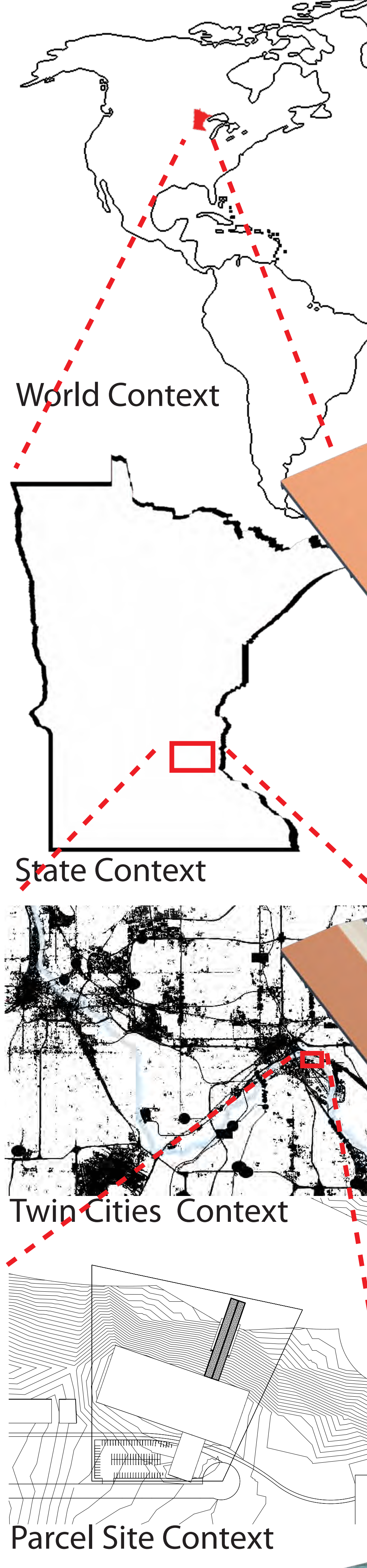
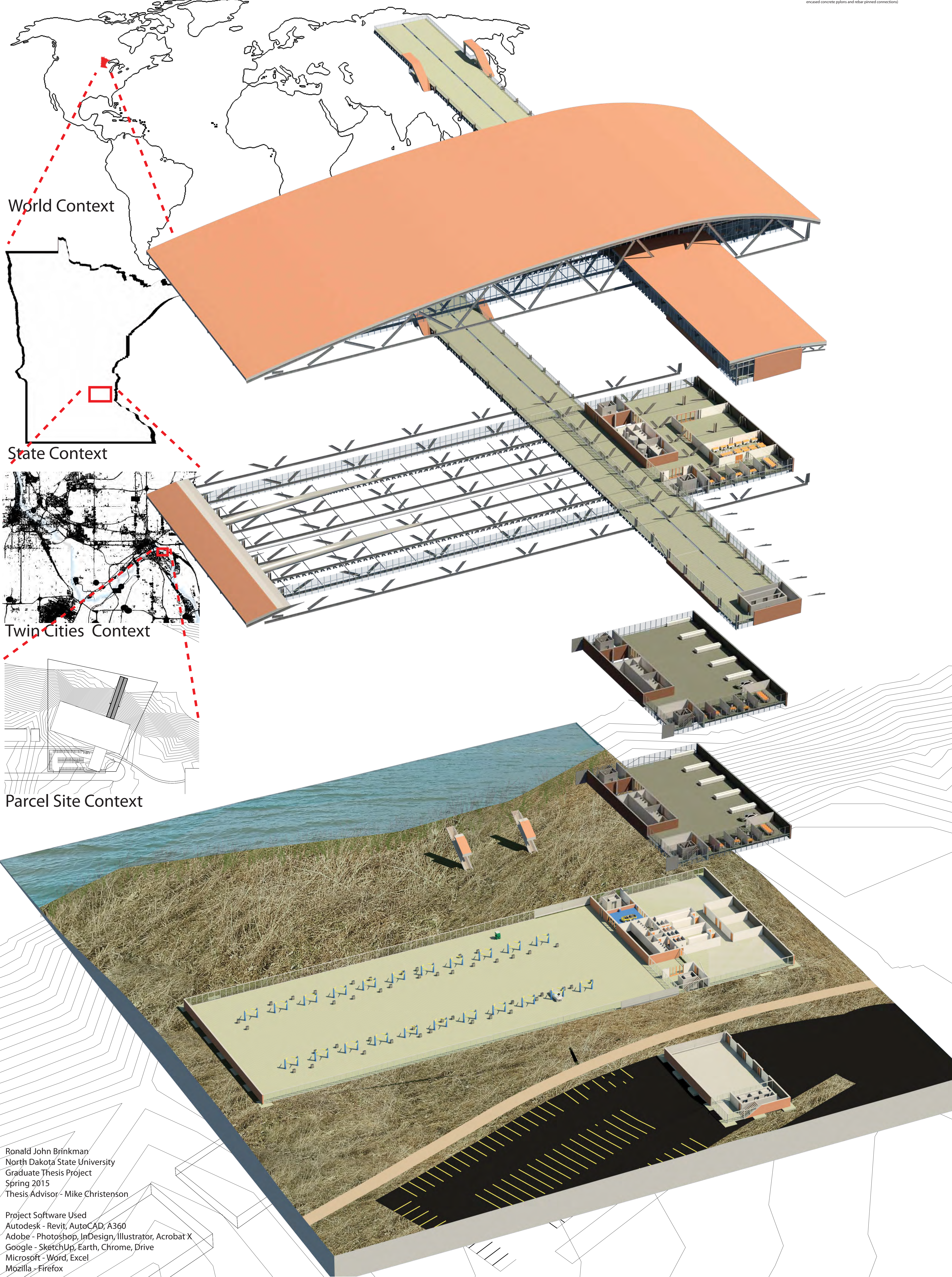
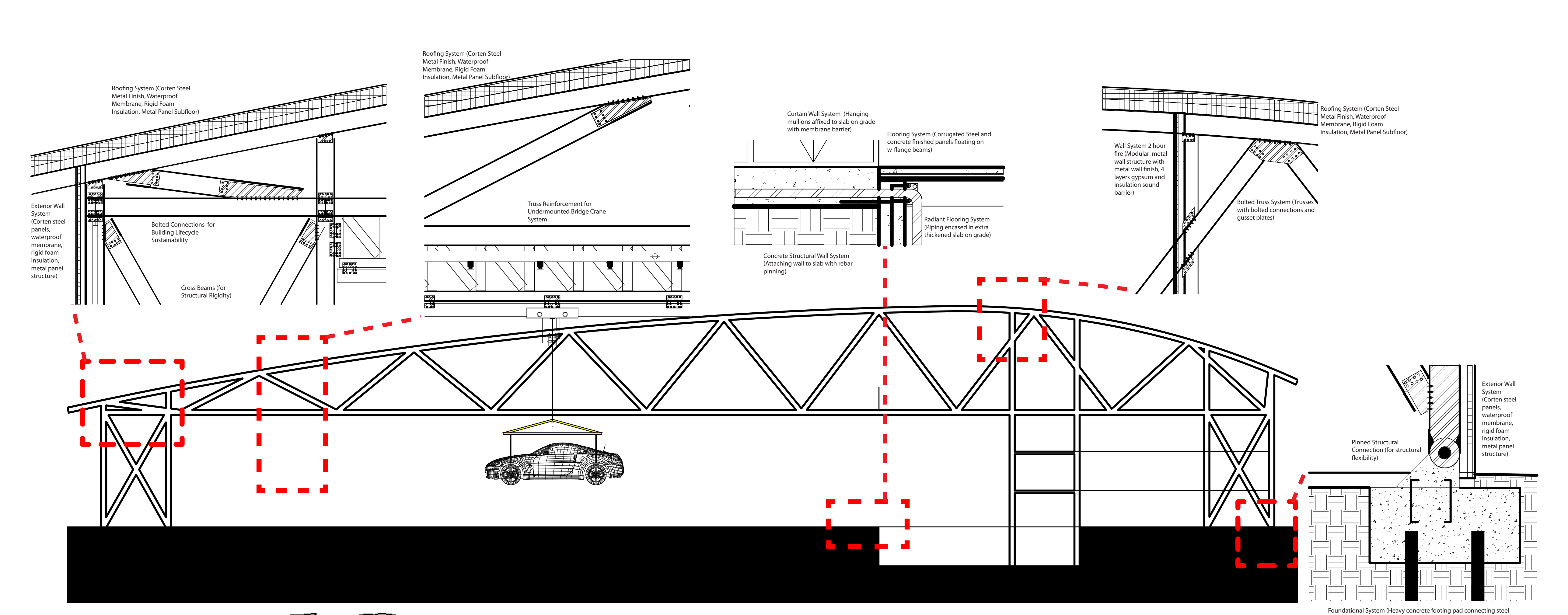
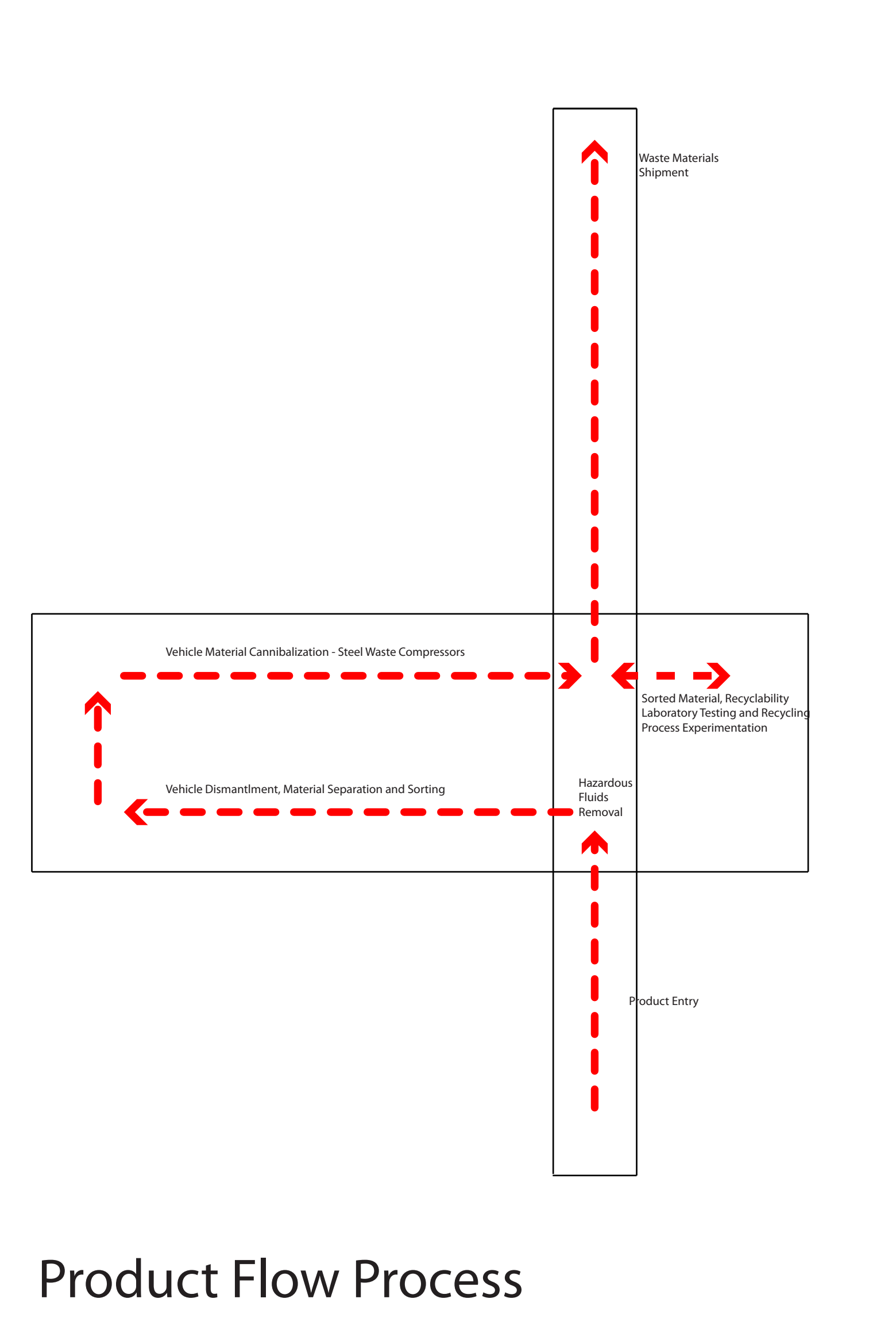
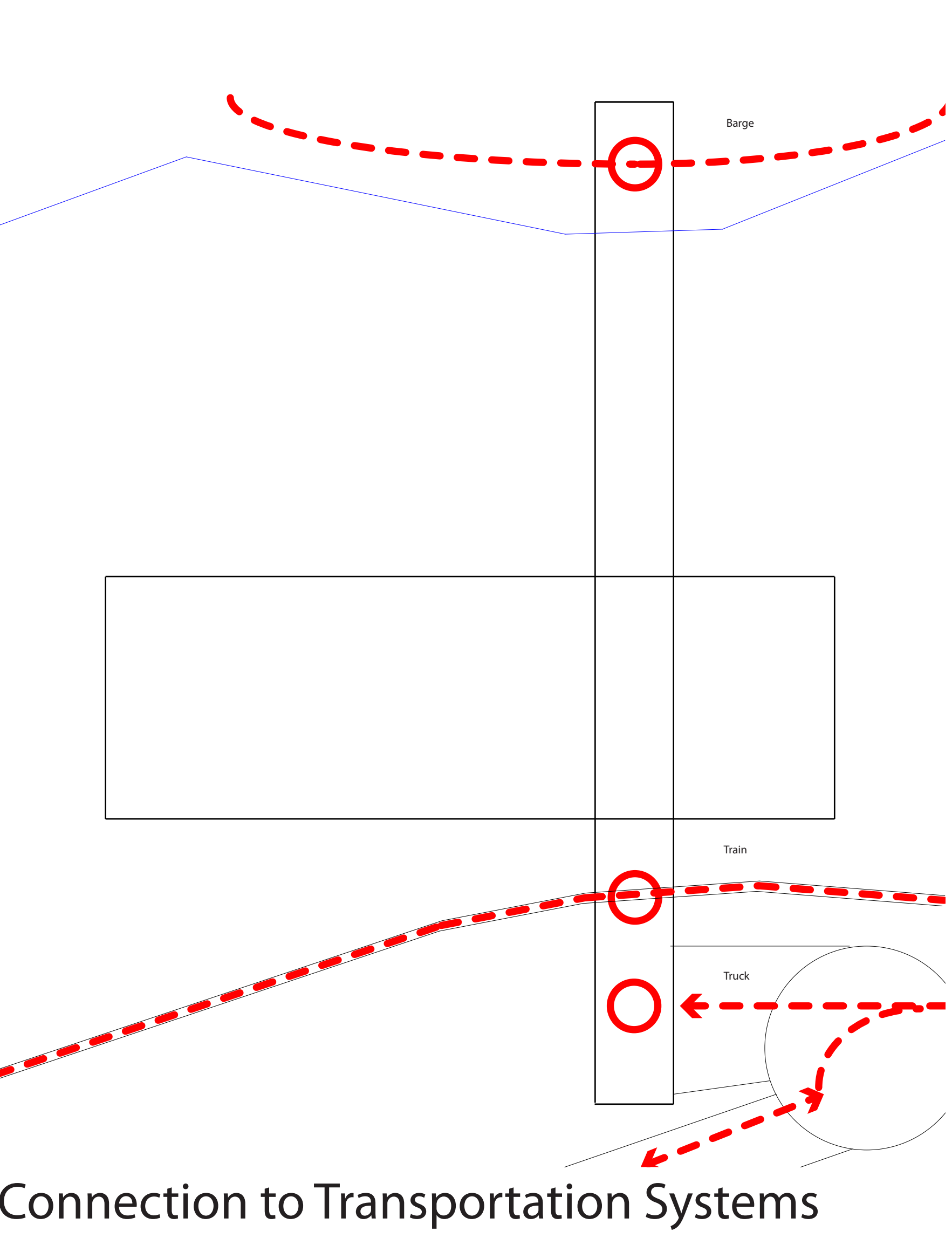
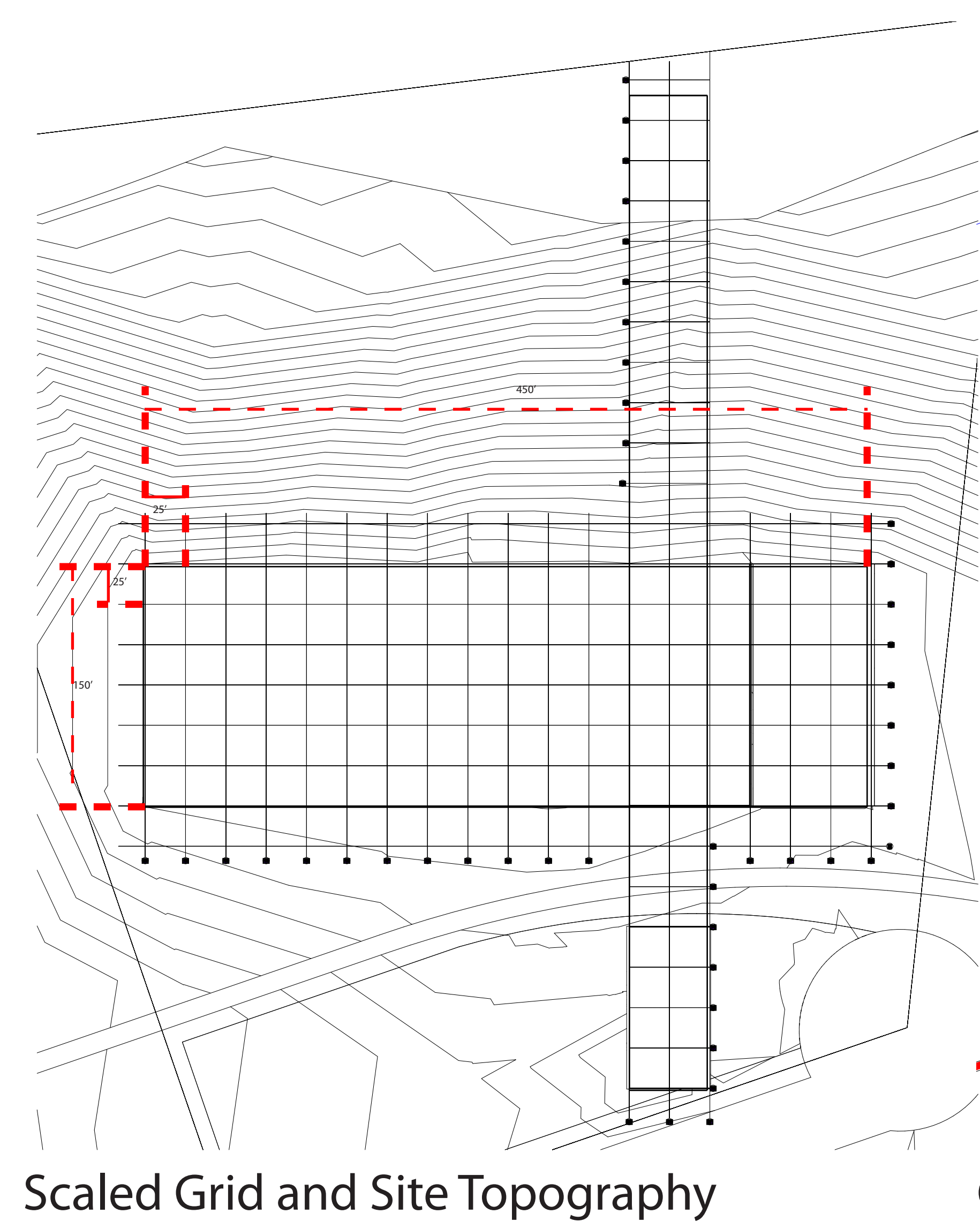


Automotive Recycling and Research Center



Ronald John Brinkman
North Dakota State University
Graduate Thesis Project
Spring 2015
Thesis Advisor - Mike Christenson

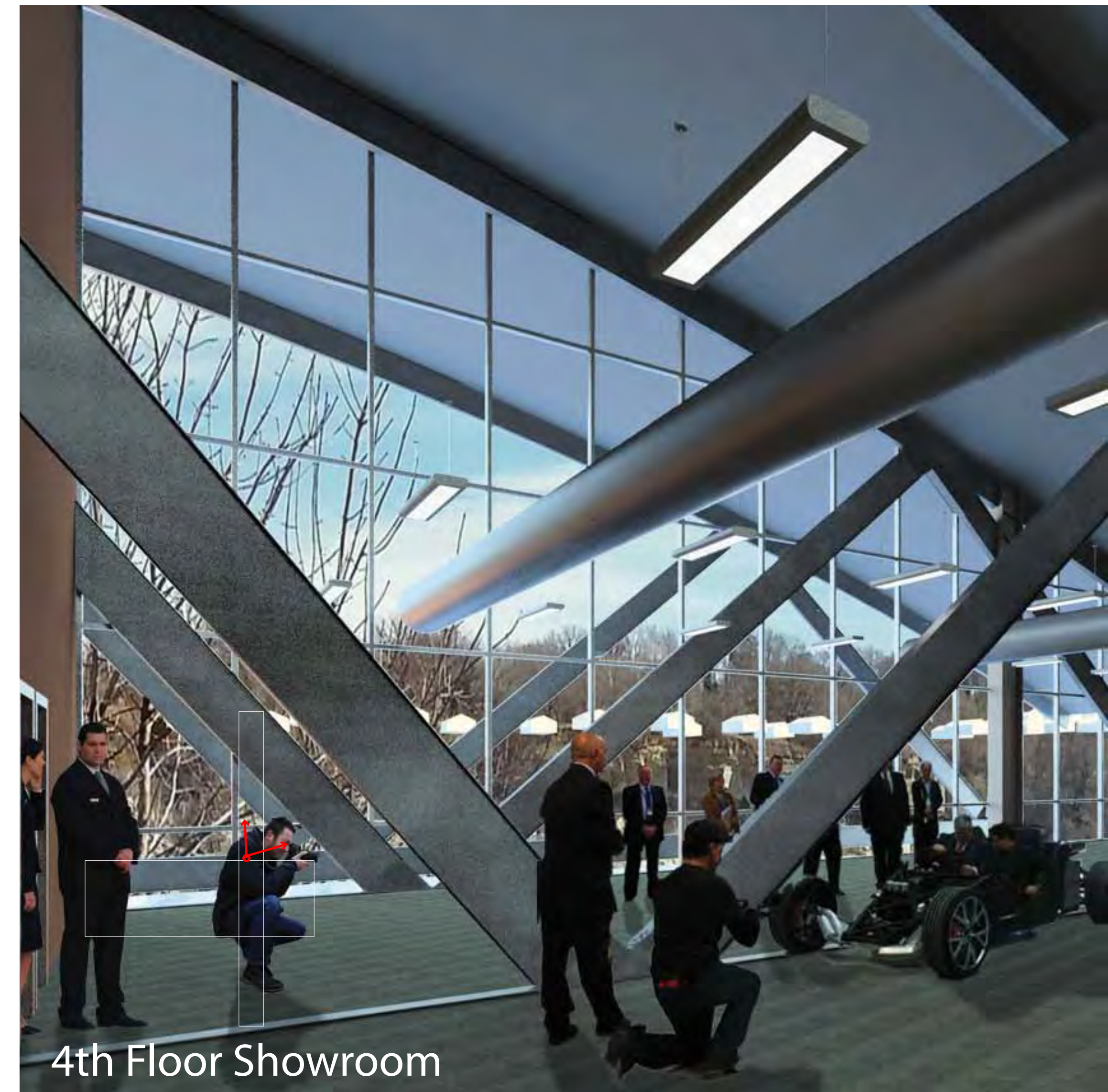
Project Software Used
Autodesk - Revit, AutoCAD, A360
Adobe - Photoshop, InDesign, Acrobat X
Google - SketchUp, Earth, Chrome, Drive
Microsoft - Word, Excel
Mozilla - Firefox



Skywalk - Main Entry



Skywalk - Viewing Deck



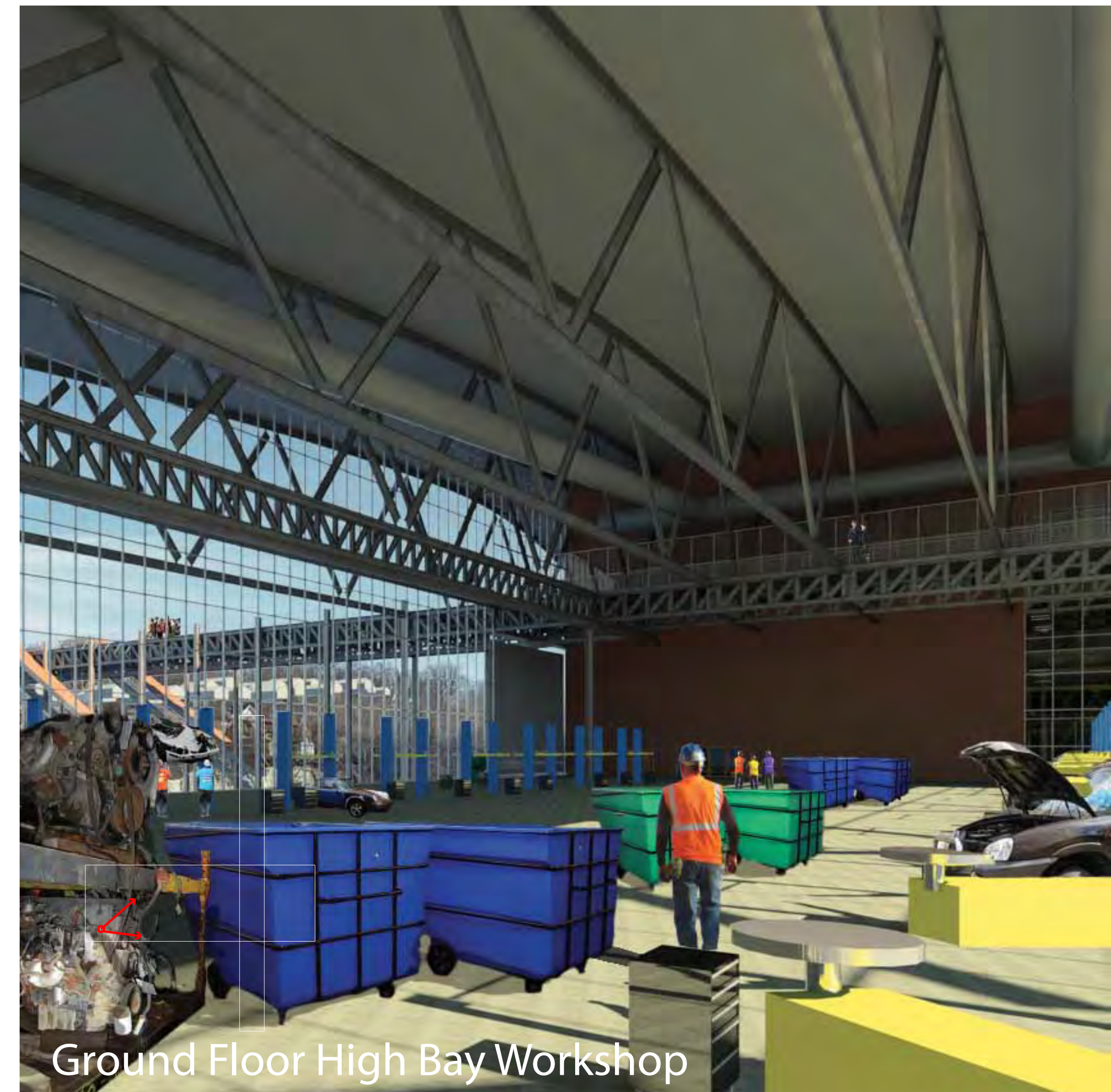
4th Floor Showroom



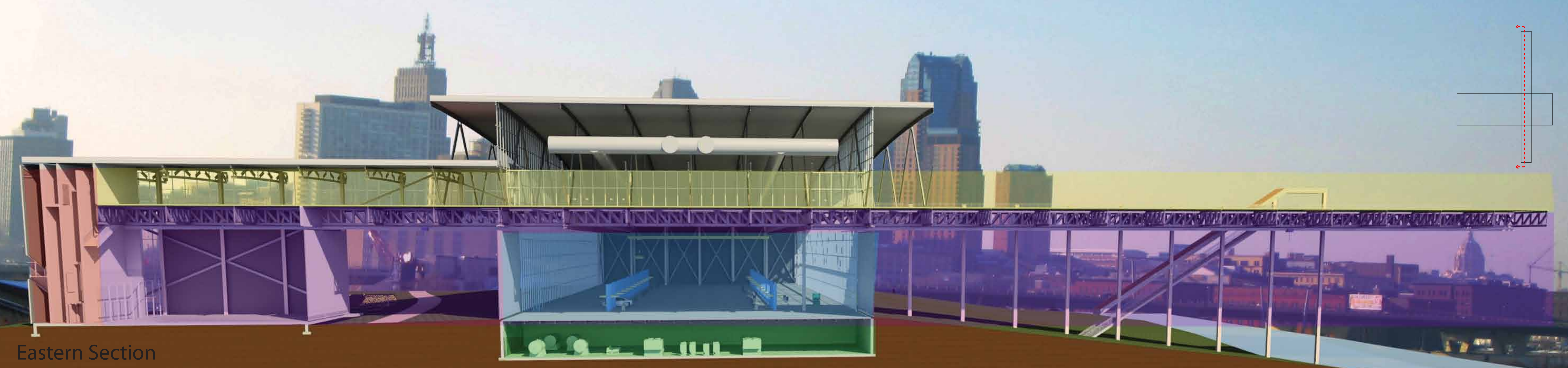
Skywalk - River View



2nd and 3rd Floors Laboratories



Ground Floor High Bay Workshop



Eastern Section

High Bay Workshop

High Bay Workshop spaces are essential for the deconstruction and dismantling of automobiles for this building. This serves as the majority of the enclosed space and features an overhead bridge crane to move all products around in the space. Additionally this space presents as the unique viewing area highlighting automotive recycling awareness and process research.

Viewing and Building Entry

This functions as the major circulation route for the building bringing the users (pedestrians and employees) above the train tracks. This also serves as the viewing platform for the dismantling workshops below. Finally a glass sliver in the floor allows for viewing the under-mounted gantry crane moving products into and out of the facility.

Mechanical and Equipment

The basement space serves as the major utilities equipment facilitation. This includes the major pumping, storing and routing equipment for the HVAC, Electrical, Plumbing, Sprinkling, Waste Disposal, and other hazardous material storages. This provides fire protection and safety of this equipment from others, while securing it in a closed environment.

Loading/Unloading

Underneath the Viewing Platform is a gantry crane facilitating the moving of all products into and out of the facility. This bridges the transportation systems vital to the automotive recycling industry in the region. Being able to access transportation by train, road and barge is crucial to shipping and function of the facility.

Vertical Circulation

Aside the horizontal Viewing Platform are the vertical circulation elements. Within this fire controlled and separated element are all the stair, elevator, mechanical and restroom systems. This also allows for a safety barrier from the laboratory and workshop spaces.

Laboratories and Offices

The Laboratory and office spaces are designed to be open and adaptable layouts for more specialized laboratory equipment introductions. This is where smaller scale, more controlled research is facilitated.

Showroom and Museum

Adjoining the Viewing Platform on the fourth floor of the facility is a showroom and museum space open to the public. This space was designed to be a unique expression of how the worlds of automotive and automotive recycling can mesh. By integrating the heavily assembled structural system into the room, with automotive recycling displays and products present a unique and educational experience to all who visit.



Southern Section