# **PLTW** Engineering

# **Project 3.1.1 Porterville Library Renovation**

## **Procedure**

The existing building is approximately 76ft x 124ft and 20ft tall and is gutted. No interior walls or fixtures remain. You will utilize the existing structure to its fullest extent and add a partial second floor to the structure. The part of the existing roof that is not enclosed for the new second floor will be converted to a green roof that will be accessible to the public.

You will redesign the existing building to create a plan for renovating the structure to serve as a public library. As necessary, you will replace existing building components or add new components to provide a safe and efficient building with adequate utilities and services. You will also create a site design that will provide sufficient parking, desirable traffic flow, and appropriate grading and storm water management.

### **Constraints**

- The design should follow all applicable building codes and local regulations.
- The existing structure will be fully utilized when possible.
- A new modern entryway and vestibule will be added to improve the aesthetics of the building, provide full accessibility, and include an exterior covered area with benches.
- An elevator must be provided for accessibility.
- First Floor plan must include areas designated for
  - Entry and Circulation Desk area
  - Children's Help Desk
  - Open area for stacks (shelves of books and media) and computer terminals
  - o Public restroom
  - Head Librarian's office
  - Staff workroom/ kitchenette
  - Staff restroom
  - Two meeting rooms
  - Porterville History room or special resource room
  - Mechanical room (opens to outside)
- Second Floor plan must include:
  - o Open floor area for stacks
  - o Public restroom

#### **Deliverables**

- 1. Project Documentation Report to include the following.
  - Title Page
  - Table of Contents
  - Project Description
    - Letter to the Mayor of Porterville describing the project, including existing conditions and proposed renovations. (minimum 500 words)
- 2. Set of Construction Drawings to include the following.
  - C-1 Site Plan
  - L-1 Landscaping Plan
  - A-1 First Floor Plan
  - A-2 Second Floor and Green Roof Plan (show location of vegetation and walking surface)
  - A-3 Interior Views of First Floor
  - A-4 Interior Views of Second Floor
  - A-5 Roof Plan
  - A-6 Two Elevations
  - A-7 Sections and Details
    - Building Section
    - Typical Wall Section thru two-story exterior wall with all components labeled
    - Wall Section through <u>new</u> second floor exterior wall with all components labeled
    - Detail view of the green roof showing all components
  - E-1 Electrical Plan of the Staff Workroom/kitchenette