HARBOR BRANCH RESEARCH LABORATORY II

HARBOR BRANCH CAMPUS

BT- 643

PRINTED FOR
SIGNATURES
NOVEMBER 14, 2008

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BT- 643

FLORIDA ATLANTIC UNIVERSITY
BOCA RATON, FLORIDA

PREPARED IN ACCORDANCE WITH
AVP POLICY AND PROCEDURE #2
PROGRAM DEVELOPMENT

PRINTED FOR
SIGNATURES
NOVEMBER 14, 2008

Florida Atlantic University
FACILITIES PROGRAM

PREPARED BY:

Robert Richman, Director, Facilities Planning
Jill Rosen, LEED AP, Administrative Coordinator

REVIEWED AND APPROVED:

FACILITIES PLANNING:
This is to certify that this document has been reviewed for project schedule, budget and code requirements.

Robert Richman, Director, Facilities Planning

INFORMATION RESOURCE MANAGEMENT:
This is to certify that this document meets the requirements of Information Resource Management.

Jeffery Schilit, Associate Provost

PROGRAM COMMITTEE:
This is to certify that this document contains the recommendations of the Program Committee.

Shirley Pomponi, Executive Director, HBOI, Chairperson

Gary Perry, Dean, College of Science

DIVISION OF FINANCIAL AFFAIRS:
This is to certify that this document meets the requirements of the Division of Financial Affairs.

Kenneth Jessell, Vice President for Financial Affairs

DIVISION OF ACADEMIC AFFAIRS:
This is to certify that this document meets the requirements of the Office of Academic Affairs.

John Pritchett, University Provost & Chief Academic Officer

DIVISION OF FACILITIES:
This is to certify that this document meets the intent of the University Architect's AVP Policy and Procedure #2 (Development of Facility Program) and is consistent with the latest approved Campus Master Plan.

Thomas Donaudy, University Architect &
Vice President for Facilities

FLORIDA ATLANTIC UNIVERSITY:
This is to certify that this document has been reviewed by the administrative leadership at Florida Atlantic University and that the material contained herein is forwarded with the President's approval and recommendation.

Frank T. Brogan, President — 12/2/08 Date

A. PROJECT DESCRIPTION

This project will comprise a new state-of-the art 40,000 square foot research laboratory building for FAU at Harbor Branch.

Please see Section IX of this program for more detailed description.

B. PROJECT HISTORY AND GENERAL DESCRIPTION

The mission of Harbor Branch Oceanographic Institute (HBOI) at FAU is to understand and conserve our oceans through exploration, research, and education for the benefit of humankind. Its faculty and staff include scientists, engineers, mariners, and support personnel who conduct research and deliver educational programs in deep-sea exploration and research; development of undersea systems, tools, and sensors; research on human impacts on coastal ecosystems; discovery of marine-derived therapeutics; and development of aquaculture systems and processes.

Harbor Branch Research and Education programs include:

Ocean Exploration and Deep Sea Research: fundamental research on deep-sea organisms in benthic and mid-water habitats, including studies of deep-sea biodiversity, community structure, and adaptations to life in the deep-sea.

Coastal Ecosystem Research: Research on marine plants, animals, microbes, their estuarine and coastal environments, and the relationships among these systems and human activities. Particular emphasis is on the Indian River Lagoon, the Florida Reef Tract, and Florida's continental shelf. This includes marine mammal research and conservation: biomedical research; population studies; stranding, rehabilitation, and release of marine mammals.

Aquaculture and Stock Enhancement: Research on development of economically feasible and environmentally sustainable methods to farm tropical and subtropical aquatic organisms for food, sport, stock enhancement, pharmaceuticals, bio-fuels, and other applications.

Marine Biomedical and Biotechnology Research: Discovery of natural products from marine organisms that can be developed into pharmaceuticals, biomedical research tools, industrial enzymes and bio-fuels.

Ocean Engineering and Technology: Research, design, prototyping, and fabrication of tools, instruments and vehicles for in-water use, engineering project management services.

Marine Education: HBOI/FAU scientists and engineers develop and deliver a variety of both formal and informal programs which include graduate and undergraduate courses,

postdoctoral training, student internships, field trips for K-12 students, camps, after school programs, public lectures, workshops, and other forms of educational outreach.

Marine Operations: - Operation and maintenance of one ocean-going ship research submersibles, enabling exploration to depths as great as 3,000 feet, as well as a fleet of small boats for estuarine and coastal use.

B. DESIGN OBJECTIVES

The overall design objective for this project is to develop a facility, which provides an environment for state-of-the-art research and educational programs that are consistent with the goals and objectives of the Florida Atlantic University/Harbor Branch Oceanographic Institute mission.

1. LANDSCAPING AND EXTERIOR LIGHTING

Landscaping and exterior lighting shall be incorporated into the design for function, aesthetics, security and safety. Lighting and security shall be furnished to connect the proposed building with neighboring buildings and parking areas.

2. WALKWAYS AND PEDESTRIAN TRAFFIC

The project shall include walkways adequate for connecting this facility to other facilities and parking areas.

3. FLEXIBILITY IN DESIGN FOR FUTURE EXPANSION AND RENOVATION

Within the program and budget constraints, the site and building will be designed to allow flexibility for future program growth and change. The useable life of the facility shall be extended by incorporating features for remodeling and expansion designed to reduce future renovation costs.

4. SUSTAINABLE DESIGN, GREEN ARCHITECTURE AND RECYCLING

The University promotes environmental quality and resource conservation through sustainable design, green architecture and recycling in its planning and development. This project will be designed and built to at least the U. S. Green Building Council's LEED Silver standard or equivalent.

5. CONNECTIVITY

The design shall provide for the connectivity to essential voice data and life-safety reporting systems and shall include wireless connectivity throughout the building and the surrounding site, as directed by IRM.

6. PROJECT BUDGET

The University expects the architect to develop design and contract documents which will be consistent with the established project budget. This obligation is mandatory. The architect

shall work with the University's construction management consultant to prepare a cost breakdown at each stage of the project design. If these estimates exceed the budget at any stage, the architect will work with the university to modify the construction documents to conform to the budget at no additional costs to the University. However, the design may not vary from the program or may the program be modified without University approval.

C. CONSTRUCTION DELIVERY METHOD

The University anticipates the utilization of a construction manager for this project. The construction sequencing is critical to minimize disruption of campus services and the relocation of parking areas. Prior to the start of construction the CM shall provide a mobilization plan to the University, for its approval in regard to these issues.

The size of the project is sufficiently large and/or complex to require major emphasis on the qualification of the contractor in order to provide specific expertise in highly specialized cost estimating, value engineering, and scheduling during the design process, with continuity of construction management through both design and construction phases.

A. STATE UNIVERSITY SYSTEM OF FLORIDA MASTER PLAN

The proposed program for this project is consistent with the goals and objectives of the FAU Campus Master Plans. A Campus Master plan for the Harbor Branch Campus is currently being drafted and will reflect much of the same goals and objectives.

B. ACADEMIC PROGRAM REVIEWS

Not Applicable

C. RECOMMENDATIONS OF THE REVIEW CONSULTANTS
Not Applicable

C. JUSTIFICATIONS
Not Applicable

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A. FACILITY DEFICIENCIES

Many of the existing labs at Harbor Branch were destroyed by hurricanes Frances and Jeanne in 2004. Several research buildings are slated to be demolished in 2008.

B. ALTERNATIVE SOLUTIONS

Not Applicable

C. QUANTITATIVE ANALYSIS OF PROGRAM SPACES

The *State Requirements for Educational Facilities Chapter 6, Section 6.1, Size of Spaces and Occupant Criteria Table* was utilized as a guide in the development of this program. The resulting detailed Space Program is included in Section IX

D. PROJECT AND SURVEY RECOMMENDATIONS

Not Applicable

A. THE ADOPTED CAMPUS MASTER PLAN

The proposed program for this project is consistent with the goals and objectives of the FAU Campus Master Plans. A Campus Master plan for the Harbor Branch Campus is currently being drafted and will reflect much of the same goals and objectives.

A. SITE CONDITIONS

1 . SITE TOPOGRAPHY (CM-N-04.00-09/97 B.1)
The site is a level site along the south side the man-made channel.

2 . STORM DRAINAGE (CM-N-04.00-09/97 B.2)
If required, the architect will be directed to provide attenuation strategy for storm water management on site and permitting with the appropriate storm water authorities. Refer to Section X, Utilities Impact Analysis for site maps and preliminary site storm water system.

3 . VEHICULAR AND PEDESTRIAN CIRCULATION (CM-N-04.00-09/97 B.3)
Vehicular, pedestrian and service circulation to the site will require study by the selected design consultant.

4 . SITE VEGETATION (CM-N-04.00-09/97 B.4)
The university will adhere to its policy of replanting and replacing any trees or shrubbery that are removed or damaged due to new construction, and the architect shall recommend additional improvements in his design. It is expected that landscaping will play an important role in enhancing the structure as well as shielding any required service areas from view.

5 . ARCHAEOLOGICAL HISTORY (CM-N-04.00-09/97 B.5)
There is no known archeological history on this site. The consultant shall notify the University of any new information it obtains through the design and construction of this facility.

6 . EXISTING UTILITY LOCATIONS (CM-N-04.00-09/97 B.6)
Refer to Section X, Utility Impact Analysis for utility maps and descriptions of proposed site utilities.

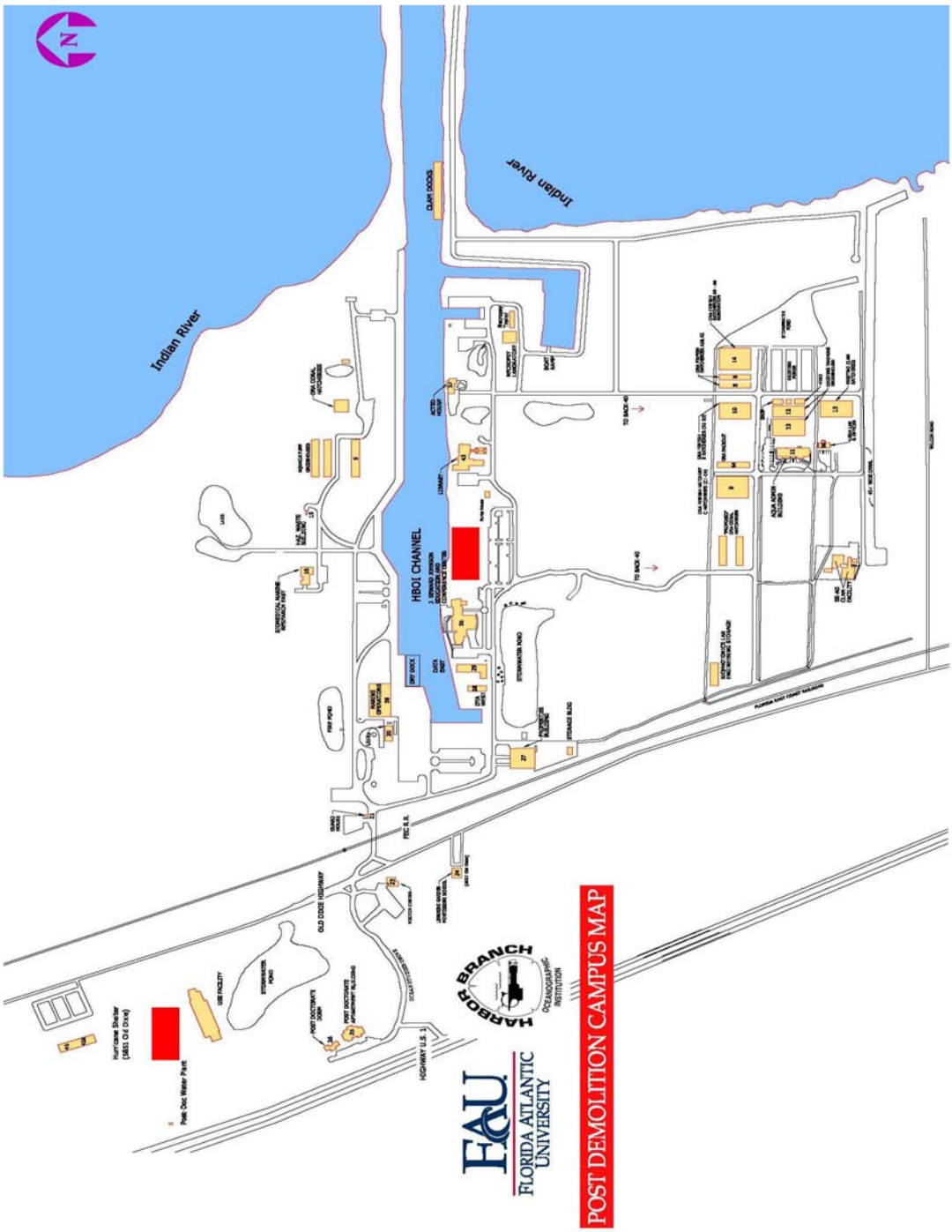
7 . ARCHITECTURAL SIGNIFICANCE OF ADJACENT STRUCTURES (CM-N-04.00-09/97 B.7)
The building design is to compliment the existing scale and architectural vocabulary of the surrounding structures of the campus.

8 . UNUSUAL SITE CONDITIONS (CM-N-04.00-09/97 B.8)
There are no known unusual site conditions. The consultant shall notify the University of any new information it obtains through the design and construction of this facility.

9 . DIRECTION OF PREVAILING WINDS (CM-N-04.00-09/97 B.9)
The consultant shall take in direction of prevailing winds in the design and orientation of the building.

B. CAMPUS MAP & SITE MAPS

The following map of the Harbor Branch Campus shows the two areas that had been considered for the site for this project as indicated by the red boxes. The program committee has determined that the site along the south edge of the channel is preferred and this program is written for that site.



Aerial photo of the Harbor Branch Campus:

A. PROGRAM AREA TABLE

The following program is to be verified with the respective user departments upon the start of design by the selected AE Team. The program is intended to provide for a completely functional facility. Accordingly, the design team shall provide for all that is reasonably inferred as needed for such a facility, even if not specifically indicated in the program.

Program Spaces		***NSF Each***	***Net Area***	***SubTotal Net***
Lab Lines / Modules	16	750	12,000	
Lab Support Modules	16	250	4,000	
Cold Rooms / Environmental Rooms	4	125	500	16,500
Loading Area	1	750	750	
Dive lockers / Storage / Showers	1	400	400	
Hazardous Storage	1	100	100	
General Storage	1	300	300	1,550
Researcher Offices	16	125	2,000	
Researcher Offices	4	150	600	
Post Grad/RA Offices 2/Office	16	125	2,000	
Bullpens for Grad Stus @ 50sf 0r 4 per	8	250	2,000	
Building Manager's Office	1	125	125	
Reception Secretary	1	250	250	
File, Copy, Fax, work room	1	125	125	
Conference Room	1	250	250	
Break Room	1	250	250	
Entrance Lobby	1	500	500	8,100
Total Net Area			**26,150**	**NSF**
Efficiency Factor	0.65			
Total Gross Area			**40,231**	**GSF**

B. OTHER PROGRAM ISSUES

The following important issues are to be considered by the design team. Many requirements are repeated in more detail in the FAU Cost Containment Guidelines and Professional Services Guidelines which are available for viewing at http://wise.fau.edu/facilities/uavp/. The design team is encourage to become familiar with these documents.

1) As the site is relatively flat, the building site shall be designed to assure positive drainage away from the building.
2) Telephone and data services shall be provided in accordance with the standards specified in Section XI of this program.
3) Provide meters, according to FAU standards and guidelines, for all utilities serving the building.
4) The building and paved site areas shall be completely accessible in strict accordance with the Americans with Disabilities Act and all other pertinent codes. This will be the sole responsibility of the design team.
5) Provide an emergency generator (with lockable screened fence or wall) for a minimum of all life safety functions. Additional capacity to be provided as directed by the University.
6) Provide lightning protection per University standards.
7) Energy efficient systems and lighting shall be used to the greatest extent possible, in accordance with University standards.
8) Provide for screened trash storage area for recycling, etc.
9) Provide for the covered outdoor storage and charging of up to 3 golf carts.
10) Provide card readers at major entrances. Provide conduit and J-boxes, as required to all exterior doors for monitoring door status and automatic locking from a central police location.
11) Provide conduit for voice and data connectivity to the existing campus backbone.
12) Provide for connectivity to the existing campus energy management system and life safety systems.
13) The building shall have 100% sprinkler protection.
14) Provide surge protection for the entire building.
15) Provide wireless capability for the entire building and all outdoor activity areas.
16) Any existing on-grade parking that is displaced by the location of the facility shall be replaced as part of this project. The actual location of these on-grade spaces shall be determined by the University.

17) All of the above considerations are to be provided for and included in the selected AE's design fee proposal.

C. SAMPLE SPACE DESCRIPTION FORMS

The following are samples only. The selected AE will complete space description forms for each unique space type upon completion of the conceptual design. The AE will complete more detailed requirement sheets on laboratory and lab support spaces.

SAMPLE:

SPACE:	**OFFICE SPACE**		
DEPARTMENT:			
AREA:	Office		
SPACE NAME:	Apply to all office and office support space		
DESCRIPTION / USE:	Office		
SUS SPACE CATEGORY:	Office	ROOM USE CODE:	310
PERSONNEL ASSIGNED / MAX.:	Varies		
DIMENSION / AREA:	Varies		
NUMBER REQUIRED:	See program		
RELATIONSHIPS			
PRIMARY:	Other offices.		
SECONDARY:			
ARCHITECTURAL CRITERIA			
FLOORS:	Mildew resistant carpet w/ vinyl base.		
WALLS:	Highly washable textured paint over gypsum board.		
CEILINGS:	Suspended acoustic tile.		
DOORS:	Solid core wood w/ HM frame.		
WINDOWS:	Desired for daylighting & view.		
LIGHTING:	Generally, recessed fluorescent lights with parabolic lens. Recessed down-lights may be used in special situations.		
ACOUSTICAL:	Acoustical treatment of walls & ceilings, extend partitions of Director Offices and conference rooms to the deck above w/ sound attenuating blanket.		
MECHANICAL CRITERIA			
HVAC:	Appropriate zoning per FAU Guidelines		
PLUMBING:	NA		
COMMUNICATIONS:	2 category 5 network ports. Telephone. Provide fiber optic cable as required. Wireless Capabilities.		
ELECTRICAL:	As required. Provide power at each telephone and computer outlet. Provide conditioned power and UPS backup.		
FURNITURE/EQUIPMENT			
FURNITURE (OWNER):	Executive Desk, Credenza, Executive Chair, Bookshelves, 2 side Chairs		
EQUIPMENT (OWNER):	Computer, Telephone		
FURNITURE (CONTRACTOR):	NA		
EQUIPMENT (CONTRACTOR):	All equipment Owner purchased and Contractor installed.		
SUPPLEMENTAL INFORMATION/REQUIREMENTS			
1. Provide blinds or window shades, as required.			

A. UTILITIES IMPACT ANALYSIS

It is the responsibility of the design professionals to research all existing conditions and to make recommendations based on the requirements of the project, future considerations, existing capacities, sizes and the location of all utilities.

1. **CHILLED WATER:** (SUS CM-N-04.00-09/97 A)
   The AE shall determine the required capacity of chilled water and make recommendations for the provision of adequate chilled water for the appropriate and comfortable operation of the building.

2. **HOT WATER:** (SUS CM-N-04.00-09/97 B)
   The AE shall determine the required capacity of hot water and make recommendations for the provision of adequate hot water for the appropriate and comfortable operation of the building.

3. **ELECTRICAL:** (SUS CM-N-04.00-09/97 C)
   The AE shall determine the total electrical load required and the appropriate feeders to tie into.

4. **POTABLE WATER:** (SUS CM-N-04.00-09/97 D)
   Potable water shall be obtained by connecting to the existing campus water loop.

5. **SANITARY:** (SUS CM-N-04.00-09/97 D)
   Through a review of the code, determine the number of fixtures required. Determine the nearest sanitary lines for connection and verify their capacity.

6. **IRRIGATION:** (SUS CM-N-04.00-09/97 E)
   Tie into the existing system to irrigate all landscaped areas. Provide new timers for the effected area within 50 feet of the building.

7. **STORM WATER MANAGEMENT:**
   Tie into existing storm water lines and basins or create other storm water retention as required. The Consultant will obtain all storm water permits.

8. **NATURAL GAS:**
   The consultant shall determine the need, if any for natural gas and study the routing, connection, costs and methods for providing such gas.

9. **TELECOMMUNICATIONS:**
   Tie into the nearest telecom manhole. Confirm plans with the FAU IRM Department. Internal wiring for telecommunication is to be complete by Telecommunication Sub contractor through FAU. All required internal able trays, conduits and duct banks to be designed by the AE and provided by the construction manager.

10. **FIRE ALARM SYSTEM:**
    A complete fire alarm system including ADA requirements, compatible with existing campus systems will be installed. Provisions will include an automatic dialer directly to the Campus Police.

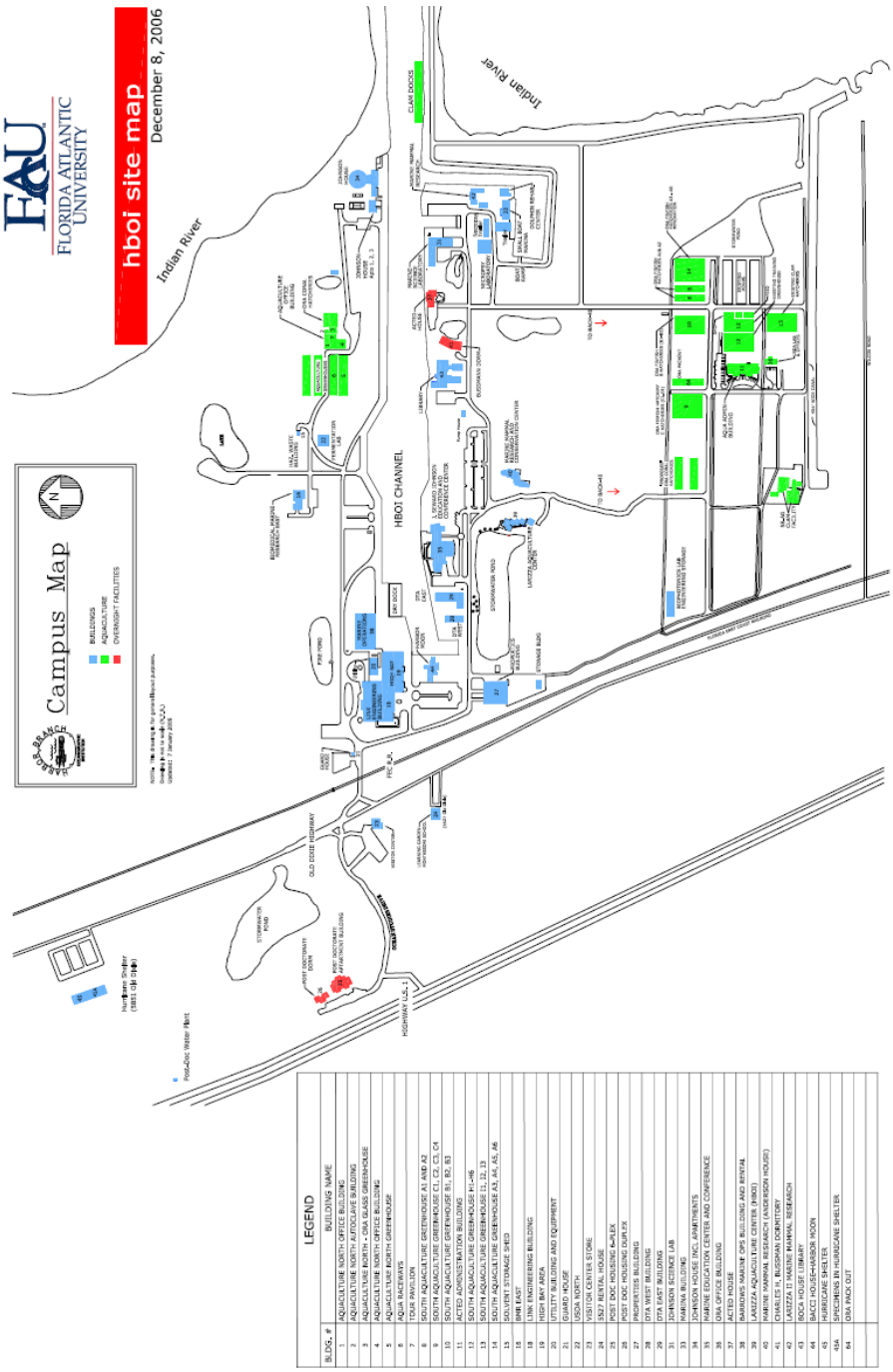
11. **ENERGY MANAGEMENT CONTROL SYSTEM:**
    A complete EMS will be installed, with connections to the existing front end system, located in the Central Utility Plant.

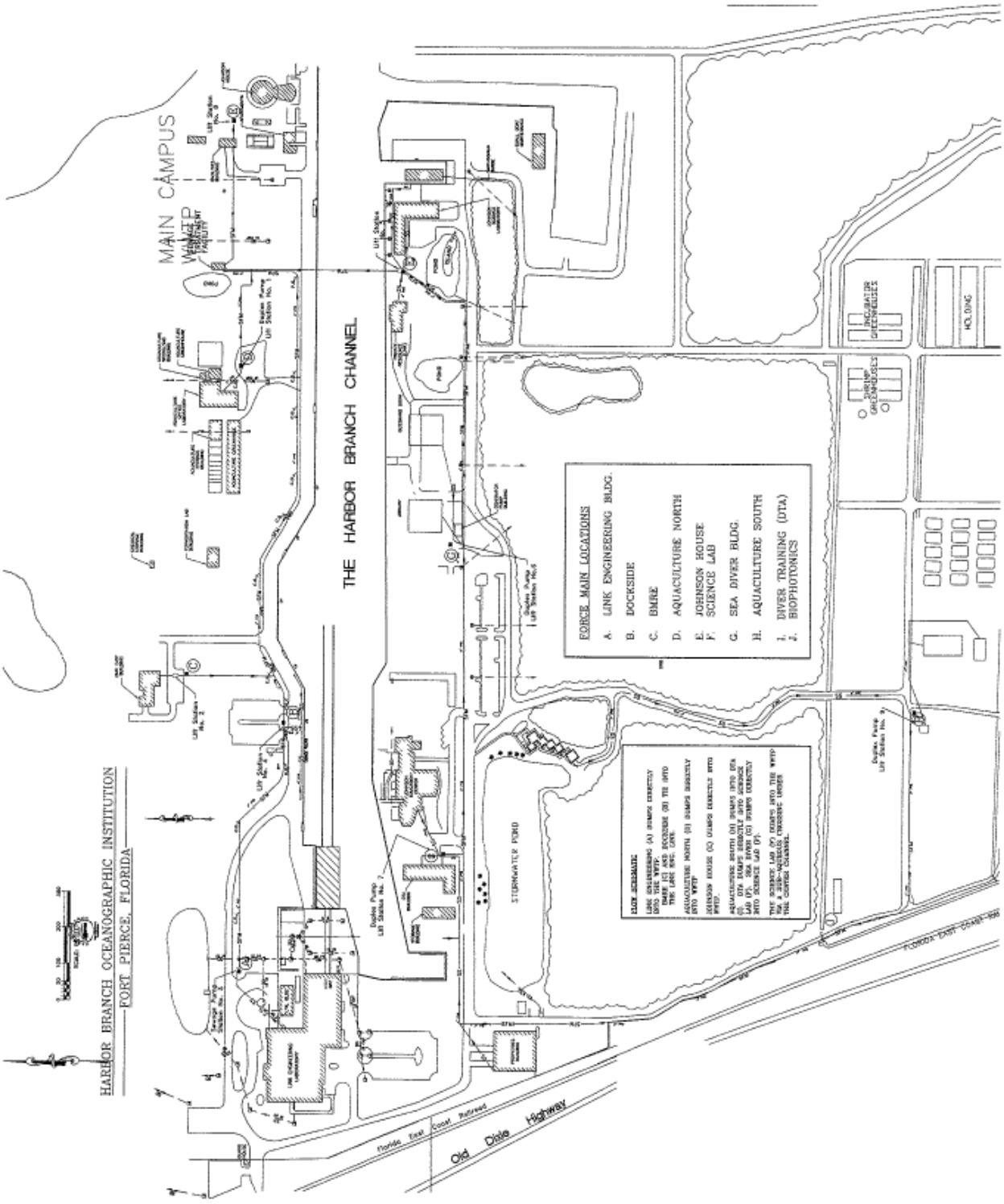
12. **SITE LIGHTING:**
    Walkway and site lighting fixtures complying with the campus standards and FAU guidelines for foot-candle levels will be installed.

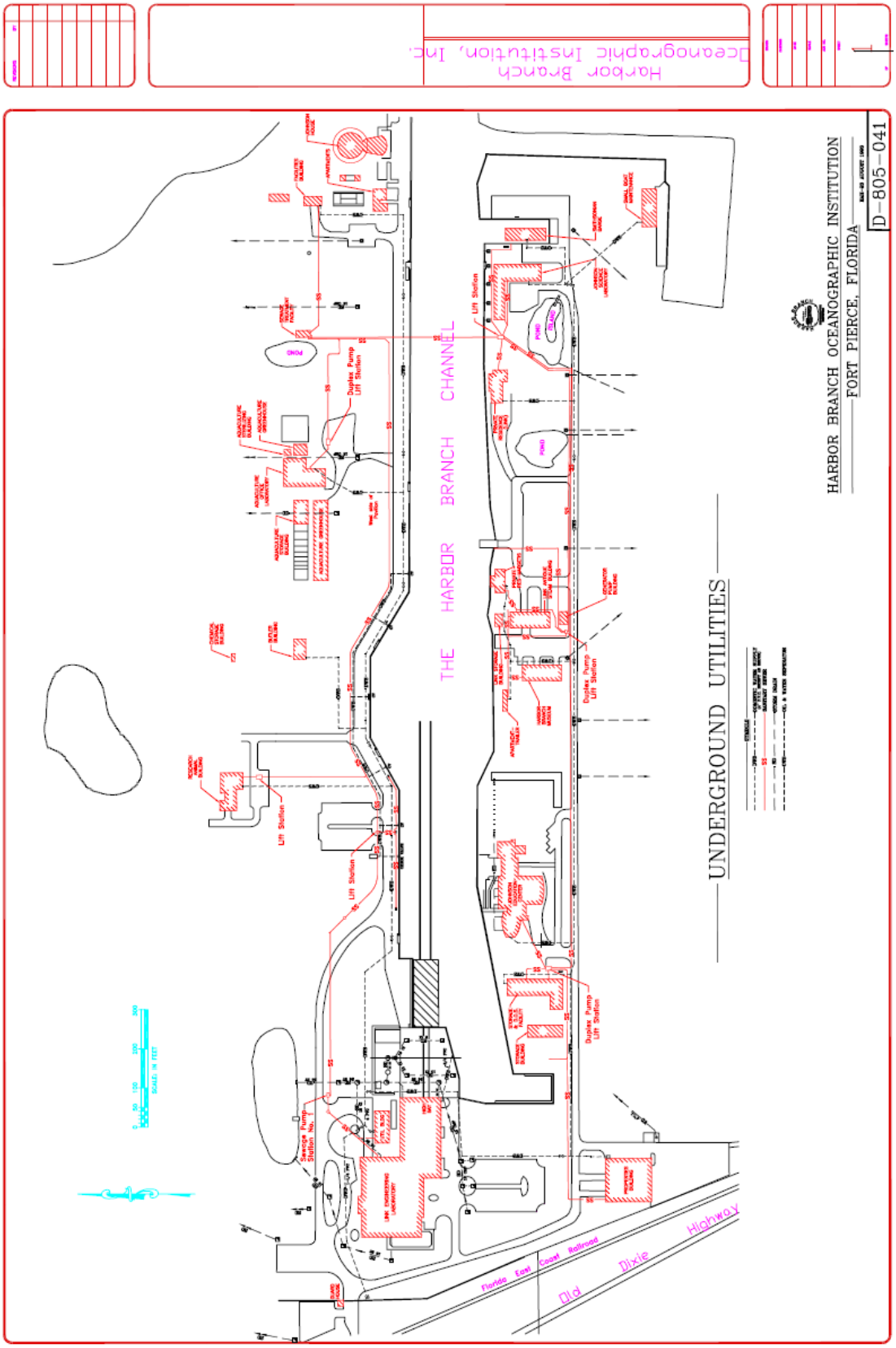
13. **SURFACE IMPROVEMENTS:**
    Walkways and landscape will be reconfigured, as required, to provide access through the site, and promote quality outdoor space.

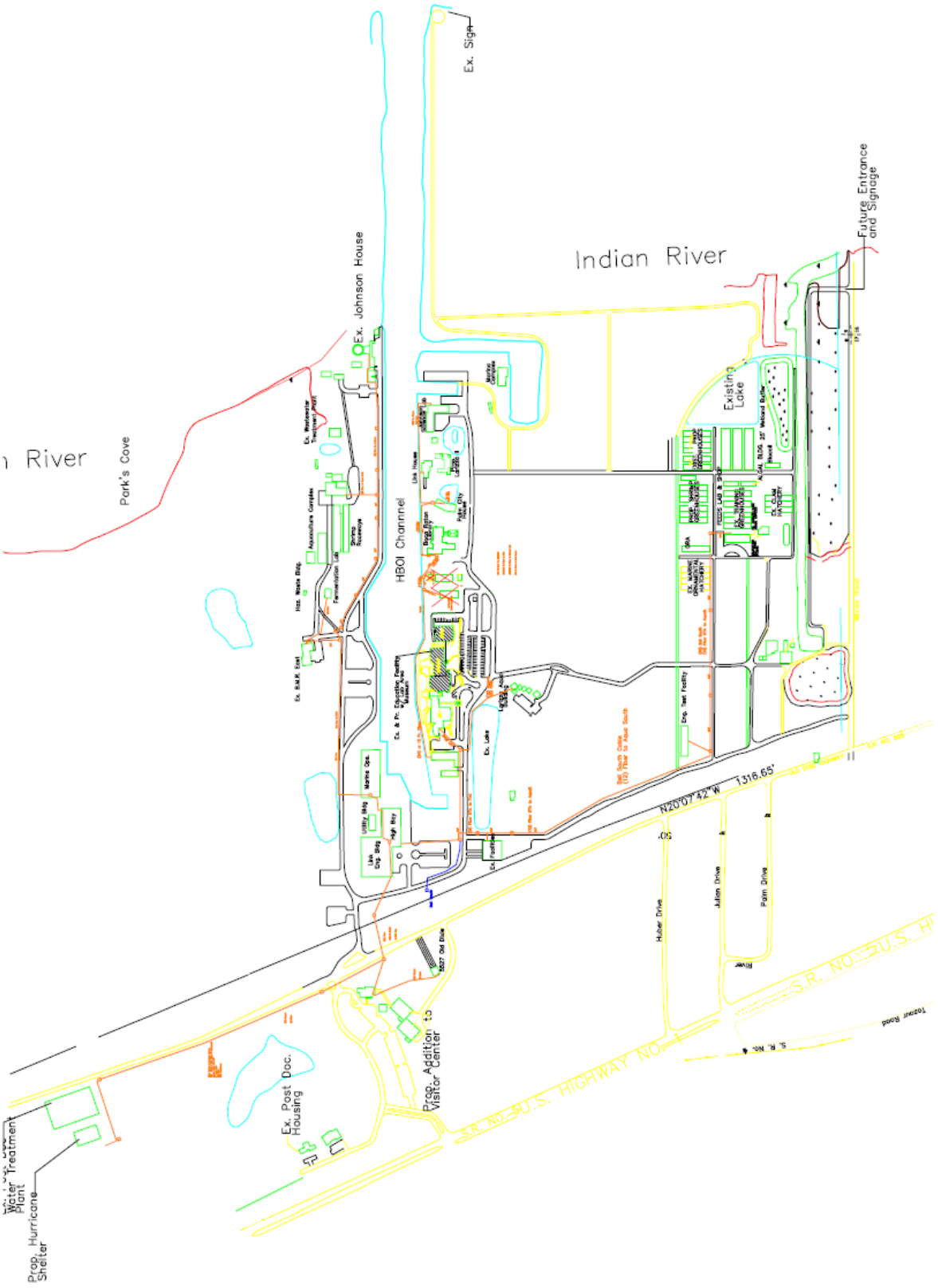
B. INFRASTRUCTURE MAPS

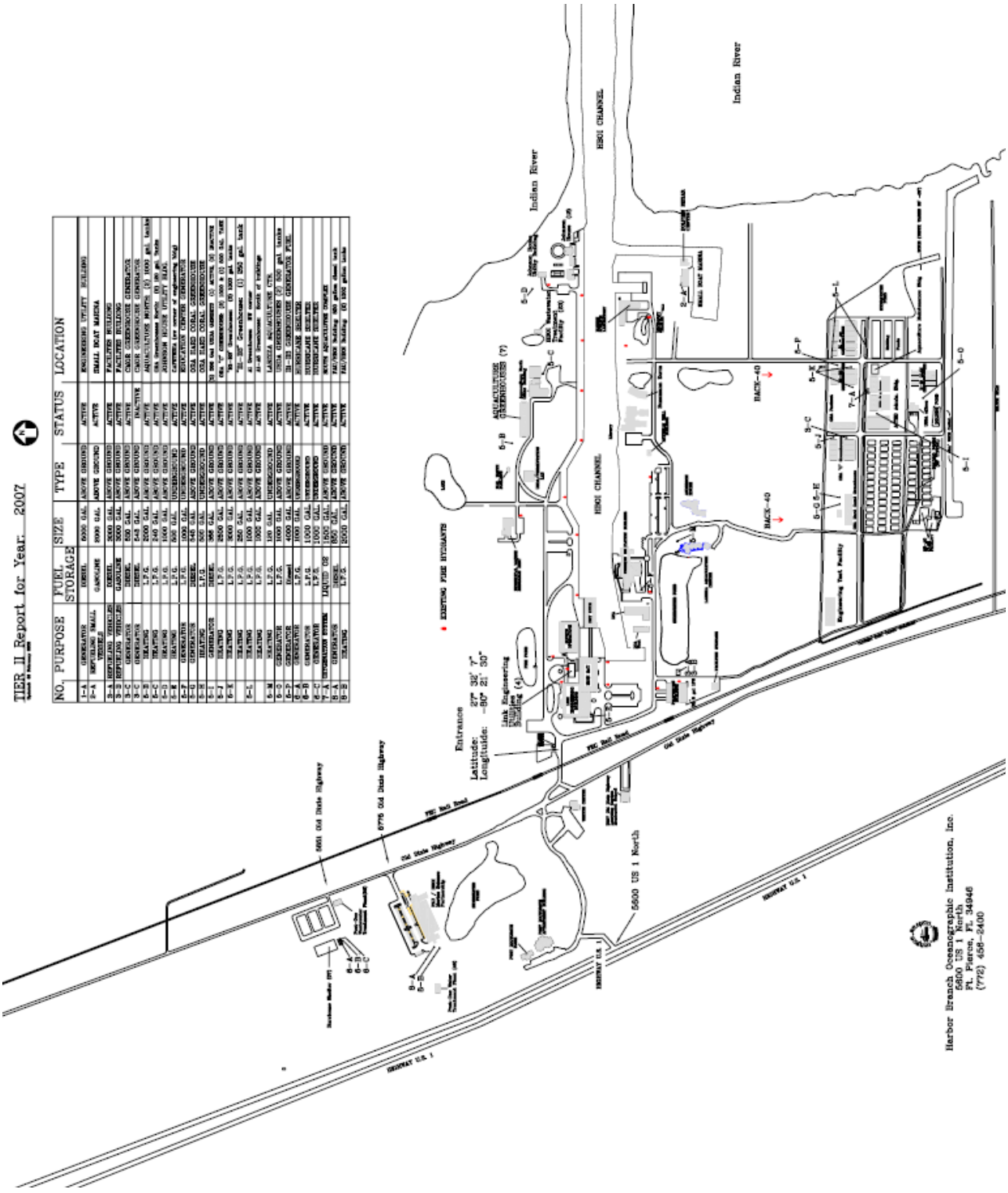
The information shown on the following drawings is provided for general information purposes only and is not to be used by the consultants or contractors in the actual design or construction of the proposed facility. All utilities and information shown are to be field verified by the AE and CM team prior to design and construction. The drawings are not to scale.



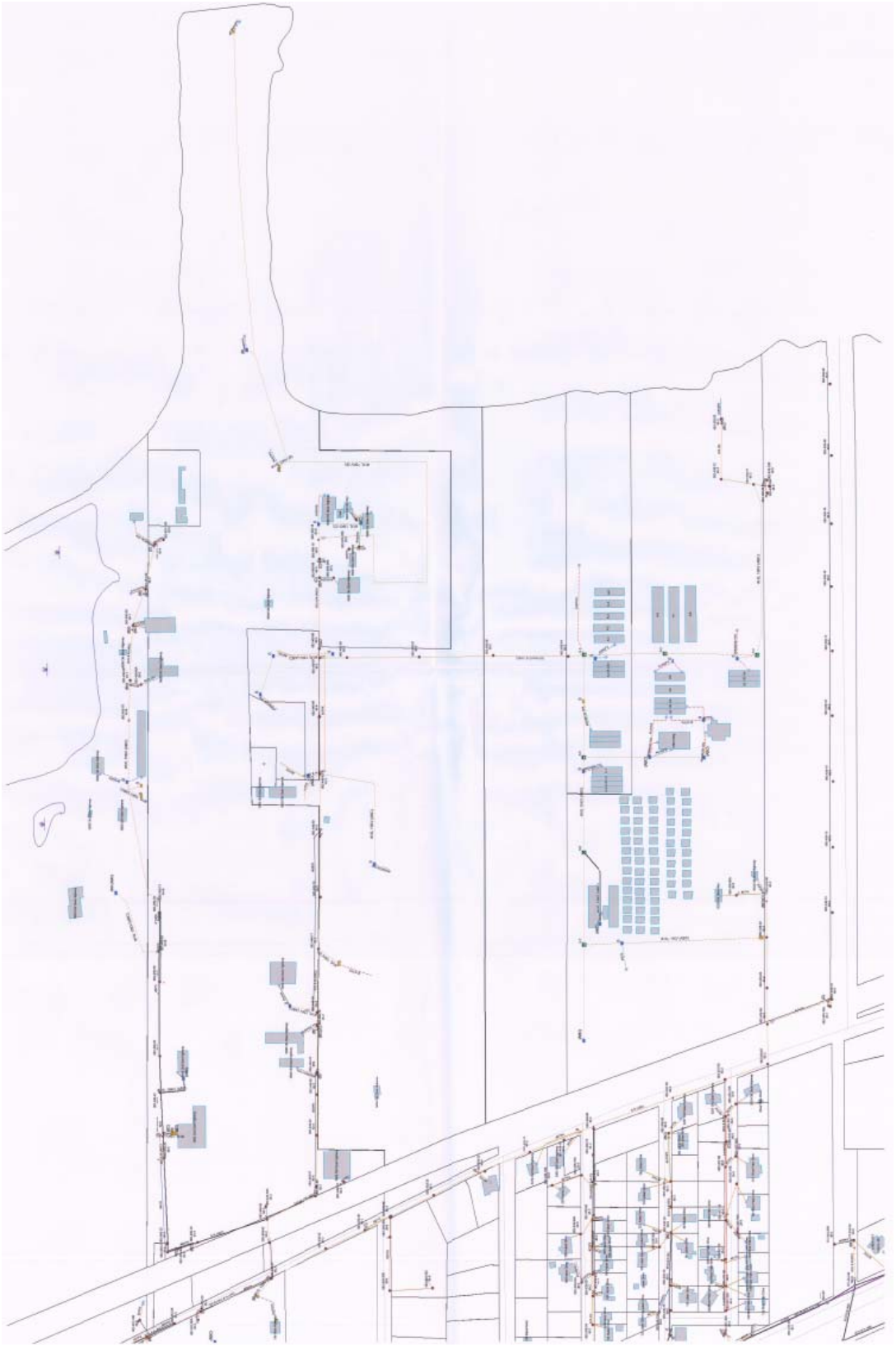

HARBOR BRANCH OCEANOGRAPHIC INSTITUTION
FORT PIERCE, FLORIDA
MAIN CAMPUS
THE HARBOR BRANCH CHANNEL
STORMWATER POND
Old Dixie Highway
FLORIDA EAST COAST RAILROAD
FORCE MAIN LOCATIONS
A. LINK ENGINEERING BLDG.
B. DOCKSIDE
C. BMRE
D. AQUACULTURE NORTH
E. JOHNSON HOUSE
F. SCIENCE LAB
G. SEA DIVER BLDG.
H. AQUACULTURE SOUTH
I. DIVER TRAINING (DTA)
J. BIOPHOTONICS
INCUBATOR GREENHOUSES
SHRIMP GREENHOUSES
HOLDING

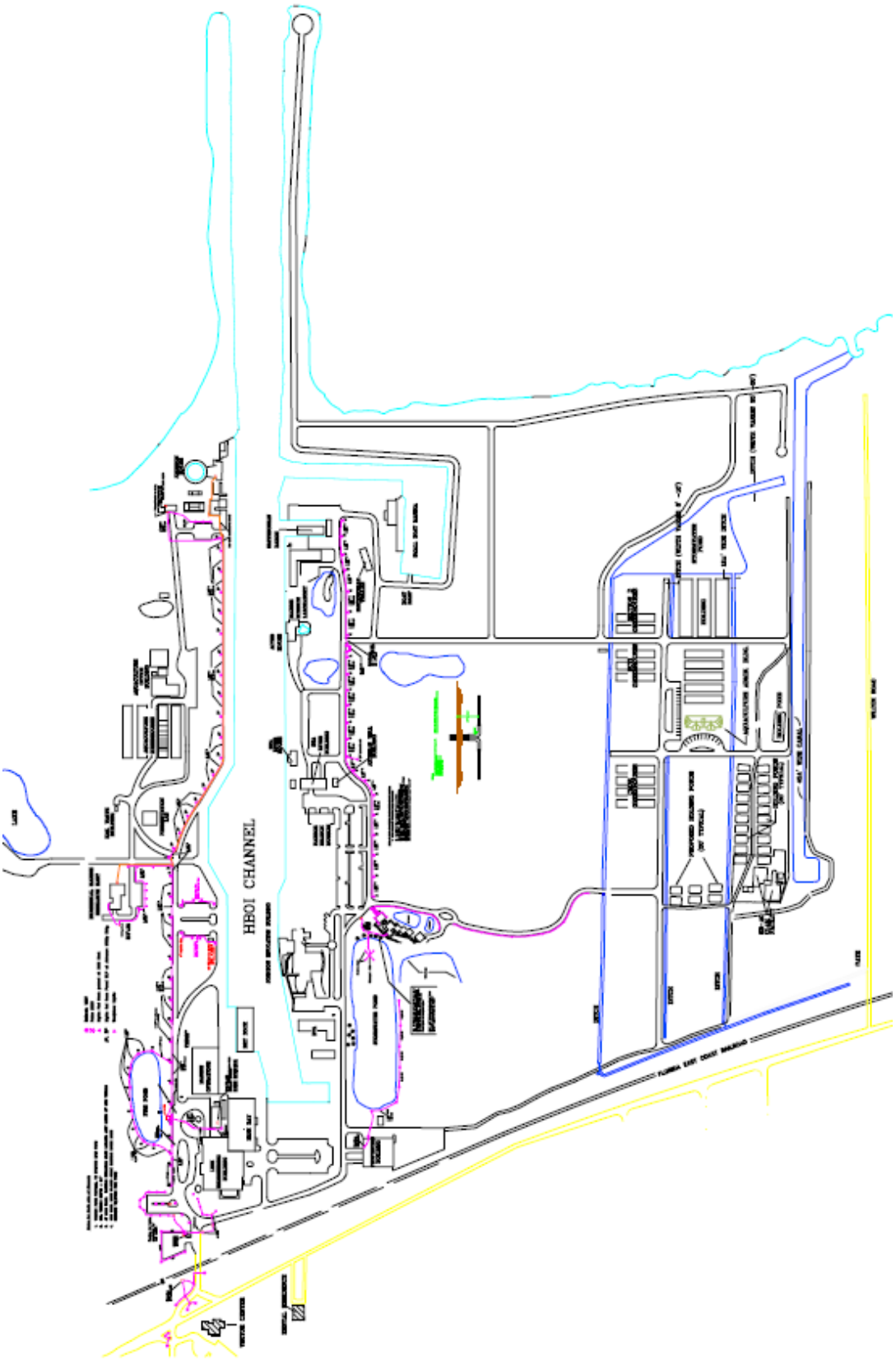

Harbor Branch Oceanographic Institution, Inc.
HARBOR BRANCH OCEANOGRAPHIC INSTITUTION
FORT PIERCE, FLORIDA
D-805-041
UNDERGROUND UTILITIES
THE HARBOR BRANCH CHANNEL
Lift Station
Duplex Pump Lift Station
Sewage Pump Station No. 1
Florida East Coast Railroad
Old Dixie Highway

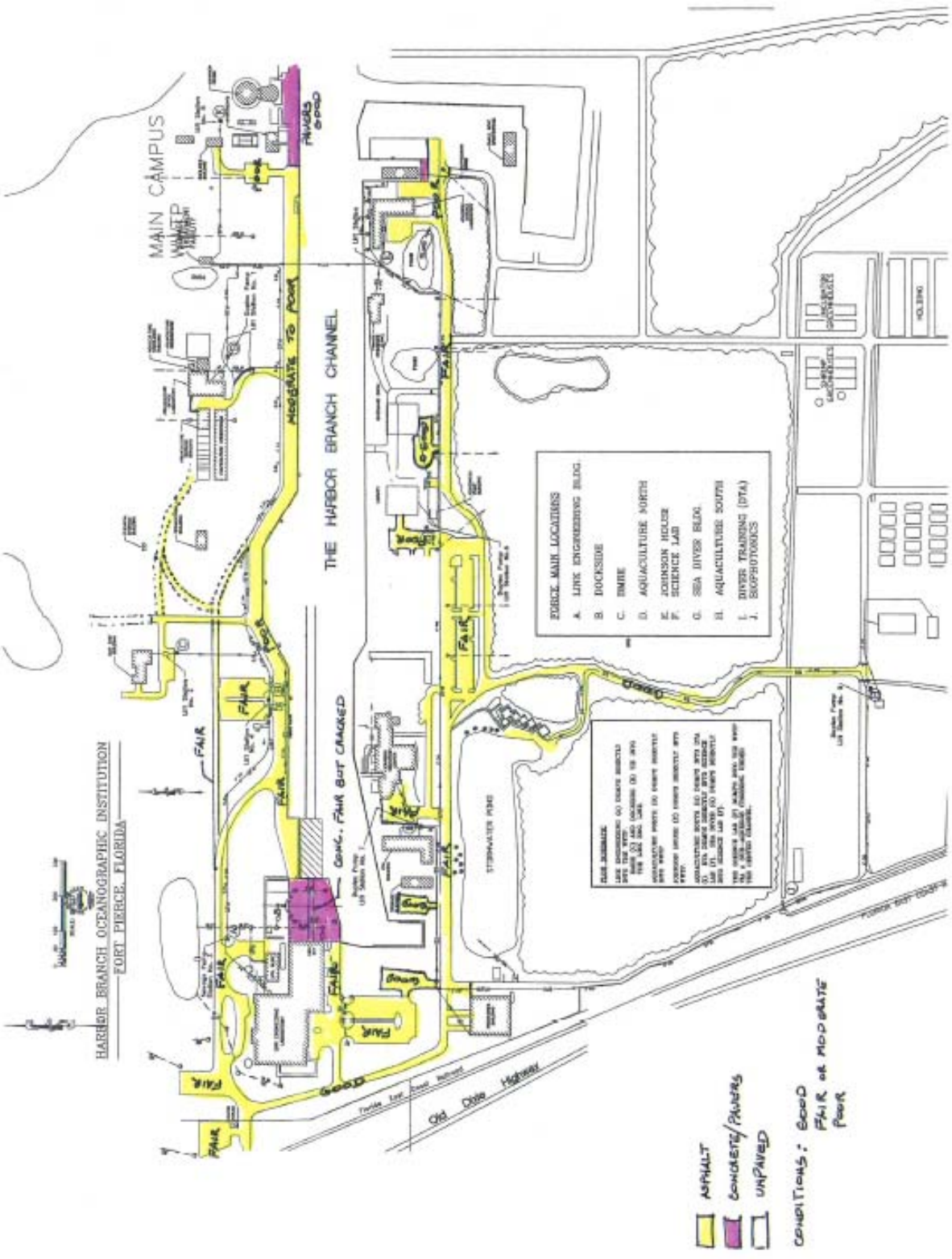

Ex. Sign
Indian River
Future Entrance and Signage
Ex. Johnson House
River
Park's Cove
HBOI Channnel
Existing Lake
N20°07'42"W 1316.65'
Ex. Post Housing
Prop. Addition to Visitor Center
Prop. Hurricane Shelter
Water Treatment Plant
Julian Drive
Palm Drive
Huber Drive


TIER II Report for Year 2007
NO. PURPOSE FUEL STORAGE SIZE TYPE STATUS LOCATION
Indian River
HBOI CHANNEL
Entrance
Latitude: 27° 38' 7"
Longitude: -80° 21' 30"
5600 US 1 North
Old State Highway
HIGHWAY U.S. 1
Harbor Branch Oceanographic Institution, Inc.
5600 US 1 North
Ft. Pierce, FL 34946
(772) 465-2400

FIBER LAYOUT




HBOI CHANNEL


MAIN CAMPUS
THE HARBOR BRANCH CHANNEL
HARBOR BRANCH OCEANOGRAPHIC INSTITUTION
FORT PIERCE, FLORIDA
FORCE MAIN LOCATIONS
A. LINK ENGINEERING BLDG.
B. DOCKSIDE
C. EMBE
D. AQUACULTURE NORTH
E. JOHNSON HOUSE
F. SCIENCE LAB
G. SEA DIVER BLDG.
H. AQUACULTURE SOUTH
I. DIVER TRAINING (DTA)
J. BIOPHOTONICS
Old Dixie Highway
ASPHALT
CONCRETE/PAVERS
UNPAVED
CONDITIONS: GOOD
FAIR OR MODERATE
POOR

A. UNIVERSITY INFORMATION / COMMUNICATION STANDARD

All voice and data systems shall comply with Florida Atlantic University's most current specifications for Information Resources Management Communication Infrastructure Specification effective on the date of the Architect/Engineer contract execution. The complete specification is located on the web at:

http://wise.fau.edu/irm/ts/cblspecs.htm.

The requirements of the University information/communications standards will be strictly enforced for the design and construction of the proposed facility.

B. UNIVERSITY INFORMATION RESOURCE MANAGER CERTIFICATION

By signature (on the signature page of this facilities program) the University Information Resource Manager certifies that a review of the University information/communication standards has been completed; and that the facilities program is developed in conformance with the Florida Atlantic University Information/Communication Standards in accordance with the Section 282, F.S.

C. ESTIMATE OF COMMUNICATIONS AND IRM COSTS

A detailed estimate is shown on the next page.

The following is a consolidated estimate of IRM costs for this project. These costs are included in the project budgets in Section XV of this program

Project: HBOI Laboratory II									
Date Submitted: October 22, 2008									
IRM Required Elements									
		ELEMENT						**AMOUNT**	**NOTES/QUANTITIES**
Jade									
	Inside and Outside Plant - voice/data/video							**$ 127,234.00**	
	Internal Wireless Access Points with Installation							**$ 14,400.00**	**8**
	External Wireless Access Points with Installation								
						Subtotal		**$ 141,634.00**	
Siemens									
	Voice Switching Requirements							**$ 1,500.00**	**2 cards**
Cisco									
	Data Switches, Routers, Devices							**$ 84,500.00**	**1 switch and 2 stackables**
Voice/Data/Security/ Misc Vendors									
	Phone Sets							**$ 5,400.00**	
	UPS							**$ 2,550.00**	
	Emergency Phone								
		Inside							
		Outside (Solar Panel wi Pedestal)							
	Automatic Lock Down							**$ 25,000.00**	
	BellSouth/PaeTec								
		1FBs						**$ 225.00**	**1**
		Special Circuits							**NA**
		Alarms							**NA**
		OPX							**NA**
							Subtotal	**$ 119,175.00**	
					Total IRM Infrastructure			**$ 260,809.00**	
	IRM Faceplate Allowance							**$ 18,900.00**	**126 @ $150 ea**
						Total IRM Costs		**$ 279,709.00**	
End User Requirements As Indicated in Program									
	Vendors (various - no set vendor contract)								
		Sm Distance Learning Classroom (25-40 seats)							
		Distance Learning Classroom (50+ seats)							
		Conf Room wi Video						**$ 42,000.00**	**1 room**
		Basic Electronic Classroom							
		Teaching Auditorium w/o Distance Learning							
		Teaching Auditorium with Distance Learning							
		Cable TV							
				Total End User Requirements				**$ 42,000.00**	
IRM TOTAL PROJECT BUDGET									
				IRM Infrastructure Costs				**$ 279,709.00**	
				End User Requirement Costs				**$ 42,000.00**	
								$ 321,709.00	
NOTES AND ASSUMPTIONS									
	Note: This project will require new trenching and conduit from Link Engineering to the Lab site,								
	from the Lab to the Mammal Stranding Center and from the Lab to the Greenhouse.								

A. CODES AND STANDARDS

The following editions of Codes and Standards (and associated review & permitting process), and University standards, where applicable, shall be followed for the design and construction of the proposed facility. Building codes which are approved at the time of building permit application shall be used for the project.

		DESCRIPTION
	Year	**Building Codes**
1.	2004	Florida Building Code, Building
2.	2004	Florida Building Code, Mechanical
3.	2004	Florida Building Code, Fuel Gas
4.	2004	Florida Building Code, Plumbing
5.	2004	Florida building Code, Test Protocols for High Velocity Hurricane zones
		Section 4A-3.012 Standard of the National Fire Protection Association (Most commonly used Codes and Standards)
Standard	**Year**	**Title**
1	2004	Fire Prevention Code
10	2002	Standard for Portable Fire Extinguishers
13	2002	Standard for the Installation of Sprinkler Systems
13R	2002	Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and including four stories in Height
14	2003	Standard for the Installation of Standpipe and Hose systems, except 2-7 Shall be omitted
20	2003	Standard for the Installation of Centrifugal Fire Pumps
24	2002	Standard for the Installation of Private Fire Service Mains and Their Appurtenances
25	2002	Standard for the Inspection, Testing & Maintenance of Water Based Fire Protection Systems
30	2003	Flammable and Combustible Liquids Code
45	2004	Standard on Fire Protection for Laboratories Using Chemicals
70	2005	National Electrical Code
72	2002	National Fire Alarm Code
90A	2002	Standard for the installation of Air Conditioning and Ventilating Systems
96	2004	Standard for Ventilation Control and Fire Prevention of Commercial Cooking Operations
101	2003	Life Safety Code
	3.13.3	**State Fire Marshal**
		Requirements for review shall comply with PSG, Exhibit 5; (all inspections, reviews and permitting for University projects shall be coordinated through the University BCA Office)
	3.13.4-5	**Required Permits**
		All Building permits are to be issued by the Building Code Official at FAU Facilities Planning, prior to the start of construction.
	3.13.5.2	Department of Business and Professional Regulation, Division of Hotel and restaurants, Bureau of Elevator Inspection for elevator inspections and permit, Department of Health
	3.13.5.4	Department of Environmental Protection (DEP), area Branch and NPDES Permits
	3.13.5.5	Local Water Management District permit
		Florida Atlantic University Standards
		Florida Atlantic University Cost Containment Guidelines
		FAU Professional Services Guide and Project Manual
		All special requirements as identified in the pre-design conference meeting(s) with the various University agencies (the A/E consultant(s) shall record in meeting minutes).
		Miscellaneous Statutes
		Ratio of facilities for men and women public restrooms of Section 553.14 of Florida Statutes

*Note: All reference to codes shall mean the latest editions adopted through legislation for use in state owned/leased buildings as described in the Florida Statues sections 471, 481 and 553*s

CONSTRUCTION MANAGEMENT PROJECT DELIVERY METHOD The preliminary schedule below is an estimate based on the current status of the project at the program phase.

GOALS AND MILESTONES	DURATION	START DATE	END DATE	
PROGRAM APPROVAL	**16 weeks**	**24-Aug-2008**	**14-Dec-2008**	**0.3 Years**
Facilities Program Development	12 weeks	24-Aug-2008	16-Nov-2008	
University Facilities Program & Advertisement Approval	4 weeks	16-Nov-2008	14-Dec-2008	
A/E SELECTION PROCESS	**14 weeks**	**14-Dec-2008**	**22-Mar-2009**	**0.3 Years**
Advertise for A/E in FAW	6 weeks	14-Dec-2008	25-Jan-2009	
A/E Short-list	3 weeks	25-Jan-2009	15-Feb-2009	
A/E Interviews	2 weeks	15-Feb-2009	01-Mar-2009	
Contract Negotiations with A/E	3 weeks	01-Mar-2009	22-Mar-2009	
C/M SELECTION PROCESS	**16 weeks**	**14-Dec-2008**	**05-Apr-2009**	**0.3 Years**
Advertise for C/M in FAW	6 weeks	14-Dec-2008	25-Jan-2009	
C/M Short-list	5 weeks	25-Jan-2009	01-Mar-2009	
C/M Interviews	2 weeks	01-Mar-2009	15-Mar-2009	
Contract negotiations with C/M	3 weeks	15-Mar-2009	05-Apr-2009	
DESIGN PHASE	**36 weeks**	**22-Mar-2009**	**29-Nov-2009**	**0.7 Years**
Conceptual Design	3 weeks	22-Mar-2009	12-Apr-2009	
University review and approval	1 weeks	12-Apr-2009	19-Apr-2009	
Schematic Design	3 weeks	19-Apr-2009	10-May-2009	
University review and approval	2 weeks	10-May-2009	24-May-2009	
Design Development and Budget verification	6 weeks	24-May-2009	05-Jul-2009	
University review and approval	3 weeks	05-Jul-2009	26-Jul-2009	
50% Construction Documents and Budget update	5 weeks	26-Jul-2009	30-Aug-2009	
University review and approval	2 weeks	30-Aug-2009	13-Sep-2009	
100% Construction Documents and Budget update	5 weeks	13-Sep-2009	18-Oct-2009	
University review and approval	2 weeks	18-Oct-2009	01-Nov-2009	
Submittal of GMP	3 weeks	18-Oct-2009	08-Nov-2009	
State Fire Marshall and Code Review	6 weeks	18-Oct-2009	29-Nov-2009	
Reconcile Code Comments and Negatiate GMP	4 weeks	18-Oct-2009	15-Nov-2009	
CONSTRUCTION PHASE	**55 weeks**	**29-Nov-2009**	**19-Dec-2010**	**1.1 Years**
Notice to Proceed	1 weeks	29-Nov-2009	06-Dec-2009	
Construction	45 weeks	06-Dec-2009	17-Oct-2010	
Substatial Completion	1 weeks	17-Oct-2010	24-Oct-2010	
Punchlist Corrective Work & Final Completion	4 weeks	24-Oct-2010	21-Nov-2010	
Owner FF&E Move In	4 weeks	21-Nov-2010	19-Dec-2010	
Owner Occupancy		19-Dec-2010		
Total	**121 weeks**	**24-Aug-2008**	**19-Dec-2010**	**2.3 Years**

A. ESTIMATED FUNDING

CURRENT FUNDING	
2007-2008 PECO (P,C,E)*	$ 18,500,000.00
TOTAL PROJECT FUND	**$ 18,500,000.00**

The $18.5 M is a portion of a $26M originally designated for a new lab building. In an effort to use the funding in the most effective manner, the program committee has agreed to fund the renovation of the HBOI Link Building with the $7.5M balance. Please see the separate facility program for the Link Building Renovation.

B. ESTIMATED BUDGET SUMMARY

See budget detail next two pages.

	ESTIMATED BUDGET SUMMARY					
1	**Construction Costs**	**GSF**			**$$/GSF**	**Total $$**
a.	Construction Costs	40,231			310.73	$12,500,800.00
b.	Additional/Extraordinary Construction Costs				22.00	$885,000.00
c.	Inflation Escalation				9.98	$401,600.00
	Sub Total Construction Costs	40,231			342.71	**$13,787,400.00**
2	**Other Project Costs**					
a.	Land/existing facility acquisition/Relocations					$0.00
b.	Professional Fees					$ 1,314,300.00
c.	Fire Marshal Fees					$34,500.00
d.	Inspection Services					$110,200.00
e.	Insurance Consultant					$8,300.00
f.	Surveys and Tests					$20,000.00
g.	Permit/Impact/Environmental Fees					$3,000.00
h.	Art Work					$68,900.00
i.	Movable Furnishings & Equipment					$2,142,300.00
j.	IRM Costs					$321,700.00
j.	Project Contingencies incl add'l Research Facilities					$689,400.00
l.	Campus Infrastructure					$0.00
	Sub Total Other Project Costs				117.14	**$4,712,600.00**
	TOTAL PROJECT BUDGET	40,231			459.85	**$18,500,000.00**

PROJECT SPACE AND BUDGET SUMMARY (Reference: SUS CM-N-04.00-09/97, Attachment 3

The following estimate establishes the Project Budget.

Project: HARBOR BRANCH FACILITY II					**11/12/2008**
3					
Fill in the Yellow shaded area only / Automatic entry in Light Green		Return to: XV, Summary / IX, Program		Worksheets: Schedule / Program	
PROJECT SPACE AND BUDGET SUMMARY (Reference: SUS CM-N-04.00-09/97, Attachment 3)					
Inflation Adjustment	1	Years @	3.00 %	Effective Rate	3.00 %
Construction Phase Duration	1	Years			
Design Phase Duration	1	Years		**Estimated Budget**	$ 18,500,000.00
				Target Budget	$ 18,500,000.00
SPACE SUMMATION (from **Section IX** of Facilities Program)					
Program Space Type (New Construction)	**NASF**	**Factor**	**GSF**	**$ / GSF**	**Costs in $**
Research Labs & Lab Support	16,500	0.65	25,385	350.00	$8,884,615.38
Offices	8,100	0.65	12,462	250.00	$3,115,384.62
Building support	1,550	0.65	2,385	210.00	$500,769.23
Avg. Construction Cost				$ 310.73	0
Subtotal Building Construction (SUS)	26,150	0.65	40,231	*Rounded to 100*	**$12,500,800.00**
CONSTRUCTION COSTS (Reference: SUS CM-D-38.00-09/97, Attachment 1-B)					
Building Construction Cost		**Units**		**Unit Cost**	**Costs in $**
New Construction Cost	40,231	GSF		$310.73	$12,500,800.00
Building Demolition	-	GSF		$0.00	$0.00
Sub-Total Building Construction Costs (today's $$)				**$310.73**	**$12,500,800.00**
Additional/Extraordinary Construction Cost		**Units**		**Unit Cost**	
Environmental Impacts Mitigation	0	Allowance		$0.00	
Site Preparation/Demolition	0	Allowance		$0.00	
Landscape/Irrigation	1	Allowance		$50,000.00	
Plazas/Walks/Bikepaths	1	Allowance		$25,000.00	
Roadway Improvements	1	Allowance		$0.00	
Parking Replacement (on-grade)	0	Cars	-	$0.00	
Electrical Services	1	Allowance		$100,000.00	
Water Distribution	1	Allowance		$75,000.00	
Sanitary Sewer System	1	Allowance		$100,000.00	
Chilled Water System	1	Allowance		$410,000.00	
Storm Water System	1	Allowance		$25,000.00	
Telecomm Trench and conc encased conduits	1	Allowance		$100,000.00	
Sub-Total Add/Extra Construction Costs				Round to 100	**$885,000.00**
TOTAL CONSTRUCTION COSTS - BUILDINGS and SITE DEVELOPMENT				332.73	**$13,385,800.00**
Inflation Adjustment					**$401,600.00**
TOTAL CONSTRUCTION BUDGET				$ 342.71	**$13,787,400.00**

Please see next page for Other Project Costs.

2	**OTHER PROJECT COSTS** Add or delete following items as required.					Subtotals (rounded)
a.	**Land/Existing Facility Acquisition/Relocation**				$0.00	
	Subtotal Land/Existing Facility Acquisition/Relocation					**$0.00**
b.	**Professional Fees**					
	A/E Fees (Curve **B**: + Above Average)	6.73	% of Const Cost		$927,892.02	
	Civil & Engineering Fee (10% of A/E Fee)	10.00	% of AE Fee		$92,789.20	
	Laboratory Program & Verification	7.50	% of AE Fee		$69,591.90	
	Landscape Design Fee	2.00	% of AE Fee		$18,557.84	
	Design Contigency	5.00	% of AE Fee		$ 46,394.60	
	Building Commissioning and T&B	5.00	% of AE Fee		$ 46,394.60	
	Misc Other Fees	1	Allowance		$ -	
	C/M Pre-Construction Services Fee	0.75	% of Const Cost		$ 103,405.50	
	Sub-Total Professional Fees					**$ 1,314,300.00**
c.	**State Fire Marshal Review and Inspection**	0.25	%		$34,468.50	**$34,500.00**
d.	**Inspection Services**					
	Roofing Inspection	1	Allowance		$5,000.00	
	Threshold Inspection	1	Allowance		$0.00	
	Code Compliance Review & Inspections	0.75	% of Const Cost		$ 103,405.50	
	Sub-Total Inspection Services					**$110,200.00**
e.	**Risk Management / Insurance Consultant**	0.06	% of Const Cost		$8,272.44	**$8,300.00**
f.	**Surveys & Tests**					
	Topographical/Site Survey	1	Allowance		$10,000.00	
	Geotechnical Testing	1	Allowance		$10,000.00	
	Sub-Total Surveys & Tests					**$20,000.00**
g.	**Permit/Impact/Environmental Fees**					
	Environmental (SFWM)	1	Allowance		$3,000.00	
	Sub-Total Permits/Impact Fees					**$3,000.00**
h.	**Art in State Building** (Section 255.043, F.S.)	0.5	% of Const C	100K Maximum	$68,937.00	**$68,900.00**
i.	**Movable Furniture & Equipment**					
	FFE - Equipment, computers, etc.	10.0%	of Const Cost		$1,378,740.00	
	FFE - Furniture	5.0%	of Const Cost		$689,370.00	
	FFE - Miscellaneous				$5,300.00	
	FFE - Equipment - Custodial & Card Access	0.5	%		$68,937.00	
	Subtotal Moveable Furniture & Equipment (FFE)					**$2,142,300.00**
j.	**IRM & Costs - See Section XI for more detail**					
	IRM Cabling Infrastructure	1	Allowance		$141,634.00	
	IRM Switching Equipment/Wireless	1	Allowance		$119,175.00	
	IRM Class/Conf Rm Equipm't - End User Options	1	Allowance		$42,000.00	
	IRM Faceplate Allowance	126	# of Drops	$150.00	$18,900.00	
	Sub-Total IRM Costs					**$321,700.00**
k.	**General Project Contingency**	5	%		$689,370.00	
	Total Project Contingencies incl. Ad'l Research Facilities					**$689,400.00**
l.	**Campus Infrastructure**	0	%		$0.00	**$0.00**
	TOTAL OTHER PROJECT COSTS					**$4,712,600.00**
	TOTAL PROJECT BUDGET COST ESTIMATE	*Project cost per SF of main lab Bldg:*			*$459.85*	**$18,500,000.00**

End of Facility Budget Detail.

The following is a list of potential research lines that are being considered for the proposed facility. These will be confirmed by the selected AE in design and program meetings with the users.

Program development for Harbor Branch Laboratory II			Revised: 10/19/2008 MDH		
Center	**Assumed Line**	**Name of Line**	**Assign Primary Researcher Name**	**Current Location Bldg & Room #**	**Comments**
Marine Ecosystem Health	Line 1	Harmful Algal Blooms	Brian Lapointe	HB1-107, 112	
	Line 2	IRLRI/Fish Biology	TBD	NONE	
	Line 3	IRLRI/Marine Botany	Dennis Hanisak	HB1-119, 120	
	Line 4	IRLRI/Phytoplankton Biology	TBD	NONE	
	Line 5	IRLRI/Zooplankton Biology	TBD	NONE	
	Line 6	MMRC - Photo ID	Marilyn Mazzoil	Anderson House, will be Johnson House	
	Line 7	MMRC - Population Ecologist	TBD	Anderson House, will be Johnson House	
	Line 8	MMRC - Veterinarian	Juli Goldstein	Anderson House, will be Johnson House	
	Line 9	Polar Research Program	Greg O'Corry Crowe	HB1-210	
	Line 10	RCRP/Coral Reef Ecology	Joshua Voss	HB1-110	
	Line 11	RCRP/Molecular Biology	Sara Edge	HB1-110	
Ocean Exploration	Line 12	RCRP/Deep Coral Reefs	John Reed	HB1-119	
	Line 13	Deep Sea Biology	TBD	NONE	
	Line 14	Deep Sea Biology/Sponges	Shirley Pomponi	BMR (Link Building)	
	Line 15	Visual Ecology	Tammy Frank	HB1-110	
	Line 16	Physical Oceanography	TBD	NONE	