

APPENDIX XII

QUALITY OF CONSTRUCTION - DESIGN CONSULTANT REQUIREMENTS

All proposed new construction or renovation of facilities shall be designed by a registered architect or Engineer.

The Contractor shall select the appropriate consultant for the design of such facilities, but the Department, in its sole discretion, reserves the right to reject the selection if the design consultant is not suitably experienced in the type of work proposed.

Throughout the design of the proposed improvements, the Contractor's consultant shall make submittals for review and approval to the Chief Engineer of the Department as outlined below:

1. **PRE-DESIGN**

The Consultant shall develop a design program to establish the following detailed requirements:

- A. Design objectives, limitations and criteria
- B. Spatial requirements and relationships
- C. Special equipment and systems
- D. Site requirements

Consultant shall develop space schematics and flow diagrams to study:

- A. Internal functions
- B. Human, vehicular and material flow patterns
- C. General space allocations
- D. Special facilities and equipment

Consultant shall complete an existing facilities survey including field measurements and site survey.

Consultant shall perform an overall site analysis and evaluation including:

- A. Topography, Analysis
- B. Vehicular movement and parking studies
- C. Onsite utility systems
- D. All necessary soil borings and laboratory tests required for foundation design.
- E. Relationship of new facility to other facilities at this location.

Consultant shall submit pre-design information for approval to ODNR (3 copies).

2. **SCHEMATIC DESIGN**

Consultant shall prepare from approved pre-design documents schematic design documents. The following shall be included:

- Conceptual plans, elevations, and building sections. (Multiple concepts may be required. ODNR shall review conceptual designs and make recommendations.)
- Preliminary selection of building systems and materials
- Structural system with alternatives
- Mechanical systems-analysis and recommendations on types of heating
- Electrical materials, systems and equipment, including telephone system (if required)
- Site development including utilities (water, gas, sewer, electric, telephone)
- Interior design
- Materials research

Consultant shall submit schematic design documents to ODNR for approval (3 copies).

3. **DESIGN DEVELOPMENT**

Consultant shall prepare from approved schematic design documents, drawings and other design development documents to establish and describe the size and character of the entire project, including architectural, structural, mechanical, civil and electrical systems, materials, and other elements as appropriate.

Consultant shall prepare outline specifications.

Consultant shall submit final design development documents to ODNR for approval (3 copies).

4. **CONSTRUCTION DOCUMENTS**

Upon approval of Design Development, the consultant shall prepare all necessary detailed final construction drawings and specifications. Submittals for review and approval by ODNR shall be made when documents are 50% - 60% complete and also at 90% - 100% complete (3 copies).

Consultant shall perform borings based on approved boring plan (if applicable).

Consultant shall perform all site surveys including property line locations that may be effected by construction.

ODNR is to receive a reproducible set of documents (Mylar Sepia) as drawings.

Specifications shall be on white 8 ½” by 14” legal size paper utilizing CSI format.

Specifications shall be customized for this project and blanket coverage specifications are unacceptable. Excessively bulky or wordy specifications will not be allowed.

Drawings shall clearly distinguish between existing and proposed facilities using substantially varying line weights, screening, etc.

All permits shall be the responsibility of the Contractor.