ADDENDUM

Date:	January 22, 2013	**Project:**	WSC – Carlson Natatorium and Recreation Center Chilled Water project
To:	Bidding Contractors	**Project No.:**	12072-212
		Addendum No.:	1
		CC:	

This addenda is issued by the Architect/Engineer to all known bidders before receipt of proposals. Bidders shall acknowledge the receipt of this Addendum on their bid form and all information and instructions given herein shall become a part of the Contract Documents.

GENERAL

Prior Approvals – If not specifically called out as OR EQUAL under the specified product the following substitutes are acceptable as long as they meet specification; this is not a formal approval that can only be determined at shop drawing/submittal review stage.

Chilled Water Coils	USA Coil and Air, RAE Coils
Automatic Flow Control Valves	Pro Hydronic Specialties
The following items were submitted for prior approval but have NOT been approved.	

General Pre-Bid Meeting Item:

Sign-in sheets for the pre-bid meeting are attached for informational purposes only.

CLARIFICATIONS

1. The Engineers opinion of probable cost is $400,000.

CHANGES TO PROJECT MANUAL

22 05 29 – Hangers and Supports For Plumbing Piping and Equipment

1. Shop drawings are required for all areas, shop drawings including hangers and supports product data including contractor's valid welding certificate.

CHANGES TO PROJECT DRAWINGS

All work shall be in accordance with the terms, stipulations, and conditions of the original contract.

Mechanical

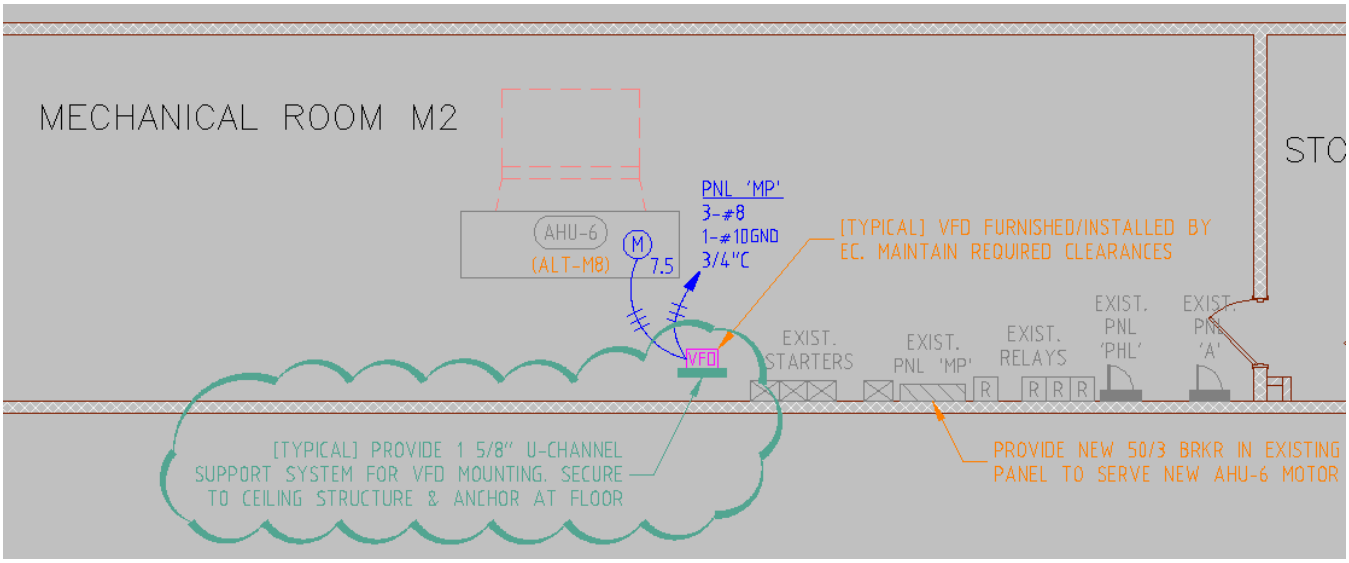
1. **Sheet M1.0**
   - **A. Sheet Notes**
     1) General Note, Add "contractor is responsible for protect all floors during the construction process".
   - **B. Carlson Natatorium & Rec. Center 2nd Floor Plan View**
     1) New chilled water supply and chilled water return piping shall follow the slope/pitch of the roof.
   - **C. Carlson Natatorium & Rec. Center 2nd Floor Plan View**
     Carlson Natatorium Balcony Plan View
     1) Add note 16. (see attached drawing page 1 of 1 on sheet M2.0). Typical per wall/ceiling penetration.

2. **Sheet M2.0**
   - **A. Sheet Notes**
     1) General Note, Add "contractor is responsible for protect all floors during the construction process".

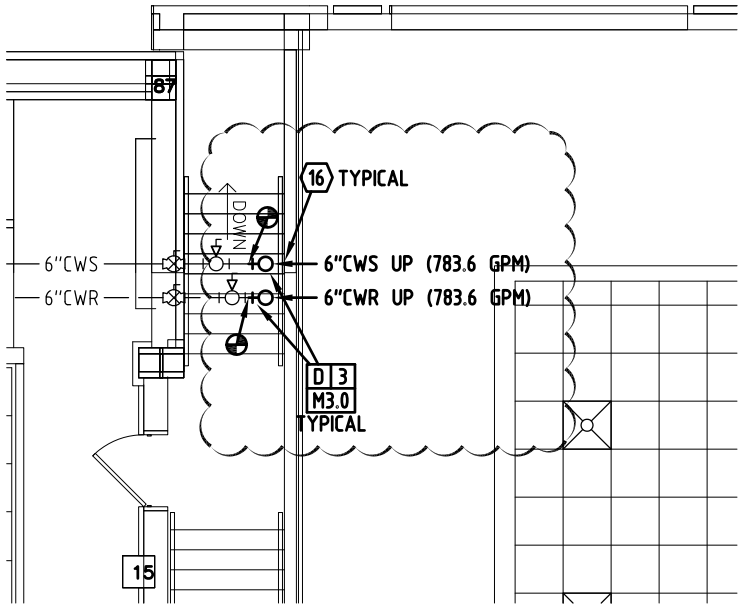
3. **Sheet M3.0**
   - **A. Pipe Material And Insulation (see attached drawing page 1 0f 1 on sheet M3.0 for the following pipe changes)**
     1) Humidity Condensate Pipe, Delete first line entirely.
     2) Chilled Water (2½"-up)
     3) Rain Water

Electrical

1. **Sheet E2.0**
   - **A. Sheet Notes**
     1) Keynote 3: reword as follows – Provide new wire in NEW ¾" c. and route to Panel 'PL' in Lower Level of Carlson Bldg (approximate distance is 150ft). Remove existing 40/3 breaker and replace with new 50/3 breaker. Panel 'PL' is a GE 100A. MLO 120/208v. 3ph. 4w. 10kaic 36 pole panel. All conduit that is installed that will be exposed shall be painted to match existing ceiling/walls.
     2) Add General Note A: contractor shall paint all new conduit this is installed that will be exposed shall be painted to match existing ceiling/walls.
   - **B. Rec. Center Mezzanine Plan**
     1) For VFDs shown, coordinate location with owner and mechanical contractor. Do not locate VFDs and u-channel in access pathway or where equipment clearances are not maintained.
   - **C. Carlson Natatorium Balcony Plan**
     1) Due to space restrictions, VFD for AHU-6 shall be mounted on u-channel support frame system away from wall as shown below. Provide u-channel system with all required accessories and securely attach to floor and wall.



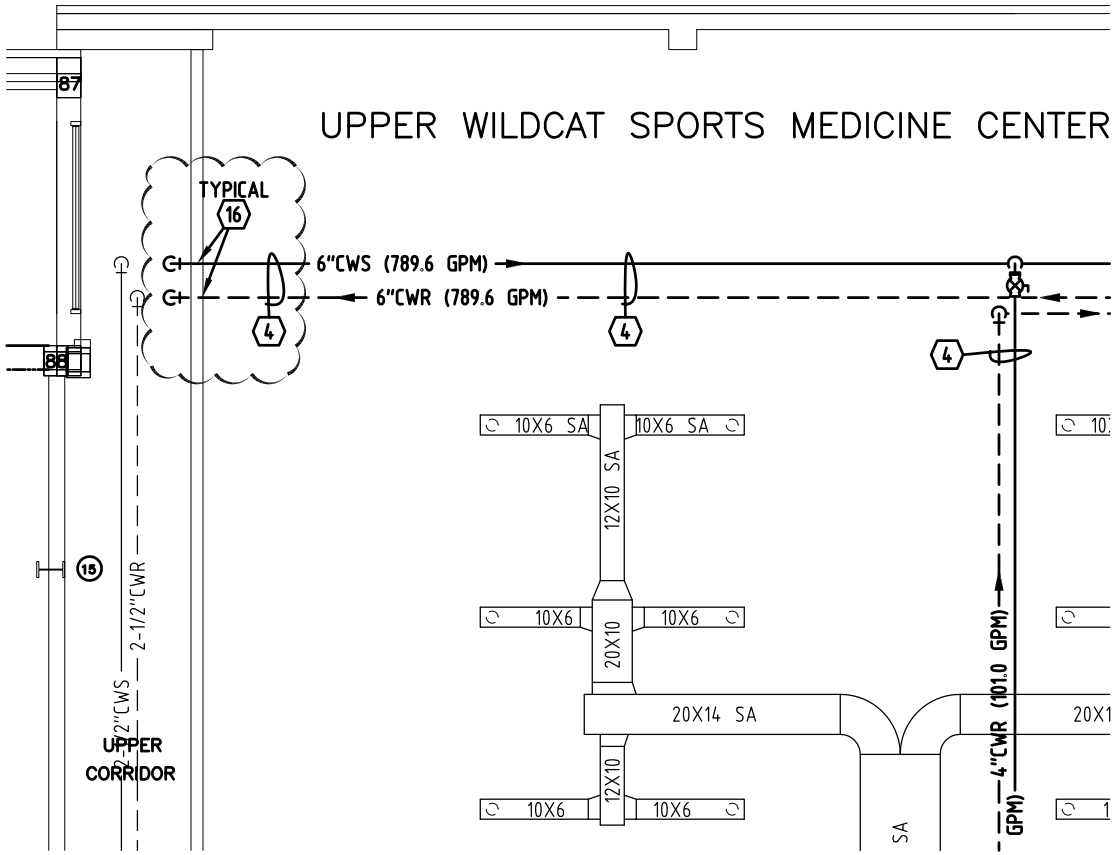
By:	Date:
Kyle Wilkinson, Jeff Johnson	01/22/13



M 1
M2.0

CARLSON NAT...

SCALE: 1/8"=1'-0"



M 3
M2.0

CARLSON NATATORIUM BALCONY PLAN VIEW

SCALE: 1/8"=1'-0"

15. INSTALL NEW CONTROL VALVE IN CHILLED WATER PIPING (PROVIDED BY CONTROLS CONTRACTOR).

16. WALLS AND CEILINGS TO BE PATCHED AND REPAIRED AFTER NEW PIPING IS ROUTED THROUGH SAID WALLS AND CEILINGS. TYPICAL ALL LOCATIONS WHERE NEW PIPING PENETRATES EXISTING WALLS.

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ADVANCED ENGINEERING SYSTEMS

PROJECT: WSC CARLSON NATATORIUM AND RECREATION CENTER CHILLED WATER PROJECT WAYNE STATE COLLEGE

PROJECT #: 12072

DATE: 1/22/2013

DESCRIPTION: ADDENDUM #1

SHEET: M2.0

NUMBER: 1 of 1

PIPE MATERIAL AND INSULATION

PIPE	PIPING							PIPING INSULATION				"K VALUE"		NOTES
	PIPE SIZE	RELATION TO GRADE	MATERIAL	FITTING TYPE	MINIMUM SLOPE	VALVES	MUST COMPLY WITH	INSULATION TYPE	MATERIAL TYPE	THICKNESS INCH	DENSITY LBS/FT^3	MIN. VALUE	AT TEMP	
CHILLED WATER	1/2" - 2"	ABOVE	SCHEDULE 40 BLACK STEEL	THREADED	-	BALL, BUTTERFLY	ASTM A 53	MOLDED SECTION	JACKETED FIBERGLASS	1-1/2"	3	.22	75°	1,3,4
CHILLED WATER	2-1/2" - UP	ABOVE	SCHEDULE 40 BLACK STEEL	CONTINUOUSLY WELDED	-	BALL, BUTTERFLY	ASTM A 53	MOLDED SECTION	JACKETED FIBERGLASS	1-1/2"	3	.22	75°	1,3,4
RAINWATER	ALL	ABOVE	CAST IRON	NO-HUB CISPI 310/NSF	1/8" FOOT	-	ASTM A 888 CISPI 301	MOLDED SECTION	JACKETED FIBERGLASS	1"	3	.22	75°	1,2,4
HUMIDITY CONDENSATE	ALL	ABOVE	TYPE "L" COPPER	CAST SOLDER	1/8" FOOT	-	ASTM B 88	NON-SPLIT CLOSED CELL	FLEXIBLE ELASTOMERIC	1/2"	3	.25	75°	1,2
STEAM <100 PSIG	1/2" - 1-1/2"	ABOVE	SCHEDULE 40 BLACK STEEL	THREADED	1" 40'	RISING STEM GATE, GLOBE	ASTM A 53	MOLDED SECTION	JACKETED FIBERGLASS	2"	3	.22	75°	1
STEAM <100 PSIG	2" - UP	ABOVE	SCHEDULE 40 BLACK STEEL	CONTINUOUSLY WELDED	1" 40'	RISING STEM GATE, GLOBE	ASTM A 53	MOLDED SECTION	JACKETED FIBERGLASS	3"	3	.22	75°	1
STEAM CONDENSATE RETURN	ALL	ABOVE	SCHEDULE 80 BLACK STEEL	300 # THREADED	1" 40'	RISING STEM GATE, GLOBE		MOLDED SECTION	JACKETED FIBERGLASS	2"	3	.22	75°	1

PIPE MATERIAL AND INSULATION GENERAL NOTES

- INSTALL ALL PIPING ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. ALL INSTALLERS SHALL BE CERTIFIED, WITH DOCUMENTATION SUBMITTED WITH SHOP DRAWINGS.
- ALL PIPING SHALL BE TESTED, CLEANED AND CERTIFIED FOR INTENDED USE. ALL PIPING SYSTEMS SHALL BE PRESSURE TESTED WITH 1-1/2 TIMES THE OPERATING PRESSURE FOR NO LESS THAN 4 HOURS. PIPING TO BE CLEANED AND FLUSHED WITH CRITICAL CONTROL VALVES BYPASSED.
- ALL FITTINGS CONNECTING TO DI-ELECTRIC FITTINGS SHALL BE SOFT SOLDERED TO THE PIPING.
- ALL WELDED PIPE AND FUSION WELDED PIPE SHALL BE WELDED BY A CERTIFIED WELDER/ FUSION CONTRACTOR. ALL WELDING SHALL BE DONE BY A CERTIFIED WELDER (CERTIFICATES MUST BE SUBMITTED) AND ALL WORK SHALL BE STAMPED. BOLTED FLANGES SHALL BE INSTALLED ON 2" AND LARGER PIPE TO SECTIONALIZE THE SYSTEM INTO WORKABLE SECTIONS, INSULATION SHALL GO AROUND FLANGES.

VALVE SCHEDULE

- CALIBRATED BALANCE VALVES: SHALL BE A BRONZE OR BRASS BALL VALVE WITH A SET SCREW STOP.
- BALL VALVE: SHALL BE NSF RATED FOR POTABLE WATER, BRASS OR BRONZE BODY WITH CHROME PLATED BRONZE BALL.
- BUTTERFLY VALVE: SHALL BE CAST IRON BODY WITH FLANGED ENDS, WAFFER STYLE VALVES ARE NOT ALLOWED.
- GATE VALVE: SHALL BE A BRONZE OR CAST IRON BODY WITH A RISING STEM AND SOLID BRONZE WEDGE.
- GLOBE VALVE: SHALL BE A BRONZE OR CAST IRON BODY WITH A BRONZE DISC
- ALL VALVES SHALL BE LINE SIZE FULL PORT INSTALLED WITH FULL STEM/HANDLE MOVEMENT. HANDLES SHALL NEVER BE INSTALLED VERTICALLY DAWN.

PIPE MATERIAL AND INSULATION SCHEDULE NOTES

1. INSULATION & ADHESIVE SHALL HAVE A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPED RATING OF 50 OR LESS ACCORDING TO ASTM STANDARD AND NFPA 255. INSULATION SHALL BE INSTALLED BY A SKILLED INSTALLER IN A CLEAN WORKMANSHIP LIKE MANNER AFTER THE SYSTEM HAS BEEN PROPERLY TESTED. ALL JOINTS SHALL BE PROPERLY SEALED TO KEEP INTEGRITY OF VAPOR BARRIER INTACT. ALL INSULATION SHALL HAVE PVC JACKETS ON ALL ELBOWS AND THE ENTIRE PIPING SHALL BE JACKETED WITH PVC WHERE EXPOSED IN PUBLICLY ACCESSIBLE AREAS.
2. SCHEDULE 40 PVC DWV PIPING WITH PRIMED AND GLUED FITTINGS IS AN ACCEPTABLE ALTERNATIVE ONLY IF PIPING IS NOT SERVING ANY DRAINS THAT MAY HAVE WATER HOTTER THAN 150° IN IT OR EXPOSED IN ANY KITCHEN AND ALLOWED BY LOCAL CODES. INSTALL INSULATION ON PIPING IN A CEILING PLENUM RETURN ACCORDING TO NOTE #1.
3. AQUATHERM PIPING IS AN ACCEPTABLE ALTERNATE AND MUST BE INSTALLED AND INSULATED PER THE SCHEDULES.
4. TYPE L COPPER WITH BRAZED CONNECTIONS AND SCHEDLED 40 BLACK STEEL WITH VICTAULIC CONNECTIONS (INSTALLED PER SUPPORT SCHEDULE) IS AN ACCEPTABLE ALTERNATIVE.

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AES ADVANCED ENGINEERING SYSTEMS

PROJECT: WSC CARLSON NATATORIUM AND RECREATION CENTER CHILLED WATER PROJECT WAYNE STATE COLLEGE

PROJECT #: 12072

DATE: 1/22/2013

DESCRIPTION: ADDENDUM #1

SHEET: M3.0

NUMBER: 1 of 1

ADVANCED ENGINEERING SYSTEMS

DATE: 1/17/13

PROJECT NAME: WSC chilled water project

PROJECT NUMBER:

RE:

IN ATTENDANCE:

SIGN IN SHEET

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