VETERANS AFFAIRS AMBULATORY CARE CENTER

Groundbreaking Delivery. Groundbreaking Technology.

OMAHA, NE
1. Understand events leading congress to pass the “CHIP IN for Vets Act”

2. Compare and contrast timelines and outcomes between traditional VA healthcare projects and the new VA Omaha Ambulatory Care Center

3. Apply lessons learned when partnering with the VA and private entities on projects

4. Understand new technology utilized in Design & Construction and the associated applications for collaboration and implementation in the field
As President of Tetrad Property Group, Chad provides executive leadership and sets the overall strategy for TPG efforts across its platform. Chad has over 25 years of project management and real estate development experience throughout the Central United States. Throughout his career, he has worked for private clients and public institutions on a variety of complex project types including commercial offices, education facilities, research laboratories, hospitals and medical clinics, athletic complexes, arenas and convention centers and hotels.
RYAN SAWALL
Vice President, Business Unit Leader

As vice president for McCarthy’s Central Region, Ryan oversees McCarthy’s work for the Omaha and Kansas City offices. Sawall is a former board member for the Nebraska Society of Healthcare Engineers. He has been working in the Healthcare industry for over 15 years and has been a part of over $1 billion of challenging healthcare projects all over the country.
Jeff Monzu
Vice President, Senior Project Manager

Jeff is an integral member of Omaha’s healthcare design team, providing excellence and consistency in leadership and technical expertise. His primary focus is the planning, programming, design and project management of healthcare facilities. Over the past few years, Jeff simultaneously managed a $34 million critical care hospital project requiring multiple trips to the client’s rural location, while completing design on a $100 million project that consolidated a healthcare provider and a medical school into an existing hospital campus.
BRAD SCHOEN  
Preconstruction Director

As preconstruction director, Brad leads all facets of McCarthy’s preconstruction efforts to ensure every project receives seamless, client-focused design phase services. Applying his 20 years of industry experience, Brad works closely with the design team to provide feedback, evaluate, develop, and implement constructible solutions. In his 13-year career with McCarthy, he has helped manage the preconstruction efforts on nearly $2.5 billion worth of construction.
LEARNING OBJECTIVE 1
CHIPIN FOR VETERANS ACT
CHIP-IN FOR VETERANS ACT

Communities Helping Invest through Property Improvements Needed for Veterans Act of 2016

Client Need: Innovative Delivery

- $56 million was originally appropriated by Congress to fund the initial development and design of a replacement medical center project for Omaha in 2010
- Project stopped and reprioritized in respect to other VA projects
- Need identified for this type of project
- Funds could be used if a complete and usable project could be created using a combination of the $56 million and donated funds
LEARNING OBJECTIVE 2

TRADITIONAL VA HEALTHCARE vs. VA OMAHA AMBULATORY CARE CENTER
A/E Submission Requirements for VA Medical Center Major New Facilities, Additions & Renovations

Program Guide PG 18-15 Volume B
A/E SUBMISSION REQUIREMENTS FOR VA MAJOR PROJECTS
(NEW FACILITIES, ADDITIONS & RENOVATIONS)

I. GENERAL

1. This document contains minimum submission requirements for the design phase of the major project.

2. The Department of Veterans Affairs (VA) may contract for any portion of a design: Pre Design, Schematic Design, Design Development Documents, or a combination thereof.

3. The A/E is responsible for producing the Basis of Design (BOD) reports, which provide the descriptive information necessary to evaluate the proposed project from a technical perspective. The BOD addresses technical issues and the A/E's design decisions, assumptions, and methods. The A/E also is responsible for preparing a complete set of drawings, calculations, sample boards, specifications, equipment catalog outputs, performance curves, dimensions, and capacity ratings, all in accordance with VA criteria. The A/E shall be responsible for obtaining and using all A/E design criteria and information included or linked on the VA Office of Construction & Facilities Management (CFM) Technical Information Library (TIL) website.

4. CFM shall be responsible for reviewing and commenting on all design submissions within 30 calendar days of receipt. VA may engage the services of peer reviewers to review the submissions and a value engineering review may be performed at each review stage. Peer reviewers' comments shall be entered into the DrCheck system three working days prior to review. VA comments shall be entered in DrCheck five working days after the review. The A/E shall not move forward into the next design phase until all changes based on the review have been entered into the DrCheck electronic reviewing system and approved by the VA Project Manager (PM).

5. The A/E shall provide individually packaged submissions to each unit specified in the "Distribution of Submission Materials" section. The A/E shall submit the Medical Center's and the Regional Fire, Safety Engineer's, and Peer Review packages directly. On some projects, as directed by the VA PM, submissions for Asbestos Abatement and Commissioning also shall be the responsibility of the A/E.

6. There are six Conceptual (C) submission, two Schematic Design (SD1 & SD2) submissions, Design Development (DD1 & DD2) submissions, and two Construction Document (CD1 and CD2) submissions described in this document. At each submission, all material shall be dated, and presented on VA standard size drawings that are appropriately scaled, for example: "CONCEPTUAL - "SCHEMATIC DESIGN SD1 SUBMISSION", "SCHEMATIC DESIGN SD2 SUBMISSION", in large black letters above or beside the VA standard drawing title block. In each submission, the A/E shall incorporate the corrections, adjustments, and changes made by VA at the previous reviews.

7. Project Reviews shall be conducted by Consulting Support Service, the Office of Facilities Planning, and Project Managers in the Central Office for the following submissions:
   - Pre-Negotiation Design Kickoff Meeting
   - Concept Selection Meeting
   - Schematic Design 2 (SD2)
   - Design Development 1 (DD1)

IV. SCHEMATIC DESIGN

A. GENERAL

The Schematic Design phase documents are developed for the VA selected concept approved in the Pre-Design phase. Schematic Design further develops the concept plan to a level of detail that includes specific functional and adjacency requirements and establishes the aesthetics of the design.

General requirements
1. A Project Management Plan shall be developed by the Integrated Project Team, led by the VA PM.
2. Drawings shall have graphic scales, north arrow (either true north or plan north); orientation shall be consistent throughout drawings of similar subject, title block, and key plan. Each drawing, booklet, and other supporting submittals including cover sheets shall be clearly and consistently identified throughout the design process with the project title, location, building, phase, section, and segment.
3. All submitted documents shall be updated as per written responses in DrChecks, electronic reviewing system to reflect review comments from previous phase and further development. The A/E shall verify that all changes based on the review of the previous phase have been entered into DrChecks and approved by the VA PM.
4. Completed quality control checklists shall be submitted, including discipline specific VA checklists for the Schematic phase.
5. Specifications shall be prepared using VA Master Construction Specifications. Submissions shall show changes to master by using the "Track Changes" function. Each submission should indicate changes from previous submission, not all changes to the master. Specifications submitted at the end of each phase (not for each review) shall include all changes.
6. Dimensions shall be provided in vertical and horizontal units (SI) units followed by English units, unless otherwise specified by the Project Manager.
7. The A/E shall submit minutes of meetings with VA and VA's contractors, as well as for A/E coordination meetings.

B. SCHEMATIC DESIGN1—[SD1]

The purpose of Schematic Design1 is to develop the concept selected by VA in Pre-Design.

1. ARCHITECTURAL

Reports:
- Submit the updated Basis of Design (BOD) report including:
  a. Preliminary phasing narrative (with preliminary phasing plans for site and building development).
  b. Types and quantity of major medical equipment to be accommodated (e.g. linear accelerator, imaging, laundry, food service, for example).
  c. Preliminary LEED or Green Globe checklist to establish basis for sustainability rating. (See Section 25. Sustainability).
  d. Summary of building features in tabular form: building height, gross area by floor and development and building total, number of patient rooms by floor and construction type.
  e. Special construction requirements, such as radiation shielding.
  f. Physical Security requirements.

Drawings:
- Submit:
  a. Cover Sheet with project name and address, VA project number, location map, signature block, name and address of VA architect, engineer, and other consultants.
  b. Project Data Sheet with index of drawings, legend of symbols of and code number.
  c. Room Data Sheets for each typical room in the project as outlined in DD1.
Typical VA Process for Similar Scope Project:

- 6 months – Acquisition cycle for designer
- 18 months – Design including all five design phases
- 4 months – Acquisition cycle for builder
- 24 months – Construction
Omaha VA Process:

- **4 months** – Development of Donor – VA Agreement
- **1 month** – Acquisition cycle for designer
- **9 months** – Design (Acquisition of builder concurrent with design process)
- **22 months** – Construction
LESSONS LEARNED

Bluebeam Revu Session for QA/QC Reviews
• Reduced number of design review phases

FGI and VA TIL Working Together for Best Outcomes
• Risk analysis to determine which VA standards to waive

Regular Communication Between VA Leadership and Partner Organization

Team Chemistry
• Planning, Design, Construction
BLUEBEAM SESSIONS
Building Codes, Design Guides, and Standards

The VA Omaha Ambulatory Surgical Care Clinic shall be designed in accordance with the current applicable building codes, design guides and standards at the time of notice to proceed as outlined below:

- The Facility Guidelines Institute Guidelines for Design and Construction of Health Care Facilities
- IBC: ICC International Building Code
- NFPA 70: National Electric Code
- IPC: International Plumbing Code
- IMC: International Mechanical Code
- IFGC: International Fuel Gas Code
- ADA: Department of Justice’s ADA Standards for Accessible Design
- NFPA 10: Standard for Portable Fire Extinguishers
- NFPA 13: Standard for the Installation of Sprinkler Systems
- NFPA 90A: Standard for the Installation of Air-Conditioning and Ventilating Systems
- NFPA 99: Health Care Facilities Code
- LEED Silver (Not Certified)
- A/E Submission Requirements for VA Medical Center Major New Facilities, Additions & Renovations Program Guide PG 18-15 Volume B (annotated with deviations)
COMMUNICATION WITH DONOR ORGANIZATION
LEARNING OBJECTIVE 4

DESIGN & CONSTRUCTION TECHNOLOGY
TECHNOLOGY

Maximize budget and schedule efficiencies
The team used the latest and greatest technology from design through construction to collaborate and innovate.

VIRTUAL DESIGN & CONSTRUCTION

THIS HELPED TO SAVE TIME AND MONEY
Process used with Leo A Daly:

- **Design Phase Coordination Review**: Track design model progress and updates from week to week
- Using Model-Based Estimating and trend reporting
- **Model-based Constructability Reviews**: Real-time BIM coordination as design evolves
THE RESULTS

- ZERO utility strikes
- Found a main hospital ductbank at 0.8’ below existing grade
  - Saved an estimated $450k in electric backup costs, and approximately 4-6 schedule delays
- Provided updated and accurate sanitary and storm alignments and connectivity
- Found buried manhole
- Provided updated and accurate alignments of all communication and fiber optic alignments

SUBSURFACE UTILITY MAPPING

Our in-house McCarthy Mapping team prior to excavation, was able to identify several unmarked utility lines that would have resulted in significant cost overruns and schedule delays had they been encountered during construction.

“By McCarthy performing their own underground utilities mapping, earthwork, site utilities, concrete and steel, it allowed for better control of the schedule, safety and quality expectations from the very beginning of the project, which saved time, money and stress.”
—Susan Morris, President, Heritage Services
CONSTRUCTION TECHNOLOGY

VA Omaha Story and Benefits:

- Early collaboration with design partners to implement a cohesive VDC process
- BIM Execution Plan which set the roadmap for digital success
- Design Phase Coordination & Constructability review of models prior to trade coordination start
- Builder-led 3D Trade Coordination for effective management and sequencing of building system
- Field technologies used to enhance the use of BIM to the field
PROJECT OVERVIEW
ARIAL VIEW OF CONSTRUCTION
GROUND LEVEL PLAN

VETERANS AMBULATORY CARE CENTER
FIRST LEVEL PLAN

VETERANS AMBULATORY CARE CENTER
SECOND LEVEL PLAN
DRIVING CONCEPTS

Elements of Design
With freedom and sacrifice in mind, the glass wall encased atrium stands as a monument to an American Flag frozen in time. Rolling wind-fed ripples of the fabric are metaphorically framed within horizontal waves of the glass. Chiseled metal beams dart across the wall face, securing the structure while symbolizing the creasing which occurs during the sacred act of folding the flag.

Within the peaks, valleys, and folds of the figurative American Flag, every person that walks through the atrium is enveloped in the freedom that comes from our veteran’s sacrifice.
As a Limestone Wall

Binding our service men and women together, and the very fabric of our society, is the enduring principle of duty. In answering that call of duty when placing boots-on-the-ground, the veterans in our community have touched the soil in nearly every corner of the world.

At the completion of their loyal service awaits a hopeful return to the Heartland. As they settle back into their Midwestern roots, for many of our veterans, the toiling work ethic formed from serving our country is channeled into the agrarian labor of the soil.

This parallel metaphor of soil was inspired by the chapel within the VA Medical Center. Originally constructed in 1950 during the post-World War II era, the chapel floors are entrenched with sand brought back from Iwo Jima.

With the stratification that occurs in the creation of limestone over time, the wall is a reminder of the layers of conflict, wars, and missions our soldiers have dutifully served, the soil that they bring home form these lands, and the soil they return to.
Honor is the lasting legacy of our veterans. The ribbon racks that our service men and women wear on their uniforms is more than just a list of accomplishments; it’s an outward symbol of the honor they hold in their hearts.

So as to remind each person of this honor as they walk into the VA Ambulatory Care Clinic and Medical Center, the entry hall is filled with varying hues of glass panes that emulate the ribbons on a rack. As the day grows old and sunlight from the west bellows through the windows, an illuminating effect occurs, bathing all that walk down the corridor with a colorful warmth that represents the honor of our veterans.
EXTERIOR RENDERED CONCEPTS
INTERIOR RENDERED CONCEPTS
INTERIOR VIEW
Reception Space
INTERIOR VIEW
Waiting Area
INTERIOR VIEW
Women’s Clinic
CONSTRUCTION PHOTOS
THANK YOU