1. **Purpose:** Document Minneapolis VAMS design best practices and specific design requirements to ensure consistency between project designs. In addition to this document, the Minneapolis VAMS Projects Section has modified and maintains several specification sections that shall be a starting point for design rather than the specification sections found on the TIL. A list of Minneapolis modified specification sections and the specification sections can be obtained from any COR.
2. **Product Names:** The product names specified in this Design Standard shall be used as reference only. Specific products listed in this standard are only indicative of the quality expected unless noted as a sole source item, no substitutions. All products equal in quality and providing the best value to the VAMC will be considered. If a product is specified by name AND is not a sole source item, add "or COR approved equal" after the product name.

DIVISION 00 – SPECIAL SECTIONS (This section is used to document any local clarifications to VA design direction found on the TIL)

1. Special Construction Requirements (Supplemental Information to VA Program Guide 18-14, Room Finishes, Door, and Hardware Schedule)
    a. Linen Closets (linen closets typically house stocked linen carts)
        i. Door hardware shall be HW-SH-9 (a.k.a. Card Reader) or HW-SH-9A (a.k.a. Store Room Lockset) based of COR direction.
        ii. Inpatient – 8'x10' ideal, 8'x8' minimum
        iii. Clinics with high linen usage (e.g. Dialysis, PT, spinal Cord, ED, Imaging) 5.5'x7' with door on 5.5' side. This allows for a cart to enter, be rotated to the back wall and allow doors to remain open for staff to pull linen.
        iv. Clinics with low linen usage (e.g. Dermatology, GI, ENT, Dental, Nuc Med, RAD) can either be design for a cart (5.5'x7') or with shelves for EMS to physically load.
2.

DIVISION 01 – GENERAL REQUIREMENTS

1. Temporary Construction Partitions/Barriers – Hard walls floor to interstial unless another construction barrier is approved by the COR. Hard walls are typically steel studs with gypsum board on one side, taped but not mudded or painted, use fiberglass batt insulation if the architect expects significant construction noise.
2. Guarantees:
    a. All materials and labor shall be guaranteed for at least one year following project acceptance by the Minneapolis VAMC Contracting Officer.
    b. Roofs shall be guaranteed, with consequential damages included, for a minimum of 15 years following project acceptance by the Minneapolis VAMC Contracting Officer.

3.

DIVISION 02 – EXISTING CONDITIONS

DIVISION 03 – CONCRETE

DIVISION 04 – MASONRY

DIVISION 05 – METALS

DIVISION 06 – WOOD, PLASTICS AND COMPOSITES

1. Rough Carpentry
   a. Wall Backing
      i. Standard Wall Backing Heights
         1. Smart Board – immediately above chief box. Chief box is mounted 55" AFF to the center of the box.
         2. Standard TV (4:3) - (diag. screen size + 5" (for frame)) X 0.3 + 55"
         3. Widescreen TV (16:9) = (diag. screen size + 5" (for frame)) X 0.245 + 55"

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

1. Roofs
   a. Flat roofs – Duralast

DIVISION 08 – OPENINGS

1. Frames
   a. Mesker Prep Locations
   b. Welded
   c. Equal rabbets not required
2. Doors
   a. Plain Sliced Red Oak Finished Doors
   b. Openings
      i. 42" wide – Clinics and Patient Care Areas
      ii. 48" wide – Bariatric Areas
      iii. 36" wide – All other areas
   c. Sliding
      i. Stanley Dura-Glide 2000/3000 Door, no substitute.
         1. Note, on Dura-Glide 2000, only the doors break away; on dura-Glide 3000, all glass panels break away
      ii.
3. Door Hardware
   a. A/E to start with Program Guides 18-14, Room Finishes, Door and Hardware Schedules

      b. Door kick plates: Use InPro corp. color: Beige 0117, .060 thickness or Acrovyn color: 104 Beige, .060 thickness

      c. Door Closers: LCN #4040xp with or without hold open.

      d. Door Electronic Hold Open: LCN Sentronic 120V

      e. Exit Device: Von Duprin.

      f. Lock Sets: Schlage L series mortise lock sets.

           i. L9010: Non-Keyed Passage

          ii. L9040: Non-Keyed Privacy

        iii. L9050P: Keyed Offices

        iv. L9070: Keyed Classrooms

         v. L9080P: Keyed Storerooms

        vi. Best Mortise Cylinder 1E74-C265-RP3 with 626 cylinder.

       vii. Best 6-pin cores

     viii. Keyway "J or K"

        ix. Lever=03, Finish=626, Rose=B

4. Automatic Door Operators

      a. Automatic Door Operators shall be Stanley, no substitute

DIVISION 09 – FINISHES

1. Non-Structural Metal Framing (see DIVISION 01 – GENERAL REQUIREMENTS for Temporary Construction Partitions)

      a. Studs – Steel, 20 gage, 16" O.C.

2. Gypsum Board

      a. Type X, 5/8" – minimum thickness.

3. Sound-Absorbing Wall Units

      a. The following list is in order of least expensive and effective to most expensive and effective. If noise within the space is a concern and standard sound absorbing materials (e.g. carpet, ACT) is not sufficient, consider a sound masking acoustical system.

         i. Type X gyp board with mineral fiber. Example: ED

        ii. CertainTeed Silent FX Noise Reducing Gyp Board with mineral fiber insulation. Example: 3S and 3R

      iii. Acoustiblok 3mm (1/8") thick with mineral fiber insulation. Example: 1Q123 plan north wall.

      b.

4. Acoustical Ceiling

      a. Ceiling Grid

         i. Armstrong Prelude XL Grid for #755 Fissured or Clean Room tile

        ii. Armstrong 15/16" Prelude Grid for Armstrong Ultima Beveled Tegular

      b. Ceiling Tile

         i. Administrative/clerical/clinical areas

                1. Armstrong #755 Fissured, 24"x48"x5/8", White
- ii. Public Areas (waiting/corridors)
  - 1. Armstrong Ultima Beveled Tegular #1911, 24"x24"x ¾", White
- iii. When a washable ceiling is needed
  - 1. Armstrong Clean Room VL Unperforated Square Lay-in, 24" X 48" x 5/8", White, Stock number 870

5. Paint
   a. Interior
      - i. Walls: Sherwin Williams, eggshell finish, or approved equal.
      - ii. Floors, except Building 70 Warehouse: Sherwin Williams Armor Seal Floor Plex 7100, partA-B70A400, Part B- B70V400, 1 oz. black, 4/32 blue.
      - iii. Door Frames: Sherwin Williams, eggshell finish
        - 1. Base: B31, W2253
        - 2. Colorant: Black: 24/32 oz, Dark Gold: 1-11/32 oz, Maroon: 7/32 oz, White: 1-4/32 oz,
   b. Exterior
      - i. Avoid surfaces that require painting.

DIVISION 10 – SPECIALTIES

1. Signage
   a. Interior
      - i. Takeform
      - ii. <mark>Do we need to include "Appendix A: Interior Signage Requirement" from the Mpls VA Design Standard?</mark>
2. Cubicle Curtain Tracks
   a. Ensure Curtains are included in the design on the equipment list as contractor provided and installed (i.e. CC).
3. Wall and Door Protection
   a. Existing Handrails and Corner Guards are typically IPC, 800 and 150 respectfully, Color 117 (Beige).
4. Toilet, Bath, and Laundry Accessories
   a. Baby Changing Stations: Koala Bear Kare, P/N - 10721

DIVISION 11 – EQUIPMENT

1. Ceiling Mounted Patient Lift System
   a. VA Project Manager can provide standard Ceiling Mounted Lift structural details; however, the design shall be reviewed by a structural engineer prior to use.
   b. Ceiling Mounted Patient Lifts shall be installed in all bariatric exam rooms and bariatric bathrooms that are associated with the bariatric exam room.
      - i. Ceiling Mounted Patient Lifts shall be installed in areas required by VA Design Guides/Manuals.

  c. All ceiling lifts should be XY or full room configurations

  d. Specify on drawings that removed ceiling lift components shall be reused.

  e. All lifts are to be sole sourced with MedCare.

 2. Patient Scales

  a. In-floor scales shall not be installed in Building 70 except in areas that are slab on grade. In-floor scales shall be installed in CBOCs if possible.

 3. AED and Cabinet

  a. LifeStart AED Cabinet 1400 Series ordered through JL Industries

  b. Philips FRx Model

DIVISION 12 – FURNISHINGS

 1. Window Shades

  a. Ensure window shades are considered in the design. If needed they shall be included on the equipment list as contractor provided and installed (i.e. CC).

DIVISION 13 – SPECIAL CONSTRUCTION

DIVISION 14 – CONVEYING EQUIPMENT

DIVISION 21 – FIRE SUPRESSION

 1. Mechanical T's

  a. shall be specified as Grulock, Victaulic, or approved equal. U-bolt style clamps are not allowed.

 2. Sprinkler heads

  a. All ward/department renovations shall be FM approved Quick Response - Semi recessed heads unless otherwise required by NFPA 13.

  b. Equipment site preps or small renovations that impact the sprinkler systems.

   i. If the space meets the requirements of a compartment per NFPA 13 Ch 3.3.6.; shall be FM approved Quick Response - Semi recessed heads unless otherwise required by NFPA 13.

   ii. If the space DOES NOT meet the requirements of a compartment per NFPA 13 Ch 3.3.6.; heads may match head style and response time.

  c. Concealed heads are not allowed; special circumstances, when warranted, require prior approval for the authority having jurisdiction.

DIVISION 22 – PLUMBING

 1. General-Duty Valves for Plumbing Piping

  a. 0.5" – 2" Water Valves: Ball, full port 600 wog Walworth, Apollo, or approved equal.

  b. 2" – 6" Water Valves: Gate, butterfly, 150 psi min., Walworth, Apollo, or approved equal.

  c. 3" – 6" Water Valves: Pro Press, Victaulic, or approved equal.

2. Facility Water Distribution
    a. Plumbing fixture supply lines shall be sized per the latest version of International Plumbing Code in lieu of VA Plumbing Design Manual.
    b. Stops (water supply shut-offs), BrassCraft Multi-Turn Angle Stop w/ Loose Key – Compression x Compression (BrassCraft SCR19X C)
3. General Service Compressed-Air Systems
    a. Air Compressors: Atlas Copco
4. Plumbing Fixtures
    a. Lavatory's: All lavatories shall be installed with adjustable gasket faceplate chair carriers for wall hung closets with auxiliary anchor foot assembly, hanger rod support feet, and rear anchor tie down.
    b. Sink Faucets
        i. Do NOT install automatic water sensor faucets
        ii. Patient and general staff: T&S paddle hand
        iii. Doctors' Offices: T&S foot valves, wall mounted.
        iv. Laboratories: T&S water savers, foot valves.
    c. Flushometers: Sloan Royal 1.6 gpf or less.
    d. Urinals: Sloan Royal 1.0 gpf or less.
    e. Showers: American Standard
    f. Hose Bibbs: Woodford Hose Bibb Co. model #65 up to 24" wall thickness.
    g. Ice Machines: Scotsman, Meridian Series. Should be installed with filter #10 Blue VIH w/pressure release.
5. Gas Systems for Laboratory and Helathcare Facilities
    a. Master alarm panels are located in the Energy Center and Bldg 70, Telephone Operator Room.
    b. Medical Gas Materials and Equipment
        i. BeaconMedaes
        ii. OHMEDA connectors
        iii. Provide On/Off indicators for all gas valves

DIVISION 23 – HVAC

1. HVAC and Boiler Plant Insulation
    a. Ductwork
        i. Insulate exteriors of supply and return. Exhaust ductwork not insulated.
2. Direct-Digital Control System
    a. Johnson Controls Communications Protocol: All equipment connected to the Building Automation System (BAS) shall use BACnet MS/TP communications protocol.
    b. Thermostats: Electronic thermostat with pre-set adjustment range. Johnson Controls Inc. to interface with existing Metasys building automation system.

3. Steam and Condensate Piping

       a. Valves
          i. 0.5" – 2" Steam Valves: Gate valves, WSP 300 psi.
          ii. 2" – 12" Steam Valves: Gate valves or gear-actuated triple offset valves, WSP 300 psi, Walworth or approved equal.
       b. Steam Traps: Armstrong

4. Air Terminal Units
       a. VAV – Titus VAVs with Johnson Control Inc. control valves.
       b. VAV shall have reheat coil and digital controls
       c. VAV Equipment Tag: Label VAV boxes as "Building#."VAV".AHU#.Room#" For example, the VAV box that serves room 1C104 in Building 70 would be labeled: 70.VAV.44.1C104. If one VAV box serves more than one room, the room number is where the controlling thermostat is located. If more than one VAV box serves a room, add ".#" after the room number, for example, 70.VAV.44.1C104.2, would be the second VAV box that serves room 1C104.

5. Air Outlets and Inlets
       a. Titus or approved equal

6.

DIVISION 25 – INTEGRATED AUTOMATION

DIVISION 26 – ELECTRICAL

1. Raceway and Boxes for Electrical Systems
       a. Recessed Receptacle Box
          i. Wall mounted monitor (non-Smart Board) recessed outlet box
              1. Arlington TVBS507, 3-Gang steel box with white non-metallic trim plate.
          ii. Wall mounted Smart Board recessed outlet box
              1. Chief PAC511 (http://www.chiefmfg.com/Products/PAC511)
              2. Mount Chief box 55" AFF to the center of the box.

2. Motor Controllers
       a. Variable Frequency Drives: ABB

3. Harmonic Filters
       a. AE to consider harmonic filters on VFD's

4. Lighting
       a. Switching/Dimming
          i. All work areas being shared by multiple people shall have dimming capability. This includes offices, work rooms, conference rooms, help desks, registration desks, etc.

5. Restrooms
       a. Each restroom shall have lighting from two sources of power; both normal and emergency.
       b. This can be two fixtures; one on emergency and one on normal or

     c.   This can be one fixture on some sort of switching device providing emergency power when normal power is lost.

DIVISION 27 – COMMUNICATIONS

1. Imaging locations with equipment rooms
   a. Install a tip jack and phone in the equipment room for technician troubleshooting to outside vendor.
2. A/E to pay special attention to height of Power and Data outlets that are designed for mobile computing systems in hallway/decentralized nurse stations. Current heights are interfering with Workstation on Wheels (WOW) and becoming damaged from repeated impact.

DIVISION 28 – ELECTRONIC SAFETY AND SECURITY

1. Fire Detection and Alarm:
   a. Existing Equipment
      i. Control Panel: Gamewell FCI, E3 Series
      ii. Keypad Display: Gamewell FCI, LCD-3
      iii. Interface Main Board: Gamewell FCI, ILI-MB-E3 Series
      iv. Power Supply: Gamewell FCI, PM-9
      v. Addressable Switch Module: Gamewell FCI, ASM-16
      vi. Network Repeater: Gamewell FCI, RPT-E3
      vii. Digital Alarm Communicator Transmitter: Gamewell FCI, DACT-3
      viii. Command Center Voice Gateway: Gamewell FCI, INI-VG
      ix. Amplifier: Gamewell FCI, AM-50
      x. Cabinets: Gamewell FCI, E3 Series
      xi. Broadband: Gamewell FCI, E3 Series Broadband
      xii. Intelligent Network Command Center: Gamewell FCI INCC
      xiii. Intelligent Network Transponder: Gamewell FCI, INX
      xiv. PC-based Graphic User Interface: Gamewell FCI, Focal Point Graphic Workstation
      xv. Smoke Sensor: Gamewell FCI Gamewell FCI, Velociti Series ASD-PL2F
      xvi. Thermal Sensor: Gamewell FCI, Velociti Series ATD-L2F
      xvii. Duct Sensor: Gamewell FCI, Velociti Series ADPF
      xviii. Beam Smoke Sensor: Gamewell FCI, Velociti Series ABD-RT2F
      xix. Manual Pull Station   Gamewell FCI MS-7AF
      xx. Addressable Monitor Module: Gamewell FCI, Velociti Series AMM-2F
      xxi. Addressable Monitor Module: Gamewell FCI, Velociti Series AMM-4F
      xxii. Addressable Output Relay Control Module: Gamewell FCI, Velociti Series AOM-2SF
      xxiii. Addressable Output Relay Supervised Control Module: Gamewell FCI, Velociti Series AOM-2RF
      xxiv. Isolator Module (Style 7): Gamewell FCI System Sensor M500X

                    xxv. Relay Output Module, Multi-Mod: Gamewell FCI Velociti Series MM0-6RF
                   xxvi. Input Monitor Module, Multi-Mod 10: Gamewell FCI Velociti Series MMI-10F
                 xxvii. Power Supplies and Battery Chargers Gamewell FCI HPF24S8
                xxviii. Speakers and Strobes: Gamewell FCI SpectrAlert Advance Indoor Notification Appliances
                 xxix. Speakers and Strobes: Gamewell FCI SpectrAlert Selectable Outdoor Notification Appliances
                  xxx. Bells: Gamewell FCI Series MB Motor Bells

  2. Security Systems
     a. Lenel
        i. Card readers
       ii. Cameras
           1. Axis cameras
      iii. Wires
      iv. Yellow Conduit

DIVISION 31 – EARTHWORK

DIVISION 32 – EXTERIOR IMPROVEMENTS

  1. Landscaping
     a. Plants
        i. Use native Minnesota trees and perennials when possible.
       ii. Grass
           1. Seed Mix – 27% creeping red fescue, 27% perennial rye, 46% Kentucky bluegrass
           2. No Mow – 100% fescue blend
     b. Irrigation
        i. Existing irrigation system extends around VAMC to the fire lane.
       ii. Include irrigation system for any trees, shrubs, and plants that extend beyond the fire lane.
      iii. Employ water efficient irrigation systems that match existing.

DIVISION 33 – UTILITIES

DIVISION 34 – TRANSPORTATION

DIVISION 48 – ELECTRICAL POWER GENERATIONS