SANTA ISABEL, GUATEMALA
INTRODUCTION
Santa Isabel has been owned by the Valdes family for generations, and was the site of the family’s home until the severe 1976 earthquake that seriously damaged the original homestead.

Santa Isabel in recent years has been and is used as a coffee plantation and pasture land for cattle, and it is a beautiful site. In part because of this beauty, the human history of the site is quite literally ancient, with pre-Mayan residents constructing ceremonial mounds on the property as early as 800 BCE or approximately 360 years before the Parthenon was built in Greece.

Pablo Valdes contacted Nelson/Nygaard early in 2011 to discuss how the property could be developed. The family had recently arranged the sale of a portion of the site to the University, and the locations of the University’s access had to be established.

It was quickly determined that in order to accurately position the University’s access points, the locations of streets, blocks plazas and the like on the remaining property would need to be established. An initial site tour was arranged in March, and the context of the property and its surroundings were ascertained.

The University had engaged the services of Sasaki to master plan its future layout and representatives from Nelson/Nygaard met with the Sasaki team in Boston to review what they had planned during the summer.

THE SITE
The site (including the University land) comprises approximately 1165 acres or 670 menzanas. The northerly portions of the property are relatively level, with the original farmhouse, the pre-Mayan mounds and some existing roads.

The southerly portions of the site, where the coffee plantation is located, are comprised of very steep land, but these areas also have an existing trail of approximately ten kilometers in length that is used by plantation workers and others, including mountain bikers for recreation.

The Valdes family secured base mapping information, especially including topographic mapping, after the first site visit and, with this data in hand, Nelson/Nygaard assembled a design charrette team to travel to (and gather in, for those team members who are local) Guatemala City and plan the site.

CHARRETTE TEAM
The design charrette commenced on August 15, 2011, and included: Rick Chellman (charrette leader), Jeff Tumlin and Manuel Soto from Nelson/Nygaard, Eduardo Castillo, Sofia Villareiga, and Jennifer Garcia from Castillo Architects; Bill Dennis of BDennis Town and Building Design, and James Wassell—a via internet connection—as the team artist. Joining the design team were most of the Valdes family, including: Fernando Valdes, Pablo Valdes, Maria Isabel Valdes, Ana Cecilia Valdes, Roberto Bianchi, Cecilia Bianchi and Juan Fernando Valdes via Skype.
THE CHARRETTE

The charrette commenced with a site tour, including a helicopter flight over the site and surrounding area that was generously provided and piloted by Fernando Valdes. This flight, coupled with the site walk and the topographic mapping gave the design team a very detailed understanding of the site and its surroundings.

The design of Santa Isabel progressed over several days and evenings, with substantial input from the family and other important stakeholders, with presentations, feedback, new drawings and then more presentations, feedback, and new drawings.
OVERALL MASTER PLAN

At the close of the charrette, an overall Master Plan had been developed by the design team, and it is depicted here in its entirety.
The overall plan is made up of essentially 7 areas, including the University and the remaining coffee plantation and natural areas.
Taking each neighborhood in turn, they are each a little different and may be described as follows.

**NEIGHBORHOOD 1**

**APPROACH**

This neighborhood will feature larger parcels on sloping land that will offer some views of distant features as well as nearby stands of magnificent trees.

The entry road passing through the southerly portion of this area has been designed as a four-lane road or street with different cross sectional details that have yet to be finalized. The initial construction of the road will likely be two lanes (one side of the ultimate four-lane road), and will be laid out to move away from the neighboring walls and other aesthetically unpleasing features that are on and near the property line (below).
FORMAL ENTRY

As visitors, residents, patrons and others pass by the original farmhouse as they enter the new Santa Isabel, they will come to the more formal and urban entry to the new development.

This is one of the areas depicted in one of the site renderings, and the public road will continue through the 4-way intersection at the entrance to the University and follow the top of the edge of the hill.
Proceeding past the formal entry, the first urban neighborhood is made up of an interesting pattern of streets that are all interconnected, but not in a rigid Law-of-the-Indies grid pattern. The street deflections and twists and turns will make this neighborhood a very interesting area to walk and bike as well as to explore slowly by car.

This neighborhood also has some small greens and other features that set it apart from some of the other Santa Isabel neighborhoods and most of the surrounding development.

This neighborhood is expected to be primarily residential, with a strong mix of home-based commercial uses, such as home-based offices, and other commercial uses scaled as houses including restaurants and shops.

**ARCHEOLOGICAL/HISTORIC PARK**

The pre-Mayan ruins mentioned previously are the next area of the Master Plan as one enters from the west. As touched on above, this area was ultimately decided by the design team to be re-integrated and the road that splits it now removed and the area restored to a more natural state.

The original state of the mounds is shown in the bottom image below from the final charrette presentation, with the current state appearing in the far right of the same image. This part of the site will likely have walking paths through it that may be mowed grass pathways or crushed gravel if the amount of foot traffic warrants it to avoid excess erosion.
The next neighborhood as one enters from the west will be the "town center" with more commercial uses mixed with more residential types. This neighborhood should serve as the "community center" for much of the surrounding and predominantly residential neighborhoods. This area was the subject of a few of the renderings to show how it can look as it is built out.

This neighborhood will also feature a major plaza, or "plaza mayor": a very common Latin American plaza and gathering place. Colonnaded building fronts will provide shelter from rain and sun and will create excellent transitions from the public to private spaces.
Looking at this area from north to southwest, the view below is obtained, with the volcanoes in the distance—the plaza mayor may be seen at the edge of the hill below the right volcano.
The next neighborhood in Santa Isabel is a more regularly-shaped series of blocks centered around a green as a focal point. This neighborhood is more like many Antigua neighborhoods with its regular grid of streets and small greens and plazas.

This area will have housing along its edges that in some cases will flow a little down hill as in the rendering to the right.
This neighborhood, like the first, provides a transitional area between the more formal and dense parts of Santa Isabel and the adjacent plantation and open space areas. This area will have more single family homes and larger homes with some mixed-use but not as much as in the center.
GENERAL ISSUE: SECURITY

Security in Guatemala is both a real and a perceived problem that is, in some respects, self-reinforcing. However, since perceived security problems could translate into a lack of sales, the design of Santa Isabel has taken this issue into account.

The principles are relatively simple, but their execution is important. The overarching principles are to create an active street edge that also affords security, with most vehicle access occurring at the rear of the lots.

Courtyard buildings, as depicted above and in plan view on the left, accomplish both principles easily and create a street "wall" of buildings with windows and doors, which like Antigua can have security elements in them and more private and open courtyards which then also transition into lanes shared with neighbors.

Another method of achieving a secure block may be done with both semi-attached and detached homes, rear alleys and front walls.
In diagram form, several other building patterns are available to also provide a secure block and an interesting and active street.
BUILDING TYPES

Santa Isabel will have a variety of building types, here are illustrations and descriptions of several of those, all of which will mix together throughout much of the site, except for the larger houses which will be located more at edges.

Mixed Use Buildings
Lot width: varies.
Lot depth: varies.
Front setback: 0 meters.
Parking location: in the rear of the building or underground.
Height: 2 – 5 stories.
Uses: apartments or offices above commercial space, with shop fronts on the first floor.
Main characteristics: First floor is taller than the rest, with large windows and entrances to shops facing directly to the street. The building can have an arcade or projecting balconies over the front sidewalk. Windows that face the street should have vertical proportions.
Mixed-use buildings can also have interior courtyards.

Live/Work Buildings
Lot width: 6 meters minimum – 9 meters maximum.
Lot depth: 20 meters minimum – 30 maximum.
Front setback: 0 meters.
Parking location: in the rear of the building, with access via an alley.
Height: 2 – 4 stories.
Uses: apartments or single-family residence above commercial, with shop fronts on the first floor.
Main characteristics: Live/work buildings are usually grouped together along a street. First floor should have a shop or office facing directly on to the street. The main entrance to the residential portion of the building should be directly on the street. The building can have projecting balconies over the front sidewalk. Windows that face the street should have vertical proportions. The residential spaces above the first floor can be designed as a loft.

Courtyard Apartment Buildings
Lot width: 20 meters minimum – 40 metres maximum.
Lot depth: 25 meters minimum – 40 maximum.
Front setback: 0 meters.
Parking location: underground or in the rear of the building, with access via an alley.
Height: 3 – 4 stories.
Uses: apartments arranged around an interior or exterior courtyard, or several ones of these.
Main characteristics: Courtyard apartment buildings are designed to have both interior and exterior courtyards of varying shapes and sizes. Interior courtyards create privacy, and allow for apartments to have access to natural light and ventilation. Exterior courtyards provide a transitional space between the street and the building, while also providing natural light and ventilation to the apartments arranged around them. The first floor can be raised from the street level in order to provide privacy to the units at ground level (a minimum of 60 centimeters from the level of the sidewalk is recommended). The main pedestrian entrance to the building should be facing the street. The building can have projecting balconies over the front sidewalks or courtyards. Windows that face the street should have vertical proportions. This type allows for different apartment sizes in a single building. Apartments can be laid out as flats or lofts.

Rowhouses
Lot width: 7 meters minimum – 9 meters maximum.
Lot depth: 25 meters minimum – 35 maximum.
Front setback: 0 meters minimum – 3 meters maximum.
Parking location: in the rear of the building, with access via an alley.
Height: 2 – 3 stories.
Uses: single-family residence.
Main characteristics: Row houses are usually grouped together along a street. The first floor should be raised at least 60 centimeters from the level of the sidewalk in order to provide privacy. The main entrance to the building should be directly on the street, with a stoop or small porch. Windows that face the street should have vertical proportions. Rowhouses should always satisfy their own parking requirements inside the lot. Parking garages should be in the rear of the building. The space above a garage can be used to build a studio or apartment. The space between the garage and the main building can be used as a courtyard or garden.
Large Houses
Lot width: 16 meters minimum – 20 metres maximum.
Lot depth: 30 meters minimum – 40 maximum.
Front setback: 3.5 meters minimum – 8 meters maximum.
Side setbacks: 1.5 meters minimum on one side.
Parking location: in the rear or side of the building, with access via an alley where possible. If access to the lot is only available through the front street, an access lane on one side of the building should be provided to access the parking in the rear or side of the building. This access lane should not be wider than 3.5 meters.
Height: 1 – 2.5 stories.
Uses: single family residential.
Main characteristics: Large Houses are considerably setback from the street and from the neighboring houses, and have gardens in the front and rear of the house. The first floor can be raised from the street level in order to provide privacy to the spaces at ground level (at least 60 centimetres above the level of the sidewalk). The main pedestrian entrance to the building should be facing the street. Windows that face the street should have vertical proportions. Front porches should have a minimum depth of 2.4 meters from column interior to face of the front wall. Large Houses should always satisfy their own parking requirements inside the lot (one car minimum). Parking spaces or garages should be in the rear of the building, with access via an alley. The space above a garage can be used as a couryard or garden. Large Houses are usually arranged along a block with similar building types that are set back from the street, like Neighborhood Houses.

Courtyard Houses
Lot width: 8 meters minimum – 15 meters maximum.
Lot depth: 25 meters minimum – 35 meters maximum.
Front setback: 0 meters.
Parking location: in the rear of the building, with access via an alley or in a zaguán that faces directly on to the street.
Height: 1 – 2 stories.
Uses: mostly single family residential, however, some spaces in the house can be used for a home office or a small shop.
Main characteristics: Courtyard houses are designed to have one or more interior courtyards of varying shapes and sizes with rooms laid-out around them. Interior courtyards create privacy, and allow for the rooms of the building to have access to natural light and cross ventilation. Rooms should be shallow and can be arranged around a corridor. The first floor can be raised from the street level in order to provide privacy to the spaces at ground level. The main pedestrian entrance to the building should be facing the street. Windows that face the street should have vertical proportions.

Cottages
Lot width: 11 meters minimum – 12 meters maximum.
Lot depth: 20 meters minimum – 30 maximum.
Front setback: 0 meters minimum – 3.5 meters maximum.
Side setbacks: 1.2 meters minimum on each side.
Parking location: in the rear of the building, with access via an alley.
Height: 1 – 2 stories.
Uses: single family residential.
Main characteristics: Cottages are compact building types that are able to fit in smaller lots. They are slightly setback from the street and from the neighboring houses, and have a perimeter garden. The first floor can be raised from the street level in order to provide privacy to the spaces at ground level, at least 60 centimetres above the level of the sidewalk. The main pedestrian entrance to the building should be facing the street. Windows that face the street should have vertical proportions. Front porches should have a minimum depth of 2.4 meters from column interior to face of the front wall of the building. Cottages should always satisfy their own parking requirements inside the lot. Parking spaces or garages should be in the rear of the building. The space above a garage can be used to build a studio or apartment. The space between the garage and the main building can be used as a courtyard or garden. Cottages are usually arranged along a block with similar building types that are set back from the street, like Neighborhood Houses or Large Houses.

Neighborhood Houses
Lot width: 12 meters minimum – 15 meters maximum.
Lot depth: 25 meters minimum – 35 maximum.
Front setback: 2 meters minimum – 4 meters maximum.
Side setbacks: 1.5 meters minimum on one or two sides.
Parking location: in the rear of the building, with access via an alley.
Height: 1 – 2 stories.
Uses: single family residential.
Main characteristics: Neighborhood Houses are setback from the street and from the neighboring houses, and have gardens in the front and rear of the house. The first floor can be raised from the street level in order to provide privacy to the spaces at ground level, at least 60 centimetres above the level of the sidewalk. The main pedestrian entrance to the building should be facing the street. Windows that face the street should have vertical proportions. Front porches should have a minimum depth of 2.4 meters from column interior to face of the front wall of the building. Neighborhood Houses should always satisfy their own parking requirements inside the lot (one car minimum). Parking spaces or garages should be in the rear of the building. The space above a garage can be used to build a studio or apartment. The space between the garage and the main building can be used as a courtyard or garden. Neighborhood Houses are usually arranged along a block with similar building types that are set back from the street, like Cottages or Large Houses.
The University is proposing a phased development of its property, starting with a library, student life, a chapel and rectory, and ultimately a hospital, law school and many other robust educational elements.
Putting the University Master Plan together with the Santa Isabel Master Plan yields the following overall Master Plan (excluding some of the green space areas).

The University will have three access points, numbered 1, 2 and 3 on the following plan, with 1 and 3 being secondary, 15 meter rights of way and #2 being the primary 25 meter entry. Additional pedestrian/bicycle connections are also likely and one such location is indicated by the green arrow.
NEIGHBORHOOD

OPEN SPACE AND RECREATION

In addition to the built areas that will create active streets for walking, shopping, eating and simply going place to place, Santa Isabel has a significant amount of green space, especially to the south. Some of this area will remain productive coffee plantation, but nearly all of it can contain trails for walking and biking as “green space”. Many kilometers of trails are easily possible as are depicted below, with walking, hiking, biking and equestrian trails all available to be developed and loops created.

These areas will help to make Santa Isabel a unique Guatemalan experience where people will be able to walk in urban settings and in nature all from their homes, shops and offices very easily and conveniently.
STREETS

Santa Isabel will have a variety of streets. A list or “palette” has been created to provide flexibility, variety and interesting options. Many of these streets were rendered during the charrette, while a few others were not, but they are all described and depicted in the following pages.

One of the options that will be common to many of the streets involves how to address drainage: this may be done in one of three ways, or less commonly in some combination of: a reverse crown that drains to the centre of the street; a center raised crown that drains to vertical curbs at the edges of a street; and a center raised crown that drains to swales and/or ditches at the sides of a more rural street (possibly portions of the entry road).

These photos from Antigua show the reverse crown, center drain treatment, with small vertical curbs at walkways, but most people seem to simply walk in the street and the walkway areas are more transitional thresholds than sidewalks, partly due to the narrow widths of the sidewalks. Many of the quieter neighborhoods in Santa Isabel will function in a similar manner, but wider sidewalks, where provided, are expected to have more use by pedestrians.
There is an existing road through the northerly part of the property that is used by some other landowners, and a portion of which is concrete. Since parts of this road divide the archeological site into two parts, it will be re-routed along the edge of the upper part of the project and then through Plaza Major and then around to the easterly edge connecting with the existing road to the north, in a phased approach, outlined as follows.

Note that phasing will largely be market-driven and the first phases may not necessarily correspond with all of the red roads.
**STREET DETAILS**

The “Streets Palette” for Santa Isabel are contained in a separate document, with the image below explaining how these streets details pages are presented and should be interpreted.

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**Street Code: BVD-30M**

**BVD-30M Section and Plan View**

**BVD-30M Intent**

Same as BVD-C-30M without curbs to make use of the natural bioswale for stormwater management.

- Potential street section for main entry to project and University
- This street serves all types of development and provides crosstown connections.
- A substantial median provides a refuge for those crossing the street and turning lanes.
- Tree-frontage serves as a buffer between dedicated, multi-use lanes for pedestrians and cyclists.

**BVD-30M Specifications**

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**Street Palette and Specifications**

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