



Meeting Minutes

By:	Perkins+Will - GK	Date:	12/17/2012
Meeting Date:	12/5/2012	Project Name:	BT-857 FIU-Campus Master Plan Update 2010-2020
Meeting Time:	10:00am-12:00pm	Project No.:	810369.000
Meeting Location:	FIU CSC Rm 1123	Attendees:	<i>Focus Group Members:</i> -Maria Drake (IT) -Robert Grillo (IT) -Jose Rodriguez (COM) -Danny Paan (FIU-FMCD) -Sergio Garcia (MD-WASD) -Jose Solares (FPL-CSFO) -Christina Amores (MD-WASD) -Nick DiCicacco (FIU-FMD) -Norman Monroe (College of Engineering) -Bob Griffith, FIU -Stuart Grant, FIU -Sarah Mazorra, FIU -Rodrigo Pigna, ML -Sarah Amritt, ML -Mike Kroll, ML -James Tatone, AEI -Daniel Cesar, AEI -Gene Kluesner, P+W -Krisan Osterby, P+W -Susan Nelson, P+W
Next Meeting Date:	January 9, 2013 10:30am-12:00pm		

The attached are meeting notes for **Work Session #3**

FOCUS GROUP 5 – Infrastructure, Utilities, & Maintenance

Item No.	Description
3.1	Data/Schedule/Meetings confirmation: Additional data requests for Final Inventory and Analysis report, project schedule, and upcoming meetings were confirmed with committee.

Item No.	Description
3.2	<p>Public Workshops: Inventory and Analysis Summary Forums are planned for two locations.</p> <ol style="list-style-type: none"> 1.) At MMC on December 3, 2012 at 6:30pm-8:30pm in CBC Special Events Room. 2.) At BBC on December 4, 2012 at 5:30pm-7:30pm in room WUC 221.
3.3	<p><u>MMC-STORMWATER MANAGEMENT DATA AND ANALYSIS REQUIREMENTS</u></p> <p>Stormwater Management System Inventory</p> <p>The stormwater management system consists of:</p> <ul style="list-style-type: none"> • Percolation • Overland flow • Exfiltration systems • Positive drainage systems with outfalls to onsite lakes <p>Existing Facility Demand and Capacity Analysis</p> <ul style="list-style-type: none"> • The capacity of the existing stormwater system at MMC is sufficient for present development. • All of the lakes on the campus are not interconnected, which does not allow the drainage sub-basins to compensate each other for inconsistencies in rainfall and runoff areas. As a result, some areas within the campus have drainage problems. <p>Projected Facility Demand and Capacity Analysis / Recommendations</p> <ul style="list-style-type: none"> • Future development will require additional exfiltration trench and/or a lake outfall systems • All water bodies should be interconnected • BMP should be incorporated into design
3.4	<p><u>MMC-POTABLE WATER DATA AND ANALYSIS REQUIREMENTS</u></p> <p>Potable Water System Inventory</p> <p>-System connects to 12" and 36" water mains located on SW 8th Street and SW 117th Avenue.</p> <ul style="list-style-type: none"> • All water mains owned and maintained by WASD <p>Existing Facility Demand and Capacity Analysis</p> <ul style="list-style-type: none"> • Physical condition of water main distribution system is adequate • FY 2011-2012 consumption: 406,232 GPD • FY 2011-2012 annual consumption: 148,274,577 gallons • LOS: 10.4 Gallons per Capita per day

Item No.	Description
	<p>Projected Facility Demand and Capacity Analysis / Recommendations</p> <ul style="list-style-type: none"> • Onsite primary distribution system will need expansion for future development and missing links to provide a "looped" system. • New secondary systems required • Elimination of dead end systems will be required. • FY 2014-2015 consumption: 432,588 GPD • FY 2019-2020 consumption: 461,410 GPD
<p>3.5</p>	<p><u>MMC-SANITARY SEWER DATA AND ANALYSIS REQUIREMENTS</u></p> <p>Sanitary Sewer System Inventory</p> <p>The system consists of:</p> <ul style="list-style-type: none"> • Gravity sewer lines • Force mains • Series of lift stations • System connects to 36" Diameter WASD force main located on west perimeter of campus <p>Existing Facility Demand and Capacity Analysis</p> <ul style="list-style-type: none"> • Existing infiltration & inflow problems being addressed by FIU • FY 2011-2012 sanitary sewage flow: 326,187 GPD • LOS: 10.4 Gallons per Capita per day <p>Projected Facility Demand and Capacity Analysis / Recommendations</p> <ul style="list-style-type: none"> • Four (4) existing lift stations need to be replaced by one (1) East Master Lift Station (LS E-1) This station is desired to be located south of the new satellite chiller plant in AHC. (Approximately 50ft x 50ft.) • FY 2014-2015 sanitary sewage flow: 347,652GPD • FY 2019-2020 consumption: 370,815 GPD
<p>3.6</p>	<p><u>MMC-SOLID WASTE DATA AND ANALYSIS REQUIREMENTS</u></p> <p>Solid Waste Collection Facilities Inventory</p> <p>Solid Waste collection and disposal is accomplished through a combination of utilizing:</p> <ul style="list-style-type: none"> • University staff • Private contractors • Public entities • Trash is collected in dumpsters at various on-campus locations (approx. 65 dumpsters/compactors) • Recycling program is executed by the Custodial Services Department • Single stream recycling

Item No.	Description
	<p>Existing Facility Demand and Capacity Analysis</p> <ul style="list-style-type: none"> • FY 2011-2012 solid waste produced: 4,138 Tons • FY 2011-2012 recycling produced: 1,589 Tons <p>Projected Facility Demand and Capacity Analysis</p> <ul style="list-style-type: none"> • FY 2014-2015 solid waste & recycling produced: 6,503 Tons • FY 2019-2020 solid waste & recycling produced: 7,239 Tons
3.7	<p><u>EC-STORMWATER MANAGEMENT DATA AND ANALYSIS REQUIREMENTS</u></p> <p>Stormwater Management System Inventory</p> <p>The stormwater management system consists of:</p> <ul style="list-style-type: none"> • Percolation • Overland flow • Exfiltration systems • Positive drainage systems • Dry retention areas • Drainage swales <p>Existing Facility Demand and Capacity Analysis</p> <ul style="list-style-type: none"> • The capacity of the existing stormwater system at EC is sufficient for present development. <p>Projected Facility Demand and Capacity Analysis / Recommendations</p> <ul style="list-style-type: none"> • Future development will require additional exfiltration trench and/or a lake outfall systems • The campus has sufficient area to provide additional lake area and/or exfiltration trench for future development • BMP should be incorporated into the drainage infrastructure design
3.8	<p><u>EC-POTABLE WATER DATA AND ANALYSIS REQUIREMENTS</u></p> <p>Potable Water System Inventory</p> <ul style="list-style-type: none"> • System connects to 30" water main located on SW 107th Avenue. • All water mains owned and maintained by WASD <p>Existing Facility Demand and Capacity Analysis</p> <ul style="list-style-type: none"> • Physical condition of water main distribution system is adequate. • FY 2011-2012 consumption: 36,724 GPD • FY 2011-2012 annual consumption: 13,404,228 gallons • LOS: 14.5 Gallons per Capita per day <p>Projected Facility Demand and Capacity Analysis / Recommendations</p> <ul style="list-style-type: none"> • Onsite primary distribution system will need expansion for future development and missing links to provide a "looped" system. • New secondary systems required

Item No.	Description
	<ul style="list-style-type: none"> • Elimination of dead end systems will be required. • FY 2014-2015 consumption: 38,947 GPD • FY 2019-2020 consumption: 43,718 GPD
<p>3.9</p>	<p><u>EC-SANITARY SEWER DATA AND ANALYSIS REQUIREMENTS</u></p> <p>Sanitary Sewer System Inventory</p> <p>The system consists of:</p> <ul style="list-style-type: none"> • Gravity sewer lines • Series of lift stations • System connects to WASD force main located on SW 107th Avenue <p>Existing Facility Demand and Capacity Analysis</p> <ul style="list-style-type: none"> • Sanitary sewer system is in good condition. • FY 2011-2012 sanitary sewage flow: 36,724 GPD • LOS: 10.4 Gallons per Capita per day <p>Projected Facility Demand and Capacity Analysis / Recommendations</p> <ul style="list-style-type: none"> • Modifications to the existing system may be necessary due to the site plan and/or system configuration • FY 2014-2015 sanitary sewage flow: 38,840 GPD • FY 2019-2020 sanitary sewage flow: 43,597 GPD
<p>3.10</p>	<p><u>EC-SOLID WASTE DATA AND ANALYSIS REQUIREMENTS</u></p> <p>Solid Waste Collection Facilities Inventory</p> <p>Solid Waste collection and disposal is accomplished through a combination of utilizing:</p> <ul style="list-style-type: none"> • University staff • Private contractors • Public entities • Trash is collected in dumpsters at various on-campus locations (approx. 65 dumpsters/compactors) • Recycling program is executed by the Custodial Services Department • Single stream recycling <p>Existing Facility Demand and Capacity Analysis</p> <ul style="list-style-type: none"> • FY 2011-2012 solid waste produced: 241 Tons • FY 2011-2012 recycling produced: 93 Tons <p>Projected Facility Demand and Capacity Analysis</p> <ul style="list-style-type: none"> • FY 2014-2015 solid waste & recycling produced: 376 Tons • FY 2019-2020 solid waste & recycling produced: 436 Tons

Item No.	Description
3.11	<p><u>BBC-STORMWATER MANAGEMENT DATA AND ANALYSIS REQUIREMENTS</u></p> <p>Stormwater Management System Inventory</p> <p>The stormwater management system consists of:</p> <ul style="list-style-type: none"> • Percolation • Overland flow • Exfiltration systems • Positive drainage systems with outfalls to onsite lakes • Outfalls to north and east sides of site <p>Existing Facility Demand and Capacity Analysis</p> <ul style="list-style-type: none"> • The capacity of the existing stormwater system at BBC is sufficient for present development. • The water bodies on the campus are not interconnected, which does not allow the drainage sub-basins to compensate each other for inconsistencies in rainfall and runoff areas. As a result, some areas within the campus have drainage problems. <p>Projected Facility Demand and Capacity Analysis / Recommendations</p> <ul style="list-style-type: none"> • Future development will require additional exfiltration trench and/or a lake outfall systems • All water bodies should be interconnected • BMP should be incorporated into design
3.12	<p><u>BBC-POTABLE WATER DATA AND ANALYSIS REQUIREMENTS</u></p> <p>Potable Water System Inventory</p> <ul style="list-style-type: none"> • System connects to 16" and 30" water mains located on NW 151th Street and NW 135th Street. • All water mains owned and maintained by the City of North Miami • Utilizes irrigation quality, treated effluent from the North Regional Wastewater Treatment Plant. <p>Existing Facility Demand and Capacity Analysis</p> <ul style="list-style-type: none"> • Physical condition of water main distribution system is adequate. • FY 2011-2012 consumption: 75,668 GPD (plus 8,806 GPD of reclaimed water) • FY 2011-2012 annual consumption: 27,618,725 gallons (plus 44,609,972 gallons of reclaimed water) • LOS: 10 Gallons per Capita per day <p>Projected Facility Demand and Capacity Analysis / Recommendations</p> <ul style="list-style-type: none"> • The onsite primary distribution system is sufficient for future development • New secondary systems required • FY 2014-2015 consumption: 80,085 GPD • FY 2019-2020 consumption: 94,208 GPD

Item No.	Description
3.13	<p><u>BBC-SANITARY SEWER DATA AND ANALYSIS REQUIREMENTS</u></p> <p>Sanitary Sewer System Inventory</p> <p>The system consists of:</p> <ul style="list-style-type: none"> • Gravity sewer lines • Master pump station • System connects to WASD force main <p>Existing Facility Demand and Capacity Analysis</p> <ul style="list-style-type: none"> • Pump station requires upgrades • FY 2011-2012 sanitary sewage flow: 75,660 GPD • LOS: 10.4 Gallons per Capita per day <p>Projected Facility Demand and Capacity Analysis / Recommendations</p> <ul style="list-style-type: none"> • Modifications to the existing system may be necessary due to the site plan and/or system configuration • Due to the age of the system, infiltration and pump station conditions may need to be evaluated • Elimination of dead end systems will be required. • FY 2014-2015 sanitary sewage flow: 80,109 GPD • FY 2019-2020 sanitary sewage flow: 94,236 GPD <p>A recent study of the sanitary system at BBC will be distributed to planning team.</p>
3.14	<p><u>BBC-SOLID WASTE DATA AND ANALYSIS REQUIREMENTS</u></p> <p>Solid Waste Collection Facilities Inventory</p> <p>Solid Waste collection and disposal is accomplished through a combination of utilizing:</p> <ul style="list-style-type: none"> • University staff • Private contractors • Public entities • Trash is collected in dumpsters at various on-campus locations (approx. 65 dumpsters/compactors) • Recycling program is executed by the Custodial Services Department • Single stream recycling <p>Existing Facility Demand and Capacity Analysis</p> <ul style="list-style-type: none"> • FY 2011-2012 solid waste produced: 676 Tons • FY 2011-2012 recycling produced: 260 Tons <p>Projected Facility Demand and Capacity Analysis</p> <ul style="list-style-type: none"> • FY 2014-2015 solid waste & recycling produced: 1,055 Tons • FY 2019-2020 solid waste & recycling produced: 1,261 Tons

Item No.	Description
3.15	<p data-bbox="360 367 1089 401"><u>MMC-CHILLED WATER DATA AND ANALYSIS REQUIREMENTS</u></p> <p data-bbox="360 430 716 464">Chilled Water System Inventory</p> <p data-bbox="360 464 1406 525">The MMC chilled water system consists of three chilled water plants connected to a common piping distribution loop.</p> <p data-bbox="410 554 737 588">Plant #1 – Main Chiller Plant</p> <ul data-bbox="459 588 987 863" style="list-style-type: none"> • Centrally located on campus • Five centrifugal chillers <ul data-bbox="553 646 987 800" style="list-style-type: none"> • Chiller #1 Trane 1,500 Tons • Chiller #2 Trane 1,500 Tons • Chiller #3 Carrier 1,500 Tons • Chiller #4 Trane 1,500 Tons • Chiller #5 Carrier <u>1,500 Tons</u> • Main Chiller Plant Capacity 7,500 Tons • No available space for additional chillers <p data-bbox="410 892 867 926">Plant #2 – Sub / Secondary Chiller Plant</p> <ul data-bbox="459 926 1276 1108" style="list-style-type: none"> • Located adjacent to Main Chiller Plant • Two centrifugal chillers <ul data-bbox="553 984 1024 1045" style="list-style-type: none"> • Chiller #1A Carrier 1,500 Tons • Chiller #2A Carrier <u>1,500 Tons</u> • Sub/Sec Chiller Plant Capacity 3,000 Tons • Available space in existing building for one future 1,500 Ton Chiller <p data-bbox="410 1138 813 1171">Plant #3 – NE Satellite Chiller Plant</p> <ul data-bbox="459 1171 1365 1383" style="list-style-type: none"> • Currently under construction • Located on the NE corner of campus in the future medical research district • Two centrifugal chillers <ul data-bbox="553 1262 1032 1323" style="list-style-type: none"> • Chiller #1B 1,500 Tons • Chiller #2B <u>1,500 Tons</u> • NE Satellite CW Plant Capacity 3,000 Tons • Available space to accommodate three additional 1,500 Ton Chillers <p data-bbox="360 1413 940 1446">Current Campus Chilled Water (CW) Plant Capacity</p> <ul data-bbox="459 1446 1032 1568" style="list-style-type: none"> • Main CW Plant (Current) 7,500 Tons • Sub/Sec CW Plant (Current) 3,000 Tons • <u>NW Satellite CW Plant (Current) 3,000 Tons</u> • Total Current CW Plant Capacity 13,500 Tons <p data-bbox="360 1598 979 1631">Available Chilled Water (CW) Plant Expansion Capacity</p> <ul data-bbox="459 1631 1105 1753" style="list-style-type: none"> • Main CW Plant (Future Growth) 0 Tons • Sub/Sec CW Plant (Future Growth) 1,500 Tons • <u>NW Satellite CW Plant (Future Growth) 4,500 Tons</u> • Total Current Chiller Plant Capacity 6,000 Tons <p data-bbox="360 1782 1276 1816">Total Existing CW Plant Capacity <u>including Future Growth</u> 19,500 Tons</p> <p data-bbox="360 1816 1276 1850">Total Existing CW Plant Capacity <u>with N+1 Redundancy</u> 18,000 Tons</p>

Item No.	Description
	<p>Current Campus Chilled Water (CW) Plant Capacity</p> <ul style="list-style-type: none"> • Total Current CW Plant Capacity 13,500 Tons • Estimated CW Peak Demand <u>12,000 Tons</u> • Remaining Current Capacity <u>1,500 Tons</u> (Provides N+1 Redundancy – No available capacity) <p>Current Campus Chilled Water Peak Demand Density</p> <ul style="list-style-type: none"> • The current campus chilled water system serves approximately 3 million square feet of conditioned space (including SCC and Stempel Complex) • The estimated peak CW demand is 12,000 Tons • Current Chilled Water Peak Demand Density ~ 250 SF/Ton <p>Current Campus Chilled Water (CW) Pumping Capacity</p> <ul style="list-style-type: none"> • Plant #1 – Main CW Plant 19,305 GPM • Plant #2 – Sub/Secondary CW Plant 12,870 GPM • <u>Plant #3 – NE Satellite CW Plant 6,000 GPM</u> • Total Current CW Pumping Capacity 38,175 GPM <p>Current Campus Chilled Water (CW) Piping Distribution Capacity</p> <ul style="list-style-type: none"> • 16" CW Cross-Connect between Main/Sub CW Plants and the new NE Satellite CW Plant • Underground CW piping upgrades based on 2009 CW (Distribution Study by Anderson-Williams completed)
3.16	<p><u>MMC-ELECTRICAL POWER AND OTHER FUELS DATA AND ANALYSIS REQUIREMENTS</u></p> <p><u>Electrical Power and Other Fuels System Inventory</u></p> <p>Florida Power and Light provides electrical service to the campus from five 13.2 KV feeders.</p> <ul style="list-style-type: none"> • Three underground feeders originating from the International Substation located on the SW corner of campus serve the majority of buildings within the campus core. • One overhead feeder routed on SW 117th Ave originating from the International Substation serves the FIU Arena, Sports Fields, Parking Garages and Modular Classrooms located on the west portion of campus. • One overhead feeder routed on SW 107th Ave originating from the Tropical substation currently serves the housing district located on the east portion of campus. <p><u>Electrical Power and Other Fuels System Inventory</u></p> <ul style="list-style-type: none"> • The Tropical Substation is fully built out • The new Medical Research District will be served from one of the three underground feeders originating from the International Substation. • The Tropical Substation feeder in the new Medical Research District will remain as a back-up feeder. • FP&L is considering a new feeder from the Flagami Substation to replace the

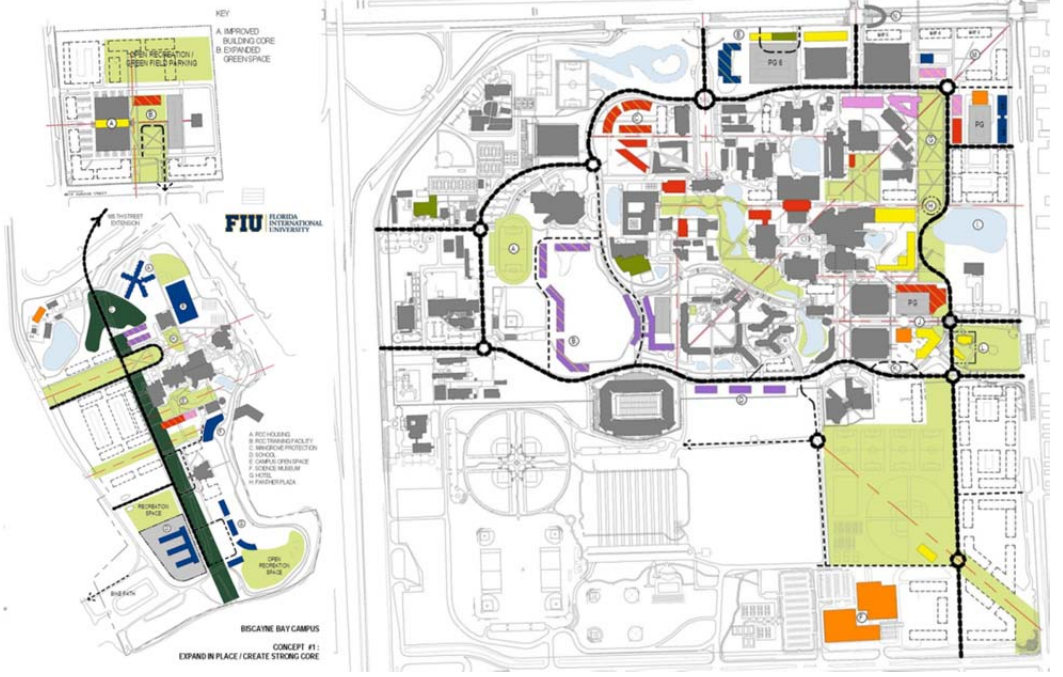
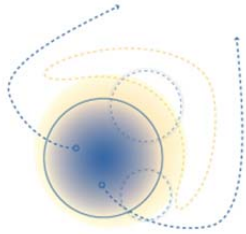
Item No.	Description
	<p>Tropical Substation feeder to back-up the new Medical Research District.</p> <p><u>Electrical Power and Other Fuels System Inventory</u></p> <ul style="list-style-type: none"> • The annual peak demand recorded between July 2011 and June 2012 was 23,670 KW (April 2012). • The current electrical distribution has sufficient capacity for campus growth. FP&L will ensure appropriate level of service to all campus buildings. • The current electrical distribution serves approximately 6.5M square feet of buildings. • The Main Chiller Plant is on the CILC (Commercial/Industrial Load Control) Rate. Interruption of service has been called 3 to 4 times in the past 2 years. FP&L provides warning 4 hours prior to interruption of service. The CILC rate provides value to FIU. <p><u>Current Campus Electrical Demand Density ~ 3.6 W/sf</u></p> <p>Emergency and Standby Power is provided from diesel engine-generator sets serving the following buildings:</p> <ul style="list-style-type: none"> • Science Classroom Complex • Stempel Complex • Engineering and Computer Sciences • Wertheim Conservatory • Owa Ehan • Chemistry and Physics • University Tower • Herbert and Nicole Wertheim Performing Arts Center • Management and Advanced Research Center • Deuxiem Maison • Health and Life Sciences • Everglades Hall • Central Utilities • Viertes Haus • Charles E. Perry • Parking Garage 3 • Parking Garage 4 • Ernest R. Graham Center • Various Campus Support Buildings
3.17	<p><u>MMC-TELECOMMUNICATIONS DATA AND ANALYSIS REQUIREMENTS</u></p> <p>Telecommunications System Inventory</p> <ul style="list-style-type: none"> • Voice communication system (Telephone) has been converted to VOIP. • Data communication system is comprised of two networks: • FIUnet – Fiber Optic Based System which links: <ul style="list-style-type: none"> • Primera Casa • Deuxieme Maison

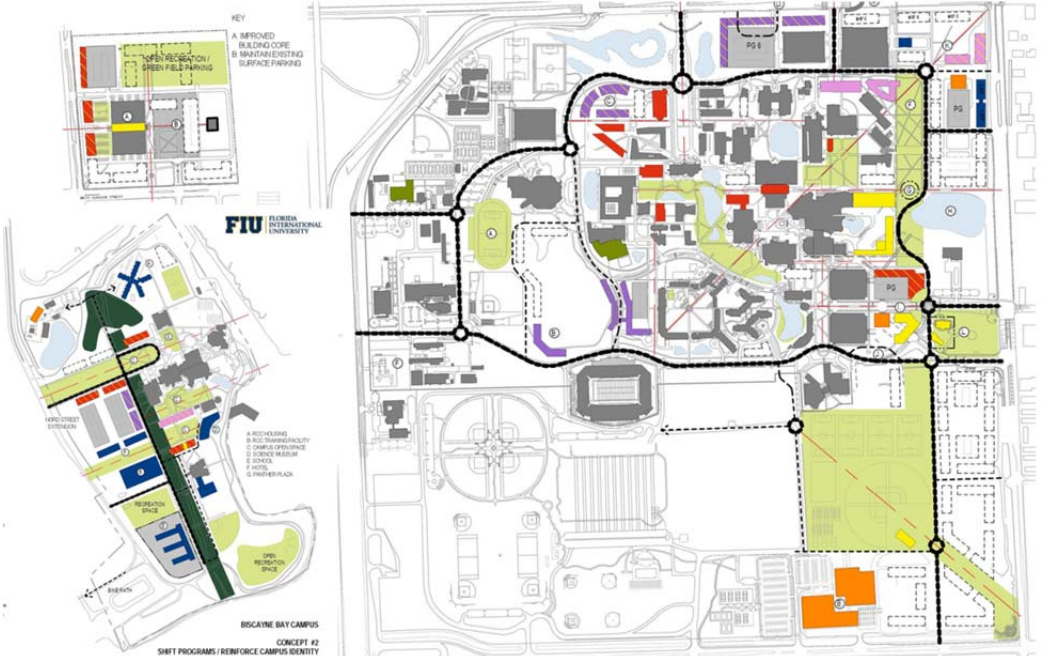
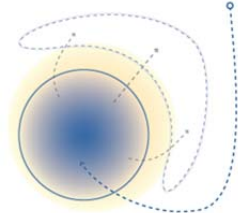
Item No.	Description
	<p>accommodate future growth on campus</p> <ul style="list-style-type: none"> • Emergency and Standby Power are provided by two diesel engine-generators serving: <ul style="list-style-type: none"> • Academic Building One • Wolfe University Center • Central Utility Building • Kovens Conference Center
3.20	<p><u>BBC-TELECOMMUNICATIONS DATA AND ANALYSIS REQUIREMENTS</u></p> <p>Telecommunications System Inventory</p> <ul style="list-style-type: none"> • Voice communication system (Telephone) has been converted to VOIP. • Data communication system is comprised of two networks: <ul style="list-style-type: none"> • FIUnet – Fiber Optic Based System which links: <ul style="list-style-type: none"> • Academic One • Hospitality Management • Library • Wolfe University Center • Administration Network – Twisted Pair, Copper Cable Based System <p><u>BBC currently has only one IT feed serving the campus. It requires a redundant conduit fiber bank.</u></p>
3.21	<p><u>EC-CHILLED WATER DATA AND ANALYSIS REQUIREMENTS</u></p> <p>Chilled Water System Inventory</p> <p>The EC chilled water system consists of one chilled water plant</p> <p>Main Chiller Plant</p> <ul style="list-style-type: none"> • Three centrifugal chillers <ul style="list-style-type: none"> • Chiller #1 Trane 1,300 Tons • Chiller #2 Trane 1,300 Tons • Chiller #3 York 1,000 Tons • Main Chiller Plant Capacity 3,600 Tons • Existing demand is approximately 600 Tons • Remaining available capacity is 2,000 Tons with the remaining 1,000 Ton Chiller as N+1 Redundancy
3.22	<p><u>EC-ELECTRICAL POWER AND OTHER FUELS DATA AND ANALYSIS REQUIREMENTS</u></p> <p>Electrical Power and Other Fuels System Inventory</p> <ul style="list-style-type: none"> • Florida Power and Light provides electrical service from two feeders originating from two separate substations, Flagami Substation and Sweetwater Substation, which serves the Main Classroom Building. • The two feeders are manually selectable in the event of a power failure via a

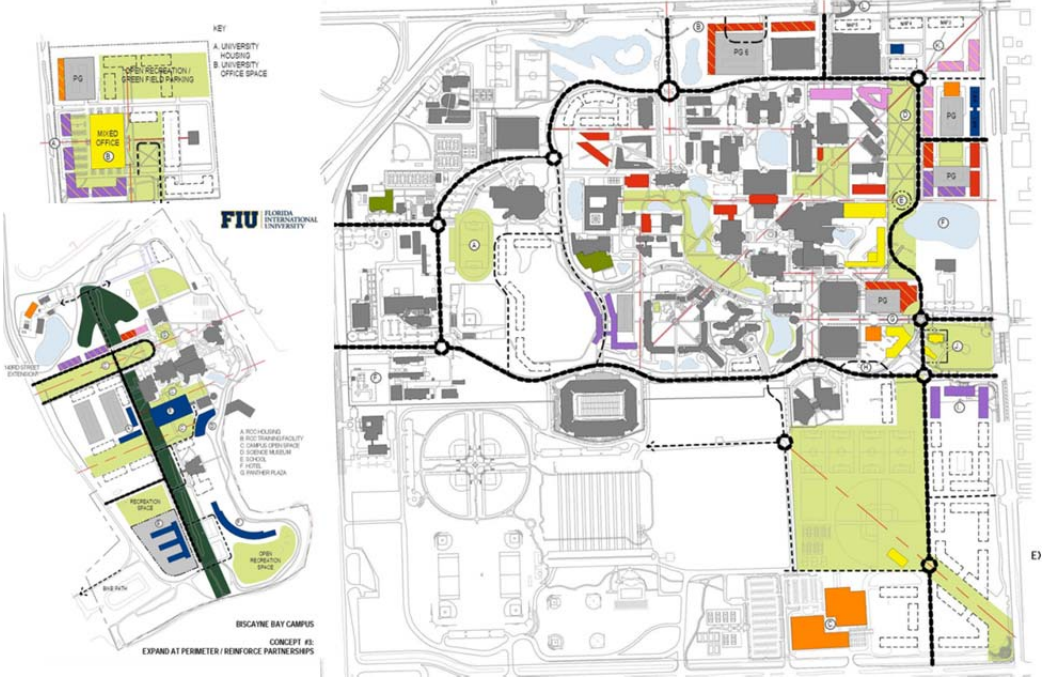
Item No.	Description														
	<p>manual tie circuit breaker.</p> <ul style="list-style-type: none"> • The Wall of Wind is served from a single feeder originating from the Flagami Substation 														
3.23	<p><u>EC-TELECOMMUNICATIONS DATA AND ANALYSIS REQUIREMENTS</u> Telecommunications System Inventory</p> <ul style="list-style-type: none"> • Voice communication system (Telephone) has been converted to VOIP. • Data communication system is comprised of two networks: <ul style="list-style-type: none"> • FIUnet – Fiber Optic Based System which links: <ul style="list-style-type: none"> • CEAS Building • Utility Buildings • EICnet – Combination Fiber Optic Based / Twisted Pair, Copper Cable Based System <ul style="list-style-type: none"> • Links all users within the EICnet system • System is operated, maintained and managed by the College of Engineering 														
3.24	<p>FUTURE SPACE NEEDS SUMMARY for 2020 PLAN:</p> <p><u>FIU NEEDS BEYOND PLANNED CAPITAL PROJECTS</u></p> <table border="0"> <tr> <td>ACADEMIC:</td> <td>940,600 SF</td> </tr> <tr> <td>SUPPORT:</td> <td>796,200 SF</td> </tr> <tr> <td>RESEARCH:</td> <td>155,800 SF</td> </tr> <tr> <td>FACILITY SUPPORT:</td> <td>116,900 SF</td> </tr> <tr> <td>RECREATION:</td> <td>90,900 SF</td> </tr> <tr> <td>CLINIC:</td> <td>35,230 SF</td> </tr> <tr> <td>TOTAL:</td> <td>2,135,630 SF</td> </tr> </table> <p>HOUSING: 509,750 SF (1542 BEDS)</p> <p>PARKING: NO NEW PARKING REQUIRED with addition of the new PG-6 <u>Not factoring in any partnership projects parking needs.</u></p> <p>RECREATION FIELDS/ COURTS: SOCCER/ FOOTBALL FIELDS 5 (This assumes continued use of Mourning High School) SOFTBALL FIELDS 4 (This assumes fields at Tamiami Park are still used) TENNIS COURTS 3 VOLLEYBALL COURTS 3</p>	ACADEMIC:	940,600 SF	SUPPORT:	796,200 SF	RESEARCH:	155,800 SF	FACILITY SUPPORT:	116,900 SF	RECREATION:	90,900 SF	CLINIC:	35,230 SF	TOTAL:	2,135,630 SF
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TOTAL:	2,135,630 SF														
3.25	<p>FUTURE SPACE NEEDS SUMMARY for 2035 “VISION PLAN”:</p> <p><u>FIU NEEDS BEYOND PLANNED CAPITAL PROJECTS</u></p> <table border="0"> <tr> <td>ACADEMIC:</td> <td>511,600 SF</td> </tr> <tr> <td>SUPPORT:</td> <td>563,900 SF</td> </tr> <tr> <td>RESEARCH:</td> <td>173,000 SF</td> </tr> <tr> <td>FACILITY SUPPORT:</td> <td>28,500 SF</td> </tr> </table>	ACADEMIC:	511,600 SF	SUPPORT:	563,900 SF	RESEARCH:	173,000 SF	FACILITY SUPPORT:	28,500 SF						
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RESEARCH:	173,000 SF														
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	<p>RECREATION: 44,300 SF STUDENT CLINIC: 15,450 SF <u>TOTAL: 876,250 SF</u></p> <p>HOUSING: 354,250 SF (1090 BEDS)</p> <p>RECREATION FIELDS/ COURTS: SOCCER/ FOOTBALL FIELDS 3 (This assumes continued use of Mourning High School) SOFTBALL FIELDS 2 (This assumes fields at Tamiami Park are still used) TENNIS COURTS 6 VOLLEYBALL COURTS 2 BASKETBALL COURTS 2</p>
3.26	<p>New Projects in Planning or Design Phase: <u>MMC Projects:</u></p> <ul style="list-style-type: none"> • Parking Garage 6 (PG-6) • Ambulatory Care Clinic (ACC) • Medical Arts Pavilion (MAP-1) • Astroscience Center • Alumni Center • Chapel • Student Academic Support Center <p><u>BBC Projects:</u></p> <ul style="list-style-type: none"> • Royal Caribbean Production Studio and Housing • Miami Science Museum-Wildlife Center • Boat Dock • Charter or Magnet School
3.27	<p>Campus Guiding Principles: Each concept plan will incorporate these principles.</p> <ul style="list-style-type: none"> • Develop a sustainable campus environment. • Develop forward looking, innovative and interdisciplinary learning and research environments. • Reinforce FIU's identity through the articulation of landmarks, precincts, edges, buildings, and open spaces. • Create a more compact urban environment. • Develop comprehensive multi-modal solutions to transportation & infrastructure. • Establish better connectivity with neighboring communities. • Create a safe, connected, pedestrian-friendly campus. • Site core academic programs along main axes. • Develop student life mixed use communities. • Foster learning through multipurpose open space. • Create opportunities for partnerships and more engagement with community.

Item No.	Description
3.28	<p>Sustainable Planning Principles: Each concept plan will incorporate these principles.</p> <ul style="list-style-type: none"> • Multi-modal circulation and access to planned transit systems. • Mixed use parking decks at perimeter of campus • More compact urban environment with connectivity to community • Student residential community with mixed use amenities on campus • Creating “green lungs” with open space quadrangles, courtyards, landscaping, and water features • Campus green belt for pedestrian and vehicular movement • Building guidelines encouraging natural ventilation, shading, and daylighting in exterior and interior spaces to reduce energy consumption • Outdoor lighting guidelines for efficient energy use • On-site storm water treatment and management • Landscape guidelines for shade, filtration and water efficiency • Recycling/composting: facilities, construction, mail/print services, dining • Thermal Energy Storage (ice tanks) planned with new chiller plants • Precinct plants: mini-loops for efficiency and shared redundancy.
3.29	<p>Alternative Concept #1: Expand in Place Create a Strong Core</p> <div data-bbox="467 1010 683 1203" style="text-align: center;"> </div> <p><u>Key Characteristics</u></p> <ul style="list-style-type: none"> • Program expansion consolidates current campus districts • Infill buildings and additions strengthen each campus core • Preserves future perimeter building sites at each campus • Maximizes growth at MMC • Minimizes growth at EC and BBC

Item No.	Description
3.30	<p>Alternative Concept #1: Expand in Place Create a Strong Core</p>  <p>KEY</p> <ul style="list-style-type: none"> A IMPROVED BUILDING CORE B EXPANDED GREENSPACE <p>FIU FLORIDA INTERNATIONAL UNIVERSITY</p> <p>BISCAYNE BAY CAMPUS</p> <p>CONCEPT #1: EXPAND IN PLACE / CREATE STRONG CORE</p>
3.31	<p>Alternative Concept #2: Shift Programs Reinforce Campus Identity</p>  <p><u>Key Characteristics</u></p> <ul style="list-style-type: none"> • Academic Health programs strengthen MMC identity • Engineering, Math and Computing programs strengthen EC identity • Hospitality, Communication & Journalism, Education and Environmental Science programs strengthen BBC identity • Maximizes future MMC flexibility • Maximizes balanced growth across campus

Item No.	Description
3.32	<p>Alternative Concept #2: Shift Programs Reinforce Campus Identity</p>  <p>BISCAINE BAY CAMPUS CONCEPT #2 SHIFT PROGRAMS REINFORCE CAMPUS IDENTITY</p>
3.33	<p>Alternative Concept #3: Expand at the Perimeter Reinforce Partnerships</p>  <p><u>Key Characteristics</u></p> <ul style="list-style-type: none"> • Focuses growth at each campus perimeter • Strengthens sites for visible partnerships • Repositions EC highest and best use • Shifts Engineering to MMC • Maximizes future campus core infill opportunities

Item No.	Description
3.34	<p>Alternative Concept #3: Expand at the Perimeter Reinforce Partnerships</p> 
3.35	<p>Focus Group Responses to Alternative Concepts: Each focus group member was provided with dots (green, yellow and red) to identify their concerns or approval of concept ideas. These will be compiled and synthesized into one concept plan that will be developed and presented at our next meeting in January.</p> <ul style="list-style-type: none"> -Existing Chiller Plants can absorb approximately 1.5M sq. ft. of new space before a new satellite chiller plant is needed in the SE precinct of MMC in 2020 plan. Thermal Energy Storage will be considered in new chiller plant developments. -The main infrastructure issue in the Academic Health Center is the need for a new lift station. A new force main is also anticipated to the west along the parkway to PG-6 / SW 112th Ave. -No central IT/Data Center facility is anticipated in 2020 plan. Studies have been done in the past that included 3 potential locations on campus as well as an off site solution. -Given the lack of a secondary access resolution on Biscayne Bay Campus, it was generally agreed that Concept 2 was not feasible in the 2020 plan. A more limited growth strategy at BBC will be used in the 2020 plan. Some partnership projects would also be identified. -Concept #1 had the most elements that were desired. A combination of options 1 and 3 will be developed. -We received favorable responses to the concept of relocating the College of Engineering

Item No.	Description
	<p>academic and research programs from EC to MMC (or Fair Property) in Vision Plan. (per Concept #3) The Engineering Center would then be re-purposed to allow for partnership projects....business incubator spaces/office/support/housing/mixed use....etc. Although funding challenges were identified to achieve this in the short term by some members.</p> <p>-Recreation Outdoor Space needs will not fit on MMC in the 2020 plan. We have indicated them on the Fair Property in the 2020 plan on all schemes. This will require coordination with county as well as shared use agreements with Tamiami Park.</p> <p>-It is anticipated that future FIU facilities will need to be master planned on the County Fair property in the Vision plan (2035) but may not be in the 2020 plan.</p>
3.36	<p>Next Steps: -Work Session #4 Synthesized Concept Plan Review Meeting– scheduled on January 9, 2013 at 10:30pm-12:00pm, Rm CSC 1123.</p>

End of Work Session #3 FOCUS GROUP 5 – Infrastructure, Utilities, & Maintenance Meeting Minutes

The foregoing constitutes our understanding of matters discussed and conclusions reached. Other participants are requested to review these items and advise the originator in writing of any errors or omissions.