Cedric Pitot de La Beaujardiere

CED’s Eco Designs - Portfolio

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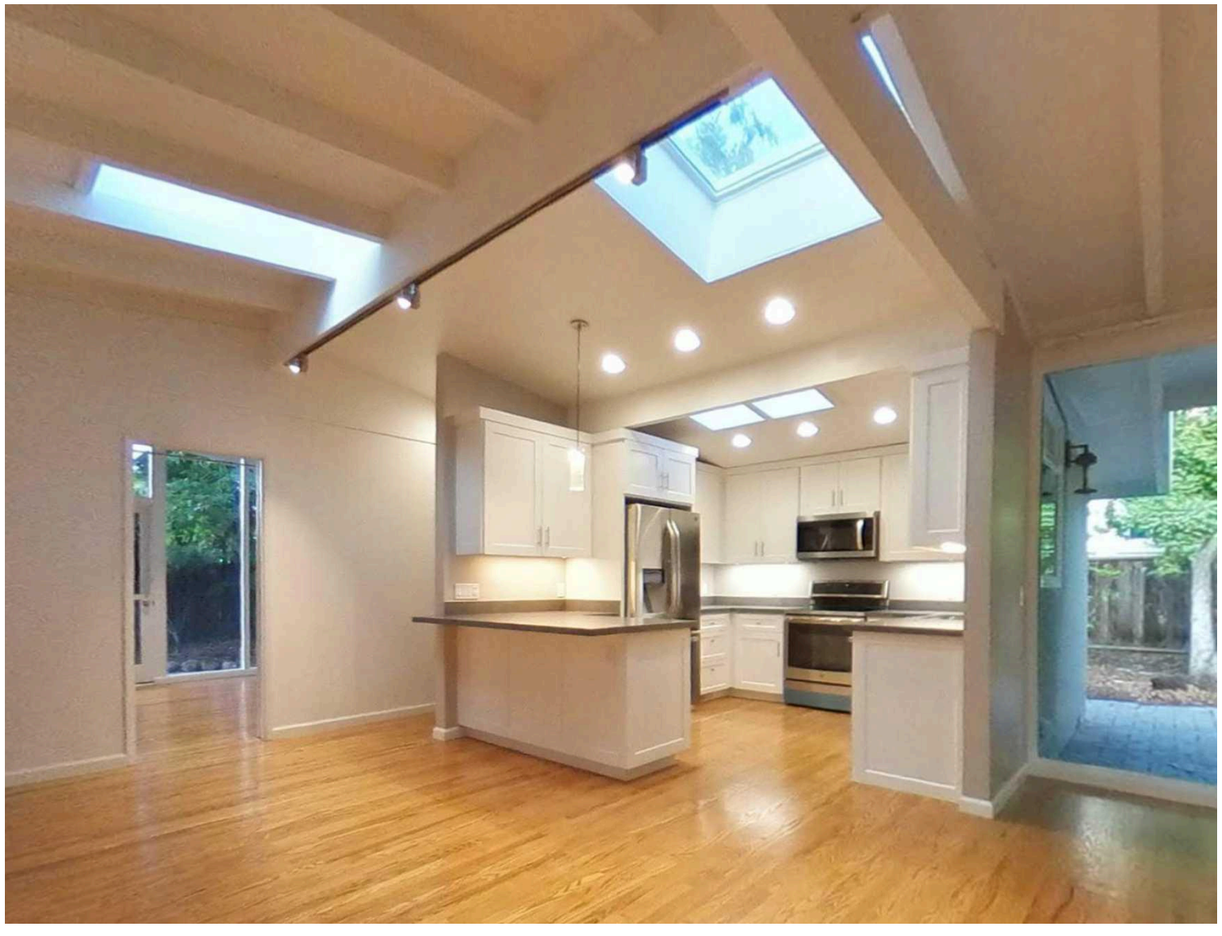
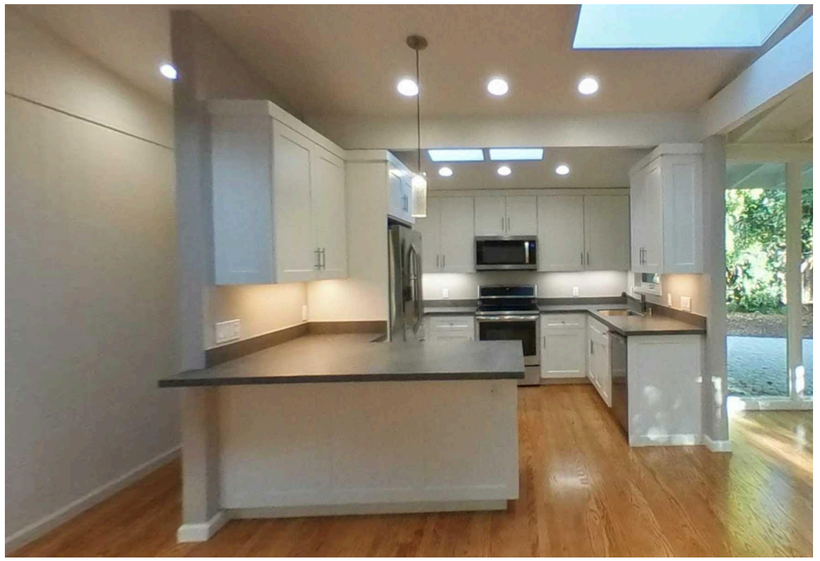
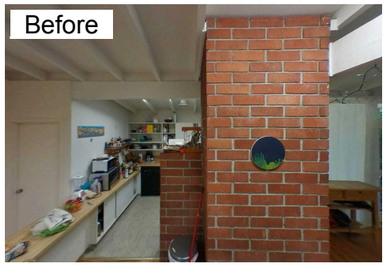
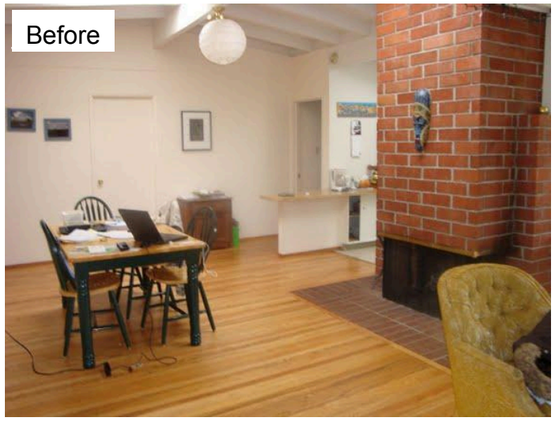
Stelling Kitchen Remodel, 2018

Principal Designer: CED's Eco Designs
Interior Designer: Design Detail
Architect: Christopher Tripoli Architect
General Contractor: Warren Construction
Flooring: Clark’s Hardwood Floors







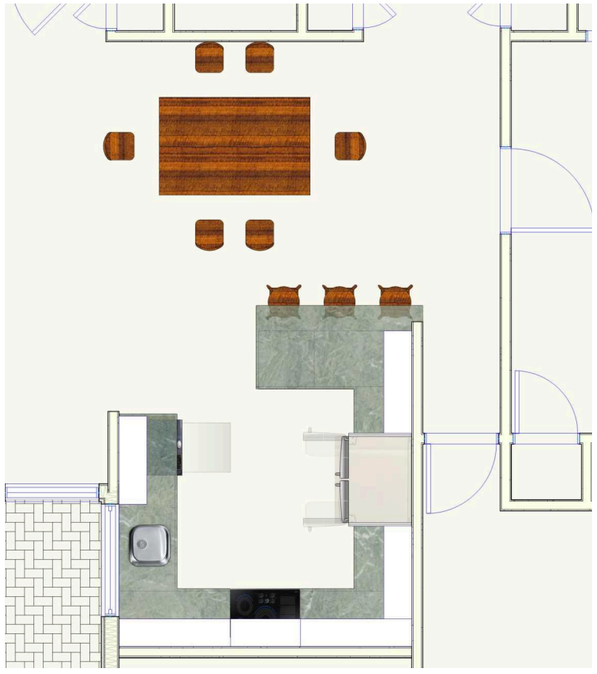


By removing the large fireplace, rarely usable due to air regulations, the formerly cramped galley kitchen became an expansive airy space, opened to the dining and living room.

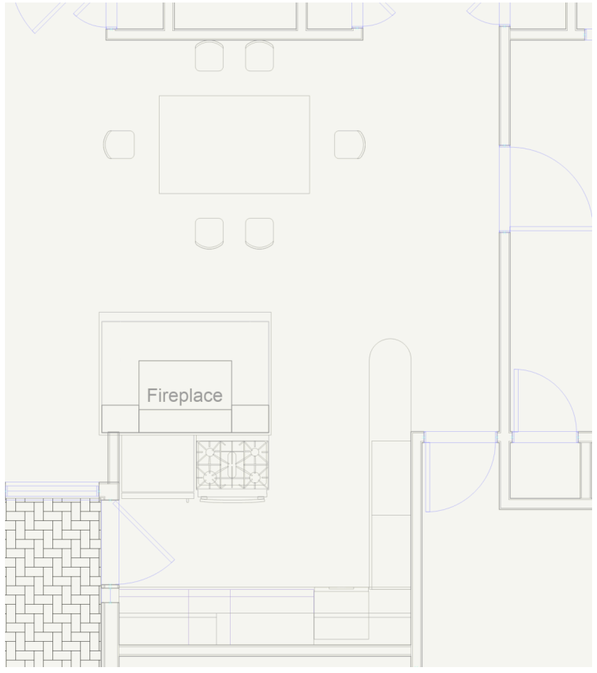
Extending the wall by the master bedroom provided four more feet of wall cabinets.

With the chimney out of the way, we could extend a peninsula from the new wall to create a bar counter which is actually usable as such compared to the limited utility of the original peninsula.

Final kitchen plan design:



Original kitchen layout:

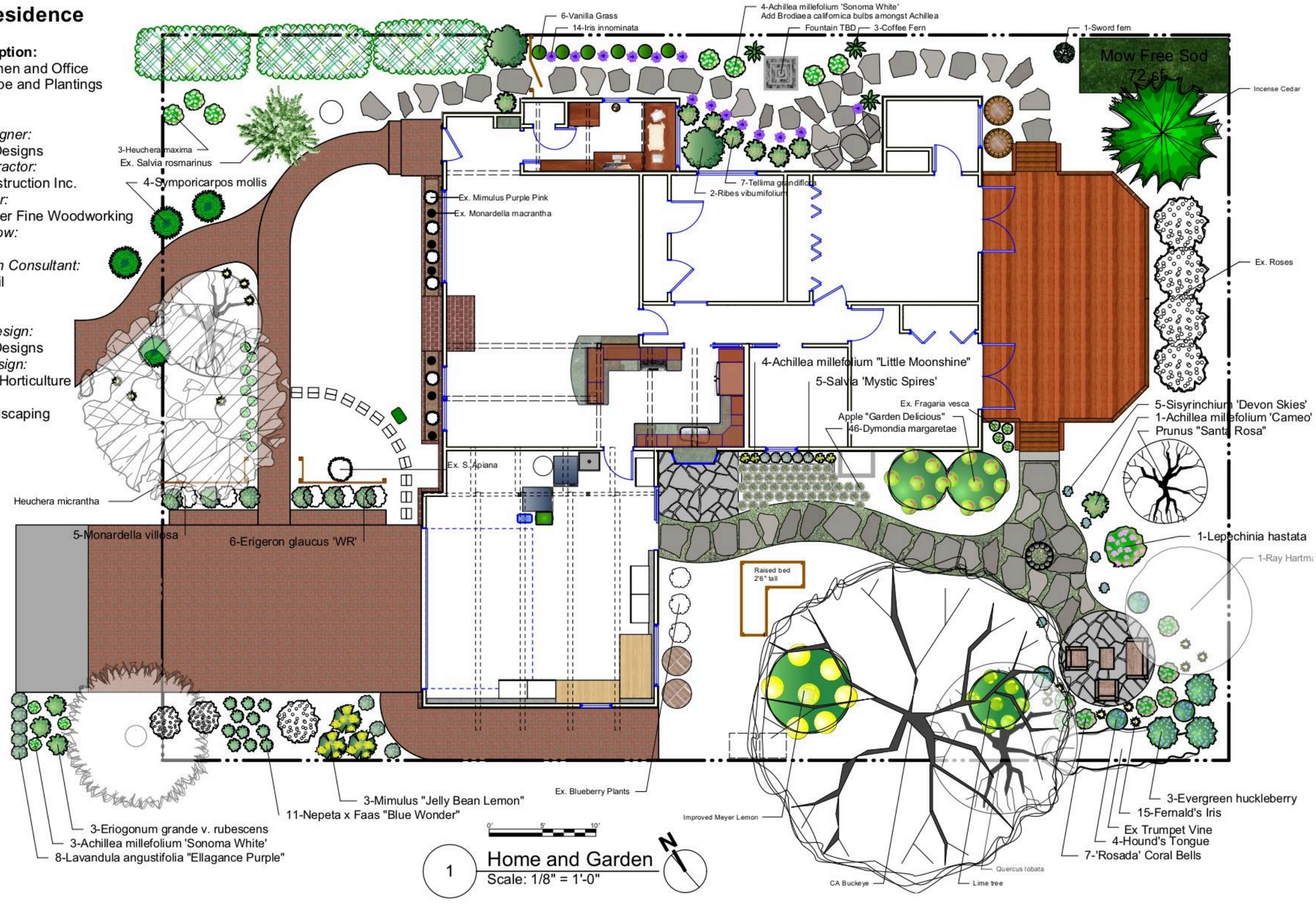


Josina Residence

Project description:
Remodel Kitchen and Office
New Hardscape and Plantings

Interior:
Principal Designer:
CED's Eco Designs
General Contractor:
Schiller Construction Inc.
Cabinet Maker:
Michael Meyer Fine Woodworking
Garden Window:
JT Windows
Interior Design Consultant:
Design Detail

Exterior:
Hardscape Design:
CED's Eco Designs
Softscape Design:
Sage Creek Horticulture
Installer:
1 Earth Landscaping



1 Home and Garden
Scale: 1/8" = 1'-0"

Evolution of Ideas - Process includes drafting up alternatives, evaluating them and getting client feedback

Design Goals:

Open up the front entryway: Client didn't like how upon entering the home, guests were faced immediately with a closet door.

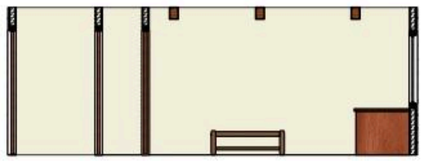
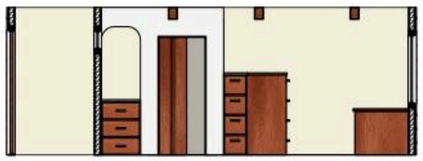
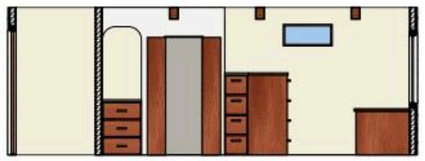
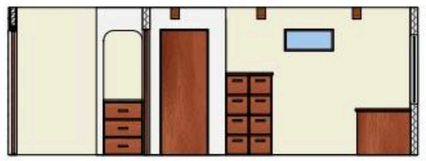
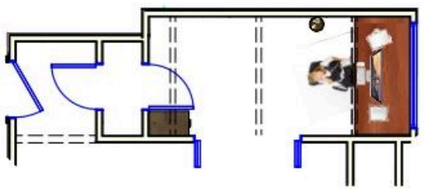
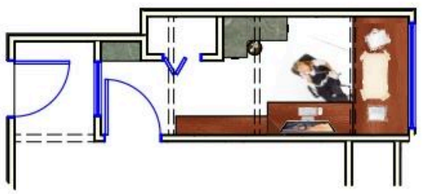
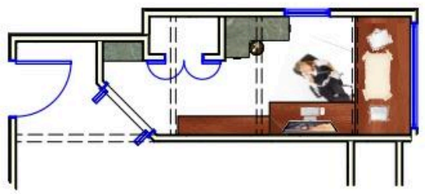
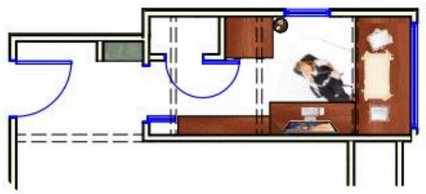
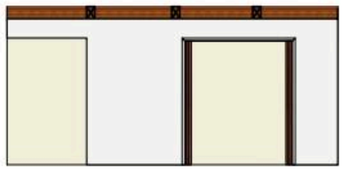
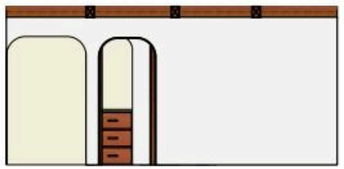
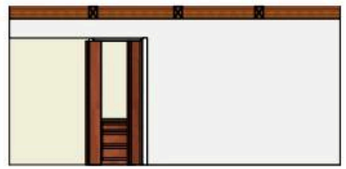
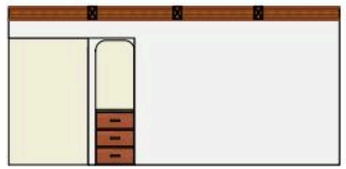
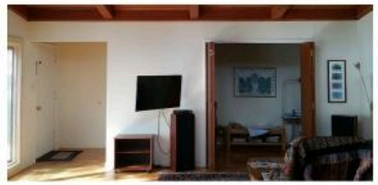
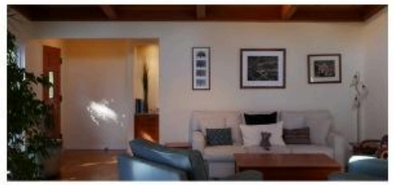
Include a coat closet.

Greater separation of the office from the living room to allow for more focused work.

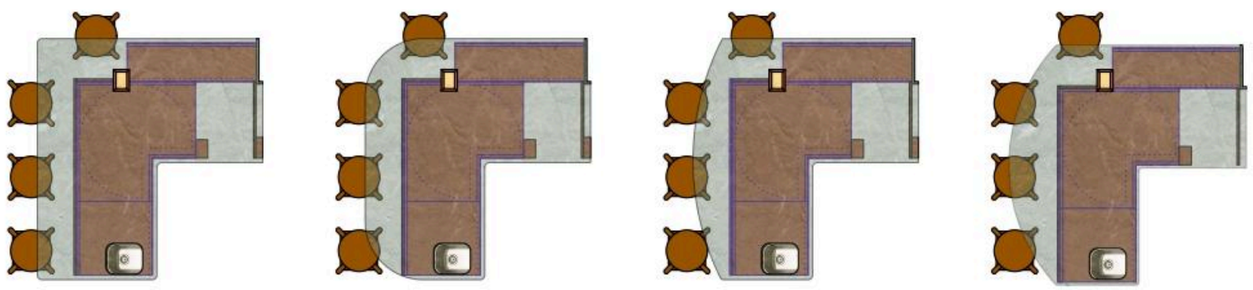
More living room wall space.

More desk space for both a computer and laying out landscape design plan sets.

Lots of filing space, and replace the bookshelves removed by the kitchen.

Original Conditions	Early Alternative	Evolving Alternative	Final Design as Built	
				Elevations North Wall of Entry and Office
				Plan Views Entry and Office
				Elevations North Wall of Entry and Living Room
				Photos North Wall of Entry and Living Room

1 Office and Entry Alternatives
Scale: 1/8" = 1'-0"



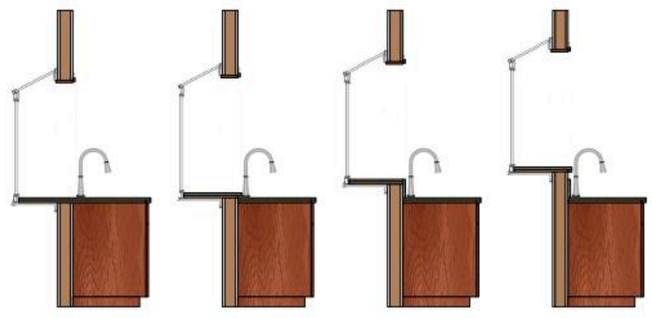
2 Bar Counter Alternatives
Scale: 1/4" = 1'-0"

Counter Design Goals:

Maximize bar space.

Avoid corbels or other obstructions around knees.

A pleasing shape.



3 Garden Window Alternatives
Scale: 1/4" = 1'-0"

Client always wanted a Garden Window to grow herbs, etc.

Found JT Windows to build and ship one in cherry to match cabinets, aluminum clad outside, and no PVC, pollutants.

The final raised design separates the window from counter clutter and is more ergonomic.

Spherical Photos - Before and After

Lliving and dining rooms and parts of front entry, office and kitchen

Before:

After:

Changes to note:

Widening of front entry, enclosing of office, opening kitchen to living and dining rooms, and increasing the clear space above the bar counters so that upper cabinets do not block people's views, especially when people converse across the counter.

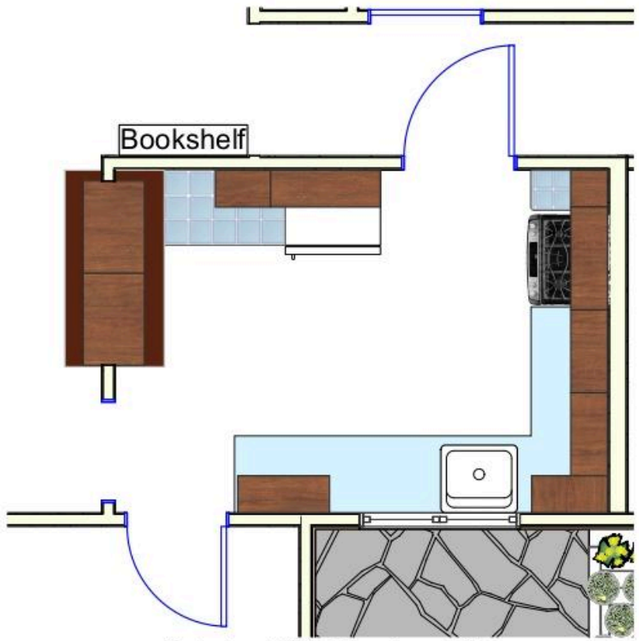
Kitchen with dining room beyond bar counter

Before:

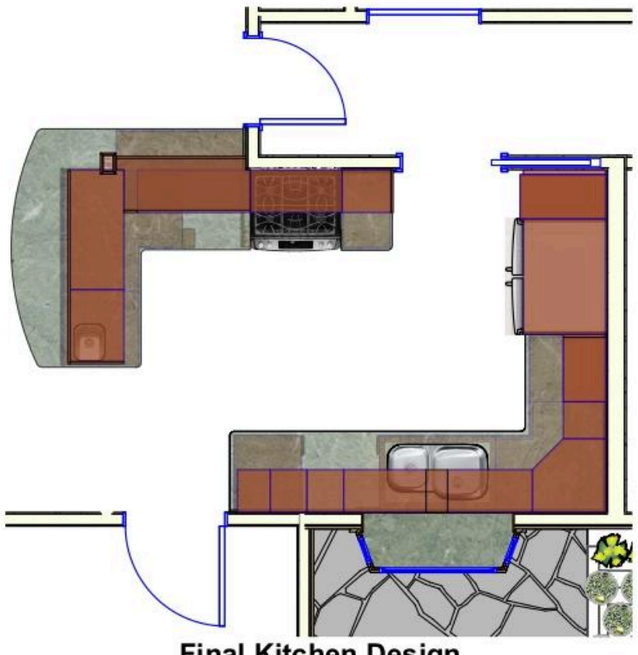
After:

Changes to note:

Bringing wood floor into kitchen, conversion to garden window, opening up kitchen to dining and living rooms, expanding height above bar counter, moving bulky fridge to back wall to have better views into kitchen, abundant storage.



Original Kitchen layout
1/4" = 1'

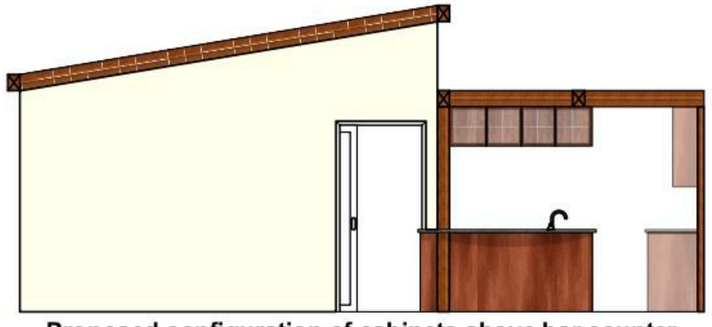


Final Kitchen Design
1/4" = 1'

Before

Before

After:



Proposed configuration of cabinets above bar counter

North Wall of Final Kitchen Design

Back Yard

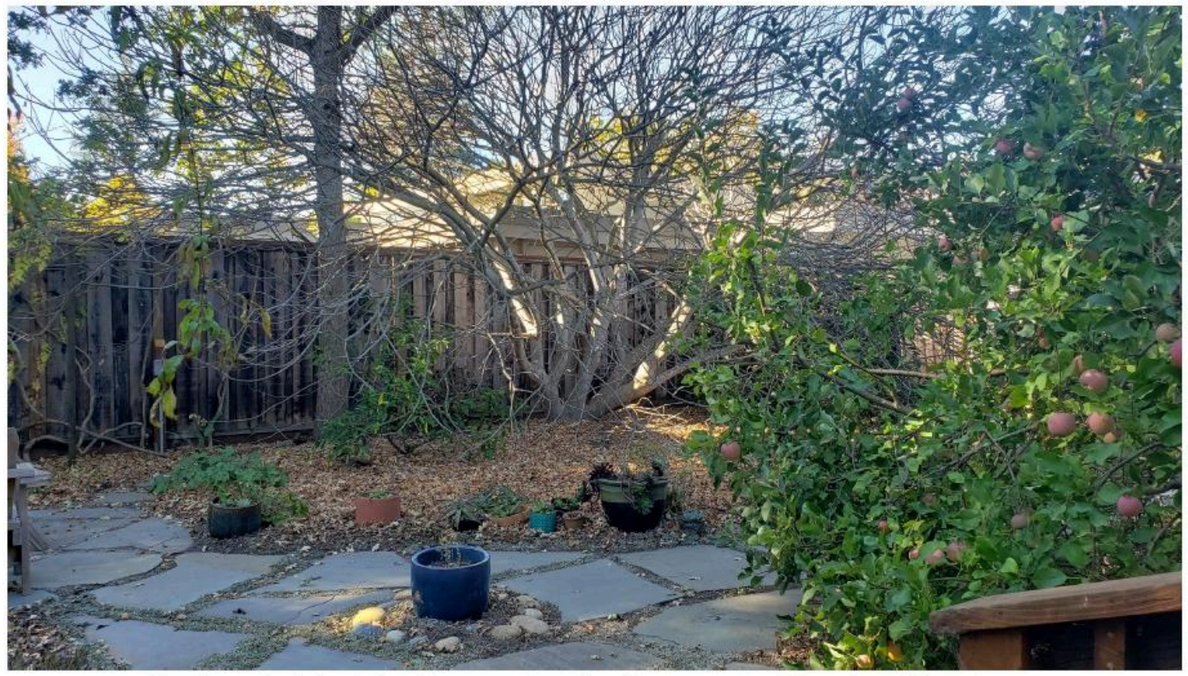
Before:

Before:

After:

Created seating area in southeast corner of garden
Honored prayer circle at the center of three meeting paths

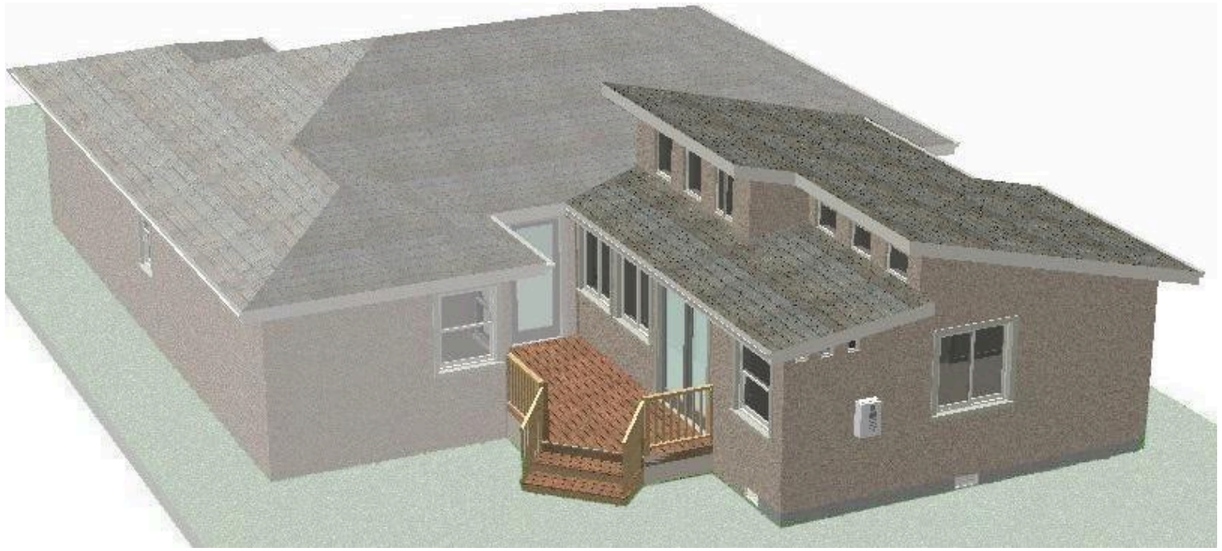
After:



Replaced pink-stained concrete urbanite pavers with natural flagstones
Planted hardy and low-water dimondia between and around flagstones

Spring Street Addition

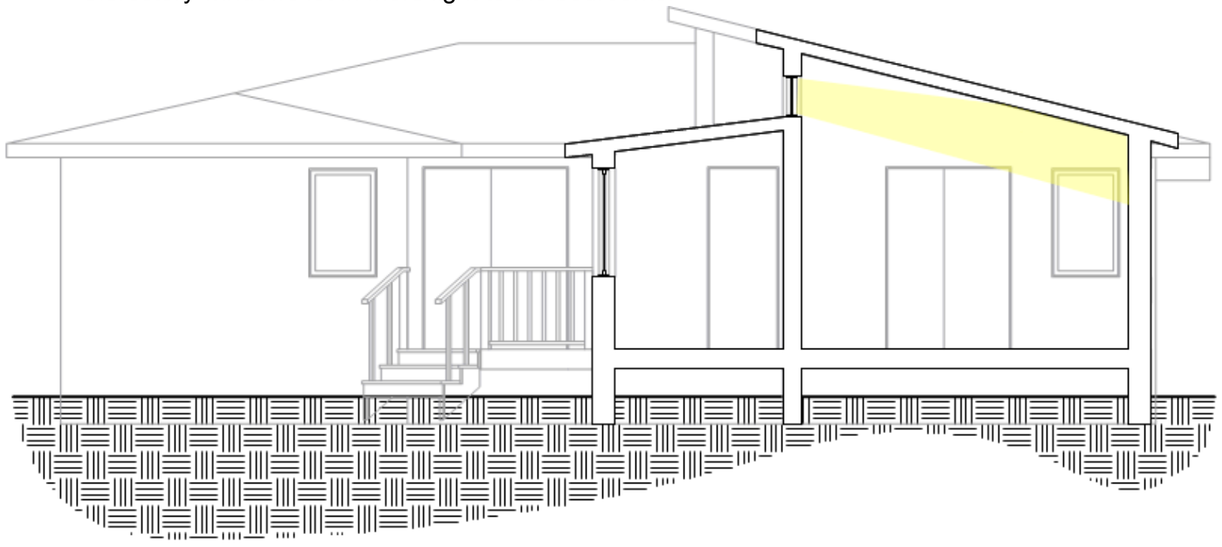
Principal Designer: CED's Eco Designs

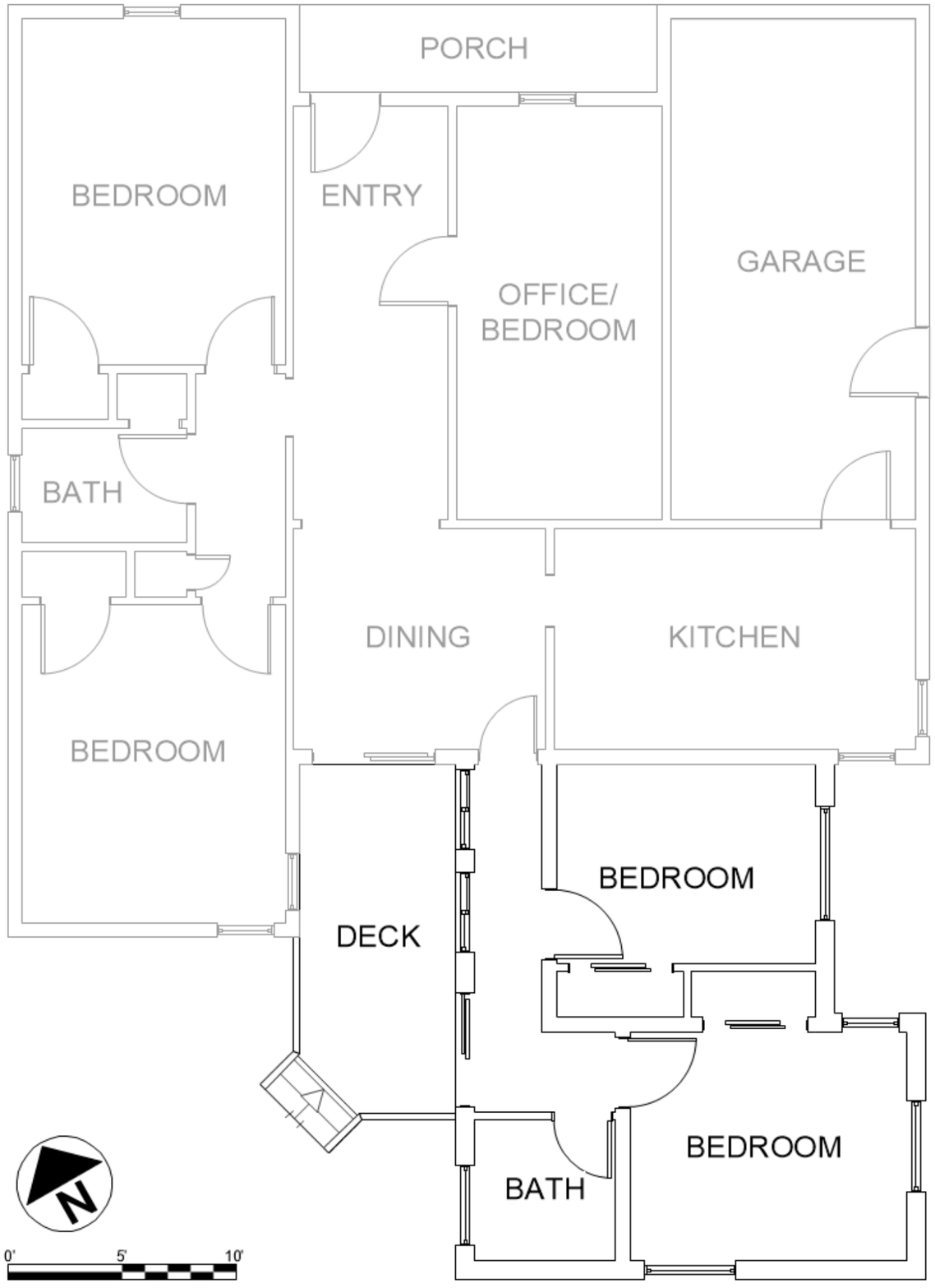


I was asked by a large family living in a small house to design an addition with a bedroom and full bath.

Features of note:

- Two smaller bedrooms rather than one large bedroom, which the family liked as it would provide more privacy, given that so many people were crowded into every existing room.
- A hallway, daylit by windows and a glass sliding door, adjoins the existing house by a new door in the dining room and gives access to the new bedrooms and bath.
- A deck in the nook of the building is accessed by sliding glass doors from the dining room and the hallway. The deck unifies the addition to the existing house and consolidates stairs.
- Clerestory windows let in more light to the bedrooms.

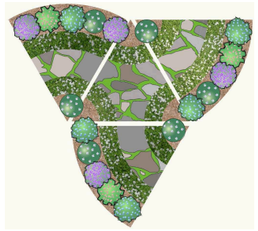




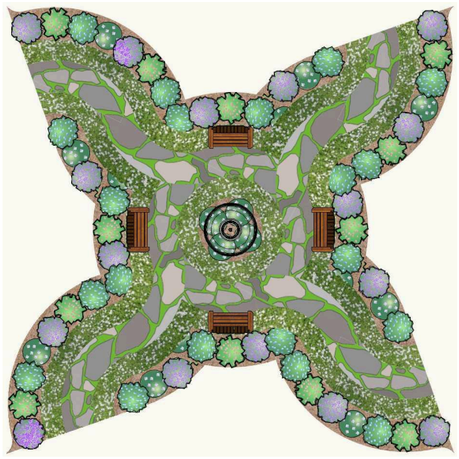
Sage Creek Horticulture

Sage Creek Horticulture (SCH) focuses on creating native, low water, restorative landscape designs. I've provided myriad services such as drafting, creating 2D and 3D design elements, graphics for the plans and for the website, website building, and IT support. Here are three of many projects I've done with SCH.

Garden Path Tiles



For a client with a large open lawn who requested paths to secluded seating, I created triangular tiles containing a 3' wide stone path bordered on each side by 2' wide swaths of ground cover and 3' wide shrub areas.

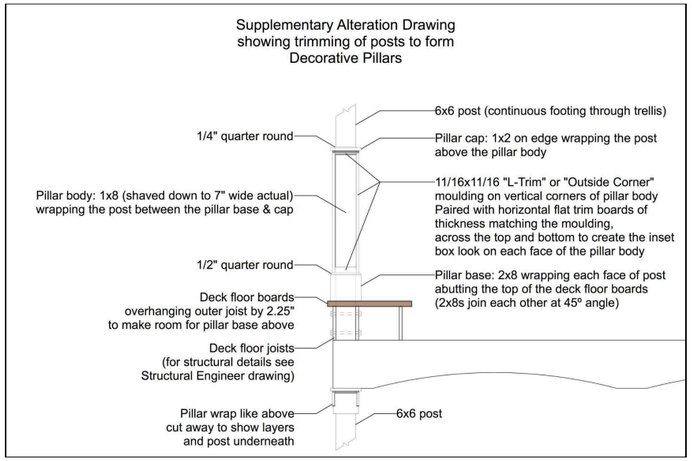


These tiles could be connected in various patterns, like this fountain focal point at the meeting of four paths. Benches backed to bushes on four sides provide for peaceful contemplation or conversation, soothed by the sounds of nature.

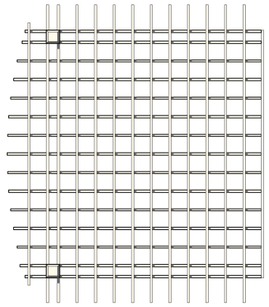
Seating areas and paths connect to existing site elements. Below the scale is an under-awning couch swing.

Balcony with Shade Trellis

Upper Deck Elevation View looking North



A client was doing a full re-landscape front and back and wanted to rebuild their old second-story balcony. We found a photo of a balcony topped by a trellis like the client's existing trellis. The client liked this design so I recreated a similar version which included a railing to match another in their home.

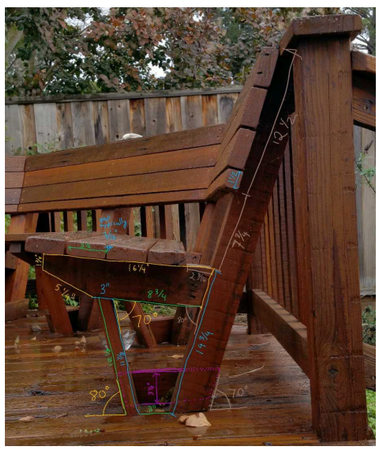


Deck Plan View
Trellis Level

Deck Plan View
2nd Story Level

3D Benches and Fire Pit

The same client had a semi-circular retaining wall at the edge of their sunken patio and wanted benches around a firepit there. Taking inspiration from our own deck's comfortable bench, I measured our bench's angles and dimensions and modeled a semi-circular version in 3D around a firepit.



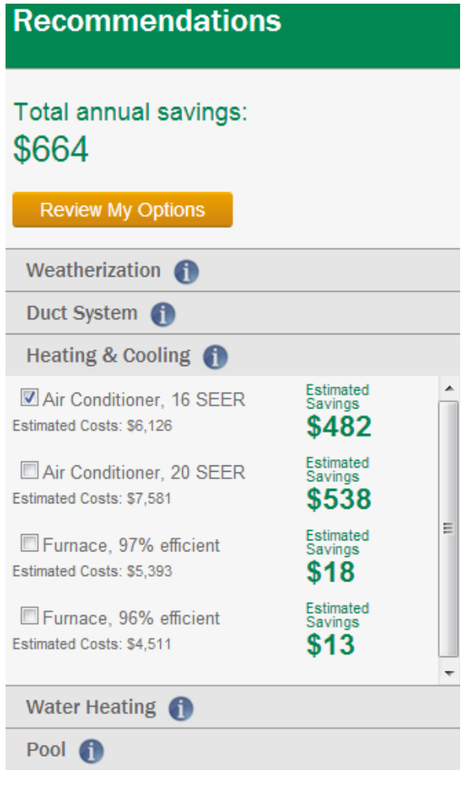
Energy

Building Performance Simulation

As a software engineer with SolarCity, I worked on a web service which simulated building energy usage.

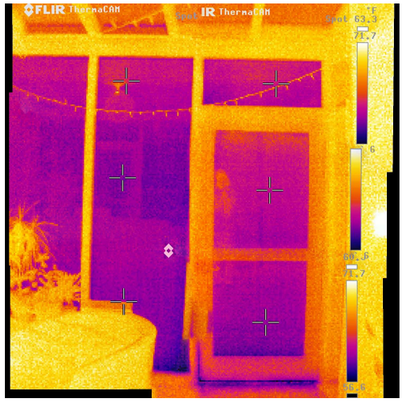
Our technicians would visit a client's home and input information about the house and the home-owners' behaviors and preferences into our web form. Our service would package this info and load it into **EnergyPlus** to simulate the building's annual energy usage. Both the existing conditions and potential efficiency upgrades were simulated. Our clients were then informed which measures would save the most energy and money, and were offered a bid to install them.

In addition to learning about Building Performance Simulations and energy efficiency measures from that lens, and learning my new favorite programming language, another fun activity I got to do in relation to my work was create a set of additional icons which we needed to display in our web interface.

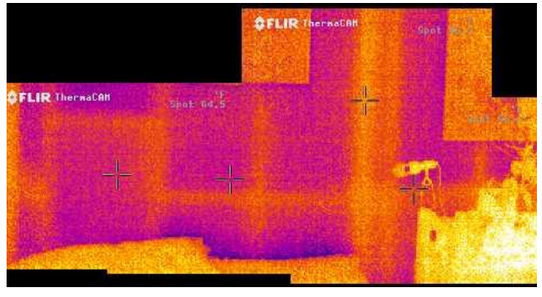


Building Science: Heat Loss

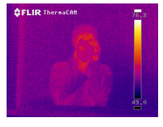
For a Building Science class at UC Berkeley's College of Environmental Design, I studied heat loss using an InfraRed camera. On a cold winter night, I cranked up the heat and walked around the house taking pictures of the walls, windows, eaves and crawl space vents, to determine where I was losing heat. To the Left is a collage of IR photos taken around the front door. One can see heat escaping from the crawl space vents, indicating the likelihood of leaky ducts.



From the inside of the house, I saw cold air leaking under the door.
To me, the windows seem a colder reflection of the room's other side.
We also clearly see the wall studs indicating the walls are not insulated.



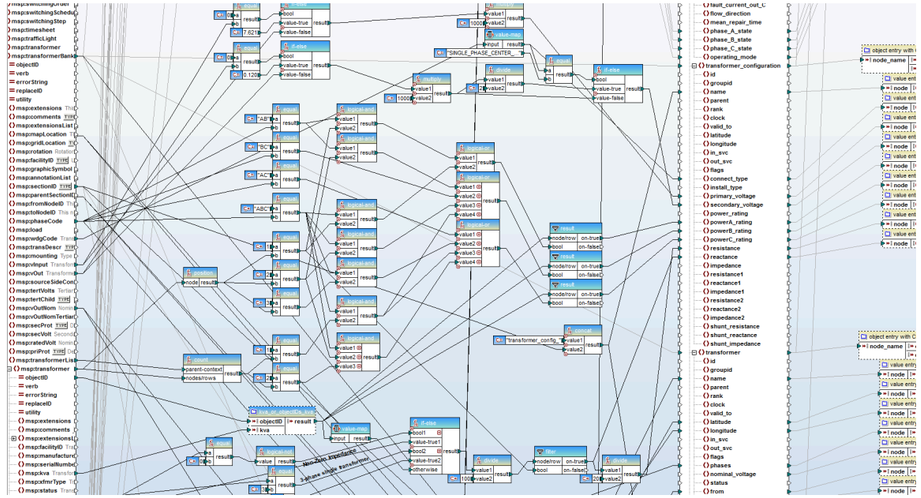
As I took photos around the house in the dark cold night, I was startled by my own InfraRed reflection in the glass.



Electric Grid Simulations & Mapping

CLEAN Coalition, a local non-profit, sought my help to run electrical grid simulations. They wanted to validate the use of Smart Grid techniques to allow larger amounts of Solar Power than the grid might otherwise support.

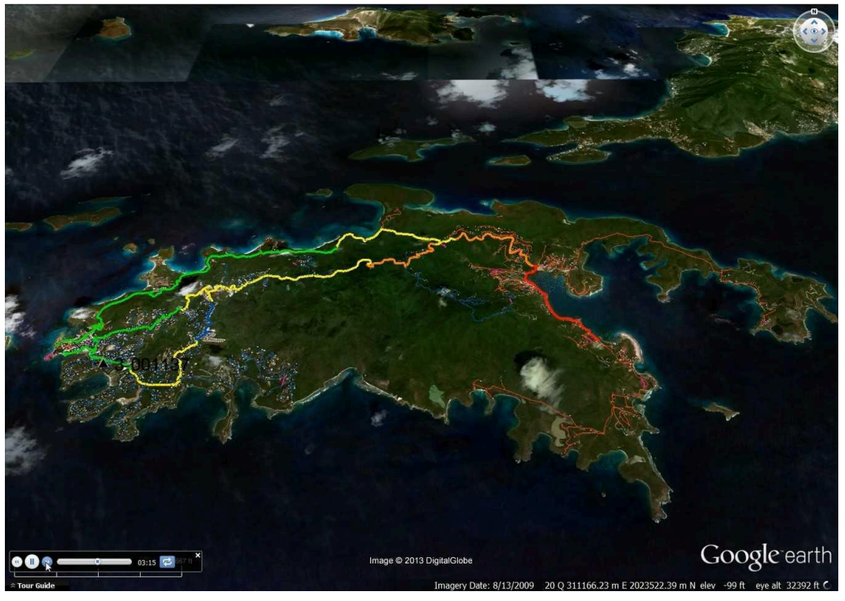
They had files describing Puerto Rico's electrical grid, but these could not be read by **GridLAB-D**, an electric grid simulation program, and they had no way to convert the files.



Map Force is a tool to convert files through which **I graphically defined the conversion logic** for each of the numerous electrical components. Through this complex network, of which a tiny sliver is shown here, I converted the input files into a more usable format.

Map Force is similar to **GrassHopper** (run in Rhino and Revit) and **Marionette** (run in Vectorworks) as they are each examples of **graphical programming tools** which bring complex parametric design in reach of lay people.

We then simulated the behavior of the electrical grid in **GridLAB-D**. **The simulation results were huge spreadsheets of numbers which were hard to comprehend, so I wrote a program to convert the results into a dynamic Google Earth map** in which, for each point in time, the power lines were colored according to how much they were under or over voltage compared to what they could tolerate. If a line segment was going from OK to overloaded, it went from green to yellow, and orange then red.



Watching a movie of the mapped simulation outputs was a much more accessible way to evaluate the results of each run.

A screenshot of my Google Earth movie showing the effect of a theoretical oversized PV array at the east end of Puerto Rico island which would overload the power lines as the sun rose. Through such simulations, CLEAN Coalition could evaluate whether Smart Grid technologies could effectively moderate the power to avoid overloading the grid.

Garden Apartments
for North Ventura Coordinated Area Plan

I've long been interested in a building form I call Garden Apartments, in which every residential unit of a multi-story apartment building has access to garden space through planted rooftops and balconies.

Above in the Cloudera site's parking lot, I show the addition of four Garden Apartments in the forms I call Spiral Coil and Wavy (each described below). The Spiral Coil Garden Apts are particularly suited to residential with a mix of retail, commercial, or community space. The spirals have underground parking accessed from Ash and Page Mill, and I preserve the lovely linear park along Olive Ave.

People are happier and healthier with access to nature and private spaces away from the frantic hubbub of city life. Rooftop gardens planted with native and/or food-bearing plants help to support the plants, animals and insects which are so vital to a healthy ecosystem and currently under threat from human-caused environmental degradation. We need to protect and restore our ecosystems not only for their own sake, but to ensure our own survival and prosperity in the face of climate change. Natural spaces reduce the heat island effect, in which cities in the summer can be 9ºF higher than the surrounding suburban and rural areas due to all the black roads and dark rooftops which heat in the sun. Plants also absorb CO2, emit oxygen, help filter air pollution and reduce urban rainwater runoff. Built correctly, rooftop gardens actually protect and extend the life of the roof, and help insulate the building.

Rooftop gardens can be created by stepping back the building mass at each level up, making a taller building human scale in that it doesn't loom over sidewalks or smaller buildings such as single family homes.

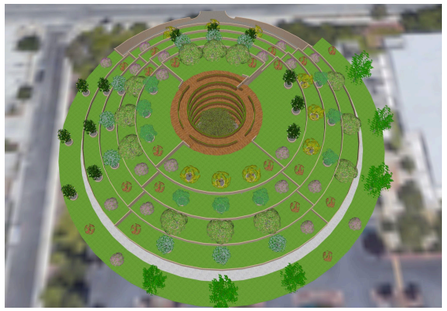
Over the years I created several Garden Apartment prototypes but the best and most thorough were ones I created to advocate for this form within the City of Palo Alto's North Ventura Coordinated Area Plan (NVCAP) process. Through the NVCAP, the City engaged with the community to create a vision, zoning and design guidelines, for a multi-block area containing residences, retail, industrial and commercial spaces.

Using **SketchUp**, I modeled four building forms, combined some into larger connected structures with elevators and walkways, and placed these buildings in the NVCAP area, respecting existing property lines.

This idea is treated in more depth at https://sites.google.com/view/ventura-vision and I discussed it at:
https://www.paloaltoonline.com/square/2021/06/15/facing-division-over-ventura-plan-palo-alto-delays-action
In this NVCAP article I'm quoted speaking for creek naturalization and in its comments give more details:
https://www.paloaltoonline.com/news/2022/01/11/palo-alto-treads-cautiously-on-adopting-new-ventura-vision

Spiral Coil
One of the forms from the set is this Spiral Coil featured at the top of this section, where, on each quarter turn the elevation goes up 2.5', so a full turn rises 10' to the next level up.

Spiral Coil Garden Apartments
grew out of two questions:
what is the inner diameter
of an ADA-accessible ramp,
in a spiral rising 10' each turn,
and could a tree fit in the
center of the spiral?
The answers are
"46 feet" and "yes".



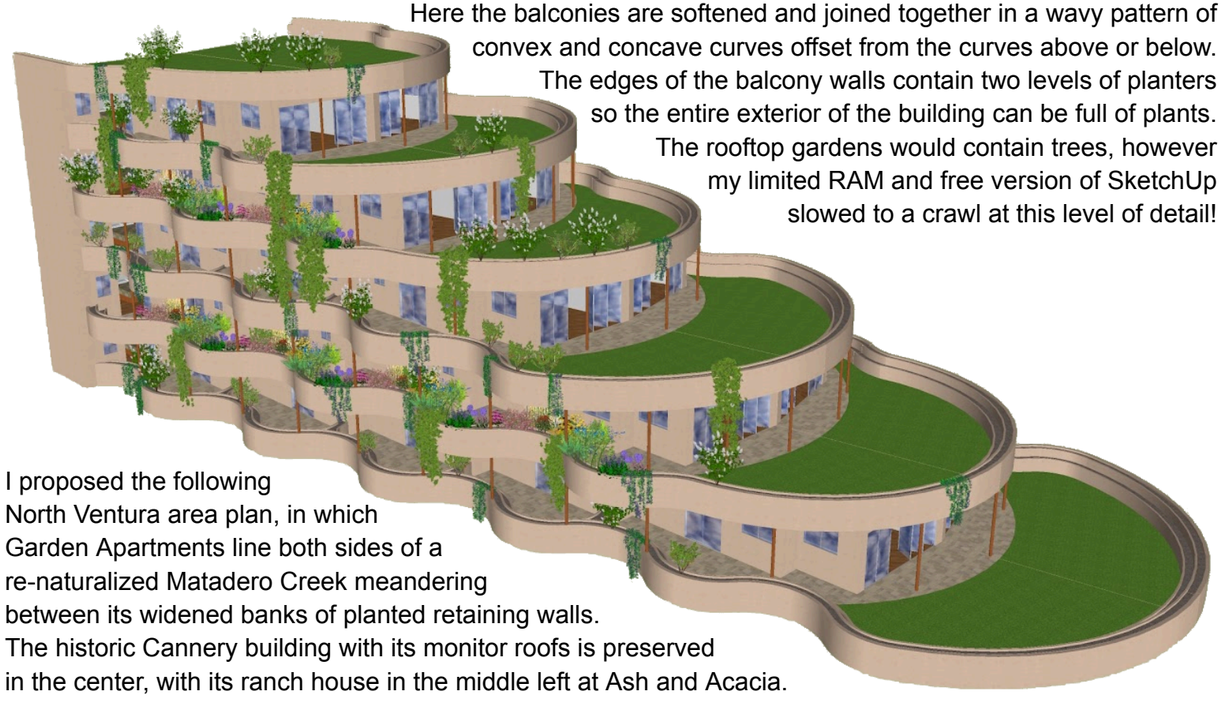
A Mixed-Use building
coils around and up following
the spiraling ramp and staircase.
Within the Spiral Coil Garden Apartment,
the ground floor and the 2nd floor's core could
contain commercial, office and community uses.
The inner courtyard around the large oak tree
would make an ideal daycare playground:
the children safe from traffic, parents
chatting in the balconies above.
Rooftop gardens adjoin
apartments on the
2nd - 5th floors.

Other than the Spiral Coil, these other Garden Apartment forms are more rectilinear, with mirrored apartments in which each bedroom has a balcony which is offset from the balconies above and below, and each apartment has a rooftop garden accessed from the living room. The stepped back form is achieved by removing one bedroom for each story up. Of course, other layouts would be possible, such as a shared central hallway giving access to one room studios, and a rooftop garden shared by residents on each story.

This **Mixed-Use** building has shops, restaurants and covered outdoor seating on the ground floor.
Above, on the 2nd - 4th floors, mirrored pairs of 1-, 2- and 3-Bedroom apartments,
Their paired backyards' privacy provided by planted green walls.
Each bedroom has a balcony and full ADA-accessible bath.
The topmost roof has a communal park.

Multi-Family Wavy Garden Apartment with Perimeter Planters

Here the balconies are softened and joined together in a wavy pattern of convex and concave curves offset from the curves above or below. The edges of the balcony walls contain two levels of planters so the entire exterior of the building can be full of plants. The rooftop gardens would contain trees, however my limited RAM and free version of SketchUp slowed to a crawl at this level of detail!



I proposed the following North Ventura area plan, in which Garden Apartments line both sides of a re-naturalized Matadero Creek meandering between its widened banks of planted retaining walls. The historic Cannery building with its monitor roofs is preserved in the center, with its ranch house in the middle left at Ash and Acacia. I've effectively advocated to Renaturalize Matadero Creek, confined to a concrete channel since the 70s. The community, council, and its feasibility study strongly support re-naturalizing this stretch. Downstream of El Camino, the creek would be integrated with Boulware Park and a new park through the former Fry's parking lot, to Park Blvd. I hope people will love connecting with the creek, and restore the rest of its length.