



## **SUMMARY**

This Directive provides the consultants with the requirements of the State University Construction Fund (SUCF) for SUNY projects. The requirements detailed within are to be implemented into the project's specifications and/or drawings. The intent is not for the specifications or drawings to reference back to this document for compliance nor is it intended to override or amend the applicable laws or codes where either is more stringent.

## **TABLE OF CONTENTS**

### Contents

Section 1 – NATURAL GAS.....	3
A. Design .....	3
Section 2 – PIPING REQUIREMENTS.....	3
A. Design .....	3
B. Natural Gas Above Ground .....	4
C. Fuel Oil Above Ground .....	4
D. Fuel Oil Direct Bury Double Containment .....	4

## Section 1 – NATURAL GAS

### A. Design

1. The Consultant shall review and coordinate the gas requirements of the project and other projects in planning and under construction with the Campus and the Fund.
2. The Consultant shall investigate the existing systems location, capacities, the type of service (interruptible or uninterruptible), and the delineation of ownership between the campus and utility provider.
3. The Consultant shall submit an application, including a gas load letter, to the appropriate utility company requesting gas service and identifying the gas requirements of the project.
4. The Consultant shall obtain approval of the application and gas load letter by the utility company in writing and shall forward copies to the Campus and the Fund.
5. The specified meters, regulators shall be reviewed with the Fund and the Campus.
6. Where natural gas service piping, meters, regulators, and other appurtenances are provided by the utility company, and the construction costs are assessed to the user (Campus), the consultant shall obtain from the utility company a written scope of work, quote, contact person, and any scheduling requirements.
7. Include an “allowance” in the project equal to the assessed costs (quote) of the utility company as a separate item in design phase estimates.
8. Unless otherwise approved by the Fund, the Consultant shall include all costs associated with the installation of gas service (including materials, labor, procurement, scheduling, etc.) in the bid documents as the Contractor’s responsibility, both during bidding and construction.
9. The depth of the piping shall be a minimum of thirty (30) inches or as required by the utility provider.
10. Where the emergency generator gas supply is connected to the building gas supply system, it shall be connected on the supply side of the main gas shutoff valve and marked as supplying an emergency generator.
11. Provide accessible manual emergency shutoff natural gas valve for each laboratory. Coverage and location of the valve inside or outside of laboratories to be coordinated with the campus.
12. Trenching for plastic gas piping shall contain proper backfill along with a copper tracer wire as required per the Fuel Gas Code of NYS.
13. Provide a flow (one line) diagram showing the pipe along with the sizes, the meter and pressure regulator with setpoints, the connected loads with their demand flow and pressure requirements.

## Section 2 – PIPING REQUIREMENTS

### A. Design

1. Valve and equipment connections shall be made with unions for threaded and soldered piping or flanges for welded piping
2. Where more than one material is indicated for a given application; either or both may be specified at Consultants discretion.

3. Weld-o-lets and thread-o-lets are permitted for steel branch connections 2 or more sizes smaller than the main. Holes for weld-o-lets and thread-o-lets shall be machined (torch cutting not acceptable). Copper branch connections shall be made with tee fittings (mechanically extracted collars not acceptable).
4. Protect piping that passes through or beneath footings or foundation walls per PCNYS.
5. See Directive 2-3 "Site Utilities" for more information on site piping requirements.
6. Piping beneath floor slabs shall be installed with no fittings or joints.
7. Plastic piping located in air distribution plenums shall have a Flame spread index < 25 and Smoke developed index < 50 per ASTM E84, as required by the BCNYS.
8. Piping used in medical capacity or hospital - material as outlined in NFPA 99

#### B. Natural Gas Above Ground

1. 2" or smaller:
  - a. Steel, Schedule 40, Grade A, Type E or S ASTM A53, A106, Malleable Iron or Steel fittings, threaded or welded joints
2. 2-1/2" or larger:
  - a. Steel, Schedule 40, Grade A, Type E or S ASTM A53, A106, Steel fittings, welded joints

#### C. Fuel Oil Above Ground

1. 2" or smaller:
  - a. Copper Type L, Drawn, ASTM B88, Brazed joints, Copper or Copper Alloy fittings
  - b. Steel, Schedule 40, Grade A, Type E or S ASTM A53, A106, Steel fittings, welded joints
2. 2-1/2" or larger:
  - a. Steel, Schedule 40, Grade A, Type E or S ASTM A53, A106, Steel fittings, welded joints

#### D. Fuel Oil Direct Bury Double Containment

1. All sizes:
  - a. Copper Type K, Annealed, ASTM B88, Primary piping with PE, FRP, or PVC containment pipe, Brazed joints, Copper or Copper Alloy fittings
  - b. Steel, Schedule 40, Grade A, Type E or S ASTM A53, A106, Primary piping with PE, FRP, or PVC containment pipe, Steel fittings, welded joints