

[illegible][illegible][illegible]

THE GENERAL CONTRACTOR AND ARCHITECT,
SUB-CONTRACTOR, TRAIL, JERRY AND FRANK, IN THEIR
OWN AND ALL RIGHTS, SHALL BE ALONE LIABLE
ACCORD TO THEIR OWNED SPACE COMPATIBLE WITH THE
CONTRACTS, SYSTEMS AND CONSENT WITH LOCAL AND THE
CITIES, FRANKS TO GO IN FINAL REVIEW IN AN EFFORT
TO THE TRAIL

[illegible]

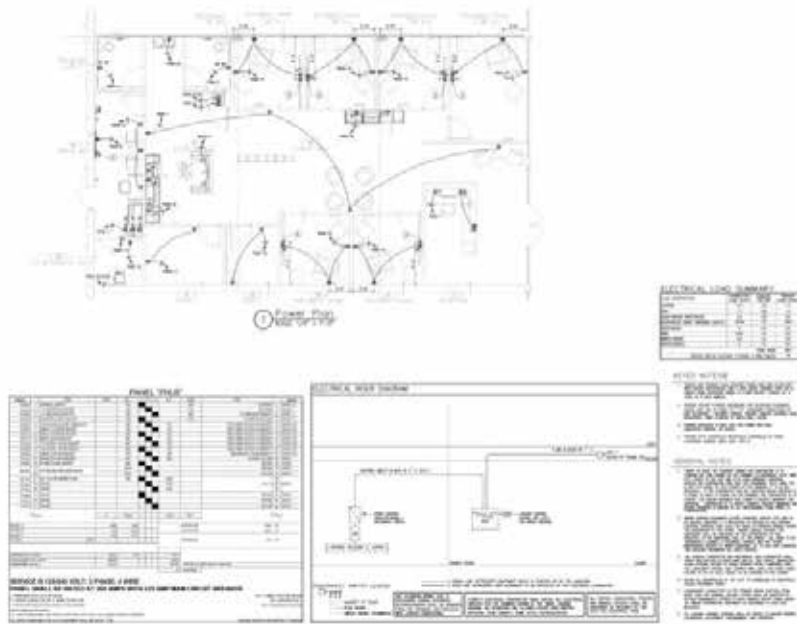
1. Explain the use of treatment modalities. The curriculum is designed to provide the student with the knowledge and skills necessary to understand the role of the treatment modalities in the management of the patient. The student should be able to identify the appropriate treatment modality for a given patient and to explain the rationale for the choice of treatment.
2. Make nursing diagnosis. The student should be able to identify the patient's problems and to make a nursing diagnosis. The student should be able to identify the patient's problems and to make a nursing diagnosis. The student should be able to identify the patient's problems and to make a nursing diagnosis.
3. Write a brief note on the following:
 - a. The patient's history and present state, as far as symptoms and signs are concerned.
 - b. The patient's physical examination, as far as symptoms and signs are concerned.
 - c. The patient's laboratory and radiological investigations, as far as symptoms and signs are concerned.
 - d. The patient's treatment, as far as symptoms and signs are concerned.
 - e. The patient's prognosis, as far as symptoms and signs are concerned.
 - f. The patient's follow-up, as far as symptoms and signs are concerned.
4. Give a short account of the following:
 - a. The patient's history and present state, as far as symptoms and signs are concerned.
 - b. The patient's physical examination, as far as symptoms and signs are concerned.
 - c. The patient's laboratory and radiological investigations, as far as symptoms and signs are concerned.
 - d. The patient's treatment, as far as symptoms and signs are concerned.
 - e. The patient's prognosis, as far as symptoms and signs are concerned.
 - f. The patient's follow-up, as far as symptoms and signs are concerned.
5. Give a short account of the following:
 - a. The patient's history and present state, as far as symptoms and signs are concerned.
 - b. The patient's physical examination, as far as symptoms and signs are concerned.
 - c. The patient's laboratory and radiological investigations, as far as symptoms and signs are concerned.
 - d. The patient's treatment, as far as symptoms and signs are concerned.
 - e. The patient's prognosis, as far as symptoms and signs are concerned.
 - f. The patient's follow-up, as far as symptoms and signs are concerned.

(Redefining MEP Design for Modern Efficiency)

CASE STUDY



TECHTURE



Client : MEP Consultant

Team Size : 3 Nos. (design Engineers & MEP Design Coordinator)

Disciplines : Plumbing and Electrical

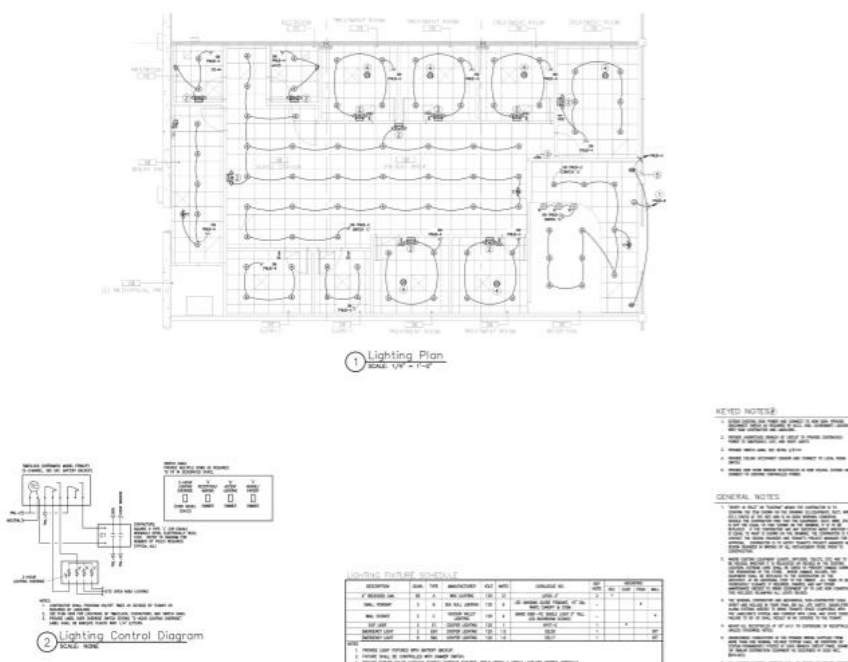
Duration : 3 days

Scale : 3500 sq. ft.

Software : AutoCAD MEP

Type : Commercial

Location : New Jersey, USA



Project Overview

This commercial retrofitting project involved complete MEP design and engineering services for an existing commercial facility. The scope covered MEP system design, schematic development, load calculations, sizing, preparation of schedules, and 2D CAD deliverables. The objective was to modernize the building's systems while leveraging and repurposing existing infrastructure wherever possible to optimize cost and resource use.

The focus was on delivering precise engineering drawings and specifications that met both current code requirements and the constraints of working within an existing building. The design process required active collaboration with the client and stakeholders to ensure compatibility between new systems and existing infrastructure while minimizing operational disruption.





Scope & Deliverables

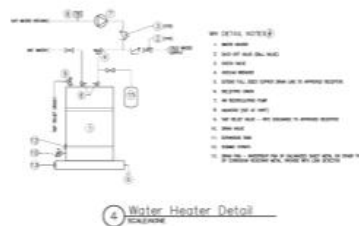
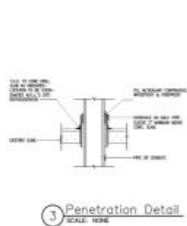
- ❏ Mechanical, Electrical, and Plumbing (MEP) system design for the retrofitted commercial facility.
- ❏ Development of schematics, load calculations, and equipment sizing for all MEP disciplines.
- ❏ Preparation of equipment schedules and 2D CAD deliverables as per client standards.
- ❏ Integration of reuse strategies for existing ducts, pipes, and equipment where feasible.
- ❏ Re-engineering of systems to meet modern efficiency standards while retaining compatibility with older infrastructure.

Challenges

- ❏ Outdated infrastructure: The existing systems were decades old, with limited compatibility for modern MEP upgrades. Many components required careful evaluation to determine reuse potential without compromising efficiency or safety.
- ❏ Limited space for equipment and ductwork: Constrained ceiling and service shaft spaces made it challenging to route new systems or upgrade existing ones without affecting the building's architectural elements.
- ❏ Renovation complexity: Understanding the original design intent and parameters was critical, especially when reusing ducts and pipes by designing similar sizing for compatibility.
- ❏ Specialized service integration: Incorporating new systems while maintaining existing operational layouts required precision planning.

Techture Approach

- 
Detailed site assessment & documentation: Conducted a thorough audit of the existing MEP systems to understand their condition, capacity, and compatibility with new design solutions.
- 
Reuse optimization: Designed systems that maximized reuse of existing ducts, piping, and equipment, aligning new designs to match original sizing where possible to reduce cost and installation time.
- 
Space-sensitive design: Developed compact and efficient layouts for equipment and duct routing, ensuring accessibility for maintenance while fitting within limited available space.
- 
Collaborative coordination: Maintained regular design review meetings with the client and consultants to resolve queries quickly, align design intent, and avoid last-minute changes impacting schedules.



Pipe Legend

---	1/2" WOOD PIPE
---	1/2" WOOD PIPE
---	1/2" WOOD PIPE
---	1/2" WOOD PIPE
---	1/2" WOOD PIPE

NOTES

1. SYSTEMS ARE TO BE INSTALLED TO MEET THE FOLLOWING:
2. SYSTEMS ARE TO BE INSTALLED TO MEET THE FOLLOWING:
3. SYSTEMS ARE TO BE INSTALLED TO MEET THE FOLLOWING:
4. SYSTEMS ARE TO BE INSTALLED TO MEET THE FOLLOWING:

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES.

PLUMBING FIXTURE SCHEDULE

ITEM	DESCRIPTION	MODEL	QUANTITY	UNIT	PRICE	TOTAL	REMARKS
1	WALL MOUNTED SINK	1/2" WOOD	1	EA	100.00	100.00	SEE DETAIL FOR SINK AND VALVE
2	WALL MOUNTED SINK	1/2" WOOD	1	EA	100.00	100.00	SEE DETAIL FOR SINK AND VALVE
3	WALL MOUNTED SINK	1/2" WOOD	1	EA	100.00	100.00	SEE DETAIL FOR SINK AND VALVE
4	WALL MOUNTED SINK	1/2" WOOD	1	EA	100.00	100.00	SEE DETAIL FOR SINK AND VALVE

Benefits

- ❏ Delivered cost-efficient MEP designs that reused existing infrastructure wherever possible, reducing material and installation costs.
- ❏ Improved system efficiency and compliance, ensuring that the retrofitted building met all relevant codes and modern performance standards.
- ❏ Optimized space utilization, allowing for new equipment installation in constrained service zones without impacting building operations.
- ❏ Reduced project risk by integrating code compliance and constructability considerations into the design phase, preventing costly changes during execution.
- ❏ Provided clear, detailed 2D CAD deliverables and schedules, enabling contractors to execute installation with confidence and minimal site adjustments.