VA Omaha Ambulatory Care Center

SAME: Engineering Presentation

Ryan Curtis, PE & Kim Cowman, PE

July 6, 2021

Learning Objectives

- Navigating a P3 Project
- Overview of Building Design and Engineering Integration
- Early Contractor Involvement

The Society of SAME American Military Engineers Omaha Post

LEO A DALY

Presenters

KIM COWMAN, PE

Vice President,
Director of Engineering

Kim is the National Director of Engineering for LEO A DALY. She leads the overall engineering practice across the company focusing on overall strategic growth and best practice development. Kim is also a licensed mechanical engineer with extensive healthcare experience. She was lead mechanical engineer for the AAC. Kim is married with 2 kids.

Presenters

RYAN CURTIS, PE

Senior Associate,
Senior Project Engineer

Ryan is an integral member of Omaha's healthcare design team, providing excellence and consistency in leadership and technical expertise. His primary focus is the design, construction administration, and project management of healthcare facilities. Ryan is married with 5 children and loves math.

Objective 1

Navigating a P3 Project

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The construction site Wednesday of the planned VA medical center in Aurora, Colo., which was designed to serve nearly 83,000 veterans.

FIRST IN THE WORLD-HERALD

Omaha nonprofit commits $30 million to partnership with VA to build clinic on hospital grounds

By Steve Liewer / / World-Herald staff writer Apr 20, 2017

$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

P3
Public
Private
Partnership

“CHIP-IN FOR Vets Act” - 2016

Mechanism for VA Health System to Partner with “private entity”

First if its kind in the United States

“Trailerblazers"

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PG 18-15
VA PSDM

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$_{WR}$ 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 shall 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 soft metric (S.I.) 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 other 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:

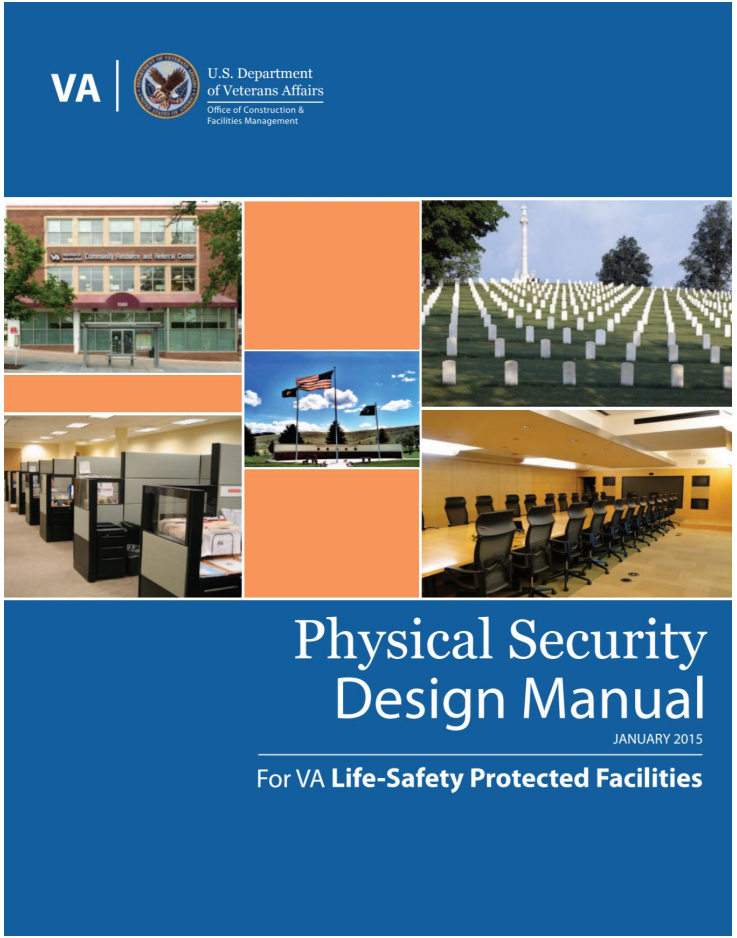
Submit the updated Basis of Design (BOD) report including:

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 department and building total, number of patient rooms and beds by floor, and construction type.
e. Special construction requirements, such as radiation shielding.
f. Physical Security requirements.

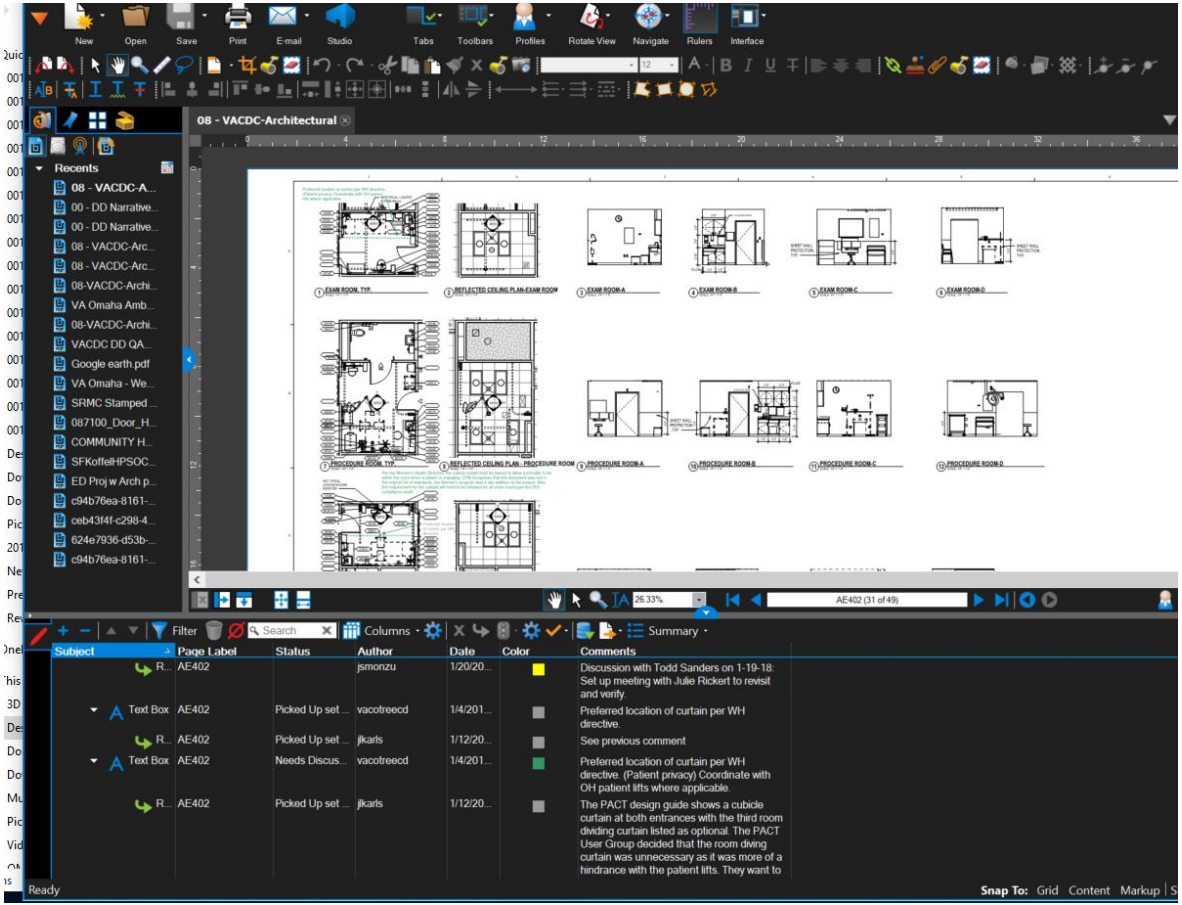
Drawings

Submit:

a. Cover Sheet with project name and address, VA project number, location map, signature block, name and address of VA, architect, engineers, and other consultants.
b. Project Data Sheet with index of drawings, legend of abbreviations and symbols, and code analysis.
c. Room Data Sheets for each typical room in the project as outlined in DD1.



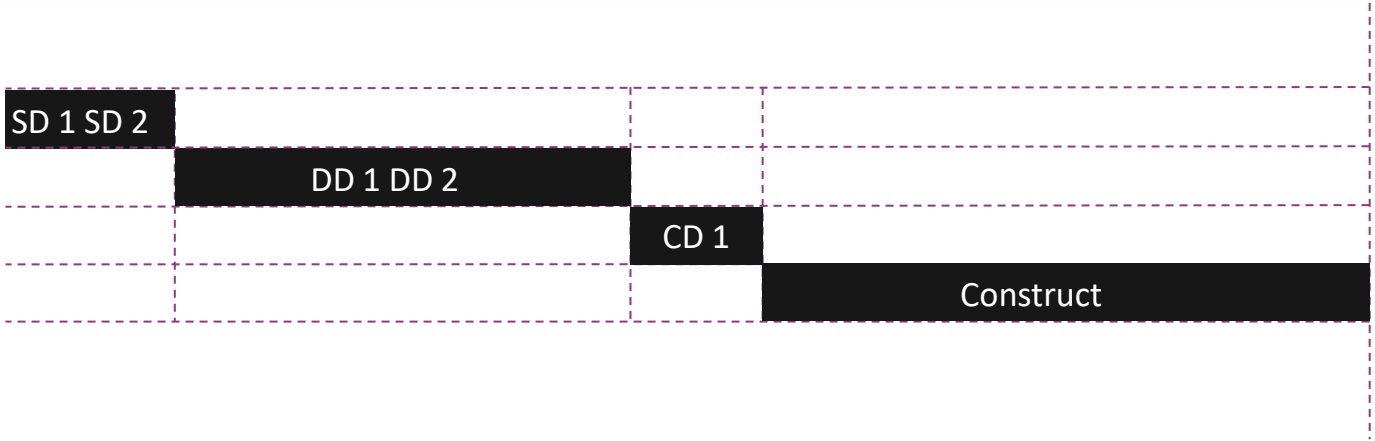
BLUEBEAM SESSIONS



TIMELINE

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

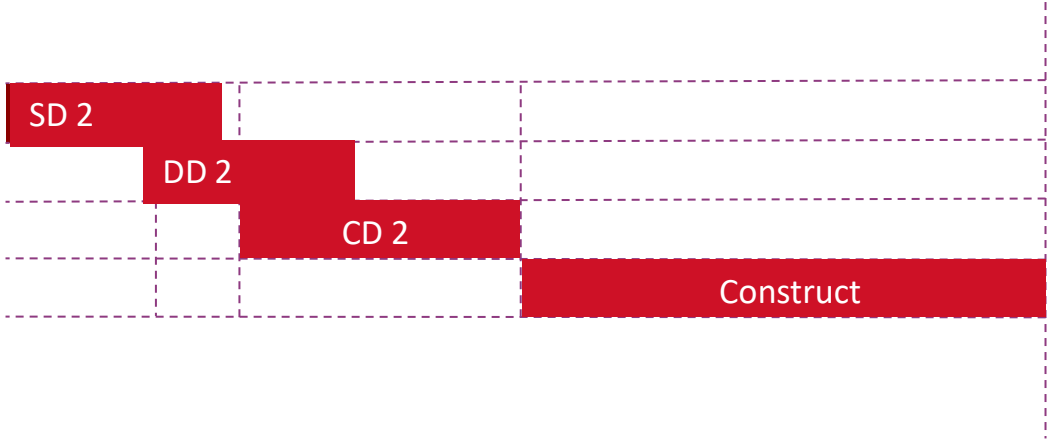


52 Months

TIMELINE

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



36 Months

Objective 2

Overview of Design Components and Engineering Integration

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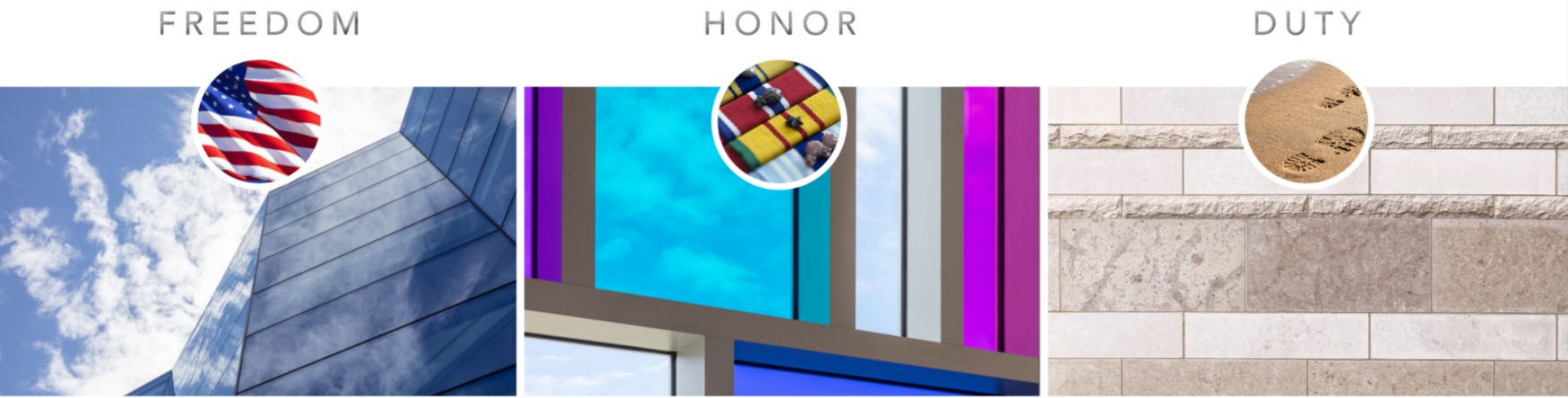
The patient journey is designed with a singular focus on overall wellness for the veterans.



Three bold aesthetic strokes unfold using abstracted symbolism to convey gratitude.

Site-Materials-Symbolism

The north façade curtain wall resembles a windblown American flag, guiding veterans to the main entrance.

In the waiting area, sedimentary layers of a limestone wall signify soil tracked home amid periods of peace and conflict.

An expanse of multicolored glazing, suggestive of military ribbons, greatest veterans upon entry and creates a new gateway to the VA campus.

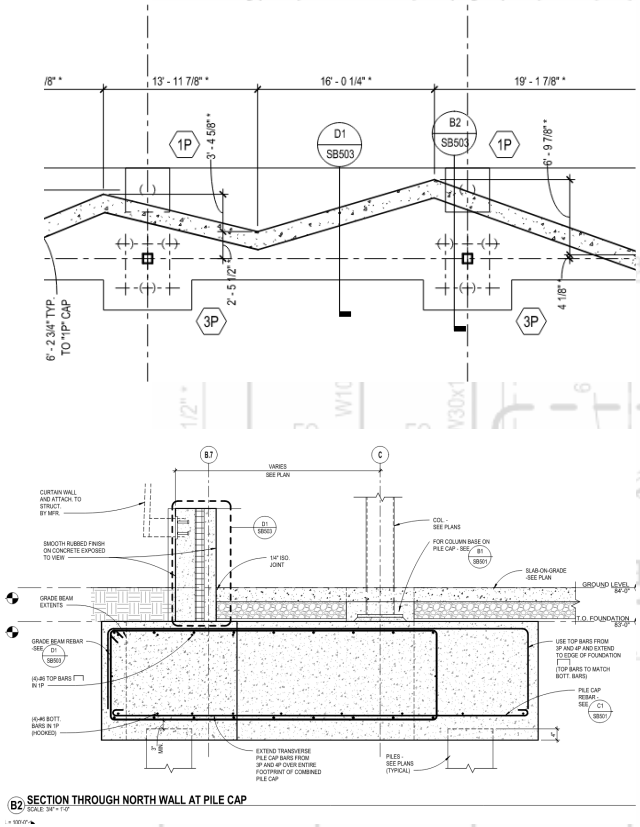
Site / Earthwork

Site / Earthwork

Storm Water Management

- Increased vegetated area post-development
- 100% of stormwater is managed on-site
- Stormwater runs through on-site detention basis and flows through landscape that doubles as a walkable “healing garden”

Site / Earthwork



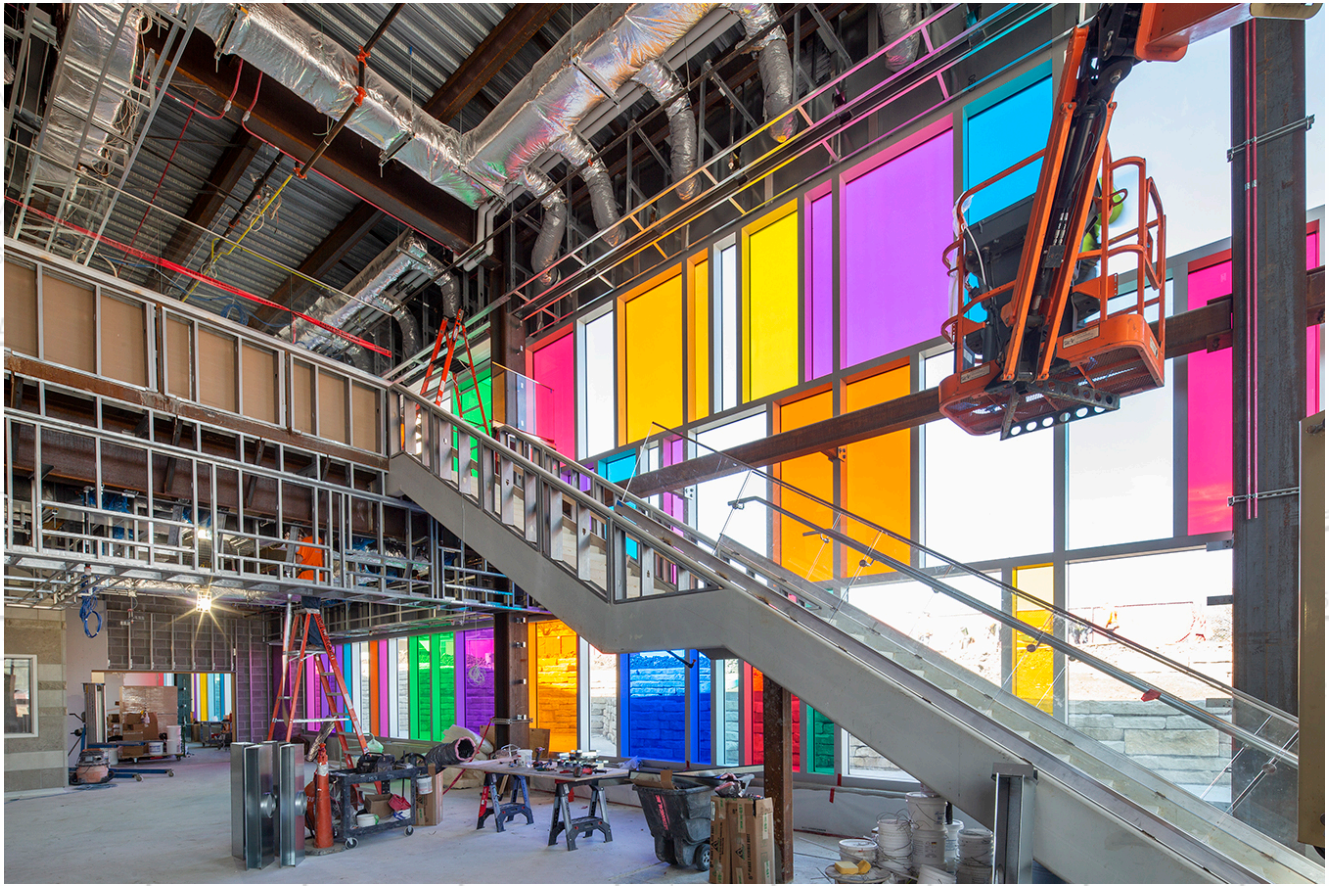
B2 SECTION THROUGH NORTH WALL AT PILE CAP
SCALE: 3/4" = 1'-0"

Superstructure

Skin

- Curtain Wall
- Metal Panel
- Precast
- Brick
- Stone
- Screen Wall System

Vibration



Lighting Design

- PACT programming model – Patient Aligned Care Team
- Lighting automatically changes throughout the day
- Emulating daylight and giving staff a sense of the passage of time
- VA first to incorporate this technology.

Lighting Design

- Integration with interior design and architecture
- Lighting tuned to compliment interior finishes and furnishings
- Angle lighting in lobby mirrors the angles of the “flag” curtain wall
- Intuitive and automated lighting controls

Mechanical Design

- Level 2 Surgery Structural and Mechanical Coordination
- Operating room design temperatures out of “typical VA range”
- Desiccant wheel at surgery unit to maintain temperature and humidity
- Unoccupied airflows for energy savings at operating rooms

Mechanical Design

- Packaged chiller plant to serve Ambulatory Care Center
- Flexibility in future for potential chilled water utility connections
- Location adjacent to existing boiler plant provided additional site opportunities at the Ambulatory Care Center for patient healing gardens

Objective 3

Early Contractor Involvement

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- Understand Construction Schedule
- Understand Constructability
- Delegated Design Items vs EOR
- Ownership & Teamwork


THANK YOU
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