A Youth Center for Ciudad Juarez, Mexico

"Not with blows but by meekness and love you must win these friends of yours"
Acknowledgements

My family
for giving me the strong, loving roots I needed in order to fly

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for all your love and support, ya sabes

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Abstract

Statement of the Situation

Ciudad Juarez has experienced a tremendous explosion of growth in the past 20 years. This is due primarily to its economic growth, and with it came an incredible influx of people. Ciudad Juarez was ill prepared for this influx and is still reeling from the effects. The most worrisome of these effects are the squatter settlements, the children growing up in the squatter settlements, and a lack of sustainable architecture.

Statement of Issues

Because Ciudad Juarez could not accommodate the huge influx of people, they settled - most often illegally - on any land they could find. These are known as squatter settlements, and they are generally located on land that was deemed unsuitable for building. Utilities are not provided, and living conditions are poor. Children growing up in these environments have a rough life, and little space for diversion is set aside. The Salesian Society, a Catholic order devoted to the social, spiritual and educational welfare of disadvantaged children, has been present in Ciudad Juarez for four years now, and a measurable difference can be seen in the three areas where they are currently constructing youth centers. These centers always consist of four elements: areas for play, education, spiritual growth and an overall sense of home. The final concern is the lack of sustainable architecture. Sustainable architecture enriches its surroundings and resources - the ecological system, society, or local aesthetics - rather than take away from them. Before the arrival of the European, Mexico had a tradition of sustainable architecture built in tune with the climate and seasons with the help of local materials and labor. Along the line, this tradition has been lost, and the environment and urban fabric have suffered as a result.

Statement of Thesis

My thesis proposal for architecture is to design a sustainable youth center for the disadvantaged children of Tierra Nueva, a designated resettlement area on the southern outskirts of Ciudad Juarez. This will be accomplished in conjunction with the Salesian Society, using their site, programs and spatial requirements as the basis for my design. The main questions I will be dealing with are: 1) How to create an architecture which will stimulate learning and social interaction. 2) How to design an environment which better meets the goals of the Salesian Society and 3) Sustainability.

Establishment of U.S. factories (maquilas) in Ciudad Juarez

- Unexpected growth
- Illegal settlements (squatter settlements): -poor living conditions -little space for play -lack of sustainable precedent

Establishment of youth centers by Salesians

Goals
Design a youth center for Tierra Nueva which:
1. Stimulates learning & social interaction
2. Meets the needs of Salesian Society
3. Is socially & ecologically sustainable
How I Got Involved

This project was a long time in the making. I could truthfully say that it goes back to when I was sixteen (I swear I'll make this brief!) and was an exchange student to Encarnacion, Paraguay. I spent two months that summer living with a family and attending school. I hardly spoke the language - my host sister and I slept with a dictionary between the two of us. Yet when it came time to leave, I never wanted to go.

That single experience almost swayed me from my life-long desire to become an architect. Except at the time, the only other thing I could think to do was become a Spanish teacher, and I for sure wasn't going to do that. So in the end I came here to Ball State, dead set on becoming an architect. My wanderlust almost side-tracked me again during my second year in the program. After talking it over with my parents and Alfredo Missair, I headed off for a semester studying architecture at a university in Monterrey, Mexico. (I conveniently missed ICMA by going the spring semester...I highly recommend this sort of timing to anyone contemplating study abroad!) In the end, I enjoyed it so much that I stayed the summer and into the fall semester of 3rd year. (I highly don't recommend that sort of timing...it's near impossible to design and complete a portfolio in the three weeks of Christmas break!)

During my stay in Monterrey, I took a class on low-income housing in Mexico. I really enjoyed the class, especially the time we spent going into the colonias where the poorest of the poor were living and getting to know them. So back at Ball State, when it came time to take the thesis prep class in fourth year, I decided to research the low-income housing situation in Mexico.

In speaking with Alfredo Missair about my research, he told me of an initiative Ball State was beginning with a university in Ciudad Juarez, Mexico. I was really interested in this initiative, because it would be dealing with many of the issues I had become interested in. Thanks to my language ability, study abroad experiences and knowledge on low-income housing, I was allowed to join a group of Ball State professors in travelling to Ciudad Juarez for a week of preliminary meetings.

When I got back to school in the fall, I was sure I wanted to do my thesis project in Juarez, and I was hoping to do a project dealing with low-income housing. So during field trip week, Dawn Layton (fellow thesis student) and I went down to Ciudad Juarez to meet...
How I Got Involved

with people and look for potential sites. I was getting pretty anxious towards the end of our stay, since I'd found no site I liked, and I wasn't even sure I wanted to do low-income housing anymore.

I was reading the local newspaper one morning when a photo caught my eye. It was a picture of a community center we'd happened across on our first visit to Juarez months before. I came to learn that this was a youth center run by a Catholic group, the Salesian Society. Turns out, they were looking to build two more. Right then and there, I knew this was what I wanted to do. It dealt with all the issues I was interested in - low-income housing, urban development, and sustainability. Plus, there was a site and a client...a real-life situation. So it was off to find Padre Osvaldo, the man in charge of the Salesian work in Cd. Juarez.

I've been working on this thesis project ever since. I am very thankful to have had the opportunity to work on a project I cared so much about, something which enveloped interests I've had since junior high. I am also thankful for the opportunity to have been able to work with the Salesians, Padre Osvaldo in particular, and with their support try to design something which will have a positive impact upon the youth of Cd. Juarez.

My buddy, Ivan, in studio.

UACJ architecture student Rafael Cordero, local architect Arq. Javier Terrazas, and me at a passive solar house designed by Arq. Terrazas.
Issues

Cd. Juarez

The location of the site and the culture of the city itself formed the basis for many site design decisions.

The Salesians

As my client, the Salesians provided the program and influenced decisions about access & ambience.

Sustainability

Ideas on sustainability guided decisions involving orientation, materials and community involvement.
Ciudad Juarez

Location.

Ciudad Juarez is located on the Rio Grande, directly across from El Paso, Texas. It has a population of 930,000 people, making it the largest Mexican city along the US-Mexico border region, and the fourth largest city in Mexico. The city is bound in by the Sierra Juarez mountains to the west and the river to the north and east; consequently, it is growing rapidly into the open desert in the south.

Issues.

Growth - too many people in too little time.

Ciudad Juarez has experienced a tremendous explosion of growth in the past 20 years, primarily due to the introduction of the maquiladora program. This program brings United States production onto Mexican soil, and as a whole, has been very beneficial to both the companies and to the workers. For the city of Ciudad Juarez, however, it has been a mixed blessing. Along with the incredible growth of economy came an incredible influx of people. Ciudad Juarez was ill prepared for this influx and is still reeling from the effects.

Squatter Settlements - too many people and nowhere to go.

Undoubtedly, the most troublesome of these effects has been the squatter settlements. People from all over Mexico and Central America came to Juarez either looking for permanent jobs or to earn money and pass the time until they could cross the border into the United States. Ciudad Juarez could not accommodate all of these people, so they have settled - most often illegally - on any land they could find. These areas are known as squatter settlements. These settlements are generally located on land that was deemed unsuitable for building because of its steep terrain, poor soil composition, proximity to landfills, of
absence of utilities, such as electricity, gas, etc. Approximately 55% of the city's population lives in illegal and/or marginal areas. Ciudad Juarez is now left with the tremendous task of trying to relocate people who are in dangerous areas, to legalize the ownership of the others, and to provide utilities and transportation services to all settled areas. The most costly of these problems is providing utilities, such as gas, water, sewer drainage and electricity to areas which have already been settled. The process can take up to 20 years.

Culture - a loss of identity.

El Paso is right across the river from Ciudad Juarez, while the nearest significant Mexican city, Chihuahua, is 240 miles away. Additionally, there has been a large influx of immigrants from all over Mexico and Central America. This mixing of cultures and the pull of the United States appears to have sapped Ciudad Juarez' sense of identity. These two facts, along with the economically and physically precarious situation of many of the people, are the basis of many conflicts in the city.

Creating a strong sense of identity won't resolve these conflicts completely. However, I believe that creating reasons for people in Ciudad Juarez to stay and raise a family, to claim a piece of the city and make it theirs, will make a noticeable difference. This has already happened in the areas where the Salesians have constructed oratorios and youth centers. In these areas, there is a definite sense of place, and of pride.
**Location.**

Tierra Nueva is an area of 1,200 hectares located to the southeast of Ciudad Juarez. The land, primarily desert, was expropriated by the city from wealthy land owners who were hoping to make a profit from the city's eventual expansion. It is now a squatter resettlement area, and it is projected to become home for around 46,000 people.

**Issues.**

Relocation - who goes?

Tierra Nueva is a relocation area for families who have come to Ciudad Juarez and settled in high risk areas. These areas include land which is located on garbage dumps, flood plains, steep slopes and utility right-of-ways.

Terms - what do they get (or lose) if they go?

Relocation to Tierra Nueva is on a completely voluntary basis. Families buy a lot for $1,000 (paid in monthly installments without interest) and receive free materials and advice to build a new home, called a pie de casa. This pie de casa consists of a concrete foundation, bedroom, bathroom, kitchen, and multi-purpose room. There is a prescribed plan they can follow, but they are also free to build their own design. Sounds like a pretty good deal...but the down side of this deal is that when they move to Tierra Nueva, they are not reimbursed for the lot and home they left behind, nor are they allowed to sell them. Although most people do not own the title to the land which they were living on, they have usually paid someone (not the real owner) for the land just the same. Nor can they sell their home and recoup the sweat equity they put into it, because doing so would only invite another household to move onto the high-risk lot and perpetuate the problem.
Results - are they going?

It's gotten off to a slow start, but people are moving to Tierra Nueva. At first it was pretty much a barren desert with only a few maquiladoras and junk yards scattered around. Also to its disadvantage was its location. Located along the fringe of the city, it is still far away from most areas of employment. Although there is public transportation reaching into Tierra Nueva now, it's still not an easy commute for many.

It appears that the pros have outweighed the cons, however. Now the first stage of development is nearing completion, with most of the lots occupied and the construction of an elementary school and church underway. In early January of 1996, they were beginning the second stage of development. At this time the land is still pretty barren, and they are only beginning to stake out lots and roads in this second area of development. On the whole, however, development in this area is going better than many people had expected.
Who they are.

The Salesians, founded in 1859 by Saint John Bosco, are the 3rd largest order of the Catholic Church. They are comprised of priests, nuns, and lay cooperators. Founded in Italy, the Salesians are now present in over 100 countries worldwide.

What they do.

The Salesians are dedicated to helping all children become productive, upstanding citizens. They believe the key to this is to educate the children, teach them a skill, and nourish them spiritually. They run programs ranging from universities to youth centers; no two are alike. Each program is specific to the culture and to the needs of the area in which it is located. All programs, however, must include 4 components - places to play, to learn and to grow spiritually, and an overall sense of "home". Don Bosco realized that children needed to play, and recreation was and still is the first means of getting children involved. After having fun, the children are more receptive to learning, and finally, spiritual activities.

The "Preventive System."

The preventive system is the backbone of Salesian education. It is based on the idea that love and charity should be the foundation of education. Rather than waiting for problems to happen, the Salesians look to prevent them. The preventive system "consists in making the laws and regulations of an institute known, and then taking great care so that the pupils may always enjoy the company of the director or his assistants, who...can converse with them, lead them, and in a kindly way give advice and correction." This philosophy involves five main directives: 1) Always be present 2) Make known all rules and regulations 3) Correct patiently 4) Strive to be loved, not feared 5) Praise when deserving praise.
The Salesians in Ciudad Juárez

Why they came.

The Salesians came to Ciudad Juárez upon the request of the Organization for the Development of Youth. This group was formed in January of 1991 to promote the formation of alternative activities for the youth of Cd. Juárez. The Salesians, headed by the Father Osvaldo Gorzegno, SDB, arrived in September of that same year.

What they've done so far.

The Salesians in Cd. Juárez have been in operation for four and a half years now. In that time, they have begun construction on three youth centers in various areas of the city and have begun planning the construction of two more.

How they operate.

The Salesians in Cd. Juárez operate primarily on funds donated from citizens and businesses in the city itself. Very little funding is received from outside sources, although with the recent recession in Mexico, the Salesians have had to ask for funds from organizations in other countries. All the land they build on is donated either from private citizens or the government. Building materials are sometimes donated, but are usually purchased. All staff members are volunteer. There are usually 14 full-time high school and college age volunteers from all over Mexico who work for room and board. These volunteers have usually had some previous affiliation with the Salesian Society, either through their education or their church.

The Salesians run a very efficient and a very effective operation. The leaders are dedicated to this cause for life, and all workers are involved for the joy of doing it. Among rapidly changing government officials and programs, the Salesians provide an island of stability and continuity. They go directly into the areas of the city which need it most, and there is a very visible effect. Parents told us that the children, after becoming involved with the Salesians, were much more courteous and manageable. I was amazed by the amount of love, patience, and respect shown by everyone we met at these centers. The centers themselves seem to be oases in a desert of poverty. People of all ages gather to play and watch games, to socialize, and to attend church. To have one nearby is seen as being a great boon to any neighborhood.
Sustainability

Sustainable Building

Sustainable design is about using techniques which replenish resources - the ecological system, society, or local aesthetics - rather than take away from them. Before the arrival of the European, Mexico had a tradition of sustainable architecture. Architecture was built in tune to the climate and the seasons with the help of local materials and labor. In the past centuries, this tradition has been lost, and the modern architecture of Mexico is one of concrete blocks, steel and glass, foreign materials and foreign labor. In this project I would like to see a return to sustainable building, by using local materials (adobe, in this case), and local labor.

Sustainable Processes

For sustainable building, it's not enough to just use environmentally friendly materials. The processes by which these are used must also be sustainable. For instance, in Ciudad Juarez, there is an abundance of manpower, material, and practically no money. Use what is available. The Salesians have a site on the opposite side of town which has to be levelled, and the soil there is perfect for making adobe. Using the local manpower and free material, people are put to work and construction costs are cut.

Sustainable Economics

We might as well face it... the world revolves around money. Ideas for sustainable building and sustainable processes won't fly, and they certainly won't be able to survive, unless ultimately they make economic sense. Ideally, I would like this youth center to be built by local people. Not only does it get the community involved in the design and construction, making it more "theirs" but they also have the opportunity to learn a skill and be paid for it. Then hopefully they can take the lessons they learned home to assist them when they need to make their own houses or find jobs. I would also like to see the vocational programs opened up to the community. If the students are learning to cut hair or fix cars, they could provide a service at a reduced price to the community while learning and making money.
Culture.

Why should it matter?

With the increasing globalization of our world, I believe architects must become more sensitive to the cultures in which we are designing. It's a mistake to think that everyone else in the world should be, or even wants to be, like the United States. Just as each building site requires a unique design response, so does each nation. An architect wouldn't design the same building for a mountain as he or she would for a plain. It wouldn't work. And neither would a building designed for the suburban US work in suburban Paraguay. The culture, traditions and economics of each place necessitate different design responses, just as the geography, climate and soil of each site do.

Design Influence

Edge.

In Mexico, buildings have traditionally been built right up to the edge of the street. This creates a strong definition of place and of ownership within the urban fabric.

Plaza.

The plaza was and, to a large extent still is, a main focus of life in Mexico. This is where families go to enjoy a sunny Sunday afternoon, where couples go to enjoy each other's company, and where neighborhood or city-wide celebrations can take place.

Church.

The church has always occupied a prominent place within Mexican life as well as within the urban fabric. In a small town, the church and its plaza are the center of life. In larger cities, churches and their plazas form major nodes.

Fiesta.

Religious festivals and fiestas for quinceneras, weddings and birthdays are commonplace in Mexico. Churches and plazas often provide the background for these events.
As my client, the Salesians, and Padre Osvaldo in particular, had a tremendous impact upon the design of this project. Not only did he hand me a program of spaces and activities he would like included in this youth center, but he also gave me a list of directives which they utilize in all of the youth centers and oratories which they build. The process of construction was also explained to me. First come the playing fields - the soccer fields and basketball courts and such. This is, of course, how they first reach out to the kids. Next comes the multi-purpose room. Here they can have misc, classes, and social events. Then depending upon the greatest need, follow in order the church, informal & vocational areas, any social service spaces, or administrative areas.

**Design Influence**

**Ease of Supervision.**

It is extremely important to the Salesians that they be able to see all areas of the youth center easily and that there be no small hidden areas where kids can go and misbehave. This supervision goes hand-in-hand with their Preventive System. Constant supervision prevents problems from happening, and if there does happen to be a problem, good sight lines allow for quick intervention.

**Controlled Circulation.**

This youth center, like all others run by the Salesians, is for the public. They want the public to come and get involved. By creating major circulation paths through the site (which really are necessary just because of the sheer size of the site), I am encouraging involvement through exposure. At the same time, this circulation needs to be controlled for safety reasons.

**Homey Atmosphere.**

The Salesians operate through the funding of donations and the work of volunteers. This doesn't leave much money for architectural flourishes. What is more important is spatial richness. The materials may be plain, but the spaces should be inviting and comfortable. This is meant to function as a home away from home, and it should feel as such.
Orientation.

It would be fair to say that the orientation of the playing fields set the order for the entire design. Since the soccer fields took up so much of the site and had to avoid an E-W orientation, there were limited configurations for their placement. Once I got those in place, then I dealt with the orientation of the buildings themselves, trying to limit exposure along the west elevations in particular.

Sun and shade.

Along with the matter of solar orientation is that of sun and shade. The climate of Ciudad Juarez is extreme. It gets to well over 100 F regularly in the summer, and at times snows in the winter. Generally there are neither air conditioners nor heaters. To mitigate the climate, I needed to provide areas of sun and shade, places where you could go to be warm in the winter and places where you could be cool(er) in the summer.

Sustainable materials.

Currently, most construction in Ciudad Juarez, and in Mexico for that matter, is done with CMU's or cast-in-place concrete. I am proposing that this youth center be built with adobe. Although the soil in this area is rocky and sandy and not suitable for making adobe, the Salesians own a piece of property across town which is perfect for making adobe. It needs to be leveled, and the excess material could be hauled over and used to construct this project.

Sustainable processes.

Labor is easy to come by in Ciudad Juarez, and money is not. Jobs, at least ones located directly in this area, are also hard to come by. The logical outgrowth of this is to use a labor-intensive construction process and hire neighbors and future users of this center to do the work. And although it wasn't specifically investigated in this project, I also think the inclusion of solar power, passive-solar water purification, and the recycling of gray water are all important sustainable processes which should be investigated and included if possible.
Program

Recreation

The Salesians first reach the children by getting them involved in sports - through leagues &/or games.

Religion

Religion, while it is not forced upon any participant, is the backbone of Salesian methods & education.

Informal Education

The Salesians believe strongly in informal education (music, dance, arts) for creating well-rounded kids.

Vocational Education

Teaching the youth a skill gives them confidence and will enhance their ability to provide for a family.

Administration

Having the administration accessible and constantly visible aids in implementing the Preventive System.
## Recreation

<table>
<thead>
<tr>
<th>#, names of spaces</th>
<th>Square Footage</th>
<th>Activities</th>
<th>Furniture/Equipment</th>
<th>Environmental Considerations</th>
<th>Design Considerations</th>
<th>Level of access</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 soccer fields</td>
<td>340' x 205' ea.</td>
<td>organized league &amp; pick-up games</td>
<td>goals, lines, balls, seating</td>
<td>avoid orientation along E-W axis</td>
<td>good visibility</td>
<td>very high</td>
</tr>
<tr>
<td>4 basketball courts</td>
<td>84' x 50' ea.</td>
<td>organized league &amp; pick-up games</td>
<td>goals, lines, balls, seating</td>
<td>avoid orientation along E-W axis</td>
<td>good visibility</td>
<td>very high</td>
</tr>
<tr>
<td>2 courts for fubolito</td>
<td>84' x 50' ea.</td>
<td>primarily pick-up games</td>
<td>goals, lines, balls, walls</td>
<td>avoid orientation along E-W axis</td>
<td>good visibility</td>
<td>very high</td>
</tr>
<tr>
<td>1 playground</td>
<td>1,500 sq. ft.</td>
<td>play area for neighborhood children</td>
<td>jungle gyms, slides, swings, tunnels</td>
<td>try to use natural, recyclable materials, meld play structures into landscape, visibility</td>
<td>good visibility</td>
<td>very high</td>
</tr>
<tr>
<td>1 weight lifting room</td>
<td>400 sq. ft.</td>
<td>individual weight lifting</td>
<td>free weights, nautilus equipment, mirrors</td>
<td>good ventilation</td>
<td>place nearby other athletic areas</td>
<td>high</td>
</tr>
<tr>
<td>1 aerobics room</td>
<td>400 sq. ft.</td>
<td>aerobics classes</td>
<td>resilient floor, mirrors</td>
<td>good ventilation</td>
<td>place nearby other athletic areas</td>
<td>high</td>
</tr>
<tr>
<td>1 office for league administration</td>
<td>150 sq. ft.</td>
<td>administration, small meetings</td>
<td>office equipment, conference area</td>
<td>place nearby other athletic areas</td>
<td>medium-high</td>
<td></td>
</tr>
<tr>
<td>2 locker rooms</td>
<td>1,000 sq. ft.</td>
<td>storage, dressing, cleaning up</td>
<td>benches, lockers, showers, toilets</td>
<td>place nearby other athletic areas</td>
<td>high</td>
<td></td>
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## Informal Education

<table>
<thead>
<tr>
<th>#, names of spaces</th>
<th>Square Footage</th>
<th>Activities</th>
<th>Furniture/Equipment</th>
<th>Environmental Considerations</th>
<th>Design Considerations</th>
<th>Level of access</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 classrooms for 25 students apiece</td>
<td>15,640 sq. ft.</td>
<td>music, painting, small group sessions, continuing education</td>
<td>desks, chairs, tables, boards, windows, fans, any supplies as needed</td>
<td>good natural ventilation, natural lighting, solar orientation &amp; shading devices</td>
<td>provide gathering spaces between classroom areas, rich and varied spatially</td>
<td>medium-high</td>
</tr>
<tr>
<td>1 multiple use room for 200 people</td>
<td>1,800 sq. ft.</td>
<td>large misas, conferences, parties for quinceneras &amp; wedding receptions, large group events</td>
<td>stage area, food serving area, conference tables, chairs</td>
<td>as much natural ventilation and lighting as possible</td>
<td>connection to cafeteria for in-house catering, connection to church &amp; plazas for parties and religious festivals</td>
<td>high</td>
</tr>
<tr>
<td>1 library with video and educational areas</td>
<td>5,025 sq. ft.</td>
<td>reading, studying, watching videos, small meeting areas for groups</td>
<td>book shelves, desks, chairs, couches, study carrels, tables, tvs &amp; movie watching area</td>
<td>natural light and ventilation without damaging books</td>
<td>connect to informal classroom area yet make available for community, outside reading space</td>
<td>high-very high</td>
</tr>
<tr>
<td>1 gymnasium</td>
<td>12,000 sq. ft.</td>
<td>basketball, volleyball games, very large gatherings</td>
<td>bleachers, game equipment, lobby, ticket counter</td>
<td>as much natural ventilation as possible, good lighting, both natural and artificial</td>
<td>easy access to public, connection to classroom and athletic areas, anchor site</td>
<td>very high</td>
</tr>
</tbody>
</table>
## Religious and Administrative Areas

<table>
<thead>
<tr>
<th>#, names of spaces</th>
<th>Square Footage</th>
<th>Activities</th>
<th>Furniture/Equipment</th>
<th>Environmental Considerations</th>
<th>Design Considerations</th>
<th>Level of access</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 chapel for 300</td>
<td>2,400 sq. ft.</td>
<td><em>misas</em>, weddings</td>
<td>pews, baptismal, pulpit area, choir area</td>
<td>both dramatic &amp; soft natural light, cool on the inside</td>
<td>prominent place on site, image of solidarity and belonging to site</td>
<td>very high</td>
</tr>
<tr>
<td>1 sacristy</td>
<td>200 sq. ft.</td>
<td>preparation for religious services</td>
<td>desk, place for religious garments, storage for sacraments,</td>
<td>cool, natural light without compromising level of access</td>
<td>easy access to the front of the church</td>
<td>very low</td>
</tr>
<tr>
<td>1 prayer room</td>
<td>500 sq. ft.</td>
<td>Bible study groups, catechism classes</td>
<td>seats, book shelves</td>
<td>natural light and ventilation</td>
<td>easy access from church entrance, quiet area</td>
<td>medium</td>
</tr>
<tr>
<td>5 offices w/ private bath</td>
<td>600 sq. ft.</td>
<td>administrative activities</td>
<td>desk, chairs, shelves,</td>
<td>natural light and ventilation</td>
<td>good visibility to rest of site, approachable yet private</td>
<td>medium-high</td>
</tr>
<tr>
<td>3 private consultation areas</td>
<td>300 sq. ft.</td>
<td>private talks, interviews</td>
<td>two (min.) comfortable chairs</td>
<td>natural light and ventilation</td>
<td>visually set back, and more private than offices</td>
<td>very low</td>
</tr>
<tr>
<td>2 conference rooms</td>
<td>800 sq. ft.</td>
<td>meetings for staff and between staff and collaborators</td>
<td>1 large table per room, chairs as needed</td>
<td>natural light and ventilation</td>
<td>distinguishable visually, private circulation</td>
<td>low-medium</td>
</tr>
</tbody>
</table>
## Vocational Education & miscellaneous spaces

<table>
<thead>
<tr>
<th>#, names of spaces</th>
<th>Square Footage</th>
<th>Activities</th>
<th>Furniture/Equipment</th>
<th>Environmental Considerations</th>
<th>Design Considerations</th>
<th>Level of access</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 vocational workshops</td>
<td>12,000 sq. ft.</td>
<td>auto mechanics, welding, electrics, wood, haircutting, sewing, computers</td>
<td>equipment appropriate to the activity, safety kits, seats and waiting areas for income producing activities</td>
<td>good natural and electric lighting, proper ventilation, impermeable surface finishes</td>
<td>accessible from community and youth center, ability to move equipment in and out, break visual monotony</td>
<td>high-very high</td>
</tr>
<tr>
<td>7 classrooms</td>
<td>1,800 sq. ft.</td>
<td>instruction for vocational activities</td>
<td>seats, tables, blackboards</td>
<td>natural light and ventilation</td>
<td>separate but adjacent to workshops</td>
<td>medium-high</td>
</tr>
<tr>
<td>bathrooms</td>
<td>1,500 sq. ft.</td>
<td>men's and women's public bathrooms, distributed throughout the site</td>
<td>toilets, urinals, sinks, mirrors</td>
<td>light and ventilation without compromising security</td>
<td>easily accessible throughout the entire site</td>
<td>high-very high</td>
</tr>
<tr>
<td>storage for materials, supplies</td>
<td>2,000 sq. ft.</td>
<td>storage for leftover, donated materials and supplies</td>
<td>shelves, drawers, hangers, boxes</td>
<td>electric lighting, ventilation without compromising security</td>
<td>distributed evenly throughout the site</td>
<td>medium-low</td>
</tr>
<tr>
<td>maintenance rooms</td>
<td>800 sq. ft.</td>
<td>rooms for maintenance/ janitorial supplies</td>
<td>shelves, drawers, hangers, boxes</td>
<td>electric lighting, ventilation without compromising security</td>
<td>distributed evenly throughout the site</td>
<td>medium-low</td>
</tr>
</tbody>
</table>
Site

Tierra Nueva. Segunda etapa (second stage of development).
Soccer Fields.

The placement of the soccer fields drove the entire design.

Because of their size and the fact that they had to avoid an east-west orientation, there were limited arrangements in which the soccer fields could be placed.

In this final arrangement, the fields are separated to break up the site visually and spatially.

The fields also front multi-family housing areas, creating transition spaces and allowing for easy supervision.

Their placement along the sides of the streets will hopefully lead to greater involvement, as passerbys will be able to see what is going on, get interested, and become involved in the Salesians programs.
Church.

Because of its importance to the culture, the community and the Salesians, the church occupies the most prominent place on the site.

The church is located at the intersection of two major neighborhood collectors. This gives the church a greater amount of exposure and creates a landmark within the surrounding community.

Across the street (to the north) is a large plaza area to be fronted by multi-family housing. This placement of the church allows for the recreation of the traditional church/plaza relationship.

The street between the church and the plaza can be paved with a more pedestrian material to increase the connection between the two. On days of religious festivals, the street can be shut down, and festivities can spill out and around the church and the plaza.
Administration.

The administration building is placed to allow for maximum supervision.

From their offices, the administrators can see across the playing fields into all areas of the site.

The administration building is also placed to control access in an area of the site where there are no other buildings, just playing fields.

In terms of overall site design, it functions as a pivot point, following the break while connecting the two parts at the point where the site breaks from the orthogonal grid.
Informal and vocational education.

The informal and vocational education areas help define the edges of the urban context.

The informal education area, located along the western edge of the site, acts as a buffer zone to the commercial area across the street.

The vocational education area helps define the street edge as well as the boundaries of the plaza across the street.

At the same time, it also opens up to the community so that students in the vocational programs can offer their services at a reduced price to their neighbors. This produces income and gives them valuable practice at the same time.
**Gymnasium.**

The gymnasium is host to many athletic and athletic-support activities (i.e. league offices, locker rooms).

Because of the functions it holds, the gym is located in the midst of the soccer fields and playground.

In terms of site design, it anchors this portion of the site, and with the administration area encloses the playground.

The gym is located along the edge of the main thoroughfare to allow for easy public access.
Overall Site.

Here the connections between the major components of the site can be seen.

Buildings control access points, anchor the site, and define edges.

Playing fields, courtyards, and gathering spaces make up a series of outdoor rooms of varying sizes which are defined by the buildings around them.
A sense of home. from earth to spirit.
Missing Page 34
Conceptual Design

Site information and analysis.
Conceptual Design

Preliminary site design.
Conceptual Design

Site concept 1.

Site concept 2.
Conceptual Design

Final site concept.
Conceptual Design

Church.

Informal education.

Administration.
Conceptual Design

Gymnasium.

Vocational education.
Final Design
Final Design

Computer site model.

Site model - north view.

Site model - west view.
Final Design

Courtyard.
Final Design

Courtyards.
Final Design

Church.
Informal education.
Final Design

Administration.
Final Design

Vocational education.
Final Design

Gymnasium.
Final Design
Final Design


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