

## Executive Summary

The Princeton Theological Seminary Library is characterized by wide open, tall spaces and stone materials that match those used in the attached Luce Library. Located on the campus of the Princeton Theological Seminary, the new addition to the library proudly represents the historic and prestigious nature of the school. The following proposal aims to enhance these natural characteristics and create an iconic image of the library and the school.

The content of this proposal includes lighting designs for four public spaces, electrical power distribution designs, an architectural study and a structural study. The lighting designs include a description of each space, important design criteria, performance information, lighting controls and renderings. The electrical power changes are broken up into two depth topics. This includes altering the lighting panels based off the new lighting designs and designing a dual bus system within the building to run designated equipment on DC power. DC power with AC backup is supplied to the new LED luminaires around the atrium and the existing IT equipment in the seminar rooms. These devices that are naturally run on DC power are linked to a ceiling grid system that is actively powered by DC current supplied by the existing photovoltaic array. To further enhance the performance of the atrium and surrounding spaces, the architectural and structural studies are focused on this area of the building as well. The architectural changes aim to increase daylight availability and create a centralized circulation path from the addition to the Luce Building. The removing and relocating of the bridges within the atrium, for these purposes, provides opportunity to perform a structural study to resize the members and columns added or changed by these architectural alterations. Both topics first study the existing systems and performance in order to make logical improvements to the space.

This work, combined into one proposal, aims to enhance the character of the library and take advantage of opportunities for energy savings, new technology use and most importantly, in creating an iconic and respectable image for the Princeton Theological Seminary.