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# Bid Package Breakdown

## SUPPLEMENTAL INFORMATION

### For Specialty Contractor

**BP # 7**

**Date: 9/26/14**

**BP Name: Mechanical (HVAC) Infrastructure**

**Bid Package Description:** Replacement /modifications of mechanical equipment and piping.

**Bid Package Value:** \$ 7,000,000.00

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#### **Specific Requirements and Scope:**

Mechanical Infrastructure (equipment, hydronic piping and control wiring) is complex and firms bidding this work as a Prime must be a firm with experience in large industrial / commercial renovation projects.

#### **Specific Skills Required:**

Bidder must be familiar with the fast track performance of project and must understand that the Design is ongoing.

Bid package is a "Design Assist" package and special engineering and experience with mechanical systems is required.

#### **Risks Associated with this Package:**

Work must be completed within the time frames established so as to not hold up the other work.

#### **Experience and Licenses Required:**

Subcontractor must be a specialized trade contractor that has a license to do this type of work that is required per that budget line item.

#### **Schedule/Performance and Manpower Requirements:**

Bidder must be large enough to immediately accommodate any emergency situations that could arise during the performance of the work.

Participants in this package must be responsive to the Prime's direction and schedule needs and must be flexible to provide manpower as needed and when needed.

#### **Insurance Required:**

Subcontractor must be able to be enrolled in an OCIP program or be able to provide insurance limits of the project.

General Liability insurance will be required. (\$5M per occurrence)



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**Bonding required:**

A 100% payment and performance bond will be required (from an A rated size VIII or better).

**Contracting Required:**

Bidder must be able to execute the Hunt Subcontractor Agreement.

Bidder must have home office support that can maintain reporting requirements of the Construction Manager (SBD, CWP and Safety)

Bidder must have a clean record with regards to legal claims.

**Programs:**

SBD (CSBE) and CWP

The Stadium aspires to have at least 70% of the project's workers be residents of Miami-Dade County, 20% of which are from the County's Community Development Block Grant (CDBG) eligible areas.

The Stadium also aspires to hire a minimum of 10% of the project's workers from Miami – Gardens. Labor residing in zip codes 33056, 33055, 33054, 33169 and 33014 should be given first preference for hire.

The project also aspires to utilize as many local firms as reasonably practical and aspires to have at least 35% of the firms hired as subcontractors be firm located within Miami-Dade County.

**Specifics to Line Items:**

**Equipment:** The mechanical equipment (AHUs, FCUs, Fans,) will be purchased and installed by the Prime.

**Piping:** The majority of the large piping will be purchased and installed by the Prime. Portions of the smaller branch piping can be potentially assigned to CSBE Firms.

**Insulation:** The majority of the piping insulation will be purchased and installed by the Prime. Portions of the smaller branch piping can be potentially assigned to CSBE Firms.

**HVAC Controls:** The HVAC Controls will be provided by a sole source subcontractor to the Prime. Portions of the conduit and wiring associated with this work can be potentially assigned to CSBE Firms.

**Fire stopping:** This work can be potentially assigned to CSBE Firms.

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## ATTACHMENT II – SCOPE OF WORK

### 1. SPECIFICATION REFERENCE:

The organization of the specifications into divisions, sections and articles, and the arrangement of the drawings shall not control the Construction Manager in dividing the work among the Subcontractors or in establishing the extent of the Work to be performed by any Subcontractor.

Reference is made to the following Divisions of Work and Specification Sections which relate to this Scope of Work for coordination purposes, but is in no way intended to limit or alter the intent of the Contract Documents:

<u>SECTION NO.</u>	<u>TITLE and DESCRIPTION</u>	
Division 1	Project Manual Technical Specs [Front End]	
Division 23 spec 230501	Mechanical and electrical conditions	09/10/14
230502	Basic Mechanical Requirements	09/10/14
230503	Basic Mechanical Materials and Methods	09/10/14
230513	Motors and Starters	09/10/14
230521	Pipe and Pipe Fittings	09/10/14
230522	Piping Accessories	09/10/14
230523	Valves	09/10/14
230529	Pipe Supports and anchors	09/10/14
230530	Electronic Speed Controllers	09/10/14
230548	Vibration Control	09/10/14
230553	Mechanical Identification	09/10/14
230593	Test-Adjust-Balance	09/10/14
230700	Mechanical Insulation	09/10/14
230800	Building Mechanical System	
	Commissioning	09/10/14
230801	Commissioning Agent Requirements	09/10/14
230900	Building Automation and Automatic	
	Temperature Control Systems	09/10/14
232113	Hydronic Piping	09/10/14
232300	Refrigerant Piping	09/10/14
232513	HVAC System Chemical Treatment	09/10/14
232516	Condenser Water Treating System	09/10/14
233113	Ductwork	09/10/14
233300	Ductwork Accessories	09/10/14
233400	Fans	09/10/14
234000	Air Cleaning	09/10/14
236500	Cooling Towers	09/10/14
237313	Air Handling Units with Coils	09/10/14
237324	Split System DX Air Handling Units	09/10/14
238216	Air Coils	09/10/14
238219	Fan Coil Units	09/10/14
239000	Project Closeout	09/10/14

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## 2. INCLUSIONS:

It is understood and agreed this **Work** includes all inclusions as described in the following subparagraphs regardless of whether or not they are in the above specifications or any other specification section or shown on the plans.

### A. Design Intent

1. It is the intent of the Scope of Work to convey to this Subcontractor the total responsibility for the Work. This Subcontractor understands that due to the "Fast Track" nature of this project, Construction Documents may not be 100 percent complete and will develop as the project progresses. However, the Subcontractor shall perform all work required or reasonably inferred under the best practices in the Construction Industry for a complete and fully functional and operational system(s) for the purpose intended.
2. This project will require the Subcontractor to work as a team member with the Construction Manager and other members of the project team through the completion of construction to assure that all work required by this Scope will be performed in such a manner that it is complete, fully functional, and in accordance with the contract documents within the contract price.
3. References to the term "Contractor" in the Drawings and Specifications shall be interpreted to mean work by this Subcontractor as they relate to this scope of work.

The Scope includes the following items. (The intent of listing scope items is for ease of major scope identification; it is not intended to be a complete listing of all items that may be required to complete the scope of work as required by the Contract Documents). Subcontractor is responsible for all SEATING as indicated in the Contract Documents, including but not limited to;

### B. General HVAC Scope

1. The Scope includes providing general items and services typical to the MEP divisions. (The intent of listing scope items and services is for ease of general scope identification and is not intended to be a complete listing of all items and services that may be required to complete the scope of work as required by the Contract Documents)
2. Provide designated/required personnel to participate in weekly and/ or as necessary MEP Coordination Meetings hosted by the Construction Manager.
3. Provide designated/required personnel to participate in generating and updating the Equipment / Commissioning Matrix.
4. Provide, as required and/or requested by Construction Manager, and /or Building Officials, and / or Owner's Commissioning Agent, personnel to assist

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- the start-up of mechanical systems and the check out of all building controls, life safety systems, and building commissioning using the completed “Commissioning Matrix” resulting from the MEP coordination meetings. This will include any “overtime” required and/or requested and any associated premium costs. Coordinate this work with the Life Safety Systems Contractors and the HVAC Control Systems Contractor as required (if separate contractor).
5. Provide all hoisting, lifting, rigging (with flag personnel) of all materials, tools and equipment during normal working hours. Coordinate and schedule with Construction Manager.
  6. Provide all required lifts, scaffolding, staging etc for personnel and materials for installation of this work. Coordinate loads with structural documents and Construction Manager.
  7. Furnish and install all required block-outs, sleeves, inserts, anchors and openings. Coordinate with all other trades, structural documents and applicable standards prior to installation.
  8. Coordinate and mark-up all block-outs, sleeves, inserts and openings required in precast on precast shop drawings.
  9. Coordinate and mark-up all openings required in masonry walls.
  10. Provide any required core drilling /saw cutting including engineering costs associated with omitted or mislocated block-outs, sleeves and openings. Coordinate with all other trades and structural documents prior to installation.
  11. Provide shop drawings for all block-outs, sleeves, inserts and openings in structural systems not reflected or referenced on structural documents prior to installation.
  12. Provide any required metal deck openings for roof mounted equipment, ductwork and piping. Coordinate with all other trades, structural documents and Hunt prior to installation. Provide and install all required flashing and curbs associated with this work.
  13. Provide UL rated fireproofing assemblies for all penetrations associated with this scope of work. Provide complete submittal of all anticipated applications prior to start of work. Subcontractor understands that Hunt has the option to direct subcontractors to utilize similar or same products, and has included all applicable costs for all major manufacturer or brand name fireproofing and firesafing products in the contract sum.
  14. Provide coordination and physical layout for all required concrete housekeeping pads, bases and curbs.
  15. Provide and install all hangers, supports, clamps, rods, inserts, imbeds, slides, anchors, braces, platforms and clip angles for ductwork, piping, and equipment.
  16. All hangers, supports, clamps, rods, braces, platforms and clip angles must be of a noncorrosive material and be compatible with the South Florida environment.
  17. Coordinate the hanging of ductwork, piping and equipment with subroof contractor and other trades for a combined support system. No equipment or piping will be installed between precast and subroof.
  18. Provide and install all vibration isolation control devices and materials required for isolating equipment, ductwork and piping from the building structure. This includes all building expansion and noise requirements referenced by the Contract Documents, code and industry standards of similar type projects.

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19. Provide and coordinate (lay-out) installation of all access doors required by code, specifications or as reflected on the contract documents. Provide and coordinate (lay-out) as necessary for proper and reasonable access to equipment, piping, valves, etc.. Access doors will match associated finishes and fire ratings. Access doors will be minimized by combined usage with associated contractors determining cost allocation.
20. Provide protection at all times of “open ended” ductwork and piping to prevent vandalism, negligent damages, water/moisture intrusion and dust/debris intrusion. In addition, all ductwork is to be kept off the ground by the use of cribbing or blocking to protect the ductwork from standing water. All ductwork is to be kept under cover or stored in a dry location prior to installation.
21. Coordinate all electrical requirements with Electrical Contractor.
22. Review, understand and coordinate the “Sequence of Operations” as it relates to all Life Safety Systems and provide necessary components and / or options for a fully functional system as required by the Contract Documents and / or the Fire Marshal and / or the Building Officials.

### C. Specific HVAC Scope

1. The Scope includes furnishing and installing the following items. (The intent of listing scope items is for ease of major scope identification and is not intended to be a complete listing of all items that may be required to complete the scope of work as required by the Contract Documents)
2. Provide and install new hydronic cooling equipment, e.g., but not limited to, cooling towers, variable speed drives, hydronic specialties, vibration isolation, hydronic piping systems, instrumentation, chemical water treatment, insulation, packaged air handlers, fan coils, dampers.
3. Provide and install final connections to all hydronic equipment, e.g., but not limited to, fan coils units, and all packaged air handler units and cooling coils per the Contract Documents.
4. Provide and install new chilled water air handlers supported from the structure above at the ground level for the coaches family lounge, officials locker room, two new large clubs on the north and south sides and two smaller clubs on the east and west side of the stadium. The club at the north side is to be incorporated in a presently un-air conditioned area and the south club in an area with a present day office usage. The proposed south club is located in the area where raker beams and seat removal/replacement will occur. Present day chilled water piping in this south service corridor area will be removed and capped as indicated on the drawings outboard of the seat modification area. The existing air handlers as well as the ones described above shall be connected to chilled water piping from the 100 level loop above. Location drops for these risers are indicated on the drawings for reference only and will be coordinated further as design develops.
5. Remove and cap the existing branch ductwork, VAV boxes and associated ductwork and air distribution devices which presently serve the new sales center area (from AHU-3B). The remaining system components associated with AHU-3B serving the present day ground level sales office shall continue to be used

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- until the south club is constructed. At this time the remaining system components and the air handler shall be removed.
6. Cap and make ready for removal of existing air handler (AHU-3C), associated ductwork, VAV boxes, ductwork and air distribution devices serving the former Marlins locker room at the ground level. This area will be served by a new chilled water air handler, ductwork and air distribution devices. This air handlers' mechanical room location will be moved to the old marlins storage room which is presently not in use.
  7. Remove and cap the existing branch ductwork, VAV boxes and associated ductwork and air distribution devices (from AHU-3A) which presently serve the existing mezzanine level offices of the sales center in the area of the raker beam removal area. The remaining system components associated with AHU-3A shall remain.
  8. Cap and make ready for removal of the existing AHU-3A and replace with new unit. Existing ductwork shall be reconnected to the new AHU and the branch ductwork, VAV boxes and air distribution devices replaced in the mezzanine office areas affected by the raker beam removal.
  9. Cap and make ready for removal of the existing air handler AHU-1 (presently serving future broadcast area) at the ground level along with all associated ductwork, air distribution devices, piping, supports and controls.
  10. Provide and install new 20 ton chilled water unit for the new ground level broadcast area. Connect units chilled water piping to the existing piping loop at this level.
  11. Cap and make ready for removal of existing air handlers 2, 6, 7, 8 serving areas at the ground level along with all associated ductwork, air distribution devices, piping, supports and controls. Ahu-8 shall be removed along with its associated branch chilled water piping, hangers and electrical feeds but all associated ducts and air distribution devices are to remain.
  12. Cap and make ready for removal of existing air handlers 3, 4, 4A, 9, 10, 11, 12, 13, 14, 15, 16, K1 at the ground level (4 & 4a at mezzanine level) and disconnect from there associated ductwork and piping. Replace units with equipment as scheduled and modify and reconnect existing associated ductwork as required to accommodate new units connection points.
  13. Ahu-13a shall be renamed as indicated on drawings.
  14. Air handlers being replaced at ground level sidelines and 050 levels shall be fed from the chilled water loop at level 100 where indicated on the drawings. Location for risers down from level 100 to be coordinated with architect/structural engineer.
  15. Cap and make ready for removal existing air handlers 18, 19, 22, 23, 24, 25, 28 and 29 located in mechanical rooms at the end zone and corners of level 100. Disconnect from associated ductwork and piping. The supply air mounted duct heater shall be removed along with its controls and electrical feeds. The end zone air handlers are presently fed from the chilled water loop at level 200. The piping feeding for these air handlers shall be removed in its entirety and the penetrations sealed at the level 200 slab. The corner air handlers are presently fed from risers in chases located by the columns near the mechanical room. Piping run out to existing corner air handlers shall be cut-off within the mechanical room space for connection to the new air handler. Air handlers shall be replaced

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and existing supply, return and outside air ductwork routing modified as required to accommodate new AHU connection points. Chilled water for the end zone air handlers will come from the chilled water loop at level 100. Provide new branch piping to main and valves (2-way). Shut-off valves shall be provided at the new taps to the 100 level loop.

16. Cap and remove fan coils from the existing concessions & stores located above ceilings as indicated on drawings. These fan coils shall be disconnected from there associated ductwork, piping. These fan coils are presently fed from the main on level 000. The piping feeding these fan coils shall be removed in its entirety and the penetrations sealed at the level 200 slab. The fan coil shall be replaced and existing supply, return and outside air ductwork routing modified as required to accommodate new fan coil unit connection points. Chilled water for these fan coils will come from the chilled water loop at level 100. Provide new branch piping to main and valves (2-way). Shut-off valves shall be provided at the new taps to the 100 level loop.
17. Provide and install (2)16.5 ton chilled water horizontal type air handlers for the Founders club area at level 100 supported from the structure above with their associated ductwork, controls, air distribution devices and chilled water branch piping. Units shall be connected to the existing 100 level chilled water loop. Shut-off valves shall be provided at the new taps to the 100 level loop.
18. Provide and install chilled water fan coils (2 tons each) as scheduled for the IDF and electrical rooms at level 100 providing support for the founders club. Units shall be connected to the existing 100 level chilled water loop. Shut-off valves shall be provided at the new taps to the 100 level loop.
19. Provide and install (1)10 ton chilled water horizontal type air handler (final load to be determined) as scheduled supported from the structure for the new Founders club kitchen. Unit shall be connected to the existing 100 level chilled water loop. Shut-off valves shall be provided at the new taps to the 100 level loop.
20. Provide and install a 10 ton chilled water fan coil (final load to be determined) as scheduled in the four new concession areas at level 100. Units shall be connected to the existing 100 level chilled water loop. Shut-off valves shall be provided at the new taps to the 100 level loop.
21. Provide and install new fan coils in the four existing restrooms on the east (2) and west (2). Existing fan coils shall be disconnected from there associated ductwork, piping and removed. These fan coils are presently fed from the chilled water loop at level 200, which is to be removed. The piping feeding these fan coils shall be removed in its entirety. The fan coil shall be replaced and existing supply, return and outside air ductwork routing modified as required to accommodate new fan coil unit connection points. Chilled water for these fan coils will come from the chilled water loop at level 100. Provide new branch piping to main and valves (2-way). Shut-off valves shall be provided at the new taps to the 100 level loop.
22. Remove the fan coil units which serve the east & west corridors that is found below the 3rd level walkway along with their associated ductwork, branch piping, air distribution devices, supports and controls.

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23. Supply air for these corridor areas will be provided with branch ductwork and air distribution devices tapped from the existing ductwork located in shafts serving levels 200 & 300. This ductwork is supplied from the air handlers at level 100.
24. Remove the fan coil units which serve the east & west club suites along with (4) suites on the north and south sides in the areas converted to handicap suites. The fan coil shall be replaced and existing supply, return and outside air ductwork routing modified as required to accommodate new fan coil unit connection points. Chilled water for these fan coils will come from the chilled water loop at level 100. Provide new branch piping to main and valves (2-way). Shut-off valves shall be provided at the new taps to the 100 level loop.
25. Provide and install all work and materials required to provide insulation of all hydronic systems furnished and installed as work of this Subcontract all in accordance with Contract Documents.
26. Chilled water piping throughout the facility that will remain and tapped for new work needs to be inspected. Testing must be performed to verify conditions, breakage, deterioration and damage. Many instances of visual corrosion on piping in which insulation was damaged or missing was observed.
27. Provide and install all hydronic and piping specialties, e.g., but not limited to, air separators, expansion tanks, air vents, strainers, flow meters, relief valves, pressure reducing valves, suction diffusers, balance valves, constant flow valves, and drain valves as per the Contract Documents.
28. Coordinate all condensate drainage with plumbing infrastructure contractors.
29. Provide and install all system identification, tags, charts, color-coding, etc. per the Drawings and Specifications.
30. Provide and install all packaged equipment with factory mounted starters, disconnects, and control panels when available.
31. Provide and install all required loose starters, disconnects, control panels, VFDs and associated fuses/heaters to the Electrical Subcontractor for installation.
32. Provide and install instrumentation, e.g., but not limited to, pressure gauges, gauge taps, test plugs, thermometers, and thermometer wells per the Contract Documents.
33. Provide and install all pipe-o-lets, thread-o-lets, etc. required for the HVAC Controls Systems.
34. Demo and remove the (7) condenser water pumping systems that presently feed the various concession kitchen freezers/coolers. These systems are located as follows: (1) at level 050, (4) at level 100 and (2) at level 400. Systems shall be removed including pumps, valves, controls, piping, supports etc. Equipment shall be turned over to the facilities engineering department.
35. Provide and install a complete water treatment system for new condenser water, and chilled water to include, e.g., but not be limited to, cleaning of piping systems, legal disposal of all chemicals used, chemical feeder equipment, inhibitors, algacides, and biocides per Contract Documents.
36. Provide and install additional cooling tower cell to match existing. Existing cooling tower on the east side of the facility to have the one remaining 750 ton galvanized cell removed and replaced with a new stainless steel cell of the same configuration as scheduled. New cell shall be re-piped into existing system.

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37. Provide complete with tower accessories, ladders, etc., vibration isolation and accessories per Contract Documents. Provide "CAD" shop drawings and coordinate with Misc. Metals Contractor for supports and connection points.
38. Provide and install packaged, fan coils, split systems, central station air handlers complete with, fans, vibration isolation, filters, cooling coils, and accessories per Contract Documents.
39. Provide and install a complete systems air and water balance for both hydronic systems and HVAC systems. Perform all sound measurement and vibration measurement as specified.
40. Provide and install all required sheave and belt changes required to successfully accomplish the air and water balance as specified for equipment and furnished under this scope of work.
41. Provide and install all engineered supports, hydronic equipment supports, equipment stands, miscellaneous iron, knee bracing, hanger steel, intermediate steel required to span open spaces within the structure, pipe legs, etc., as may be required to meet the intent of the Contract Documents.
42. Furnish, as required and/or requested by construction manager and /or building officials, personnel to assist the start-up of mechanical systems and the checkout of all building controls, life safety systems, and building commissioning. This will include any "overtime" required and/or requested and any associated premium costs. Coordinate this work with the Life Safety Systems Contractors.
43. Provide final cleaning and wipe down of all HVAC equipment including sheet metal as per Contract Documents. Provide the final cleaning just prior to the Owners first event.
44. Coordinate and schedule installation of Air Handling Units (AHUs) with architectural walls, ceilings etc. Provide and install all required supports for associated piping, ductwork, enclosures, devices, etc.
45. Coordinate with build-out contractors a complete airside balancing for sheet metal and ventilation systems. Furnish the necessary manpower as required and / or requested by Construction Manager to assist a complete System Balance as required.
46. Provide and install all built up plenums, housings and casings for the ventilation systems as indicated by the Contract Documents.
47. Provide and install all structural support of housings, plenums and casings to fully support and brace field erected housings and plenums per Manufacturers recommendations and the Contract Documents.
48. Provide and install supply air fans, filter sections with frame work, vibration isolators equipment, automatic dampers installation, and drain pans as required per the Contract Documents.
49. Provide and install auxiliary drain pans to include condensate drain lines where required by local codes, Drawings and Specifications or as required and recommended by equipment manufacturers.
50. Provide and install louver blank off panels on all unused louver areas, include double-wall insulation of blank off panel as required.
51. Provide and install fire damper sleeves, angles and access doors as required per the Contract Documents, local code and SMACNA.
52. Provide and install galvanized angle iron safe off of openings around duct perimeters where penetrations through walls or floors are made. Closure metal

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shall be provided for both sides of wall penetrations. Provide fire-safing behind angle iron in rated walls where fire dampers are not installed. Also provide fire-safing around the angle to the wall as well as any space between the wall and the duct.

53. Coordinate and/or install duct mounted smoke detectors provided by Electrical Contractor.
54. Subcontractor acknowledges and agrees that all motorized dampers that do not interface with the fire alarm system shall be controlled by this subcontractor.
55. Subcontractor shall operate and maintain mechanical systems until substantial completion of the work.
56. Remove the fan coil units, associated ductwork, air distribution devices, piping and controls which serve the west club suites in the areas converted for the LIV expansion at level 200. The new area will be provided with (2) five ton fan coils. Piping for these fan coils will be from the chilled water loop at level 100. Provide new branch piping to main and valves (2-way). Shut-off valves shall be provided at the new taps to the 100 level loop.
57. Remove the fan coil units which serve the NE, NW, SW, SE, N, S, W, E club suites along with their associated ductwork, branch piping, air distribution devices, supports and controls. The suites shall be provided with new fan coil along associated ductwork, controls and air distribution devices. Chilled water for these fan coils will come from the chilled water loop at level 100. Provide new branch piping to main and valves (2-way). Shut-off valves shall be provided at the new taps to the 100 level loop.
58. Disconnect and remove the existing exhaust fans located in the restroom ceiling at level 300 from their associated ductwork. These fans serve the restrooms on the east and west sides at the north and south ends. Fans shall be replaced in their present locations on the NE, NW and SE corners and reconnected to existing ductwork. The existing ductwork shall be modified as required to accommodate new fan connection points. The SW corner 300 level restroom area has been removed. The ductwork from fan at this level and associated air distribution devices shall be removed. The new fan shall be installed in the level 200 ceiling and the existing ductwork modified as indicated on the drawings to accommodate the fans inlet outlet points. Provide discharge louver at the wall as indicated on the drawings.
59. Cap and Make ready for removal the existing air handler 32 located on level 400 serving the Bokampers area on the east side of level 300 along with its associated ductwork, air distribution devices, piping, supports and controls. Unit shall be turned over to building engineering.
60. Provide and install mini-split type units as scheduled for the four new IT rooms located on the north and south section of the facility at level 300. The condensing unit for these mini splits shall be located at level 400 above. Each system shall be comprised of (2) wall hung mini-split air handlers connected to (1) condensing unit.
61. Cap and remove existing fan coils along with their chilled water branch piping, controls and supports from the existing concessions & stores at level 400 located above ceilings and on roofs as indicated on drawings. These fan coils shall be

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disconnected from there associated ductwork, piping. Provide and install new fan coils units for the concessions as scheduled. The Existing supply, return and outside air ductwork routing will be modified as required to accommodate new fan coil unit connection points. The new fan coils shall be provided chilled water from existing risers as indicated on the drawings.

62. Cap and make ready for removal of existing air handling unit 33 supported from the structure above which serves the suppers suites and press box at the levels below. The air handler shall be replaced and existing supply, return and outside air ductwork routing modified as required to accommodate new unit connection points. Chilled water for this unit will come from the chilled water piping riser located at the south elevator core structure. Provide new branch piping to main and valves (2-way).
63. Provide and install a 5 ton chilled water AHUs as scheduled for the four new concession areas at level 400. The new fan coils incorporated on the east and west sides of the elevator core structures shall be provided chilled water from existing 6" risers located at the N, S structures as indicated on the drawings.
64. Provide and install upgrade to the existing BAS system. Coordinate, furnish and install all components, raceways and wiring with existing BMS system to provide a fully functional BAS system; including control panels, cabinets, alarms, devices, central processing unit, conductors, connectors, etc. as indicated in the Contract Documents. Furnish an install all wiring in conduit for all new and relocated BAS devices.
65. The building automation system is fully capable of expanding along with the future needs of the facility. The suite and common area fan coils presently are not monitored by the system. All fan coil units when replaced shall be provided with unit mounted controls compatible with the existing buildings BAS. All new air handlers shall be connected to the BAS system.
66. Provide and install point of interface at all future build-out spaces, food services areas and suites. These interface points will be used for interface of lighting control and specific food service equipment.

