



Lauren D. Armeneau

PORTFOLIO

Selected Works ~ 2018
University of Calgary



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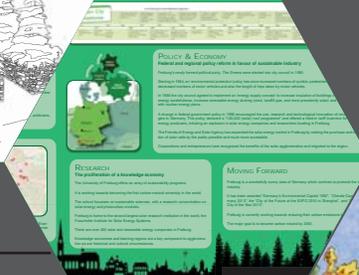


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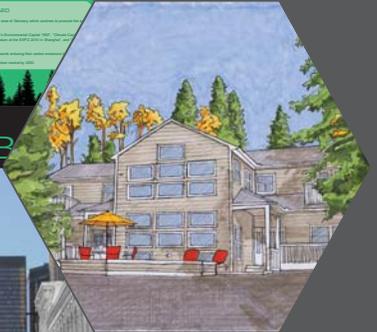


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Paris, France



Florence, Italy

Architectural Travel Photography

The collection of photographs featured above and on the following page were taken in August 2015 during my travels in Europe. I used a Canon DSLR T5i camera to take HDR images.

Landscape Travel Photography



Santorini, Greece

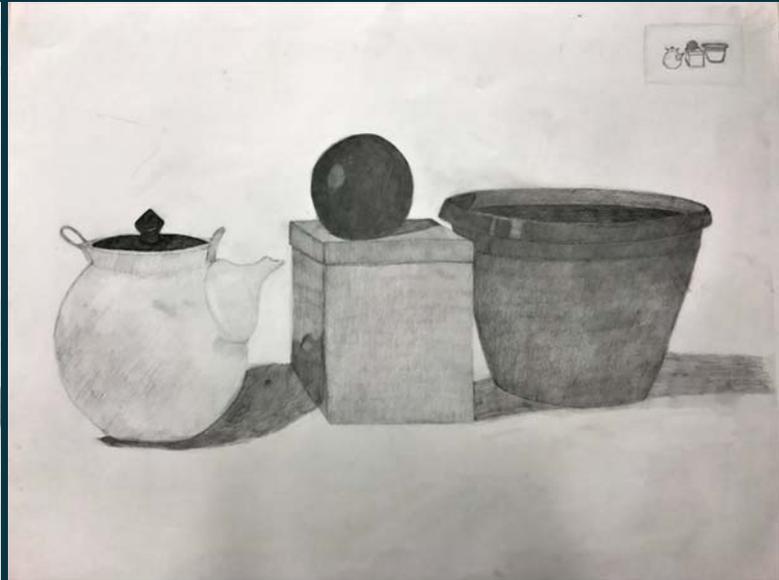
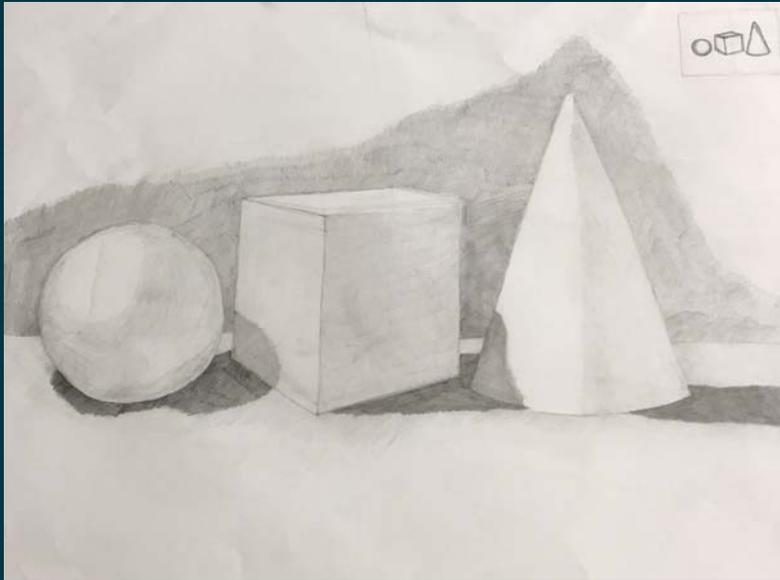


Florence, Italy

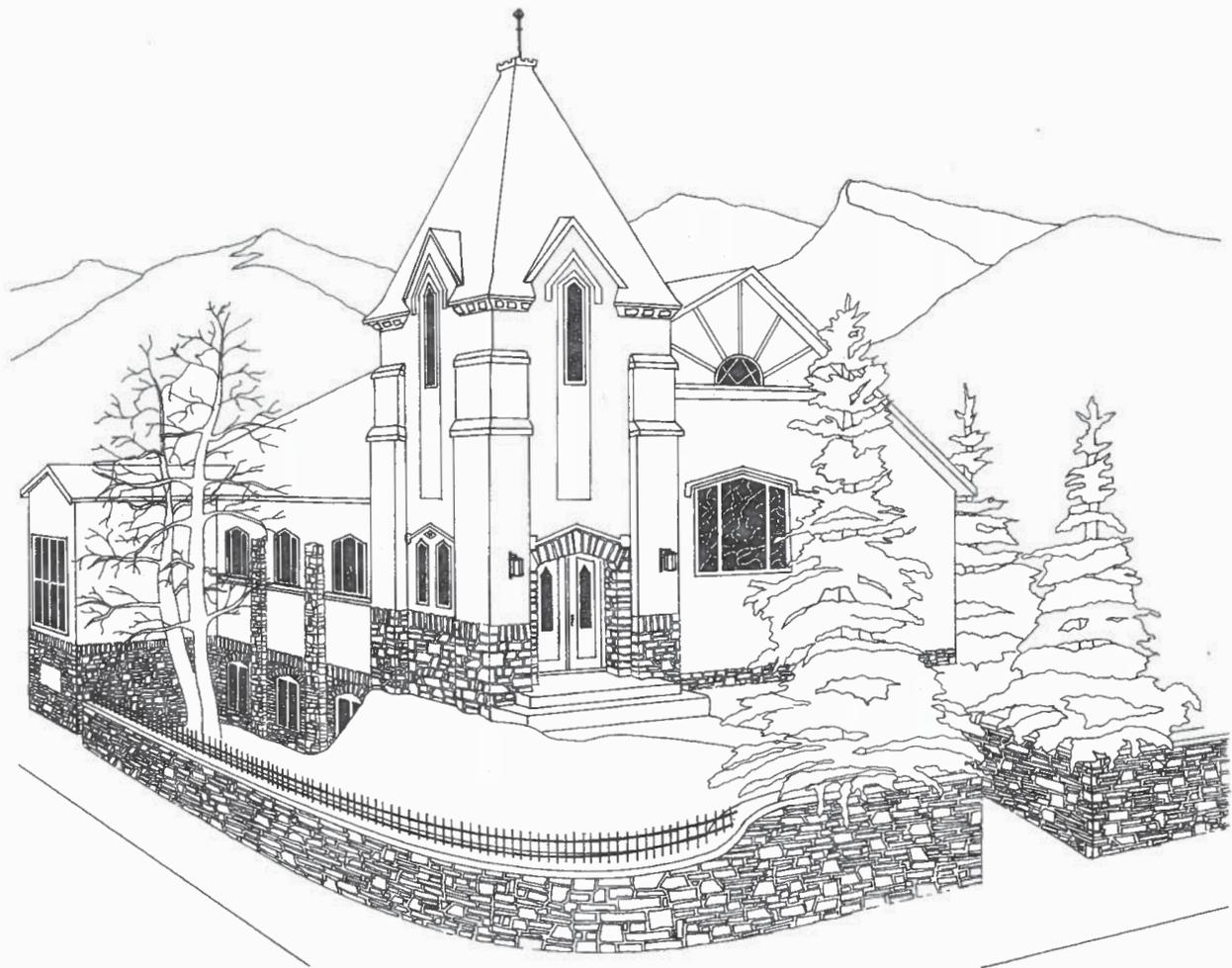


The Acropolis, Athens, Greece

Still Life



Still life projects from Continuing Education ART 314. Exploration of perspective drawing using geometric shapes. For this project I used graphite pencils on mayfair paper.



RUNDLE MEMORIAL UNITED CHURCH — BANFF, ALBERTA

Ink Line Drawing

This drawing of the Rundle Memorial United Church in Banff, Alberta, was created on an 11" x 14" sheet of 2 ply bristol paper using technical pens. From photographs I took of the church, I drew front and side elevations as well as a plan view. From those drawings, I drew this two point perspective. This church has significance in that my parents were married here in 1990.

WHY FREIBURG?

A combination of social movements, policy implications, and educational reforms have played the most significant role in sparking the green movement.

The solar industry is the most prominent renewable energy industry in Freiburg.

The city of Freiburg currently has a reputation for being one of the greenest cities in the world.

Year	Event
1973	Oil crisis
1974	First solar collector in Freiburg
1975	First solar collector in Freiburg
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2019	First solar collector in Freiburg
2020	First solar collector in Freiburg
2021	First solar collector in Freiburg
2022	First solar collector in Freiburg
2023	First solar collector in Freiburg
2024	First solar collector in Freiburg

SOCIAL

It all began with a social movement...

Members of the community successfully protested the construction of a nuclear power plant in the neighboring town of Wyl.

This movement sparked a culture for green innovation.

Organizations were founded between networks of environmentalists, politicians, business leaders and research organizations.



POLICY & ECONOMY

Federal and regional policy reform in favour of sustainable industry

Freiburg's newly formed political party, *The Greens* were elected into city council in 1980.

Starting in 1984, an 'environmental protection' policy has since increased numbers of cyclists, pedestrians and transit-riders, and decreased numbers of motor vehicles and also the length of trips taken by motor-vehicles.

In 1986 the city council agreed to implement an 'energy supply concept' to increase insulation of buildings in order to decrease energy wastefulness, increase renewable energy sharing (wind, landfill gas, and most prevalently solar) and to not go forward with nuclear energy plans.

A change in federal government policy in 1998 encouraged the use, research and technological innovation of renewable energies in Germany. This policy declared a "100,000 (solar) roof programme" and offered a feed-in tariff incentive for renewable energy producers, initiating an explosion in solar energy companies and researchers locating in Freiburg.

The Friends of Energy and Solar Agency has expanded the solar energy market in Freiburg by making the purchase and installation of solar cells by the public possible and much more accessible.

Corporations and entrepreneurs have recognized the benefits of the solar agglomeration and migrated to the region.

AGGLOMERATION

The 22 red stars on this map of Freiburg represent the locations of a good majority of the various solar research institutes, solar energy equipment suppliers, universities and non-profit organizations for solar research. It demonstrates the proximity of firms in the solar industry in Freiburg, proving the agglomeration of the industry. Most of the research institutes are located in the large cluster in central Freiburg, and the suppliers are clustered on the periphery, with the exception of a few. Firms exhibited include: Fraunhofer-Institut für Solare Energiesysteme ISE, International Solar Energy Society (ISES), the Solar Info Center and others.



RESEARCH

The proliferation of a knowledge economy

The University of Freiburg offers an array of sustainability programs.

It is working towards becoming the first carbon-neutral university in the world.

The school focuses on sustainable sciences, with a research concentration on solar-energy and photovoltaic modules.

Freiburg is home to the second largest solar research institution in the world, the Fraunhofer Institute for Solar Energy Systems.

There are over 450 solar and renewable energy companies in Freiburg.

Knowledge economies and learning regions are a key component to agglomeration as are historical and cultural circumstances.

MOVING FORWARD

Freiburg is a wonderfully sunny area of Germany which continues to promote the solar industry.

It has been awarded "Germany's Environmental Capital 1992", "Climate Capital Germany 2010", the "City of the Future at the EXPO 2010 in Shanghai", and "European City of the Year 2010".

Freiburg is currently working towards reducing their carbon emissions by half by 2030.

The major goal is to become carbon neutral by 2050.

SOLAR CITY FREIBURG

Infographic Poster

This poster was made for GEOG 451 using ADOBE Illustrator. It was part of a group project in which we argued that the green movement in Freiburg, which resulted in an agglomeration of solar industry, was sparked by a combination of social movements, policy implementations and educational reforms. We combined research by all three members; my research focus was on social movements and educational reforms. I created the gears infographic and did much of the technical design work in ADOBE. LAUREN ARMENEAU

Colour Rendering

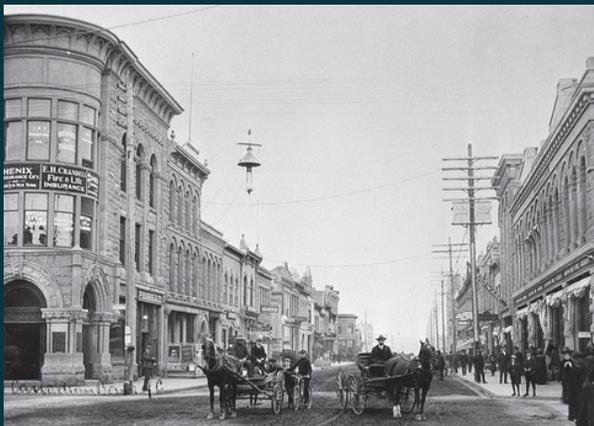


This is a freehand rendering of the home I grew up in. I used a combination of markers and watercolor pencils for a textured effect. I chose to do this house because it was designed by my Father, and was what first sparked my interest in architectural design.

Photoshop Project



This composition was made in ADOBE Photoshop where I merged together two photographs of Stephen Avenue. The photograph below was taken in 1905 and acquired from the Glenbow Museum database. The photo above



was taken in 2015 by myself. The goal of the composition was to show a visual representation of urban progress, most notably in the scale and materiality of architectural design.



Physical Model

This is a 1:200 physical model of Central Memorial Park, Calgary's oldest park. The lampposts, monuments, statues, benches, buildings, flag pole, and letters were all modeled in SketchUp and 3D printed. The 3D printed objects were glued together, and hand painted with acrylic model paint. The trees were purchased online, trimmed and shaped to better represent the originals.



qualex.ca/park-pont-condo-breaks-ground/

On the following page are additional views of the model.



THIRTIETH AVENUE S.W.
FOURTH STREET S.W.
SECOND STREET S.W.
N
CENTRAL MEMORIAL PARK
CALGARY, ALBERTA
SCALE 1:200
LAUREN ARMENEAU

Sketchup Model



The images on the preceding page display a representational model of Central Memorial Park Library made using SketchUp. I took the minimalist model I made for 3D printing and added more architectural detail, colour and landscaping. The people, benches, trees, flowers and lampposts were imported from the 3D Warehouse. Below is a photograph I took at the library which I used as a reference.

