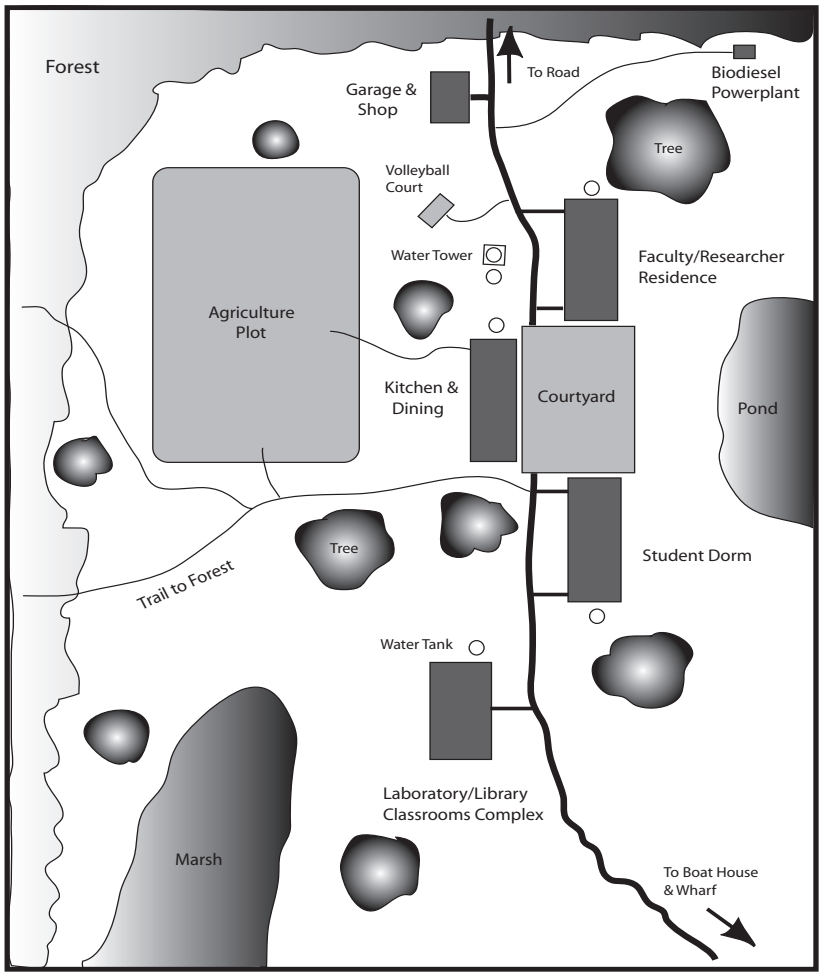
Description of the New ITEC Field Station Location & Infrastructure

The Dixon Property,
A Perfect Location

Having our field station on the Dixon property has a great many advantages, and is truly a win-win situation. We will be only a minute from the forests, and much closer to the coral reefs we regularly use than we were at our old location. We will also be able to visit all of our previous sites both terrestrial and marine. And, we will still be able to access the bus to town as the Bocas-Drago road will be but a 10 min walk from the new station (5 min. by utility vehicle). Most importantly though, we will have complete control of our property and our future.



Map of New ITEC Field Station

The New ITEC Field Station

The field station will be built in two phases. Phase one includes the construction of four main buildings and several outbuildings. The main facility will surround a central courtyard on the hill and include a single story kitchen-dining facility seating 60, a two-story student dormitory sleeping 36, a two-story residence for ITEC faculty and visiting researchers sleeping up to 16, and a two-story building containing the laboratory and library below, and two classrooms above. Three outbuildings will also be constructed including a garage/shop, a dive equipment storage unit and a structure to house our 25 kw biodiesel power-plant. All buildings will have reinforced concrete foundations and be constructed of pressure-treated lumber. Roofs will be high grade, rust-resistant metal with insulation beneath. Buildings will be double-wired for normal 110v power plant output, and 12v for solar output. The buildings will be arranged to take advantage of the breeze coming from the north and will overlook Almirante Bay to the south. All buildings will be mosquito proof. An utility vehicle track will be built from the Bocas-Drago road so that we can continue to access town by car. A garage will be constructed near the road to house our vehicles (see map below and artists conception in the brochure). The basic architectural plans are available on request.

Phase two will include the construction of new docks, more outbuildings, and another student dorm intended for visiting high school groups. Additional boathouses at the "Dixon Marina" will be also built. Other construction projects include a wharf adjacent to the mangroves at "Pete's Reef" and a floating dock on the outside of the reef attached to a mooring. A rancho (thatched structure) will be built on the wharf along with a storage unit for hammocks, chairs, tables and kayaks. The wharf will be a five minutes away by trail from the field station. A pond will be constructed in the marsh directly in front of the field station which will attract a variety of wading birds and other animals to the area.

The Agricultural Plot

A sustainable agricultural plot will be established northwest of the field station. Most of our fruits and vegetables will be grown here organically, and include plantain, banana, papaya, pineapple, passion fruit, squash, yuca, vegetable pear, taro, etc. Many other vegetables such as tomato, peppers, carrots, onion, cucumbers, etc., will be grown in elevated beds covered with 20% shade cloth. Large compost bins will be constructed to provide nutrients to these various fruits and vegetables. Fruit trees of various kinds will be planted around the field station and will include coconut and pifa palms, citrus, mango, avocado, water apple, guanabana, guava, and others. These agricultural sites will also be used as teaching laboratories in future sustainable tropical agriculture courses to be taught at the field station.

Description of Buildings and Infrastructure

Kitchen-Dining Room, Laundry Facility. This single-story structure will be located in the center of the station on the courtyard and will seat up to 60 individuals. The building will have a concrete floor covered with tile and abundant screened windows and ceiling fans for ventilation. The kitchen will be spacious and modern with two solar-operated refrigerators, commercial stoves, central stainless prep table, heated buffet table, and a walk-in cool storage for fruits and vegetables. The ITEC office will occupy one corner of the structure and a covered out-door laundry area with washing machines and wash basins will be built adjacent to the office. A small deck will be built on the north side of the building for outdoor seating. The large dining room will be used as an additional classroom, for study, or for watching movies, etc.

Student Dormitory. This two-story structure will be placed on the west side of the courtyard and contain six rooms housing six students each for a total capacity of 36. Rooms will be large and supplied with bunk beds, tables, lights, ceiling fans, electrical outlets and an individual closet/storage area for each student. Each bunk bed will contain two large lockable drawers below the lower bunk. Four bathrooms will be constructed on each floor and connected directly to the rooms providing a 4.5-to-1 student-to-bathroom ratio. Bathroom showers and floors will be tiled and contain storage space for supplies. Covered decks will be constructed on both floors facing Almirante Bay. A storage area will be constructed below the bottom floor deck.

Laboratory-Library-Classrooms Complex. This two-storied structure will serve multiple purposes. The laboratory will be large, supplied with counter space along its perimeter and two 4x8 ft. tables will occupy the center. The lab will be provided with sinks, gas stove, a walk-in

dry closet for microscope storage, a herbarium, insect cabinet, and storage areas for invertebrate and vertebrate collections. The spacious library will connect directly to the lab through an open walkway and will contain shelf space for 5000 volumes, reprint files, tables, walk-in dry closet for computer storage and a lounge area. A lavatory will be placed between the lab and library. Two, 25-person capacity classrooms will occupy the upper floor of the building. These rooms will be supplied with storage closets, blackboards, projection screens and ceiling fans. The dividing wall will be fitted with sliding doors so that the entire upper floor can be opened up into one large room for meetings and symposia.

Faculty-Researcher Residence. This two-story structure will be placed on the east side of the courtyard and contain eight rooms with private baths sleeping up to 16 instructors and researchers. Two twin beds or a single double bed will be placed in each room as needed. Each room will contain a closet, dresser, ceiling fan and desk. Baths will have tiled showers and floors, and storage area for bath supplies. Covered decks on both floors will be built facing Almirante Bay. A storage area will be constructed below the bottom floor deck.

Dive Equipment Storage Building. A small, single-story building will be constructed adjacent to the boathouse on Ground Creek. The structure will contain racks for dive tanks, shelves for dive equipment and pegs for holding BCs and regulators. Changing stalls and fresh-water showers will be installed along one side of the building. This building will also contain an outboard motor storage area and small workshop. A separate smaller building will be used to store fuel.

Garage and Workshop. A garage and workshop will be built on the north side of the campus. This building will house our utility vehicle. The shop will contain various wood and metal working machinery capable of handling our research project needs as they develop. The solar battery array will also be housed here.

Pete's Reef Wharf. A wharf measuring 10 by 30 feet will be built adjacent to Pete's reef. Access will be provided by a trail from the station and an elevated walkway through the mangroves. The structure will be supported by concrete pilings and the superstructure of pressure treated lumber. A thatched-covered "rancho" will shade the wharf and a small storage building will be built to one side for the storage of tables, chairs, hammocks and kayaks. All area beaches, reefs, mangroves and creeks will be accessible from this location. A floating dock measuring 12 by 12 feet in size will be placed outside the reef in deeper water and moored to cement anchor on the bottom.

Our Water Supply. Abundant fresh water will be obtained from a roof catchment system constructed on the four main station buildings. Five 1000 gallon tanks set at the same elevation and connected together with 3 inch pipe will be used to store water. One of the tanks will sit at the bottom of a 30 ft. reinforced concrete water tower and used to transfer water to another 1000 gal. tank at the top of the tower by automatic electrical pump system. Water from the upper tank will be fed directly by gravity to all of the buildings maintaining constant high water pressure. Drinking water will be filtered with a micropore ceramic filter system.

If you have any suggestions as to how we might improve our design or provision our new station, please let us know!