

REQUEST FOR A/E SERVICES

Ventilation Study Milwaukee Secure Detention Facility (MSDF)

DFD PROJECT NO. 13G10

Agency: Department of Corrections

Facility Location:
1015 North 10th St
Milwaukee, WI 53205

Introduction and Background:

MSDF is located in downtown Milwaukee. It has a design capacity of 1,040 beds and consists of nine basic floor levels, six of which have mezzanines housing detainees in pod groups. The first floor consists of intake, kitchen, laundry, warehouse, and visitors lobby. The second floor contains administrative offices, hearing rooms, central control, and visitor's video area. The third floor contains the health services unit, associated offices, pharmacy, maintenance, and one special needs housing unit. The fourth floor contains programming space and four-person housing rooms. The fifth floor contains programming beds and segregation. The remaining floors each contain two housing units with mezzanines and social worker offices. The majority of the detainees are on probation and parole holds pending revocation hearings. Both males and females are housed in the building.

Since construction of the MSDF building over ten years ago, it has been observed that extreme heat and humidity conditions create very difficult to manage environment throughout the building, and in the eighth and ninth floors in particular. The design of the building is such that there are no operable doors or windows in occupied spaces, and all ventilation and temperature control is through mechanical systems.

In addition, MSDF staff have identified multiple HVAC operational and maintenance issues that have become problematic.

Scope of Services:

Investigate and study the design and function of existing ventilation systems for all inmate and staff areas of the building during periods of high outdoor temperature and humidity. Include in the study: review of original design, collection of operating data, interviews of operating and management staff, performance and analysis of any pertinent testing on existing systems, and collection of information from equipment manufacturers. Suggest alternatives and provide recommendations and estimates of cost for recommended system modifications necessary to maintain all inmate and staff areas at a specified temperature and humidity.

A project is currently under way to clean the ducts and coils and confirm original test and balance report information.

The following HVAC issues should be considered as part of the study:

- Functionality of the HVAC systems in providing specific Program conditions, use variable frequency drives during all outdoor weather conditions in place of fixed speed drives, and smoke evacuation mode through the fire alarm system;
- Adequacy of food service exhausts, controls, and make-up;
- Adequacy of supply air for shower areas
- Other operational and maintenance issues, as identified by staff

Project Deliverables:

The State of Wisconsin is looking for an Architect/Engineering firm to provide complete technical consultation and pre-design services at MSDF as follows:

- Provide a report describing options for improvement of environmental conditions and estimates of cost and schedules for those options for consideration by the State.
- Include possible project alternatives and cost estimates to correct HVAC issues identified with the building.

Project Timeline:

In order to plan for timely evaluation of recommendations and planning for subsequent design and construction activity, the selected A/E will be expected to complete the study and recommendations within two months of issuance of a Notice to Proceed.

Skills and Knowledge:

A qualified firm would have an appropriately staffed team with thorough knowledge, understanding, licensing and experience with the following:

- HVAC design in commercial high-rise buildings in Milwaukee, Wisconsin
- Building Automation Systems, Fire Alarm Systems and Smoke Control Systems
- Standards for design and construction for state-owned correctional buildings
- Retrofitting existing HVAC systems for cooling applications

Preliminary Project Budget:

Construction (Est)	TBD
Contingency	TBD
Pre Design	\$30,000
Design	TBD
DFD Fee	TBD
Total	\$30,000

