CHAPTER 1: OVERVIEW OF LANCASTER LINCOLN

1.1 PROJECT INTRODUCTION

- Life comfort requirement is increasing day by day leading the risen of many famous urban area such as Sala Dist 2, Phú Mỹ Hưng Dist 7. People nowadays tend to move to live in the apartment due to the increasing in population and the self-convenience.

- For the above reason, Trung Thuỷ cooperation (TTG Holding) just release a new modern living model of LANCASTER LINCOL project. The building is in the area covered by river. The northwest direction faces the Bến Nghé chanel, opposite to District 1. The northeast faces District 2, The the front direction faces the urban area with a lot of huge working project. The LANCASTER project is an important step of improving human comfort.

  - From LANCASTER to Phú Mỹ Hưng: 10 minute
  - From LANCASTER to District 1: 5 minute
  - From LANCASTER to Thủ Thiêm urban area: 7 minute
1.2 INFORMATION ABOUT PROJECT

- Project address: 428 - 430 Nguyễn Tất Thành, Dist 4, HCM City
  - Net working area 8.414 m²
  - Project has 3 basements và 40 floor and 1 office building with 8 floor
  - Project has 696 high standard dwellings và 298 officetels
  - The area of dwelling unit is 54 – 150 m² and officetel 35 – 65 m²
  - The area of the swimming pool is 400 m²

1.3 ME WORKS

1.3.1 Power supply system

1.3.1.1 Introduction

- The power supply system serve the daily routine of project by electrical power.
- The electrical generator, transformer and Main Distribution Switchboard are connected by cable to create an electrical web net that work continuously to create electric.
- The main equipment using electric is HVAC system, elevator, lighting, pump for plumping and firefighting,.. Every schematic design has it’s owned distribution switchboard.
- Distribution Switchboard is designed for each floor in order to work independtly form the floor that does not have bad impack to other floor when problem occurs.
- Generator
- Transformer

- BUSWAY Cable
1.3.2 Firefighting system

- The fire fighting system include:
  - Sprinkler system
  - Hydrant và Hose reel system
  - Drencher
  - Walled hung fire extinguisher with CO2
  - Firefighting water tank:
    - The tank volume is 192m³ under the basement 3.
  - Firefighting pump:
    - Jockey pump
    - Firefighting pipe
    - Drencher system is distributed all over the basement
  - Walled hung fire extinguisher:
    - Walled hung fire extinguisher is located mainly around the basement, flammable area such as generator room, technical room, switchboard room and near the firefighting box

- Firefighting pump
1.3.3 HVAC system

1.3.3.1 HVAC system for office building
- Water Chiller: Water Chiller is located on the basement 1 and using scroll compressor to prevent noise to surrounding
- Pump set form chiller to FCU: 3 pumps, 2 pumps are for running and 1 for back up
- Pump set to cooling tower nhiệt: 2 pumps, 1 pump is for running and 1 for back up
- The Chiller uses R410A as a refrigerant

1.3.3.2 Cooling tower
- Using cooling tower able to handle chiller cooling capacity. The cooling tower is located on the 7th floor of the office building.
1.3.3.3 **FCU and PAU**

- FCU or fan coil unit is a heat exchanger between air and chilled water. The FCU include: filter, fan, cooling coil.
- PAU or primary air unit is a device to cool the fresh air before delivering it to FCU.

1.3.3.4 **Split and multi unit for apartment cooling**

- Using split unit and multi outdoor unit of Daikin.
1.3.3.5 Exhausted air system
   - The exhausted air from toilet is deliver out of the building by gathering all
     exhaust air collector and extract it through 1 main exhausted duct.

1.3.3.6 Exhausted air system for dwelling unit
   - The exhausted air from toilet and kitchen is connected together and delivered
     outside of the room by exhausted fan

1.3.4 Plumping system:

1.3.4.1 Water supply system:
   - The supply water system consists pipe net and pumps to deliver and distribute
     water to the equipment. The complete supply water system include internal and
     external water net
   - External water system consists all pipe works and equipment used to
     distribute and deliver water to usage target (apartment, office building,
     hotel,…) It is connected with the internal system through the valve and water
     block.
   - Internal water system consists all pipe works and equipment used to
     distribute and deliver water to usage target inside the building (faucet, flush
     toilet,...)

1.3.4.2 Water supply system:
   - Domestic waste water, rain water and other waste water is generally called
     waste water. Each system with specific pipe type has slope and gather in the
     septic tank. In there, accretion occurs to decompose the organic compound.