

## **CHAPTER 226: ELECTROENCEPHALOGRAPHY (EEG) LABORATORY**

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## 1 PURPOSE AND SCOPE

This document outlines Space Planning Criteria for Chapter 226: Electroencephalography (EEG) Laboratory. It applies to all medical facilities in Department of Veterans Affairs (VA).

## 2 DEFINITIONS

Electroencephalography (EEG): A neurophysiologic measurement method which graphically records the electrical activities of the brain along the cerebral cortex from electrodes applied to the scalp. Electrical currents are not measured, but rather voltage differences are measured among different parts of the brain. The resulting traces are known as an electroencephalogram (also EEG) and represent the postsynaptic potentials (electrical signals) from a large number of neurons. The EEG is a brain function test, and in clinical use it is a correlate of brain activity, recordings of which are used in the diagnosis of epilepsy, trauma, tumor, and other brain diseases.

Electromyogram (EMG): A test used to record the electrical activity of muscles. When muscles are active, they produce an electrical current that is usually proportional to the level of muscle activity. An electromyogram (EMG) is also called a myogram.

Healthcare Planning Module: Methodology used to create a VISN Strategic Plan which defines how and where high-cost services should be delivered in each market.

Neurophysiology: The part of physiology as a science which is concerned with the study of functioning of the nervous system.

Picture Archiving and Communication System (PACS): The digital capture, transfer, and storage of diagnostic images. A PACS system consists of: workstations for interpretation, image / data producing modalities, a web server for distribution, printers for file records, image servers for information transfer and holding, and an archive of off-line information. A computer network is needed to support digital imaging devices.

### **Space Planning / SEPS**

Accessible: A site, building, facility, or portion thereof that complies with provisions outlined in the Architectural Barriers Act of 1968 (ABA).

Architectural Barriers Act (ABA): A set of standards developed to ensure that all buildings financed with federal funds are designed and constructed to be fully accessible to everyone. This law requires all construction, renovation, or leasing of sites, facilities, buildings, and other elements, financed with federal funds, to comply with the Architectural Barriers Act Accessibility Standards (ABAAS). The ABAAS replaces the Uniform Federal Accessibility Standards (UFAS).

Average Length of Encounter (ALoE): Averaged length of time, in minutes, a patient spends in an Exam / Treatment Room interacting with a provider and the clinical support team. It is accounted from room “set-up” to “clean-up” by staff. This metric is used to determine the number of annual patient / provider encounters that take place in an Exam / Treatment Room which, in turn, is used to calculate the number of Exam / Treatment Rooms needed in



a facility based on projected annual workload. The ALoE is determined with VHA SME input during a PG-18-9 clinical chapter revision / update.

Average Length of Stay (ALoS): The average number of days a patient Veteran stays in an inpatient care unit. The ALoS is used to calculate the number of patient bedrooms for a specialty by dividing the site's projected workload by the ALoS.

Building Gross (BG) Factor: A Factor applied to the sum of all the Departmental Gross Square Footage (DGSF) in a project to determine the Building Gross Square Footage. This factor accounts for square footage used by the building envelope, structural systems, horizontal and vertical circulation including main corridors, elevators, stairs and escalators, shafts, and mechanical spaces. The Department of Veterans Affairs has set this factor at 1.35 and included guidance in case of variance when developing a Program for Design (PFD) in SEPS.

Clinic Stop: Per these criteria, a clinic stop is the workload unit of measure for space planning. Clinic Stops are codified by VSSC, when applicable, they are referenced by number in the calculation of workload driven patient care spaces in this document.

Department Net to Gross (DNTG) Factor: A parameter, determined by the VA for each clinical and non-clinical department PG-18-9 space planning criteria chapter, used to convert the programmed Net Square Feet (NSF) area to the Department Gross Square Feet (DGSF) area.

Encounter: An interaction between a patient Veteran and a VA provider or providers in an Exam Room / Treatment Room / Consultation Room / Procedure Room, spaces where a patient Veteran received clinical care.

Full-Time Equivalent (FTE): A staffing parameter equal to the amount of time assigned to one full time employee. It may be composed of several part-time employees whose combined time commitment equals that of one full-time employee (i.e., 40 hours per week).

Functional Area (FA): The grouping of rooms and spaces based on their function within a clinical service or department.

Functional Area Criteria Statement (FACS): A verbalized mathematical / logical formulation assigned to a FA incorporating answers to Input Data Statements (IDSs) to determine the condition for providing the rooms / spaces listed in the FA in the baseline space program or Program for Design (PFD) for a project. Certain rooms / spaces may or may not have additional conditions.

Input Data Statement(s): A question or set of questions designed to elicit information about the healthcare project to generate a Program for Design (PFD) based on the parameters set forth in this set of documents. This information is processed through mathematical and logical operations in the VA Space and Equipment Planning System (SEPS).



JSN (Joint Schedule Number): A unique five alpha-numeric code assigned to each content item in the PG-18-5 Standard. JSNs are defined in DoD’s Military Standard 1691 and included in SEPS Content Table.

Net Square Feet / Net Square Meters (NSF/NSM): The area of a room or space derived from that within the interior surface of the bounding walls or boundaries.

Patient Unique: (or Unique Patient), A Veteran patient counted as a unique in each division from which they receive care. Patient Uniques are included in the Registry for a VA Medical Center.

Program for Design (PFD): A project specific itemized listing of the spaces, rooms, and square foot area required for the proper operation of a specific service / department, and the corresponding area for each. PFDs are generated by SEPS based on the PG-18-9 Standard.

PG-18-5: A Department of Veterans Affairs’ Equipment Guidelist Standard for planning, design, and construction of VA healthcare facilities; a Program Guide (PG) that lists assigned room contents (medical equipment, furniture, and fixtures) to each room in PG-18-9. PG-18-5 follows PG-18-9’s chapter organization and nomenclature.

PG-18-9: A Department of Veterans Affairs’ Program Guide for the Space Planning Criteria Standard use to develop space planning guidance for the planning, design, and construction of VA healthcare facilities; a Program Guide (PG) that provides space planning guidance for VA Medical Centers (VAMCs) and Community Bases Outpatient Clinics (CBOCs). PG-18-9 is organized by chapters, as of September 2021 there are 56 clinical and non-clinical PG-18-9 chapters; they are implemented and deployed in SEPS so that space planners working on VA healthcare projects can develop baseline space programs.

PG-18-12: A Department of Veterans Affairs’ Design Guide Standard for planning, design and construction of VA healthcare facilities, a Program Guide (PG) that provides design guidance for VA Medical Centers (VAMCs) and Community Bases Outpatient Clinics (CBOCs). The narrative section details functional requirements and the Room Template section details the planning and design of key rooms in PG-18-9. Not all PG-18-9 chapters have a corresponding PG-18-12 Design Guide; one Design Guide can cover more than one PG-18-9 chapter.

Provider: An individual who examines, diagnoses, treats, prescribes medication, and manages the care of patients within his or her scope of practice as established by the governing body of a healthcare organization.

Room Area: The square footage required for a clinical or non-clinical function to take place in a room / space. It takes into account the floor area required by equipment (medical and non-medical), furniture, circulation, and appropriate function / code-mandated clearances. Room area is measured in Net Square Feet (NSF).

Room Code (RC): A unique five alpha-numeric code assigned to each room in the PG-18-9 Standard. Room Codes in PG-18-9 are unique to VA and are the basis for SEPS’s Space Table for VA projects.



Room Criteria Statement (RCS): A mathematical / logical formulation assigned to each room / space included in PG-18-9 incorporating answers to Input Data Statements (IDSs) to determine the provision of the room / space in the baseline space program or Program for Design (PFD) for a project.

Room Efficiency Factor: A factor that provides flexibility in the utilization of a room to account for patient delays, scheduling conflicts, and equipment maintenance. Common factors are in the 75% to 85% range. A room with 80% room efficiency provides a buffer to assume that this room would be available 20% of the time beyond the planned operational practices for this room. This factor may be adjusted based on the actual and/or anticipated operations and processes of the room/department at a particular facility.

SEPS: Acronym for Space and Equipment Planning System which produces equipment lists and Program for Design for a healthcare project based on specific information entered in response to Input Data Questions.

SEPS Importer: A style-based format developed to allow upload of RCSs and IDSs to SEPS to implement and operationalize space planning criteria in PG-18-9 in the SEPS digital tool. This format establishes the syntax used in the RCSs and allows the use of Shortcuts. Shortcuts allow developers of space planning criteria statements to simplify RCSs making full use of their logical and mathematical functionality. A shortcut can refer to an RCS, a room in any FA or a formula. Shortcuts are [bracketed] when used in FAs and RCSs and are listed along with their equivalences at the end of the Space Planning Criteria section.

Space Planning Concept Matrix (SPCM): A working document developed during the chapter update process. It lists all the rooms organized by Functional Area and establishes ratios between the directly and the indirectly workload driven rooms for the planning range defined in this document. The matrix is organized in ascending workload values in ranges reflecting existing facilities and potential future increase. Section 5 of this document Space Planning Criteria reflects the values in the SPCM.

Stop Code: A measure of workload including clinic stops forecasted by the Office of Policy and Planning (OPP) for all Strategic Planning Categories at Medical Center and Outpatient Clinic levels.

Telehealth: The use of technology, such as computers and mobile devices, to manage healthcare remotely. It includes a variety of health care services, including but not limited to online support groups, online health information and self-management tools, email and online communication with health care providers, remote monitoring of vital signs, video, or online doctor visits. Depending on the concept of operations for this space, it may be equipped as an exam room or as a consult room with video/camera capability.

Utilization Rate: A factor used in the calculation of a directly workload-driven room throughput. It represents, in a percent value, the room is idle based on the planning assumptions. For example, if a directly workload-driven room is available for use 8 hours a day, the Utilization Rate represents the assumed time it will be actually be used, an 85% utilization rate indicates, for planning purposes, the room will be used 6.8 hours a day. An



additional directly workload-driven room will be provided in the calculation once the previous room has reached 100% utilization. The utilization Rate is embedded in the Room Throughput value calculated in Section 3 of this document.

VA Room Family (VARF): An organizational system of rooms / spaces grouped by function, a 'Room Family'. There are two "Orders" in the VARF: Patient Care and Patient Care Support; Patient Care features four sub-orders: Clinical, Inpatient, Outpatient and Residential Clinical. There are also four sub-orders in the Patient Care Support order: Building Support, Clinical Support, Staff Support and Veteran Support. Each room in a Family has a unique Room Code and NSF assigned based on its Room Contents and function which correspond to the specific use of the room. The same RC can be assigned to different Room Names with the same function in this document and can be assigned an NSF that varies based on the PG-18-5 Room Contents assigned to the room.

VA Technical Information Library (TIL): A resource website maintained by the Facilities Standards Service (FSS) Office of Construction and Facilities Management (CFM) containing a broad range of technical publications related to the planning, design, leasing, and construction of VA facilities. VA-TIL can be accessed at: <https://www.cfm.va.gov/TIL/>

Workload: Workload is the anticipated number of procedures, clinic stops, clinic encounters etc. that is processed through a department/service area. The total workload applied to departmental operational assumptions will determine overall room requirements by modality.

Workstation: Area outfitted with equipment and furnishings, typically allocated 56 NSF each. Managers and other staff with no direct reports as well as part-time, seasonal, and job-sharing staff may qualify for a workstation. Such environments are particularly conducive to team-oriented office groupings. These environments work best when they have access to conference and small group meeting spaces.

### **3 OPERATING RATIONALE AND BASIS OF CRITERIA**

- A. Space planning criteria included in this Standard have been specifically developed for this Department / Service in a Department of Veterans Affairs healthcare facility based on established VHA policy and guidelines to define the scope of services provided for the existing workload demand as well as that in the foreseeable future. Rooms and Functional Areas are provided based on research of clinical and non-clinical activities performed in this Department.
- B. Development / update of VA's Program Guide (PG) standards is a research based effort executed with participation of VHA Subject Matter Experts (SMEs), VA-Construction and Facilities Management Office (CFM) professional staff and specialty consultants hired for the task. These space planning standards are based on current applicable VHA policies and guidelines, established and/or anticipated best practice standards, and latest medical technology developments. Workload metrics were tailored to satisfy current and anticipated veteran workload demand.



- C. The space planning component of PG-18-9 is based on the Space Planning Concept Matrix (SPCM) which lists all the rooms organized by Functional Area and assigns room quantity (Q) and area (NSF) for a series of ranges corresponding to the smallest to the largest department for this service in the VA healthcare system in incremental size; each range corresponds to a workload parameter which determines the number and area of each directly workload-driven room. The remainder of the rooms in the range i.e., waiting, storage, staff workstations, etc. are determined by ratios to the resulting number of or NSF of the workload-driven rooms.
- D. Sections 4 and 5 of these space planning standards as well as the PG-18-5 standard are implemented in the Space and Equipment Planning System (SEPS) and hosted at the MAX.gov website so planners working on VA Construction projects can develop single or multi-department projects based on these PG-18-9- and the PG-18-5 standards. Output from SEPS is through Space and Contents Reports; the Space Report is the Program for Design (PFD), the Content Report is the Project Room Contents (PRC). Inclusion of a Functional Area as well as Room quantity (Q) and determination of the room area (NSF) in the PFD is based on the projected Workload input which triggers calculations included in the Room Criteria Statements (RCSs). The RCSs are placed immediately after each room name, room code and baseline area (NSF). The PRC list the medical equipment, furniture and fixtures associated to each Room Code in the project. The PFD & PRC are the baseline requirements for the planning phase of a VA project based on a site's projected workload for the target planning year. This chapter's corresponding PG-18-12, Design Guide -if available- is intended for use during the design phase of the project.
- E. Space Planning parameters and metrics in this document are based on the EEG Laboratory Space Planning Criteria Matrix (SPCM) developed as the basis for this chapter. The EEG Laboratory SPCM lists all the spaces a VA EEG Laboratory site would require; the quantity and NSF for each room is calculated based on the EEG Laboratory projected workload or number of FTE positions authorized. The SPCM is organized in 10 ranges, each range represents an incremental workload value equivalent to one Patient Care Room, this way all current VA EEG Laboratory sites are covered, the upper ranges are calculated for future facilities in case a higher projected workload or FTE positions authorized than those at the present time for EEG Laboratory.
- F. The SPCM metrics are translated into one (or more) Room Criteria Statement (RCS) for each room in Section 5 of this document. The SPCM Planning Range, the maximum number of directly workload-driven patient care rooms, in this document is 10. If a project shall require provision of workload driven rooms above the maximum range value) refer to CFM for guidance. Rooms in this space planning document are organized in 5 Functional Areas (FAs).
- G. Based on its intended function, each room / space is assigned a:
  - 1. Room Name (RN),
  - 2. Room Code (RC),
  - 3. Room Area, the Net Square Feet (NSF) and its corresponding "soft metric" Net Square Meters (NSM),



4. Unique Room Criteria Statement(s) (RCSs) correlated to answers to Input Data Statements (IDSs), and
  5. Room Comment as needed.
- H. The Room Codes included in this chapter stem from the VA Room Family. A unique support space, that may have variable area, is assigned a unique Room Code and adopts the square footage, as needed, correlated to the room contents assigned which in turn correspond to the range for those rooms. A unique clinical space or a direct clinical support room, i.e., control room, system components room, etc. typically does not feature variable NSF. Patient Care room names for rooms unique to this chapter end in “, EEG Lab”. Patient Care Support room names end in “, Bldg Sprt”, “Clncl Sprt”, “Stff Sprt”, or “, Vet Sprt”, correlating to Building, Clinical, Staff or Veteran Support room families.
- I. Section 5, Sub-Section F lists the SEPS Importer Shortcuts used for implementation of Sections 4 & 5 in SEPS. These shortcuts are inserted into the Room Criteria Statement (RCS) for each room which upon upload into the Space and Equipment Planning System (SEPS) allowing planners developing VA healthcare projects to determine quantity and square footage of each room by performing mathematical or logical calculations. Shortcuts refer Input Data Statements (IDSs), Rooms or calculation parameters stemming from the SPCM.
- J. SEPS is accessible to government healthcare planners and private sector consultants working on VA HC projects during their Period of Performance (PoP) through the MAX.gov website; government provided Training is a requisite for access.
- K. SEPS incorporates a Net-to-Department Gross factor (NTDG) factor of **1.50** for EEG Laboratory and a Building Gross factor of 1.35 in the space calculation to generate the Department Gross Square Feet (DGSF) and the Building Gross Square Feet (BGSF) respectively for the project based on the aggregate resulting Net Square Feet (NSF) for each range. Planners can adjust the BGSF factor in SEPS; the NTDG factor is fixed.
- L. Refer to the chapter corresponding PG-18-5 Equipment Guidelist for the Room Content assignment for each room during the planning phase of a project.
- M. Refer to the chapter corresponding PG-18-12: Design Guide, if available, during the planning and design phases of a project. Not all PG-18-9 clinical chapters have a corresponding PG-18-12 document, please refer to the VA-TIL.
- N. The space planning and design Program Guides: PG-18-9, PG-18-5, and PG-18-12 are available at the [Department of Veterans Affairs Office of Construction and Facilities Management \(CFM\) Technical Information Library \(TIL\)](#) website.





**4 INPUT DATA STATEMENTS (IDS)**

- A. How many EEG clinic stops (Stop Code 106) are projected? (W) (Values: 300 to 1,666)
- B. How many Evoked Potential clinic stops (Stop Code 126) are projected? (W) (Values: 300 to 1,666)
- C. How many Prolonged Video EEG clinic stops (Stop Code 128) are projected? (W) (Values: 300 to 1,666)
- D. How many EMG clinic stops (Stop Code 212) are projected? (W) (Values: 450 to 7,500)

**5 SPACE PLANNING CRITERIA**

For functional descriptions of key spaces refer to the Design Guide for Electroencephalography Laboratory.

**A. FA 1: RECEPTION AREA**

- 1. EEG Lab Waiting, Bldg Sprt (SB003) ..... 100 NSF (9.3 NSM)**
  - a. Provide one if [number of exam rooms] is between 1 and 2
  - b. Provide one at 130 NSF if [number of exam rooms] is 3
  - c. Provide one at 170 NSF if [number of exam rooms] is 4
  - d. Provide one at 215 NSF if [number of exam rooms] is 5
  - e. Provide one at 260 NSF if [number of exam rooms] is 6
  - f. Provide one at 290 NSF if [number of exam rooms] is 7
  - g. Provide one at 330 NSF if [number of exam rooms] is 8
  - h. Provide one at 370 NSF if [number of exam rooms] is 9
  - i. Provide one at 415 NSF if [number of exam rooms] is 10

- 2. EEG Lab Reception, Cncl Sprt (SC183) ..... 85 NSF (7.9 NSM)**
  - a. Provide one if [number of exam rooms] is between 1 and 4
  - b. Provide one at 260 NSF if [number of exam rooms] is between 5 and 10

Allocated NSF accommodates two Receptionist FTEs, patient privacy area, and circulation.

- 3. EEG Lab Patient Check-in Kiosk, Cncl Sprt (SC165) ..... 55 NSF (5.2 NSM)**
  - a. Provide one if [number of exam rooms] is between 1 and 4
  - b. Provide one at 105 NSF if [number of exam rooms] is between 5 and 10

Allocated NSF accommodates two Display Kiosks, patient privacy area, and circulation.

- 4. EEG Lab Patient Education Workstation, Cncl Sprt (SC172) ..... 40 NSF (3.8 NSM)**
  - a. Provide one if [number of exam rooms] is between 1 and 4
  - b. Provide two if [number of exam rooms] is between 5 and 10

Provides medical information for patients and visitors. Locate accessible to waiting.

- 5. EEG Lab Patient Education Room, Cncl Sprt (SC171) .....120 NSF (11.2 NSM)**
  - a. Provide one if [number of exam rooms] is between 1 and 10



Patient Education / Resource Room to be used for private patient education needs and also as a medical information resource, which may include electronic and hard copy material, for patients and visitors. Locate accessible to waiting.

**6. EEG Lab Family Toilet, Bldg Sprt (SB136) ..... 80 NSF (7.5 NSM)**

*a. Provide one if [number of exam rooms] is between 1 and 10*

Allocated NSF accommodates one accessible toilet @ 25 NSF, one wall-hung lavatory @ 12 NSF, ABA clearances, and circulation. The Family Toilet may be shared with other services / departments depending on adjacencies.

**7. EEG Lab Visitor Toilet, Bldg Sprt (SB191) ..... 60 NSF (5.6 NSM)**

*a. Provide one if [number of exam rooms] is between 5 and 10*

Allocated NSF accommodates one accessible toilet @ 25 NSF, one wall-hung lavatory @ 12 NSF, ABA clearances, and circulation.

**B. FA 2: PATIENT AREA**

**1. EEG Exam Room, EEG Lab (CEE01) .....170 NSF (15.8 NSM)**

*a. Provide one if [EEG clinic stops (Stop Code 106) projected], [Evoked Potential clinic stops (Stop Code 126) projected], [Prolonged Video EEG clinic stops (Stop Code 128) projected] is between 300 and 1,000*

*b. Provide two if [EEG clinic stops (Stop Code 106) projected], [Evoked Potential clinic stops (Stop Code 126) projected], [Prolonged Video EEG clinic stops (Stop Code 128) projected] is between 1,001 and 2,000*

*c. Provide three if [EEG clinic stops (Stop Code 106) projected], [Evoked Potential clinic stops (Stop Code 126) projected], [Prolonged Video EEG clinic stops (Stop Code 128) projected] is between 300 and 3,000*

*d. Provide four if [EEG clinic stops (Stop Code 106) projected], [Evoked Potential clinic stops (Stop Code 126) projected], [Prolonged Video EEG clinic stops (Stop Code 128) projected] is between 3,001 and 4,000*

*e. Provide five if [EEG clinic stops (Stop Code 106) projected], [Evoked Potential clinic stops (Stop Code 126) projected], [Prolonged Video EEG clinic stops (Stop Code 128) projected] is between 4,001 and 5,000*

**2. EMG Exam Room, EEG Lab (CEE06) .....170 NSF (15.8 NSM)**

*a. Provide one if [EMG clinic stops (Stop Code 212) projected] is between 450 and 1,500*

*b. Provide two if [EMG clinic stops (Stop Code 212) projected] is between 1,501 and 3,000*

*c. Provide three if [EMG clinic stops (Stop Code 212) projected] is between 3,001 and 4,500*

*d. Provide four if [EMG clinic stops (Stop Code 212) projected] is between 4,501 and 6,000*

*e. Provide five if [EMG clinic stops (Stop Code 212) projected] is between 6,001 and 7,500*



- 3. Patient Preparation Room, EEG Lab (CEE11).....120 NSF (11.2 NSM)**
  - a. Provide one if [number of exam rooms] is between 1 and 4
  - b. Provide two if [number of exam rooms] is between 5 and 8
  - c. Provide three if [number of exam rooms] is between 9 and 10

The testing electrodes are applied and removed in this room

- 4. EEG Lab Patient Toilet, Bldg Sprt (SB201) ..... 60 NSF (5.6 NSM)**
  - a. Provide one if [number of exam rooms] is between 1 and 4
  - b. Provide two if [number of exam rooms] is between 5 and 8
  - c. Provide three if [number of exam rooms] is between 9 and 10

Allocated NSF accommodates one accessible toilet @ 25 NSF, one accessible wall-hung lavatory @ 13 NSF, ABA clearances, and circulation.

**C. FA 3: SUPPORT AREA**

- 1. EEG / EMG Reading Room, EEG Lab (CEE21) .....120 NSF (11.2 NSM)**
  - a. Provide one if [number of exam rooms] is between 1 and 4
  - b. Provide one at 180 NSF if [number of exam rooms] is between 5 and 10

This is a multi-purpose room to accommodate: monitoring, reading, interpreting EEG tapes, dictation and reporting, resident, intern, and staff training, and evaluation of related Electroencephalography and Electromyography studies.

- 2. EEG Lab EEG / EMG Workroom, Cncl Sprt (SC231) .....180 NSF (16.8 NSM)**
  - a. Provide one if [number of exam rooms] is between 1 and 4
  - b. Provide one at 220 NSF if [number of exam rooms] is between 5 and 10

This work room provides space for the EEG / EMG technicians.

- 3. EEG Lab Clean Utility Room, Lgstcs Svc (SB737) ..... 80 NSF (7.5 NSM)**
  - a. Provide one if [number of exam rooms] is between 1 and 4
  - b. Provide one at 120 NSF if [number of exam rooms] is between 5 and 10

- 4. EEG Lab Soiled Utility Room, Lgstcs Svc (SB743) ..... 80 NSF (7.5 NSM)**
  - a. Provide one if [number of exam rooms] is between 1 and 4
  - b. Provide one at 120 NSF if [number of exam rooms] is between 5 and 10

- 5. Equipment Storage Room, EEG Lab (CEE51) ..... 100 NSF (9.3 NSM)**
  - a. Provide one if [number of exam rooms] is between 1 and 4
  - b. Provide one at 140 NSF if [number of exam rooms] is between 5 and 10

- 6. EEG Lab Clean Linen Alcove, EMS (SC467) ..... 40 NSF (3.8 NSM)**
  - a. Provide one if [number of exam rooms] is between 1 and 4
  - b. Provide one at 80 NSF if [number of exam rooms] is between 5 and 10

- 7. EEG Lab Crash Cart Alcove, Cncl Sprt (SC052)..... 20 NSF (1.9 NSM)**
  - a. Provide one if [number of exam rooms] is between 1 and 10



- 8. **EEG Lab Wheelchair / Stretcher Alcove, Bldg Sprt (SB252) ..... 50 NSF (4.7 NSM)**
  - a. *Provide one if [number of exam rooms] is between 1 and 6*
  - b. *Provide two if [number of exam rooms] is between 7 and 10*

- 9. **EEG Lab Housekeeping Aides Closet (HAC), Bldg Sprt (SB244)..... 60 NSF (5.6 NSM)**
  - a. *Provide one if [number of exam rooms] is between 1 and 10*

Depending on location in the Hospital / Medical Center this space may be shared with adjacent clinics / departments.

**D. FA 4: STAFF AMD ADMINISTRATIVE AREA**

- 1. **EEG Lab Director Office, Stff Sprt (SS204) ..... 100 NSF (9.3 NSM)**
  - a. *Provide one if [number of exam rooms] is between 1 and 10*

- 2. **EEG Lab Physician Workstation, Stff Sprt (SS218) ..... 56 NSF (5.3 NSM)**
  - a. *Provide one if [number of exam rooms] is between 1 and 2*
  - b. *Provide two if [number of exam rooms] is between 3 and 4*
  - c. *Provide three if [number of exam rooms] is between 5 and 6*
  - d. *Provide four if [number of exam rooms] is between 7 and 8*
  - e. *Provide five if [number of exam rooms] is between 9 and 10*

- 3. **EEG Lab Nurse Manager Office, Stff Sprt (SS204)..... 100 NSF (9.3 NSM)**
  - a. *Provide one if [number of exam rooms] is between 1 and 5*
  - b. *Provide two if [number of exam rooms] is between 6 and 10*

- 4. **EEG Lab Chief Technician Workstation, Stff Sprt (SS218) ..... 56 NSF (5.3 NSM)**
  - a. *Provide one if [number of exam rooms] is between 1 and 10*

- 5. **EEG Lab Technician Workstation, Stff Sprt (SS218) ..... 56 NSF (5.3 NSM)**
  - a. *Provide one if [number of exam rooms] is between 1 and 5*
  - b. *Provide two if [number of exam rooms] is between 6 and 10*

- 6. **EEG Lab Staff Breakroom, Stff Sprt (SS262) .....120 NSF (11.2 NSM)**
  - a. *Provide one if [number of exam rooms] is between 1 and 5*
  - b. *Provide one at 160 NSF if [number of exam rooms] is between 6 and 10*

- 7. **EEG Female Lab Staff Locker Room, Stff Sprt (SS232) ..... 100 NSF (9.3 NSM)**
  - a. *Provide one if [number of exam rooms] is between 1 and 5*
  - b. *Provide one at 140 NSF if [number of exam rooms] is between 6 and 10*

Provide locker space only for those FTEs without assigned office or work space. For less than five FTE combine Locker Room facilities with adjacent department or sum in chapter 410.

- 8. **EEG Male Lab Staff Locker Room, Stff Sprt (SS241)..... 100 NSF (9.3 NSM)**
  - a. *Provide one if [number of exam rooms] is between 1 and 5*
  - b. *Provide one at 140 NSF if [number of exam rooms] is between 6 and 10*



Provide locker space only for those FTEs without assigned office or work space. For less than five FTE combine Locker Room facilities with adjacent department or sum in chapter 410.

- 9. **EEG Female Lab Staff Toilet, Bldg Sprt (SB202) ..... 60 NSF (5.6 NSM)**
  - a. *Provide one if [number of exam rooms] is between 1 and 5*
  - b. *Provide two if [number of exam rooms] is between 6 and 10*
- 10. **EEG Male Lab Staff Toilet, Bldg Sprt (SB203) ..... 60 NSF (5.6 NSM)**
  - a. *Provide one if [number of exam rooms] is between 1 and 5*
  - b. *Provide two if [number of exam rooms] is between 6 and 10*

Allocated NSF accommodates one accessible toilet @ 25 NSF, one wall-hung lavatory @ 12 NSF, ABA clearances, and circulation.

**E. FA 5: EDUCATION AREA**

The spaces below provide programming of educational spaces at department / service level.

- 1. **EEG Lab Resident Training Room, Educ Svc (SS111) .....240 NSF (22.3 NSM)**
  - a. *Provide one if [number of exam rooms] is between 1 and 10*

Allocated NSF accommodates six conference chairs @ 7.5 NSF each, two 5'-0" x 2'-0" tables at 10 NSF each, one credenza @ 8 NSF, and circulation; total six people. This space will be used by EEG Administration for conferences and for staff education.

**F. SEPS IMPORTER SHORTCUTS**

The following shortcuts are used in the Room Criteria Statements in the Electroencephalography (EEG) Laboratory Functional Areas. These shortcuts are used during upload of this document into the Space and Equipment Planning System (SEPS) software during implementation of the space planning parameters contained herewith to allow for mathematical or logical calculations to be performed. Input Data Statements (IDSs), Rooms or a partial calculation formula can have a shortcut.

- 1. *number of exam rooms: [EEG Exam Room, EEG Lab (CEE01)] + [EMG Exam Room, EEG Lab (CEE06)]*
- 2. *EEG clinic stops (Stop Code 106) projected: [How many EEG clinic stops (Stop Code 106) are projected?]*
- 3. *Evoked Potential clinic stops (Stop Code 126) projected: [How many Evoked Potential clinic stops (Stop Code 126) are projected?]*
- 4. *Prolonged Video EEG clinic stops (Stop Code 128) projected: [How many Prolonged Video EEG clinic stops (Stop Code 128) are projected?]*
- 5. *EMG clinic stops (Stop Code 212) projected: [How many EMG clinic stops (Stop Code 212) are projected?]*



## 6 PLANNING AND DESIGN CONSIDERATIONS

- A. This chapter applies specifically to equipment and facilities in a fixed location visited by patients. It does not include space programming information for portable services commonly associated with EEG Laboratories. Consider areas for portable EEG services when planning relates to other services, such as neurological surgery.
- B. As the EMG Exam Room may be utilized by other services such as Neurology, Rheumatology, and Rehabilitation Services, consider locating the EEG Laboratory adjacent to them for efficient utilization of staff and patient convenience.
- C. Consider grouping EEG and EMG Exam rooms together to reduce Provider travel distances. Standardization of rooms and modular design should be considered to allow flexibility to adapt to new technologies and respond to changes in patient volumes.
- D. Stable environmental conditions must be maintained as changes may be perceptible to patients and can create physical responses which impact readings. Temperature and relative humidity must be balanced to prohibit static electrical charges at all times.
- E. Acoustically isolate EEG and EMG Exam rooms to inhibit distracting stimuli which will alter the readings.
- F. Isolate EEG and EMG Exam from elevators, transformers, motors, and wiring carrying large amounts of current. Voltage, particularly, will impact the readings.
- G. Provide electronic grounding in the exam rooms and workrooms to prevent interference with the accuracy of the procedure.
- H. Connection to ancillary services, such as lab and pharmacy, should be considered.
- I. The waiting room should be connected to the patient entrance corridor to the department and be under the visual control of Reception / Check-in. This space can be shared between adjacent services where appropriate.
- J. Plan for locating the Patient Prep room adjacent to patient waiting to reduce patient travel time/distance and increase staff responsiveness.
- K. Design should accommodate patient privacy and confidentiality in all areas, and in reception and patient care areas in particular. This includes visual and auditory considerations.
- L. Where possible, the department should be configured to limit the mix of patient and service functions, and to maintain clear separation of clean and dirty functions to avoid cross contamination. For example, Clean and Soiled Utility rooms can be located at alternate ends of a department.
- M. Corridors should be designed to a minimum of 8 feet clear width to accommodate passage of equipment or beds and two stretchers and/or wheelchairs. In non-patient areas and outpatient clinical spaces, corridors may be a minimum of 5 feet in clear width.



- N. Administration and support areas should be located and designed to maximize staff and space efficiency, and reduce staff travel distances.
- O. Sharing of patient and staff support areas among adjacent services should be considered for efficient utilization of staff. For example, centralized check-in/check-out can reduce the total number of FTEs required to provide this function over multiple service lines.
- P. During design, NSF for Staff Lounge and Lockers may be combined with an adjacent department(s).
- Q. Verify room sizes and equipment layouts with equipment vendors prior to finalizing room layouts.
- R. Refer to Design Guide for Electroencephalography Laboratory for a detailed discussion of functional and design considerations.
- S. Refer to Department of Veterans Affairs (VA) Office of Construction and Facilities Management Technical Information Library ([www.cfm.va.gov/til/](http://www.cfm.va.gov/til/)) for additional technical criteria.

**7 FUNCTIONAL RELATIONSHIPS**

Relationship of Electroencephalography (EEG) Laboratory to services listed below:

**TABLE 1: FUNCTIONAL RELATIONSHIP MATRIX**

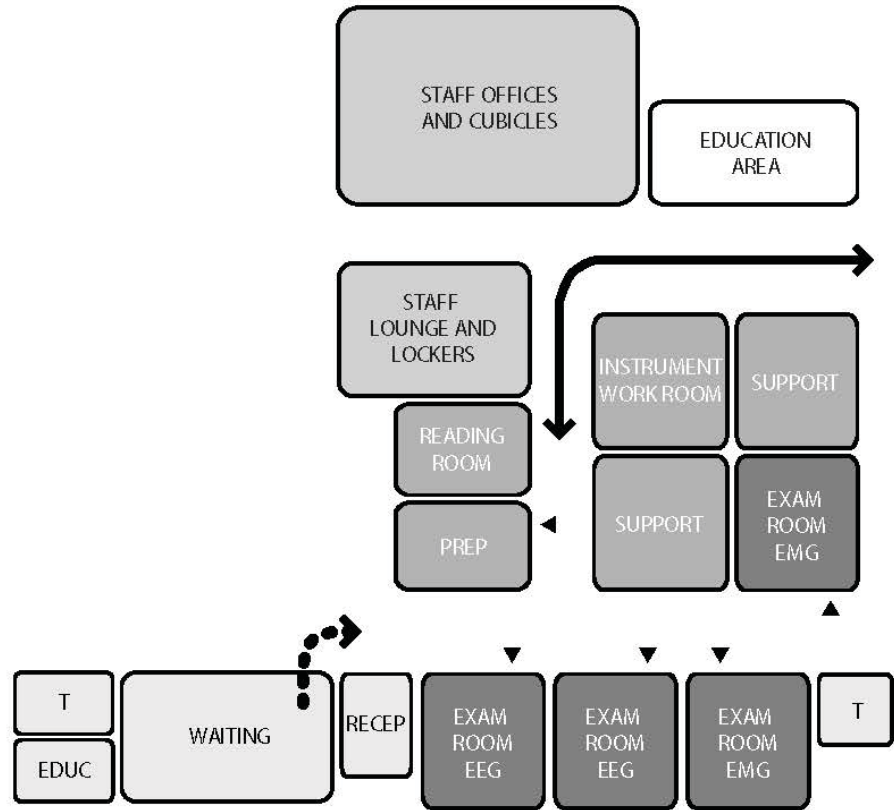
SERVICES	FUNCTIONAL RELATIONSHIP
OP: CBOP: Patient Care	2
CLNCL: Clncl Svc Adm: Hospital Medicine	3
BLDG SPRT: Logstcs Svc: Warehouse	3
CLNCL SPRT: EMS: Production	3
STFF SPRT: Education: Nursing Training	3
CLNCL SPRT: OIT: Telecommunications	3
CLNCL SPRT: OIT: Server	3

**Legend:**

- 1. High
- 2. Moderate
- 3. Minimal



**8 FUNCTIONAL DIAGRAM**



LEGEND

- |  |                               |  |                |
|--|-------------------------------|--|----------------|
|  | EXAM/ TESTING/ PROCEDURE      |  | STAFF/ SERVICE |
|  | PREP/ RECOVERY/ SUPPORT       |  | OUTPATIENT     |
|  | STAFF AND ADMINISTRATIVE AREA |  | GENERAL ENTRY  |
|  | RECEPTION AREA                |  |                |
|  | EDUCATION AREA                |  |                |

