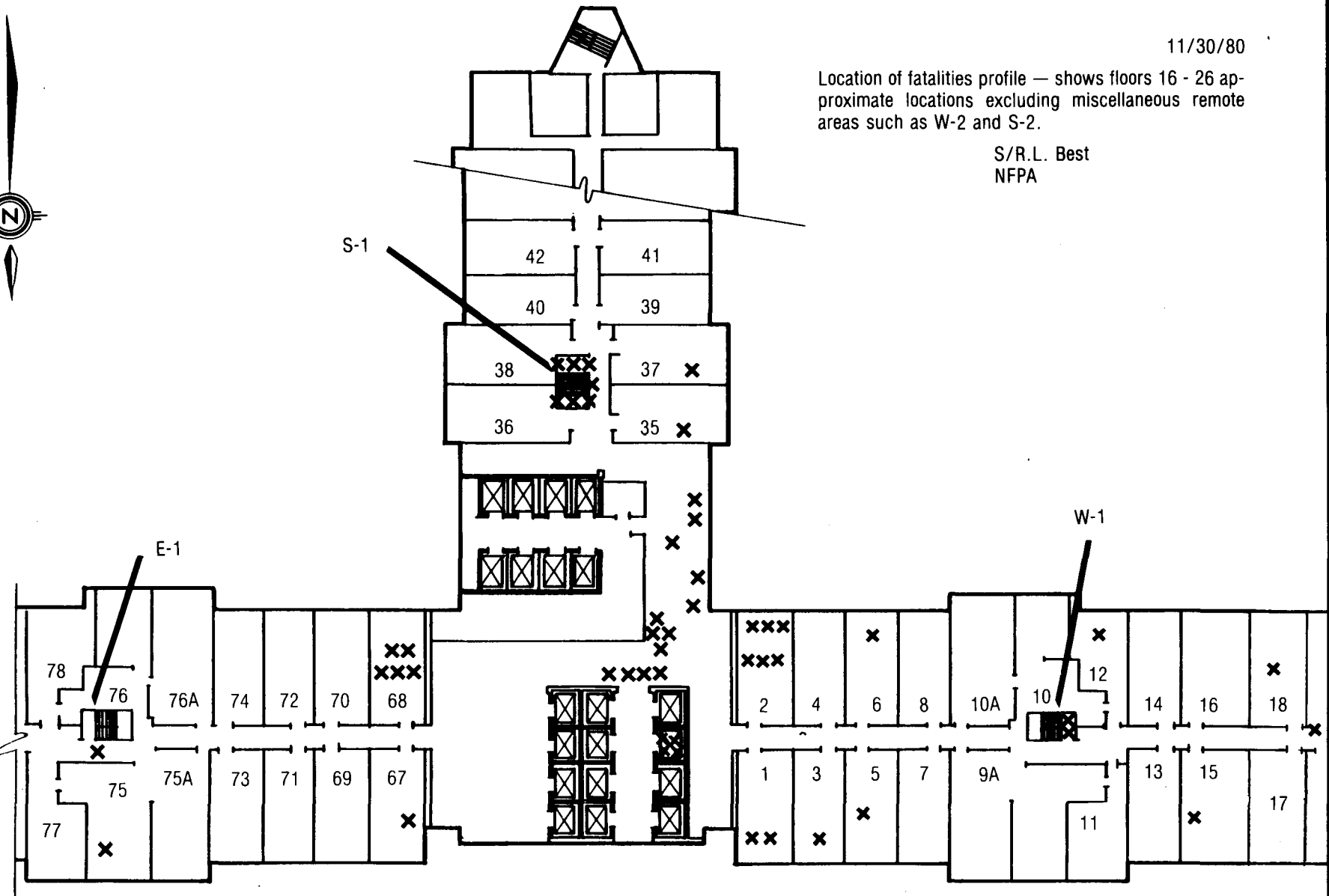
S/R.L. Best
NFPA



S-1

W-1

E-1

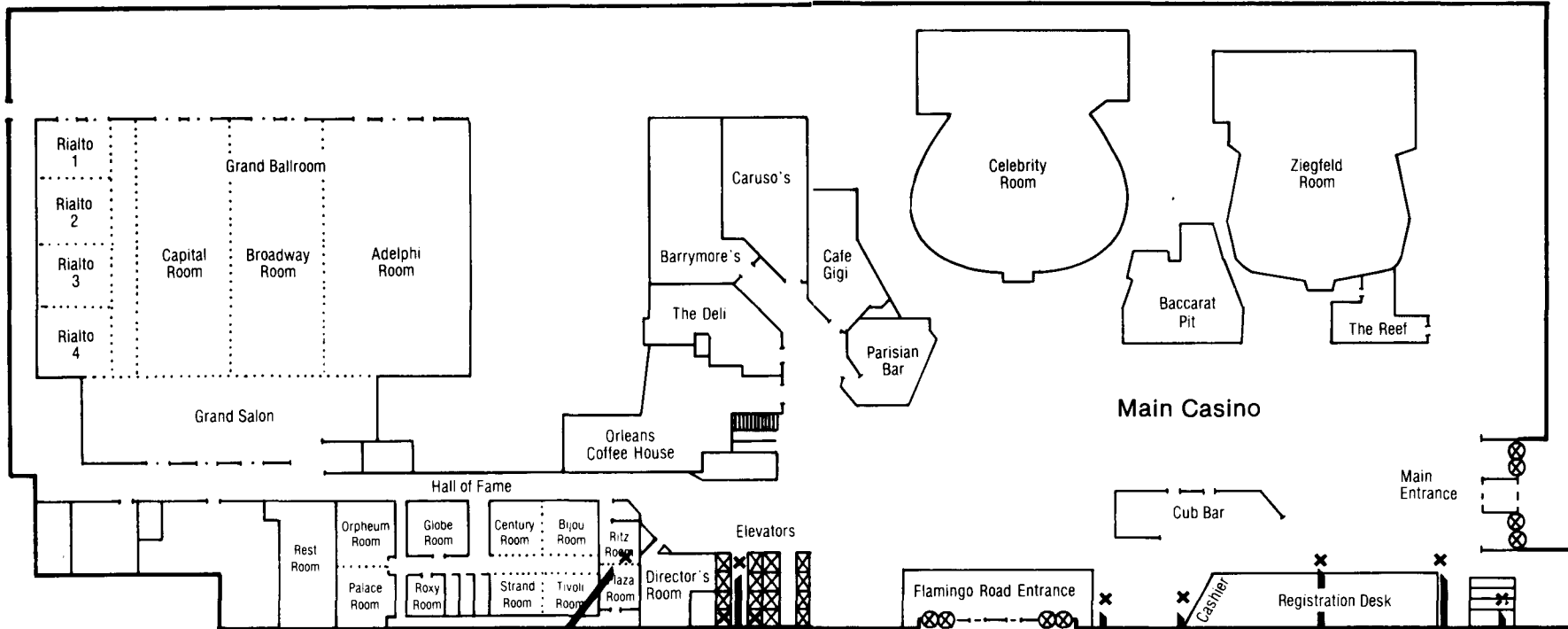


VIII-12

MGM HOTEL VICTIM LOCATIONS

FLOOR	MALE	FEMALE	TOTAL
Casino Level	11	7	18
16th Floor	0	1	1
19th Floor	2	2	4
20th Floor	8	6	14
21st Floor	6	2	8
22nd Floor	1	2	3
23rd Floor	9	5	14
24th Floor	6	3	9
25th Floor	1	6	7
26th Floor	0	1	1
Unknown Location	<u>6</u>	<u>0</u>	<u>6</u>
	50	35	85

EMS 12/23/80



- 1 Female - Jumped, North Side
- 1 Male, 1 Female - West End, Registration Desk
- 1 Male - Registration Desk, Center
- 1 Male - East End, Registration Desk
- 1 Female - Between Registration Desk and Flamingo
- 1 Male, 1 Female - Casino Elevator, East Hall
- 4 Males - in Ritz Room
- 1 Female - West Stairwell to Executive Offices
- 1 Male, 1 Female - Casino Elevator P-4
- 2 Males, 1 Female - Casino Elevator P-7

- 1441
- 1442
- 1443
- 1444
- 1508
- 1509
- 1439
- 1491
- 1510
- 1511
- 1512

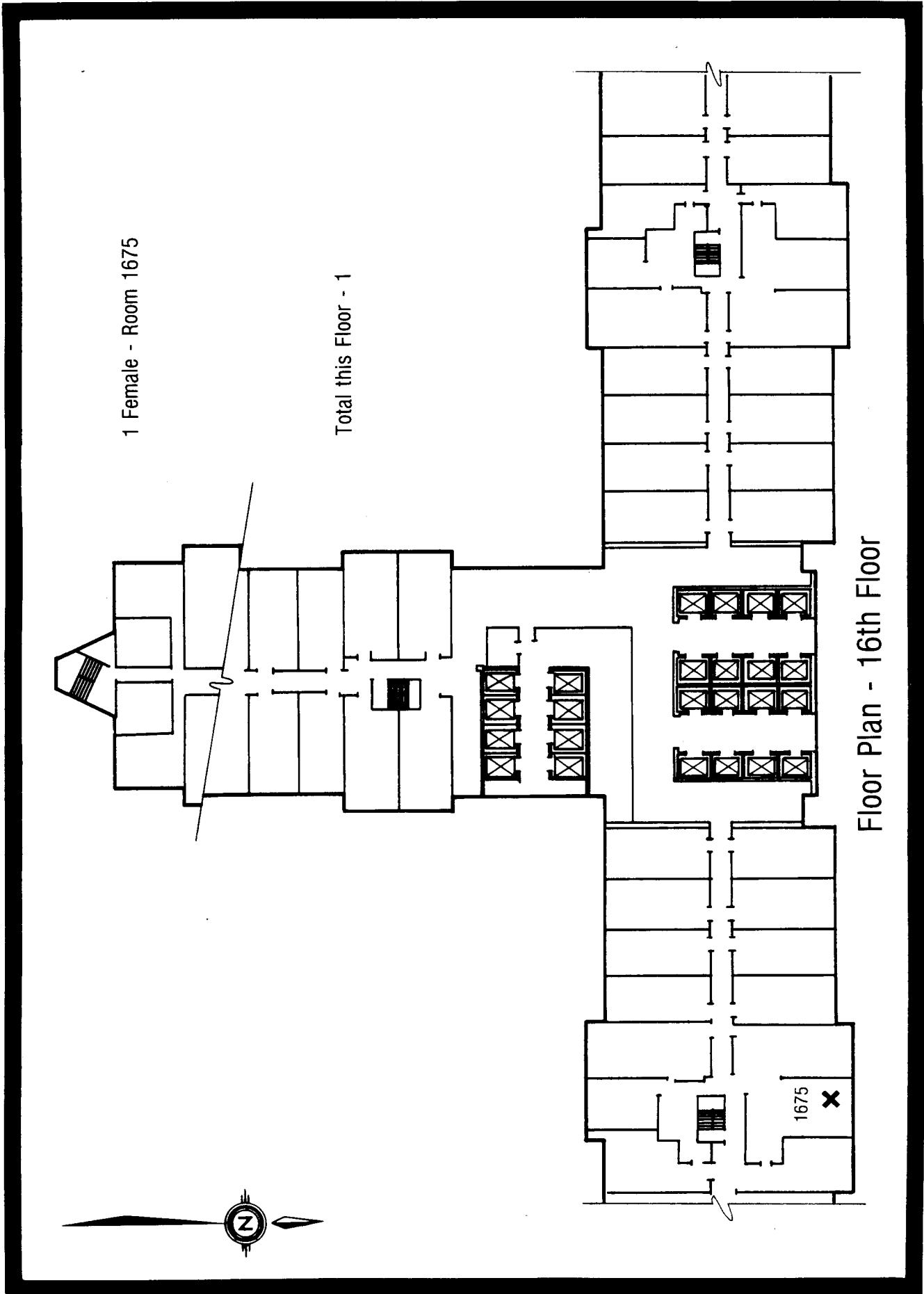
- 1430
- 1436
- 1435
- 1434
- 1432
- 1445
- 1433

Total this Floor - 18
(1 outside building)

MGM GROUND FLOOR

NOTE: Not Plotted on any Floor Plan

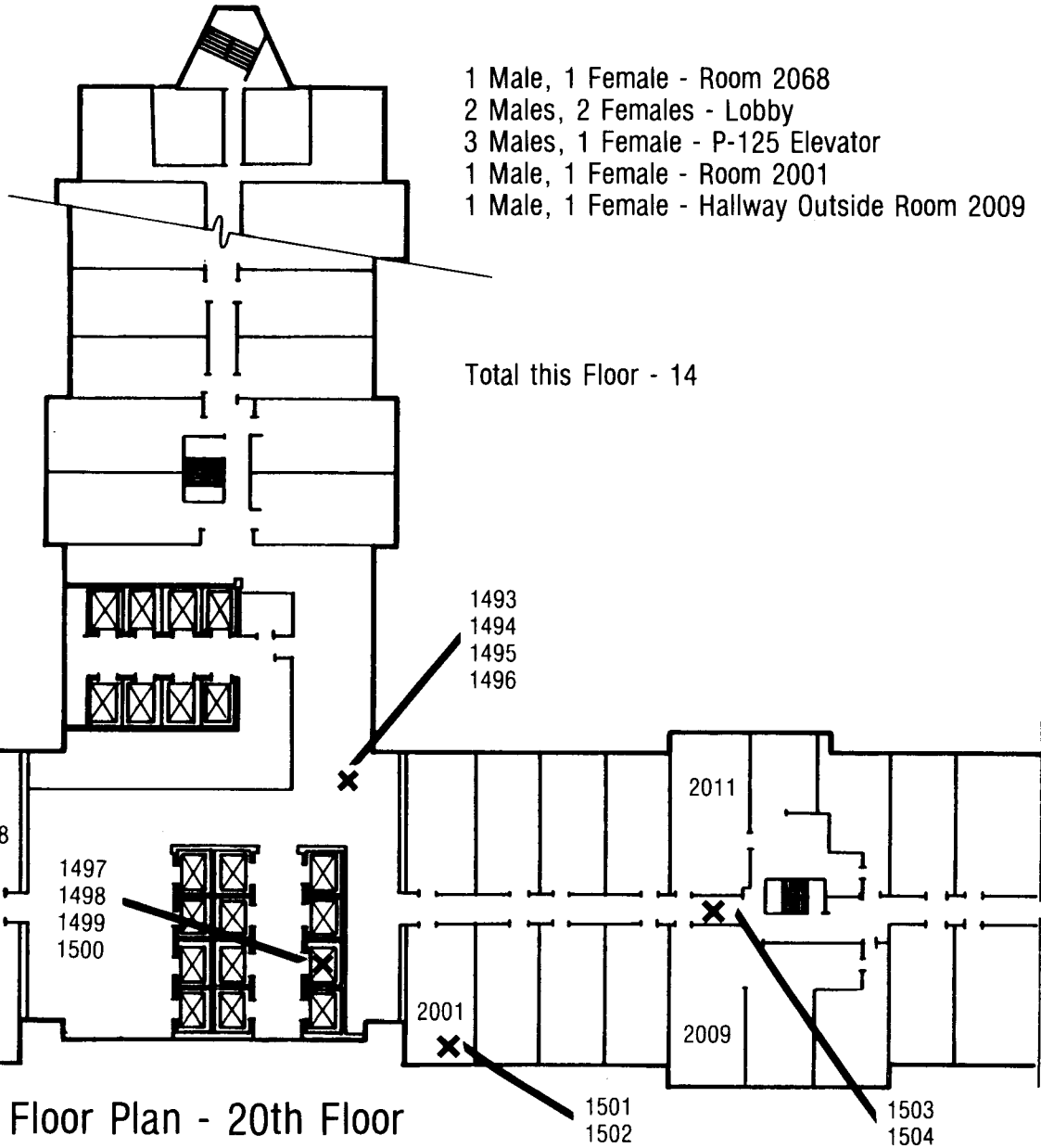
- 1437 - 1 Male - DOA Sunrise Hospital
- 1448 - 1 Male - DOA Desert Springs Hospital
- 1446 - 1 Male - Helicopter Removed from Roof
- 1454 - 1 Male - Found on Roof
- 1513 - 1 Male - Helicopter Removed from Roof



1 Female - Room 1675

Total this Floor - 1

Floor Plan - 16th Floor

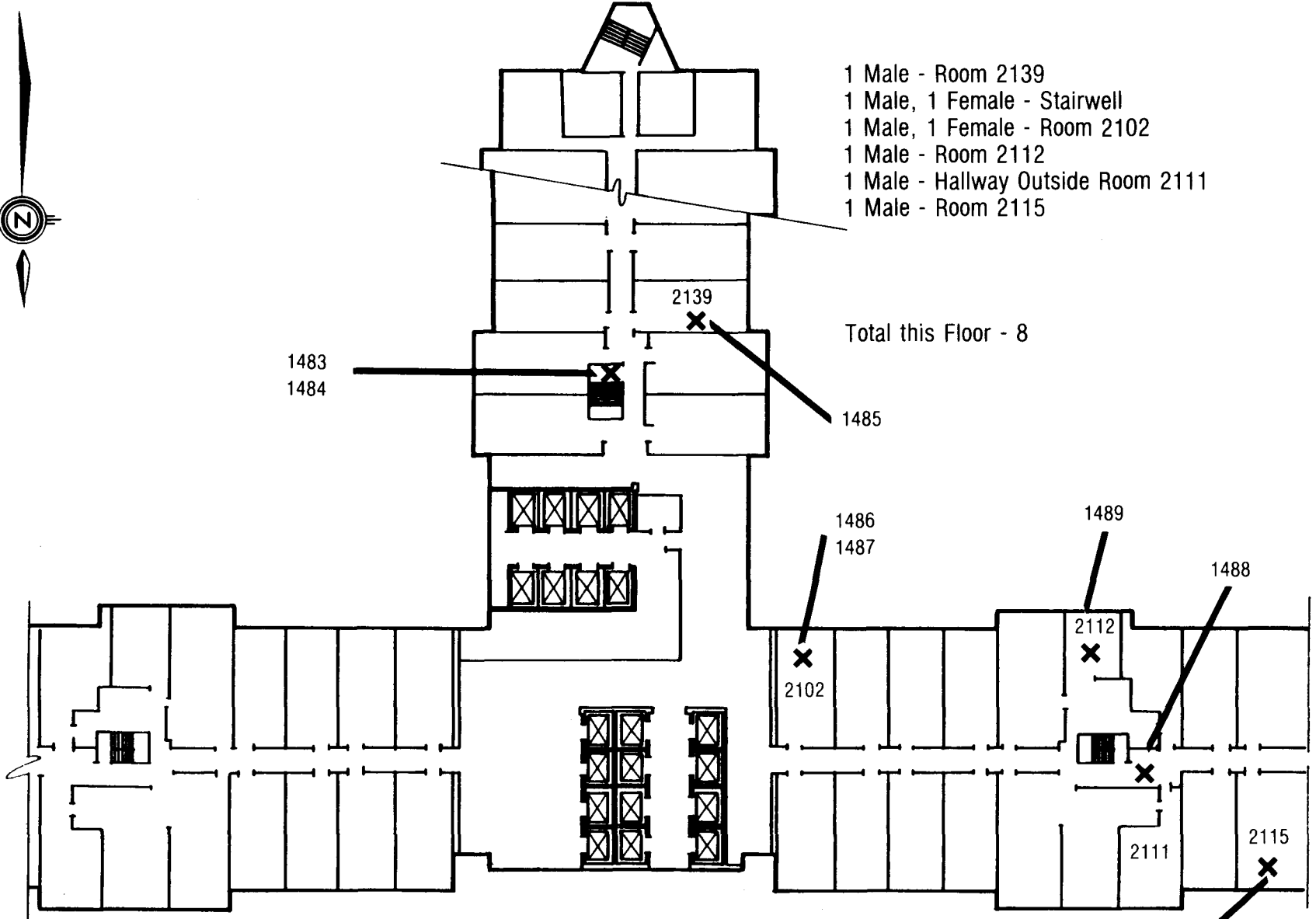


Floor Plan - 20th Floor

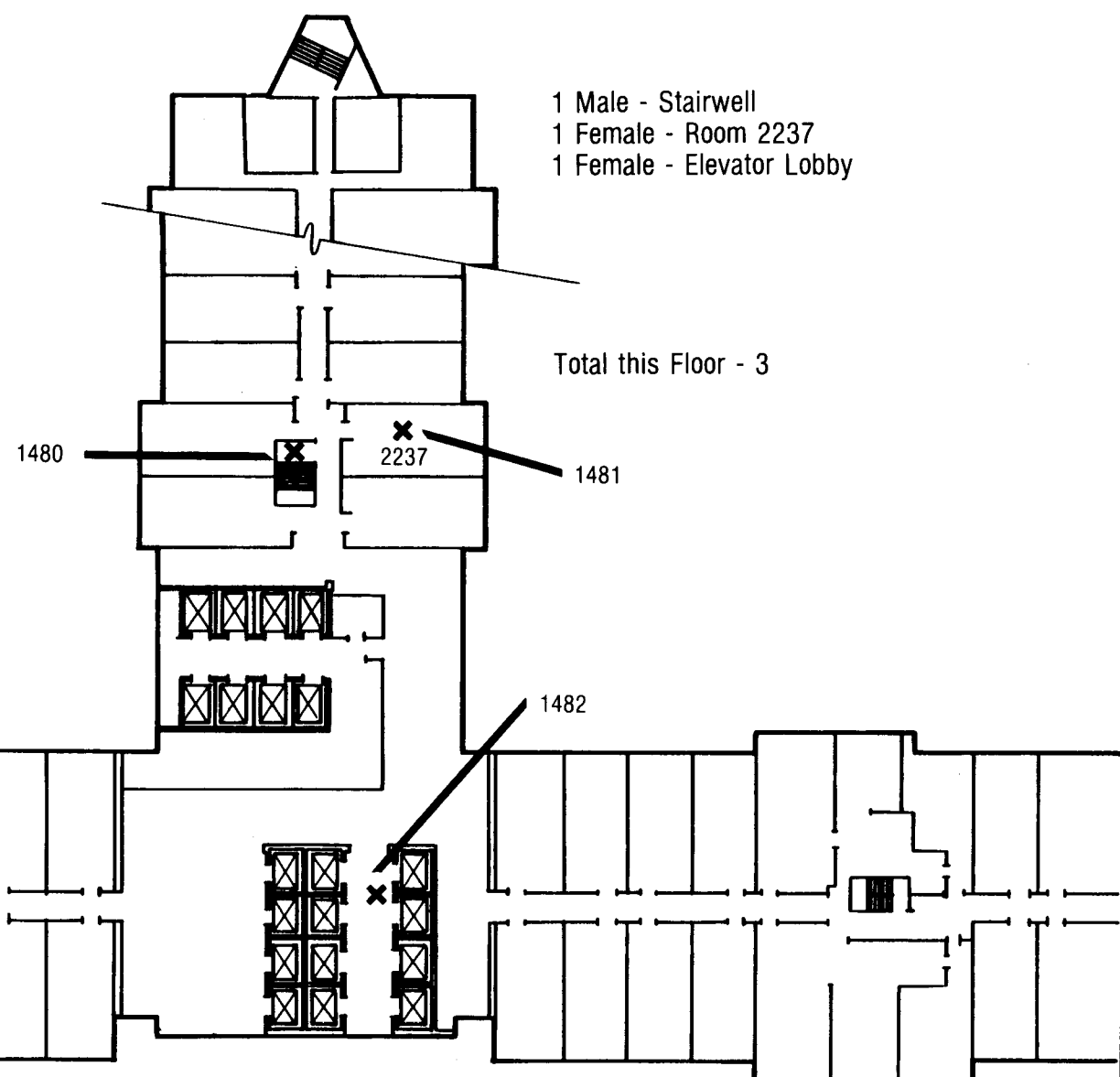
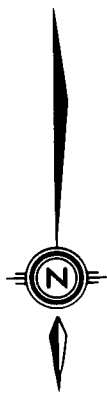


- 1 Male - Room 2139
- 1 Male, 1 Female - Stairwell
- 1 Male, 1 Female - Room 2102
- 1 Male - Room 2112
- 1 Male - Hallway Outside Room 2111
- 1 Male - Room 2115

Total this Floor - 8



Floor Plan - 21st Floor



1 Male - Stairwell
1 Female - Room 2237
1 Female - Elevator Lobby

Total this Floor - 3

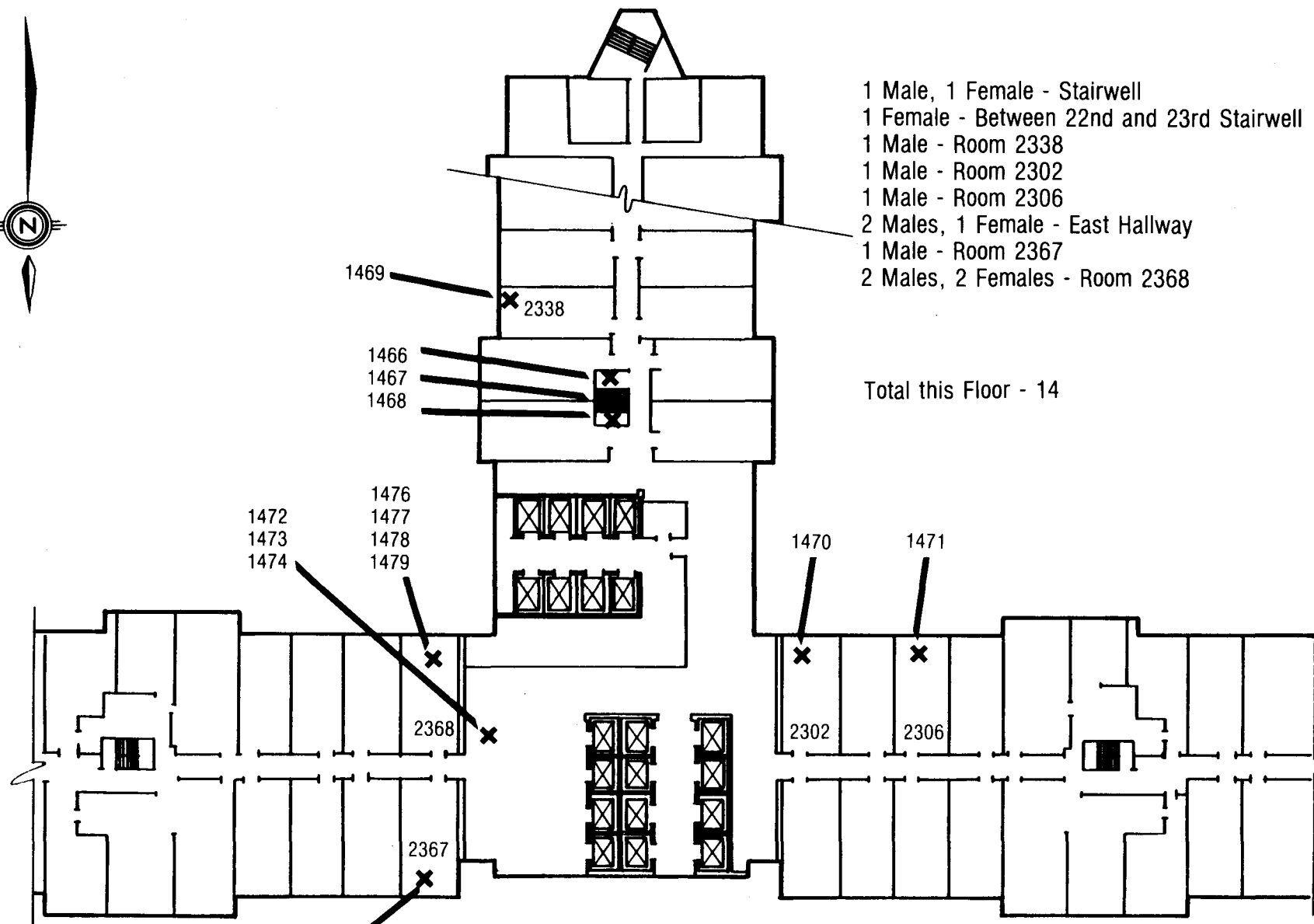
1480

2237

1481

1482

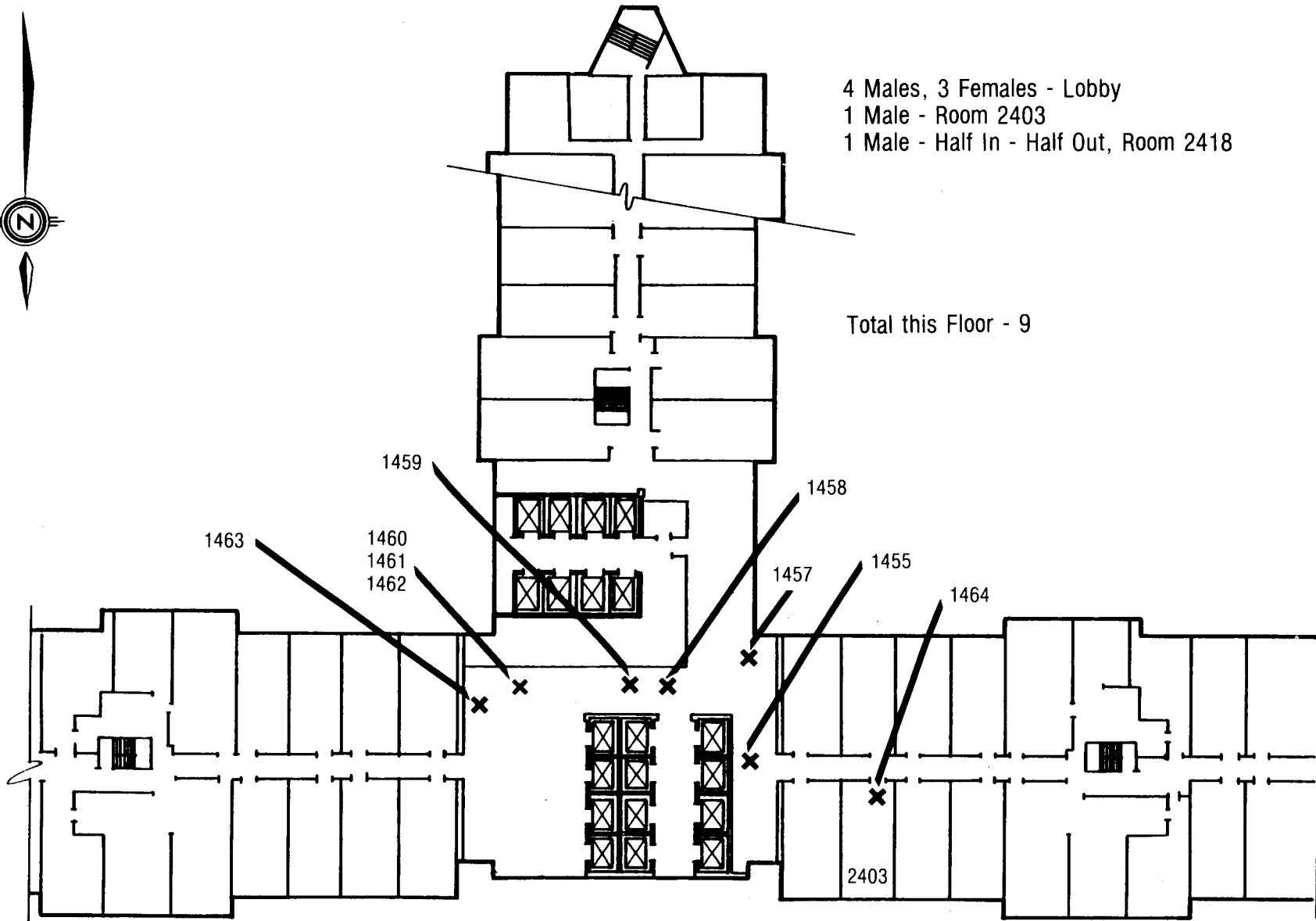
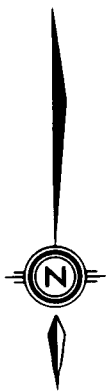
Floor Plan - 22nd Floor



- 1 Male, 1 Female - Stairwell
- 1 Female - Between 22nd and 23rd Stairwell
- 1 Male - Room 2338
- 1 Male - Room 2302
- 1 Male - Room 2306
- 2 Males, 1 Female - East Hallway
- 1 Male - Room 2367
- 2 Males, 2 Females - Room 2368

Total this Floor - 14

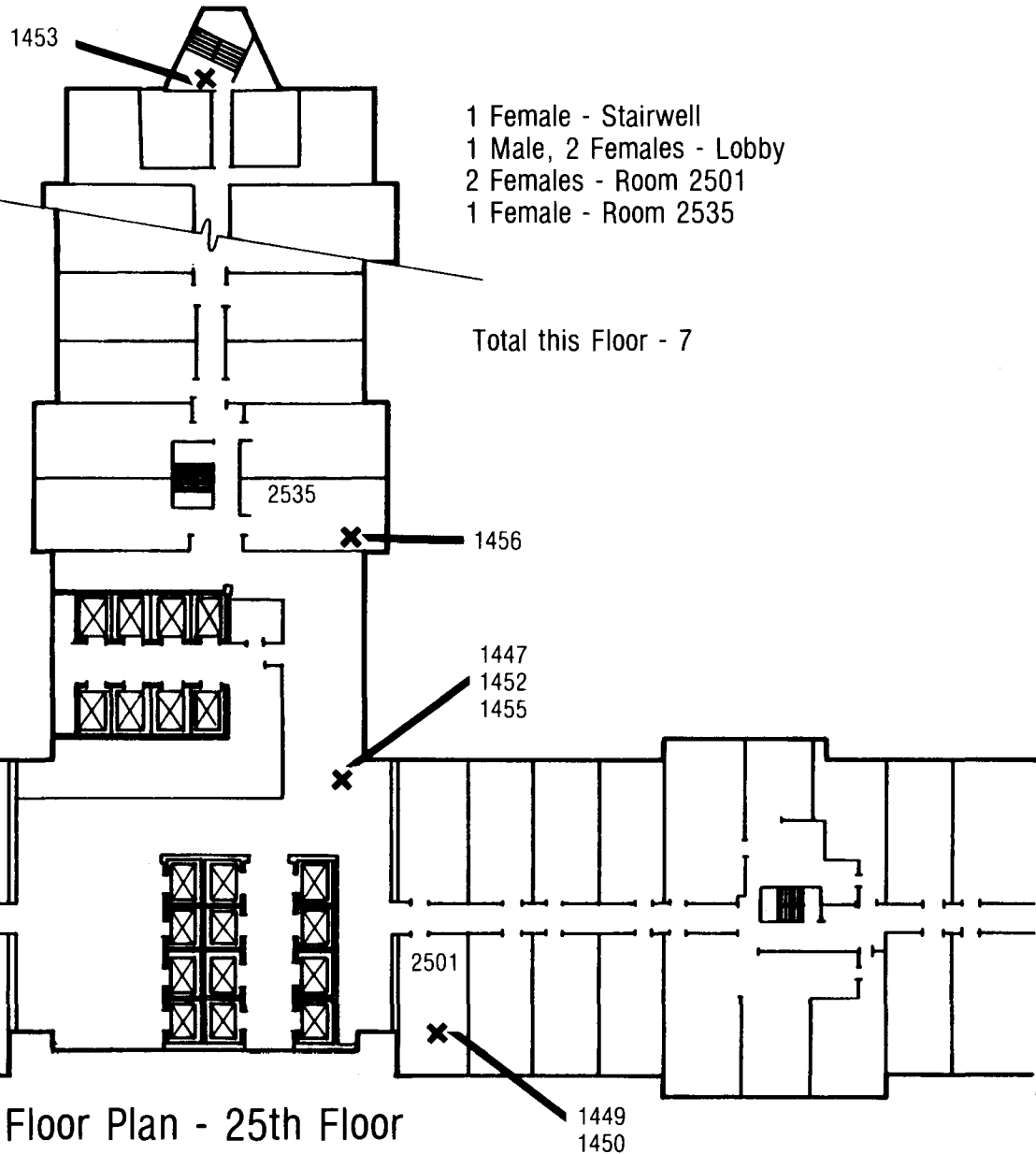
Floor Plan - 23rd Floor



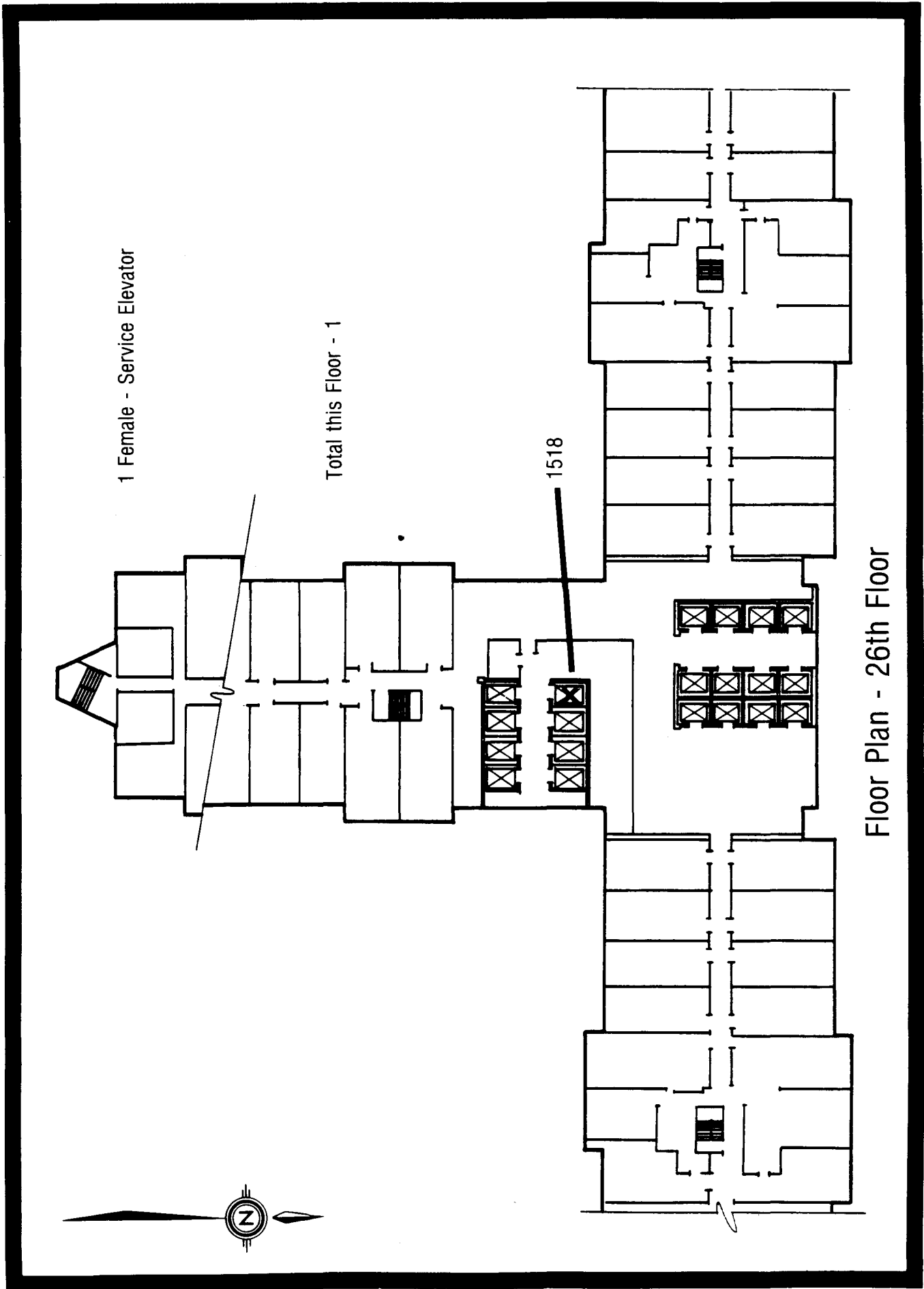
4 Males, 3 Females - Lobby
1 Male - Room 2403
1 Male - Half In - Half Out, Room 2418

Total this Floor - 9

Floor Plan - 24th Floor



Floor Plan - 25th Floor



1 Female - Service Elevator

Total this Floor - 1

1518

Floor Plan - 26th Floor

Bag #	Case #	NAME	Method of I.D.	Mortuary
	1430	MACK, Delores Ann		Palm
1	1432	MCDOWELL, Genelle	Dental x-ray	Bunker
2	1433	MICKS, Mark	Dental & Viewing	Palm
3	1434	VASQUEZ, Jose Luis (Ceja)	I.D. in wallet on person	Palm
4	1435	GUIDRY, Gustave N.	Dental, Viewing body and property by wife	Palm
5	1436	THOMAS, Phyllis	Viewed - Family	Palm
B6	1437	TRAMEL, Charles	Papers on body	Palm
R7	1438	THOMPSON, Diane	Viewing - family	Palm
B7	1439	KELLER, Blanche E.	Viewing by son	Palm
8	1440	THOMPSON, Tom	Viewing - family	Palm
9	1441	HUDGINS, Jodell	MGM Hotel I.D. card	Palm
10	1442	PICKETT, S.	Security Guard Badge #55	Palm
11	1443	POTTER, David P.	Illinois Driver's License	Palm
12	1444	GERBOSI, William M.	Illinois Driver's License	Palm
13	1445	PETERSON, Roberta	Dental	Palm
M14	1446	GALICO (Chalom) Leon	Son - by photo	Bunker
16	1447	HANKS, Dellum	View - sister-in-law	Spaulding
M15	1448	WHITE, Clarence	Papers on body	Palm
17	1449	NOSE, Lori Ann	Viewed by mother	Bunker
18	1450	MAYER, Carol Ann	Viewed by brother-in-law	PVC
R6	1451	KELLER, Jack		Palm
15A	1452	MIDDLETON, Barbara E.	California Driver's License	Palm
20	1453	TUNIS, Patricia	Dental & family view	Palm
14	1454	BELL, Joe	Arkansas Driver's License	PVC

Bag #	Case #	NAME	Method of I.D.	Mortuary
21	1455	DUNCAN, Willie	MGM Hotel I.D. Card	Palm
19	1456	MCGAUGHEY, Christine Lynn	California Driver's License	Palm
22	1457	PEHA, Daniel	Photo - by friend	Bunker
23	1458	SPAGNOLA, Tom	View by friend - Steve Genovese	PVC
24	1459	PANGBURN, Diane	Viewed by friend - Steve Genovese	PVC
25	1460	HOLSHUH, Steven Jack	I.D. on person	Palm
26	1461	SANDERS, Catherine Ann	I.D. on person	PVC
27	1462	SIERRA, Pablo	Photo - by friend	Bunker
28	1463	SIERRA, Margarita	Photo - by friend	Bunker
29	1464	SIERRA, Manuel	Viewing	Bunker
30	1465	PALAZZOLO, Charles	I.D. on person	PVC
31	1466	NILSSEN, Dr. Donald	I.D. in wallet	Bunker
32	1467	NILSSEN, Janet T.	I.D. by sons	Bunker
33	1468	BARRESI, Elizabeth	I.D. in bag	Bunker
34	1469	BUSHELL, Robert P., M.D.	Viewing by Dr. Elam	Bunker
35	1470	JOHNSON, Richard Oren	Minn. Driver's License	PVC
36	1471	SIPFLE, Richard E.	Michigan Driver's License	PVC
37	1472	HOO, James L.		PVC
38	1473	HOO, Edna		PVC
39	1474	STEPHENS, Sammie Lee	Viewing by son	PVC
40	1475	STEPHENS, Gary Dean	Oklahoma Driver's License	PVC
41	1476	UNOLD, Alan M.		PVC
42	1477	KNICK, Emil Joseph	Maryland Driver's License	Palm
43	1478	KNICK, Mary Elaine	Maryland Driver's License	Palm

Bag #	Case #	NAME	Method of I.D.	Mortuary
44	1479	UNOLD, Roslyn	Family Information	Palm
45	1480	SHAFFER, Donald M.	I.D. on person	PVC
46	1481	ROGALL, Pearl M.	I.D. on person	Spalding
47	1482	LEAVITT, Theresa	Dental	Spalding
48	1483	IADELUCA, Raphael	I.D. on person	Bunker
49	1484	IADELUCA, Angela	Photo - by family	Bunker
50	1485	MCCARTHY, Glenn A.	I.D. on person	Spalding
51	1486	HERRING, Edward	I.D. on person	Spalding
52	1487	HERRING, Genese Helen artlett	I.D. on person	Spalding
53	1488	MORALES, Fernando Lobo	I.D. on person	Bunker
54	1489	TORRES, Andres Garcia	I.D. on person	Spalding
55	1490	ASHTON, John F.	MGM I.D. card	Palm
56	1491	MCKINNEY, Vincent James	California Driver's License	Palm
57	1492	MCKINNEY, Ethel Dorothey	California Driver's License	Palm
58	1493	SOSHNICK, Allan M.	Georgia Driver's License	Palm
59	1494	CASTELAZO, Victor	Driver's License	Palm
60	1495	CASTELAZO, Laura	I.D. in person by family	Palm
61	1496	SOSHNICK, Allan M.	Georgia Driver's License	Palm
62	1497	MCQUITHY, Elmire L.	Indiana Driver's License	Palm
63	1498	MCQUITHY, John K.	Indiana Driver's License	Palm
64	1499	BLAIR, David R., Jr.	Ohio Driver's License	PVC
65	1500	THEBEAULT, James E.	Ohio Driver's License	Palm
66	1501	VASSOUGHI, Mary Ann	I.D. in purse	Bunker
67	1502	VASSOUGHI, H., M.D.	I.D. on person	Bunker

Bag #	Case #	NAME	Method of I.D.	Mortuary
68	1503	MORALES, Susanna E. Lobo	I.D. on person	Bunker
69	1504	ALVAREZ, Jose Luis Mata	I.D. on person	Palm
70	1505	GALICO, Sara	Viewed	Bunker
71	1506	LITTMAN, Ellis C.	Missouri Driver's License	PVC
72	1507	LITTMAN, Roslyn E.	Missouri Driver's License	PVC
73	1508	SANDERS, Barbara J.	Indiana Driver's License	Palm
74	1509	SANDERS, David F.	Indiana Driver's License	Palm
75	1510	ASHER, David	Indiana Driver's License	Palm
76	1511	MONAWECK, John Floyd	Arkansas Driver's License	Spalding
77	1512	ANDREWS, Karen	Dental & Jewelry	Palm
78	1513)			
)			
79	1514)			
)			
80	1515)	NUMBERS NOT ASSIGNED		
)			
81	1516)			
)			
82	1517)			
83	1518	CAPETILLO, Maria M.	I.D. on person	Spalding
84 (211)	1513	ROGALL, Edward M.	Viewed - Family	Palm

SECTION IX
WITNESS STATEMENTS

SECTION IX
WITNESS STATEMENTS

This section contains a list of witness statements from persons involved with the MGM fire. The following pages are only copies of these statements and are only a partial listing of all statements taken. Original statements are on file with the Clark County Fire Department and the Clark County District Attorney's Office.

On January 29 and 30, 1981, the following individuals were interviewed concerning their activity between 7:00 and 7:30 a.m., on the morning of November 21, 1980.

These individuals are security officers, who were working 12:00 midnight to 8:00 a.m., assigned to various locations within the MGM hotel and casino.

George Jaikowech
Jack D. Williams
Larry Horton
Calvin Thomas
Linda Lambert
Raymond A. Yeager
Anthony Vacelli

William Whitby
Samuel Matthews
Al Rossi
William Smith
James A. Childs
Joseph Westaby
Lt. Champlin

The following security officers were interviewed and reports not made because their work assignments confined them to remote locations within the hotel or have terminated employment:

Mr. Filkins
Cleo Mack
Robert Geroe
William Gaughn
Jack Perala

Sara Capizzi
George Williams
Bill Lane
Mr. Huggins)
Mr. Pickett) *Deceased*

DATE: Tuesday, November 25, 1980

TAPED INTERVIEW OF TIM CONNOR

PRESONS PRESENT: TIM CONNOR, Employee, MGM Hotel
WAYNE BURNS, Fire Investigations Division, CCFD
TOM CLEM, United States Fire Administration
JOHN KELLY, Bureau of National Fire Protection Association, Electrical Investigator

STATEMENT FROM TIM CONNOR

My usual starting time is 7:00 in the morning. So at 7:00, I check in my keys, go to my warehouse, which is in the basement. I have a routine that I leave my warehouse area, come around through the arcade, up the escalators and at the top of the escalators I grab a left and go in front of the coffee shop, which is open and there is people in it, to the Deli which is at that time of the morning is always closed, because it is the closest path that I have to get to the kitchen area to start my visual inspection. Each morning I make a walk through. The doors are closed and there is a sign out in front of it says it is closed, but they are never locked. I open one of the doors and come on in and as I enter and proceeded to approximately the column in the middle of the Deli, I heard a crackling sound, like a fire, a roaring fire going like a big bonfire or something and I looked to the right over to the Deli sub-station the bus station on the right hand side (the south side of the wall) and I could see the shadow of the flames flickering as a candle flickers and I proceeded to that Deli side station, stepped inside I could see a wall of flames on the back wall, which would be the east wall. It was a sheet of flames running from the top of the counter to the ceiling.

NOTE: The position that Tim noted he was in he did not get the full view of the entire rear of the Deli bus area. He could, from his position, only see the corner. The rest of the Deli area was obscured from his view at the time.

From there, I went directly to the telephone, which is back at the entrance behind the desk and I called Security. I told Security that they had a fire in the Deli and he asked me if it is bad enough for the Fire Department, and I said, "Hell yes, roll em". I hung up the phone, started back toward the fire house cabinet, which is in the hallway between the Deli and the restaurant row. As I approached that, pressure and smoke, I was pushed backwards and knocked off my feet in front of the booths right there and I came down in front of the booths, went over and opened the front doors (the bi-fold doors) and swung the sign out of the way and at that time was when Security met me and they were running across the casino and up the stairs toward me. The lead man asked me if I knew where the fire hose cabinet was in this area. I said, "Yes, around by Barrymore". And I ran around to the fire hose cabinet, which is inside an alcove just outside of the Barrymore restaurant. There was nobody with me. I remembered he was taking off his gun and handing it to another guy as I approached this, so I broke the glass, opened the fire hose (cabinet) door and as I opened the door, he, or somebody, reached by me and spun fire house out and turned it on. I could remember seeing the water dripping out of it so I know it was on.

The only remaining course to me was to take the bottle. I took the bottle and I went through the little passage way there, which is a door passage way into the Deli. I entered the Deli there and he obviously took the hose and went to the front of the Deli, probably not knowing the passage way existed. At which time I started around the corner to go into the bus station, which is directly around the corner from the alcove and the smoke, pressure, whatever pushed me backwards knocking me into the alcove.

QUESTION: *You had stated that when you started to step down the two steps that come out of the little switch-back hallway, did you see smoke, and what was it doing at the time you saw it?*

Yes, I do remember seeing smoke, an extreme amount and it was swirling, it wasn't swirling, it was like a sea in a wind tunnel. How you see it go around something or over something, you see it was coming down and across. It was just swirling like a wing type deal. I remember seeing it now.

QUESTION: *This smoke effect appeared to be coming from what portion of the Deli?*

It was coming out of the side station. Directly out of the side station and that was when pressure hit me and knocked me backwards and then I wound up in the, when I stood up in the alcove there I remembered thinking that I have got to go to the casino and I stood up and I was totally engulfed in smoke, but I could still see where I was going. I remembered that I could still see the carpet. I could see the floor, but I couldn't breath, so I got down and I started moving and the lights went out. I don't know if the lights went out or if I was engulfed in more smoke or whatever it

TIM CONNOR, Continued

was, but I could not see, I could not breath and somehow headed for the Casino I wound up against the stairs in Caruso and when I got to the stairs at Caruso, knowing the hotel as I do, I went up the stairs, across a little parfit and hit the doors there, which were fortunately unlocked, they were chained, but they were unlocked. That's how I exited the area. I never got into the casino. I never seen the security or the actual fire, after my first encounter with it. I never seen the fire, but I never felt heat, but the smoke was intense.

QUESTION: (Tom Clem) Tim would you describe the difference between the environment that you were in at the front of the gate, versus the other side of the gate as far as the smoke, heat or whatever?

Yes. After I opened it, I knew, because there was no air, I could not breath. As I was going through there I remember when I got to the stairs, I kept thinking of the fountain, which is right inside Caruso. I felt those stairs and there is only one set of stairs. They go to Caruso. When I got inside and I opened the doors I could stand up. I could see the lights were on and there was air. Smoke had not entered that. It was headed toward the casino and it was not going into that at that moment and I ran on through there and at that time for some reason, two people came out of the kitchen area, they came out of the electric doors. So the electricity was on in there. And I still don't know if the lights went off or whether I was just totally engulfed in smoke in restaurant row. That still puzzles me.

QUESTION: (Tom Clem) You are saying then Tim that it could have been possible that the smoke was obscuring the lights that were in the ceiling?

This is what I am thinking because at this time of the day all of those restaurants, Barrymore, Caruso, Gigi are all closed. They are in the process of cleanup. There are lights on inside of there that that they turn up so that they can clean up and they turn down when they are through. At that time of the morning, at 7:00 in the morning Barrymore is usually being vacuumed. At 7:00 in the morning Caruso is usually closed as is Gigi and they alternate with them as far as vacuuming and carpeting cleaning, which is a constant process.

QUESTION: (Tom Clem) I want to go back to when you originally saw the shadow of flickering flames and you went up through the entrance door of the deli bus stand and you looked in the back. I want you to describe the level of the flames. Where they were as opposed to were they on the floor, were they on the shelf, the ceiling? Describe that for me.

When I stepped in, I looked at this wall of flame. It was running from the counter to the ceiling and I remembered since then that there is a shelf along there and as I looked in those flames, I could not see this shelf, cause it was just a wall of flame and it was just like a bon-fire in the open. It was really...really on fire. I mean it's really hot and burning and that's the impression that I got there, but it was running from the top of the counter up to the ceiling.

QUESTION: (Tom Clem) And from your best observation, it did not appear that it was coming from the ground, or the floor or the tile?

No. It was definitely not coming from the floor. There was no question in my mind at all. It was from the top of the counter up. It was not coming, it was not below the countertop, which is a stainless steel countertop. This I definitely remembered.

QUESTION: Tim, I also know that from our previous conversation before we taped, that you were involved in some of the interior finish work, tile work in this room. Would you describe for us the tile, where it was and how it ran and a little more of the interior finish that you described a few minutes ago to me?

The original on this, behind each one of the booths, or on the booths walls behind in the alcoves, all the booths sit in kind of an alcove effect. There was tile running from the booth from just below the top of the booths to the top of the ceiling with pictures on all these walls of all the entertainers of the past and that ran in all of the booth areas, all the way around the entire room. Approximately a year to a year and a half ago we had gone in and put in tile floors and bays in each one of the two bus stations, had completely redone the bus station in the back and taken out the counters in there and put all tile all the way around all the added booth areas from the back of the sub station in question all the way around to the kitchen area in the back and the interior on the back wall of that sub-station we put tile on.

QUESTION: The construction, the finish materials of the bus station. How did that...

That was masonite, either formica or masonite, I really don't know what it is, it's about one eighth of an inch

TIM CONNOR, Continued

thick and it is a very non-porous, slick finish. It is easy to clean and it is locked in with glue and little metal runners and they ran that from the top of the base to the ceiling in each one of the bus stations in the room for cleanliness and to eliminate any breakage in the walls due to the carts and throwing of the dishes, etc.

QUESTIONS: How did the finish of the walls that were not tiled differ from the tiled walls, as far as the finished materials?

They were dry wall. Taped dry wall with wallpaper. I don't remember the wallpaper in here. This you would have to check with our wallpaper people downstairs. They have replacements in stock for this for all of the rooms in here, so you could get a piece of that if you wanted it.

QUESTION: Who would be in charge of that, the wallpaper?

The wallpaper in there would be Warran Garner.

QUESTION: (Wayne Burns) Tim, to go back one more time, when you stepped inside of the area where you could see the backs of the Deli side station and you made reference to a wall of flame in there, could you go into a little more detail as to the size of it, approximately how wide it was, what portion of the wall appeared to be engulfed in flames?

From what I could see, it was a total mass of flames. It ran from the top of the counter to the ceiling. It was burning really strong, really...like a...I don't know how to describe it. Like a really big bon-fire, where the flames were really just jumping up. It's really burning out of control. You know, if it would have been a small type fire, I would have notified security and acted a little differently. It was totally out of control. I remember this explicitly that it was totally out of control. That it was nothing that I could handle... we had to get the fire department. We had to get the people who knew what they were doing. I am not a fire fighter. I know nothing about fire and I am not about to play games with it. I have people in that business. My son is very well educated in that and he has stressed the point to me that I know nothing. Give it to somebody who knows what they are doing.

QUESTION: (Tom Clem) If we ran an analogy of a controlled log in a fireplace, that flickering and that vine of flame that would come up from that would be alot different than the type of roaring flame...

Yes. To me, as I can remember in my mind, it would be like a roaring "fed" fire, where you have extreme gases or something hitting it, just screaming up... not just a nice easy burning fire like in a fireplace, but I mean a very hard fire, where it is really out of control, just going for all it was worth.

1043 Hours -- Conversation concluded with Tim Connor

(Re-Interview)

Tim Connor, Badge number 08788, my address is ~~3695 Paxton Court~~ I am employed as an Engineer at the MGM. I am in charge of the marble and tile installation and repair. My normal working hours are 7 to 3, so at 7:00 five of us had met at...

QUESTION: That was on the 21st, yesterday, November 21st.

Yes. We met in the Engineer Shop at about quarter to 7, had a cup of coffee and discussed the work situation. I had two men that had come in earlier and they were in the Zeigfield drying out a floor that I had set the previous day. Two of the men went to the 10th floor to change their clothes. At 7:00 I picked up my keys, went to the shop, opened it up and the other two were there and I went up, as I usually do. I came out of the garage, down through security by the elevators, up the escalators past the coffee shop and into the Deli. I have a habit of going through the Deli because it is closed this time of the day. I can go into the kitchen on my way down through the back hallway to the Zeigfield where I was going. As I entered, I opened the doors in the Deli (which the doors are always closed, they are not locked, they are just closed) I walked inside, getting inside about half way, probably near the column in the middle there, I heard a crackling sound to the right and I seen the shadow of fire in the bus station on the south side of the Deli, or the righthand side there. I went over to there...

TIM CONNOR, Continued

QUESTION: Now the right hand side, that's as you are standing at the door, you are looking into the Deli, right inside?

Yes. And I went over there immediately and looked inside and there was fire shooting from the stainless steel pan up to the ceiling. It was a sheet of fire. I could not see the wall, it was just a sheet of fire there. But it was just from the pan to the ceiling. So I immediately ran back through the tables to the entrance there and behind the cashiers counter there is a telephone. I pushed the buttons, 4481, notified the security they had a fire in the Deli. He said, Is it enough to roll the fire department? I says Yes, get them going. I immediately went back to the scene of the fire in the bus station. Just as I started in there I realized as I am headed for it that there is a fire hose cabinet on the back side of the small hallway that goes from the Deli to the Barrymore, or Restaurant Row, there. There is a fire hose cabinet there. I have done the marble and tile work here and I know the area well. I started for this and I was blown back by pressure. Not by heat or by flames, but by pressure.

QUESTION: Air pressure?

Air pressure is what it felt like...

QUESTION: What direction was it flowing?

It was coming towards me.

QUESTION: Into the building?

No, it was going from the fire out toward the casino, air pressure.

QUESTION: Was it warm air, or just...

I didn't feel any heat. I don't remember feeling any heat. I have no sense of smell so I don't know if there was any smell involved or not. So I turned and I ran back out, opened both doors in the Deli, swung the sign out of the way so that security could get in there, because I assumed that they would be bringing something. At that time, three security officers came from the casino, one of them running very hard and trying to take off his gun at the same time, the small Italian guy. I don't know his name. But the three security men came there and the one guy in the lead (the Italian fella) he asked me "is there a fire hose cabinet in this area?" I said "Yes, around by the Barrymore". And I ran as hard as I can around through Restaurant Row back through the Barrymore and I beat him there and I hesitated there for a second thinking he was there and would have a key. And when he wasn't there, I broke the glass on fire hose cabinet, opened it and I reached for the hose and at that time he got ahold of the hose, I assume that it was him. I never seen...there was somebody along side of me who grabbed the hose, started reeling it out and turning the water on. There was a bottle there, fire extinguisher bottle. I grabbed the bottle and when he went into the Restaurant Row I went around through this. I don't know whether he knew that that was a travelers entrance into the Deli or not. It was the shortest distance to the fire, but he would not have known that. I did. I went that way with the fire hose bottle and as I got through the door, I turned the bottle on and the pressure blew me back against the wall. It was not heat, it was not fire, it was pressure and extreme black smoke. It blew me back against the wall.

QUESTION: Like a real strong gust of wind...away from the fire?

Yes. That was the way it hit me, but it seemed to be more pressure.

QUESTION: At this time how large was the fire? Was it growing rapidly?

I didn't see the fire. The fire was on the back side of this. All there was was extreme black smoke and I did not see any flames.

QUESTION: And a strong gust of wind and that's when you decided to get out?

Well, it hit me and moved me backwards and I turned to go back toward the casino, to go around that way to confront it and either smoke or the electricity went off, because I had no more...I could not see anything and I could not breath. The smoke engulfed me and I could not breath and I hit the deck and the hose was going out so I assumed that they were confronting the fire from the front and I could not see where the casino was. I had no idea where it was, it was totally black.

TIM CONNOR, Continued

QUESTION: You don't happen to know the names of either one of these people you mentioned?

I have no idea. There was three security men and I have no idea who the three of them are.

QUESTION: O.K. You know this is being taped for statement purposes? You are aware of that?

Yes.

QUESTION: If we need to get a written statement from you, would you make one for us at any time?

I would be glad to.

— — — — — INTERVIEW ENDED — — — — —

DAVE BESHOAR

Transcript of interview conducted with Dave Beshoar, 26-year-old fire fighter from West Springs, IL. November 22, 1980 at the MGM Hotel site in Las Vegas, NV.

Beshoar was one of four West Springs fire fighters on vacation in Las Vegas and staying at the MGM. Two of these men perished in the fire.

We walked into the Orleans Room at 7:15 - the reason I know that is that there was a man sitting at the first table and he asked the waitress what time it was and she said 7:15 and I jokingly remarked to him, "That's a.m." We sat down, they brought us our coffee, had a couple sips, a security guard walked in through the door - we were about the second table in to the right as you faced into the restaurant - and I could see him walk in, he was looking right at me. He said (not quoted) Gentlemen, I'm going to have to ask you to leave, there's a small fire next door and we're evacuating this area as a precautionary measure. So we got up and left and were the first ones to reach the door and there were people already running out from behind us. The smoke at that point out in the hallway was about a little bit higher than head height, we looked into the deli, which was to our left, and there was heavy smoke in there and we could see flame through the smoke.

There was a security guard standing there - I don't know if it was the same one who asked us to leave, but we identified ourselves as fire fighters and asked him for a fire extinguisher or hose line and we'd help knock down the fire till the fire department got here. He said they were not accessible, said they couldn't get to them, so we went looking for some ourselves. We walked all the way back to the north wall and then back to the east past the elevators looking for a fire extinguisher or hose line and we couldn't find one, so we went back to the restaurant area outside the doors.

By that time the smoke was really billowing out of the deli area. You could see quite a bit more flames. The smoke at that point out in the hall area was about waist height and there were still people coming out of the Orleans Room, so we instructed them to all get down low and make their way out that way so they could get fresh air, of course. We started working our way toward these fire exit doors along the north wall here ourselves. When we got here there was one door open, we opened the rest of the doors, we stayed back to make sure everybody was out. The only people we saw still in there were casino people, several guards, and perhaps a small handful of (I imagine) they were dealers.

At that point there was a loud click, the lights went out, and the whole casino floor darkened. You could hardly see the smoke billowing across the ceiling, all the way across the casino floor toward the west end. We looked back toward the restaurant area and the flames were already coming out toward where the ceiling raises up over the casino.

At that point, standing at this door over here in the middle of the north wall, the heat was already getting so intense we had to leave. So we came outside and the rest I think is history and you can gather that from these people.

QUESTION: Wasn't there kind of a backflash (flashover)?

No, well, I was still inside until possible as long as a minute after the electricity went out. I don't recall any type of backdraft situation.

QUESTION: No big ball of fire?

No, the deli restaurant was totally involved at that point and the flames were curling out along the ceiling working toward that higher ceiling over the casino coming out almost straight west by northwest.

(OTHER VOICES IN BACKGROUND)

I came out before the line was advanced into the building through this door and we were standing approximately right here in front of these revolving doors and that's when the chairs and suitcases and everything else started coming through the windows, so we went across the street and just watched from there.

Eight to ten minutes after we were asked to leave the restaurant that canopy was burning. It was so super heated within no more than four minutes could have elapsed, that by the time we got to these doors we stood there until we couldn't take the heat anymore. I don't know, within three or four minutes-it was super heating along the top of the ceiling and once that flame hit the higher casino roof, there was no stopping it. Everything was there - the heat, the oxygen content was good - the only thing they needed was open flame and as soon as it hit that roof it raced.

QUESTION: There is a theory going around that there was a delayed alarm because it spread too fast,...

No, absolutely not because the first rig was parked right here by the time I hit that door the first time. The very first time, and that couldn't have been more than two minutes maybe.

DAVE BESHUAR, Continued

QUESTION: There was no delayed alarm?

None, and two minutes later it's pouring out. (Background comment). Oh, it was incredible. I'm sure those guards that were in there - when I left because it was too hot - I don't know, I seriously question whether or not they made it out. They were sitting right across from here - we could see them from this door - we could see people still on the casino floor and they were all dressed in security uniforms and I don't know.

— **ALICE BROWN**

— *Report of Interview with Alice Brown, ~~XXXXXXXXXXXXXXXXXXXX~~ Las Vegas, Nevada, on November 22, 1980.*
— ~~XXXXXX~~

— Ms. Brown is a Cashier in the Coin Cage at the MGM Hotel Casino. She was working the 11:00 p.m., November 20, 1980 to 7:00 a.m., November 21, 1980 Shift. She stated as follows:

— That about 10:30 p.m. on November 20, 1980, she was walking on the Audry St. side of the MGM enroute to the employees entrance. She looked up at the building and saw yellow orange sparks emanating from an area of the building near the new construction on the south side of the building. She then proceeded to the employees time clock area and reported what she saw to the security guard who was on duty. As she walked away from the security desk she heard the guard on the phone reporting what she'd seen.

— Ms. Brown was asked if she noticed anything during her shift or whether she observed any flickering lights. She stated that she didn't observe anything unusual or smell anything, but she did say that she had noticed flickering lights frequently while employed at the MGM. She said that it was common for the lights to dim and flicker and she wouldn't necessarily pay any attention to that.

— Ms. Brown stated that she left the coin cage at 7:15 a.m. and went to check out. By the time she got to the employee area and checked out someone told her there was a fire in the casino. When she walked to the parking lot and looked back the flames were already visible.

— S/John F. Rice, Special Agent, ATF

RICHARD W. HAYNES

Statement of Richard W. Haynes, Special Agent, Bureau of Alcohol, Tobacco & Firearms, Las Vegas, Nevada, made on November 24, 1980.

During the evening hours of November 21, 1980, I was located in the office of the Bureau of Alcohol, Tobacco & Firearms, located at Room 312 Federal Building, 300 Las Vegas Blvd. South, Las Vegas, Nevada. My responsibilities during this period consisted of maintaining radio communications with agents located on the fire scene at the MGM Grand Hotel, locating and interviewing via telephone, certain witnesses as directed by agents on the scene and in general coordinating communications between agents on the scene and those elsewhere employed.

During the hours 4:30 p.m. to 9:30 p.m., November 21, 1980, I had occasion to telephonically contact, or attempt to contact the below identified individuals with the indicated results:

Eva Gibson (~~702-451-8199~~) Ms. Gibson advised she did not notice any flickering of the electrical lights prior to or during the fire. Gibson further stated that she would like to add the following information to the interview she had given Special Agent Deal of this Office.

1. That subsequent to the fire she had been told by the mother of Glenn Martin, (~~049-0223~~), a busboy employed in the Coffee Shop at the MGM, that Glenn stated he had smelled smoke just prior to departing the MGM on November 21, 1980 at approximately 7:00 a.m.
2. That the wall she observed bursting into flames was the wall opposite that which divides the coffee shop and deli.

Robert Lee (~~702-451-2051~~); that he had not noticed any flickering of electrical lights prior to or during the fire in the Coffee Shop area.

Clara Mefferd - telephone number given was ~~496-5770~~ I was informed by the telephone operator that no prefix such as 496 exists in the Las Vegas Metropolitan area. All subsequent efforts to contact Ms. Mefferd proved unsuccessful.

Jim Connor - believed to be a tile fitter who frequented the Coffee Shop. Telephone number 451-5504, was repeatedly tried with no answer.

S/Richard W. Haynes, Special Agent, ATF

BOBBY COMBS

Report of interview with Bobby Combs on November 21, 1980 at approximately 5:45 p.m. via telephone from 702-385-6584, (Bureau of Alcohol, Tobacco, and Firearms Office, Room 312 Federal Building, Las Vegas, Nevada), to ~~XXXXXXXXXX~~, (Residence of Bobby Combs), by Special Agent Richard W. Haynes, Bureau of Alcohol, Tobacco and Firearms.

Mr. Combs stated that he is employed as a Blackjack Dealer by the MGM Casino and that on the morning of November 21, 1980, he had reported for work at 4:00 a.m. Combs stated that at approximately 7:00 a.m. on November 21, 1980, he was dealing Blackjack in the casino when he heard a commotion coming from and saw people running in and about the end of the Casino near the Coffee Shop. At first Combs thought it was a fight until someone yelled "Fire". At this time he saw dense black smoke entering the Casino area from the area of the Coffee Shop. Combs' Pitboss told all dealers to put a "lid" on the games. Combs reported that by the time he had reached under the table, located and placed the glass lid over the chip tray, he looked up to see bright red flames reaching half way to the ceiling, rolling down the step area located at the end of the Casino adjacent to the coffee shop. Combs stated he hesitated only a short time and then headed for the casino exit. Before reaching the door the Casino's lights were completely blacked out by the smoke and Combs stated that for an instant he didn't think he would make it to the doors. Combs stated that he was not positive, but that his impression was that the smoke had an odor about it of burning electrical wire. Combs stated that neither prior to or during the above described episode did he notice any flickering of the lights. When asked if he knew a Frank Massi or Frank Manti believed to be a stagehand at the MGM, he stated he did not.

S/Richard W. Haynes, Special Agent, ATF

DORIS KITSMILLER

Report of Interview with Doris Kitsmiller, ~~XXXXXXXXXXXX~~ Las Vegas, Nevada, ~~XXXXXX~~ John F. Rice, at the MGM on November 22, 1980.

Mrs. Kitsmiller is the head hostess at the MGM Coffee Shop, Deli and Dealers' Lounge. On November 21, 1980, she went off duty about 2:30 a.m. She had been working since 6:00 p.m. on November 20, 1980.

Mrs. Kitsmiller stated that she was constantly through the Coffee Shop and Deli Area during her shift. She did not smell any smoke or notice any flickering of lights or see anything unusual during this time. She also stated that none of her employees reported anything unusual to her during the shift.

Mrs. Kitsmiller said that she closed the Deli at approximately 1:10 a.m. on November 21, 1980. The Deli is open from 8:00 a.m. to 1:00 a.m. daily. Mrs. Kitsmiller stated that the Deli is not locked when it's closed. She went on to say that she checked the Deli again at 2:30 a.m. before going off duty. She stated that everything was normal at that time.

S/John F. Rice, Special Agent, ATF

JOHN DODGE

~~XXXXXXXX~~

Las Vegas, Nevada

PHONE: ~~XXXXXX~~

My employee number is 27370 and I work in the Coffee Shop, Orleans Room.

I went into the Deli between 5 and 6. I put the deli out in each station, 1, 2, and 3, and I left, out of the deli.

QUESTION: Did you see anything, smell anything, hear anything?

I didn't see a thing.

JEAN HARTMAN

Report of Interview with Jean Hartman, ~~281 Cooper Creek #1~~. Phone ~~742175~~, by Special Agent John F. Rice, on November 24, 1980.

Ms. Hartman is employed at the Grand Gift Shop on the Basement Level of the MGM Grand Hotel. The Gift Shop is located at the bottom of the escalator to the casino.

Ms. Hartman stated that on November 20, 1980, about 8:45 a.m. she came to work at the Gift Shop. Upon entering the Gift Shop she noticed that there was a smokey haze in the area. She said the smoke had an odor similar to car exhaust. She said that the odor cleared up after about ten minutes with people coming in and out. She said that she didn't notice anything else during the rest of the day.

S/John F. Rice, Special Agent, ATF

VERLIN CHARLES EVERIST, JR.

Statement of Verlin Charles Everist, Jr., made at ~~XXXXXXXXXXXX~~, on November 22, 1980 in the presence of Special Agents Richard W. Haynes and Douglas W. Coombs of the Bureau of Alcohol, Tobacco & Firearms.

My name is Verlin Charles Everist Jr. and my nickname is Buster. I have been employed eight years at the MGM Hotel and have been dealing craps for the last four years. I had started the 2:00 a.m. - 10:00 a.m. shift on November 20, 1980. On November 20, 1980 at 7:00 a.m. I was taking the escalator from the lower floor, where the dealer break room is located, to the Casino Floor. The escalator is located adjacent to the Deli and Coffee Shop area. In the escalator well I noticed a mist or haze, and a slight smell of smoke in that area. I continued up to the Casino floor, dealt my shift for one hour and upon my return down the escalator to the break room, I did not notice the haze or smoke smell. I did not hear anyone else mention about the haze at that time and I forgot about it until the fire break out the next morning. After I had evacuated the MGM on the morning of the 21st of November, I was having a drink with my Shift Boss George Roota (phonetic), and I mentioned this incident to him.

Subscribed and Sworn to before me
this 22nd day of November, 1980

S/Richard W. Haynes, Special Agent, ATF

WITNESS:
S/Douglas W. Coombs, Special Agent, ATF

KENT OBORN

Report of interview with Kent Oborn, on November 21, 1980, at ~~309 Las Vegas Street~~ N. Las Vegas, Nevada, by Special Agent Douglas W. Coombs, Bureau of Alcohol, Tobacco & Firearms and Larry Bouchette, Las Vegas, Nevada Fire Investigator.

Mr. Oborn stated that he has been employed by the MGM as a Chef since December of 1973. Mr. Oborn stated that on the morning of November 21, 1980, he was working the 7:00 a.m. till 3:00 p.m. shift. Mr. Oborn stated that at approximately 7:10 a.m., while he was cooking bacon on the broiler, a waitress came up to him and stated there was a fire in the Deli. Mr. Oborn stated he did not know the identity of the waitress. Mr. Oborn said that he went into the Deli and observed flame extending approximately two feet all around the Keno Board in the Deli. Mr. Oborn stated that the Keno Board is located on the south wall in between the side stand and the east wall. Mr. Oborn also said that the Keno Board was approximately three feet by four feet.

Mr. Oborn said that these flames were orange and red in color and were accompanied by black smoke.

Mr. Oborn said as soon as he saw the flames he immediately went to the telephone and notified the operator that there was a bad fire in the Deli. Mr. Oborn stated that he then grabbed the water hose and was about to spray the fire, but he heard someone say don't put water on an electrical fire. Mr. Oborn said he then just dropped the hose on the floor. Mr. Oborn said the lights then went out in the Kitchen Deli Area.

Mr. Oborn stated he then saw the fire was getting out of control and he advised his fellow workers to get out of the kitchen. Mr. Oborn stated that he and his fellow employees exited through a smoke filled hallway which led to an emergency door.

S/Douglas W. Coombs, Special Agent, ATF

HARVEY B. GINSBERG

DATE: January 9, 1981

ADDRESS WHERE TAKEN: 3400 Sirius

PERSON GIVING STATEMENT: Harvey B. Ginsberg

ADDRESS: ~~XXXXXX~~

TELEPHONE: ~~XXXXXX~~

I, Harvey B. Ginsberg, being 38 yers of age and residing at ~~XXXXXX~~, City of Las Vegas, State of Nevada, wish to make the following statement:

On the morning of November 21, 1980, I had scheduled a business breakfast to be held in the MGM Grand Coffee Shop at approximately 7:15 a.m. I left my car under the canopy of the west entrance of the MGM for valet parking and was approximately the sixth car in line. I left my car without taking a parking ticket and entered the west entrance of the hotel approximately 7:18 a.m. Upon entering the hotel I noticed a foggy, smokey atmosphere, especially in the ceiling area of the casino. My first impression was the air conditioning system was not working properly. At this point I did not anticipate that the smoke was a result of fire, since business was proceeding as usual in the casino.

I walked down the middle aisle of the casino in the direction of the coffee shop. I arrived at the steps at the rear of the casino at approximately 7:20 a.m. At this point I noticed some flickering flames which appeared to come from the direction of the escalator. At just about the same time, I noticed people running in various directions near the newsstand and in front of the escalator near the coffee shop and deli. It appeared as though panic was setting in, so I turned around and trotted approximately halfway back out of the casino in a westerly direction. At this point I felt safe, however, after turning around and looking toward the rear of the casino, I noticed that the flames had already entered the casino area and appeared to be a swiftly rolling wall of flame reaching from floor to ceiling.

I then started to run toward the front of the casino as fast as I could. While I was running, other people started to run and chairs from the Black Jack table were strewn in the aisle, and as a matter of fact, I tripped on one of them but still managed to get out of the casino in about 20-25 seconds, from the point halfway in the casino.

Upon leaving the west entrance I noticed that my car was still in front of the hotel and that it was now first in line. I jumped in my car and drove across Flamingo and entered the underground parking of the Barbary Coast Hotel. I parked in the first spot reserved for registered guests at the Barbary Coast and then walked out of the parking lot onto Flamingo. From the time I entered my car to the time I left my car and walked back onto Flamingo, the time elapse was approximately 45 seconds.

As soon as I arrived back on Flamingo, I noticed the flames had broken through the west entrance of the hotel and were now engulfing the canopy, as well as the entire area surrounding the front of the hotel.

It is my impression, that from the time I entered the hotel at 7:18 a.m. to the time that I was outside the hotel and noticed the front entrance on fire, the elapsed time was approximately 5-6 minutes.

S/Harvey S. Ginsberg

DATE & TIME: 11:00 a.m./1-9-81

EVA GIBSON

Report of interview with Mrs. Eva Gilson, Phone # ~~XXXXXXX~~ on November 21, 1980, at 5:30 p.m. in Las Vegas, Nevada made to Special Agent James D. Deal, Bureau of Alcohol, Tobacco and Firearms.

Mrs. Gibson states that she is employed at the MGM Grand Hotel in Las Vegas, Nevada, in the Coffee Shop. Mrs. Gibson states that she arrived to work in the Coffee Shop at approximately 6:25 a.m. on the morning of November 21, 1980. She further states that she observed nothing, nor smelled anything out of the ordinary. However, Mrs. Gibson did state that the sewage system was being cleaned and that it smelled bad in the kitchen area.

Mrs. Gibson stated that she saw smoke coming from the Delicatessen area one second and then observed the wall which separates the Coffee Shop from the Delicatessen area burst into a reddish orange colored flame. At this point Mrs. Gibson left the area immediately and escaped the ensuing fire.

S/James D. Deal, Special Agent, ATF

ROBERT LEE

Report of interview with Mr. Robert Lee, Phone# ~~XXXXXX~~ on November 21, 1980, at 6:15 p.m. in Las Vegas, Nevada, made to Special Agent James D. Deal, Bureau of Alcohol, Tobacco, and Firearms.

Mr. Lee states that he is employed at the MGM Grand Hotel in Las Vegas, Nevada, in the Commissary Department. Mr. Lee states that he arrived at work at 6:00 a.m. on the morning of November 21, 1980. Mr. Lee further states that he observed nothing or smelled anything out of the ordinary.

Mr. Lee states that he was first notified there was a fire in the building by one Jose Vargas, who is an employee of the MGM Grand Hotel. Mr. Lee stated that Mr. Vargas led a small group of people out of the hotel. Mr. Lee further stated that he left the casino area before he had a chance to observe any flames or smoke.

S/James D. Deal, Special Agent, ATF

LOUIS MIRANTI

My name is Louis Miranti, I work at MGM. My address is ~~XXXXXXX~~ Las Vegas, Nevada. At the time, at 6:00 o'clock or 6:20 on the morning of the fire, Friday, I was working in the eye in the sky and I was at approximately 6:20 a.m. standing in the sky over Pit #1 which is the main pit in the '21' games. The pit is approximately across from the casino cage, the opposite end of the casino. I was down there checking the game between 6:20 or 6:25 and approximately a quarter to 7:00 or ten minutes to 7:00 I noticed nothing unusual in the casino. I headed back to my office which was towards the front of the casino on the north side, northwest side of the casino corner. I went up the, went through the two doors and, the two doors that leads me to the executive elevators going to the third floor. I went up the elevator going to the third floor. I went up the elevator to the third floor, went to my office which was somewhere close, or between the public relations office and the auditing office. That's the door to the eye. I looked into the eye and it was about almost five minutes to seven, no smoke, I smelled nothing, saw nothing unusual, stayed up on the third floor elevation, went into my office which is the extreme west end of the eye in the sky. Ah, approximately, I sat down to make my hourly report approximately five or ten minutes after seven I heard crackling noises and I didn't think that was too unusual because they weren't too loud and at that hour in the morning morning we usually get maintenance men up sometime to clean up or vacuum the floors and, ah, so when I heard the noises I was figuring well, in another minute or two Security always brings them up. He'll come and check with me that's it. Well, five more minutes went by and the crackling sounds got worse. In fact, the noise was so unusual me being up there for so many years I knew every sound. That sound was so unusual that I says I'd better take a look. And, ah, it felt like, it sounded like a crackling sound of a very intense fire. That's the way it sounded. I went out of my office, I went over to the landing, the stairwell, and I looked into the sky and before I went down the steps I could see oh, approximately 300 feet or more, that is, if you want to pinpoint it, from the west end of that sky I would be looking a little bit beyond east of the casino cages, which would bring me somewhere maybe 100, 150 feet from the casino cages so you are looking at maybe 100 feet west of the Deli and the rest, the Coffee Shop's door. I was west, maybe I could see 100 feet west of that, those doors, and I saw this billow of smoke, like a tidal wave coming towards me. Ah, just a flash came to my mind, it's coming too fast, you'd better run. So I just turned around instead of going to the office to pick up anything, I knew it was coming that fast. I just opened the door and ran out of the sky, shut the door behind me. I thought maybe I could slow it up. I didn't see any flame, all I saw was smoke, so I thought I'd slow up the smoke. Well, I ran to the hallway leading back to the executive offices and the executive elevators. The elevator wasn't there so I ran down the steps. I got down to the bottom of the steps and there's a double doors there that go into the casino in the area of the front desk and the, between the front desk and the bell captain's desk. I saw through the glass that all the smoke, and it was almost to the glass, but I looked out and saw it already took over the front end, but I felt the heat and I knew if I opened those doors, unconsciously I knew, that if I opened the doors I'd never make it to the front door because it was already enveloped. But the heat of that smoke that I felt through the doors I knew that I had to get out of there and I ran back up the stairs. And when I got to the top landing of the stairs I found that the, that the hallway that I came out of, that leads from the auditing department was full of smoke already. In other words, that smoke followed me out of that, in that hallway. I found that I couldn't go back down the stairs. The elevator was out. The only thing left for me to do was to break the windows, the glass doors rather, that led into the executive offices. I broke those doors with my shoulder, ran through the executive offices, broke the two double doors on the other end, the back end, of the executive offices. The only thing I think that saved my life is I knew there was an exit in the auditing office, so I, at that point, I had to make a decision either to go straight towards the computer room or turn left by the toilet and go around the toilet and go into that side and I decided to take that route because for fear that there may be some locked doors if I went straight and I made the right decision. Because when I got to auditing, those doors I had to push them open and I ran through auditing and at the end of that room which, where the big safe is, is maybe 100 feet, I found this door that I knew was there. I opened it and it was full of smoke. But I looked behind me and I saw the smoke was chasing me there too and I knew I couldn't go back. So I held that door open and I looked down at the floor and I see two brand new turkish towels. I picked them up, put them in my face and went to the closest, that I thought would be the closest exit. I looked in that hallway, I shut my eyes and I felt the doors, I felt the first one and it was locked. The second one was open. I got in there, stepped down, I ran my foot up and down to see if it was concrete. It was. I knew I had the right door. I grabbed for a rail and I went down three, I think three flights of stairs. I got to the base of the stairway, I opened by eyes and I saw pitch black. My eyes started burning. I closed them and I said I better take one more shot and I'll yell for help. I took the towel off of my face and I took in all the smoke and I was able to holler for help and I heard a voice about maybe 200 feet to my right and I said, and he says, the voice says, come this way. And I said you'd better keep talking because I can't hear you, I mean I could hear you but I can't see you. You'd better keep talking. And then I covered my mouth and I seem to have taken in too much smoke at that point. And I headed for that direction and I headed towards the voice. I got maybe 100, 150 feet, maybe 125 feet and I knew that was the last breath I could take in that towel because the towel was saturated. I took the breath and I figured

LOUIS MIRANTI (Continued)

I'd drop to the ground and maybe I could pick up some air on the ground and crawl to the guy. But I seemed to maybe lost consciousness at that time and I had my hand out in front of me trying to protect myself while I was running that I wouldn't hit anything and I felt someone grab my hand and pull me out. The next thing I knew was the security guard was pulling on my left hand saying, pulling the towels away from my mouth because I probably was in shock and I wouldn't let go and he was pulling that off of me and saying, "Breathe fresh air, breathe fresh air" and he pulled the towels away from me and he brought me to. And we were outside the, the big sliding doors, the delivery doors on the south end of the, south, west end of the building behind the Hallelujah Hollywood stage where they make deliveries for scenery. And he had me out those doors. I was just lucky that he came in to take a look around to see if there was anybody else in there and I happened to catch him at that moment. He brought me to outside. Then a car picked me up and took me around the building to the Flamingo side where I told him my car was parked and he took me to the fire department and the fire department gave me some air, saved my life, and I got in my car and went straight to the Sunrise Hospital, stayed there about 28 hours and Dr. Venger released me. And that's it.

BERT SWEENEY

Okay, this is Investigator Wayne Burns. We're going to have a taped statement from Firefighter Bert Sweeney. The time is 8:42 a.m. on November 27, 1980. At this time we are inside the Flamingo entrance to the MGM Hotel.

Okay Bert, if you can just start from the beginning and tell me everything that happened when you pulled up on Engine 11 and stopped the truck.

Okay, understand we left the station at 7:18, pulled in 97 at 7:19, we dismounted the truck, put on our high-rise gear, walked in through the swinging doors, and went down to the exit entry ramp to the casino floor, straight in front of the doors. At that time...

QUESTION: About how far is that, Bert, from the exit door?

It's roughly 36 to 40 feet.

QUESTION: Okay.

Okay, at that time all of us stopped and, ah, you can see ah, sort of a stratified layer of black smoke, just a small one back in say the first quarter of the casino floor from the area of origin. Okay, at the same time we noticed this stratified layer which was probably down about 6 to 8 feet from the ceiling. Ah, a fire ball and a heavy dense black cloud with a little bit of flame visible in the perimeter of the flames started rolling out. The main body of the rolling cloud was in contact with the ceiling and as it came out towards the center of the casino ah, it just sort of angled back to where it was touching the floor as it came out. At that time that we saw it first coming towards us we turned back around and it took roughly twelve seconds to get from where we seen it at first to get back to the doors. By that time the smoke had dropped down to within about four feet of the floor. We came through the swinging doors and out to the engine which took about a total elapsed time of 25 seconds at the pace we were walking from the point we seen it coming out of the area of origin until we got to the engine. At the same time we got to the engine I looked down to the west end of the hotel and saw the fire break out of the overhang for the valet parking area.

QUESTION: That rapidly, hmm? Let's backtrack just a little bit and tell me what you observed when you got off the engine in reference to people or smoke or fire or whatever.

Okay, when we pulled in there was no smoke visible, there was no rush of people trying to get out of the hotel. I remember one female standing to the right of the doors as we pulled up and she was coughing and crying a little bit. Dressed in a dark velvet type dress suit type thing, you know. Okay, that's really, there may have been some more people off to the other side of the entry way but there was, you know, there wasn't any indication of any panic or anything and ah, went on in. Okay, also when we got back out, this fire had broken out of the ah, valet area down there. At the same time the fire through these glass doors off to this side threw them open and the fire was burning with a fire storm appearance, you know, from the floor up and it was swirling and that's where we set our first attack line in there. I got in about 30 feet and Captain Smith and one of the other firefighters came in, I believe, this door here.

QUESTION: This, ah, the door you're making reference to is a revolving door approximately 20 feet inside of the main swinging doors on the Flamingo side, right?

Right. And then we had sort of a perimeter established. I think the feeling was if there were still people inside, they would have a haven to get to, you know to get on out and sort of hold things in check. You can see the ceiling where we were. Pretty much intact.

QUESTION: You made reference Bert, to the fire breaking out, on the east side of where you had originally stopped the engine.

Right.

QUESTION: Now, how far is that from the main entrance where you came in?

Ah, approximately 10 to 15 feet east of the main entrance.

QUESTION: And you say you did see the fire rolling out then after you had exited the building?

BERT SWEENY (Continued)

Okay, as the doors blew open from the pressure inside there was a momentary flash of fire on the floor and went up the side of the door. We knocked that out and went in with one of the lines. Then, we were using two inch-and-a-half lines at this point to give us roughly four minutes of fire fighting time. The water ran out, we backed out and jacked a three-inch line down to the hydrant in front of the hotel on Flamingo and from then on Captain Smith and firefighters Toby Lamuraglia and Ted, oh I can't remember his name now, okay, anyway, they came back in and I headed upstairs with Captain Ashley for the fire, you know, portion of the rescue. And that's as much as I seen. The rest was all smoke in the hallways upstairs.

QUESTION: Okay - yeah - let's go back to the smoke that you observed in the casino after you'd made your initial entry and the wall of smoke and flame that you had made reference to. The color involved was what, grey, black, brown?

Okay - the stratified layer that was 6 to 8 feet from the ceiling just hanging there, there was no movement then, like it had been there...

QUESTION: How far out through the casino did that reach?

Ah, roughly one quarter of the distance of the whole floor from that area to...

QUESTION: From the east end where the Deli is?

Right. About a quarter of the distance. Then the rest of the ah, it came to a point, you know it was flat, stratified on the bottom and it beveled back up to the ceiling, back into that area. Then we saw the smoke cloud, or the fire cloud, whatever, it was dense black smoke and you could see little fringes of flame breaking out as the cloud came out.

QUESTION: Right. Ah, did you and your crew have air packs on at this time?

Right. When we went in the first time we had our air packs on, forcible entry tools and the high rise pack, 150 ft. of inch-and-a-half hose which we layed down when we got back out and took our cross lays off.

QUESTION: Okay, ah, is there anything else that you can remember about the situation? How the fire progressed through the casino ah, people, the direction they were running, ah, how much panic was involved?

There were I would say ten to fifteen, maybe 20 people at the most, on the casino floor gaming and, ah, I saw three or four people coming out of the delicatessen area and they started running across this ramp that come over to these doors in front of us here and the people as the cloud progressed through the casino floor, as much as I saw of it, then they started scattering to the sides of the casino area to get up here and get on, you know, get to an exit. I didn't see anything from the point where we turned around and headed this way. When we got to the doors, you know, it felt like the fire had pushed us outside, the smoke had dropped so fast, you know.

QUESTION: You say the smoke had dropped, what, approximately...

About say three to four feet from the floor at this point where the swinging doors are.

QUESTION: How dense was the smoke at that time?

Ah...

QUESTION: Inasmuch as your visibility?

It was dense enough and hot enough to blister my plastic dome on my helmet, you know, I had to replace it.

QUESTION: That occurred on your way out.

Right. As I hit this door here I noticed it, I heard it snap and the one condenser that was in it - as I went over here when I started bringing my line into these doors that were thrown open I put my face shield down and I thought, well, you know, what's wrong with it, you know, I tried to wipe it off and then I didn't pay any attention to it. I just noticed that I couldn't see anything so I flipped it back up, you know, a little bit so I'd have some visibility. But the heat got it right here. I was standing up and, you know, it blistered my...

QUESTION: Alright, in reference to the heat blistering your face shield, ah, to give us a little better idea - how tall are you Bert?

Six foot, six.

QUESTION: Is there anything more you can add?

No, I don't think so, that's pretty much it.

Okay, this is going to be Investigator Burns again. We're going to be ending this taped conversation with Firefighter Bert Sweeny at 8:52 a.m. on November 27, 1980.

KURT SCHLUETER

Report of interview with Kurt Schlueter, ~~XXXXXXXXXX~~, Western Springs, Illinois, ~~11-22-1980~~, by John F. Rice, on November 22, 1980, at the MGM Hotel.

Mr. Schlueter is a Firefighter from Western Springs, Illinois, who was visiting the MGM Grand Hotel on November 21, 1980. He stated as follows:

He and two of his friends entered the Coffee Shop in the MGM at 7:15 a.m. November 21, 1980. (He remembers the exact time, because a girl in front of him asked the waitress what time it was.) He and his companions David Beshoar and Perry Beshoar were seated along the wall that separates the Coffee Shop from the Deli. Mr. Schlueter said that they had just been served coffee when a security guard came in and told them that there was a fire in the Deli and asked them to leave. Mr. Schlueter had not smelled any smoke up to this time.

He and his companions left the Coffee Shop and as they exited Mr. Schlueter looked to his left and saw smoke and flames coming from the Deli. Mr. Schlueter said that the smoke was coming from the Deli. Mr. Schlueter said that the smoke was about head level at this time. He began assisting in moving people out toward the Flamingo Street exit. About a minute later the smoke was down to waist level. He and his friends opened the emergency doors on the Flamingo Street side and were assisting people out the doors. While standing at the emergency exit, Mr. Schlueter looked back and observed flames rolling out of the Deli. He estimates the total elapsed time at three minutes. He could see the Casino filling with smoke. It all appeared to be coming from the Deli. There was not noticeable flame in the Casino itself at this time.

Suddenly, he stated, there was a large rolling mass of smoke forced him and his friends to abandon the doorway and he couldn't see anything more. He proceeded down the outside stairs and stood across the street on the North Side of Flamingo. About five minutes later he saw flames and smoke shoot out of the front of the hotel.

Mr. Schlueter who is a firefighter, believes that it was a back draft that occurred when the side and front doors were opened that produced the rolling mass of smoke that drove him from the doorway.

S/John F. Rice, Special Agent, ATF

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ALFRED NATLE

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Report of interview with Alfred Natle on November 21, 1980 at 7:15 p.m. via telephone from 702-385-6584, (Bureau of Alcohol, Tobacco & Firearms Office, Room 312 Federal Building, Las Vegas, Nevada,) to ~~702-457-6146~~, (Residence of Alfred Natle), by Special Agent Richard W. Haynes, Bureau of Alcohol, Tobacco & Firearms.

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Mr. Natle stated that he was employed by the MGM Hotel/Casino as a Dealer and that on November 21, 1980, at approximately 7:00 a.m. he was "sitting in on" one of the craps games being conducted in the MGM Casino. At this time Natle and the other people at the craps game became aware that the Casino was on fire. One of the craps dealers at the table, known to Natle only as Buster and described by Natle as being a white male, about 6 foot tall, weighing about 195 lbs., and being clean shaven was overheard by Natle to say something to the effect "Wow! That fire's been going twenty four hours." Buster subsequently elaborated stating that he (Buster), had seen smoke and thought he had heard sprinklers on within the wall areas at about 6:30 a.m. to 7:00 a.m. on November 20, 1980. Natle further stated that Buster works the graveyard shift and could possibly be further identified by either Ron Tripp (Pit Boss), Mark LoBello (Boxman), or Bob Hendricks (Dealer), all MGM Employees working the graveyard shift.

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Natle stated that he believed he smelled smoke about an hour before the fire evidenced itself on November 21, 1980.

—

S/Richard W. Haynes, Special Agent, ATF

VELMA TURNER

~~XXXXXXXXXXXX~~

North Las Vegas, Nevada

PHONE: ~~XXXXXX~~

My employee number is 20336 and I work in the Coffee Shop. At the time of the fire I was in the Deli taking jack stands. I noticed the Keno board sparking. I left the Deli, went to the kitchen, told Kenny about the fire, went to tell my boss, who was sitting at the counter at this time. We tried to get people out at this time because it was just starting more than...so we all exited.

Report of interview with Velma Turner on November 21, 1980 at approximately 5:30 p.m. via telephone from 702-385-6584, (Bureau of Alcohol, Tobacco & Firearms Office, Room 312 Federal Building, Las Vegas, Nevada), by Special Agent Richard W. Haynes, Bureau of Alcohol, Tobacco & Firearms.

Ms. Turner stated that on November 21, 1980, at approximately 7:00 a.m. she was working in the Coffee Shop of the MGM Hotel where she is employed. At this time she noticed blue sparks coming out of the Keno Board followed shortly by black smoke. Mr. Turner stated she noticed no flames nor any distinguishable odor. Mr. Turner alarmed Kenny, the Assistant Chef in the Coffee Shop, who brought a fire extinguisher to the Keno Board area. However, the fire extinguisher was not used and Kenny and herself joined in the evacuation of the coffee shop. Mr. Turner stated that others in the Coffee Shop area included Eva Gibsen, a cook named Tyree, another employee named Elvis and two dishwashers named Tony and Charles.

S/Richard W. Haynes, Special Agent, ATF

JERRY L. THEO

TYPE CRIME: Investigation

DATE OCCURRED: November 21, 1980

TIME OCCURRED: 0717 hours

LOCATION OF OCCURRENCE: MGM Hotel/Casino

I, Jerry L. Theo am 41 years of age and my address is ~~XXXXXXXXXX~~ Las Vegas. Home Phone: ~~XXXXXX~~

I am the Assistant Chief Operator at the MGM Hotel/Casino and was on duty at 0715 hours, November 21, 1980. I was in my private office in the PBX Room when Betty came in with some papers and stated "People are running in the casino!" I then walked out to the board area and asked Betty why people were running in the casino and she stated, "There is a fire in the Deli". I asked her did she call the Fire Department and she stated "Yes". I then looked at the board, and noticed it seemed very busy. I was deciding what to do, I mean, should I assist the girls on the board, and Betty stated "They want us to evacuate the casino" I told her to do it. I then heard an unknown operator state "Don't panic, don't use the elevators." I thought to myself, why are they saying that if the fire is in the Deli?

I opened the outside door to the security guard to find out what was going on and saw the black smoke in the hallway. The lights were still on. The security guard was not there, so I told the girls to leave immediately. I walked back in to the PBX Room thinking I could instruct the guests, but I had no instructions or directives, and I began to leave. I was opening the door to leave when a security guard advised me to leave the area. The phone man, Fred Cook, left behind me. I left the MGM via the underground parking area.

WITNESS: S/Lorne L. Lomprey

S/Jerry Theo, 01089

PATTY JO ALLSBROOK

TYPE CRIME: Investigation

DATE OCCURRED: November 21, 1980

TIME OCCURRED: 0717

LOCATION OF OCCURRENCE: MGM Hotel/Casino

I, Patty Jo Allsbrook, am 35 years of age and my address is ~~XXXXXXXXXXXX~~ Home Phone: ~~XXXXXX~~

I was employed at the MGM Hotel on November 21, 1980 at 0715 hours in the capacity of a PBX Operator. My work station is right next to the supervisor's Betty. She received a phone call on a house line from Pierre (a hotel chef) and she in turn called the Fire Department on a direct line stating "This is the MGM, we have a fire in the Deli." I thought this was a normal routine call until we received numerous calls about a fire. I advised people not to use the elevators (approximately 15) and became very concerned when I heard a herd of elephants, well actually, what sounded like a herd of elephants on the casino floor above our office. Jerry opened the door to see what was going on, saw the smoke and she stated "everyone leave". We left via the underground parking. I thought all of this unreal as the alarm panel (fire alarm system) was not buzzing or sounding. I did not see the lights from where I was at. Betty announced on the board to evacuate the casino through the building's intercom.

I recall not receiving any information from security or anyone advising us of our status or informing us what to do. No one knew. When Jerry saw all that smoke and said for us to leave, we did, and it seemed less than seven or eight minutes from Betty's original call until we were out of the garage.

WITNESS: S/Lorne L. Lomprey

S/Patty Allsbrook

PATRICIA JEAN FRYMIRE

TYPE CRIME: Investigation

DATE OCCURRED: November 21, 1980

TIME OCCURRED: 0717 hours

LOCATION OF OCCURRENCE: MGM Hotel/Casino

I, Patricia Jean Frymire am 44 years of age and my address is ~~XXXXXXXXXXXXXXXXXX~~. Home Phone: ~~XXXXXX~~

I was on duty as a PBX Operator on November 21, 1980 at the MGM Hotel/Casino. At approximately 0715 an unknown security guard telephoned by house line my supervisor (Betty Gillihan) and advised her there was a fire in the Deli. Betty phoned the Fire Department on the direct line. I thought this to be a routine call as we've received numerous calls for either paramedics or fires over the past seven (7) years. I thought no more about it until I heard what sounded like a herd of horses in the casino above our office. A few more minutes had passed when a security guard entered our office and stated, "Get out, now!" I then saw the smoke entering the air duct and hallway outside and left the office via the underground parking.

WITNESS: S/Lorne L. Lomprey

S/Patricia J. Frymire

IRENE ROWE

TYPE CRIME: Investigation

DATE OCCURRED: November 21, 1980

TIME OCCURRED: 0717 hours

LOCATION OF OCCURRENCE: MGM Hotel/Casino

I, Irene (NMN) Rowe am 39 years of age and my address is ~~XXXXX Flamingo Road~~ Home Phone: ~~XXXXXXX~~

I was employed at the MGM Hotel on November 21, 1980 at 0715 hours in the capacity of a PBX Operator. I was working the CRT (locating file) and I was supposed to go on break at 0715. I heard the hot line (security house phone) ring and Betty answered. She then called on the Fire Department direct line and stated "This is the MGM, there is a fire in the Deli." I thought this to be another routine call and went into our lounge for my break. I then heard a lot of noise, like heavy furniture being moved upstairs in the casino. Someone yelled at me and told me the hotel is on fire. As I started to leave I noticed smoke coming from the fire alarm panel and also from the vent. I was about the last person out and saw lots of black smoke. I then left via the underground parking lot. I met my friend on the way out and ran with him. We could not even see the elevator doors in the hallway.

I recall around 6:30 a.m., I asked Betty if I could go upstairs and get some donuts from the bake shop. I tried to use the elevators on the left side and they would not light up. They weren't working. I didn't smell smoke. I used the elevators on the right and went to the casino level, obtained the donuts and pastry and returned on the same elevator. The time was now about 6:40 a.m. I then returned to my position at the CRT machine.

WITNESS: S/Lorne L. Lomprey

S/Irene Rowe

ELIZABETH GILLIHAN

DATE OCCURRED: November 21, 1980

TIME OCCURRED: 7:15 a.m.

LOCATION OF OCCURRENCE: MGM Grand Hotel, Las Vegas, Nevada

I, Elizabeth Gillihan am 43 years of age and my address is ~~2221 Canal Street~~ Las Vegas, Nevada 89110. Home Phone: ~~432-0653~~

I was the PBX Operator on duty at the MGM on November 21, 1980. At 7:15 a.m. Sgt. Williams called me and told me there was a fire in the Deli kitchen. I called the Fire Department. A few minutes later Sgt. Williams called back and said, "Is the Fire Department on the way?" I heard running upstairs, it sounded like a herd of elephants. I walked down to Jerry Theo's office, she is the A.C.O. who came in about 7:00 a.m. I told her there was a fire in the Deli kitchen but listen to the running. She came out. About that time the switchboard lit up. When the board lights up it usually means that the guests are aware of something wrong. About the second call I picked up, I was sure, was Pierre Vireday, the executive chief. He said, "We have a problem in the Coffee Shop kitchen, is the Fire Department on the way?" I told him, "Yes."

I still wasn't too alarmed as the Deli and Coffee Shop kitchens are combined. A few calls later, someone called and said, "Evacuate the casino immediately over the PA system." I did that twice. I said, "May I have your attention please, evacuate the casino immediately and carefully, thank you," I told Jerry we needed help on the board. She said, "I'm going to talk to the security guard to see what's going on." She opened the door and said, "Let's go now," or something like that. I went down the stairs behind her and looked out. I went back up the stairs and fell on my pen to yell for Netta, because she couldn't hear Jerry from the message desk. I grabbed my purse and coat from the chair, but as I looked to see if Netta was coming, I saw smoke that looked as if it was coming from the fire panel on the southwest wall in PBX. I came down the steps - I don't remember going up the ramp or through the underground parking. Halfway I saw a security guard and said, "Which way?" He said, "Straight on." We took off running - the fire alarm panel did at no time go off.

WITNESS: S/Larry H. Boucher

S/Elizabeth Gillihan

MARION VAUGHN

On November 27, 1980, an article appeared in the Review Journal (see attached) through the Associated Press. I was able to locate and interview by telephone MR. MARION VAUGHN.

Mr. Vaughn says: that on November 21, 1980, he intended to check into the MGM, no rooms were available, so he stayed and gambled in the casino from approximately midnight to approximately 5:30 a.m. At approximately 6:00 a.m. he was tired and hungry and decided to have breakfast in the coffee shop of the MGM and ordered coffee. He says he waited for awhile, he was getting poor service; and decided to leave. At approximately 6:30 a.m. he paid his bill and walked out of the coffee shop. He says he noticed smoke to his immediate left, after walking out of the coffee shop. He reported this to a security guard (he believed him to be a policeman). Vaughn says he couldn't smell smoke, because he had a cold at the time. Vaughn claims the guard was inattentive to him and unbecomng.

Vaughn says he decided to get the hell out of there. He warned some people to leave, claims he got a cab from the front of the MGM and left. They travelled approximately four blocks when he heard the sirens and returned to the MGM and saw it in flames.

Sgt. David E. Belz

11/27/80: From the R.J. AP

Ft. Wayne Journal Gazette
Myra McFarland 219-461-8531

M. Vaughn
~~XXXXXXXXXX~~
~~XXXXXXXXXX~~

New Haven
~~XXXXXXXXXX~~
Tri-State Harvestere
Silver Lake
~~XXXXXXXXXX~~

Decatur Ind.
James F. Klenk

JASON ANDREW ROHDE

DOB: ~~XXXXXX~~

SS #: ~~XXXXXXXXXX~~

~~XXXXXXXXXX~~

Las Vegas, Nevada

On January 2, 1981, I brought to the District Attorney's Office, Jason A. Rohde, a juvenile employed as a bus person in the Orleans Coffee Shop at the MGM, working the night of the fire, November 21, 1980

Jason Rohde was interviewed by Deputy District Attorney John Wawerna, and myself, David Belz. Rohde was able to provide a detailed drawing of the Orleans Coffee Shop, and the busing station, within the deli, where the fire originated.

Rohde says when he came to work the evening of November 20, 1980, at 11:00 p.m., he smell a peculiar odor believing it to be burned coffee pot, in the area of bus station #3, he checked this area and did not find anything unusual. Later that morning, after returning from his break, he smelled it again, and could not find a source. After punching out at 7:00 a.m., November 21, 1980, he returned to the coffee shop to pick up his hair brush, he had left in the bus station #3, he smelled this odor again, thought nothing of it and left for school.

Rohde did not report this odor, nor did he discuss it with any other workers.

This was the only contact he has had with anyone concerning the fire investigation.

Rohde went on to say that: Approximately six (6) weeks before the fire on November 21, 1980, the maintenance men removed coffee pot warmer from the Busing station #2 located in the Orleans Coffee Shop. This area was smoldering for some time and he remembers seeing them poke out glowing ash and blackened material from the underside of the counter. This incident occurred on his shift, between 11:00 p.m. and 7:00 a.m. exact date is unknown.

David Belz

EMMETT BARNES

My name is EMMETT BARNES and I live at ~~XXXXXX~~ Las Vegas, Nevada. My home phone is ~~XXXXXX~~. I have been employed at the MGM for seven (7) years as a Maintenance Engineer. I work the graveyard shift for the last three (3) years from midnight to 8:00 a.m., with Saturday and Sunday off. PETE DOBBS was my supervisor. My basic duties at the MGM were preventative maintenance, general maintenance and I worked on the gas equipment.

I worked on the air flow ovens, lights, pie case. I fixed leaks in the ceilings. Since I can remember the work that I have done in the Deli area was PM on gas equipment, the air flow ovens. I worked on the pie case, lights, fixed a leak in the ceiling caused by evaporation. In the Orleans Room, I fixed leaks in the bus station area and also preventative maintenance. I was working the day of the fire, but I went home sick about 6:15 a.m. I had been in the Deli area between midnight and 1:00 a.m. I am not sure of the time, but you can check the work order to see what time it was. I am not sure there was a work order. I repaired the coffee urn in the Deli. I also fixed the thermostat in the room service kitchen. About 6:00 or 6:15 a.m., I went to my boss, PETE, and told him I was sick and that I was going home. I had no knowledge that there was a fire. I could not smell anything or I could not see anything. I didn't see how there could have been a fire. Since the fire, I have talked to three or four insurance company people and two other people that I guess were MGM people. I think one was an attorney represented someone and one was an insurance company.

I don't think I am too familiar with the alarm system, but I thought that it would go off in PBX and security. To my knowledge, I don't think the alarm can be automatically reset. Someone from the MGM showed me about the fire system and escape routes and what to do in case of an emergency. I am not sure if there is a written procedure. We have a meeting once a month to discuss problems. I have made a total of three (3) separate statements and the questions are all about the same, about the fire. There is a prankster that has been pulling little pranks for a year or so. Whoever he is, I think he might be a kitchen helper. He has been urinating in the back employee elevator. The urn that I fixed in the Deli the night of the fire had been plugged up by someone putting bread in the coffee urn. I have no idea who did this. In reference to the fire alarm, to my knowledge they must be mechanically reset. The tone would stop, but not the light. I did receive a questionnaire in the mail in reference to the MGM fire, but I don't remember who it was from. I think from some attorneys.

Two days after the fire I worked in the boiler room guarding it. I have been unemployed since.

DATED this 21 day of January, 1981.

S/Emmett Barnes

WITNESSES: S/Becky Grismanauskas
S/O.R. Lyons

VERNON FRANKLIN SUMMERFIELD

My name is VERNON FRANKLIN SUMMERFIELD. I live at ~~XXXXXX~~ Las Vegas, Nevada, and my phone is ~~XXXXXX~~ I am currently employed at the MAXIM HOTEL as a Maintenance Engineer. I have Mondays and Tuesdays off and possibly I will be going to day shift next week.

I was employed at the MGM on January 15, 1978 as a Maintenance Engineer on Graveyard. I am off on Fridays and Saturdays and was off the night of the fire. My primary duties were the kitchen and stove repair. I worked 3 nights in the kitchen and usually 2 nights as relief senior - watch engineer.

We did jobs other than PM's by work orders. A work order would go to MAINTENANCE CONTROL and then to the watch engineer - the watch engineer would then assign the work order to one of the working engineers. Each work order is numbered and after it is filled out by the engineer handling the job it is turned back in to the watch engineer. The number from the work order is then put on the time card and corresponds to the number on the time card. Maintenance Control does this. As far as I know, we keep all of these work orders for reference or call backs on a job.

The only things I have ever done that I can remember in the Deli was maybe clean out a drain or maybe clean a drain in the Orleans room. I don't remember ever working on the pie case or even hearing about anything happening to the pie case. I don't remember ever hearing about anything to do with the coffee warmers at all. There was very seldom any calls to Station 2 - in the Orleans room.

I have not been contacted by anyone in reference to the MGM fire. This is my first statement to anyone. I am really not familiar with the pie case area in the Deli - I heard something about it on the news, but that's all I know.

The Fire Department came one time and gave us training in reference to fires, but it was mostly for Security. There was no manual that I know of.

There was a prankster who we think was urinating in the elevator. I don't know much about it but could smell it. I have no idea who it was.

I am very surprised about the fire still. I felt it was well-maintained. Anything we ordered for maintenance was always given to us - expensive or not. I find the fire hard to believe as far as the building goes as I feel it was extremely well maintained. I can't believe something like this happened.

Dated this 22 day of January, 1981.

S/Vernon F. Summerfield

WITNESSES: S/Becky Grismanauskas
S/Sgt. David E. Belz

BURTON FLEISCHMAN

My name is BURTON FLEISCHMAN and I live at ~~3033 Ridge Drive Space #133~~, Las Vegas, Nevada, 89103, phone ~~XXXXXX~~ I am currently employed at the Barbary Coast as a Maintenance Engineer and have been so employed for about 6 weeks.

I went to work for the MGM on October 4, 1979 on the graveyard shift - 12:00 Midnight to 8:00 a.m. with Tuesdays and Wednesdays off. I was employed as a Maintenance Engineer. I was working the night of the fire.

The day of the fire, I had just left the boiler room and I was walking down the lower arcade to the Casino. I was going to take air temperature readings in the Executive Offices. I got to the dress shop - Marshall Russo dress shop - and suddenly I heard water dripping from the ceiling right above me and the ceiling fell on me. I was knocked down and I was dazed and there was smoke. I heard screaming and there was confusion and I couldn't believe the black smoke. I knew I couldn't go forward so I got down on the floor and got close to the wall and crawled on my hands and knees back towards the direction I had just come from. I got on the radio and called Maintenance Control. I said get the Fire Department or there is a fire, get the Fire Department. I then called my boss, Pete Dobbs and he told me to check the sprinklers to make sure they were working. I smelled a strong smell - so strong it felt like it was burning my lungs - it was like a plastic smell - maybe rubber or plastic or maybe insulation - but it didn't smell like wood. The lights were still on. I found my way to the Boiler Room as that had been my assigned responsibility that night. I could hear the water running.

My basic duties at the MGM were to do general maintenance but primarily to make readings - hot water heaters - for the right pressure. I had just taken the readings that night. The sprinkler pumps were running when I returned to the Boiler room after the fire started. I never did see fire, but smelled smoke and saw it. This was between 0708 and 0710 when the ceiling fell on me so I returned to the boiler room about 10 minutes later or maybe less. The readings I had taken earlier were documented. My general duties that night had been to take air readings and boiler readings. Air readings were normal. Air handle readings were done between 0300 and 0400. They are throughout the entire building - the 26th floor, production, celebrity, convention and the Jai Lai. The air holders, suck in air into the building and mixes with air in the building and blows it back out - a big mixing chamber. Everything had been normal that night. I was not in the Orleans or Deli that night - that I can remember. The only things I can ever remember doing in the Orleans room or Deli, ever, were to maybe change bulbs or unplug a sink or something. I don't remember any incident or anything happening in the pie case or near or by the coffee warmers in those rooms. If it did, I am unaware of it.

There was a prankster at the MGM - he/she was urinating the rear elevators. I don't know of many more pranks, except one night I was in the convention air handle, which is in the center of the hotel and I went in and closed the door and someone put a broom between the handles so I couldn't get out. I tried to knock it down a couple of times and finally did. I heard someone running down the stairs and I chased him and he ran out of the building towards the street and I didn't see who it was or where he went. I have no idea who it was.

After I returned to the boiler room, after the fire had started I stayed there to make sure the sprinkler pumps were running. There was no smoke in the boiler room. Later, I came up in the alley and met with Dobbs. He told me to go back down and make sure everything continued to run okay. So that is what I did until my relief showed up at 8:00 a.m.

I have given two oral statements to MGM people. I did receive a questionnaire recently and I think it was from the MGM - it was on MGM stationary, but I will call and let you know who it is supposed to be mailed back to.

One more thing, when I called Dobbs to tell him about the fire he then called all the engineers and told them to meet him in the alley. This was right after the fire started - at least right after I became aware that there was a fire.

Maintenance is on the extreme north west corner of the hotel and the boiler room is on the South East side - I was a long ways away from Maintenance so I didn't return there. In my opinion, the MGM is extremely safety and preventive maintenance conscious. Anytime anything went wrong - even a small thing - they replaced it. I worked as an engineer in New York prior to coming to Las Vegas, and in my opinion and from what I have heard from other engineers at other hotels here in Las Vegas, the MGM had the best PM program of any place. They have weekly, bi-weekly and monthly PM programs. We had safety meetings once a month - I think with OSHA. They are extremely safety conscious. We never really were instructed about fire as Security was in charge - we would assist if they asked us

BURTON FLEISCHMAN (Continued)

or told us to, tho. I would say 90% of our job was PM. After I was off duty, I was asked about keys to the gate on the 26th floor - I was flown up there by helicopter and unlocked the gate - I only went about 100 feet in - I never did get past the transformer room - I was getting kind of sick and asked if I could go back down because I didn't have any air equipment.

I am not sure about the alarm systems - I think the alarms are either in Maintenance Control or Security - I know there are some kind of alarms in Maintenance Control but I am not sure if they are fire alarms.

This statement is date January 22, 1981.

S/Burton Fleischman

WITNESSES: S/Becky Grismanauskas
S/O.R. Lyons

GORDON RAY CAREY

My name is GORDON RAY CAREY and I live at ~~XXXXXX~~, Las Vegas, Nevada, 89102, telephone ~~XXXXXX~~.

Previously to the fire, I worked for six (6) weeks as a Maintenance Engineer. My shift was Midnight to 8:00 a.m., with my days off being Wednesday and Thursday and PETE DOBBS is my supervisor.

I worked in the Orleans Coffee Shop on one occasion, and I repaired a table. I put a clip under a metal shelf and maybe changed bulbs. I don't recall doing any work or service to bus station 2 in the Orleans Coffee Shop. ED GROVES, the refrigeration man, showed me around the Deli. I never do any repairs in the Deli at all and I have no knowledge of anyone working there.

Myself and another engineer were in the "Dog House". An area above the kitchen, around 5:00 a.m., the morning of the fire and we didn't smell anything. Nothing unusual other than kitchen smells. The "Dog House" is an area where there are about 20 exhaust fans and filters where the exhaust from the kitchen comes out. This was our normal once-a-month PM (Preventative Maintenance).

I have only been questioned once by two or three lawyers who spoke with me concerning where we were and what we did during the fire.

We were sent a questionnaire one (1) week ago. I believe it had six (6) questions. I don't specifically remember all the questions, except the last one: Do I know of anyone who could give information for cause and spread of fire? and one more question: What was your location one (1) hour before the fire. I believe one other one was: How were you notified of the fire?

I put it in the self-addressed envelope and sent it back. It came in MGM stationary and went back to a law firm in Las Vegas.

DATED this 21 day of January, 1981.

S/Gordon Ray Carey

WITNESSES: S/Becky Grismanauskas, Investigator
S/Sgt. David E. Belz

JIMMIE RAY VANCE

My name is JIMMIE RAY VANCE and I live at ~~359 Summit Creek~~ Henderson, Nevada, telephone ~~765-1050~~

I have worked for the MGM since January 16, 1980, and was employed as a Maintenance Engineer. My shift was 12:00 midnight to 8:00 a.m. with Thursday and Friday off. I was off the day of the fire. My supervisor was PETE DOBBS or VERN SUMMERFIELD, depending on what days off.

Sometime during the month of September, 1980, while I was working, I was notified by either phone or radio by Maintenance Control, to check out a burning smell in the Orleans Coffee Shop. I went up there and there was no doubt what it was. The coffee warmer at the waitress station on North side of Hall of Fame side in Orleans Coffee Shop. I moved the hot plate out from underneath the counter and put it on top. I noticed the underside had been scorched and blackened. It had not been burning. I made out a work order and turned it in to Maintenance Control and it is reviewed by the Chief or Assistant Chief Engineer.

I cleaned the coils on the compressor in the Deli and unblocked the glass filler drain and don't remember doing any other repair work.

In case of fire, Maintenance Engineers were instructed to go to the kitchen area and check the automatic gas shut off valves and then to stand by and assist security.

I am not aware of any written procedures.

I am not that familiar with the fire alarms in the Security Office. I believe the pull box would be reset. I don't know if PBX were able to reset alarms.

I have no idea if Security is able to reset alarms in the Security Office.

No one has questioned me or interviewed me concerning the fire.

DATED this 21 day of January 1981.

S/Jimmie Ray Vance

WITNESSES: S/Sgt. David E. Belz
S/Becky Grismanauskas, Investigator

JAMES A. CORBETT, JR.

My name is JAMES A. CORBETT, JR., and I live at ~~XXXXXX~~, North Las Vegas, Nevada.

I have been employed at the MGM for six (6) years as a Security Officer and the last year as a Maintenance Engineer.

My usual shift is midnight to 8:00 a.m., with Sundays and Mondays off.

The Chief Engineer is in charge of all work orders and his name is BILL PADOVESE. He works a day shift. PETE DOBBS is the senior watch engineer for the Graveyard shift.

Maintenance Control would write a work order, written by Hank (I don't know the last name) or JERRY JOHNSON and sent to the Watch Engineer. He then assigns one of the engineers to the job. Wherein perhaps if a small fire were to break out, usually the watch engineer would respond or would send another engineer. Because of the seriousness of a small fire the watch engineer probably would respond even if another engineer did.

I have been shown a floor plan drawing by SGT. BELZ and I am familiar with the Orleans Coffee Shop and the Deli area.

I only remember repairing the glass fill sink in the Orleans Coffee Shop and replaced a few lights, no other repair work was done.

During September or October, I worked in the Deli, particularly the pie case. It was unplugged. I plugged it back in and watched it for about 40 minutes and it was OK.

I don't recall repairing any coffee pot warmers in either the Orleans or the Deli.

There are three (3) electrical workers who usually repair electrical items and they work days.

Other people have talked to me, three (3) or four (4) and I don't know if they were MGM employees or on a retainer.

Dated this 21 day of January, 1981.

S/James A. Corbett, Jr.

WITNESSES: S/Sgt. David E. Belz
S/Becky Grismanauskas

ED GROVES

My name is WILLIAM E. GROVES - I go by ED GROVES. I live at ~~XXXXXX~~, Las Vegas, Nevada, and my phone number is ~~XXXXXX~~. I was employed by the MGM on January 9 - 7 years ago, right after it opened. I worked graveyard and I worked days for awhile but for the last 6 or more months I worked graveyard midnight to 8:00 a.m. Mr. Pete Dobbs was my supervisor. My main function was refrigeration.

I checked refrigeration units every night - walk-ins, reach-ins and ice machines. I also would take work orders when we got them and took room calls for refrigeration problems. Day shift also took work orders and room calls. Once a week I changed filters on all the units - usually on a Thursday because I was off on Fridays and Saturdays.

PM was weekly but if something were to go wrong I would just get a work order and fix it. The only work I ever did in the Deli was PM on the pie cases - once a week I would change filters and clean it. The pie case you have been asking about to my knowledge never had anything go wrong with it - it was installed when the MGM opened and was the same machine. The shift before the fire, I had replaced the filters on the machine. Everything was fine. I think if there ever had been a problem with it, day shift refrigeration would have told me.

The pies and baked goods would be taken out of the pie case when the room closed - usually between 12:00 midnight and 2:00 a.m. - they alternated closing the Deli and the Orleans room early. I can't remember if the Deli closed early or late my last shift. Then about 7:00 a.m. or so, someone would re-fill the pie cases. I think it was a young kid who worked out of the bake shop. The bake shop was open 24 hours a day. I don't know who he was.

The only one I have talked to about the fire, was a guy - I think an Insurance man - from LA called me - he asked me about the pie case, but I told him the same thing I am telling you. I think it was impossible for the pie case to have started that fire. I heard they have tested it since the fire and can't get it to do anything wrong or unusual...I can't believe that little compressor did that.

I had just cleaned the pie case - I shimmied it out from the wall and cleaned under it. To my knowledge there is no plug in - nothing ever happened to the machine so I never did find out where it was actually plugged in but I heard it was in the kitchen. One ice machine in the Orleans room used to blow a breaker now and then and I knew where that one was, but not the one in the Deli. I never saw a plug as far as the area where I could see. I don't mean the pie case was plugged in - I mean where it was connected to or wired to.

S/Ed Groves

WITNESSES: S/Becky Grismanauskas
S/O.R. Lyons

MEL ROBINS

TO: Beecher Avants

FROM: B. Grismanauskas

On this date February 2, 1981 I spoke with MEL ROBINS of ALARMCO SECURITY, Vice-President. MR. ROBINS told me that he was contacted by the MGM in the fall of 1978 and that the Fire Department had requested the MGM be connected with a Central Alarm System. This system would be manually activated on floors 5 through 26. There were no alarms to his knowledge on the first level, second level or space occupying the building up to and including the 4th level. The system had five tones - the first minute delivering a certain pitch, the second minute delivering a different pitch and so on up to 5 minutes. After 5 minutes the ALARMCO office would then notify the Fire Department by form of a hot line. The morning of the fire, there were numerous fire calls from the MGM in the form of the system described above. He does not recollect the time of the first call but would be able to tell us exactly how many alarms went off and at what times should we desire to have this information. A representative from our office would have to go to ALARMCO and identify ourselves to get this information.

He stated that the Alarm system mentioned above is independant of the MGM itself. The unit has battery systems that are even water proof. The only other hotel that he knows of that is directed to ALARMCO is the CAESARS PALACE and that is only water flow which is their sprinkler system.

He stated that he thought it was odd that the Fire Department would request this only of the MGM. He stated he asked EGENWEILER what he did to 'tick off' the Fire Department as to why just the MGM had to comply with this Central Alarm System. He stated that the only person who has talked to him about the alarm system was an individual from the MGM who was conducting a fire investigation. He does not remember his name.

—

JOHN R. EGGENWEILER

— My name is JOHN R. EGGENWEILER, Chief of Security for the MGM GRAND HOTEL. I was not at the MGM the morning the fire broke out but arrived at approximately 0730, after I had learned of the fire.

— The guest room floors are floors 5 through 26. The space or area that would make up floors 1 through and including 4 is that space consisting of the casino, second level and attics and storage making up the rest of the space up to the 5th floor. There are 6 pull type alarms on each floor of the Hotel, floors 5 through 26. Each of these must be manually activated. There were no alarms on the first level through and including the space of the 4th floor. Sometime in the fall of 1978, BARRETT of the Clark County Fire Department requested that the MGM install a Central Alarm System. BARRETT then approved the new Alarm System for the MGM which consisted of a 5 minute time delay in the system itself. After the alarm was pulled, an alarm light would go off in the main Security Office. The light indicated the pull station that the alarm was coming from. The alarm also went off audibly - in Security and PBX. After the 5 minute time delay, the alarm would then go off at ALARMCO and ALARMCO would then notify the Fire Department.

— The Security Office is manned 24 hours a day. The morning of the fire, SECURITY CLERK CARMEN GUALTERI, not sure of spelling, was on duty in the Security Office from 0100 to 0900.

— Once a month, security at the MGM met, security supervisors - periodically updated their evacuation plan.

— I have not been interviewed by anyone other than Investigator Grismanauskas at this time.

— The MGM did not have the type of elevators that would automatically shut down and go to the first floor when a fire alarm sounded.

— The Fire Department conducted inspections of the MGM from time to time. I was only aware of possible violations when I would receive a copy of the Inspection Report from the Fire Department via MR. ROSS when it pertained to possibly a fire extinguisher that needed to be replaced or matters directly related to the Security Office. To my knowledge, MR. ROSS received the Inspection Reports from the Fire Department and responded accordingly. As I would receive my copy of the inspection I would take the appropriate action to correct it.

— S/John R. Eggenweiler

— WITNESS: S/Becky Grismanauskas, Investigator

CARMEN GUALTIERI

TO: Beecher Avants

FROM: B. Grismanauskas

On this date February 3, 1981, I spoke with CARMEN GUALTIERI, Security Clerk for the MGM. He was on duty the morning of the fire, working the 0100 to 0900 shift. CARMEN related to me the following:

He was on duty in the Security Office and at approximately 0710 - he is not sure of the exact time - Lt. Rice received a call on his radio that there was a bad fire in the deli. Lt. Rice left the Security Office. Carmen then proceeded to xerox some copies of reports. He did not see nor hear nor smell anything unusual prior to this time during his whole shift. He began to hear some 'garbled' messages on the radios - "What's wrong?", "What?", etc. about 2 or 3 minutes later he opened the door of the security office and saw dark smoke. There were no alarms sounded. He saw no visual alarm lights in the Security Office. He then proceeded to assist people out of the MGM. He said people were running everywhere. While still in the Security Office, prior to exiting, he said there were NO phone calls and he had been watching the TV monitors - he saw nothing unusual. After exiting the MGM and after assisting people he ran over to the Barbary Coast and called his Chief. He was unable to reach him. He then called his assistance chief, CHET WHIDDON and advised him of the fire. He then stated he went up to a firefighter, he thought maybe was a Captain, and told him that he CARMEN had the key to the box in the Security Office that contained all of the keys for the stairwells, rooms, etc. The firemen later came back to him and said they could not get to the Security Office to obtain the keys. He could add nothing else to the above facts other than other incidents of helping people out of the MGM and helping once he was outside.

THOMAS DONALD, JR.

I, Thomas Donald, Jr., SS# ~~XXXXXX~~ of ~~XXXXXXXXXX~~ occupation, unemployed, (telephone no. ~~XXXXXX~~) do hereby make the following true statement to Becky Grismanauskas and Ray Lyons of the Clark County District Attorney's Office, Investigations Division, of my own free will. There have been no threats, or promises of immunity or reward made to me in order to induce me to make this statement. It is further understood that this statement may be used either wholly or in part as evidence in a Court of Law. I can read and write the English language:

I was working at the MGM the morning of the fire. I came on at 7:00 a.m. I was employed as a bakers helper for about 10 months.

About 7:10 in the morning I had went into the Orleans room and pulled out the pies in the pie case and I had started around the corner going to the Deli Coffee Shop. I just started going in. The doors were open. I was just at the doors when about four security guards ran by me then I looked and saw some smoke and fire coming out of a side stand right behind the pie cases. The fire was thick like the whole side stand had been on fire. The entrance into the side stand the doorway, the flames were from the bottom of the floor to the top of the ceiling. The flames were starting to like roll across the roof not very fast, but the smoke was moving very fast. The security guards were running around looking for fire extinguishers. They couldn't find any. By that time the smoke had almost filled the whole Deli Coffee Shop up, then I left.

I did not see a Keno Board on fire. I heard other people say that but I don't remember seeing a Keno Board near there.

The only persons that have talked to me about the fire are the two people from the D.A.'s Office. I filled out a questionnaire from the MGM and mailed it back, but that is all.

S/Thomas Donald

WITNESS: S/Becky Grismanauskas

GEORGE JAIKOWECH

Mr. Jaikowick states he was interviewed by MGM attorneys only.

He states that at approximately 7:15 a.m., he was in the East end of the casino by the elevators, working slot drops near pit 7 & 8, close to the Parisian Bar. He noticed a haze in this area and noticed people running and saw a ball of flame over the escalators. He saw smoke coming and told people he was working with to get out of there. He told the bartender to leave and assisted three (3) cocktail waitresses and other people out.

David E. Belz

RAYMOND A. YEAGER

~~XXXXXXXXXX~~

Las Vegas, Nevada

PHONE: ~~XXXXXX~~

Mr. Yeager has worked at the MGM since September 1980. He has been interviewed by no one other than the MGM attorneys, however, he did receive a flyer to fill out.

Raymond Yeager had been assigned to the kitchen post, lunch relief, coffee relief, etc.

Mr. Yeager said that he went through the kitchen at least three times. The last time being between 6:15 and 6:45.

Between 4:00 and 5:00 a.m., Mr. Yeager walked through the Deli, Barrymore seating area and busing station behind the pie case and noted nothing unusual.

At the time of the fire, Mr. Yeager was at the stage door, between Ziegfield room and Celebrity. A tall maintenance man came from the hallway and said there was a fire in the Deli.

Mr. Yeager stated that he helped people (employees) get out the fire exit in the hallway. He said it looked like smoke was coming through air vents in the hallway. He went to the south stairwell and helped get people out. The highest floor that Mr. Yeager went was the 19th floor. He indicated that after only about 10 minutes the lights went out and smoke was everywhere.

Mr. Yeager stated that he had made three complete rounds through restaurant areas and all doorways and hallways. Two other times he opened doors and looked and never saw anything unusual. He stated that it was a very quiet night.

Before 3:00 a.m., he called in the smell of gas. He called Maintenance and they said they are cleaning grease pits.

He indicated that he caught one employee sleeping in the Barrymore on November 7, 1980 (Mendoza, a steward, Empl. #33202) at 5:45 a.m. He walked through the Deli kitchen at approximately 6:30 a.m. and noted nothing unusual.

David Belz

LINDA LAMBERT

~~XXXXXXXXXX~~

Las Vegas, Nevada 89104

PHONE: ~~XXXXXXXX~~

Linda Lambert has been employed by the MGM since September, 1980. Ms. Lambert has not been interviewed by anyone other than the MGM attorneys.

On November 21, 1980, she was assigned in a truck on outside patrol.

Ms. Lambert came in after 7:00 a.m. and was standing at the security booth. George Williams asked if she had a radio and she said yes. He asked her to go with him and when they got to the Deli, George radioed back that they needed the Fire Department. The whole right side wall, as you look in, was in flames. There was not a lot of smoke, just flames.

They went and got fire equipment. Ms. Lambert got an extinguisher at the bottom of the escalator near the help-hall. She went back to the Deli and it was a bigger fire. George came with a hose. When he sprayed water there was a force and it knocked them out of there. Ms. Lambert was standing on top of the stairs and it blew her back to pit #7. She got up and noticed the Parisian Bar already was on fire. She told Sgt. Williams to get everyone out. She then helped get the people in the main pit #1 out to the Flamingo side. She then went to the front entrance and broke the glass so people could get out.

Ms. Lambert stated that she then went to the little bar on the Flamingo side and sent those people out through the doors. The casino at this time was full of smoke. She went back to the Reef Bar and helped the bartender out.

David Belz

CALVIN THOMAS

~~XXXXXX~~

Las Vegas, Nevada

PHONE: ~~XXXXXX~~

Calvin Thomas has been employed by the MGM for approximately 4 years. He has been interviewed by no one other than the MGM attorneys.

Mr. Thomas indicates he was assigned to the lower arcade area, near Silly Shirts. He kept people from entering back up into the arcade. He assisted in getting those persons from the paint shop out. He assisted in crowd control on the front part of the MGM and indicated that he was not in the Deli area.

David E. Belz

JACK D. WILLIAMS

~~XXXXXXXX~~

Las Vegas, Nevada

PHONE: ~~XXXXXX~~

Jack D. Williams has been employed by the MGM for seven years two months. He is presently a Security Sgt. working 12 midnight to 8:00 a.m., shift and was working this shift on November 21, 1980.

Jack Williams was working at the security control booth near the casino cage. He received a telephone call from an engineer who said to get the Fire Department, there was a fire in the Deli.

Jack Williams picked up the telephone (hot line) to PBX operator and told them to get the Fire Department, there was a fire in the Deli and the PBX Supervisor told him the Fire Department had already been called (hot line goes to PBX Supervisor).

Jack Williams sent four or five guards to the Deli area and he could only see them go up steps.

He talked to Officer Huggins on the radio and instructed him to break the glass out and get the fire hose out. He replied "it was too late sarge". He then told him to get all the people out.

Williams told people in the cage to get out. The change girls and poker boss called and wanted to know what was happening. Williams told him to get all his people out.

Williams indicated he heard PBX operator over the P.A. system in the casino give instructions to evacuate the place is on fire. Williams said he heard this more than once.

Williams sent Lambert, Huggins, Pickett (those were who he could remember) and others that were working up there in the general area.

David E. Belz

AL ROSSI

~~XXXXXXXXXX~~

Las Vegas, Nevada

PHONE: ~~XXXXXX~~

Mr. Rossi has been employed at the MGM hotel for approximately seven years as a security officer. He has been interviewed by one hotel attorney and given a questionnaire to fill out and return by mail. No other individual or investigators have interviewed him.

On November 21, 1980, he was assigned to the casino floor, mainly the East casino slots, with routine activity, rather slow. At about 7:15 a.m., he heard Sgt. Williams call two other officers (Huggins and Pickett) to go to the Deli area and check for a possible 402. He heard shouting on the radio the fire was out of control.

He saw Officer Bill Lane running through the casino and out the doors on the Flamingo side. He thought he was responding to a fight. He met him outside the Flamingo entrance and asked him what was going on. Lane indicated to Rossi he was waiting for the Fire Department. They were standing outside when the alarmed doors opened. Guests and employees came running out.

They both went inside the crash doors and helped people out. The smoke was nearly to the doorway and the smoke was about three feet above the floor. Cashiers and cocktail waitresses came out. Bill Lane was about three feet ahead of Rossi and Rossi indicated he lost sight of him. Bill Lane and another guard, he believed was Horton, were helping another employee out. Rossi could not see anybody else. He saw flames in the casino by looking through the doors and stayed outside the rest of the time.

David E. Belz

WILLIAM SMITH

~~XXXXXXXXXX~~

Las Vegas, Nevada

PHONE: ~~XXXXXXXX~~

Mr. Smith has been employed by the MGM as a security officer for six and one half years. He has been interviewed by MGM attorneys only, no other individuals or investigators.

On November 21, 1980, Mr. Smith worked the 12:00 midnight to 8:00 a.m., shift, his station being the time office. he indicated he saw smoke coming down the hall and got employees out the back end at the employees entrance.

Officer Childs helped two porters who passed out and brought them back to the arcade.

Officer Thomas told him to evacuate the persons in the back area. He told people to stand by at doors. He went to the East stairwell and brought people out and put them on busses and just stood by to assist. He was assigned to floor 18 and checked all the rooms and everyone was gone. At 4:00 p.m., Mr. Smith went home.

Dave E. Belz

ANTHONY VACELLI

~~XXXXXXXXXXXXXXXXXXXX~~

Las Vegas, Nevada

PHONE: ~~XXXXXXXX~~

Mr. Vacelli has been employed by the MGM as a security officer since November 12, 1979. He has not been interviewed by any investigator, but he did receive a questionnaire from the MGM attorney for him to fill out and return.

On November 20, 1980 (12:00 midnight to 8:00 a.m.) Vacelli was assigned to work security in the towers. At approximately 5:30 a.m., he reported to the Flamingo entrance and relieved the security officer for lunch. At approximately 6:05 a.m., he came to the casino to work the slot fills. He was at the security booth in the casino when Sgt. Williams received a call, saying there is a fire in the Deli.

Vacelli, along with Williams, Lambert, Huggins and Pickett, were sent by Sgt. Williams to see what they could do. They ran into the Deli and the wall on the right hand (South West wall) was engulfed in fire.

After seeing this everyone scattered, looking for fire hoses or extinguishers.

Officer Huggins had a radio and Vacelli told him to call the stand and tell them to get the Fire Department. Sgt. Williams said they had already been notified.

That was the last time he saw any of them. From there he went back and got a radio. He tried to slow the people down who were running through the casino. He was walking toward the elevators trying to slow the people up.

He first heard the noise "swoosh" then the smoke. Dark black smoke came out of the Deli and fire behind it. He couldn't see anything in the casino the smoke was so black. He started choking and held his breath. He could hear a door that had an alarm going off. He walked toward the sound and found the door and went out.

Huggins had a radio and he called the stand. He said, "I can't see anymore" and then he said he couldn't breath anymore. Officer Yeager was the one who heard this and told Vacelli.

David E. Belz

JOSEPH WESTABY

~~XXXXXXXXXXXXXXXXXXXX~~

Las Vegas, Nevada

PHONE: ~~XXXXXX~~

Mr. Westaby has been employed by the MGM for seven years. The only interviews he has had regarding the fire were with hotel attorneys. No other individuals or investigators.

Mr. Westaby stated that he was working the employee parking lot the 12:00 midnight to 8:00 a.m. shift.

He saw smoke coming from vents at the 5th floor level. The first smoke was pale blue haze, changing to yellowish orange tinge. About this time he heard the call, officer go to the Deli. This color turned to brown then getting darker until it turned black smoke and the South tower was obscure.

Mr. Westaby indicated that his phone did not work and his radio was not on the same frequency. He was out of touch with everyone.

David E. Belz

JAMES A. CHILDS

~~XXXXXXXXXXXXXXXXXXXX~~

Las Vegas, Nevada 89102

PHONE: ~~XXXXXXXX~~

Mr. Childs indicated he has worked at the MGM for seven months. He stated that he has talked with no one about the events of the fire except the MGM attorney.

Mr. Childs' normal station of security is at the Helps-hall.

At approximately 7:20 a.m., Officer Lambert came by his post and got the fire extinguisher. This was the only notification he got as his radio had not worked since 2:30 a.m.

He gave her the extinguisher then went into the arcade and looked in the hallway. He saw no smoke. After a couple minutes went by he indicated he saw smoke and stopped dealers from going upstairs. The smoke was getting heavier. Officer Williams came down and said to evacuate everyone out back. He then went to the helps-hall. He went upstairs and the smoke was spreading through the casino. He said he saw a little flame from the Deli.

He then went downstairs and got a fire hose and went back up. The fire was spreading. The gift shop upstairs was in flames. The smoke was thick. George Williams was checking downstairs and called out that he found two people passed out in the service elevator area and they carried them out the back. Mr. Childs said they made three trips into the casino looking for survivors. The ceiling was burning and collapsing. He did not find anymore and then went out the rear arcade area.

Mr. Childs indicated he went into the E Tower on the 24th and 25th floors. He shot the door handles off the fire exit doors to get back inside as smoke was in this stairway.

David E. Belz

SAMUEL MATTHEWS

~~XXXXXXXXXX~~

Henderson, Nevada

PHONE: ~~XXXXXXXX~~

Mr. Matthews has been employed at the MGM since October, 1979. He has been interviewed by MGM attorneys only and no other individuals or investigators.

On the date of the fire he worked the casino floor until 2:45 a.m., after which he went to the stage door post until 7:12 a.m., when he heard Sgt. Williams dispatch a possible 402 in the Deli area, and the fire department was needed and they were on their way. He heard someone say they were loosing it (the fire). Sgt. Williams instructed everyone to vacate the area.

He assisted in getting people out of the back area. He did not go back to the casino area.

David E. Belz

FIRE ALARM SYSTEM

as described by LT. CHAMPLIN, MGM Security Supervisor

There are approximately six (6) or more pull boxes on each floor and when one is pulled a red light and a tone would show and sound in the security office. The security office is manned 24 hours a day, seven days a week. The security personnel in the office would call the security officer at the booth, located in the casino near the cashier cage, a security officer is dispatched along with a supervisor. It is standard practice to send two (2) officers. The location where the alarm originated had to be checked within five (5) minutes. The alarm system, if not reset within five (5) minutes, automatically notified the Fire Department.

Security Control (the security booth) would notify maintenance control, who in turn would send two (2) maintenance engineers also.

The alarms in the P.B.X. Office is a back-up system. The light and tone would be reset when security or maintenance control notified P.B.X.

Weekly, usually every Friday, Alarmco would test at random the alarm system in the towers on each floor. These alarms were located in the hallways. It is an audio and PA system. This could be activated in the security office, P.B.X., or the secondary command post located by the tower desk. This system was not activated during the fire.

Lt. Chamlin was working as security as Supervisor. He left at approximately 6:45 a.m., heard on the radio of the fire, returned to work and assist with traffic and crowd.

Sgt. Williams followed as next in command. Day shift began at 7:45 a.m., security was to be on the floor.

David E. Belz

SECTION X
EXPERTS STATEMENTS

SECTION X
EXPERTS STATEMENTS

As indicated in the Preface of this document, and noted in the National Fire Protection Association's Preliminary Report included in this section, the United States Fire Administration, the National Fire Protection Association and the National Bureau of Standards are conducting a cooperative study to document and analyze this incident. Experts from each of these agencies assisted in the determination of origin, cause and circumstances of this fire. It was anticipated that the composite results of their statements and opinions would be provided in this section; results of the study will not, however, be available before June, 1981. The final report(s) of these agencies will be released as soon as possible.

PM MECHANICAL, INC.

5216 South Pecos

Las Vegas, Nevada 89120

Telephones: (702) 451-1743

(702) 385-2785

January 9, 1981

TO WHOM IT MAY CONCERN

I, Phillip D. Murphy, have been in the Refrigeration, Air-Conditioning, and related trade since 1942. All of my experience has been in the Southern Nevada area except for U.S. Navy Service 1942-1948. I have worked in the trade in all capacities including Journeyman, Foreman, General Foreman, and Superintendent. I have been and still am a member in good standing of Plumbers & Pipefitters Local No. 525 since February 1952.

In February 1978 I went into business for myself and am now doing business as PM Mechanical, Inc. State Contractors License No. 14679.

Sincerely,

PM MECHANICAL, INC.

S/Philip D. Murphy

President

VOLUNTARY STATEMENT

PHILIP DEAN MURPHY

DATE OCCURRED: November 21, 1980

TIME OCCURRED: 0717

LOCATION OF OCCURRENCE: MGM Hotel/Casino

I, Philip Dean Murphy, am 56 years of age and my address is 5216 South Pecos, Las Vegas. Home phone is 451-1743. Business phone is 451-1743.

I was notified on December 3, 1980 to contact the Clark County Fire Department, per their request to assist them in determining if there was any hydraulic, electrical or mechanical problem with a compressor they had in their custody. I arrived at the Clark County Fire Station #18 on December 9, 1980, in the morning hours, and was shown a refrigeration condensing unit which I immediately recognized as a "Tecumseh" model, one of which I am familiar with. Captain Lomprey, from the Fire Department requested I examine this unit as soon as possible, and I agreed to conduct the examination on December 12, 1980, at 1300 hours at Clark County Fire Station #18. I left the area and returned on Friday the 12th as agreed with two employees, Pat Murphy and Gary Magelssen.

The unit was placed in the apparatus floor at the fire station and I proceeded to examine it. Present were numerous persons, including Fire Chief Roy Parrish, Capt. Patterson, Capt. Lomprey and Capt. Burns.

In my opinion, I advised the investigators of the following information:

The small copper tube supply discharge line should carry a pressure from 125/135 p.s.i., at a temperature of 100° to 110° F. The larger copper tube is the return with 15 to 30 p.s.i. at 30° to 35° F. To avoid overheating or sudden heat build up the "Tecumseh" compressor has built into it a Klixon Device which is a thermo overload mechanism that shuts the unit down when it becomes overheated.

Captain Lomprey asked me if there was a 'timer' to the unit which would allow the unit to shut down for defrosting. I did not see a defrost unit attached to compressor, however, I explained to Captain Lomprey it is very common to have a 'timer' attached or remote from the unit for defrost purposes.

There is a pressure operated switch that controls the temperature in the pastry display case. This shuts down (cycles) the system at a factory preset pressure.

When the compressor is running or functioning, slight vibrations are extended into and on any attached tubing or piping. This is a normal function and impossible to correct, as any motor or other hydraulic unit operates with slight vibrations. I have never, in 38 years, seen or heard of a compressor that does not vibrate slightly.

The tubes that were in the wall which carried the freon should have been coated with armaflex insulation. The suction line, which is the return copper tube, should be insulated. If that line were coated with armaflex, it would not gather condensation, in this case, not being coated with armaflex, in my opinion, was not insulated properly. It is also my opinion one should never run copper with aluminum in the same chaseway, especially if either or both are not insulated. The phenomenon known as "galvanic action" will occur.

The heat dissipated from the condenser coils ranges approximately from +120° to +180° F. This air or heated air should be allowed to flow unobstructed into the atmosphere to avoid a heat build-up around the condenser or compressor.

When I conducted the test on the "Tecumseh" unit, I observed the following:

Those electrical components attached to and into the unit were functioning prior to the fire in my opinion. If I could have plugged this unit in an electrical outlet, it would have functioned electrically perfect. There was no evidence of any electrical short or fault in this machine.

PHILIP DEAN MURPHY (Continued)

Mechanically, this unit was in excellent shape, all moving parts or material needed for proper operation functioned properly, according to my test. In my opinion, this unit was mechanically sound prior to the fire.

Hydraulically this unit was sound. Although the copper tubing was cut away from the condenser and compressor I determined that the hydraulic fluid level in the compressor was full to its proper level. The hydraulic fluid is actually lubricating oil to lubricate the bearings and other moving parts in the compressor. This oil appeared to me to be brand new or normal. There was no burnt odor. According to my test I conducted all moving parts functioned in a normal manner and this unit was not "frozen" or appeared damaged in any way.

It is my opinion the test I performed on December 12, 1980 concluded the "Tecumseh" refrigeration compressor #8327-17 (E-F0773-C 710068) cat #34 #LRA 32-5 115 v.; 60 Hz; 50 Hz had no electrical, mechanical or hydraulic fault prior to the MGM fire. This unit functioned perfectly in each test I performed. It is my further opinion this unit was not nor did not start or cause to start this fire; however, its location (construction enclosure) is questionable as to its location, as were the construction techniques employed while installing the copper tube to the pastry case.

I have made this statement to Captain Lorne Lomprey, Fire Investigator, Clark County Fire Department, on my own free will.

S/Philip D. Murphy

S/Lorne L. Lomprey

S/L. Boucher

NATIONAL FIRE PROTECTION ASSOCIATION

PRELIMINARY REPORT MGM Grand Hotel Fire Las Vegas, Nevada November 21, 1980

On the morning of November 21, 1980, 84 people died and 679 were injured as a result of a fire at the MGM Grand Hotel in Las Vegas, Nevada. This was the second largest life-loss hotel fire in United States history.

In conjunction with the Clark County Fire Department, a cooperative investigative effort is in progress by the National Fire Protection Association (NFPA), the U.S. Fire Administration (USFA), and the National Bureau of Standards (NBS). This effort is being conducted under the NFPA/USFA/NBS Major Fires Investigation Agreement. This agreement, funded by all three organizations, provides for the investigation of technically significant fires by the NFPA Fire Investigations Department to document and analyze incident details and report lessons learned for loss prevention purposes. Due to the extensive nature of the MGM incident, all three groups had personnel on site; NFPA is responsible for data compilation, analysis, and final report preparation.

In addition, a human behavior study of hotel occupants is being conducted by NFPA in cooperation with the Clark County Fire Department, U.S. Fire Administration, and the National Institute for Occupational Safety and Health. It is expected that results of both studies will be available by June, 1981.

BACKGROUND

The MGM Grand Hotel was located on the southeast corner of the intersection of East Flamingo and Las Vegas Boulevards. The 26-story building was constructed during 1972 and 1973 and opened in December of 1973. Like most of the large hotels on the "Strip", this building was located in Clark County.

The building consisted of a very large ground floor area that contained the Casino, restaurants, showrooms, a convention center, and the upper level of a jai alai fronton. (See attached diagrams.) The below grade level (Arcade level), which had approximate outside dimensions the same as the Casino level, contained the lower level of the jai alai fronton, a movie theatre, a large number of shops and boutiques, service areas, and underground parking. The number of shops and boutiques, service areas, and underground parking. The Casino and Arcade levels communicated directly via an open stair. The gross dimensions of the Casino and Arcade levels were 380 feet by 1200 feet. The Casino itself was approximately 150 feet by 400 feet. The hotel consisting of three wings was built on top of the Casino and Arcade levels. Each wing was approximately 320 feet long and 70 feet wide.

The T-shape tower contained 2076 guest rooms. Seven hundred eighty additional guest rooms were under construction on the west side of the existing building. On the morning of November 21, 1980, there were at least 5000 guests, staff, and other people in the building.

The building was of mixed construction. The construction types included fire-resistive, protected non-combustible, and unprotected non-combustible. The interior finish varied significantly and included both combustible and non-combustible materials.

The building complex was partially sprinklered. Protected areas included the Arcade level, major portions of the Casino level, and part of the 26th floor. Protected areas on the Casino level included convention areas, showrooms, and some restaurants. The large gambling Casino and the high-rise tower were not sprinklered.

Means of egress from the Casino level was either through doors directly to grade or down a stairway to grade. The means of egress system for the high-rise tower consisted of one interior stair and one smokeproof tower for each of the three wings for a total of six stairs. All of the stairs discharged to the outside of the building. At the bottom of most of the stairs, horizontal passages were used to reach the outside. All three of the interior stairs and one of the smokeproof towers were not enclosed with two-hour fire rated construction. Due to locked doors, once the people entered stair enclosures, they could not gain access to other floors.

PRELIMINARY REPORT (Continued)

A manual fire alarm system with bells and public address capability was provided in the building. There did not appear to be manual pull stations on the Arcade or Casino levels; however, the system could be activated from the security office on the Casino level. Manual pull stations were located throughout the guest room floors. The system was arranged to sound a pre-signal and then a general alarm in five minutes after activation of a manual pull station. The system was a local signalling system only. Other than automatic sprinklers, there were no automatic detection devices in the building.

There were four major subsystems for the heating, ventilation, and air conditioning (HVAC) system. Heated or cooled air was supplied through ducts for the Arcade and Casino levels. Return was through air transfer grills and the lighting system to a large return air plenum above the ceiling. The return air plenum for almost the entire Casino level was through one undivided area.

The second subsystem provided conditioned air from a mechanical penthouse on the roof to the central core and three wings of the high-rise. This penthouse also contained the elevator machinery for one bank of elevators. There was no return air from the guest room corridors. The third subsystem included guest rooms equipped with individual fan coil units. These had chilled water piped to them. Make-up air was provided from the corridor for these units. The fourth subsystem was provided for toilet exhaust. The toilet exhaust system serviced the Casino level and guest room toilets in the tower.

In the high-rise portion of the building, there were two "seismic joints" that went from the area above the ceiling of the Casino to the return air plenum above the 26th floor. These were shafts, approximately one foot wide, that isolated the east and west wings of the building from the south wing. The bottoms of these seismic joints were not enclosed and communicated directly with the return air plenum above the Casino ceiling. Where the corridors crossed these seismic joints on each level, there were flexible non-fire rated "accordian fold" stainless steel panels in the walls of the corridor that went from the floor to the ceiling.

INCIDENT

At approximately 7:10 a.m. on November 21, 1980, an employee discovered a fire in a bus station in a restaurant called the Deli at the east end of the Casino. The bus station was a waitress and bus boy service area. The Deli was not open for business. The Casino and adjacent coffee house were in full operation. Security was contacted and an attempt made to extinguish the fire using an occupant use hose; due to the magnitude of the fire, the attempt was unsuccessful. The Clark County Fire Department was notified at about 7:15 a.m. There is no evidence that the building fire alarm system sounded.

The Clark County Fire Department has determined that the most probable source of ignition of this fire was electrical in nature. This occurred within a combustible concealed space adjacent to a pie case along the south wall of the Deli.

The first materials ignited included plywood used to enclose the pie case. The fire most likely smoldered for a period of time before breaking out of the concealed space and into the Deli bus station at approximately 7:10 a.m.

Initially smoke would have moved directly from the bus station to the return air plenum above the ceiling through an air transfer grill. Once open flaming took place in the bus station, the fire apparently began spreading on lightweight fuels such as plastic and paper products and combustible interior finish. The fire then spread to the remainder of the Deli, consuming other available combustibles such as wooden decorative members and foam plastic padding of chairs and booths.

Flashover of the bus station and then the Deli along with the lack of fire resistant barriers allowed the transfer of thermal energy into the Casino. Large amounts of air flowing through the adjacent coffee house and the Arcade provided a fresh air supply for the fire. Present in the Casino were highly combustible furnishings and contents and combustible interior finish. Large amounts of plastic materials such as foam padding and mouldings were included in the fuels. The presence of fuel, air supply and a very large undivided area allowed for extremely rapid fire spread and heavy smoke production. The entire Casino and porte cochere* on the west end of the building were fully involved with

*A roofed structure extending from the entrance of a building over an adjacent driveway and sheltering those getting in and out of vehicles.

PRELIMINARY REPORT (Continued)

fire by 7:25 a.m. There were limited or nonexistent barriers to fire spread which allowed the spread of heat, smoke, and other products of combustion to the building's upper floors. These shafts included elevators, stairs, and shafts located at seismic joints in the high-rise tower.

Tower occupants slowly became aware of the fire by smelling or seeing smoke, people yelling, or eventually due to helicopters flying around the building. Some occupants were able to exit the building without assistance. Many were rescued by fire fighters, construction workers, and passersby. Many other occupants made their way to the roof where they were removed by helicopter. A large number of guests were trapped in their rooms where they awaited rescue. Total evacuation of the building took nearly four hours.

Preliminary information as to the locations of victims in the hotel accounts for approximately 78 of the total 84 fatalities. Some casualties were removed from the upper levels of the building before their locations were documented. Fourteen victims were on the Casino level and approximately 64 victims were on the upper floors of the hotel. Of the 64 victims above the Casino level, 29 were located in guest rooms, 21 were in corridors and elevator lobbies, five were in elevators, and nine were in stair enclosures. Most victims were on the 20th through the 25th floors.

Three of the interior stairs were not enclosed with two-hour fire rated construction. There were direct openings from the return air plenum above the Casino to these stairs. In addition there were non-rated access panels that allowed fire and products of combustion to spread into these stairs. The spread of smoke into the stairs directly contributed to several fatalities. At least one of the smokeproof towers was not enclosed on the bottom with adequate fire resistant materials which allowed direct transmission of smoke from the casino area into the smokeproof tower. As far as can be determined, the air handling equipment was not equipped with smoke detectors arranged to shut down the systems upon sensing products of combustion. In addition some fire dampers were disabled so that they could not close when the fusible links melted and others did not close completely. As a result, products of combustion were distributed through the tower by the HVAC equipment.

The fan coil units in the guest rooms most likely contributed to the movement of products of combustion from the corridors to the guest rooms. These fan units were not directly connected to any vertical air shaft and provided a method for spread of smoke that may also have contributed to several fatalities.