

MANUAL FOR DISASTER MANAGEMENT IN MUSEUMS

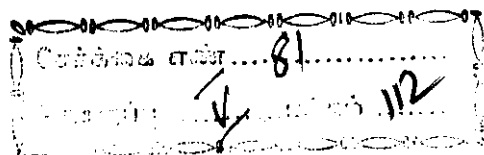
(Government Museum, Chennai-600 008)



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Preface

Disaster Management is very important for any museum. It makes the staff aware of the various possible disasters in a museum, its prevention procedures, training in disaster management, after disaster procedures in case of museum objects.

When I joined as Joint Relief Commissioner of Relief Measures, Government of Tamil Nadu in 1985-86, the discipline of Disaster Management was in a nascent state. I had occasion to participate in a World Health Organisation Seminar and a Workshop in Administrative Staff College of India, Hyderabad held in 1985-1986. At that time Disaster Management consisted of Flood and Drought Management. Chemical and industrial disasters were new. The Bhopal tragedy had just then struck, but preparedness was a new experience. I had prepared a Flood and Drought Management Manual. It reflected the state of technology then. Personal Computers were just beginning to be known. Most District Collectors had telephones, which operated on the Central Battery System – the receiver had to be lifted and the operator would connect the desired number. Today, technology has had a quantum jump with Cellular Phones giving access at all locations and powerful portable computers, which can be linked by mobile phones. This would have been the stuff of science fiction then. However, my previous experience has sensitised me to the need for Anti-Disaster Management Planning and Management.

The recent fire in the General Post Office, a heritage building was an eye opener. A fire fighting drill was organised for the staff of the Government Museum, Chennai and staff associated with the museum during December, 2000 in batches with the help of the Fire Service Department staff and the supplier of the fire fighting equipment. It so happened that on 20th of December 2000, during a school function in the Museum Theatre, the front curtain caught fire. The staff of the museum with the help of the fire extinguishers just then installed in the theatre and the training they had just received swiftly plunged into action within seconds and extinguished the fire and saved a priceless heritage building of Chennai. Action has been subsequently taken to strengthen the fire fighting equipment in the district museums also.

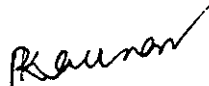
At the end of October 2000, Dr. V. Jeyaraj, Curator, Chemical Conservation and Research Laboratory of the Museum returned to India after attending an international conference and workshop on Museum Environment in Melbourne, Australia. He had been sensitised to Disaster Management in the workshop and also acquired some knowledge.

After the fire in December 2000, I decided to prepare a Disaster Management Plan for the Museum. The work was entrusted to Dr. V. Jeyaraj, in view of the technical expertise required. He has been assisted in preparing the Tamil version by Thiru D. Jawahar Prasad Raj, Curator, Geology Section. The detailed plan of each gallery and location of electrical equipment, fire prevention equipment has been prepared by Thiru Suresh Kumar, Draughtsman.

This volume deals the various disasters expected in a museum, action to be taken before the disaster, while disaster and after disaster. It has got annexures like the disaster management plan for the Government Museum, Chennai and the district museums. This includes a Standard Operating Procedure for each type of disaster for each level of the employee. It includes the list of whom to contact for each type of emergency. I it is hoped that this will be a model for Indian museums to follow. To our knowledge no other such plan or manual exists in any museum in India.

This handbook will serve those who are interested in Disaster Management in museums and those interested in protecting our art and cultural heritage.

Chennai-600 008,
16th March 2001.



(Dr. R. Kannan, Ph.D., I.A.S.)

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Disaster

Disaster will equally apply to – a small leak through the storage area window that has drenched the news paper collection; a pest invasion; a major flood; a piece of vandalism; an earthquake; theft of an object; a fire etc. Disaster can be small or large.

Basic Requirements of Disaster Preparedness

1. Prevention
2. Preparation
3. Response and
4. Recovery

Having a Disaster Preparedness Plan means a museum has implemented action to prevent disasters from occurring and has prepared by developing the necessary procedures to effectively respond to and recover from a disaster when it does occur-thereby reducing the impact on the staff, the collection and the museum.

- Step 1:** Assess all risks and threats (What could go wrong?)
- Step 2:** Reduce or Remove those risks (How can we prevent it?)
- Step 3:** Prioritise collection (Which objects do we grab?)
- Step 4:** Establish disaster response team (Who are we going to call?)
- Step 5:** Establish support networks (Who else can help us?)

Step 6: Prepare the disaster response plan (What do we do?)

Step 7: Prepare the disaster recovery plan (How do we cope with this?)

Step 8: Train all staff (Do we all know what to do?)

Step 9: Review the plan (What worked, what didn't?)

Standards for Disaster Planning

The disaster plan is a written document, which sets out procedures to be followed in an emergency. All staff should know its general contents by suitable means. The plan should include:

- Responsibilities of staff, method of raising alarm and communication to others;
- Emergency telephone numbers, including home numbers of staff;
- Confidential plan of building showing services, hazardous stores, etc.
- A separate copy of this should be available to the fire brigade on arrival;
- Priorities in mitigating damage to the collection;
- Sources of relevant expertise, including conservators and nearby museums, archives, etc., as agreed before hand;
- List and locations of materials and equipment;
- List of suppliers and services of equipment
- Security measures for the collections if premises damaged, e.g. pre-arranged safe storage;
- First aid measures for damaged collections, by type of material, drawn up in consultation with Conservators.

Plan Headings

1. ***Introduction***-It includes the management support, policies that the plan will support, the team working on the plan, what the plan intends to cover and how it should be used.
 2. ***Disaster Prevention***-Threats to museum and its collection should be assessed. The action to reduce the risks should be made.
 3. ***Disaster Preparation***-
 4. Disaster Response
 5. Disaster Recovery
3. It includes the action taken to meet any disaster, which may attack the collection.
4. It includes all steps to be taken to assess the situation while the disaster or just after the disaster has occurred.
5. It includes all actions to be taken to recover the objects After the disaster.

THE BUILDING

Identification of Risks to the Museum Building

1. Natural Disaster such as fires, floods, storms, earthquakes etc.
2. Industrial and Technological Disasters such as spills of hazardous materials, failure of equipment, air-conditioners etc.
3. Building renovation or construction-Proper supervision should be made to avoid any damage.
4. Condition of roof and guttering-Routine maintenance should be made.
5. Leakage and seepage-Proper maintenance routines should be done.
6. Security-Robbery, burglary, theft etc.

Action Plan

Preparing floor plans with the following points:

1. All entrances and exits and main evacuation points
2. Power points and the main
3. Fire extinguishers mentioning the type of fire
4. Main utilities and services and their shut off points such as water, electricity
5. List of emergency contacts

There are many layouts for a good Disaster Preparedness Plan and as long as all the basic elements are included, one cannot be said to be better than another.

Complete record of the collection and its disposition with in the store or display should be available at a distance from the collection itself, and a duplicate should be held in another building.

FIRE

One must know the elements of disaster preparedness. The various elements of disaster preparedness are

1. Before a disaster
2. During a disaster
3. After a disaster

Before a disaster, one must look for *prevention* and *preparation* measures. In order to prevent any disaster one must assess the risks and try to reduce the risks. In order to prepare the museum to face the disaster one must prioritise the collection, get ready with a disaster response team, get ready with support networks, and train the staff in managing the disaster.

During any disaster one must have the Disaster Response Team ready to face it.

After the disaster one must be ready for the recovery of the objects by Disaster Recovery Plan, Review and Update Plan so that the museum will face the situation boldly in the future.

Fire Safety

Fire is another devastating agency, which completely destroys objects such as organic objects and in-organic objects within a short time. Even metallic objects like lead also will be damaged due to fire. Fire safety is an important aspect to be cared for.

Causes of Fire

Fire in a museum can occur due to various factors. They are:

1. Electrical and mechanical factors
2. Chemical factors and
3. Human factors.

Electrical and Mechanical Factors

Electrical installation, electrical fittings, defective air-coolers, air conditioners, exhaust fans etc., are the main reasons for the break out of fire in museums. The cause for most of the fire in museums in the past is the failure of the air-conditioners. In order to overcome this problem substandard materials should never be used and the wiring should be renewed from time to time. Heavy loading of the wire should be avoided. In any case the loading should never be increased without the knowledge of the electrical experts.

Chemical Factors

Museums have conservation laboratories or other biological sections where chemicals are used for the conservation of preservation work. Some times while painting of the galleries is done paintings and other inflammable chemicals are used. The negligence in their use causes fire in the gallery. Even at times the gas used in the canteen also results in fire in the museum.

Human Factors

Human factors are creating a lot of problems as far as fire breaking is concerned.

a. Smoking

Fire in museums erupts due to smoking. Smoking in museums either in the galleries / storage or offices should be strictly prohibited.

b. Open Fire

Open fire should never be used inside the museum / Storage. In the case of electric failure, some small museums use kerosene lamps or candles. It should not be the practice. In such cases emergency lamps or torchlights may be used. Even while sealing the museum doors or security almyrahs, care should be taken to avoid fire as open fire is used for this purpose. No material should be fired inside the galleries on any account.

c. Equipment

The use of defective equipment, heaters etc., is posing a lot of fire hazards in a museum. The defects should be rectified immediately and annual maintenance should be carried out periodically.

d. Use of Inflammable Materials

Some museums use motor generators for the lighting in case of power failure in the museums. The motor generator rooms

should be away from the main galleries. The petrol or diesel used in the motor generator rooms should be very carefully handled. Zoological and Botanical galleries normally have specimen jars filled with spirit or other inflammable materials.

e. Wars and Rioting

Wars and rioting in the past have damaged many antiquities and museum objects. During the world wars many museums took precautions to safeguard their objects. Similarly during the riots also there is a possibility of keeping bombs in museums. Large museums do check for these fire weapons when visitors enter the museum. It is essential to check the visitors for any entry of weapons etc., inside the galleries.

The Principles of Fire Extinction

The fundamental principles to prevent fire are:

- a. Prevention of fire from starting
- b. Fire detection no sooner it starts
- c. Fire extinction at the earliest without causing any harm to the objects.

The requirements for fire are combustible material, air for combustion and the ignition temperature. If one of the three requirements are absent or removed there will not be fire or fire will be extinguished. Fire can be extinguished either by smothering, blanketing or by cooling.

Standards for Protection against Fire:

1. The museum building must be designed or adapted to minimise the risk of fire and to prevent its spread.

2. Areas housing collections must be rigorously insulated to a high standard from fire spread from areas of risk. The degree of risk from risk areas must be reduced as much as possible.
3. All electrical wiring and equipment must be installed in accordance with the electricity at work regulations and must be regularly maintained and checked.
4. The Fire Officer's advice must be sought on the selection of all materials used in displays and storage areas. Normally all such materials should be fire retardant. He should be consulted when alterations to the buildings are to be carried out.
5. After proper survey of the building and area, the type, number and location of fire-detection sensors, fire-fighting equipment should be decided.
6. Fireproof cabinets must be provided to house the museum documents and records.

All staff and volunteers must regularly attend training in fire prevention and response.

Fire Extinguishing

The break up of fire should be intimated to the fire service station at once. Extinction of fire differs from object to object and from one type of fire to the other. One must know the types of fire and the types of objects near the fire so that the type of fire extinction may be decided and fire put off without much damage to the objects. There are five types of fire. They are:

1. Class A fire (fire on ordinary combustible materials like paper, wood, etc.)

2. Class B fire (fire on inflammable materials like oil, volatile chemicals etc.)
3. Class C fire (fire on flammable materials like organic solvents etc.)
4. Class D fire (fire on metals like sodium, potassium etc.)
5. Class E fire (fire on electrical installation).

The fire fighting equipment also varies with the type of fire. The common type of fire extinguishers is water type, dry chemical type and carbon-di-oxide type. Water type fire extinguisher is used mainly to extinguish fire on solid materials, which catch fire. Carbon di oxide type and dry chemical type fire extinguishers are used to extinguish all types of fire. The dry chemical fire extinguisher contains Sodium bi-carbonate and Carbon di oxide and the carbon-di-oxide brings out the powder. ABC Powder type fire extinguisher contains mono ammonium phosphate and carbon-di-oxide. This is good for all types of fire. Use of water type fire extinguisher may be avoided in the case of objects such as painting, documents etc., as the water used in fire fighting will damage the drawings higher than fire.

Fire extinguishers should be kept in conspicuous places. Their periodic recharging on the dates recommended by the manufacturer is absolutely necessary, as the chemicals inside them do not remain effective indefinitely.

First Aid

It is important for all the gallery staff to know about first aid, as they could be the first ones on the spot to give immediate attention to a visitor. Quite often it is noticed in museums that a

visitor hurts oneself during the visit. Many visitors had hurt them and broken showcase glass and found bleeding. It is important that training in first aid should be given with the help of either Red Cross or John Ambulance First Aid training. The first step is to have a first aid cupboard or box in a central location. This may be available with the reception or with the security personnel. The cupboard must contain medicines and dressing materials. The box and the required materials can be had from any medical accessory materials shop.

Checklist for Fire Prevention

The security personnel in the case of large museums or the Curator in the case of small museums must personally supervise the use of the checklist. Any items that are shown as effective as a result of the review should be promptly entered in a logbook for correction. A notation should be made in the logbook when the defect is rectified. The following should be checked at least once a month.

- Whether a chart containing the important phone numbers of the fire brigade are available at the sides of the staff in-charge of the sections.
 - Test fire alarm system regularly.
 - Check the loss of fire extinguishers.
 - Whether the fire extinguishers are visible.
 - Check watch and ward charts.
 - Check the doors and shutters for defects.
 - Are there clean house keeping conditions?
 - Checking the No Smoking sign boards.
 - Check the emergency doors and locks for immediate use.
- Check for the removal of waste from the locality then and there.

EARTHQUAKE

In an earthquake the ground movement seldom causes death or injury. If the museum is a high raised building, damage will be large. Most casualties occur from falling objects or flying building materials such as broken glass or dislodged bricks. Fire can occur due to electrical short circuiting or chemical spills. Water damage can be caused by burst pipes. Showcases, open exhibits will fall. Glass show cases may be cracked.

If an earthquake is occurring:

- ◆ Human safety is the first priority
- ◆ Take cover in a supported doorway or under sturdy furniture
- ◆ Stay away from glass windows, doors, display cabinet, bookcases
- ◆ Do not have sharp tools in hands.

After the Earthquake:

- ❖ Be prepared for after shocks
- ❖ Extinguish all fires with the proper type of fire extinguishers
- ❖ Contact Emergency Services (Phone No.)
- ❖ Check for broken water pipes, shorting electrical circuits
- ❖ Turn off all water at main values, water leaks.
- ❖ Turn off all electrical appliances at the power point
- ❖ Open doors carefully and watch for falling objects
- ❖ Carefully move outside and away from the building
- ❖ Do not re-enter the building unless instructed by emergency personnel.

FLOOD

Flood is due to heavy rain , storm in the sea, breakage of dam, damage to the water tank in the museum etc. It leads to severe problems to the museum collection. Organic objects face a lot of problems due to flood.

Standards for Protection against Flood

1. As far as possible no pipe work or tanks must be permitted in new buildings in areas where collections are kept; every effort should be made to exclude paperwork from such areas in old buildings.
2. Objects, which can be raised, must be placed higher than about 15 centimetres above the floor and away from the walls.
3. Where there is a risk of water leaking from above, the tops of shelves and showcases should be protected with polythene sheeting. Waterproof boxes, cabinets, etc., should be used where ever possible.
4. All staff and volunteers should receive regular training in flood prevention and response.
5. The danger of water damage as a result of fire should be regularly discussed with the fire brigade.

BOMB THREAT

Bombing is now a days quite common in public offices by the miscreants to achieve their goal. There fore any public-place where public movement is noticed at large should be guarded very carefully. It is essential to check the entry of the miscreants with bombs. Metal detectors may be used to check the entry of unwanted metal materials, thereby the entry of lethal weapons along with the bombs are avoided. It is always better to seek the help of the bomb experts.

Prevention

Prevention is better than cure. There fore it is our foremost duty to check the entry of such weapons as a routine.

1. All the staff involved in the security should be well informed and the entry of such weapons should be avoided.
2. Entries should be restricted into the museum. The cloak room materials must be thoroughly checked.
3. In case any box, bag or suspectable items are found either in the galleries or campus, it should be immediately informed to the police and the diffusion squad so that the bomb scare might be avoided.
4. Some galleries of risk may be closed so that such valuable objects will be away from any anticipated damage.
5. Bomb detecting dog / squad may be requisitioned to detect the plantation of the bomb.
6. In such cases no public and staff should be allowed. Only persons who are trained in the diffusion of bombs should be allowed.

7. As far as possible rare objects from the gallery may be removed to a place of safety so that the damage may be minimised, in case there is any bomb blast.

SECURITY (THEFT / ROBBERY)

Museum security is a mechanism that provides for the protection of collections, equipment, information, personnel and physical facilities and that prevents influences that are undesirable, unauthorised or detrimental to the goals or the well being of the museum. Security is not only the job of security personnel but also it concerns every one who works at the museum and who visits the museum. Security is not just the public accessible parts of the institution, but all other parts as well. Museum security is the philosophy and activity of providing an environment in which people and objects may be as free from threat of harm or damage as possible.

The security requirements will be better understood if they are considered under the following categories.

1. Design and planning
2. Qualification of risk
3. Surveillance and alarm systems
4. Management and training of security personnel
5. Liaison with local authorities
6. Documentation, records and controls
7. Cost of security personnel, operation, equipment and insurance
8. The use of independent consultants.

The security of premises of a museum, its collections and the data they contain, the staff and visitors is of vital importance. Since the artefacts of the past preserved in the museum are the only evidences of our ancient art, culture, history and science, it is obligatory on the part of museums to take all precautionary measures and use all devices to safeguard the priceless collections. Even though, there is legal protection of antiquities in our country, a large number of antiquities, art objects etc., from various Indian museums are being stolen and smuggled out of the country. There are various dangers to the museum objects from various angles. The objectives of any museum system designed to deal with a security threat are:

1. Detect something wrong
2. Communicate that information rapidly and reliably and
3. Take effective action.

Several elements, which contribute to the security in museums, are:

1. Staff
2. Barriers
3. Collection management practices
4. Environmental monitoring

Staff

Alertness and keen observation are the very important qualities required in the security staff. Even though the security job mainly bestowed on the security personnel, all the other staff also has their share in the security of the museum objects. Every

staff member should be alert and conscious of changes in the collections, environment, and behaviour.

Barriers

A barrier is some thing, which comes between a visitor and an object. There are many physical barriers like barricades: fences, railings, glass, perspex, transparent polymers, drawing kolam or even simple space. An effective and time-proven method of safeguarding both the visitors and the objects is using barriers. It is to be recollected that in Japan the objects are exhibited in the open either on the walls or pedestals, the disciplined Japanese public is not tempted to touch the exhibits, which are firmly fastened to their backgrounds and not, for the most part delicate or fragile.

Environmental Monitoring

Regulating the environment surrounding the collections is very important for the object security. The wider concern is controlling the climate with in the whole facility or providing microclimate in the showcases.

Much of wear and tear, as well as accidental damages to museum objects can be significantly reduced by the judicious application of collection care management and adapting certain basic conservation principles. Many damages to the museum objects are attributed to the poor handling, lack of training to staff, neglect and vandalism.

Mishandling

Human factors such as poor handling and lack of training to staff to tackle objects result in serious damages to the objects either in the gallery, storage or while transportation. Careless handling of the object results in soiling, dents, scratches, abrasions etc. Damage occurs when objects are dropped, objects tear or break when outsize or heavy objects are hand-carried instead of being transported on trolleys. Objects break when they are lifted from points of weakness. Surfaces of objects get damaged when they are dusted or cleaned with coarse or soiled cloths, brushes or vacuum cleaners carelessly.

Neglect

Neglect of object results in many problems. Areas where any type of work on art objects is done must be kept absolutely clean. Very often it is noticed that perspiration and grease of hands stain the art objects. The natural oils from hands, deposited on objects, attract much dust, which is chemically harmful. It is advisable to wear clean cotton gloves when handling objects of art, or to use a clean cloth between hands and the object. Hands should not touch the painted surfaces, as in the case of miniatures or manuscripts, photographs or slides and negatives.

Vandalism

Vandalism is a deliberate or wilful act by which damages are made on the museum objects. Acts of true vandalism are fortunately a few. The visiting public is generally respectful of the works of art on display. The motivation of the deranged

individual to damage the objects take place in crowded galleries. The defacement of paintings or sculptures with graffiti by pencils, felt pen, ink, tar, oil etc., particularly on nudes and female figures have moral and behavioural connotations which require study by psychoanalysis. Other instances of wilful damage can be attributed to political, religious, ethnical, linguistic or racial fanaticism. There are instances of damaging paintings by knife, pen, nails are recorded in museums. There are instances, where the visitors inscribe their names on the objects itself as a token of their visit to the museum. Some times objects are smeared with oily substances as a mark of respect to the gods that they represent. Touching the feet of images out of reverence or fondling certain parts is quite common and these kinds of activities make an image unnecessarily glossy in patches. Improper method of storage, improper handling, packaging, and transportation, defective lighting arrangements and so on so forth are also equally damaging the museum objects amounting to the human vandalism.

In the majority of situations the conservation and security precautions in museums are sufficient to prevent accidental damage, negligence and to inhibit the less determined vandal. These measures include physical or psychological barriers, such as floor elevations, spreading river pebbles; ropes and stanchions or the total encasement of the objects in show cases. These barriers will deter many visitors from approaching too close and touching, marking or accidentally scratching the objects. However, mischievous visitors will find ways to outwit the guard. Other means of security protection depends on the guard's perception of deviant behaviour on visitors. Close circuit TV scanning of queues of visitors can often pinpoint strange behavioural patterns and the guard on duty can be alerted to be

more watchful of the individual spotted. Another method is to pass the visitors through airport style security electronic barriers, metal detectors, etc., and remove potentially harmful devices.

Standards for Protection against Theft

There should be standards for protection of the building, types of alarming devices, invigilation and security of keys.

Standards for Protection of the Building

1. The area or the building where the museum collections are kept should be capable of withstanding possible attack by an intending thief or a vandal.
2. Windows and doors must be defended well so that an intruder is deterred from trying to get in or is delayed long enough to allow a supporting intruder alarm to trigger a response before the intruder can enter, steal and escape.
3. Show cases must not be regarded as the primary protection against theft of display material when the building is unoccupied. Their construction must provide a level of security appropriate to the risk.

Standards for Alarms

1. All openings in the building fabric, such as doors, windows and roof-lights, must be fitted with intruder detectors. Intruder detection alarm system, which qualifies the specifications of security.
2. The system should be as simple as possible to avoid false alarms.

Standards for Invigilation

1. The level of invigilation of the displayed and stored objects should be appropriate to the risk.
2. The entry of the researchers and other students should be registered and they should be adequately supervised.
3. When outside contractors are allowed to work proper guidelines should be followed and also provided with identity cards.

Standards for Key Security

1. A strict policy regarding the possession of keys must be devised and enforced.
2. There should never be more keys than is necessary and the number of people in possession of keys should be kept to the barest minimum. All keys other than the external door keys held by the key holders, and keys to safes should remain within the building in a key cabinet or safe, and should be identified by a coding system.
3. An issue system against signature should be issued as a security measure.

Security Measures

Museum security can be broadly classified in to two categories. They are

1. Internal security and
2. External security.

1. Internal Security

The curatorial staff of the museum is responsible to a certain level on the security of the objects in their collection. It is always better to have a photographic album of the objects displayed in the gallery. Some museums have a register in the gallery, which contains particulars like the list of objects, size, and materials so that the gallery staff can point out the missing object. Some museums write down the name and number of objects in each case. It is the look out of the curator to photograph all the objects and have an archive of negatives so that any photograph is lost it can be replaced at a reasonable time. An authentic and systematic documentation of the museum collection not only helps in identifying each and every museum object but also saves from legal implications in case of theft and robbery. Therefore, the curatorial staff should contribute to the inner security. Annual verification should be done to see the availability of the museum objects. There are instances in the history of museums that many objects were found lost for which no one was responsible. Vulnerable objects like coins, bronze sculptures, jewelleries and precious stones and other rare objects should be kept in strong rooms and should be shown only to the interested persons who have got prior permission.

The strong room should be constructed by concrete and iron grills where ever necessary with double lock and key system and the duplicate keys should be kept sealed and kept in the treasury or police custody and once a year they may be checked and re-deposited in the treasury or to the police. Each gallery should be provided with gallery guard at all the times. The hide out places should be avoided. All the show cases, doors, etc., should be locked. The galleries should be opened in the presence of one of

the curatorial staff or security officer or police and he should certify that all the objects are found and all the cases are found locked. When ever an object is taken from the showcase, it should be recorded and the gallery staff should sign in the register. A note to the effect should be kept in the showcase so that the gallery staff who comes to duty following the incident will be able to take note of it. The head of the gallery staff, an administrative staff such as the duty clerk, security officer, duty officer, the concerned curatorial staff can go round the galleries from time to time and reduce the risk. On holidays duty officers may be posted who will check the activities during the holidays. The directors can make surprise checks from time to time. Gallery guards are responsible for the safety of the exhibits, furniture, and fittings inside the gallery. In case there is power failure, an alternative arrangement should be made immediately. Power generator may be kept ready. Emergency lamps can be kept in every gallery. There should be provision for separate switchboards for galleries, administrative blocks, verandas and connecting corridors and they should be properly named to identify them easily at the time of emergency.

2. External Security

The external security means the protection of the museum objects from theft, burglary, vandalism, fire, flood etc. all these devastating factors, which cause irreparable loss and destruction to museum objects, emanate from the museum building. Therefore, proper security measures should be taken to the building. Museum should not be lonely. The museum must have minimum entrances and exists to restrict the movement of museum visitors. The ventilators and the windows should be provided with grills or gross bars. There should be adequate

visibility in all parts and around the building. It should be well lit during the night. Well-secured iron grills for perimeter and fence entrance gates, which provide visibility of landscape as well as security, should be provided in the lay out itself. The drain pipes, sewage pipes and water supply pipes provide easy access to the upper floors and terrace. They should be either concealed or covered with barbed wires. The compound wall must be fitted with spikes or broken glass pieces to check unauthorised entry. The main entrance of the museum building and the doors of important galleries are provided with the collapsible metallic doors, which ensure extra strength and visibility inside. Electric alarm system may be installed to alert the security staff at the time of theft. Old locks should be changed and new standard locks should be provided and the duplicate keys should be deposited with the treasury. Gate passes signed by the heads of the various sections. No gate pass should be held valid unless the security section countersigned it. Tall trees near the museum building should be trimmed to avoid scaling the museum building. It is better to check the night security measures by surprise checks by senior officers of the museum besides the check by the security officer.

Thefts and Burglaries

Taking proper control measures may prevent thefts and burglaries in museums. They are both manual and mechanical including electronic.

Manual (Security Staff)

Experience of many museums have proved that nothing can replace the manual security which consists of the security

staff and the watch and ward appointed in the galleries to have a constant vigil during the day and night. Many museums have their own gallery staff, headed by a security officer. Other museums have police force also in addition to their own security staff. Museums like National Museum, New Delhi, Salar Jung Museum, Hyderabad have the Central Industrial Security Force in addition to their own. Security staff should be very carefully selected. Bad elements should not be kept in the security. All the staff should be trained in fire fighting, shooting, public behaviour, law related to the antiquities, general information about the safety of the objects etc., so that they can swiftly act at the time of emergency. Telltale clocks may be installed at vulnerable points. Mirrors may be fixed in the galleries to monitor the movement of the visitors in the gallery. In Indian Museum, Calcutta there is three orders of security staff. They are the museum security staff within the galleries; private security staff in side the campus; and state police cordons out side the campus. In the Chennai Museum the gallery guards look after the security of the objects; the watchmen look after the security out side the galleries; and the police outpost inside the campus provide the round the clock vigilance and also the galleries are open and closed in their presence and are sealed. The keys are sent to the Police Commissioner's office every day for the security of the keys of the museum buildings.

Mechanical and Electronic Devices

A number of mechanical and electronic devices are now available in the market, which can be used by museums and art galleries to strengthen the security. Telltale clocks were extensively on use in the museums. The mechanical devices at times do not properly function which create a lot of problems

and reduces the alertness of the security force and lays more dependence on the mechanical device. Even the false alarms may bring lethargy in the security staff to respond to an alarm during emergency. Testing of the emergency alarm should be done regularly after informing the staff so that they will be alert. Night time security depends, in addition to patrols, on preventing entry, or if this has been achieved, its immediate detection. Grills or shutters can detect opening and they can also be wired to a central system so that if they should be opened an alarm is set off. Therefore further methods in which an infra red light is directed from a projector at a receiving unit, which may be up to 2500 feet away, and an alarm is given off if the ray is broken. Another method particularly useful for storage rooms is closed circuit TV. Tell tale clocks may be fixed at different points of the building where the watchmen should go and punch the clock and specified hours in order to check whether the watchmen perform their duties properly.

Museum CCTV Security

Closed circuit television (CCTV) provides an important contribution to safeguarding works of arts in museums. The closed circuit television system extends the eyes of the museum staff to a given area in order to prevent vandalism or theft of precious works of art. The success of closed circuit television in the prevention of these is a result of the following:

1. The deterrent effect of a visibly displayed camera
2. The current use of closed circuit television cameras to provide surveillance of potential vandals or thieves.

3. The availability of low-cost, high quality television systems
4. The ability of a guard force to respond immediately when a criminal act is observed and
5. The ability of the closed circuit television video recorder to provide a permanent record later viewing by police or in court room use for conviction.

Closed circuit television is the equipment used invariably in all the European museums to monitor the unauthorised entry into the museums. Closed circuit television sets are installed in National Museum, New Delhi and Indian Museum, Calcutta and are watched by the officials concerned. A single staff along with sundry jobs in small museums is looking this after. Good locks are always better in the museums and they should be changed at a specific period so that the failure can be arrested. In certain museums the duplicate keys are made by the museum itself with in the museum in order to avoid unnecessary security problems. The locks which are not frequently used should be checked atleast.

1. Passive Intruder Alarm System

The passive intruder alarm system consists of a number of seismic sensors connected by wires to a remote display unit. It detects ground vibration of human beings, vehicles etc. in this case the air-conditioning plants etc., should be kept closed or it should be away from the equipment.

2. Electronic Surveillance System:

As the human being or vehicle moves towards or away from the instrument, sound, the action causes a rising and falling in the speaker.

3. Seismic Intrusion Detector

This detector detects the movement of human beings, animals by vibration. The instrument cannot function where there is an air conditioner near by. If the road is near by the vibration due to the vehicular traffic will also give problem to this device.

4. Electronic Burglar Alarm System

Burglar alarm functions by the working of a photocell. When shadow caused by the movement of human beings, animals etc., are detected the instrument makes noise.

Check List for the Security in Museums

Internal Security Arrangements

1. Are the windows, ventilators, skylights etc., provided with grills or similar safety devices?
2. Are the grills strong enough?
3. Are the grills keeping with the aesthetics of the building?
4. Are all the entrances and exits properly guarded with collapsible gates?
5. Are the locking arrangements in the building such that they cannot be easily tampered with?
6. Whether the number of gallery guards is adequate?

7. Are the gallery guards/attendants any time off during the working hours of the museum and if so, what is the arrangement for their replacement?
8. Who attends to the locking and opening of the galleries?
9. When is the cleaning of the galleries done?
10. Is there proper supervision at the time of the cleaning of the galleries?
12. Where and with whom are the keys deposited?
13. Where are the duplicate keys placed?
14. What is the provision for the availability of duplicate keys in an emergency?
15. Are the Security Officer and the night guards given accommodation near the museum building?
16. In what way does the Security Officer exercise this at night?
17. Is there a provision of telltale clocks inside the museum?
18. Is there any electrical gong alarm system in the museum?
19. Is there a burglar-proof system? Is it working satisfactorily?
20. Is there place inside the galleries where one may hide out?
21. At the closing time, how is it ensured that the galleries are clear of the visitors ?
22. Are all the showcases are provided with locks?
23. Whether all the rare antiquities are displayed within the showcases?
24. Is there any gallery or strong room that can be considered burglar proof?
25. What is the system of locking the special gallery?
26. What is the system of admission to the special gallery?
27. Is there any access from the gallery to any other office or technical rooms?
28. Are the entrances to air-conditioning and electrical units independent or through the galleries?

29. Are the accesses to the basement and the roof duly provided with locking arrangements?
30. Is there any alternative arrangement for lighting when electric supply fails?
31. Are there separate switchboards for galleries, verandas and connections outside the museum?
32. Is there any telephone accessible to the guards at night?

External Security Arrangements

33. Are there sufficient guards for patrol duties around the museum?
34. What are the duty hours of the guards?
35. Is there any supervisory staff for the guards during night?
36. Are there armed guards?
37. Is there any telltale clock system? If so how many points are there?
38. Is there any compound wall or fencing around the museum?
39. Are the gates of the compound wall or fencing duly provided with locking arrangements?
40. Is the building easily scaleable?
40. Is the down taking pipes from the roof covered with barbed Wire so as not to be easily scaleable?
42. Is there yard lighting or flood lighting around the museum?
43. Whether locks are sealed?
44. What is the system of opening and closing?
45. Is there any register of gallery opening and closing?
46. Whether Police is on security duty?
47. Any inter communication system available?
48. Is there any electronic security gadgets available?
49. Whether periodic checking is made?

TRAINING THE STAFF

Training is the process of changing a given behaviour up to a desired behaviour. Training is important because of the following reasons:

- Trained manpower is not easily available in the market.
- Training condenses the experiences that others have gained over several years.
- Training removes the anxiety of workers as to whether they can do the job successfully.
- Training helps the institution to have a well-coordinated team.
- Training helps to equip a person to do the job in the shortest possible time.

A balanced training programme develops in person knowledge, skills and attitude. Effective training programmes for those who work in museums are fundamental in ensuring that our museums are equipped to face the challenges of them. Since every one has a role in the success or failure in the disaster management of a museum, training is essential. Training should not apply just to junior staff. Junior staff must be given long detailed training so that they will pick up the subject very well from the beginning. A short-term training should be given to the experienced staff members at regular intervals so that the modern trends will be taken care off. Many directors and senior staff urgently need to acquire improving management and financial staff and it should be just a one-off, but should combine any necessary through out an individual's active career.

In-service Training:

Museums in the European countries provide training to the staff in the form of Induction Course when they join the museum either as full-fledged staff or as a trainee. They are provided with various aspects of museology including fire fighting. This avoids any embarrassment in case there is fire. Fire fighting training provides strength to an individual in the event of a fire enabling him to face the situation boldly. The training should be given by appropriate specialist bodies; others may be covered quite adequately by making available appropriate publications. It is essential for the staff to receive proper training in the provisions and implications of the appropriate legislation, and such training is now often available through local authority personnel departments. For the developments of the staff some of the specialist courses will be of much use. Induction course for security staff will help every new member to know the geography of the building, patrol patterns, emergency fire, theft and bomb procedures, fire fighting and legal issues relevant to his work. A written manual should be provided for all the security staff, covering all basic aspect of their work. Specific training on fire fighting and first aid is usually organised by local authority personnel departments. Volunteers and temporary staff should not exceed the number of the permanent staff and they should be trained in their work. Training like every thing else should be designed to meet a genuine need.

Emergency Contact List

State Emergency Services	Name	Phone Number
Fire Service	Fire	101
Police	Patrol	100
Police	Traffic	103
Ambulance	Ambulance	102
Traffic Police	F2 Police Station	103
Police Department	Commissioner of Police	8555089
Hospital	Dean	5363131
	Government General Hospital	5363139
Tahsildar	Revenue	5382108
Tamil Nadu Electricity Board	TNEB Electricity Assistance	
TNEB ,Egmore	Electricity Failure	8262393 8582102
Corporation/ Zonal Office	Zonal Officer	8279738
Corporation	Health Officer	
Public Works Department	Assistant Engineer (Civil)	
Public Works Department	Assistant Engineer (Electrical)	6259126
Regional Meteorological Centre	Area Cyclone Warning System Dissemination System	8277061

Insurance Company	National Insurance Company, Chennai-2	8525331
	United Insurance Company	8520161
Police	Technical Services & Finger Print Bureau	8571848 8548073
Pest Control	Tamil Nadu Warehousing Corporation (Pest Control Division)	
Transportation	Public Relations Officer, Transport Department	5385151
Secretariat	Secretary, TDC Department	5362887 (O)
Commissioner of Museums	Dr. R. Kannan, Ph. D., IAS.	826 1578 (O) 434 1209 (Res.)

Asst. Director	A.R.Parthasarathy	8269 638- Ex..203 4742 416(R)
Curators		
Education	K. Lakshiminarayanan	202 (O) 230(R)
Conservation	Dr. V. Jeyaraj	205 (O) 4745944 (R)
Zoology	P. Jawahar	206 (O) 2414 577(R)
Art	M. Mohan	207 (O)
Numismatics	R. Shanthi	208 (O)
Design & Display	J. R. Asokan	209 (O) 3726022(R.)
Geology	D. Jawahar Prasadraj	210 (O) 4418 673 (R)
Archaeology	R. Balasubramanian	211 (O) 626 1655 (R)
Botany	M. N. Pushpa	212 (O) 4418 673 (R)
Children's	K. Sekar	213 (O) 4363 039 (R)
Anthropology		214 (O)

DAMAGE CHECKLIST

1. Whether the affected area is fit to access? Yes / No
2. Under whose direction the access to the affected area was made?

Name:.....

Address:.....

.....

.....

Phone:

3. Area affected by the disaster

Area:

4. Is the area is fit for movement? Yes / No

5. Cause for the damage?

Fire / Water / Building Renovation or Construction / Failure of the Building / Others

6. Type of Damage Caused

Fire Completely burnt
 Smoked
 Soot coated
 Brittle due to heat

Water Completely wet
 Partially wet
 Damp
 Humid

Materials swollen
Materials stuck together

Failure of the Building

Roof damage
Walls collapse
Floor damage
Broken members
Others

Building Renovation/Construction

Spilling of construction / painting materials
Fall of heavy materials and crushing the objects
Falling of scaffolding
Others

Others

Drainage pipe damage
Spill of chemicals
Others

7. What is the percentage of damage to the collection of the area affected? %

8. What type of collection has been affected?

- | | | |
|------------------------|--------------------|--------------------------|
| • Paintings | • Textiles | • Leather |
| • Books and | • Records | • Photographic materials |
| manuscripts | | |
| • Natural history | • Bone, ivory | • Ceramics |
| objects | and horn | |
| • Wooden objects | • Metallic objects | • Glass objects |
| • Cane objects | • Stone objects | • Terracotta |

- | | | |
|------------------|------------------------|---------------------|
| | | objects |
| • Plaster models | • Coins | • Plastic materials |
| • Furniture | • Electrical equipment | • Computers |

9. Whether the damaged objects can be kept where they are? Yes / No

10. How will you protect your objects above floor level or cover them from dripping water?

Raising them by keeping bricks

Covering them with polythene sheets

Removing them to a safer place

Others

11. Can the damaged objects be moved from the site?

Yes

No - it is fixed

No - it is too heavy or too large to shift

12. Prioritise the objects for salvage.

Textile / paper / wooden object / basketry / leather objects / paintings / biological specimens / electronic and electrical instruments

13. Whether the affected / damaged objects are replaceable?

Yes / No / Yes with difficulty / Not possible / Some are possible

14. Can the damaged objects are salvaged internally or externally?

Internally salvaged / Some need to be salvaged externally / Externally salvaged

15. What type of equipment needed for salvaging?

Air-Drying / Freezing / Transport / Packing / Recording /
Lifting

16. Type of consultancy needed.

Conservator / carpenter / Electrician / Structural Engineer /
Cleaner / Packers / Movers / Locksmith / Plumber / Dryers /
Others

17. Is there any area, on-site or off-site available for drying wet materials?

On-site available / Not available

Off-site available / Not available

a) How large is the site available for drying?

Sq.meters

b) Whether the site has provision for keeping them secured? Yes / No

c) Whether the site has power supply? Yes / No

d) Does the site have water tap with water? Yes / No

18. Whether the power supply is affected in the building?

Yes / No / Partly affected

a) Is there three-phase power supply available?

Yes / No

b) Is there a generator available in working condition? Yes / No

19. Are there roads available all around?

Yes / No

20. Other requirements.

Name of the person assessing the damage: Dr. V. Jeyaraj
Designation: Curator, Chemical Conservation and
Research Laboratory
Contact No. 8269638 Ext. 205 (O) 4745944 (Res.)
Date:

Disaster Response Team

1. Disaster Coordinator:

Name : Dr. R. Kannan, I.A.S.,
Designation : Commissioner of Museums
Institution : Government Museum, Chennai
Telephone No 8261578 (O) 4341209 (Res.)

Name : K.Lakshminarayanan
Designation : Curator, Education Section
Institution : Government Museum,
Chennai-8
Telephone No 8269638 Ex. 202

2.. Documentor / Assessor

Name : Dr. V. Jeyaraj
Designation : Curator, Chemical
Conservation and Research
Laboratory
Institution : Government Museum, Chennai
Telephone No: 8269638 Ex.205 (O)
4745944 (Res.)

3. Disaster Response Team Members

Name : P. Jawahar
Designation : Curator, Zoology Section
Institution : Government Museum, Chennai
Telephone No: 8269638 Ext. 206 (O)

Name : M.Mohan
Designation : Curator, Art Section
Institution : Government Museum,
Chennai-8
Telephone No: 8269638 Ex. 207

Name : R. Santhi
Designation : Curator, Numismatic Section
Institution : Government Museum,
Chennai-8
Telephone No: 8269638 Ex. 208

Name : J.R. Asokan
Designation : Curator, Design & Display
Section
Institution : Government Museum,
Chennai-8
Telephone No: 8269638 Ex. 209

Name : D. Jawahar Prasad Raj
Designation : Curator, Geology Section
Institution : Government Museum,
Chennai-8
Telephone No: 8269638 Ex. 210

Name : R. Balasubramanian
Designation : Curator, Archaeology Section
Institution : Government Museum,
Chennai-8
Telephone No: 8269638 Ex. 211

Name : M.N.Pushpa
Designation : Curator, Botany Section
Institution : Government Museum,
Chennai-8
Telephone No: 8269638 Ex. 212

Name : K. Sekar
Designation : Curator, Children's Museum
Institution : Government Museum,
Chennai-8
Telephone No: 8269638 Ex. 213

Name :
Designation : Curator, Anthropology Section
Institution : Government Museum,
Chennai-8
Telephone No: 8269638 Ex. 214

Name : A.R. Parthasarathy
Designation : Asst. Director (Admn.)
Institution : Government Museum,
Chennai-8
Telephone No: 8269638 Ex. 203

Name : N. Thiagarajan
Designation : Asst. Engineer,

Institution : P.W.D. (Civil)
Telephone No: 8269638 Ex.

Name : Pugalendi
Designation : Asst.Engineer (Elect.)
Institution : Government Museum,
Chennai-8
Telephone No: 8269638 Ex. 235

Name :
Designation : Sub Inspector
Institution : Police Station
Government Museum Campus,
Chennai-8
Telephone No: 8269638 Ex. 233

Duties of the Emergency Response Team

- ❖ Declare emergencies and implement the Emergency Plan
- ❖ Implement evacuation procedures
- ❖ Contact emergency services (fire, police, ambulance) and utilities
- ❖ Establish a command post, chain-of-command and reporting procedures
- ❖ Access and stabilise the environment
- ❖ Assess emergency services, supplies and equipment
- ❖ Obtain emergency services, supplies and equipment
- ❖ Ensure the safety of staff and volunteers at all times during emergency

- ❖ Arrange for off-site storage and work facilities
- ❖ Arrange the transfer of collections to a safe site
- ❖ Record the movement of collections
- ❖ Contact, deploy and supervise museum staff
- ❖ Implement and supervise salvage procedures of collections
- ❖ Contact, train and supervise volunteers
- ❖ Document all aspects of the response / recovery procedures
- ❖ Sign purchase orders
- ❖ Meet with the press
- ❖ Prepare post-emergency reports.

Emergency Plan

A. Statement of Authority:

In the event of a physical emergency the Commissioner/Director of Museums authorises its staff and employees to meet the emergency. The Emergency Response Team is vested with the authority to declare a state of emergency and to use appropriately whatever resources are necessary.

B. Statement of Policy:

In an emergency the museum declares its priorities to be

1. Protection of life
2. Protection, recovery and stabilisation of the collection of records.

For these ends alone it authorises the bypassing of normal procedures.

C. General Instructions:

1. In all appropriate areas visible emergency exit signs must be posted clearly.
2. When there is an alarm/calling bell or information from the staff all persons shall evacuate the museum buildings.

3. Copies of the Emergency Plan should be available readily.
4. The Emergency Response Team has authority in all practical matters for the duration of the emergency.

Appendices:

1. Complete staff list with addresses and phone numbers
2. Emergency Response Team call-out list with phone numbers (Check weekly).
3. Public emergency services phone numbers (Check annually).
4. Phone and fax numbers of other sources of emergency support and appropriate Public Works authorities (Check annually).
5. Phone and fax numbers and addresses of local suppliers of equipment, materials, freezing services, accommodation and services that might be required (Check annually).
6. Building information, with plans showing location of water, electrical, gas and compressed air circuits and all switches and cut-offs (Update annually).
7. Lists of emergency equipment and materials held in stock with quantities and location (Check stock and update monthly).
8. Lists and locations of fire fighting equipment and first aid supplies (Check monthly and update monthly)
9. Location of safe copies of collections Records and Emergency Plan.
10. Distribution of Emergency Plan and Appendices: A, B & C to all staff; C points 1 and 2 in every room; Appendices 2 and 3 beside every telephone.

Availability of Water

Water storage is available in the sump in between the Old Zoology block and the Curatorial block and in the sump near the Bronze gallery.

Reference

Disaster Management Plan for the Government Museum, Chennai

A Disaster Management Plan is a document containing information on the Standard Operating Procedure to be adopted in an emergency. By its comprehensive nature, it saves the time used in thinking in emergencies. With training drills it ensures quick response of the people involved. It does not respond to emergencies – it is people who do that. It ensures that staff is familiar with the plan and their roles in it, and that they have the resources, training, and authority to undertake their duties and responsibilities. This information has to be made up-to-date and the plan practiced regularly. Emergency preparedness does not stop once a written Disaster Management Plan is completed.

Some Duties of the Emergency Response Team

1. At the sight of any disaster, immediately to the Guide/Asst. Curator/Telephone Operator. Evacuate non-essential staff and public to a place of safety. Switch off the electric main and open all the emergency doors.
2. Inform the duty clerk / duty officer / the curator concerned / or any near by officer immediately about the incident. Depending upon the incident contact the police / fire service immediately.
3. The Guide or Assistant Curator of the gallery is the immediate person to whom the information has to be passed on. He / she will immediately inform to the Concerned Curator / Duty Officer / the Co-ordinator of the Response Team. In the absence of the above persons, who so ever is available has to take immediate action.
4. In case of fire, use the fire extinguisher and use it with in the first few seconds. The first 30 seconds are the most important. Then inform to the fire station on phone number 102. Inform the place of the emergency, institution, phone number, your name. Inform the telephone operator about this. The Fire service will give a ring and the incident will be confirmed by the fire service and then only the fire service van will start for action. Arrange for the opening of gates and get one person ready at the entrance gate for directing the vehicle to the place of the incident immediately.
5. Try to safeguard the visitors and staff first. Then carry away the rare objects to safety.

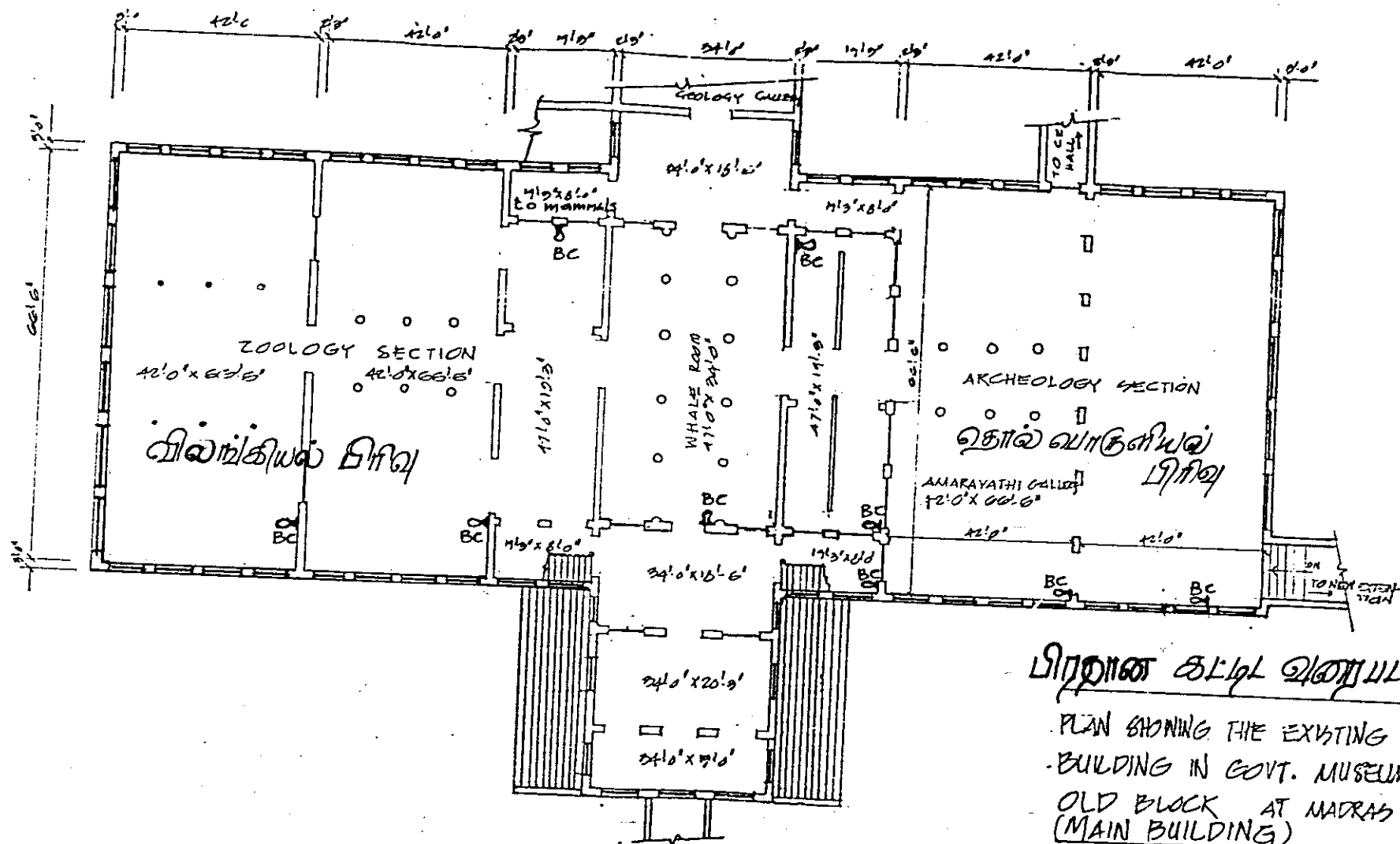
1. At the sound of the alarm signal (Calling bell) all persons shall evacuate the premises immediately and staff shall go directly to their designated assembly point.
2. Copies of the Emergency Plan are available with the Guide / Assistant Curator of the building.
3. The Emergency Response Team has authority in all practical matters for the duration of the emergency.

Disaster Management Plan for the District Museums

There are twenty district museums in Tamil Nadu. All the museums are equipped for avoiding manmade disasters and natural disasters. Fire fighting equipment has been provided in all the museums. The Curators are to take all steps to safeguard the art and cultural heritage in the museums.

SITE PLAN OF
GOVT. MUSEUM, MADRAS
NOT TO SCALE

-
- Hand-drawn site plan of the Tamil Nadu Sahitya Akademi building complex. The plan shows several interconnected buildings with various labels in English and Tamil. Key areas include:
- Ticket Counter** (leftmost building)
 - Sump** (top left)
 - Entrance** (multiple locations marked with arrows)
 - Connemara Public Library** (top center)
 - Old Library** (top right)
 - Tamil Nadu Sahitya Akademi Museum** (center)
 - Theatre** (bottom center)
 - Gate** (multiple locations along the bottom boundary)
- The plan is oriented with North at the top.



GROUND FLOOR PLAN

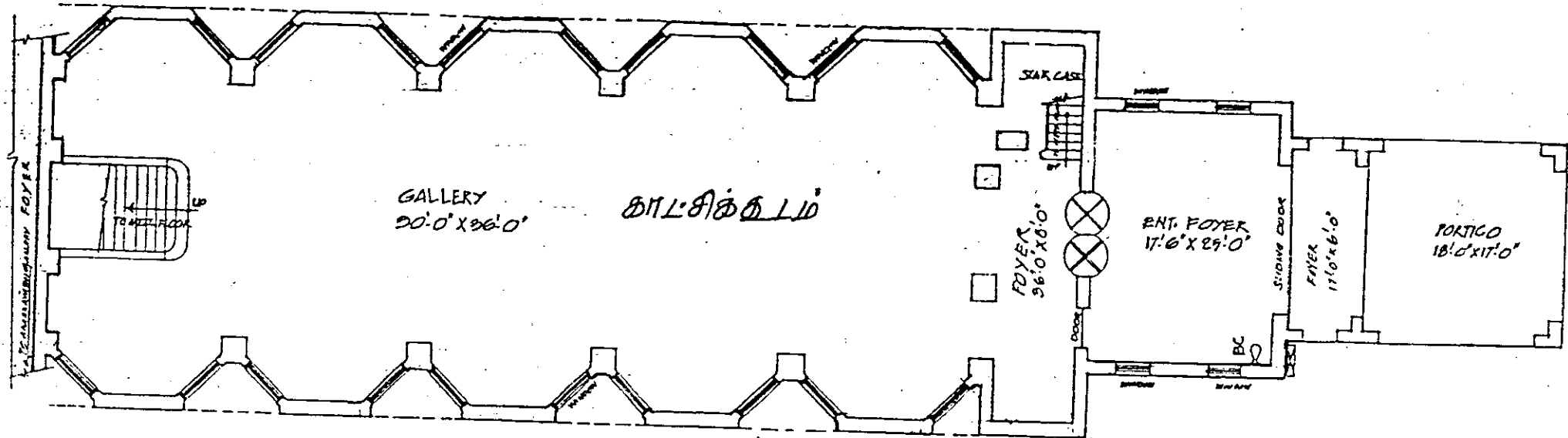
தரை தளம்

பிரதான கட்டிட அமைப்பு

PLAN SHOWING THE EXISTING
BUILDING IN GOVT. MUSEUM
OLD BLOCK AT MADRAS
(MAIN BUILDING)


SCALE: 1/4\"/>

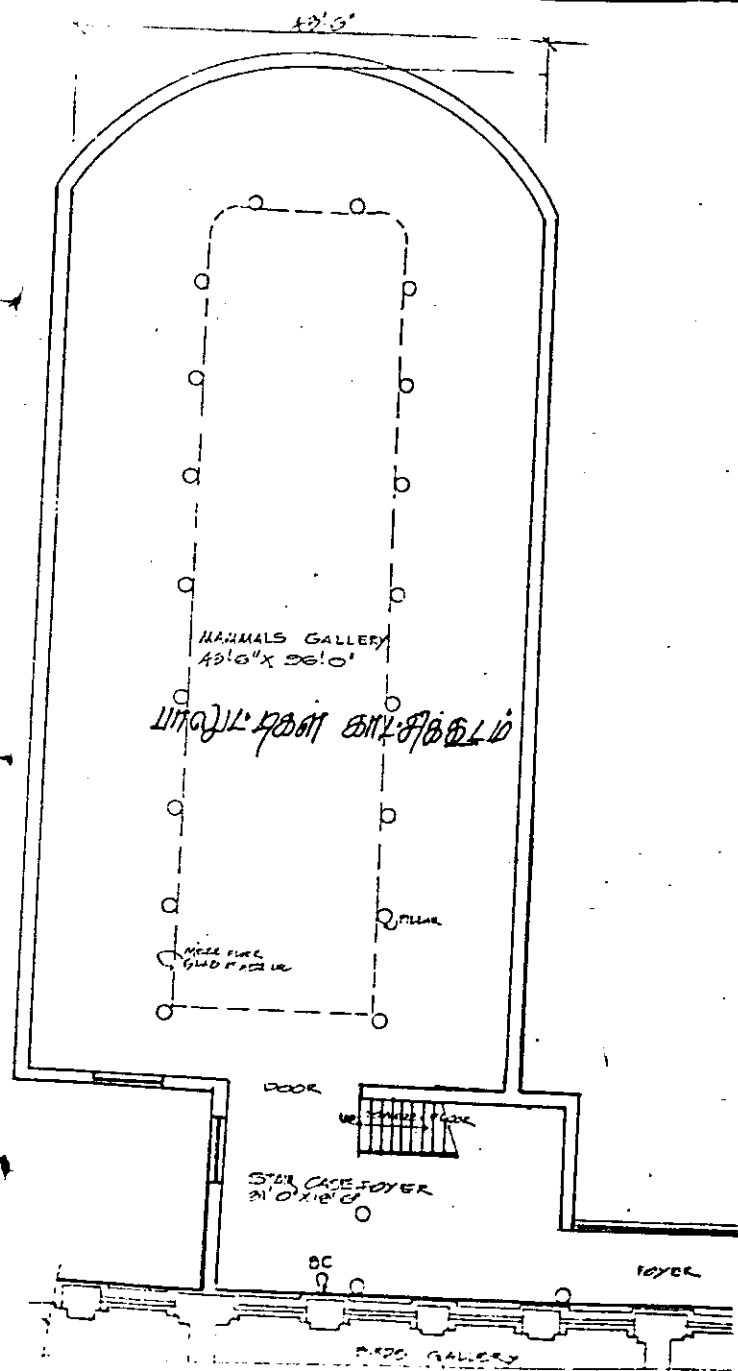
FIRE EXTINGUISHERS REFERENCE.
B.C D.C.P



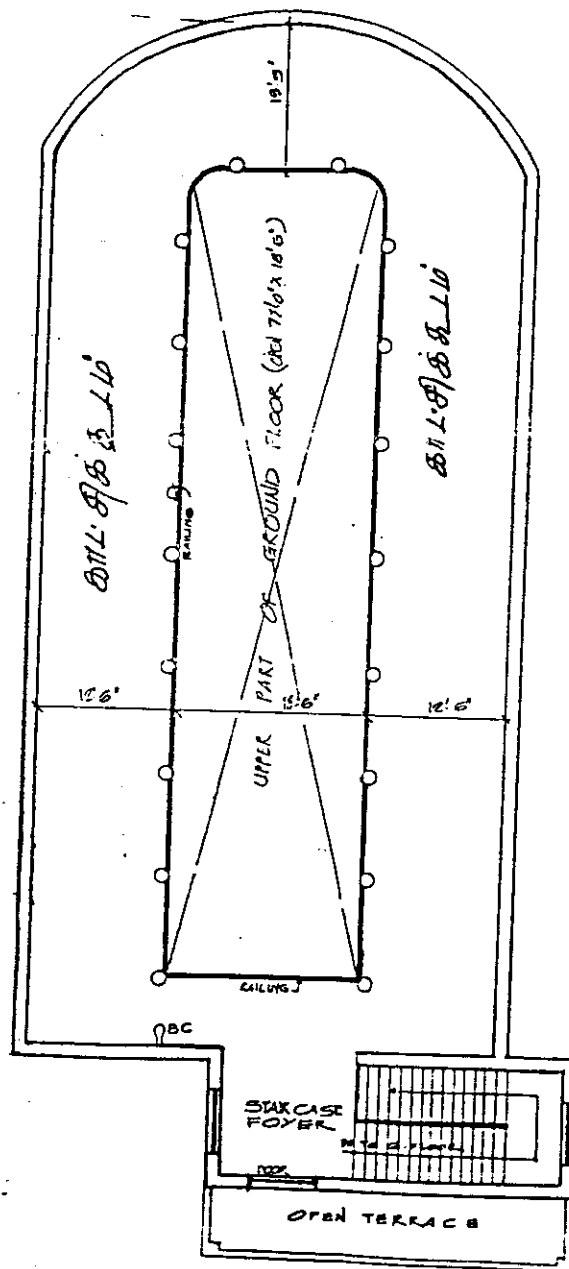
GROUND FLOOR-PLAN

தரை தளம்

FIRE EXTINGUISHERS REFERENCE	புதிய கட்டிடத்திற்குள் உள்ள பில்டிங்	SCALE : 1/8" = 1'-0" (1:100)	DESIGN & DISPLAY SECTION GOVT. MUSEUM, EGMORE CHENNAI - 600 008	
MAIN STITCH	PLAN SHOWING THE EXISTING BUILDING	DATE : 14-11-00		
BC-D C P	(NEW EXTENTION BUILDING) IN GOVT. MUSEUM	CURATOR :		
	EGMORE, CHENNAI - 600 008.	DRAUGHTSMAN :		



தரை தளம்



மேல் தளம்
2ND FLOOR PLAN

FIRE EXTINGUISHER REFERENCE

IBC DCP

MAIN SWITCH IN GROUND FLOOR (ENTRANCE)

PLAN SHOWING THE EXISTING
BUILDING (MAMMALS GALLERY)
IN GOVT. MUSEUM,
EGMORE.

CHENNAI - 600 008

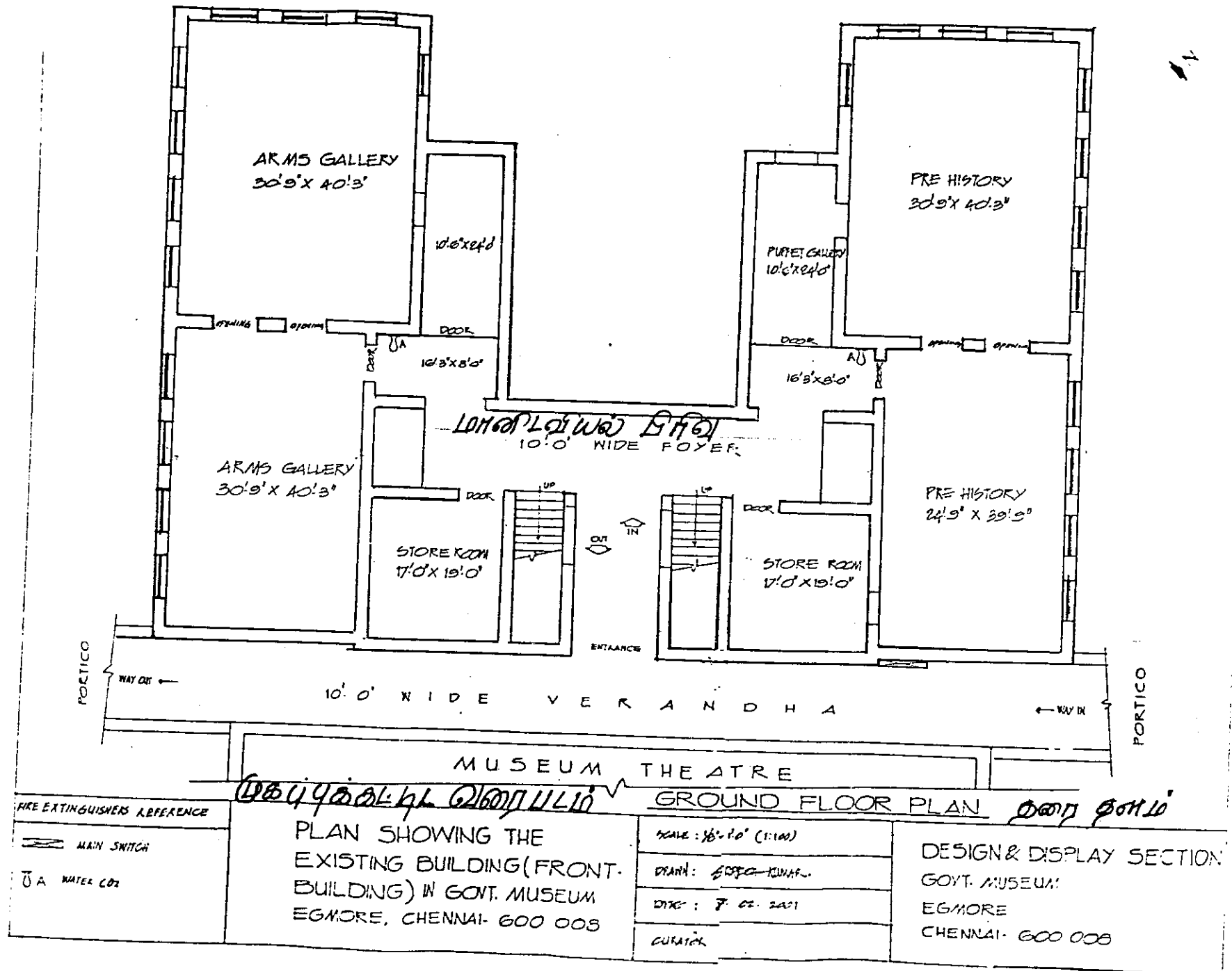
பாவுல்டுகள்
காட்சித்தடம்

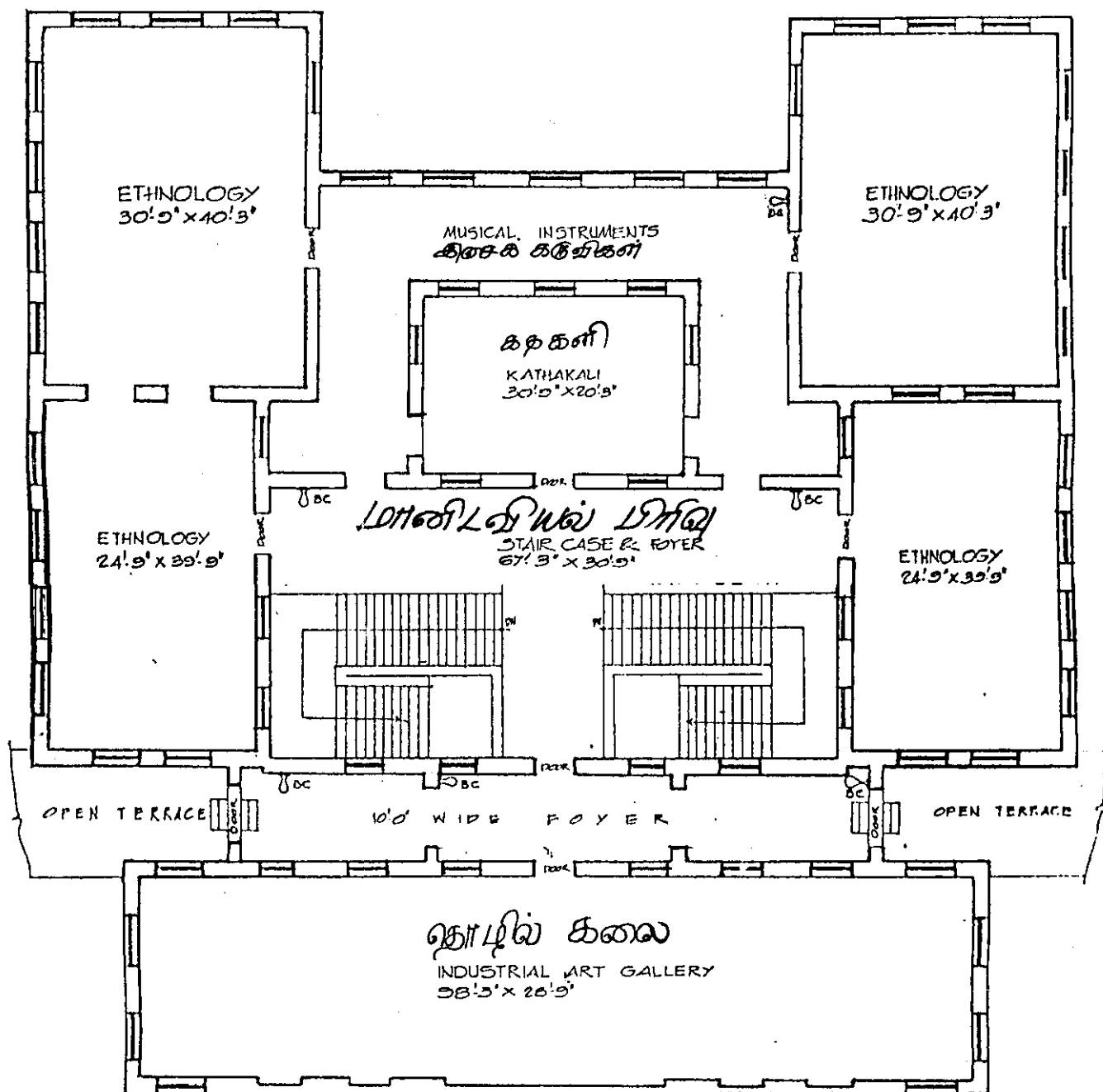
SCALE: 1/8" = 1'-0" (1:24)

DATE: 2.12.1971

DRAWN: [Signature] CHECKED:

DESIGN & DISPLAY SECTION
GOVT. MUSEUM,
EGMORE
CHENNAI - 600 008





FIRST FLOOR PLAN

முதல் மாடம்

FIRE EXTINGUISHERS REFERENCE

BC - DCP
WIN SWITCH IN GROUND FLOOR

முதல் மாடம்

PLAN SHOWING THE EXISTING
BUILDING (FRONT BUILDING)
IN GOVT. MUSEUM, EGMORE
CHENNAI - 600 008

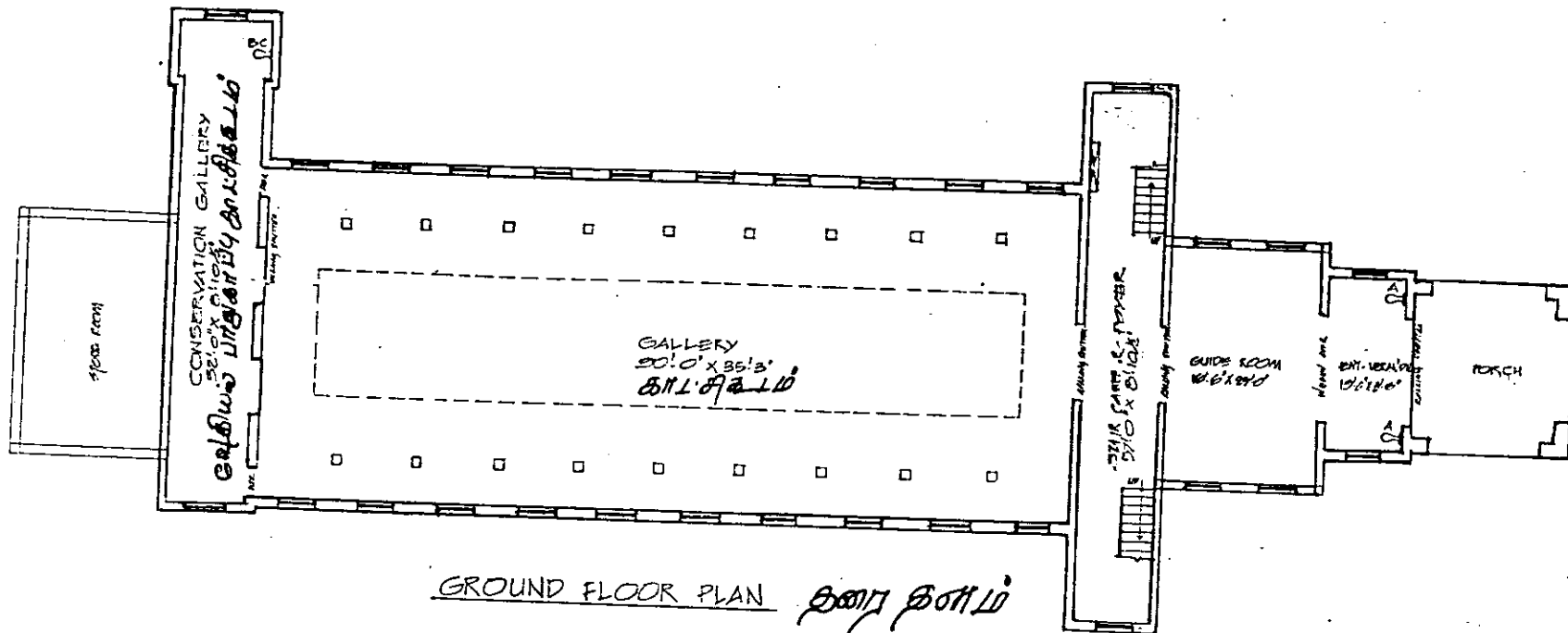
SCALE 1/8" = 1'0" (1:100)

DRAWN : *[Signature]*

DATE : 5.12.2001

CHECKED :

DESIGN & DISPLAY SECTION
GOVT. MUSEUM
EGMORE
CHENNAI - 600 008



GROUND FLOOR PLAN காட்சி அரங்கம்

FIRE EXTINGUISHERS REFERENCE

- MAN BOARD
A CO₂ WATER
BC DCP

பிடிமக க. ல. வரைபடம்

PLAN SHOWING THE EXISTING BUILDING
(BRONZE GALLERY) IN GOVT. MUSEUM
EGMORE. CHENNAI - 600 008

SCALE : 1/8" = 1'0" (1:100)

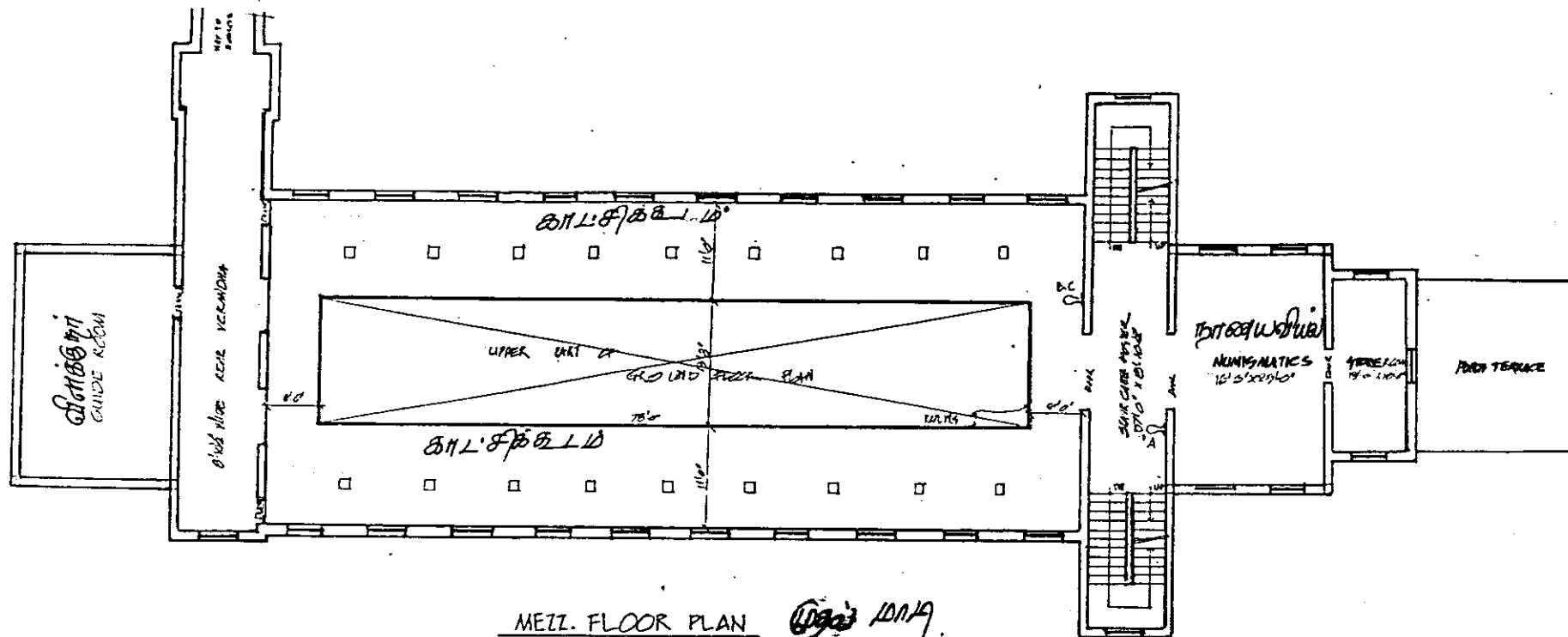
DRAWN : [Signature]

DATE : 20. 02. 2001

DESIGN

DESIGN & DISPLAY SECTION

GOVT. MUSEUM
EGMORE
CHENNAI - 600 008



FIRE EXTINGUISHERS REFERENCE

KA CO2 WATER

BC DCP

MAIN SWITCH IN GROUND FLOOR

பிழைக்காது
L. VEDARAJAN

PLAN SHOWING THE EXISTING BUILDING

(BRONZE GALLERY) IN

GOVT. MUSEUM, EGMORE,

CHENNAI - 600 008

SCALE : 1/8" = 1'0" (1:100)

DATE : 01.06.2001

DATE : 01.06.2001

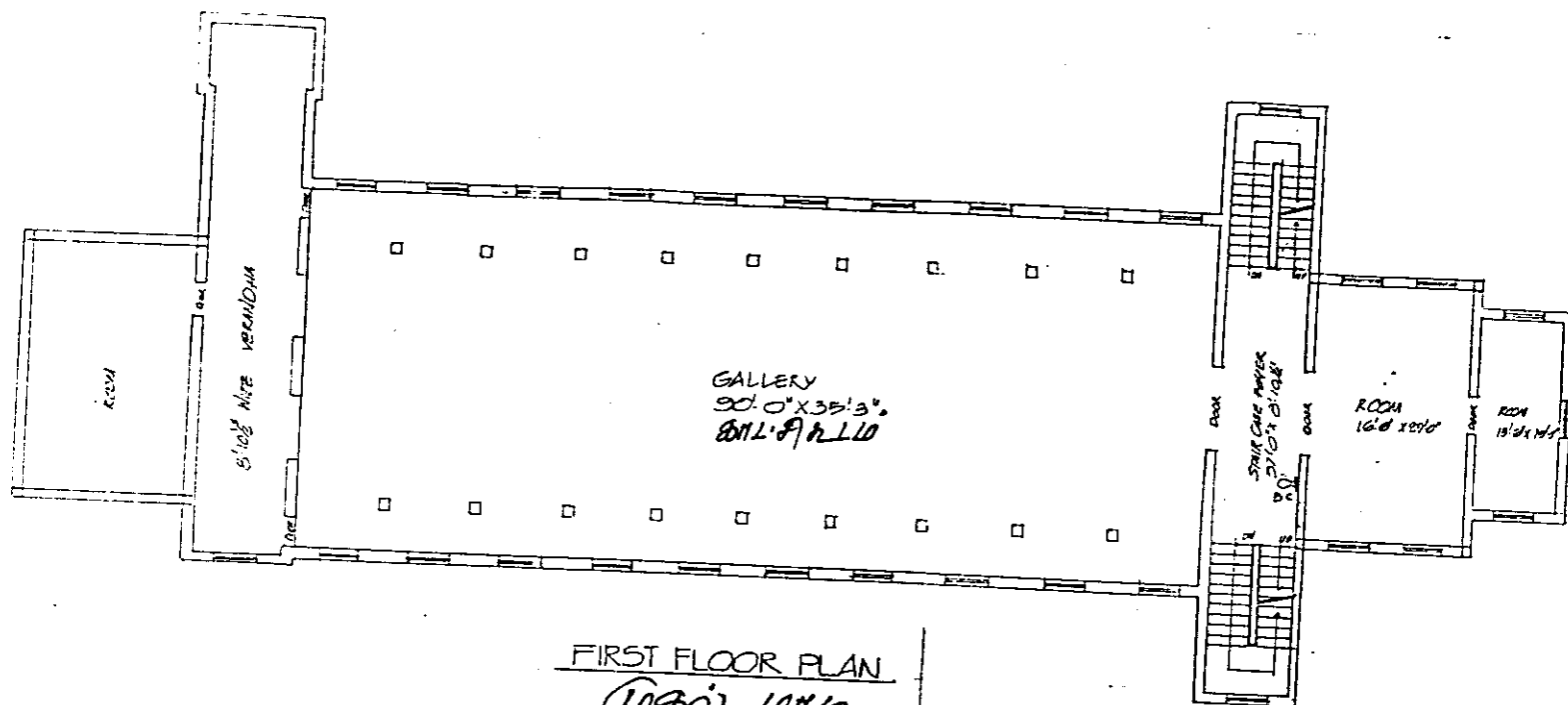
CURATOR :

DESIGN & DISPLAY SECTION

GOVT. MUSEUM

EGMORE

CHENNAI - 600 008



FIRST FLOOR PLAN

பிழைப்பறை பிழைப்பறை

FIRE EXTINGUISHERS REFERENCE

DSC DCP
MAIN SWITCH IN GROUND FLOOR

பிழைப்பறை
பிழைப்பறை

PLAN SHOWING THE EXISTING BUILDING
(BRONZE GALLERY) IN
GOVT. MUSEUM, CHENNAI
CHENNAI 600 008.

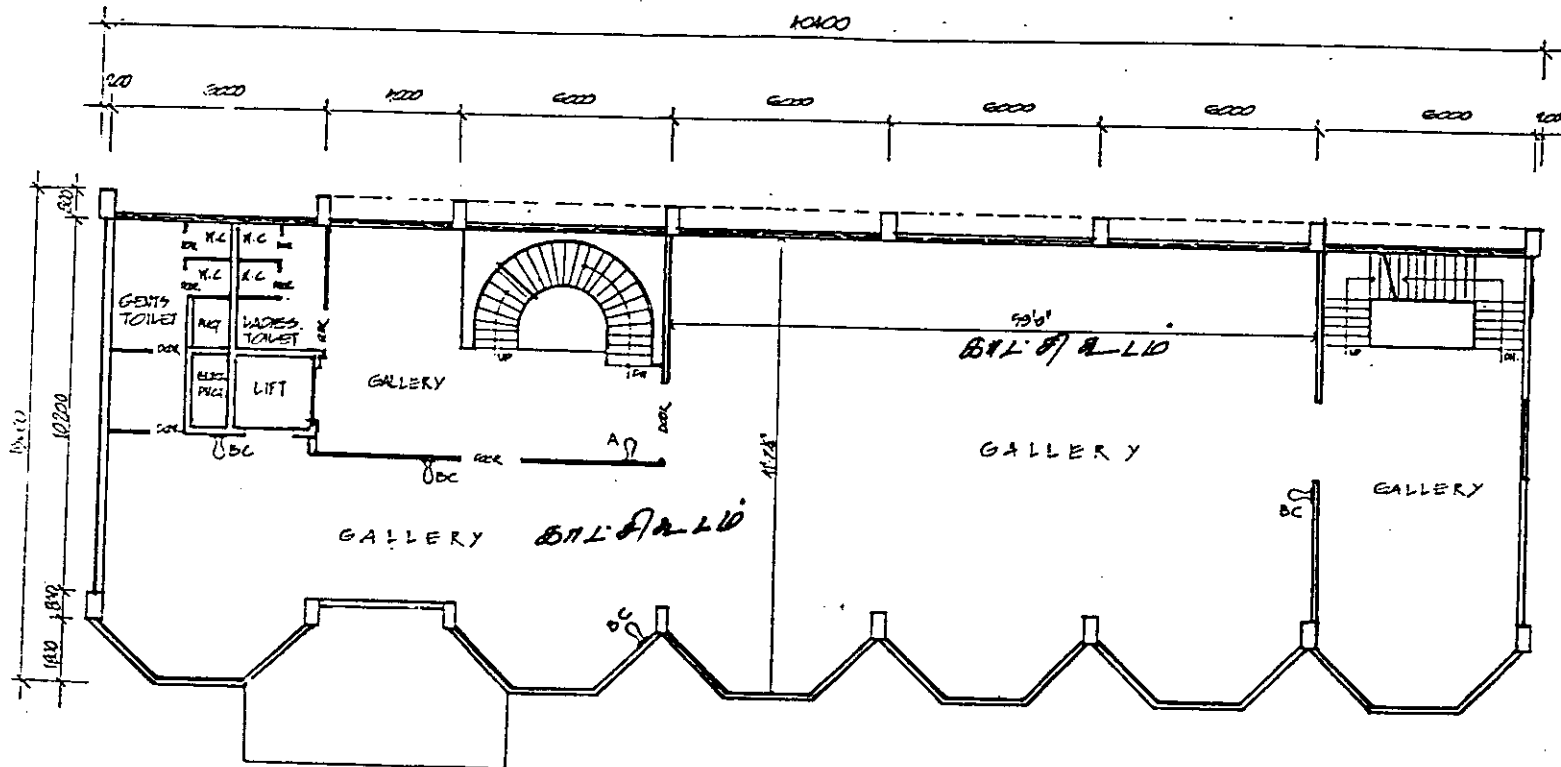
SCALE: 1/8" = 1' (1:600)

DRAWN: ARJUN KUMAR

DATE: 22.02.2001

CHECKED:

DESIGN & DISPLAY SECTION,
GOVT. MUSEUM
CHENNAI 600 008



FIRST FLOOR PLAN

சென்னை 101119

FIRE EXTINGUISHERS REFERENCE

KA-CO2 WATER

KDC-D.C.P.

HAND SWITCH IN GROUND FLOOR.

PLAN SHOWING THE EXISTING
BUILDING (CHILDREN'S MUSEUM)
IN GOVT MUSEUM.

ECANORE
CHENNAI- 600 003

சென்னை 600 003
சென்னை 600 003

SCALE: 1/8" = 1'-0"

SHEET 1A OF 201

DATE: 14.03.2011

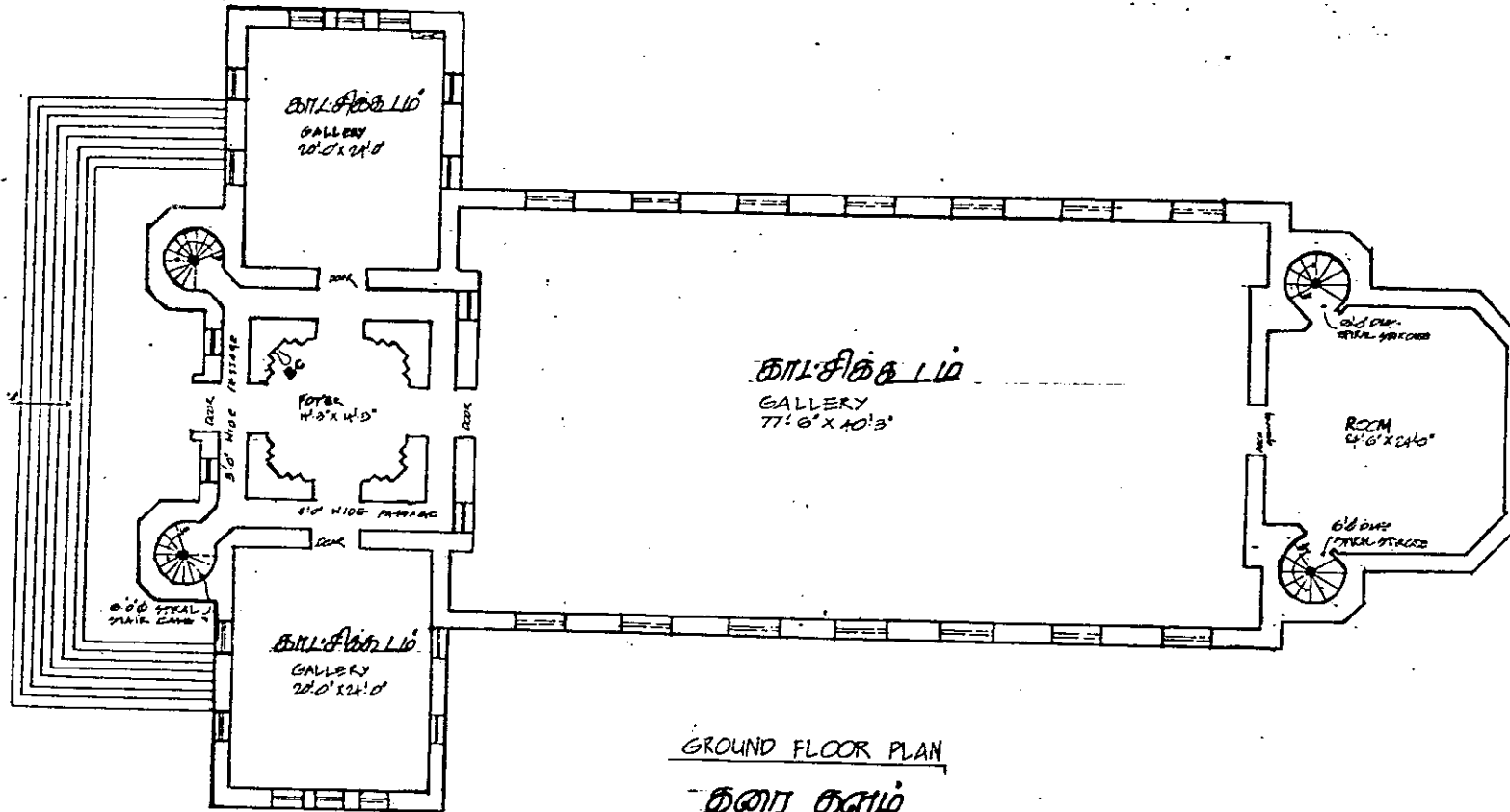
SHEET No.

DESIGN & DISPLAY SECTION

GOVT. MUSEUM

ECANORE

CHENNAI- 600 003



GROUND FLOOR PLAN

தரை தளம்

FIRE EXTINGUISHERS REFERENCE

MAIN SWITCH

D.C.P.

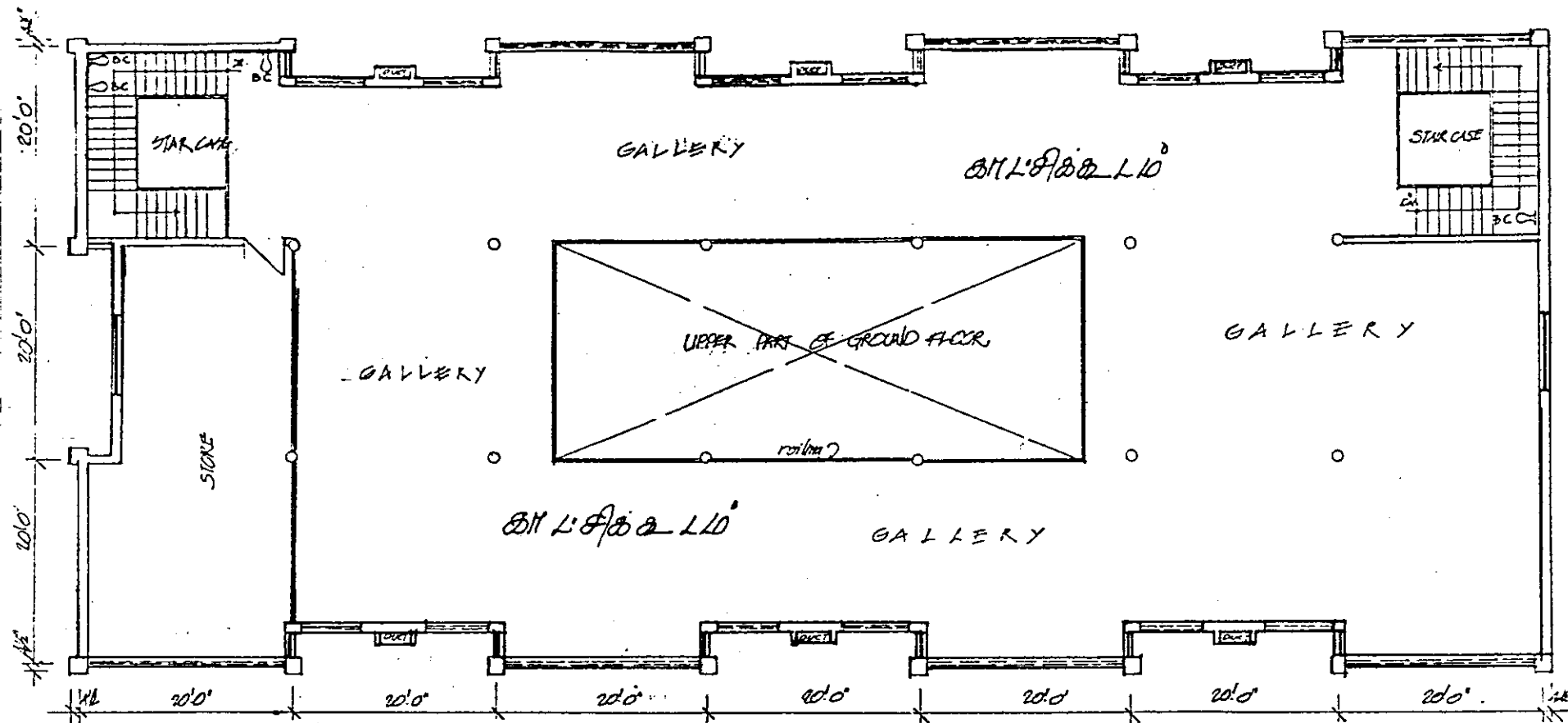
தேசிய கலைக்கூட
ஏறெட்டம்

PLAN SHOWING THE EXISTING
BUILDING NCAI MUSEUM
(NATIONAL ART GALLERY)
EGMORE, CHENNAI- 600 009

SCALE: 1/8" = 1'-0" (1:240) DATE: 12-03-2001

DRW: 11-03-2001 SHEET No.

DESIGN & DISPLAY SECTION
GOVT. MUSEUM
EGMORE
CHENNAI- 600 009



SECOND FLOOR PLAN

காட்சிக்காக காட்சிக்காக

FIRE EXTINGUISHERS REFERENCE

KBC. DCP

MAIN SWITCH BOARD IN GROUND FLOOR

காட்சிக்காக காட்சிக்காக
PLAN SHOWING THE EXISTING BUILDING
(CONTEMPORARY ART GALLERY)
IN GOVT. MUSEUM, EGMORE.
CHENNAI - 600 003

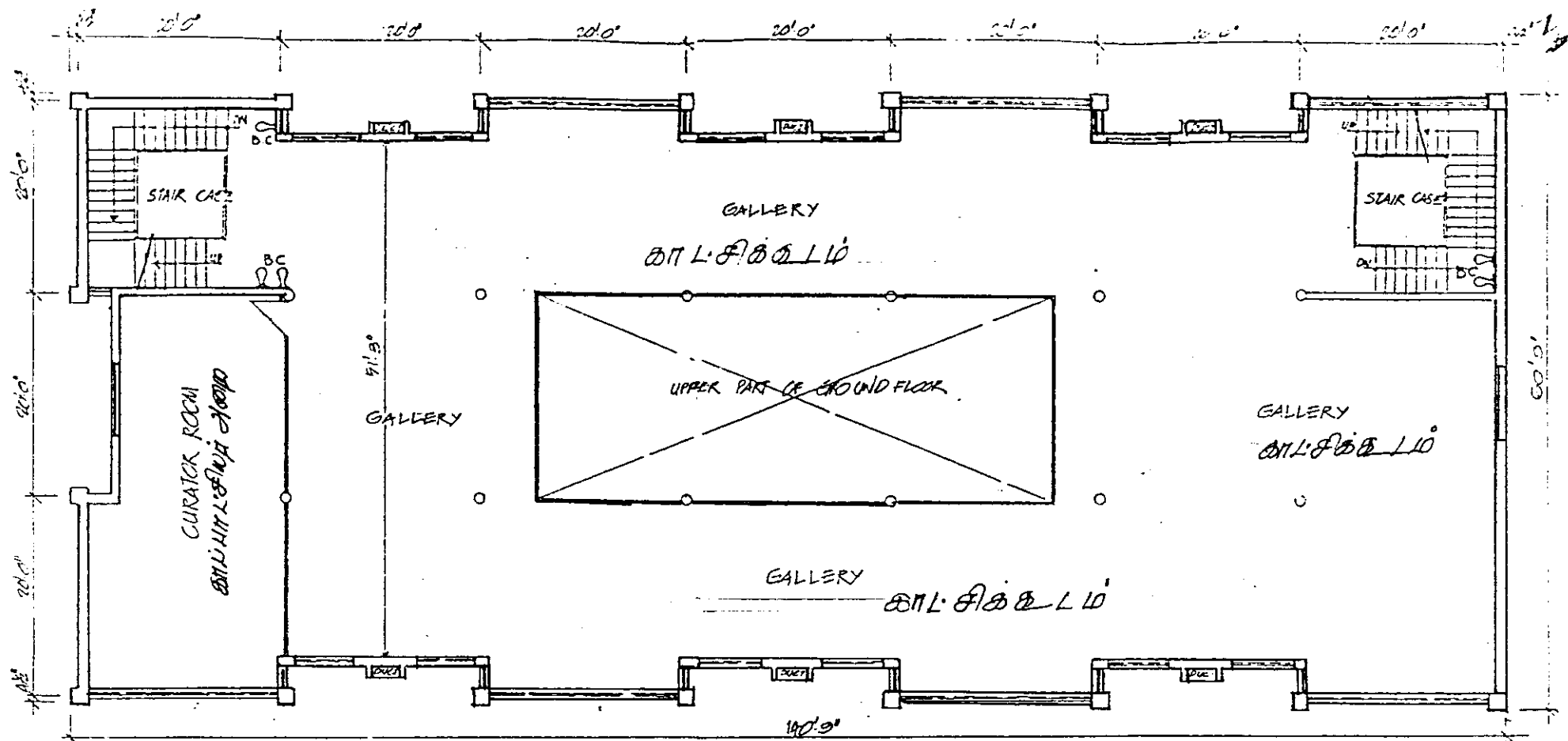
SCALE: 1/8" = 1' (1:600)

DRAWN: ARJUN KUMAR

DATE: 2. 10. 2001

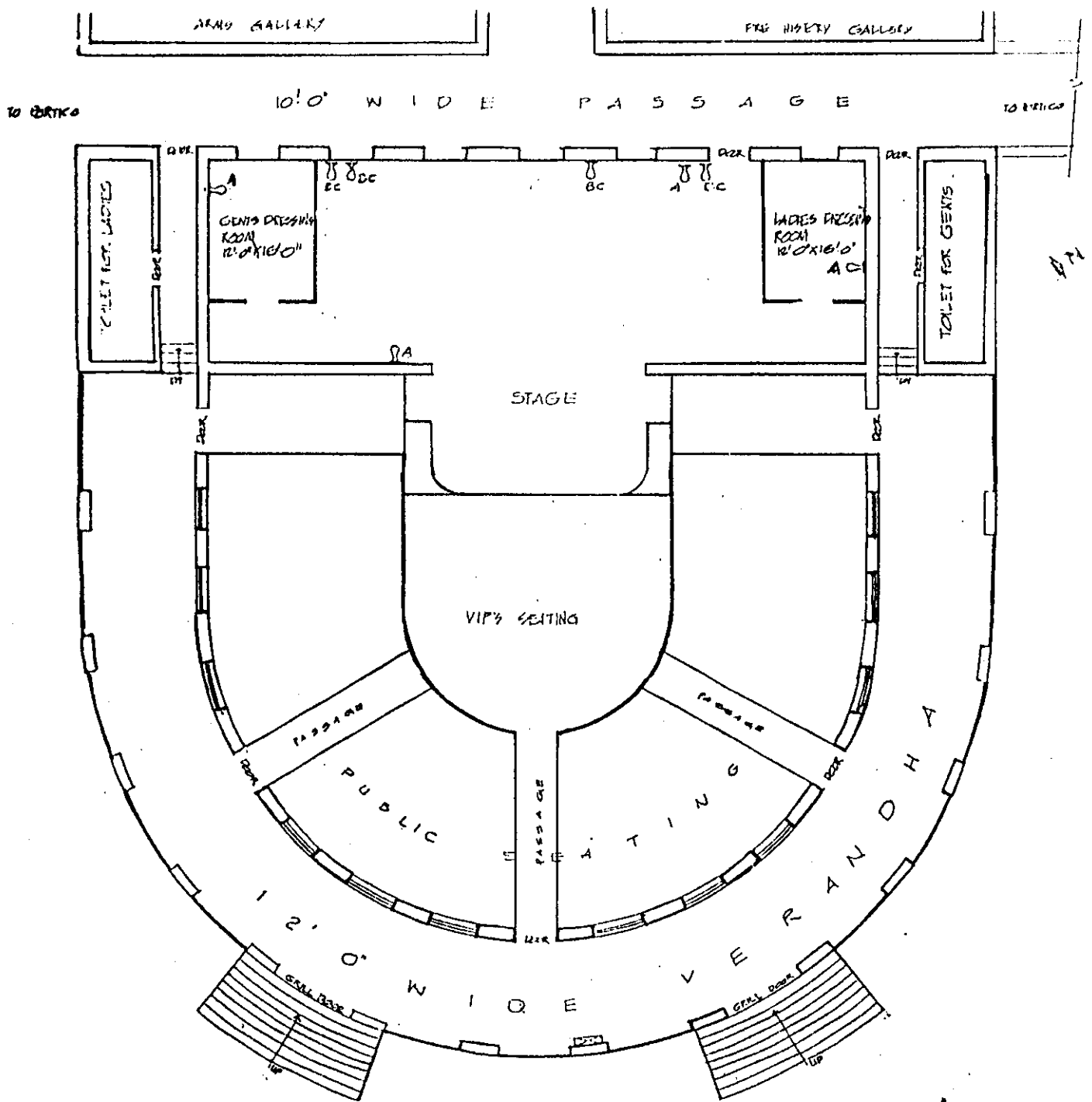
CHECKED:

DESIGN & DISPLAY SECTION
GOVT. MUSEUM,
EGMORE,
CHENNAI - 600 003



FIRST FLOOR PLAN - முத்து லாபா

<p>FIRE EXTINGUISHERS REFERENCE</p> <p>DBO - DCP</p> <p>MAIN SWITCH IN GROUND FLOOR</p>	<p>கால்கெட்டி கால்கெட்டி</p> <p>PLAN SHOWING THE EXISTING-BUILDING</p> <p>(CONTEMPORARY ART GALLERY)</p> <p>IN GOVT. MUSEUM, EGMORE.</p> <p>CHENNAI - 600 003.</p>	<p>SCALE : 1/8" = 1'-0" (1:100)</p> <p>DRAW : ANURAG KUMAR</p> <p>DATE : 28-02-2011</p> <p>CURATOR :</p>	<p>DESIGN & DISPLAY SECTION</p> <p>GOVT. MUSEUM</p> <p>EGMORE</p> <p>CHENNAI - 600 003</p>
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GROUND FLOOR PLAN

சென்னை

RE EXTINGUISHERS REFERENCE:

MAN SWITCH
A WATER CO.
BC DCP

சென்னை
PLAN SHOWING THE EXISTING BUILDING
(MUSEUM THEATRE) IN
GOVT. MUSEUM, EGMORE
CHENNAI. 600 008

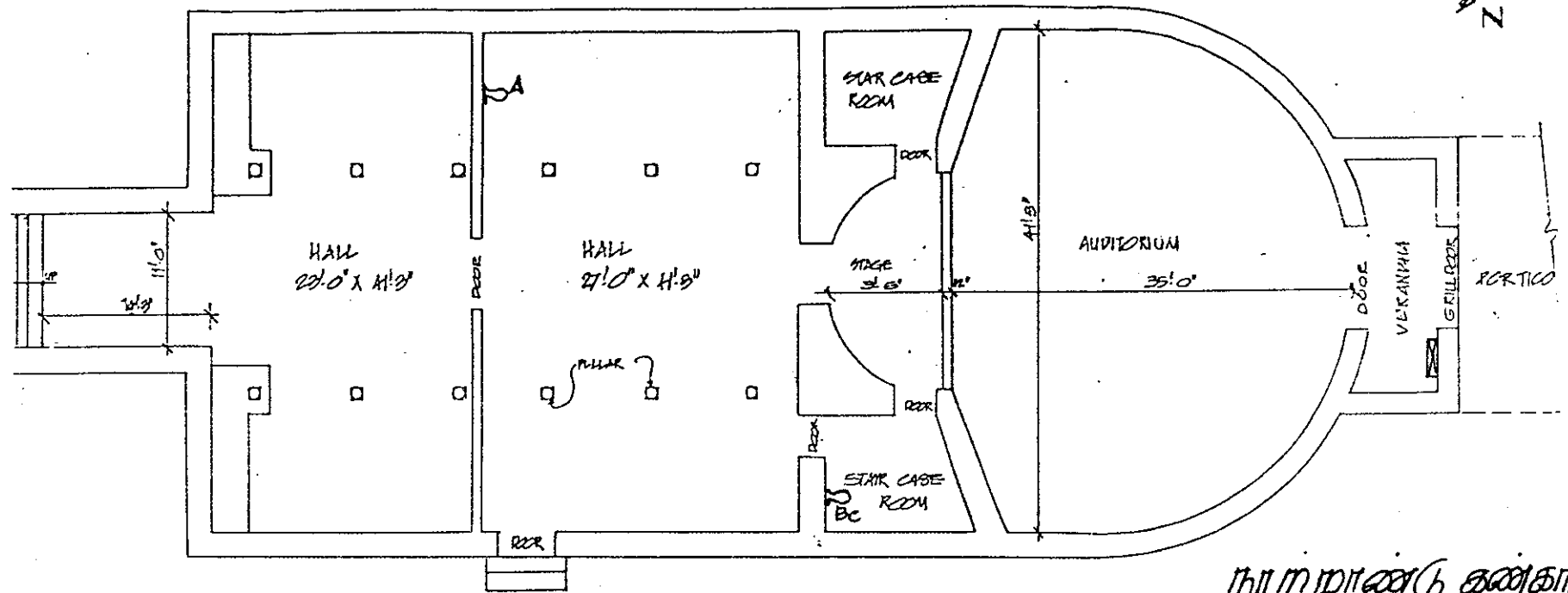
SCALE: 1/8" = 1'0" (1:22)

FRAM: 1/8" = 1'0" (1:22)

DATE: 12. 06. 2001

CURATOR:

DESIGN & DISPLAY SECTION
GOVT. MUSEUM
EGMORE
CHENNAI. 600 008



GROUND FLOOR PLAN

தரை தளம்

நாமநாண்டு கண்காட்சி
சீக்கட்டம்

FIRE EXTINGUISHERS REFERENCE	PLAN SHOWING THE EXISTING BUILDING (C.E. HALL) IN GOVT. MUSEUM, EGMORE CHENNAI - 600 008	SCALE: 1/8" = 1'0" (1:100)	DESIGN & DISPLAY SECTION GOVT. MUSEUM EGMORE CHENNAI - 600 008
<div style="display: flex; align-items: center;"> <div style="width: 15px; height: 10px; border: 1px solid black; margin-right: 5px;"></div> MAIN SWITCH </div>		DRAWN: P. N. ENGINEER (TUMU)	
<div style="display: flex; align-items: center;"> <div style="width: 15px; height: 10px; border: 1px solid black; margin-right: 5px;"></div> A WATER CO₂ </div>		DATE: 5-02-2001	
<div style="display: flex; align-items: center;"> <div style="width: 15px; height: 10px; border: 1px solid black; margin-right: 5px;"></div> BC OCP </div>		CURATOR: 1	

