

A Path to the Future
BASE CAMP SARASOTA
Business Plan Report

Prepared for

Sarasota County Environmental Services

Prepared by

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Appendix (Separate Document)

BASE CAMP SARASOTA - A PATH TO THE FUTURE

Introduction and Executive Summary

This document is a compilation of ideas from many sources and designed to convey the steps necessary to create and develop Base Camp Sarasota (BCS), a biological field station to be located in Sarasota County, Florida.

For those reading only parts of this document, we recommend reading this Executive Summary and the next section on Mission and Purpose along with chapters of specific interest. The Appendix contains additional information on recommendations and specific work completed to-date, including consultant reports, program and facility recommendations, planning, preliminary design exercises, site analysis, market surveys, and other relevant documents.

A Path to the Future

Every path has a starting place and every step determines the direction of the path. BCS is envisioned as a starting place for collecting data, examining subtropical ecosystems, studying the area climate, and analyzing climate change so that appropriate steps (policies and decisions) can be taken to manage our natural communities with a focus on mitigating the effects of climate change.

BCS is a biological field station to be built in the Carlton Reserve in Venice, Florida, on five acres contributed by Sarasota County. The station will attract some of the world's foremost scientists and ecologists to study the unique subtropical ecosystems of Southwest Florida, providing a "base camp" for research and education to guide future land use policy and environmental decisions based on both biology and economics.

Accordingly, BCS represents an important interface for ecology, education and economics. By studying the components and machinery of our local environment, biologists and other scientists can provide sound science to ensure best practices for environmental management, thereby saving money and providing a boost to science education. Moreover, such scientific research can also lead to entrepreneurial opportunity and economic development.

As we have learned recently, many of the assumptions that we have made about the cause and effect of environmental degradation are, in fact, incorrect or inaccurate. As a result, millions of dollars are spent on ineffective programs when simpler and more efficient ways exist. As an example, many have assumed that the loss of oysters, clams and other marine life in our bays is a direct result of manmade pollution. While pollution certainly plays a role in water quality degradation, we have recently discovered—via the Sarasota County Dona Bay study—that the loss of much of our bay life is linked to the seasonal infusion of fresh water from the interior of the County via large drainage ditches built in the 1940s and 50s. This ecological knowledge can lead to better decisions on how to restore our bays by dealing with fresh water issues as we continue to evaluate other impacts.

Moreover, understanding how “nature does it” enables us to “put things back” so nature can do it again. Typically, nature’s way costs a lot less than human wheel reinvention, which may additionally result in more damage (ala early Everglades restoration efforts and the Kissimmee River project). Locally, understanding nature’s way is the philosophy which has been driving Sarasota County’s Celery Fields wetland restoration project at I-75 and Fruitville Road designed to control downstream flooding. Again, a scientific understanding of our upland and wetland climates enables us to make more effective decisions about how to use our resources more efficiently to protect and improve the environment so that nature can do what it does best.

BCS can also be seen as a precursor of a larger initiative, currently being promoted by the Century Commission for a Sustainable Florida, to develop a series of outreach centers throughout the State. These centers would bring research from all of Florida’s universities (and possibly others outside the state) to communities where research can be applied to real-world situations. Conversely, communities and end users will be able to communicate their needs for research to the academic institutions, resulting in research that works. There is an opportunity for the first center to be located in Sarasota County. Accordingly, New College of Florida and Sarasota County Government are exploring this opportunity with the Century Commission, the University of Florida’s Institute of Food and Agricultural Sciences (IFAS)/Cooperative Extension Service, and the Florida House Institute for Sustainable Development (FHI).

And, finally, BCS should be considered not just as a part of a community, but as a community. Accordingly, it must be considered in light of the four systems layers which make up every community: the natural, built, social and economic systems. The *built* systems must respect the *natural* systems, particularly since this will be a premier field station, promoted worldwide and reflecting the leadership of Sarasota County in sustainability. And, the *social* elements of interaction among the scientists who visit BCS must be considered, along with the station’s interaction with the local community. And, finally, original seed funding for this project came from the Economic Development Corporation of Sarasota County (EDC) which, early on, recognized the *economic* value to be derived from the field station in providing best practices to manage ecosystems and the environmental attributes of Southwest Florida which bolster tourism, real estate and other livelihoods. Moreover, the EDC recognizes opportunities, yet undiscovered, in the emerging fields of Biomimicry, nanotechnology, natural capitalism, energy production, integrated water management, carbon control, zero waste processing, etc.

Using This Document

By detailing ideas, recommendations and work to-date, this document offers a path to the creation, operation and sustainability of Base Camp Sarasota. To move forward, a number of processes must be undertaken, questions answered and issues resolved. Accordingly, this report contains information, discussion, recommendations and tasks as categorized below. However, in no way does this document reveal the final path, as future decisions will surely change its direction. As with any well thought-out plan, flexibility is a keystone.

The document is formatted under three major headings—Strategic and Business Planning, Design and Construction, and Administration and Operations—with broad subcategories. The general structure follows the format below:

STRATEGIC AND BUSINESS PLANNING

Partners and Champions
Purpose and Mission
Ownership and Governance
Business Planning and Funding
Program Development

DESIGN AND CONSTRUCTION

The Design Process
The Construction Process

ADMINISTRATION AND OPERATIONS

Administration
Policies and Procedures

Each category will be evaluated in terms of:

- Background and work to-date.
- Currently known issues.
- Tasks required.
- Recommendations for implementation.

At this time, we can outline processes to be followed and results to be delivered, but we cannot define the results of all tasks. For example, governance issues must be resolved and a strategic plan adopted by a governing body, and this document contains a framework for that process. Development and construction tasks will require the work of experts in their fields who will be recruited or hired later, but we are now able to identify the basic steps they will need to take. Likewise, human resource and safety policies must be developed for field station staff and visitors, and these tasks should be done by interested and knowledgeable teams which will develop human resource and safety manuals for BCS. In many cases, category tasks will overlap in terms of timing and this will be addressed in the Schedule.

It must be noted that this document would not be possible without guidance obtained from the *Operations Manual for Field Stations and Marine Laboratories* (FSML) edited by Susan Allen Lohr for the Organization of Biological Field Stations (OBFS). Sections of the *Operations Manual* are quoted throughout, and it is recommended that those who follow in this process consult the *Operations Manual* for specific assistance in developing plans, policies and procedures. The *Operations Manual* is available online at www.obfs.org and is periodically updated with new information and sample plans.

It is hoped that this document, in combination with the *Operations Manual*, will be used further as a tool for various taskforces and working groups by referring these groups to specific chapters relating to their work.

Contributions

The contributions of Dr. Margaret (Meg) Lowman are abundantly apparent, as expressed throughout this document, and her passion and vision have been driving factors in the work to-date. Lowman has acknowledged that she cannot do it alone, and particularly acknowledges her colleagues on the Science Advisory Committee, along with the many organizations referenced herein.

In addition to Sarasota County and New College of Florida, many thanks are given to the Economic Development Corporation of Sarasota County, the TREE Foundation, the Triad Foundation and the Florida House Institute for Sustainable Development. To the numerous individuals whose work has started this process, many more thanks. These individuals are too numerous to mention in one place, but their contributions are noted throughout this document and in the Appendix.

The local community was extremely fortunate to have an accomplished field station manager and consultant, Susan Allen Lohr, visit in April 2007 and make a number of recommendations to help clarify the process needed to make the field station a reality. Lohr's background and insight are an invaluable contribution, and her expertise should be utilized as the process moves forward. Her recommendations are documented throughout this report with additional information provided in the "Report on Susan Lohr's Visit to Sarasota County" in the Appendix.

Below is a listing of the major recommendations listed at the end of each section of this report. These recommendations should delineate the process and steps to be taken for BCS to become a reality. Many of these steps will overlap, and their timing relationships are preliminarily depicted in the Base Camp Sarasota Preliminary Schedule located at the end of this Executive Summary.

Recommended Steps

At the time of this report, the primary partners for BCS are Sarasota County and New College of Florida. Together, they will take the first steps, starting below.

Partners and Stakeholders

- The primary partners will appoint and develop a Steering Committee consisting of partner representation (primary and others), along with members who can provide the particular skills and services needed during the start-up phases of the project.
 - Each partner should be represented by a champion and/or decision-maker who can make decisions, direct funds, and ensure that the project stays on track within his/her organization.

- Representatives should include elected officials or volunteer leaders as well as CEOs and staff. Some organizations may be represented by more than one person.
- No one entity should be in the majority, so the Committee should be structured accordingly, maintaining an odd number of members.
- The Steering Committee will be charged with specific goals and timeframes (no more than 18 months to two years). It will answer to the primary partners on a regular reporting basis.
- In cases where paid staff or faculty are required to work on BCS as part of their job assignment, they should be appropriately compensated or given release time from their usual duties.
- The Steering Committee will finalize strategic and business plans, develop the governing organization, develop taskforces, assign specific tasks, and finalize funding commitments for early processes (for both funding and fundraising).
- The earlier an Executive Director, CEO, or Administrator is hired, the smoother and more effective the process will be. A large portion of this person's time will be fundraising and managing the volunteers who are serving on the taskforces (this hiring will be dependent on available funding). During the formative processes, a part-time or Interim Executive Director and/or consultants could assist the Steering Committee with its work.

Purpose and Mission

- The Steering Committee will undertake a collaborative process to finalize and adopt the vision, mission, goals, objectives, tasks and plans for both BCS *and* itself. (NOTE: The purpose and mission of BCS may differ from the purpose and mission of the Steering Committee since the Steering Committee function is actually to define the field station concept and organization. But, the Steering Committee is doing both.)
- The Steering Committee (and the subsequent governing body) should continuously update and refine statements of purpose, reason and community to meet the needs of partners/users. These statements should be current and readily available as tools for fundraising and public relations.
- The Steering Committee (and the subsequent governing body) should ensure that the history of BCS is documented and archived as a model for future field station and project development.

Ownership and Governance

- The Steering Committee will evaluate various forms of ownership and governance, including *full sponsorship* by New College or other partner; *partial sponsorship* though

the creation of an institute, consortium or other organization; creation of a *stand-alone organization*; or a *blended or alternate scenario*.

- A not-for-profit institute and/or consortium with many interested partners (members) could serve a number of purposes, whether it is tied to and reports to New College or operates independently.
- Sarasota County should not be considered as an owner or sponsoring organization, but should participate to the degree it serves the residents of the County.
- Investigation of the full sponsorship and institute scenarios would include review of New College's charter to determine if there are legal or legislative issues to be addressed.
- The Steering Committee will make recommendations to the primary partners and develop governance documents such as partnership agreements, incorporation papers (as required), bylaws, etc.
- The Steering Committee may wish to hire a consultant to assist with governance development.
- Taskforces appointed by the Steering Committee can address issues other than governance structure, such as Design and Construction, Fundraising, Administration Development, Operations Policies, Operations Accounting, Community Relations as determined during the strategic planning process.
 - The Steering Committee would give each taskforce specific goals and timeframes, many of which are contained in this report or in the *Operations Manual*.
 - Each taskforce would develop its own work plan within its charge, but would be held accountable to the Steering Committee with specific goals and reporting periods.
 - The Steering Committee may wish to seriously consider hiring a field station administrative development consultant, such as Susan Allen Lohr, to guide this process.
- Steering Committee members need to make a serious commitment to the development of BCS and should be prepared to participate in cultivating community involvement and funding opportunities.

Business Planning and Fundraising

- The Steering Committee will undertake refinement of the strategic and business plans starting with an initial phase of partnership development and program and service planning before continuing with design processes.
- Four phases of BCS development are anticipated, with different purposes and fundraising strategies for each. These phases include:

- The *Initial Phase* to finalize strategic planning and to develop partnership and program opportunities.
- The *Interim Phase* to implement partnership and program development.
- The *Design Phase* to design and permit the facility.
- The *Construction Phase* to construct the site and buildings.
- *The Initial Phase*
 - The Steering Committee will undertake a 12 – 18 month phase of partnership development and program and service planning prior to continuing with site and building design.
 - During this phase, the Steering Committee will adopt its strategic and business plans and establish the formal governance entity, including adopting and filing the necessary documents.
 - Taskforces will be commencing their work. A website and other communications tools will be developed.
 - Initial seed funds in the amount of \$150,000 - \$200,000 will be required to support the partnership and program planning work. These funds will sustain an interim Executive Director and/or consultants.
 - Potential partner/users will be interviewed to determine their needs and desires and ability to pay over time, and programs will be developed to meet the needs of these partners.
 - Partners can become members of the BCS governing structure and provide additional resources and annual funding.
 - Memorandums of Understanding (MOU) or similar agreements will be developed with each partner.
 - Partner development should lead to identification of niche areas both within the community and beyond the region.
 - Basic programs can be clustered under several categories, such as the following:
 - Academic Use (research and teaching; developing best practices)
 - Applied Research (land management and monitoring; training)
 - Community Resources (education, teacher training, eco-tourism, artists-in-residence, retreats, conferences, etc.)

- At least four core fee-generating programs, which can start immediately, should be developed to support an Interim Phase, forming the basis for ongoing operations and amplifying the need for the facility.
- At the end of this phase, a team of field station experts (including Susan Lohr) should be invited to review the plans and programs and provide feedback on their viability.
- *The Interim Phase*
 - As the Interim Phase is initiated, the Steering Committee will morph into the Board of Directors of the governing body and the permanent Executive Director should be hired (if this has not yet occurred).
 - Funding for the Interim Phase will support the permanent Executive Director, additional staff, offices and operations for a four to five-year period during the design and construction period.
 - During in this phase, taskforce work on administrative and operating policies will be finalized.
 - Interim phase funding can come from a combination of partner support and fee-for-service (although fees for facility use would be limited).
- The Executive Director will provide the following services along with others as determined by the Steering Committee/Board:
 - Assist the Steering Committee/Board of Directors in implementing the strategic and business plans.
 - Assist taskforces.
 - Hire and manage staff in accordance with implementation plans.
 - Manage and conduct fundraising.
 - Implement the Interim Phase.
- The Interim Phase—as well as ongoing operations—should be supported by an annual guaranteed stipend of around \$150,000. These funds could be supplied by a number of partners so that no one partner is individually burdened. (This recommendation comes from the 25-year experience of Susan Allen Lohr and is crucial in supporting a non-endowed field station.)
- *The Design and Construction Phases*
 - Two types of funding will be required during the Design and Development phase: design consultant costs (aka, soft costs) and capital costs (hard costs). Some funders will not support soft costs.

- The Executive Director will be involved with fundraising at this level, but has other responsibilities as well. It is important for the Board to ensure that sufficient assistance is provided from the Board and appropriate taskforces.
- In summary, four phases of funding are required. As noted in the BCS Planning and Interim Operations Schedule, several of these phases overlap.
 - *Initial Phase* – Partner and program development – approximately \$150,000 - \$200,000.
 - *Interim Phase* – Startup operations, 4 – 5 years with staff – approximately \$660,000.
 - *Design Phase* – Design professionals and permit approvals – approximately \$700,000 (overlaps Interim Phase).
 - *Construction Phase* – Site and building construction – approximately \$3,000,000 to \$4,000,000 (overlaps Interim Phase).
- The Steering Committee/Board should establish a Fundraising or Finance Committee to assist the ED with fundraising for initial capital costs and for ongoing operations funding.
- Fundraising should include the following strategies:
 - Develop a fundraising plan based on the type of funding needed (seed, interim, planning and design, construction, operations). It may be beneficial to hire a fundraising consultant to assist with fundraising plan development.
 - Continuously stay in contact with potential donors, legislators and other public officials, grant organizations, potential partners and other interested parties.
 - Maintain personal contacts (most effective). *Governmental funding can take years to develop, so maintain contact with legislators.*
 - Utilize Board and taskforce members to assist with ongoing community outreach as well as “asking for the donation.” If members themselves are uncomfortable with the “asking part,” take along someone who can close the deal.

Market, Users and Customers

- The Steering Committee will develop a Marketing and Public Relations Taskforce to monitor the market and develop market strategies to promote BCS. The tasks of Marketing and PR should consist of a minimum of the following tasks:
 - Continue to monitor subtropical climate field stations.

- Use ongoing public relations and outreach, conducted by Dr. Meg Lowman and others, as opportunities to promote BCS as it develops.
- Develop a marketing strategy for BCS.
- Refine the user list with specific contacts and outreach programs.
- Marketing and Public Relations is an important component of a viable entity and the Board of Directors of the governing body may want to consider it as one of their responsibilities, implemented through a standing taskforce or periodic review (quarterly to annually).

Design and Construction

- Hire a facilities manager who understands the development process prior to commencement of this phase.
- Convene a Construction Taskforce (building committee) to oversee the design and construction processes. The Construction Taskforce should include members who understand current development processes and pitfalls.
- Make a final determination as to whether consultants and contractors can be hired through a private process or whether they must be hired through a public bid process (more time consuming and costly).

Site and Building Design

- Convene a construction taskforce (building committee) to oversee the design and construction processes. The construction taskforce should include members who understand current development processes and pitfalls.
- Make a final determination as to whether consultants and contractors can be hired through a private process or whether they must be hired through a public bid process (much more time consuming and costly).
- Bring in the General Contractor (GC) as soon as feasible. The GC can assist in developing cost estimates during various stages of design, assist with building systems design, and gain a better understanding of the client's desires. The GC may be willing to participate as a member of the design team at little or no cost.
- Commence the Design Phase:
 - Hire architect, engineer and other consultants.
 - Convene a design stakeholder group (similar to and including the initial Preliminary Design participants) to undertake the following tasks:

- Review the conditions and constraints of the new site.
- Update the programming, basic site planning and building design concepts so that they are consistent with the programs and partners developed during the Initial and Interim Phases. Ensure consistency with modern field station requirements.
- Update the site planning and building design concepts to apply to the new site.
- Review and incorporate creative and relevant design opportunities obtained from early design initiatives (FHI, UF, Design Challenge, etc.).
- Develop a site concept plan.
- Finalize the Master Plan.
- Review and test the plans with stakeholders.
- Consider holding a charrette, or similar process, to incorporate and speed up this portion of the process.
- Finalize site plan, obtain Board approval for the site plan, and undertake site plan engineering.
- Undertake building design.
- Finalize plans for permitting.
- Undertake the permitting process.
 - Work with regulators early in the process to ensure that sustainable practices or “experimental” low impact development techniques may be utilized.
 - Work to change regulations if necessary.
 - Monitor the process to ensure that regulators have all the information they need in the correct format, and that they are timely and responsive.
 - Diplomatically involve senior staff or management if reviewers are having difficulty with new or different concepts.
- Stay involved.
 - Ensure that regular review meetings and appropriate periods of review by the Construction Taskforce and the Board of Directors (as appropriate) are scheduled within the consultants schedules.
 - Oversee the process to ensure that consultants are meeting deadlines and interacting as needed (i.e., architects and civil engineers are working with the same plan and that any changes are communicated back and forth).

- Think through systems such as electrical, communications, data systems and locations of outlets during the design process.
- Don't forget interior design, furnishing, fixtures, equipment and specialized needs.

Construction

- Convene a construction taskforce (building committee) to oversee the design and construction processes. The construction taskforce should include members who understand current development processes and pitfalls.
- Make a final determination as to whether consultants and contractors can be hired through a private process or whether they must be hired through a public bid process (much more time consuming and costly).
- Bring in the General Contractor (GC) as soon as feasible. The GC can assist in developing cost estimates during various stages of design, assist with building systems design, and gain a better understanding of the client's desires. The GC may be willing to participate as a member of the design team at little or no cost.
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 - Review the conditions and constraints of the new site.
 - Update the programming, basic site planning and building design concepts so that they are consistent with the programs and partners developed during the Initial and Interim Phases. Ensure consistency with modern field station requirements.
 - Update the site planning and building design concepts to apply to the new site.
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- Think through systems such as electrical, communications, data systems and locations of outlets during the design process.
- Don’t forget interior design, furnishing, fixtures, equipment and specialized needs.

Administration and Operations

- The Steering Committee or Board should appoint one or more taskforces to develop administrative and operations policies. Funds should be budgeted for professional assistance as needed.
 - This committee should include human resource experts as well as scientists and operations personnel.
 - The Executive Director and staff who are responsible for various aspects of administration and operations should assist the taskforce.

- If the BCS ownership and governance are tied directly to another entity, administration and staff from that entity should also participate.
- Policies and regulations should undergo legal review.
- The taskforce and ED should use the *Operations Manual* as a guide, and where possible, hire experienced field station administration consultants like Susan Allen Lohr to assist.

Additional Thoughts

Although extremely satisfying, birthing an organization and developing/constructing a facility are hard work and fraught with pitfalls. However, it is evident that there is already a great deal of community support for BCS, and with additional public outreach, there will be considerably more support. There is very little which cannot be accomplished through collaborative processes, so, in discouraging moments, trust the process and ask for help. Remember, the mission is compelling, so enjoy the journey and, most of all, have fun.

Final recommendation: Have many celebrations!

Strategic and Business Planning

Typically, an organization's strategic plan sets the direction for the mid- to long-term future, and its business plan sets short- or mid-term objectives and defines the steps necessary to achieve them. Generally the Board of Directors develops the strategic plan, relying on executive staff to develop the business plan (usually with the Board's blessing). In the case of BCS organizational development, the Steering Committee will initially establish both the long-range direction as well as the shorter range business and work plan. Once the organization has been formed, the more traditional systems will most likely take effect.

This chapter includes discussion on partners, work to-date, the formation of a Steering Committee, the strategic work of the Steering Committee, business plan development and fundraising.

Partners and Stakeholders

As with any endeavor, results are only as good as the commitment of the parties involved. While a great deal of work has already been accomplished by those who believe in the importance of locating a field station in Sarasota County, the actual work of developing Base Camp Sarasota (BCS) will require strong commitment from many parties. To-date, the primary partners have included New College of Florida and Sarasota County, along with assistance from others including the Economic Development Corporation of Sarasota County (EDC); the TREE Foundation for Tree Research, Education and Exploration; the Triad Foundation; and the Florida House Institute for Sustainable Development (FHI). The partners' work to-date is documented below, prior to discussion of potential additional partners and recommended next steps.

Initial Partners and Work To-Date

Below is a summary of current partners and work to-date. Documents provided in the *Appendix* are noted.

BCS was initially championed by Dr. Margaret (Meg) Lowman, Director of Environmental Initiatives and Professor of Biology and Environmental Studies at New College of Florida and by Bob Johnson, Chairman of the New College Board of Trustees. Dr. Lowman has devoted a great deal of time and effort to promoting BCS and her efforts are documented throughout this report.

Lowman first sought advice by visiting and speaking with the National Science Foundation (NSF) field station panel in Washington DC. She then followed NSF requirements to create a Science Advisory Committee (SAC) consisting of peer-reviewed, professional scientists; collated a literature review of local peer-reviewed ecological literature for this region (in Appendix); and joined the Organization of Biological Field Stations as a personal member, which led to further protocols and action steps throughout her three-year "championing" role.

Lowman brought the project to Sarasota County to determine potential County involvement and locate a site for BCS. The Sarasota County Board of County Commissioners have enthusiastically endorsed the idea, and it has been promoted by members of the County's Environmental Services and Parks and Recreation departments. Robert Patten, Director of Environmental Services; Amy Meese, General Manager of Natural Resources; and Theresa Connor, General Manager of Water Resources, currently lead the initiative on behalf of Sarasota County. The County has participated by providing a site for the field station with professional staff analysis of the site, along with staff participation in planning meetings and site visits, and initial funding for business plan development. (Excerpts from Lowman's Reports to Sarasota County in the Appendix constitute a basic chronological history of work to-date).

Lowman also involved the EDC, the TREE Foundation and the Triad Foundation in funding for preliminary planning and programming. The EDC sees the field station as a viable economic development generator, particularly as support for its Life and Environmental Sciences cluster program.

The Science Advisory Committee—including New College and County participants along with other interested parties—assisted with analyzing field station information, reviewing and selecting the field station site, and developing a science plan. Their information is also documented throughout this report, and a list of members is contained in the Appendix.

With funds from the EDC and the TREE Foundation, Lowman worked with the FHI on preliminary programming and design. FHI organized and conducted a preliminary design charrette with noted sustainability architect, Pliny Fisk. The Preliminary Programming and Preliminary Design Charrette Report is contained in the Appendix.

Subsequent to preliminary programming and design, two other initiatives have provided opportunities for additional design input.

- Design Challenge session of 2006 Conference on Rethinking Sustainable Construction 2006 held September 18 – 22, 2006. Information is contained in the Appendix.
- University of Florida Architectural Study. As a result of the Design Challenge, Dr. Mark McGlothlin of the University of Florida's School of Architecture used BCS as a studio study for graduate students. Their work is also contained in the Appendix.

In addition, through sponsorship of the TREE Foundation, Susan Allen Lohr visited Sarasota County in April 2007, spending the day with representatives of New College, Sarasota County, the EDC and FHI. Lohr's specific recommendations for BCS are noted throughout this document and in the Appendix, along with the informational and prototypical documents she provided. These documents include the *Strategic Plan* for the Noyo Center for the City of Fort Bragg, California; the Noyo Center *Five-Year Strategic Planning Chart*, February 2006; the Noyo Center *Organizational Chart*; a chart of Noyo Center Operating Costs; and a list of *Typical Field Station Facilities*. Because they are excellent reference documents, they are

contained at the beginning of the Appendix for ease of reference, following the reports of Ms. Lohr's visit. Ms. Lohr's resume is also contained in the Appendix.

Throughout the process, Lowman has continuously promoted the project and solicited community input through at least 30 presentations and workshops through New College, Sarasota County, the EDC and other business, civic, and scientific organizations throughout the region.

This document itself is a continuation of the process, and it is hoped, the beginning of the realization of the BCS organization, activities and facilities.

Other Stakeholders and Partners

While New College and Sarasota County are the primary partners at this stage, other potential partners include the Southwest Florida Water Management District (SWFWMD); other state and regional governmental entities; other local educators, universities and colleges; civic and business groups; community and private foundations; and private individuals and businesses. Some of these may include the following:

- Southwest Florida Water Management District
- Florida Department of Environmental Protection (DEP)
- Century Commission for a Sustainable Florida
- Florida's Governor, Cabinet, and the Florida Legislature
- Southwest Florida Regional Planning Council
- Other Regional and State Governmental Entities
- Economic Development Corporation of Sarasota County (EDC)
- Sarasota County Openly Plans for Excellence (SCOPE)
- Sarasota Arts Council
- Sarasota Convention and Visitors Bureau
- Local Chambers of Commerce
- Gulf Coast Community Foundation of Venice
- The Community Foundation of Sarasota County
- The Selby Foundation
- Sarasota Conservation Foundation
- Sarasota County School Board
- Other area School Boards
- University of South Florida
- Manatee Community College
- Edison Community College
- Florida Gulf Coast University
- Other Universities and Colleges
- Babcock Ranch
- Isles of Athena

The requirements, interests and resource commitments of partners and potential partners will be addressed during the strategic and programming portion of the development process. Additional information on potential partners is contained in the chapter on Market, Users and Customers.

Champions, Decision-makers and Workers

Champions are individuals who make things happen, often through drive, passion and hard work. Their passion and commitment bring not only their own organizations to the table, but other parties and resources as well. Champions are often the pioneers and leaders of initiatives and they typically ensure that the project stays on track within their organization and others.

Decision-makers are those who can speak and make commitments for the organizations they represent. *Workers* are often staff members who are assigned certain tasks by their supervisors, but can also be volunteers who have a passion for the mission.

Ideally, more than one of these characteristics are found in one person. However, since all are needed and there is much work to do, it is important to ensure full representation from partners. Accordingly, representation from not-for-profit organizations should include both volunteer and staff leadership, and representation from governmental entities should include both staff and elected officials. In the case of academic institutions, representation should come from the governing board, administration and faculty, as needed.

In instances where paid staff, administration or faculty members are required by their organizations to spend time on the initiative, it is important that their time be compensated or the task be made part of their job description, or that they be given release time from their regular duties.

Bringing Them All Together (Steering Committee)

Once the primary partners have committed to the project, they can create a Steering Committee to guide the process through initial phases until a permanent organization and governing board are established. The Steering Committee has specific goals and timeframes and reports to the primary partners on a regular basis. Since it is a temporary body, the Steering Committee will be in effect for only 18 – 24 months before transforming into the governing organization.

The Steering Committee should consist of seven to eleven members, maintaining an odd number. While a small group can function very effectively and quickly, there is a great deal of work to complete in a relatively short period of time. Furthermore, some partners may be represented by several members, and no one partner should have a majority of members. For example, if New College has three members (faculty, legal, administration), the Steering Committee should be made up of at least seven members, four of which are not from New College. Representatives other than identified partners should include members who exhibit the characteristics previously discussed, plus members who can provide particular skills and services needed during the start-up phase of the BCS.

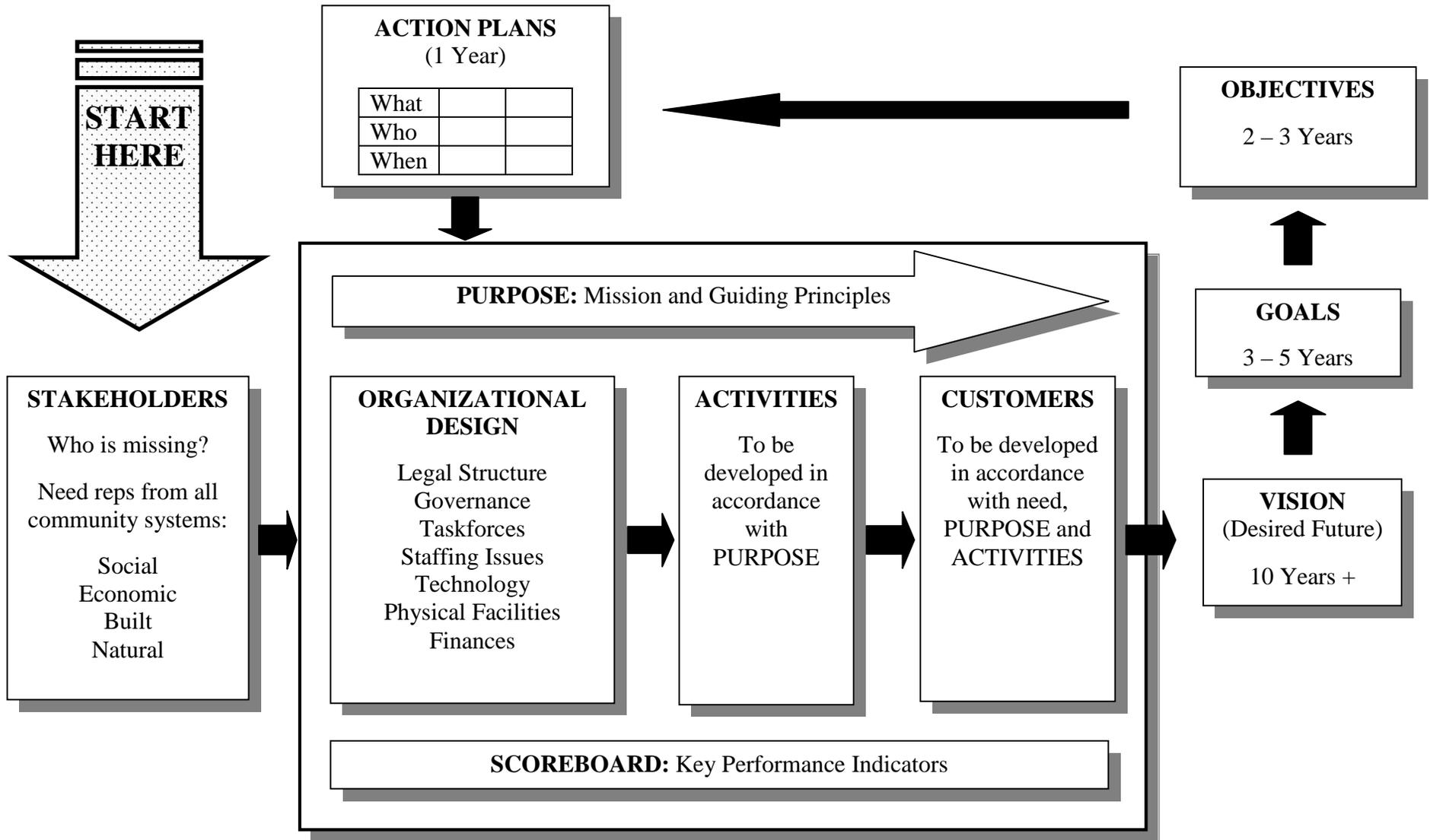
The Steering Committee will finalize the strategic and business plans for BCS, study and recommend an ownership and governance structure, develop taskforces, assign tasks, and undertake fundraising for preliminary phases. The processes and work of the Steering Committee are discussed in more detail in the following sections on Purpose and Mission, Ownership and Governance, and Business Planning and Funding. A chart on Steering Committee work follows the Recommendation section below.

As detailed in later sections, the Steering Committee will require staff or consultants to assist in its work. While it would be beneficial to hire an Executive Director sooner rather than later, some tasks in the initial phases may involve specific skills not typically required of an Executive Director. Accordingly, an Interim Executive Director (and/or additional consultants) may be hired to undertake specific tasks during this period. Nevertheless, hiring the Executive Director as early as possible will provide valuable assistance for fundraising and managing volunteers as well as developing additional partnerships and programs. Perhaps the best scenario is that a part-time Interim Executive Director, with specific assistance, becomes the permanent Executive Director.

Recommendations for Partners and Stakeholders

- The primary partners will appoint and develop a Steering Committee consisting of partner representation (primary and others), along with members who can provide the particular skills and services needed during the start-up phases of the project.
 - Each partner should be represented by a champion and/or decision-maker who can make decisions, direct funds, and ensure that the project stays on track within his/her organization.
 - Representatives should include elected officials or volunteer leaders as well as CEOs and staff. Some organizations may be represented by more than one person.
 - No one entity should be in the majority, so the Committee should be structured accordingly, maintaining an odd number of members.
- The Steering Committee will be charged with specific goals and timeframes (no more than 18 months to two years). It will answer to the primary partners on a regular reporting basis.
- In cases where paid staff or faculty are required to work on BCS as part of their job assignment, they should be appropriately compensated or given release time from their usual duties.
- The Steering Committee will finalize strategic and business plans, develop the governing organization, develop taskforces, assign specific tasks, and finalize funding commitments for early processes (for both funding and fundraising).
- The earlier an Executive Director, CEO, or Administrator is hired, the smoother and more effective the process will be. A large portion of this person's time will be fundraising and managing the volunteers who are serving on the taskforces (this hiring will be dependent on available funding). During the formative processes, a part-time or Interim Executive Director and/or consultants could assist the Steering Committee with its work.

STEERING COMMITTEE ACTION CHART



Purpose and Mission

Once formed, the first task of the Steering Committee will be to undertake a collaborative process to refine and adopt the mission and goals of BCS, create the vision, determine the governance structure, and develop the work plan. Subsequent steps will include raising the funds needed for each phase and implementing the plan.

Before making changes, however, it is important that all parties understand the need and opportunities for a field station in the community, as well as the background mission and purposes that have been driving the work to-date. The information below is an edited compilation of work done by Dr. Meg Lowman, the Science Advisory Committee (SAC), Sarasota County, and other partners.

Why a Field Station in Sarasota County?

In addition to its model subtropical location and its diversity of habitat, Sarasota County provides the ideal location for a field station due, in great part, to its leadership in sustainable practices. Recent County initiatives include the 2050 land use plan, the updated Comprehensive Plan incorporating sustainability initiatives, the 2030 carbon neutrality commitment, and numerous other sustainability programs. At the time this report was prepared, Sarasota County and other statewide partners were discussing the potential development of a center for sustainable practices, currently envisioned as a prototype for distributing research and development from Florida's universities to businesses and communities for real-world use. This center would provide the ideal interface with BCS for the distribution of critical climate change data and information.

More specifically, there are numerous reasons for a field station in Sarasota County, a number of which are making daily headlines:

- Climate change is impacting us all, and we need to get a handle on it soon.
- As part of providing ecosystem services, it's less expensive and more effective let nature do its work rather than reinventing the wheel, but we don't yet understand nature's work.
- Millions of dollars are misspent on programs which are based on assumptions, personal agendas, misinformation or old data rather than on well-documented, current, sound scientific data.
- Sarasota County, the State of Florida and the Southwest Florida Water Management District (SWFWMD) own park and preserve lands in the County. Sarasota County's Comprehensive Plan indicates that approximately 104,000 acres of land are in public conservation lands. Both the County and the State have plans and funds to continue sensitive lands acquisitions. These lands require management and maintenance. Scientific data will assist with the development of cost-effective and workable management plans. (State land managers should be partners in this initiative.)
- Attracting world class scientists to our region will enhance K – 12 science education and public environmental outreach, offering additional economic benefits.

- Recent thinking has become focused on providing more science education in response to concerns about the environment and the United States' position in the world economy.
- Sarasota County anticipates increased land use pressures, as baby boomers seek to retire in subtropical, coastal climates. Effective land use decisions must be based on a sound knowledge of local ecology.
- Real estate, tourism and other economic activities rely on a healthy natural environment.
- The County's active arts and cultural communities can provide interesting and creative opportunities for field station usage.

BCS has the potential to serve every current and future inhabitant of southwest Florida, as well as the state of Florida, the U.S., and the global community through the scientific knowledge achieved at the site. The field station will sustain and enhance innovative work in the study, interpretation, and protection of ecological treasures in our area and similar subtropical climates.

In addition to serving as a national and international center for biological research on local ecosystems, the field station will provide a low impact setting which will allow visitors to experience a living museum of Florida's natural resources. The site will demonstrate Low Impact Development on the landscape, and buildings will demonstrate best practices of low impact, "green" design.

School and community groups will visit to learn about research findings as well as the process of conducting research. Teachers and students alike will receive training in scientific processes and protocols. Visiting land managers will be trained in the best practices for ecosystem management and restoration, informed by the research conducted at the station. Residents and tourists will be able to hike and explore the adjacent Myakka watershed and Carlton Reserve with better ecological understanding. Corporations will use the facilities for training and corporate retreats. Artists will take advantage of opportunities for inspirational visits and stays. Community groups will use the facilities for retreats and fundraisers.

Sound Science and Economic Opportunity

As noted, scientific data is important on a number of levels, however, it has been common in the past to ignore sound science in favor of agenda, outdated information, and personal observation and belief. More recently, sound science has been coming back to the forefront—globally, nationally, statewide, and locally—as evidenced by such initiatives as the 2007 IPCC Report; the Century Commission for a Sustainable Florida; Florida Governor Charlie Crist's sustainability proposals; and programs in California, Austin, Chicago, etc. It is likely that such thinking will lead to additional funding for scientific research, particularly with regards to climate change issues.

An important criteria for defining sound science is through the process of publication and peer review, which determines the creditability of a study. Furthermore, the number of peer-reviewed publications available in a specific area is a major criteria for determining eligibility for grant funds. Although Sarasota County is a known leader in sustainability and environmental care, there is a significant lag in published, peer-reviewed scientific study for the area which, unfortunately, contributes to difficulty in obtaining federal and private grants for additional

scientific study. Currently, there are only about 40 such peer-reviewed publications about local habitat which include a series of papers on bromeliad ecology by Dr. Lowman and a study on only one animal, the Scrub Jay.

However, the presence of a biological field station within a community appears to contribute to its ability to produce sound scientific studies (which typically leads to additional grant dollars and intellectual capital coming into the community). The table below compares the number of Sarasota County peer-reviewed publications to communities with existing field stations:

Sound Science as Measured in Peer-reviewed Publications

Location	Number Peer-Reviewed Publications
Highlands County, FL (Archbold)	1,150
LTER Everglades, FL	800+
Pinellas County, FL (Brooker)	300+
Leon County, FL (Tall Timbers)	700 +
Harvard Forest MA	1,500+
Highlands NC	6,000+
Sarasota County, FL	40 +

As New College, Sarasota County and the Economic Development Corporation have realized, the presence of BCS will encourage the inflow of both dollars and intellectual capital, contributing to the continued vitality and economic sustainability of the community.

Vision and Mission of BCS

The following statements are currently functioning as the Mission and Vision statements for BCS. It’s anticipated that these statements will be refined and formalized as the process moves forward.

- Mission – To monitor the environment of our Southwest Florida landscape, with special emphasis on climate change.
- Vision – BCS is at the forefront of providing positive answers to the questions about Southwest Florida’s environmental health in 2050.

Goals and Strategies

The overall goal is as follows:

To establish a research and education center offering state-of-the-art laboratory facilities as well as a small conference and environmental education facility amidst the natural habitat of Southwest Florida.

Specific goals of the BCS as currently envisioned are:

- To study subtropical ecosystems, especially those of our local area.
- To provide environmental monitoring of climate change in subtropical ecosystems.
- To provide much-needed (but currently absent) professional scientific records through the process of peer-publications about southwest Florida ecosystems.
- To train tropical, subtropical and temperate biologists.
- To advise and serve local environmental managers.
- To provide scientific, peer-reviewed records of southwest Florida ecosystems.
- To serve as a global model for tropical ecosystems research and their related issues.
- To serve as a catalyst for environmental education regionally and nationally.
- To create a platform of scientific data supporting best land use and sustainable development practices.

Specific strategies discussed to-date include the following:

1. Create a world-class field research and biological education center to foster ecological research of the natural systems indicative of the southeastern U.S. and Sarasota County that can also serve as a model for tropical countries.
2. To the extent practicable, assure that built systems associated with the research and education center are a demonstration of a light ecological footprint on the landscape through strategies such as green building practices, Sarasota School of Architecture principles, and life cycle balance considerations.
3. Provide advice on best practices for community education and outreach including the general public, K-12, community colleges, undergraduate and graduate students, political leaders and economic partners.
4. Promote economic development opportunities through application of natural system processes and adaptations to built system designs (i.e. Biomimicry*, Natural Capitalism, Centers for Sustainability, etc.).
5. Create opportunities to research best management practices for ecological systems and provide training for systems managers.
6. Develop opportunities to partner with Sarasota County's cultural and artistic community.
7. Capitalize on eco-tourism, retreat and corporate convention opportunities.

*Biomimicry is a relatively new term for science that integrates engineers, biologists, and business by using nature's models to imitate or take inspiration from these designs to solve human problems.

Additional Information on Community Need

The following information was developed as part of a grant request project and, with update and revision, could be used as a basis for future funding requests.

A. The community need met by this project

Land use is one of the most important determinants of the sustainability of the human population. America's only subtropical ecosystems—one of the planet's most fragile environments—is located here in Southwest Florida, and yet almost nothing is known about the impact of development on this environment. Sarasota County projects that the County population will reach 532,000 by 2030 (647,444 including seasonal residents) up from 367,867 in 2005 (447,694 seasonal). The current pace of development coupled with projected growth means that this already-vulnerable habitat faces such critical issues as invasive exotic species, conversion to agricultural uses or development, hydrologic alterations, poor fire management, and declines in biodiversity.

Very little professional scientific research has been conducted on Sarasota County's freshwater and terrestrial watershed and ecosystems. Fewer than fifty scientific publications exist throughout the entire history of Sarasota County, and over half of these were written about one organism, the Scrub Jay. Rigorous ecological research is critical to future environmental management. As pressure for development continues to increase in the region, the results of scientific research must guide policies that ensure the sustainability of Southwest Florida ecosystems.

With its hospitable climate and abundance of environmental challenges, BCS will attract national and international scientists and students to produce groundbreaking studies of Sarasota County and Florida's ecosystems. They will bring both intellectual capital and grant funding in addition to their research findings, two added economic incentives for our region. These studies will provide critically important knowledge to help guide the County's land use policies for decades to come. This policy must reflect the reality of a subtropical climate, rapid population growth, and multiple competing uses for land. It is urgent that the best available science, policy, and management skills be brought to bear on the challenges of sustainable economic growth and land use.

B. Other local agencies or services addressing the same problem

There presently is no multi-disciplinary, multi-institutional resource center in Florida dedicated to providing a synthesis of the best available science, policy, and management to address the problem of sustainable economic development, transportation, and land use. This public/private partnership of academia and government is unique for the following reasons:

1. BCS represents one of the first field stations designed with a vision to train both U.S. students and scientists, as well as those from neighboring tropical and subtropical countries, whose environmental problems are directly linked to ours.
2. The strong partnership with all of the region's academic institutions, including community colleges, K-12, and state universities.

3. A Science Advisory Committee composed of statewide and national scientists with highly professional credentials and with prior experience in biological field stations guided the initial planning of BCS.
4. The strong partnership of academics and government – New College and Sarasota County – will provide project governance and oversight.
5. The important science-based management for the future of Florida, a bellwether state with regard to expanding population and land use pressures, relies on ecological research by professionals.
6. Unstudied biodiversity and ecological issues abound in this vastly understudied region of North America.

The proponents and future governing bodies of the BCS should ensure that the history of the organization is preserved for ongoing project development and as a model for future field station development. As the changing needs of community, partners and users affect the purpose and uses of the field station, the governing bodies should also ensure that mission statements and goals are updated accordingly. Organizational purpose statements and backup materials should always be current and readily available as tools for fundraising and public relations.

Recommendations for Purpose and Mission

- The Steering Committee will undertake a collaborative process to finalize and adopt the vision, mission, goals, objectives, tasks and plans for both BCS *and* itself. (NOTE: The scientific purpose and mission of BCS may differ from the purpose and mission of the Steering Committee since the Steering Committee function is actually to organize and develop the field station. But, in actuality, the Steering Committee will be functioning as both organizer and operator.)
- The Steering Committee (and the subsequent governing body) should continuously update and refine statements of purpose, reason and community to meet the needs of partners/users. These statements should be current and readily available as tools for fundraising and public relations.
- The Steering Committee (and the subsequent governing body) should ensure that the history of BCS is documented and archived as a model for future field station and project development.

Ownership and Governance

As discussed previously under Partners and Stakeholders, one of the first tasks for the establishment of BCS will be the determination of roles and responsibilities. Until clear direction and commitments are made by the primary partners, the project will experience delay and lack of commitment from other community partners. Once these commitments have been made, the project should be able to move forward at a relatively quick pace (given the normal pattern of planning and developing such initiatives). This section presumes that initial partnerships and commitments have been settled and that Steering Committee appointments are underway. Much of the work of the Steering Committee is discussed in this section.

A number of sections on Governance and Administration have been taken directly from the *Operations Manual for Field Stations and Marine Laboratories (FSML)*, hereafter referred to as the *Operations Manual*, edited by Susan Lohr for the Organization of Biological Field Stations (OBFS). Particular sections are quoted at the end of this section, providing a framework for the basic questions, issues and challenges which must be answered during the formation of BCS.

The entire *Operations Manual* may be found online at www.obfs.org and is also contained with the BCS historic documentation held by Dr. Meg Lowman.

While “Administration” is more fully discussed in a separate section of this document, the particular sections quoted from the *Operations Manual* discuss some basic questions which must be answered during the formation of the BCS governance structure.

Clearly there is a critical need to address the issue of sponsorship with policies that reflect the mission of the sponsoring organization, the need for concordant activities between the sponsoring organization and the field station, and the administrative relationships between sponsoring organizations and remote facilities. The following sections describe the pros and cons of options and opportunities to address sponsorship and governance and suggest some organizational frameworks which may be considered for BCS by the recommended Steering Committee or its functional equivalent.

Sarasota County Sponsorship

Sarasota County has been a major player in the development of the field station. The County has donated the site, provided site analysis and other preliminary services, and is contributing start-up resources. And appropriately, Sarasota County has indicated no interest in becoming a sponsor or owner of the field station. While the County clearly has a vested interest in the success of BCS, sponsorship is not an appropriate role for local government. The research and exploratory nature of the field station require that its activities and direction be flexible and adaptable to changing requirements. Local governments are responsible to their citizens for particular core services and somewhat restricted in their ability to participate in entities outside their structures. Moreover, local governments are increasingly faced with limited staff resources and funding opportunities for non-core services. The County’s role in the development and ongoing operations of BCS should be regarded as part of a private/public partnership and it

should be welcomed and encouraged to participate as a primary partner to the highest degree possible.

New College Sponsorship

With an enrollment of approximately 750 and a current goal of 800 students, New College of Florida is a relatively small university within Florida's University System, and until 2001, was part of the University of South Florida (USF). The College is annually ranked at the top (usually #1) of its category as to size, value and scholastic excellence. The student-to-faculty ratio is about 11:1, with approximately 66 faculty members. For the most part, the College relies on funding from the State, and its tuition rates are controlled by the State as part of the Florida University System, led by a Board of Governors. Furthermore, the Board of Governors and the State Legislature are often at odds over funding issues, and the State is always challenged for revenue resources. Not surprisingly then, funding is somewhat limited for state universities.

To its benefit, New College is well served by the New College Foundation and has a reputation for achieving value from its resources. However, the transformation to an independent school has required adaptation at the same time the College continues to expand. Changes in administration have been required to fill gaps in services previously provided by the USF network along with leasehold acquisitions, renovations and capital construction projects (new dorms, classrooms, etc.). Accordingly, the College may be challenged to provide comprehensive resources and administrative services for the field station in terms of dollars and faculty/staff time.

However, the field station would be well served to have New College as a sponsoring organization, particularly with its worldwide reputation for scholarship and its commitment to environmental science. In addition, New College has no on-site laboratories or special facilities for terrestrial ecology, despite a burgeoning student interest in conservation, ecology, environmental education and sustainability.

It may be worthwhile, therefore, to explore alternatives to the options of either direct sponsorship or self governance (as an independent organization). While it may take additional time and effort to establish a governance system that would best serve all entities involved, it could provide great benefit over the long term. Essentially, there is a great deal of flexibility in setting up such a system and it's recommended that the Steering Committee analyze various options and make recommendations to the primary partners. Some options are discussed below.

Institutes or Other Third Party Non-Profits

Forming a separate but related 501(c)(3) institute to own, govern and administer the field station would provide an opportunity for New College to maintain some "ownership," and yet give the BCS more autonomy. The institute, or other third party non-profit organization, could be designed to have an even broader mission than that of simply operating the field station, allowing it to grow in function as future needs and opportunities might require. Members and directors of the institute could include partners and stakeholders outside New College, but the institute itself could be under the umbrella of the College. The institute could both conduct its own fundraising to serve its mission and receive funds from the College. A perceived downside is that the institute might be seen as competition for fundraising. However, it is likely that the College will

already be providing funding and fundraising services as part of its commitment to the field station. In any case, a clear memo of understanding will be required to spell out the relationship between the College and the institute (and possibly the New College Foundation) and define how much autonomy the institute would actually retain.

An example of a closely related institute/university structure is the Woods Hole Oceanographic Institution (WHOI). WHOI is devoted to scientific research and science- and engineering-education and grants degrees jointly with Massachusetts Institute of Technology. Another example of a university-connected institute is the Big Sky Institute (BSI) at Montana State University (MSU). Although the concepts of the Institute had existed at MSU for some time, it was established in 1999 as a formal institute, reporting to the MSU Provost & Vice President for Academic Affairs. BSI works with numerous colleges and departments at MSU and has a small staff funded primarily through competitive research and project grants. As part of its mission, BSI and its partners are developing a field station facility in Big Sky, MT.

Consortiums

The OBFS *Operations Manual* contains information on consortiums consisting of various partners who contribute both funds and governance to field stations. While she was visiting Sarasota County, Susan Allen Lohr suggested that a consortium of partners and partner-users could come together and form the governance organization of the field station. Before further design and actual construction activities begin, BCS proponents will need to find partners and users and develop specific programs to meet the needs of those partners. This interim period of program development is discussed further under Business Planning and Fundraising, and in the reports documenting Lohr's visit located at the beginning of the Appendix. The *Operations Manual* contains recommendations for the documents and agreements necessary for the development of consortiums. The consortium could become the governance entity of a stand-alone, not-for-profit organization or institute as discussed above.

Public versus Private Purchasing

A major consideration that should be weighed carefully during governance deliberations is how consultants, contractors and operations vendors will be hired and how supplies will be purchased. As discussed in more detail in the section on Design and Construction, public bid processes for hiring contractors adds considerable time and cost to initiatives. These hiring and purchasing processes will impact not only design and construction, but purchases of equipment, food, service and daily supplies.

Board of Directors (or Equivalent)

Under the institute or third-party non-profit scenario, the typical governing entity is a Board of Directors, which, in this case, would be given powers by the sponsoring organizations and/or primary partners. These powers are outlined in the Articles of Incorporation and Bylaws of the organization. However, should New College retain the option of sponsorship, its Trustees may wish to consider appointing a separate, equivalent board to govern the field station.

Advisory Boards

Whether governed by an existing sponsor or by a new institute or non-profit, BCS could be well-served by the utilization of one or more advisory boards. The structure of the BCS governing entity will determine the powers, reporting authorities, and make-up of the advisory board. For example, if New College retains sponsorship and does not appoint a separate Board of Directors, advisory boards may be formed to report to specific parties or governing groups within New College. If, however, there is a separate institute or non-profit, the advisory boards would most likely report to the Board of Directors of that organization or institute.

Typically, advisory boards are just that: advisory. *However, to make advisory boards truly beneficial to the organization and to motivate their members to serve in a meaningful way, their recommendations should be given serious consideration.* These boards are not designed to have final powers of approval—particularly when it comes to budgets—although they can be given some powers of policymaking and administration. Having the advisory board chair serve on the governing board (or as an officer of the governing board) may be a way to grant more authority to the advisory board. Advisory boards meet as often as needed, and once the organization is underway, they may convene only once or twice a year.

As noted, the Scientific Advisory Committee has already been active in pre-planning BCS, and their advice will probably be invaluable as field station activities move forward. Other advisory boards could include community and business outreach groups or boards to consider special needs or circumstances, in addition to the suggestions below.

Committees and Taskforces

Committees take two forms: *standing committees* which serve continuously until bylaws are changed, and *ad hoc committees* or *taskforces* which serve for as long as it takes to accomplish the task for which they were formed. Current thinking on governance leans toward only a few standing committees, including finance, governance and audit. All others are taskforces and called as needed.

During the planning and development phases of the field stations, several different types of taskforces may be required, a number of which will dissolve once their work is done. Some of these may include:

Steering Committee	Administration Development
Science Advisory Committee	Operations Policies
Planning and Construction	Operations Accounting
Fundraising	Community Relations

All taskforces should be given a description of their form, function and timeframe similar to the outline below. The Steering Committee determines the form and duties of the various taskforces and sets targets and goals for each group as it deems necessary. Each taskforce then develops its own work plan and reports to the Steering Committee on a regular basis.

Steering Committee

Below is a sample outline of the Steering Committee makeup and responsibilities:

Base Camp Sarasota Steering Committee

Members: (List by name and representation; should include representatives who can make decisions on behalf of the major partners as well as representatives of other community stakeholders and interested parties with desired skills).

Functions: To oversee the creation of the field station, its mission and purpose, and its operating systems, funding and policies.

Responsible to: (Name positions in one or more organizations, such as New College Board of Trustees and the Board of County Commissioners and include lead contact names)

Timeframe: A specific period, such as 18 months, is better than a reference such as “until the field station is operating.” The timeframe can always be extended. Reporting periods can also be specified.

The Steering Committee should take on some tasks and policy development, such as creating the governing structure, articles, bylaws, and associated documentation, but it may wish to appoint a specific group of its own members to undertake these tasks. Additional questions to be answered include the following:

From the *Operations Manual for the FSML* (Page 15):

There are a number of questions associated with governance. Each should be answered in writing, and a process established for appropriate action.

- a. Who determines policy?
- b. Who hires and fires?
- c. Who evaluates the Director/Executive Director?
- d. Who controls the strategic plan, and other planning processes?
- e. Who approves the budget?

Cautions for Organizational Governance

In recent years, Enron, WorldCom, Tyco and other corporate scandals led to federal oversight via the passage of the Sarbanes-Oxley Act (SOX). However, nonprofits such as American Red Cross, United Way, Boy Scouts of America and other nonprofits have suffered very public scandals and have also come under the scrutiny of federal and state lawmakers. California has passed the Nonprofit Integrity Act, and attorneys general in New York, Massachusetts, and other states have proposed legislation which would extend some of the key provisions of SOX to nonprofit corporations. As part of their organizational frameworks, both New College and the New College Foundation address SOX requirements.

The summary of the SOX requirements—generally and as they affect nonprofits—contained below is from *The Sarbanes-Oxley Act and Implications for Nonprofit Organizations* by BoardSource (www.boardsource.org) and Independent Sector (www.independentsector.org). The entire document is contained in the *Appendix*.

With two notable exceptions, the Sarbanes-Oxley Act affects only American publicly traded companies and regulates what boards must do to ensure auditors' independence from their clients. The Act also creates and defines the role of the Public Company Accounting Oversight Board, an entity empowered to enforce standards for audits of public companies. The Act explains processes for electing competent audit committee members and for ensuring that adequate reporting procedures are in place. In addition, it calls for regulations, and closes most of the loopholes, for all enterprises — for-profit and nonprofit — relating to document destruction and whistle-blower protection.

Regardless of their structure, boards of all types are subject to certain fiduciary responsibilities, including the duty of care (being informed about the organization and participating in its decision-making processes), the duty of loyalty (exercising power the interest of the organization rather than the interest of self or another entity), and the duty of obedience (making decisions in compliance with the laws and purpose of the organization).

BoardSource provides a great deal of information for nonprofit organizations and one of their lead consultants, Dr. Sandra Hughes, was retained by the Economic Development Corporation of Sarasota County (EDC) in its formative stage and by the Gulf Coast Community Foundation's (GCCF) Building Better Boards programs. Dr. Hughes lives in Bradenton and the Steering Committee may wish to consider using her services (possibly through the GCCF) or those of a similar governance consultant to assist with Board structure and development.

Recommendations for Ownership and Governance

- The Steering Committee will evaluate various forms of ownership and governance, including *full sponsorship* by New College or other partner; *partial sponsorship* through the creation of an institute, consortium or other organization; a *stand-alone organization*; or a *blended or alternate scenario*.

- A not-for-profit institute and/or consortium with many interested partners (members) could serve a number of purposes, whether it is tied to and reports to New College or operates independently.
- Sarasota County should not be considered as an owner or sponsoring organization, but should participate to the degree it serves the residents of the County.
- Investigation of the full sponsorship and institute scenarios would include review of New College's charter to determine if there are legal or legislative issues to be addressed.
- The Steering Committee may wish to hire a consultant to assist with governance development.
- The Steering Committee will make recommendations to the primary partners and develop governance documents such as partnership agreements, incorporation papers (as required), bylaws, etc.
- Taskforces appointed by the Steering Committee can address issues other than governance structure, such as Design and Construction, Fundraising, Administration Development, Operations Policies, Operations Accounting, Community Relations as determined during the strategic planning process.
 - The Steering Committee will give each taskforce specific goals and timeframes, many of which are outlined in this report or in the *Operations Manual*.
 - Each taskforce will develop its own work plan within its charge, but will be held accountable to the Steering Committee with specific goals and reporting periods.
 - The Steering Committee may wish to seriously consider hiring a field station administrative development consultant, such as Susan Allen Lohr, to guide this process.
- The Steering Committee should address Sarbanes-Oxley issues during its formation, and its members should be prepared to commit to their fiduciary responsibilities to BCS.
- The Steering Committee should assess the impacts of the ownership/governance structure on hiring consultants, contractors, and operations vendors through public bid or private processes. Public processes add both time and cost to initiatives.

Additional Information from the *Operations Manual*

The following sections on Governance and Administration are taken directly from the *Operations Manual for Field Stations and Marine Laboratories (FSML)*. While “Administration” is more fully discussed in a separate section of this document, the particular sections quoted from the *Operations Manual* discuss basic questions which must be answered during the formation of the BCS governance structure.

The entire *Operations Manual* may be found online at www.obfs.org and is also contained with the BCS historic documentation held by Dr. Meg Lowman. It’s recommended that relevant portions of the *Operations Manual* and this document be used as guidance for specific tasks.

Emphasis has been added to highlight specific challenges.

C. Governance of the FSML (Sec. II.C.1, *Operations Manual*)

1. There are two distinct models for FSML governance:

a. Model I: Governance by a sponsoring institution, which is usually a university, college, museum, or larger nonprofit corporation. As of January 2001 approximately 85% of OBFS member FSMLs were part of a larger institution.

b. Model II: Self-governance at an independent FSML, with no sponsoring institution. These FSMLs are usually nonprofit corporations with federal tax-exempt status. As of January 2001 about 15% of OBFS member FSMLs were independent.

For Model I FSMLs, many of these functions are intrinsic to the FSML, although authority may lie with either the sponsoring institution. For Model II FSMLs, the Bylaws of the Board of Trustees dictate where authority rests.

Advisory Committees and Other Groups (Sec. II, C.3, *Operations Manual*)

Many FSMLs have found tremendous benefits in using advisory committees. Most common is a Scientific Advisory Committee, composed of scientists who conduct research at the FSML as a minority of committee members, other national or international colleagues, and persons with special expertise such as high-level regulatory executives. These committees meet at least once a year and address policy issues related to the scientific content of research or educational programs at the FSML. To be most effective, their advice is solicited in a proactive fashion rather than in response to one or more emergencies. **And most important, their advice is taken very seriously.**

Other advisory groups can be constituted to deal with fundraising, finances, endowments, capital projects, or any number of topics.

Administrative Activities (Sec. II.E.1, *Operations Manual*)

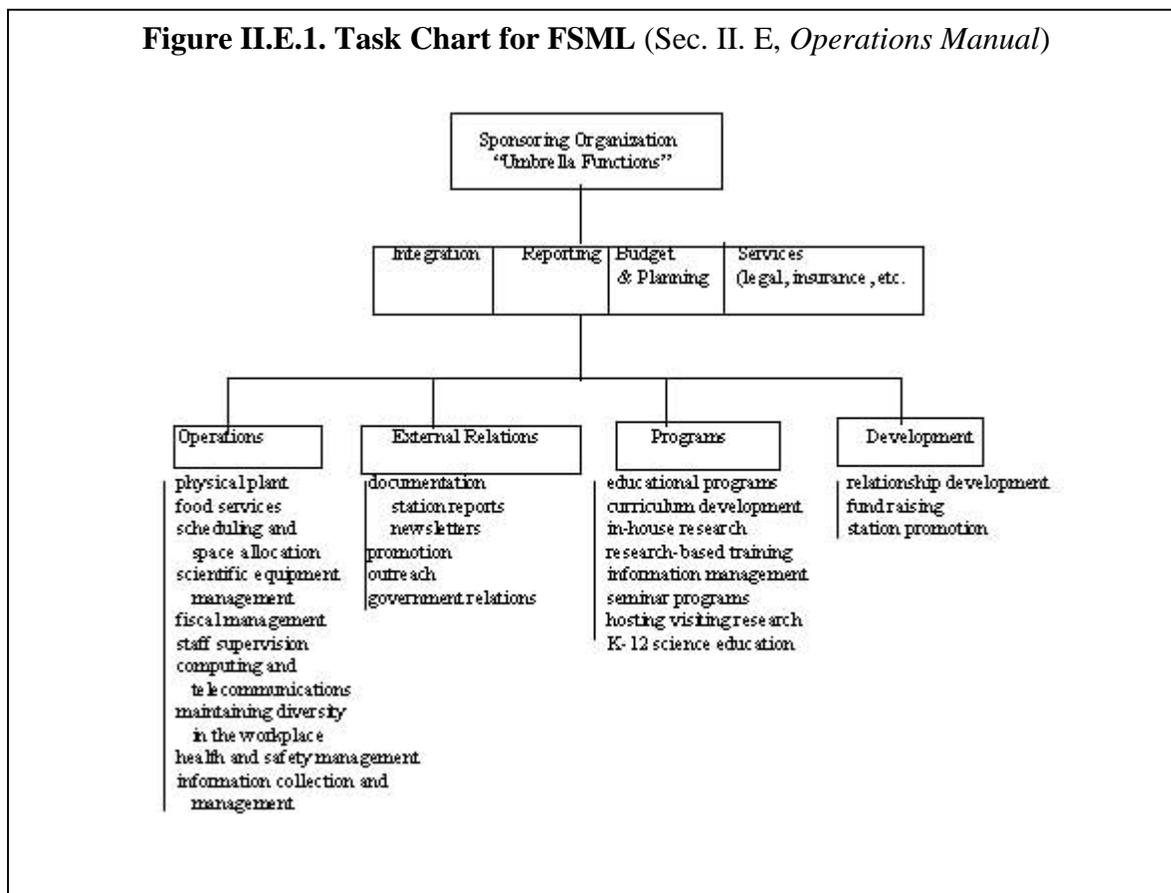
The administrative activities of a FSML can be organized in a task tree as illustrated in Figure II.E.1 (*Ed: See following page*). The scale of the station's activities determines the level in the tree at which FTEs are assigned. For most FSMLs, **the sponsoring institution provides a number of “umbrella functions”**. These might include ultimate fiscal responsibility, accounting and auditing, purchasing, risk management, human relations, legal services, and transportation services. **However, the FSML, because of its remote location, often performs at least portions of these tasks** or faces significant challenges in coordinating sponsoring institution functions with FSML on-site needs and functions. **This situation creates inevitable dissonance in budget, reporting lines, and information flow.** This dissonance leads to conflict, and can contribute to a ‘them’ vs. ‘us’ fingerpointing culture which greatly undermines effective administration. **Understanding the source of the conflict in the manner described above can help to resolve these issues and find solutions.**

In developing a task chart similar to Figure II.E.1 (*following page*) for a FSML, tasks not pertinent to the mission or situation should be removed and others unique to the facility should be added.

Job Titles and Descriptions (Sec. II.E.1, *Operations Manual*)

Job titles at the FSML should describe the nature of the staff member's duties as closely as possible, while preserving future flexibility in responsibility assignments as the FSML and the staff member's capabilities grow. **Official job titles with the sponsoring institution often will not match the FSML functional job titles**, since the official job titles must be taken from the sponsoring institution's taxonomy of job titles. Due to differences in scale, the division of responsibilities among job titles will differ between the FSML and the sponsoring institution. **This inevitably leads to substantial problems, including inappropriate actual activities in relation to job title, inappropriate pay scale associated with the level of responsibility and experience, inadequate avenues for pay and position advancement.** Ideally, the sponsoring institution will address this by adding a set of job titles specific to the FSML personnel.

Figure II.E.1. Task Chart for FSML (Sec. II. E, *Operations Manual*)



Administration (Sec. II, A, *Operations Manual*)

A. Guiding Principles

FSMLs are diverse institutions. However, as relatively remote sites for conducting field research, research training and science education FSMLs share some fundamental similarities. Effective administration of a FSML will take into consideration the following general principles:

1. All administrative activities should evolve from the FSML mission, through the program, facilities, master, business and strategic plans. **The FSML mission statement should reflect the mission of the sponsoring institution, and justifies the activities of the FSML to the sponsoring institution.** The purpose of FSML administration is to manage the execution of tasks which arise from FSML plans.

2. Administrative policies must be derived from the sponsoring institution's policies. Additional policies will be required to cover activities and needs peculiar to the FSML. Independent FSMLs should develop policies that reflect their governing Board's philosophy.

Administration (Sec. II, A, *Operations Manual*, Continued)

3. The level of reporting within the sponsoring institution should be concordant with the administrative level at which the categories of activities in which the FSML engages are integrated within the sponsoring institution. For example, **if the FSML engages in both outreach and research, the FSML Director should report at an administrative level which includes both outreach and research in its responsibilities.**

4. A FSML is essentially a **remote campus**. A fully developed FSML performs nearly all the functions of a campus on reduced scale.

5. External participation through advisory committees and periodic external reviews can greatly enhance the stability and resiliency of the FSML's administration.

6. FSML administration does not occur in a vacuum. The FSML is nested within a network of administrative relationships (see **Figure II.A below**). For these relationships to be sustainable, there must be an exchange of benefits. Each partner supplies something of value to the other partner. In addition to the mutual provision of some need, there is also an exchange of reporting.

The largest percentage of administrative efforts are best directed towards those groups below the dashed line in the figure, as well as toward the sponsoring institution. However, to achieve sustainable growth, the FSML administration should allocate administrative responsibility to maintaining the other relationships as well.

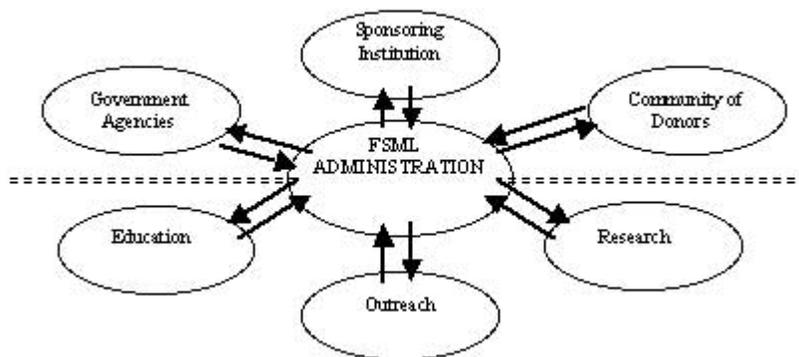


Figure II.A. FSML relationships. Those below the double dashed lines are groups for whom the FSML either provides direct administration or facilitates the conduct of the group's activities. Those above the dashed line are entities that function either above or outside the FSML's administrative jurisdiction.

Administration (Sec. II.A, *Operations Manual*, Continued)

7. The nature of administrative relationships varies widely among FSMLs. Some FSMLs are independent nonprofit corporations and have no sponsoring institution. **For independent FSMLs, a Board of Directors often fills some of the roles of both the sponsoring institution and the community of donors.** Some FSMLs have many neighbors who can support their mission politically and financially, while others are located in remote areas with low human population density and perhaps a poorly educated surrounding community. Many FSMLs serve only one or two of the three programmatic groups (research, education and outreach).

Business Planning and Funding

During her visit in April 2007, Susan Allen Lohr made a number of recommendations regarding the phasing and planning of BCS, many of which were consistent with processes already underway. She did, however, recommend that additional program and partnership development be undertaken, prior to working on further site and building design.

The business planning discussion recommendations for startup, program development, interim program implementation and facility development (design, permitting and construction) The funding discussion is broken into two categories: one-time start-up and capital funds and ongoing operating funds, followed by a discussion of fundraising opportunities and recommendations.

Program Assessment and Development (Recommendations from Susan Allen Lohr)

Lohr's recommendations are summarized in the framed text boxes below and encompass the process from now through the construction of BCS. Her recommendations form the basis for the phased planning and fundraising steps which comprise the balance of the business plan, although some steps and timeframes have been modified to meet local expectations and opportunities. It is also important to note that construction and development costs should be refined as site and building planning unfold, and that local costs may vary from Lohr's experience.

Phase I – Program Assessment and Business Plan (2007-2008)

A steering committee can develop programs, especially the portions outside New College's mission. The center could be part of an institute.

1. Set up a Steering Committee to oversee the initial planning, staffing and governance steps. Steering Committee members can be partners, but should be selected for effective and efficient function, not for broad representation.
2. Complete planning tasks (business plan, needs assessment, identification of paying users, program selection). This can be accomplished with one or more contracts.
3. Towards the end of this time period, assemble a planning workshop of 5 to 7 field station experts (pick them carefully!) to evaluate BCS progress and assess how realistic and appropriate the expectations are for the education mission, research mission, and business plan.

Cost of the remaining planning tasks = \$150,000.

Provided by Susan Allen Lohr, Lohr Associates, Inc.

An Interim Executive Director (and other consultants) could be hired in a consulting capacity to provide the planning services envisioned in Item #2 above. Additionally, Lohr could be retained to assist with Item #2 and particularly, with Item #3.

Phase II – Interim Operations (2008-2012)

1. Find a physical and administrative home – New College Foundation is a possibility.
 - a. Develop legal and administrative framework to give Base Camp Sarasota (BCS) some immediate substance and relative independence, in order to maximize entrepreneurial creativity and organizational integrity. Will need an interim home for five years to house programs and operations while physical facility is being developed.
 - b. Office lease and costs for five years 2007-2012 = 60 months x \$1,000/month = \$60,000
2. Hire an Executive Director for BCS. Meg Lowman has the drive, focus and vision to fill this position effectively. Perhaps release time or other arrangements can be made. Ideally this would be a full-time position, but if not, then creative use of an assistant, other partners, etc. will be essential so no momentum is lost.

Tasks for this first phase include:

- a. Set up independent governance structure
- b. Establish effective partnerships
- c. Hire additional staff as needed
- d. Develop and implement four initial programs or initiatives with a strong likelihood of success
- e. Fundraise for facility construction

Staff and operating expenses (exclusive of construction) for five years = \$600,000.

Cost of Phase II: \$660,000

Phase III – Detailed Facility Design and Capital Campaign

1. Amend existing plans to incorporate the results of Phase I planning and programs = \$25,000
2. Costs of Capital Campaign = \$150,000
3. Architectural Design, Engineering and LEED Certification = \$500,000
4. Presentations, Regulatory Compliance, etc. = \$25,000

Cost of Phase III: \$700,000

Provided by Susan Allen Lohr, Lohr Associates, Inc.

Phase IV – Construction (*Ed. Note: Costs are anticipated to be lower than presented here.*)

1. Estimate for site development, utilities, “green” and conventional infrastructure, etc. = \$1,000,000
2. Estimate of 200/sq. ft. for 15,000 square feet = \$3,000,000
3. Furnishings and equipment = \$800,000
4. Construction supervision = \$200,000

Cost of Phase IV: \$5,000,000 (*Ed. Note: Total Construction costs are anticipated to be in the range of \$3,000,000 to \$4,000,000.*)

Provided by Susan Allen Lohr, Lohr Associates, Inc.

Summary of Phases

	Phase I – Program Assessment and Business Plan	Phase II – Interim Operations	Phase III – Detailed Design and Capital Campaign	Phase IV – Construction
Year	2007-2008	2007-2012	2008-2010	2010-2012
Cost	\$150,000	\$660,000	\$700,000	\$5,000,000

Provided by Susan Allen Lohr, Lohr Associates, Inc.

Project Phases

BCS project phases can be broken into four categories: Initial, Interim, Design and Construction, as described below.

Initial Phase

Clearly there is a need to refine the program and services offered—in conjunction with funding opportunities—prior to finalizing design. During this phase, potential users and partners will be contacted, and their needs and their ability to fund will be determined (see Market, Users and Customers chapter for additional partnership suggestions). Program and partner development can be undertaken in at least three core areas:

- Academic Use (research and teaching; developing best practices)
- Applied Research (land management and monitoring; training)
- Community Resources (education, teacher training, eco-tourism, artists-in-residence, retreats, conferences, etc.)

At least four funded programs will be developed. Concurrently, the Steering Committee will be developing the organizational structure and documentation. Lohr has indicated that this period would take between 12 – 18 months, and should cost around \$150,000. This funding would support an Executive Director or Interim Executive Director and consulting or faculty services. In-kind donations of office space and support services would also be desirable. (Note: During this period, the Executive Director may serve in either an interim or consulting capacity, possibly leading to a permanent role.)

Interim Phase

The Interim Phase will include implementing the governance structure and board strategies, and undertaking the four fee-generating programs. The cost estimate for this period is approximately \$600,000 to support staffing and operating costs. The Executive Director should become a permanent employee in this phase. Funding for this phase should come primarily from partners and from program fees, and office space and support staff could be obtained from in-kind donations. This phase will last about 4 to 5 years and will most likely overlap the Design and Construction Phases. The Executive Director will be continuing to develop ongoing fee-generating programs and relationships with paying partners.

Design Phase

This phase includes site and building design and permitting. It could take up to two years to complete. Funding will be required to support the design professionals required for development, but should also support an on-staff Facilities Manager to represent BCS in the design and construction processes.

Construction Phase

This phase includes site and building construction and will be funded from the capital campaign. Construction should be completed in less than a year. Ideally, the end of construction will correspond with the end of the Interim Phase as staff and users move to the site.

Start-Up, Planning and Capital Funds

Dr. Meg Lowman has raised initial start-up funds for preliminary planning and science programming through the TREE Foundation and the Triad Foundation, and, at her urging, both Sarasota County and the EDC have contributed preliminary planning funds. By providing background, business plan, and presentation materials, the work to-date should provide a solid basis for continuing fundraising efforts.

In summary, funds will be required for the following phases:

- Initial Phase – organizational and program development.
- Interim Phase – organizational and program implementation.
- Design Phase – site planning and building design, permitting.
- Construction Phase – site and building construction.

Developing fundraising plans and identifying donors will be crucial for determining funding sources for each phase. For example, some donors will not fund organizational, design or operating processes, but will fund capital projects. While the Executive Director will be a major player in the fundraising process, the Board and fundraising taskforces should be providing a great deal of assistance.

Operating Funds

Operating costs will be based on the extent of services and programs provided and the resources needed to support these programs. Ideally, fee-for-services and grant programs provide the funds necessary for ongoing operations and administration. However, Susan Lohr has indicated that, in her experience, field stations need to be covered by ongoing annual support from partners, unless they are actively funded by an endowment. The typical amount for this annually designated support is around \$150,000, *and there are no exceptions*, regardless of scale. This annual financial support can come from a coalition of partners rather than from a single source.

Ms. Lohr has provided a chart of five-year start-up, capital and operating costs for the Noyo Field Station (contained on the following page). *However, it is important not to base costs for BCS on this example until further analysis of program and services has been developed.*

Noyo Center Operating Costs (Sample for California center; local costs may differ.)

Task	Year One	Year Two	Year Three	Year Four	Year Five
Personnel (with FTE)	Acting Director (0.5) Administrative Manager (0.25)	Executive Director (1.0) Administrative Manager (1.0) Scientific Technician (0.5) Facility Manager (0.5)	Executive Director (1.0) Administrative Manager (1.0) Scientific Technician (1.0) Facility Manager (1.0) Program Manager (0.5) Financial Manager (0.5)	Executive Director (1.0) Administrative Manager (1.0) Scientific Technician (1.0) Facility Manager (1.0) Program Manager (0.5) Financial Manager (0.5)	Executive Director (1.0) Administrative Manager (1.0) Scientific Technician (1.0) Facility Manager (1.0) Program Manager (1.0) Financial Manager (0.5)
Personnel Expense	67,000	170,000	250,000	250,000	300,000
Facility Consultants:					
1. DPP Plan	50,000				
2. Architectural Design, Engineering and LEED Certification		400,000	400,000		
3. Construction Supervision			50,000	50,000	50,000
Operational Expense*	10,000	25,000	30,000	35,000	40,000
Total Annual Expense	127,000	595,000	730,000	335,000	390,000
Annual Income (from grant overhead, fees, rents, etc.)	0	3,000	5,000	10,000	20,000
Net Annual Operating Expense	127,000	592,000	725,000	325,000	370,000
Cumulative Net Operating Expense	127,000	719,000	1,444,000	1,769,000	2,139,000
<i>Grants Needed:</i>					
Personnel/operations support	77,000	195,000	275,000	275,000	320,000
Ocean instrumentation	0	5,000	10,000	15,000	20,000
Construction planning and supervision	50,000	400,000	450,000	50,000	50,000
Land Acquisition Costs		4,000,000			
Capital Construction Costs		1,000,000	2,000,000	1,000,000	
<i>Land Acquisition Grant Needed:</i>		4,000,000			
<i>Construction Grants Needed: \$4M obligation secured, dispersed over three-year period</i>		1,000,000	2,000,000	1,000,000	

* Includes all non-personnel expenses (travel, utilities, legal, office, etc.) except for capital construction

Provided by Susan Allen Lohr, Lohr Associates, Inc

NOTE: Costs for BCS should be based on proposed programs and services and not on the numbers provided in the example above.

Fundraising Opportunities

Opportunities for capital fundraising include local and national foundations, State or regional partners, legislative appropriations, private contributors, etc. Dr. Lowman has been pursuing a number of funding opportunities based on an estimated \$3 million of construction costs. One scenario for capital funding suggests that one third would come from foundations; one third from a State match with New College; and one third from private investors. The State of Florida will match New College donations for educational and research structures.

As of the date of this document, the current plan is for New College to write a planning grant to the Gulf Coast Community Foundation, followed closely thereafter by a \$500,000 grant (for which New College can obtain the State's matching funds, totaling \$1 million). Private contributions will also be sought from ten donors at \$100,000 each. Sarasota County Environmental Services staff will pursue a County allocation to create a nationally acclaimed green-design research and environmental education center for Southwest Florida. However, funding scenarios may well change as BCS moves forward and costs are refined.

Subsequent operations of the field station will be funded by a combination of partners and users. New College may be able to provide recurring State funds for science and equipment. Counties and other governmental partners may be able to provide funds for staffing and maintenance in return for ongoing services. A Memorandum of Understanding (MOU) will be developed with each partner to ensure ongoing annual support, totaling a minimum of \$150,000 as previously discussed.

The Steering Committee may want to appoint a Fundraising or Finance Committee to assist the Executive Director with fundraising. These committee members should be knowledgeable in fundraising strategies and methods and provide opportunities to approach various sources of funds, both within the community and throughout the Country. The make up of the Committee may change as committee purpose converts from raising funds for planning and capital to raising funds for operations.

The fundraising process should consist of documented steps which have proven successful, including the following:

Develop strategic fundraising plans based on the type of funding needed (seed, interim, planning and design, construction, operations). It may be advisable to hire a fundraising consultant to assist with fundraising plan development.

Continuously stay in contact with potential donors, legislators and other public officials, grant organizations, potential partners and other interested parties. Ongoing personal contacts work best. *Governmental funding can take years to develop, so stay in touch with legislators regularly* (especially as new legislators are elected).

Utilize Board and taskforce members to assist with ongoing community outreach as well as "asking for the donation." If members are uncomfortable with the "asking part," take

along someone who can close the deal. Consciously or subconsciously, many donors are simply waiting to be asked for a contribution.

Recommendations for Business Planning and Fundraising

- The Steering Committee will refine the strategic and business plans to begin with an initial phase of partnership and program development before continuing with design processes.
- Four phases of BCS development are anticipated, with different purposes and fundraising strategies for each. These phases include:
 - The *Initial Phase* to finalize strategic planning and to develop partners and programs.
 - The *Interim Phase* to implement partnerships and programs.
 - The *Design Phase* to design and permit the facility.
 - The *Construction Phase* to construct the site and buildings.
- *The Initial Phase*
 - The Steering Committee will undertake a 12 – 18 month phase of partnership development and program and service planning prior to continuing with site and building design.
 - During this phase, the Steering Committee will adopt its strategic and business plans and establish the formal governance entity, including adopting and filing the necessary documents.
 - Taskforces will commence their work. A website and other communications tools will be developed.
 - Initial seed funds in the amount of \$150,000 - \$200,000 will be required to support the partnership and program planning work. These funds will sustain an Interim Executive Director and/or consultants.
 - Potential partner/users will be interviewed to determine their needs and desires and ability to pay over time, and programs will be developed to meet the needs of these partners.
 - Partner development should lead to identification of niche areas both within the community and beyond the region.
 - Partners can become members of the BCS governing structure and provide additional resources and annual funding.

- Memorandums of Understanding (MOUs) or similar agreements will be developed with each partner.
- Basic programs can be clustered under several categories, such as the following:
 - Academic Use (research and teaching; developing best practices)
 - Applied Research (land management and monitoring; training)
 - Community Resources (education, teacher training, eco-tourism, artists-in-residence, retreats, conferences, etc.)
- At least four fee-generating core programs, which can start immediately, should be developed to support an Interim Phase, forming the basis for ongoing operations and amplifying the need for the facility.
- At the end of this phase, a team of field station experts (including Susan Lohr) should be invited to review the plans and programs and provide feedback on their viability.
- *The Interim Phase*
 - As the Interim Phase is initiated, the Steering Committee will transform into the Board of Directors of the governing body and the permanent Executive Director should be hired (if this has not yet occurred).
 - Funding for the Interim Phase will support the permanent Executive Director, additional staff, offices and operations for a four to five-year period during the design and construction period.
 - During in this phase, taskforce work on administrative and operating policies will be finalized.
 - Interim phase funding can come from a combination of partner support and fee-for-service (although fees for facility use would be limited).
 - The Executive Director will provide the following services along with others as determined by the Steering Committee/Board:
 - Assist the Steering Committee/Board of Directors in implementing the strategic and business plans.
 - Assist taskforces.
 - Hire and manage staff in accordance with implementation plans.
 - Manage and conduct fundraising.
 - Implement the Interim Phase.

- The Interim Phase—as well as ongoing operations—should be supported by an annual guaranteed stipend of around \$150,000. These funds could be supplied by a number of partners so that no one partner is individually burdened. (This comes from the 25-year experience of Susan Allen Lohr and is crucial for non-endowed field stations.)
- *The Design and Construction Phases*
 - Two types of funding will be required during the Design and Development phase: design consultant costs (aka, soft costs) and capital costs (hard costs). Some funders will not support soft costs.
 - The Executive Director will be involved with fundraising at this level, but has other responsibilities as well. It is important for the Board to ensure that sufficient assistance is provided from the Board and appropriate taskforces.
- Four phases of funding are required. As noted in the BCS Planning and Interim Operations Schedule, several of these phases overlap.
 - *Initial Phase* – Partner and program development – approximately \$150,000 - \$200,000.
 - *Interim Phase* – Startup operations, 4 – 5 years with staff – approximately \$660,000.
 - *Design Phase* – Design professionals and permit approvals – approximately \$700,000 (overlaps Interim Phase).
 - *Construction Phase* – Site and building construction – approximately \$3,000,000 to \$4,000,000 (overlaps Interim Phase).
- The Steering Committee/Board should establish a Fundraising or Finance Committee to assist the ED with fundraising for initial capital costs and for ongoing operations funding.
- Fundraising should include the following strategies:
 - Develop a fundraising plan based on the type of funding needed (seed, interim, planning and design, construction, operations). It may be advisable to hire a professional fundraising consultant to assist with fundraising plan development.
 - Continuously stay in contact with potential donors, legislators and other public officials, grant organizations, potential partners and other interested parties.
 - Maintain personal contacts (most effective). *Governmental funding can take years to develop, so maintain contact with legislators.*
 - Utilize Board and taskforce members to assist with ongoing community outreach as well as “asking for the donation.” If members are uncomfortable with asking, take along someone who can close the deal. Many donors are simply waiting to be asked for their contribution.

Market Analysis, Users and Customers

The feasibility of any marketable project revolves around end users and customers, particularly those who pay to use. Who they are and what they need are the primary questions to be answered early in the program development process, along with consideration of available product (in this case, ecosystems) and analysis of the competition (other field stations).

Dr. Margaret (Meg) Lowman, herself a well-traveled scientist with huge field station experience has put it this way, “Essentially, if beds, kitchen and unique ecosystems are provided, ecologists will flock! It is that simple. A good example is the Archbold Field Station in central Florida. Through a visionary legacy by the MacArthur family, Archbold offers beds, library, kitchen and sandy ridges and scrub ecosystems within walking distance. A cadre of scientists conduct research there, not surprisingly a large portion from northern universities who visit during winter.” (Sarasota Herald-Tribune, August 28, 2005)

However, a scientist has to prove the hypothesis, and with Sarasota County’s assistance, Lowman developed a market study employing the use of the survey engine, Zoomerang. Copies of the raw survey results are contained in the Appendix, and below is a summary of some of the key results.

Market Survey

The survey was sent to two groups, the local Science Advisory Committee (SAC) and a collection of 34 national and international research scientists who typically obtain grants and utilize field station resources, whether for themselves or for students. The results below relate only to the national group, although there are members of the SAC who would also be “paying” users.

General Responses

18 of the 34 surveyed responded, a 53% response rate.

12 (67%) would use the site for solo research.

11 (61%) would bring classes to the site.

10 (56%) would send graduate students to the site for research stays.

Time of Visitation

Not surprisingly, the highest ranked months for field station visits were December through May (33% to 44% with the exception of February which was 28%) and the lowest ranked were June through November (17% to 28%). Other timeframes included sabbaticals (39%) and annual visits (39%). Even though the winter seasons were clearly preferred, the overall pattern seemed to indicate that there would generally be year-around demand for the field station.

Field Station Features and Benefits

The following table summarizes field station amenities as rated high or highest in priority with other ratings as noted:

Amenity	<i>High or Highest 50% or over</i>	<i>High or Highest Priority</i>	<i>Medium Priority</i>	<i>Low or Lowest Priority</i>
Laboratories	X	56%	44%	0%
Dormitories	X	61%	6%	33%
Classrooms	X	50%	28%	23%
Kitchen Facilities		39%	33%	28%
Auditorium		36%	24%	36%
Canopy Walkway	X	56%	22%	23%
Boats for Watershed Research	X	61%	17%	22%
Internet	X	94%	6%	0%
Conference Facilities		39%	22%	39%
Distance Learning Facilities		24%	31%	44%
Grant Supported Research with Grad or Undergrad Students	X	61%	33%	6%
Satellite Access to State-of-the-Art Imagery	X	61%	17%	23%
NEON Site Facilities		36%	24%	42%

Working and sleeping facilities, internet access, grant supported research, and satellite access to imagery are all important. Convenience facilities, such as conference rooms and auditoriums are less important to these scientists, although they may serve a greater function for the community at-large and other non-science users.

Research Topics

The following table rates the importance of certain research topics within easy reach in Southwest Florida.

Research Topic	<i>High or Highest 50% or over</i>	<i>High or Highest Priority</i>	<i>Medium Priority</i>	<i>Low or Lowest Priority</i>
Invasive Species	X	95%	0%	6%
Land Use	X	89%	6%	6%
Infectious Diseases		12%	33%	55%
Biochemical Cycles		39%	22%	39%
Biodiversity	X	83%	18%	0%
Watershed Ecology	X	95%	6%	0%
Canopy Biology	X	61%	22%	17%
Florida Hammocks	X	67%	17%	17%
Pine Flatwoods	X	66%	22%	11%
Urban Ecosystems	X	50%	28%	11%
Coastal Ecosystems	X	83%	6%	11%

With the exception of infectious diseases and biochemical cycles, the area ranks highly available for research topics in the listed topics.

Other suggested topics were water quality, hydrology, nutrient cycling, wildlife and marine ecology, wildlife utilization at urban interface, effects of development on wetlands, isolated wetlands, etc. *Clearly, the study of any one of these categories fits within the overall mission to evaluate the impacts of climate change.*

Science Advisory Committee

The members of the SAC are listed in the Appendix. The survey was sent to 22 individuals and 12 responded for a response rate of 55%. A number of the members are local and would not be direct users, so would not be expected to reply. However, 13 are not local and could be considered potential users and/or partners.

The SAC high and highest ranked site needs included laboratories, dormitories, classrooms, kitchen facilities, internet, grant supported research, and satellite access to state-of-the-art imagery.

Rankings for availability of research topics was similar to the study above. Additional topics include ecological links, changing land-use practice, natural resource valuation, renewable

energy, habitat/ecology reconstruction and ecosystem management, medical ecology, Biomimicry, and economic aspects of ecosystems.

Competition

In the overall scheme of natural science field stations, the word “competition” may be an overly strong term, but the concept is useful in analyzing opportunities for user and grant funding as compared to other field stations which may be similar in location, ecology or research focus.

The primary competition for ecological subtropical research in the United States is located in the state of Florida (the major locale of such ecology in the Continental U.S.), or controlled by a base Florida organization for a similar offshore location. The following analysis evaluates known independent Florida field stations as well as national network stations.

Florida Field Stations

The table below contains the names, locations, and research focus of Florida field stations which might function as competition for BCS.

Station Name	City, State (Site)	Research Focus
Archbold Biological Station	Lake Placid, FL	Scrub; Central Prairie
Disney Wilderness Preserve	Kissimmee, FL	Wetlands Restoration
Gerace Research Center	Ft Lauderdale, FL (San Salvador Island)	Bahamas Tropical Island Marine
Ordway-Swisher Biological Station	Gainesville, FL	Sandhill Ecosystem
Pinellas County Biological Field Station	Tarpon Springs, FL	Land Management
Riverwoods Field Laboratory	Lorida, FL	Kissimmee River & Everglades Watershed Reconstruction
Seahorse Key Marine Laboratory	Gainesville, FL (Seahorse Key)	Marine Fisheries
Tall Timbers Research Station	Tallahassee, FL	Long Leaf Ecosystem Management
Sanibel-Captiva Conservation Foundation, Marine Laboratory	Sanibel, FL	Marine Estuary
William Beebe Tropical Research Station	Trinidad Tobago	Tropical

From examining the location and type of the existing field stations, it appears that none serve the same function as envisioned for BCS. Those located north of Tampa and in the central part of the State are functioning in different types of ecosystems, without the subtropical, freshwater/upland characteristics of BCS. In several cases, they are focused on reconstruction or management of

very specific habitats also dissimilar to BCS. As user need will determine, BCS can not only address land management and reconstruction interests, but also focus on broader ecological research conducted by visiting scientists.

National Field Stations - The Long Term Ecological Research (LTER) Network

The LTER is a collaborative effort involving more than 1,800 scientists and students investigating ecological processes over long term and broad spatial scales. The National Science Foundation established the LTER program in 1980 to support research on long-term ecological phenomena in the United States and supports 26 sites throughout the country (see map below). The Network promotes synthesis and comparative research across these sites and ecosystems and among other related national and international research programs.



Long Term Ecological Research (LTER) Network

The only LTER Florida location is the Florida Coastal Everglades (FCE) site which focuses on understanding ecosystem processes along the two major drainage basins in Everglades National Park: Shark River Slough and Taylor Slough. FCE is particularly interested in the dynamics at the estuarine ecotone, the transition zone where freshwater and estuarine wetlands meet. This ecotone is dynamic in the landscape in response to changing freshwater inflow (with Everglades restoration), sea level rise (climate change responses), and disturbance (particularly hurricanes and fire).

The other two tropical sites are Moorea Coral Reef (MCR) which is focused on coral reef research and The Luquillo Experimental Forest (LEF) which is focused on tropical forest research in the Luquillo Mountains of Puerto Rico. It appears that none of the LTER sites provide opportunities for the same types of subtropical ecological research that would take place at the BCS.

Opportunities

In addition to opportunities identified through the Zoomerang survey, New College has relationships with over 130 organizations for National Science Internship programs available for New College students. Presumably many of these organizations would generate researchers with need for a subtropical field station as well. In addition, Dr. Lowman participated in planning the National Ecological Observatory Network (NEON), an interdisciplinary group of scientists, engineers and educators charged with guiding and funding environmental research in the U.S. over the next several decades. Expert scientists are comparing the impact NEON will have on the future of ecological research to NASA's impact on the beginning of space exploration and research.

Jointly established by the American Institute of Biological Science and the National Science Foundation, NEON is outlining a blueprint for a national research infrastructure, one in which scientists can work together to identify and answer key questions only suited to research on a national level. Lowman served on NEON's Design Consortium, a committee which is creating specific guidelines for NEON facilities and infrastructures, and establishing the project's educational components.

As a result of Lowman's work, BCS will be included in neoNEON (national level funding for equipment and part of the larger neotropical domain site housed in Puerto Rico). Unfortunately, since Sarasota County has only a limited number of published, peer reviewed scientific studies, the area could not qualify as a main domain site.

Lowman's extensive outreach into both the scientific research community and the local community should be regarded as a "marketing opportunity" for BCS and her abilities in this regard should not be overlooked.

Users

Users will depend on the mix of uses and activities (research, outreach, education) developed by the BSC partners and stakeholders. Potential users, their focus, and possible funding opportunities are represented in the sample table below, which may be used as a planning tool to develop partnership and funding strategies. These users could provide the basis for operating

funds, however, some may also rank higher than shown when considered as a source of funds for capital development rather than program funding.

BCS User/Funder Chart (Sample)

User/Funder	Typical Focus	Source of Funds	Funding Opportunity 1 (Low) to 5 (High)
Academic Institutes of Higher Learning	<ul style="list-style-type: none"> • Research (Faculty and Student) • Professional Development 	Grants and User Fees	5
K-12 Educators	<ul style="list-style-type: none"> • Student Science Training • Teacher Training • Field Trips 	Funding/Staffing as Partner	2
Community Organizations	<ul style="list-style-type: none"> • Field Trips • Fundraising 	User Fees	1
Private Citizens	<ul style="list-style-type: none"> • Field Trips • Education 	User Fees	1
Businesses (Economic Development)	<ul style="list-style-type: none"> • Biomimicry, Natural Capital, and Business Opportunities • Research and Data • Meeting Facilities • Field Trips & Education 	User Fees Sale of Research and Expertise	3
Regional and County Extension Services	<ul style="list-style-type: none"> • Data and Research • Outreach 	Partnership Grants	2
Land Use Institutes & Centers for Excellence (State)	<ul style="list-style-type: none"> • Data and Research • Best Practices 	Grants	3
Community Foundations	<ul style="list-style-type: none"> • Support for Climate Change Analysis • Opportunities for K-12 and Other Learning Programs 	Program Grants	3
State of Florida and Water Management Districts	<ul style="list-style-type: none"> • Data for Water and Land Use Policies • Opportunities for Community Learning Programs 	Partnership Grants	4
Federal Government	<ul style="list-style-type: none"> • Data on Climate Change 	Grants	3
Local Governments	<ul style="list-style-type: none"> • Data for Public Lands Management • Data for Water and Land Use Policies • Data for General Policy and Spending Decisions 	Partnership Grants	3

As recommended by Susan Allen Lohr during her visit and subsequent communications, the determination of partners, users and funders and their program needs should be determined prior to further design and construction. Lohr has also indicated that a minimum contribution of \$150,000 per year will be required to keep the field station operating in a viable manner, and that this subsidy can be provide by various partners in return for certain agreed-upon rights and services. Her recommendations have been incorporated into the Business Planning and Funding chapter as part of the initial and interim phases of the field station development process.

Marketing and Public Relations Taskforce

A Marketing and Public Relations Taskforce will be very helpful for developing marketing plans and participating in outreach to field station customers and potential partners, as well as assisting fundraising taskforces. Members of this committee can be chosen for their expertise in marketing as well as their passion for the mission. They can assist with evaluation of subtropical field stations, support Dr. Lowman with her continued outreach, and promote BCS within the community. This taskforce may provide such an important service that it could become a standing committee or advisory group, providing feedback on an annual or semi-annual basis.

Recommendations for Market, Users and Customers

- During the Initial Phase of program development, users and their needs should be evaluated for partnership and funding opportunities.
- The Steering Committee will appoint a Marketing and Public Relations Taskforce to monitor the market and develop market strategies to promote BCS. The tasks of Marketing and PR could consist of the following tasks:
 - Assist in monitoring subtropical climate field stations.
 - Use ongoing public relations and outreach, conducted by Dr. Meg Lowman and others, as opportunities to promote BCS.
 - Develop a marketing strategy for BCS.
 - Refine the user list with specific contacts and outreach programs.
 - Work closely with fundraising committees.
- Marketing and Public Relations is an important component of a viable entity and the Board of Directors of the governing body may wish to consider it as one of their responsibilities, implemented through a standing taskforce or periodic review (quarterly to annually).

Design and Construction

This section contains a summary of the design and construction processes in conjunction with work completed to-date. This phase begins with hiring of a Facilities Manager, the formation of a taskforce and the hiring of consultants and ends with a Certificate of Occupancy and a celebration.

While the design and construction processes are complex, lengthy and challenging, this is also a time of great anticipation, creativity and production. This is where dreams become buildings and the work of many years finally becomes a reality. Thus, it is very important that individuals who are suited to this work—whether they are volunteers or paid staff or consultants—be recruited, retained and allowed to do their jobs. While professionals know their practice, the information provided in this chapter is primarily for those less familiar with the development process. The Design and Construction Phase schedule contained at the end of this chapter is intended as a guideline and should be modified and updated to meet the expectations of the Board.

While the Executive Director and the Board should be *involved in* design and construction, their primary responsibility is the overall operations of BCS, and they should be diligent in not micromanaging the development process. However, if schedules and budgets are getting out of line, the Board should not hesitate to step in and rectify the situation.

The roles of the Executive Director and the Board in this process include the following:

- Provide stakeholder input on planning and design.
- Review and adopt budgets and schedules.
- Ensure overall schedules and budgets are met.
- Undertake timely review and approval of plans.
- Give support to the building committee.
- Fundraise.
- Use special events as public relations opportunities.

Public versus Private

A critical issue affecting timeframes and cost is whether the project can be designed and constructed via a private sector process, or whether the project must undergo the standard public Request for Proposal (RFP) and bid processes. While necessary in the public realm to ensure that consultant and builder hiring procedures are open and fair, these public processes take time and cost money. Hiring a consultant through the RFP process and subsequent contract negotiations can take up to a year and add 50% to 100% to the fees. The construction bidding process yields a low bidder, but it may not be the best fit for a specialized project, and pricing is typically 30% to

100% higher. Both New College and Sarasota County are constrained by these procedures to some degree, but a separate, not-for-profit entity should not be. Another option might be for a non-public entity to design and construct the facility and then turn it over to a more public entity once completed. The issue of how to structure the design and construction process in a timely and cost-effective manner should be given serious consideration during ownership and governance discussions.

The Design Phase

The Design Phase starts with preliminary planning and ends with site construction authorization and building permits. The first step involves creating a building committee or construction taskforce and developing the design team.

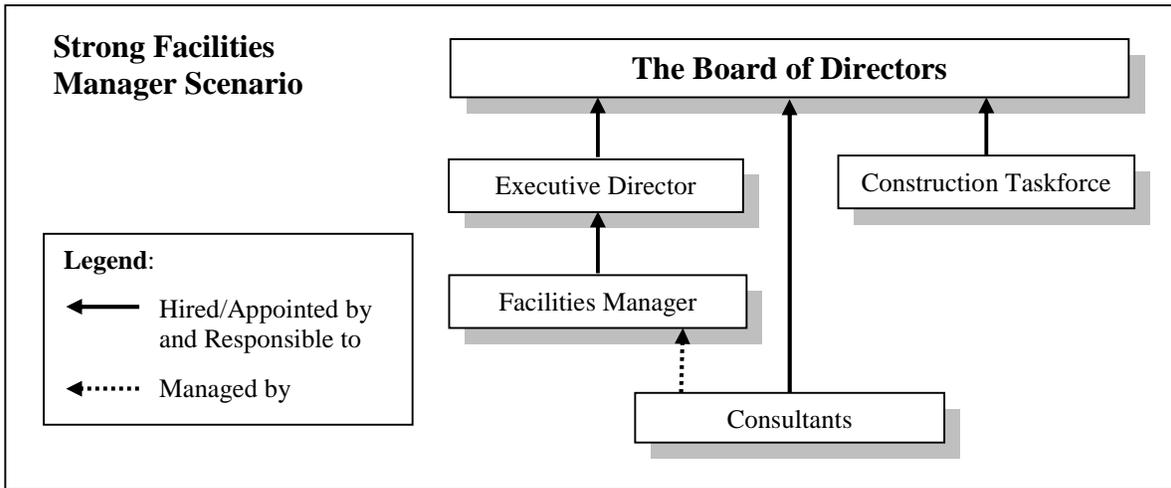
Facilities Manager and Construction Taskforce (Building Committee)

Prior to commencing the Design and Construction phase, the Board and Executive Director should hire a Facilities Manager—ideally with design and construction experience—and appoint a construction taskforce or building committee. The job description of the Facilities Manager should be carefully considered for both pre- and post-construction responsibilities. The scope of this position could vary from straightforward, on-site maintenance and facilities operations to more complex responsibilities, including facilities planning, design and construction oversight, and residential management. Another option is to hire a manager for the design and construction phases and hire a different individual once the station is operational. However, this option should be weighed against having a Facilities Manager who understands the reasons and ramifications of design and construction, warranties, and systems operations from the very beginning.

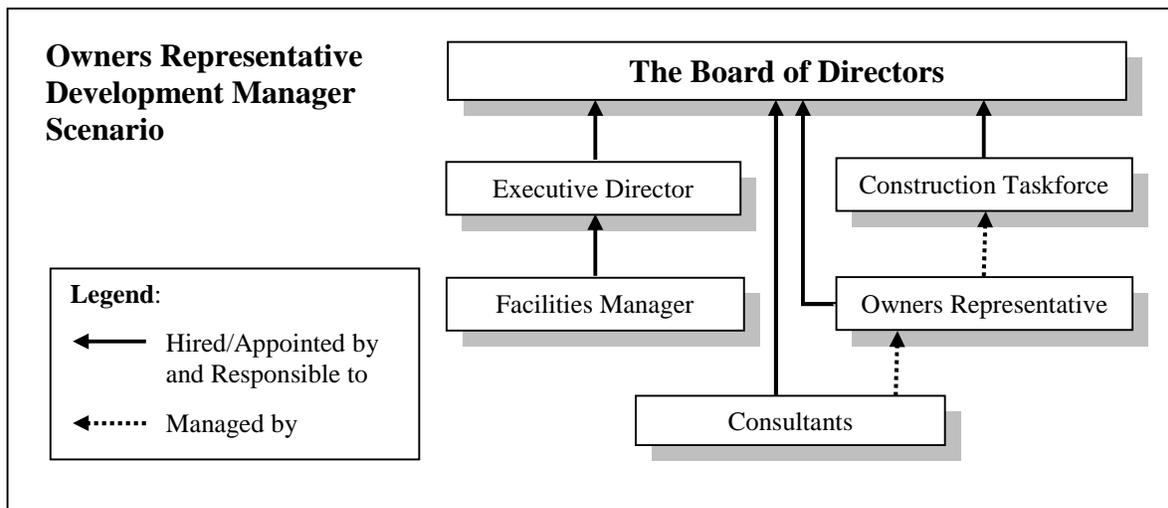
If the Facilities Manager does not have a strong background in construction processes, the taskforce chair should be willing to provide the expertise and time required to oversee these processes, or the Board should hire a development manager or owners representative. The Facilities Manager reports to the Executive Director, and the taskforce (and owners representative) reports to the Board, but all parties will be working closely together throughout the process, so mutual respect is important. Teamwork and a strong working relationship will foster a much smoother process than power plays and ego satisfaction.

The graphics on the following page depict two scenarios: one with a Facilities Manager with a strong development background, and one where the Board hires an owners representative or development manager. While all hires are ultimately responsible to the Board, some may be responsible to the Board but “managed” by other parties.

Facilities Management Scenarios



In the scenario above, the facilities manager is hired by and reports to the Executive Director. The consultants are in contract with the Board—and ultimately responsible to it—but are managed by the Facilities Manager to ensure schedules are met and that consultants are communicating with all members of the team. The construction taskforce is appointed by and responsible to the Board in an advisory capacity. The taskforce works with the Facilities Manager to develop and vet plans and processes before they go to the Board.



In this scenario, the owners representative and other consultants are in direct contract with the Board, but the owners representative oversees the other consultants. The construction taskforce is appointed by and responsible to the Board in an advisory capacity. The taskforce works with the owners representative to develop and vet plans and processes before they go to the Board. The

owners representative should be fairly autonomous, but is overseen by the construction taskforce to ensure that that the project meets objectives set by the Board.

The Design Process

This section describes a typical design team along with the site and building design processes to be followed once the Facilities Manager and building committee are in place. The general descriptions of process will be followed by specific site information and some of the general site and building design issues known to-date.

The Design Team

Ultimately, the design team will consist of the Facilities Manager, the construction taskforce and the design consultants. The consultants will be under contract with the owner (Board) and most likely managed by the Facilities Manager (or equivalent development manager or owners representative) as previously determined.

Typically, the design process starts with an architect, or a land planner, or a civil engineer, or an environmental consultant. The *most efficient* process starts with a team consisting of all these disciplines, but some owners feel it is less expensive to hire one consultant at a time. However, architects may design sites which do not meet land use or land development codes that planners and engineers understand. Planners don't always design with the sensibilities of an architect, and engineers often design with an eye to getting the project permitted, with less consideration for aesthetics and amenities. Environmental consultants are typically not site designers. As a result, one consultant draws a plan and another has to change it. And, every change—whether by an architect or an engineer—results in higher costs and longer design timeframes.

If the architect has a good understanding of site planning and design, a land planner is not required (unless land use changes are necessary). But, at a minimum, the initial team should include the architect, the civil engineer and the environmental consultant. Furthermore, cost aside, the more the design team understands—from the beginning—about design issues and the client's needs, the more effective the plan will be. In order to make the design process even more cost-effective, a savvy owner will also bring in the general contractor to provide feedback on construction costs as design progresses.

With the desire to develop and build sustainably, the design team will need to be formed with these goals in mind, and specialty disciplines involving energy, water and solid waste may also be required. In addition, many review agencies require that a licensed landscape architect seal landscape plans that are required to meet certain codes. Because the workload, fee range and competency of consultants vary tremendously, ideally three quotes should be obtained for all consultants unless they are already known to the client/owner.

Charrettes and Design Workshops

Once the Facilities Manager, building committee and the consultant team are in place, they can review physical site conditions and constraints, work to-date, environmental issues, social interactive needs, economic conditions, stakeholder requirements, etc. Given the collaborative

nature of this project and the community interest in its design, it may be advisable to undertake a design charrette to review previous work and update facilities programming and the master plan.

Typically, design charrettes follow a formal format involving at least four days which include stakeholder input, followed by design work, followed by stakeholder feedback on the design, more design work, more review, etc. until a final plan emerges. Or, the process can be less formal, using workshops and looser timeframes.

Charrettes can be used for both site and building design and are an excellent tool for master planning, as recently demonstrated by the New College Campus Master Plan process. The BCS design team should discuss the feasibility of this process as part of their initial organizational sessions. (More information on the charrette process is available from the National Charrette Institute at www.charretteinstitute.org and from the American Institute of Architects at www.aia.org.)

Facility Programming

Facility programming evaluates the project in terms of function. Architects use this programming phase to determine a client's use and space needs to create a plan or diagram from which the architectural design and site plans will emerge. Program planning is not necessarily site-specific.

Master Planning

Master planning is advisable for phased projects or sites where more than one building or use is proposed. The master planning process moves the facilities programming information into design and site planning for a specific site. At a minimum, the master plan contains the stakeholders' visions, preliminary design recommendations, the concept site plan, and a phasing plan. Design recommendations can be general or specific in nature, and the master plan usually documents the principles and values of the participating stakeholders. The master plan should include the entire site and anticipate future needs even as those needs—and subsequently the plan itself—will likely change over time. Master planning the entire site ensures that future opportunities have been considered in a comprehensive manner (i.e., issues such access, connectivity, utilities, energy, water and potential uses have been taken into account). The concept site plan should receive the blessing of the Board of Directors before further funds are expended.

Part of the facilities master planning and design process should include anticipated construction phasing for the project. The hypothetical phases of construction below were based on the preliminary programming and design workshops in 2005 and 2006 and will be modified, but they provide an example of how the project could be phased.

Hypothetical Phases of Construction

Phase 1. Classroom and lab unit; dorm unit to sleep 15-20 (five rooms of 4 bunks each and/or four rooms of 4 bunks plus one faculty room with two bunks) with office space; one housing unit with kitchen space to accommodate faculty or station manager, and include office space.

Phase 2. Kitchen/dining unit that can be utilized as lecture hall; two additional units for scientists of long-term stays (with bedroom, office, kitchen, porch).

Phase 3. Greenhouse, parking, boardwalks, additional library/small conference auditorium.

The Site Plan

After the site concept plan has been approved by the Board, a licensed civil engineer will prepare detailed engineered plans for submittal to review agencies. The engineered plans will deal with items such as impervious surface calculations, drainage systems, paving, traffic access, parking, parking lot and driveway striping, building location, signage, planting buffers, preserve areas, setbacks, water utility, sanitary sewer utility, solid waste, energy, communications infrastructure, and numerous other details. To complete these drawings, the engineer will require current, detailed boundary, topographical and tree surveys. Both the architect and engineer will probably require soil testing to analyze the characteristics of subsoils, to determine if there is rock, sand, muck, organic material, waste material, etc. below the surface. The soil test will determine how certain infrastructure is placed and how buildings will be constructed. The plans will take several months to complete, and fees may range from \$50,000 to \$100,000 and up.

Site Permitting

The paragraphs below describes the typical site and development permitting process in effect at the time of this report. While there are currently a number of conversations statewide on how to change both the method and processes of development to encourage more sustainable practices, regulatory controls are slow to change. Sustainable development practices are new and often inconsistent with existing regulation. If the regulatory climate has not changed significantly by the time permits for BCS are needed, other strategies may be considered. For example, there may be opportunities to develop as a demonstration project to display newer and more sustainable ways of developing and building. However, these opportunities will require the buy-in of regulatory governing bodies, as well as close work with agency management, staff and review personnel, particularly within the County and the local water management district.

Once complete, site plans undergo a thorough permitting process with the County, the local water management district and other interested regulatory parties, which can include state,

regional and federal agencies. Typically, the review period takes at least six to nine months, but more complex reviews can take over a year. The review period for BCS may be somewhat longer due to the presence of the regulated habitats on the property (wetlands, protected plant habitats, and protected animal species). The review process involves an initial submittal by the applicant, a review period by agency staff, issuance of reviewer comments, a resubmittal by the applicant, a second review period, issuance of comments and/or a permit approval. Sometimes the review and resubmittal processes involve three or four iterations. The County typically will not issue its final approval until all other agencies have signed off, making the County's site construction authorization the final step. Once construction authorization is received, site construction can commence.

During the review process, plan submittals should be complete and resubmittals kept to a minimum. Each submittal should include all documentation requested, and turnaround on responses should be timely. If there are particular issues, consultants should communicate regularly with regulators *and* alert their client. Knowledgeable and experienced consultants can obtain approvals with one resubmittal (and occasionally on the first submittal). However, when methods and systems are new or experimental, longer timeframes should be anticipated.

Accordingly, the owner and consultants should involve review agencies at the appropriate levels (governing board, management, staff, etc.) throughout design and permitting. Working directly with reviewers early in the design process should be helpful, and it may be necessary to initiate changes to regulations through the agency's amendment process. If the review agency is a BCS partner (such as Sarasota County or the Southwest Florida Water Management District), buy-in by their governing boards should help, but it may be necessary to communicate the message diplomatically to management and reviewers. If the project gets stuck with a reviewer who cannot make approval decisions outside the regulatory box, it may be necessary to involve senior management.

The Architectural Design Process

During the site permitting process, the architect will be developing detailed construction drawings. The building design process requires the services of licensed architects and mechanical, electrical, plumbing and structural engineers. Some of the BCS systems may require specialty consultants as well. Building codes are strict and detailed, and periodically change, adding to building design and cost. The traditional design process includes three phases: 1) programming and schematic design (general floor plans and building elevations), 2) design development (specific floor plans, room, and design details), and 3) construction drawing (working drawings and specifications describing construction details). Some of the detailed architectural work should not start until there is a fairly safe understanding that the site plan will be approved as designed.

Architects also conduct construction administration during construction, whereby they provide responses to requests for additional information from the general contractor and monitor the actual construction of the building. Although construction inspection may add some cost, it is generally in the owners' best interest to keep the architect involved throughout. The additional oversight provides some surety in case of building failure or construction problems, and funders often insist upon the architect's signature on draw requests for payment.

Design can take between four and eight months, and costs vary. The architect's schedule should allow ample time for client review and response. Once construction drawings are complete and site plan approval has been obtained, the general contractor can submit the building permit. The building permit process usually takes only a few weeks.

The design process also incorporates interior design, including furnishing, fixtures and equipment, some of which will have special conditions for operation. For example, BCS will require high speed data storage and transmission systems to comply with specific standards for scientific study, along with sound-proofed office and laboratory space, specialized equipment with particular power requirements, and other specialty items which will emerge during design.

Project Specific Issues

The information below provides a brief summary of detailed information contained in the Appendix on the Carlton Reserve location and general site and building design issues.

The Carlton Reserve Site

The SAC studied a number sites throughout Sarasota County and determined that the best opportunities were located within the T. Mabry Carlton, Jr. Memorial Reserve, which is owned by Sarasota County and houses the County's water treatment plant.

The Carlton Reserve covers 24,565 acres of pine flatwoods, dry prairies, hammock, and wetlands and contains large areas of wet prairie (depression ponds) and palm-oak hammocks with a wide variety of plants, birds and other wildlife. Parts of the Reserve are adjacent to the Myakka River and to other publicly owned lands, including the Myakka State Park and the Myakka Prairie. The Carlton Reserve provides opportunities for public enjoyment, including hiking trails, picnic pavilions, canoe launches, equestrian trails and other nature park amenities.

Details of the current site are contained in a report dated September 2006, prepared by the Sarasota County Natural Resources and entitled *Field Investigations for Biological Field Station* (contained in the Appendix). However, if there are specific concerns about the site resulting from further analysis and planning, the configuration of the site may have to be modified. While the Reserve contains a variety of both disturbed and essentially undisturbed habitat, it also provides amenities such as potable water, electrical power, and access via County roads.

Site Design Issues

The general comments below relating to the site planning and building design are taken from the *Base Camp Sarasota Progress Report – Program and Preliminary Design* prepared by the Florida House Institute for Sustainable Development, February 17, 2005, contained in the Appendix. The Design Workshop section of the *Progress Report* documents a number of site and building design issues which should be reviewed and modified prior to moving forward in the design process.

The goal of the field station design process: To exemplify a higher standard of green building and suitable construction techniques for a unique site. To blend nature and research facility with minimal footprint and site perturbation.

Address site issues first, then building issues. Site is ranked by accessibility, security, and habitat variety.

Water table fluctuation at site is one foot or less in the dry season. However, during the wet season, portions of the site may be under water by four feet.

Some concerns about the 26,000 acre Carlton Tract: Lack of security because of private land ownership (turkey farm) adjacent to site; lack of sustainable true lakes; and use of an impacted site—rather than a pristine site—is ideal. (NOTE: The current site is even more impacted than the original Horse Pond site which was the subject of this particular discussion.)

The issues of public access to research areas will need to be addressed, as well as opportunities and areas for experimentation. Ecological management research often requires careful manipulation for understanding and developing environmental best management practices which will be beneficial to the region studied. While these experimental areas are compatible with the recreational nature of the Reserve, it will be necessary to separate public use from research use as well as from scientific labs and scientists' living areas. During site planning, it will also be important to plan, or at least consider, the entire site so that issues of access, use, connectivity, energy, water and utilities can be planned for future phases or changes in use.

BCS Building Design Considerations

Prior to entering the facility programming phase, Dr. Lowman will be developing a science plan incorporating information gathered from other field stations. The science plan will expand BCS's mission in terms of climate change, evaluate the types of research and lab equipment that will be feasible for the site, and detail the benefits that the research will provide to Sarasota County. The science plan should be very helpful in identifying facilities needs.

Other opportunities for preliminary programming and design for BCS took place in late 2005 and early 2006, and are detailed in the *Base Camp Sarasota Progress Report* contained in the Appendix. The *Progress Report* describes a mini-charrette held with noted designer Pliny Fisk to develop principles and values, along with broad design concepts. BCS should provide the opportunity to study the area's ecology, set an example of sustainable building practices and, ideally, provide an opportunity to measure the performance of the buildings over time. Broad principles include low impact development techniques, onsite energy production, integrated water and wastewater management, carbon neutrality, zero waste, possible onsite production of some foods, and safe and sustainable building practices. Although the workshop group was working with the earlier Horse Pond site, these concepts can be applied to any site.

In addition, Dr. Mark McGlothlin of the University of Florida's School of Architecture used BCS as a studio study for graduate students. Sarasota County also sponsored a design challenge at the 2006 Rethinking Sustainable Construction Conference.

Subsequent to these program and preliminary design workshop opportunities, field station expert Susan Allen Lohr visited the community. While some of her suggestions differ somewhat from the preliminary programming scenarios, many of the principles of the previous work are viable and should be considered as the process moves forward. Essentially, BCS should be designed to meet the needs of its paying partners and ultimate users as well as to provide the facilities that research scientists now expect. Appreciably, these facilities do not have to be fancy or unduly expensive.

Work from both the UF architecture studio and the design challenge, along with reports from Lohr's visit, are contained in the Appendix. In addition Lohr also provided the list of typical field station facilities which appears on the following page.

Typical Field Station Facilities

(NOTE: Some of these uses can be handled by adjacent nature centers or visitor centers.)

1. Detailed biological and physical inventories of the site and region, which will become a resource available for research and education programs.
2. Satellite communications and high-speed Internet connections.
3. Equipment necessary to implement a long-term monitoring program, based on participation in existing and emerging earth observing networks. Maps and a trail system.
4. Research and teaching lab space. Small private spaces for researchers. A larger teaching lab. Design with flexibility for configuration for different classes and functions, yet maintain an architectural vernacular appropriate to the site.
5. Research plots that can be guaranteed secure for mid- to long-term projects.
6. Appropriate shared lab equipment for student research. It is envisioned that scientists should provide most of their own equipment.
7. Site security.
8. Overnight accommodations for 30+ people. Housing should be flexible enough to provide privacy for couples, families and students. Sleeping units of small size (1 -2 people per room) are best, with private access to bath facilities. Kitchenettes could be shared. "Private space" is important for visitors, especially those visitors who reside at the Center for more than a few days. Large dorms would not be appropriate. A dining hall is not always necessary.
9. Computer room for visiting researchers and short course use.
10. Storage is critical for field stations and always underestimated. Storage is required for general use. Also required is a private, lockable area for visiting researchers.
11. Public reception space.
12. Library and collections facilities.
13. An inviting meeting area, with a fireplace or fire pit, that will encourage friendly interactions.
14. A medium-sized lecture hall. There should be a prep kitchen associated with the lecture hall, similar to a church hall kitchen.

Provided by Susan Allen Lohr, Lohr Associates, Inc.

Recommendations for the Design Phase

- Convene a construction taskforce (building committee) to oversee the design and construction processes. The construction taskforce should include members who understand current development processes and pitfalls.
- Make a final determination as to whether consultants and contractors can be hired through a private process or whether they must be hired through a public bid process (much more time consuming and costly).
- Bring in the General Contractor (GC) as soon as feasible. The GC can assist in developing cost estimates during various stages of design, assist with building systems design, and gain a better understanding of the client's desires. The GC may be willing to participate as a member of the design team at little or no cost.
- Commence the Design Phase:
 - Hire architect, engineer and other consultants.
 - Convene a design stakeholder group (similar to and including the initial Preliminary Design participants) to undertake the following tasks:
 - Review the conditions and constraints of the new site.
 - Update the programming, basic site planning and building design concepts so that they are consistent with the programs and partners developed during the Initial and Interim Phases. Ensure consistency with modern field station requirements.
 - Update the site planning and building design concepts to apply to the new site.
 - Review and incorporate creative and relevant design opportunities obtained from early design initiatives (FHI, UF, Design Challenge, etc.).
 - Develop a site concept plan.
 - Finalize the Master Plan.
 - Review and test the plans with stakeholders.
 - Consider holding a charrette, or similar process, to incorporate and speed up this portion of the process.
 - Finalize site plan, obtain Board approval for the site plan, and undertake site plan engineering.
 - Undertake building design.
 - Finalize plans for permitting.

- Undertake the permitting process.
 - Work with regulators early in the process to ensure that sustainable practices or “experimental” low impact development techniques may be utilized.
 - Work to change regulations if necessary.
 - Monitor the process to ensure that regulators have all the information they need in the correct format, and that they are timely and responsive.
 - Diplomatically involve senior staff or management if reviewers are having difficulty with new or different concepts.
- Stay involved.
 - Ensure that regular review meetings and appropriate periods of review by the Construction Taskforce and the Board of Directors (as appropriate) are scheduled within the consultants schedules.
 - Oversee the process to ensure that consultants are meeting deadlines and interacting as needed (i.e., architects and civil engineers are working with the same plan and that any changes are communicated back and forth).
- Think through systems such as electrical, communications, data systems and locations of outlets during the design process.
- Don’t forget interior design, furnishing, fixtures, equipment and specialized needs.

The Construction Phase

This section reviews general contracting, construction processes and involvement of stakeholders during the construction phase.

The General Contractor

General contractors are hired by owners under a number of scenarios, including direct hire (with a stand-alone contract); design-build (combining the design and building processes under one team and a unified contract); or in a loosely knit combination (the contractor is involved early in the process but not contractually tied to the design team). The design-build process is probably appropriate for larger, more complex projects than BCS, but having the contractor on the team early in the process is worth consideration. The construction management (CM) process involves hiring a third party to manage the design/construction process similar to the owners representative or development management process discussed above in the Design Phase.

Contractors price their work in a number of ways, including a time and materials charge with no hard limit (not recommended for new construction), a not-to-exceed price limit, and an open-book bid process whereby sub-contractors bid for specific tasks and the general contractor works

for a pre-negotiated overhead and profit fee. Pricing should include continuous on-site supervision as well as consideration for the green building and low impact development systems which will be required for BCS.

The American Association of Architects (AIA) provides standard contracts for the various scenarios including some which are suitable for smaller projects. General contractors may have in-house contracts as well. All contracts should be thoroughly reviewed by the Board's legal representative as well as by the Facilities Manager or owners representative. Architects sometimes review contractor and subcontractor contracts, but these services can add costs and sometimes create conflicts between the architect and the contractor. Additional information on contracts and contractual arrangements can be found at the AIA website, www.aia.org, and at The Contractors Group website, www.thecontractorsgroup.com.

The Board, or the construction taskforce and the Facilities Manager, should have a thorough understanding of fiduciary relationships among the parties, warranties, liability for design failure, liability for construction failure, personal injury liability, lien rights, construction insurance, dispute resolution, etc. While both the architect and the contractor are in direct contract with the owner, there are certain relationships between the design side and the construction side which should be understood by all parties.

Liability for design and construction flaws continue well beyond the standard warranty period for the building or site systems (typically one year). Insurance is a recommended investment, and the owner, the design consultants, and the contractor should be responsible for specific types and amounts of insurance, including replacement insurance should completed work be destroyed or damaged during construction.

Contractors are generally required to post bonds for public work and some private projects. However, if the contractor is reliable and known to the owner, eliminating the bond will save some cost. Subcontractors have certain lien rights if they are not paid, and it is important for the owner to obtain lien releases before, or concurrent with, releasing payment to the general contractor.

Construction Process

Typically, the Construction Phase starts with site work followed by building construction. Once the site construction permit/authorization is received—or the contractor and owner are comfortable that the site will be approved as designed—the contractor takes bids and hires the site subcontractors. Similarly, once the building construction documents (plans and specifications) are complete and the permit is assured, the contractor will take bids and hire the building subcontractors. Some general contractors may provide various site or building services in-house. Prior to starting construction, the contractor should provide the owner with a detailed schedule of construction, along with a draw schedule which anticipates the amount and timing of payments.

Site and building construction may overlap, as long as the site work won't interfere with the building construction; access to the building site is available for workers, trucks, and heavy equipment; and required power and utilities are available.

At projected intervals, various County and other regulatory agencies inspect the contractor's work. Some inspectors have the power to change plans or stop the project if construction isn't in compliance with plans or regulations. If the inspector feels that regulations are inconsistent with plans—even if plans have been approved—a great deal of conflict and delay can ensue. Accordingly, it is important for design professionals to be diligent even if agency reviewers are not. The owner and its representatives also need to stay involved to assist where necessary.

Eventually, construction is complete and the County will issue the Certificate of Occupancy, allowing the owner to have a ribbon cutting party and to occupy the building. However, this is usually not the end of the construction phase. Typically, the owner develops a “punch list” of items which have not been constructed to plans or specs, or are damaged, or are otherwise faulty or carelessly constructed. Some contractors are slow to respond to punch lists, so the owner should hold back enough payment to motivate the contractor to complete the job.

Prior to final payment, the contractor should provide warranty information both for contractor and subcontractor's work and for systems and equipment, along with appropriate instruction manuals and contact information. Owners should respect warranty periods and conduct additional inspections and evaluations prior to expiration of the contractor's warranty (typically one year), but should not call the contractor over minor issues two or three years after the completion date.

Change Orders

In theory, by the time construction starts, design issues should be resolved, either by reviewers or by the design team. Unfortunately, since the process is complex, this is rarely the case. New Board members interfere at the last minute, donors decide they don't like the design and expect to make changes, users finally see their space taking shape and want to redesign, and so on. The appropriate way to handle these situations is to establish a process of incorporating regular review periods during the design phase, establishing design cutoff dates, and firmly sticking to these policies. Although there is an established “change order” process involving the owner, the architect and the contractor, *changes are considerably more expensive* to implement than items designed into the project. In fact, some contractors may count on the change order process to make additional profits. A policy, along with a rationale and explanation, to limit change orders should be established early in the design process and publicized broadly among all participants.

Site Visitations

Now that the fun has started, everybody wants to visit the project! However, construction projects are busy places with a great deal of potentially dangerous physical activity. Deadlines are tight and workers need to focus on the work at-hand rather than entertaining the owner and guests. The construction site is fraught with opportunities for the uneducated visitor to get hurt, and specific safety policies must be followed by everyone on site.

However, contractors understand that stakeholders and clients will want to visit the site. These opportunities can keep donors and potential users interested the project as well as provide feedback opportunities for Board members. Visitors should schedule times with the contractor

through the Facilities Manager or owners representative. These times should also be convenient for the construction crews (ideally after work). The exception to this rule is the Facilities Manager or owners representative, who should be allowed to visit the site at-will, to represent the owner, answer questions, ensure compliance with design, etc. All visitors should comply with safety requirements, such as wearing appropriate clothing and shoes, wearing safety gear and hard hats when required, following directions, being aware of potential falling objects, watching for obstructions, holes, etc.

Public Relations Opportunities

The Board should take opportunities to schedule fun public relations events such as site ground-breaking, building ground-breaking, and finally ribbon cutting ceremonies. Sometimes these events are fairly standard, but with some thought, they can become special opportunities for expanding awareness of the project, motivating and thanking volunteers and staff, and celebrating the completion of years of work.

Recommendations for the Construction Phase

- Ensure that documents are thoroughly reviewed so that they cover the work anticipated, liability issues, warranty, insurance, lien rights and the like.
- Develop an understanding of contractual relationships among the owner, design professionals, contractors and subcontractors.
- Prior to starting construction, the general contractor should provide a time schedule and a draw schedule outlining timeframes and payment amounts.
- Stay involved, but don't get in the way.
 - If members of the Board, construction taskforce, or donors wish to visit the site during construction, be sure to schedule in advance with the contractor.
 - The exception is the staff Facilities Manager who should be able to visit the site at any time to represent the client, ensure compliance with plans and answer questions.
 - When visiting the site during construction, all parties should comply with safety measures such as wearing appropriate clothing and shoes, wearing safety gear and hard hats when required, following directions, being aware of potential falling objects, watching for obstructions, holes, etc.
- Be ready to respond to last-minute issues which may need quick solutions.
- Users and other stakeholders may try to change interior layouts or systems at the last minute as they see spaces take shape, but try to minimize changes since they are costly.
- Have fun and use ground-breaking and ribbon-cutting ceremonies as a way to promote the field station locally.

Administration and Operations

The operating framework for Base Camp Sarasota (BCS) will need to be created, along with a number of systems and policies dealing with details from how and where scientific activities can be conducted to human resources, etiquette for visitors, safety procedures, facilities management, finances, etc. The Executive Director will most likely be responsible for establishing these policies and systems prior to and during the Interim Operations phase. During this time, the Executive Director should have assistance from the Science Advisory Committee and one or more taskforces devoted to policy development. The first step will be to define the policies and procedures required and then to prioritize the order of their development. The policies that affect the Interim Operations Phase will be developed immediately, while others affecting later phases can wait.

Much of the work for administration and operations for BCS is thoroughly outlined in the *Operations Manual for Field Stations and Marine Laboratories* (FSML) edited by Susan Allen Lohr for the Organization of Biological Field Stations (OBFS) and found at www.obfs.org. Further, the structure of administration and operations will result from decisions made regarding governance and ownership. For example, if BCS is “owned” by New College of Florida, administration will differ from that of a stand-alone field station, or one owned by a not-for-profit institute. Under the first scenario, the field station could fit into the College’s administrative framework and the College could provide specific services to the field station just as it does to any of its departments. Otherwise, the field station will be providing its own administrative services. These decisions will have a major impact on staffing needs as well, particularly as they impact administrative and support staff requirements.

In addition to the information provided in the *Operations Manual*, the OBFS website provides an extensive bibliography and listing of organizations which may be useful during the development of BCS, along with an appendix containing sample documents. The listing below is the table of contents for the portions of the *Operations Manual* covering administrative issues, some of which have been discussed elsewhere in this document.

II. Administration

- | | |
|--|------------------------------------|
| A. Guiding Principles | K. Safety |
| B. Statements of Mission, Vision, Goals and Objectives | L. Legal Issues |
| C. Governance of the FSML | M. Regulatory Environment |
| D. The Nature of the Directorship | N. Ecosystem Impacts |
| E. Organization | O. Land Management and Stewardship |
| F. Staffing and Human Resources | P. Volunteer Programs |
| G. General Policy Development | Q. The FSML Network |
| H. Liability and Insurance | R. Public Relations |
| I. Consortiums and Other Formal Associations | S. Other Administrative Policies |
| J. Personal Behavior | T. Emerging Administrative Issues |
| | U. Record-keeping |

III. Programs

- A. Technical Support
- B. Research
- C. Education
- D. Outreach: Public Relations, Community Relations and Professional Service
- E. Social Interactions

IV. Facilities

- A. Guiding Principles
- B. Buildings
- C. Communication and Connectivity, including Web-based Science Databases
- D. Equipment, including Computers and Software
- E. Habitat Resources
- F. Operations and Maintenance
- G. Facility Policies
- H. Site Issues

V. Finances

- A. Cost Centers
- B. Chart of Accounts
- C. Budgets
- D. Grants and Contracts
- E. Cost Recovery Policies
- F. Software Tools
- G. Financial Reports
- H. Financial Policies
- I. External Audits
- J. Endowments
- K. Funding Sources

The taskforces for this phase should include members who are familiar with the issues at hand, whether they be human resource issues, facility use, finances, programs, etc. It would be advisable to include legal review of all policies, and the Board may wish to employ the services of a field station consultant as well. At a very minimum, Susan Allen Lohr could be retained to review policies and systems.

Recommendations for Administration and Operations

- The Steering Committee or Board should appoint one or more taskforces to develop administrative and operations policies. Funds should be budgeted for professional assistance as needed.

- This committee should include human resource experts as well as scientists and operations personnel.
- The Executive Director and staff who are responsible for various aspects of administration and operations should assist the taskforce.
- If the BCS ownership and governance are tied directly to another entity, administration and staff from that entity should also participate.
- Policies and regulations should undergo legal review.
- The taskforce and ED should use the *Operations Manual* as a guide, and where possible, hire experienced field station administration consultants like Susan Allen Lohr to assist.

REFERENCES

Planning Links

Organization of Biological Fields Stations – OBFS (Includes general information and links to member field stations)

www.obfs.org

Operations Manual for Field Stations and Marine Laboratories edited by Susan Allen Lohr for OBFS

<http://www.obfs.org/index.php?module=ContentExpress&func=display&ceid=5&bid=28&btitle=Organizational%20Activities&meid=54>

Noyo Center, Fort Bragg, CA (Planning documents for a new field stations)

<http://ci.fort-bragg.ca.us/pages/viewpage.lasso?pagename=4%7CMarine%20Science%20Institute>

BoardSource (References for not-for-profit organizations)

www.boardsource.org

Independent Sector (References for not-for-profit organizations)

www.independentsector.org

National Charrette Institute (Information on charrette and design processes)

www.charretteinstitute.org

American Institute of Architects (Information on design processes and contractual agreements)

www.aia.org

The Contractors Group (Information on contractual agreements)

www.thecontractorsgroup.com

OTHER LINKS OF INTEREST

Sarasota County

www.scgov.net

New College of Florida

www.ncf.edu

Economic Development Corporation of Sarasota County

www.edcsarasotacounty.com

The TREE Foundation (Tree Research, Exploration and Education)

www.treefoundation.org

The Florida House Institute for Sustainable Development

www.i4sd.org

Southwest Florida Water Management District

www.swfwmd.org

Dona Bay Water Management Plan

http://www.sarasota.wateratlas.usf.edu/upload/documents/814_Dona%20Bay%20Watershead%20Mgt%20Plan%20Chapters%20PDF.pdf

Sarasota County Water Atlas

<http://www.sarasota.wateratlas.usf.edu/>