

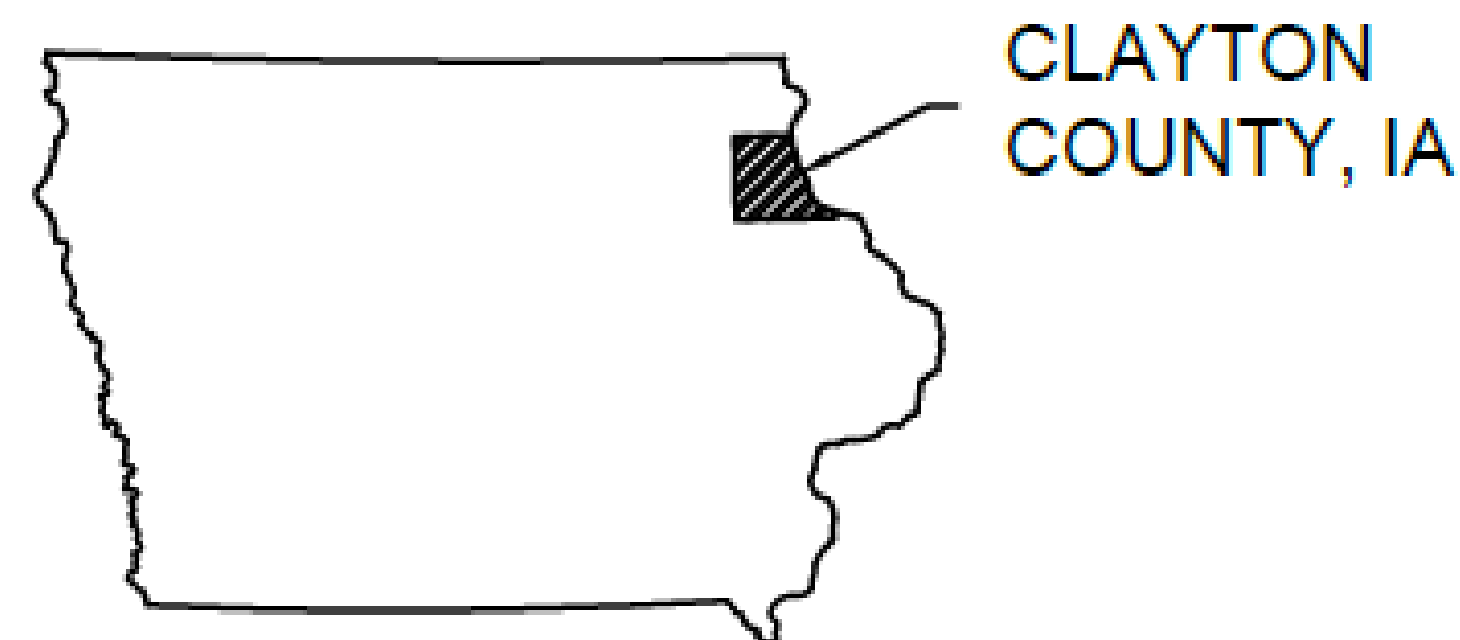
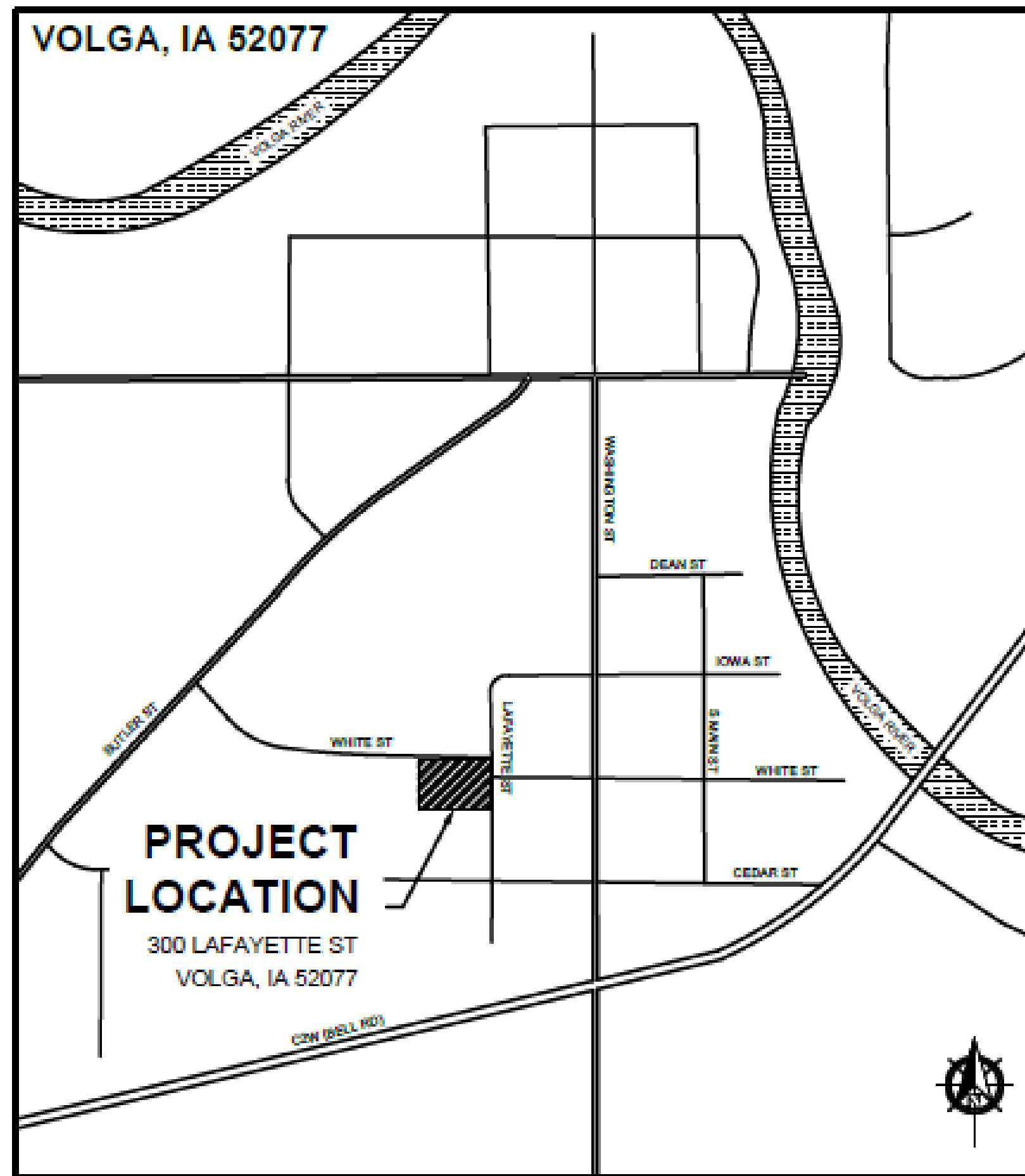
# PROPOSED FIRE STATION EXPANSION

Client: VOLGA FIRE DEPARTMENT

Team Members: Mitch Vogt & Schuyler Bell  
 Department of Civil & Environmental Engineering  
 The University of Iowa

May, 2020

## Project Location



## Design



Figure 2. Proposed Floor Plan

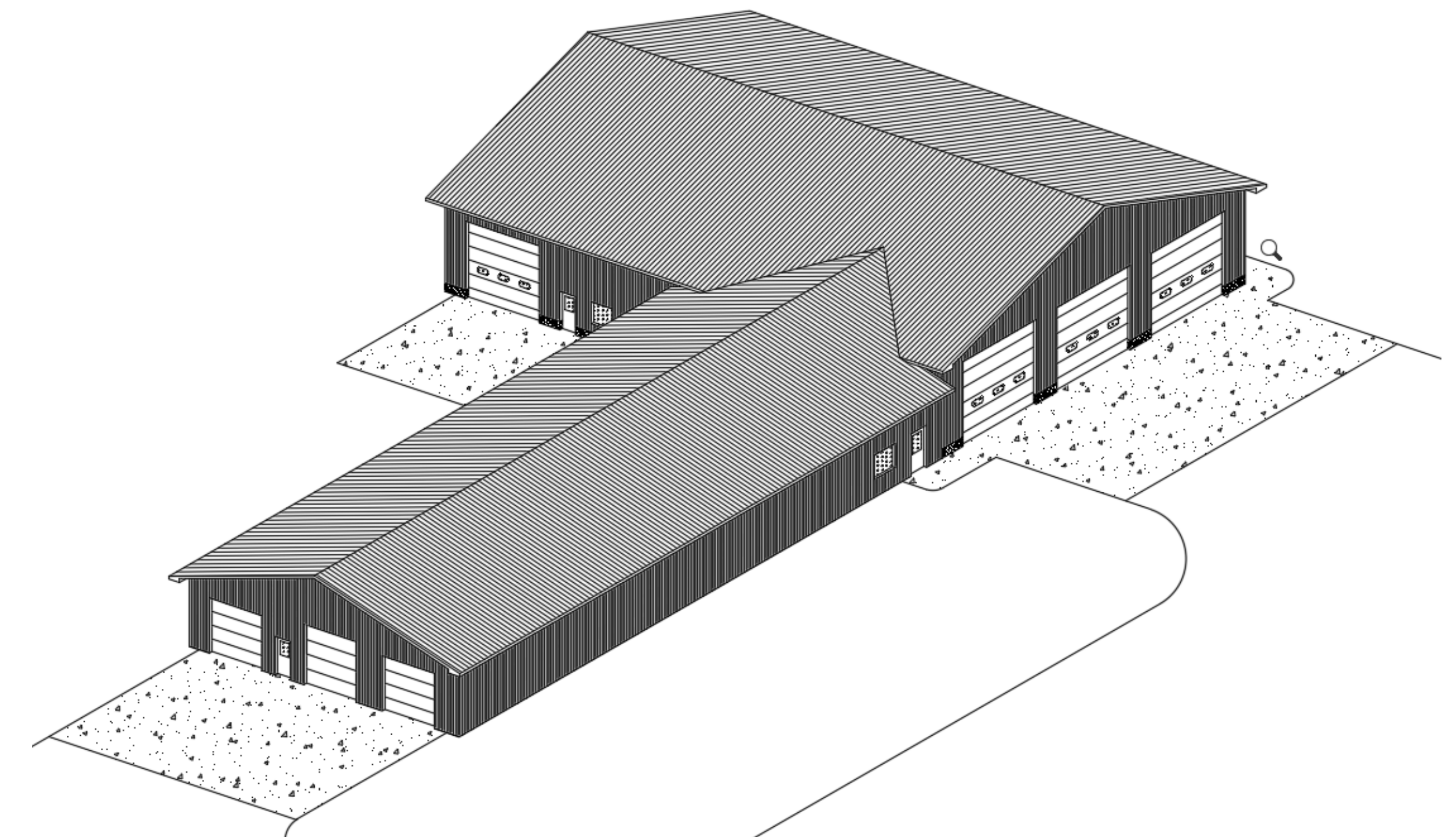


Figure 3. Proposed Perspective View

## Design Overview

- Type IV Non-Sprinklered Construction
- 100% Type U Occupancy
- 5,260 SF Addition (88' x 58')
- 8,880 Total SF
- Post & Beam Construction
- 14' Overhead Doors
- Continuous Stem-Wall Foundation

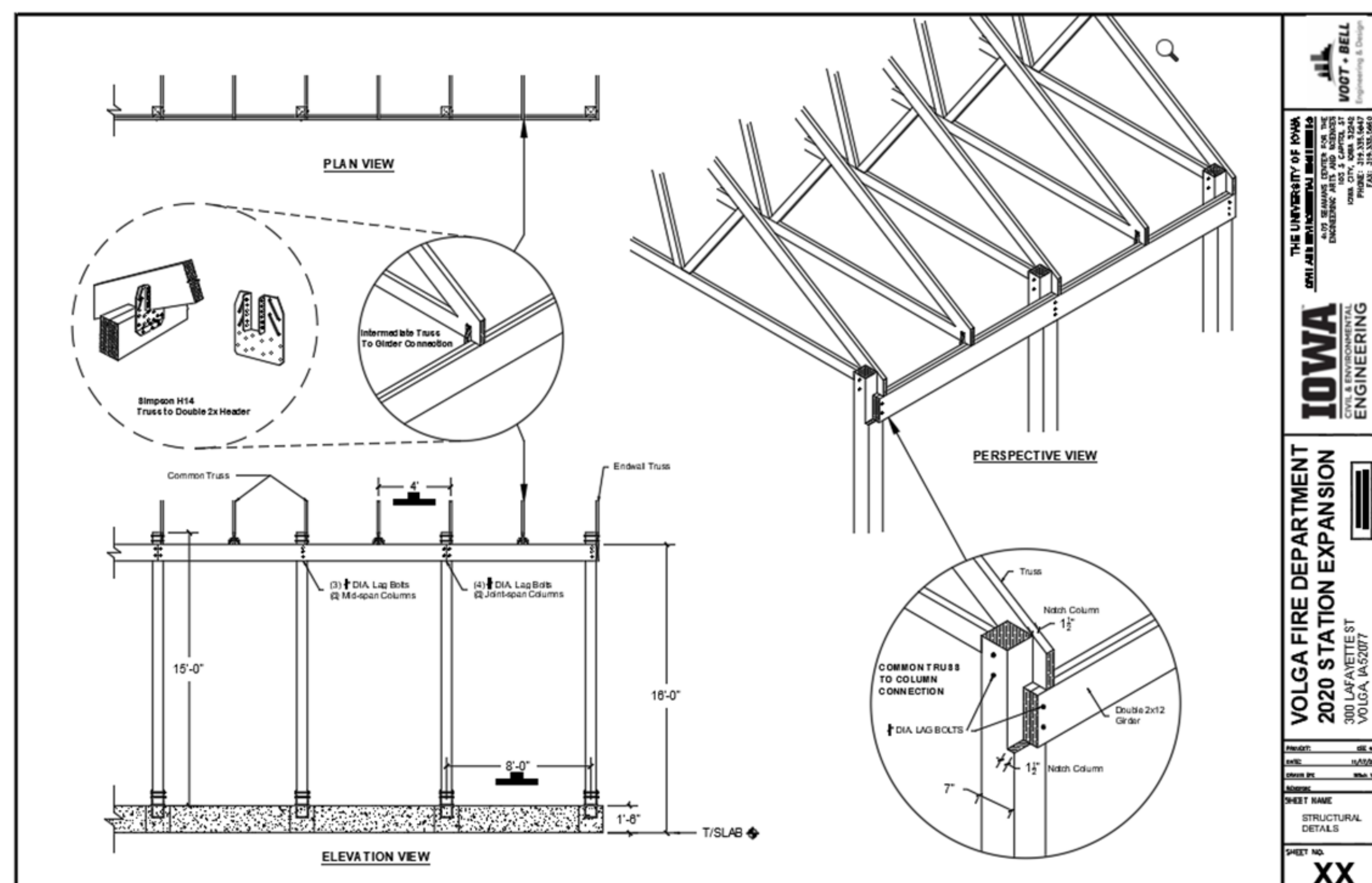


Figure 4. Structural Details

## Design Objectives

- Alleviate Crowding & Create Storage
- Partitioned Space for Multiple, Separate Uses
  - Fire, EMT, City Office, Street Department, Emergency Ops.
- Reconfigure Garaging with 1:1 Truck to Apparatus Bay
- Additional Restrooms
- Washbay

## Project Cost

- Structure Materials = \$119,000
  - Plumbing, Mechanical, & Electrical Materials = \$33,000
  - Engineering Consulting Fees = \$30,000
  - Labor = Volunteered
- TOTAL (Building) = \$182,000**

## Codes & Standards

ZONING CODE..... CITY OF VOLGA ZONING CODE  
 BUILDING CODE..... INTERNATIONAL BUILDING CODE (2015)  
 ENERGY CODE..... IOWA STATE ENERGY CODE  
 MECHANICAL CODE..... INTERNATIONAL MECHANICAL CODE (2015)  
 ELECTRICAL CODE..... NATIONAL ELECTRIC CODE (2014)  
 PLUMBING CODE ..... UNIFORM PLUMBING CODE (2015)