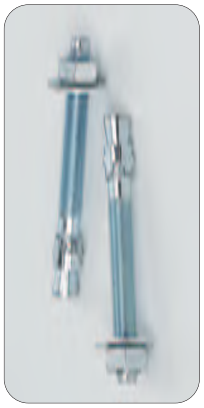
For Mechanical Systems Hangers per design load criteria

WEDGE ANCHOR

Catalog Number	Thread Size	Size in.	Size mm	Thread Length in.	Thread Length mm	Drill/Hole Size in.	Drill/Hole Size mm	Load Cap. Tension* lbs.	Load Cap. Tension* kN	Load Cap. Shear* lbs.	Load Cap. Shear* kN
AWA-37-225	3/8"-16	3/8" x 2 1/4"	(9 x 57)	1 1/4"	(32)	3/8"	(9)	760	(3.38)	940	(4.18)
AWA-37-275	3/8"-16	3/8" x 2 3/4"	(9 x 70)	1 5/8"	(41)						
AWA-37-300	3/8"-16	3/8" x 3"	(9 x 76)	1 7/8"	(47)						
AWA-37-350	3/8"-16	3/8" x 3 1/2"	(9 x 89)	2 3/8"	(60)						
AWA-37-375	3/8"-16	3/8" x 3 3/4"	(9 x 95)	2 5/8"	(66)						
AWA-37-500	3/8"-16	3/8" x 5"	(9 x 127)	3 7/8"	(98)						
AWA-50-275	1/2"-13	1/2" x 2 3/4"	(13 x 70)	1 3/8"	(35)	1/2"	(13)	1390	(6.18)	1700	(7.56)
AWA-50-375	1/2"-13	1/2" x 3 3/4"	(13 x 95)	2 3/8"	(60)						
AWA-50-450	1/2"-13	1/2" x 4 1/2"	(13 x 114)	3 1/8"	(79)						
AWA-50-550	1/2"-13	1/2" x 5 1/2"	(13 x 140)	4 1/8"	(105)						
AWA-50-700	1/2"-13	1/2" x 7"	(13 x 178)	5 5/8"	(143)						



Note: Based on concrete compression strength of 4,000 psi using applied safety factor of 4.

HOLLOW BASE DROP-IN ANCHORS

Catalog Number	Rod Size	Overall Length in.	Overall Length mm	Sleeve Length in.	Sleeve Length mm	Drill/Hole Diameter in.	Drill/Hole Diameter mm	Load Cap. Tension* lbs.	Load Cap. Tension* kN	Load Cap. Shear* lbs.	Load Cap. Shear* kN
ADH-25	1/4"-20	7/8"	(22)	5/8"	(16)	3/8"	(9)	285	(1.27)	300	(1.33)
ADH-37	3/8"-16	15/16"	(33)	15/16"	(24)	5/8"	(16)	520	(2.31)	640	(2.84)
ADH-50	1/2"-13	1 3/4"	(44)	1 1/4"	(32)	3/4"	(19)	1005	(4.47)	1005	(44.70)
9323	1/4"	--	--	--	--	--	--	--	--	--	--
9343	3/8"	--	--	--	--	--	--	--	--	--	--
9353	1/2"	--	--	--	--	--	--	--	--	--	--

Note: Based on concrete compression strength of 4,000 psi using applied safety factor of 4.

Drill in anchors for Mechanical Hangers per design.

RAPID ROD™ HANGERS FOR CONCRETE

Catalog Number	Rod Size	Shank Size & Length in.	Shank Size & Length mm	Drill/Hole Size in.	Drill/Hole Size mm	Load Cap. Tension* Lbs.	Load Cap. Tension* kN	Load Cap. Shear* Lbs.	Load Cap. Shear* kN
ARC-25-125	1/4"-20	1/4" x 1 1/4"	(6 x 32)	1/4"	(6)	485	(2.16)	610	(2.71)
ARC-37-150	3/8"-16	1/4" x 1 1/2"	(6 x 38)	1/4"	(6)	650	(2.89)	660	(2.93)
ARC-50-275	1/2"-13	3/8" x 2 3/4"	(9 x 70)	1/4"	(6)	1510	(6.71)	1580	(7.03)

Note: Based on concrete compression strength of 4,000 psi using applied safety factor of 4.

RAPID ROD™ HANGERS FOR STEEL

Catalog Number	Rod Size	Shank Size & Length in.	Shank Size & Length mm	Load Cap. Tension* In 12 Ga. Lbs.	Load Cap. Tension* In 12 Ga. kN	Load Cap. Tension* In 1/4" Lbs.	Load Cap. Tension* In 1/4" kN
ARS-25-100	1/4"-20	1/4" x 1"	(6 x 25)	390	(1.75)	1260	(5.60)
ARS-37-100HN	3/8"-16	1/4" x 1" *	(6 x 25)	512	(2.28)	1260	(5.60)
ARS-37-150	3/8"-16	1/4" x 1 1/2"	(6 x 38)	390	(1.75)	1260	(5.60)
ARS-37-150HN	3/8"-16	1/4" x 1 1/2"	(6 x 38)	512	(2.28)	1260	(5.60)
ARS-37-200	3/8"-16	1/4" x 2"	(6 x 51)	390	(1.75)	1260	(5.60)

Note: Loads shown for ASTM A36 beams and ASTM A572 steel purlins include a safety factor of 4.
For UL and FM listings, steel rapid rod must be installed with a retaining nut.

Reference page 212 for general fitting and standard finish specifications.

WM TAO & ASSOCIATES
CONSULTING ENGINEERS

Shop Drawing Submittal Review

Transmitted To: Cannon Design

Date: August 26, 2016

Attention: **stl-cac@cannondesign.com**

Contact Person / WTA Field Inspector: Patrick Garner

Project Name: Webster University-**ISB**

Reviewed by: Mark Schaefer

Project No. WT 14127.01

☐ UPS ☐ Courier ☒ **Email**

Copies	No.	Description
1 PDF	238800M03	(Submittal No.'s) ~~(R&B CxSRC)~~
		(Cannon #238800-006) - (Paric #15051-0194) – ~~(WES #607)~~
		• **Ductwork Hangers and Supports**

Remarks:

c: **Kelvin Patel**
Kpatel@cannondesign.com

☒ **Furnish as Submitted** ☐ Furnish as Noted

☐ Rejected ☐ Revise & Resubmit

☐ Reviewed ☐

Corrections or comments made on shop drawings during this review do not relieve contractor from compliance with requirements of drawings and specifications. This check is only for review of general conformance with the design concept of project and general compliance with information given in contract documents. Contractor is responsible for: confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe and satisfactory manner.

7955 Manchester Road, Suite 125 • St. Louis, Missouri 63143-2711 • Phone: 314-884-7600 • Fax: 314-884-7601

If enclosures are not as noted, please notify us at once.

Sara Trout (314) 884-7645

WTASHOP - Webster ISB - 23 8800-006

From: STL-CAC <STL-CAC@CANNONDESIGN.COM>
To: 'Patrick Garner' <pgarner@wmtao.com>, WTASHOP <wtashop@wmtao.com>
Date: 8/19/2016 1:06 PM
Subject: Webster ISB - 23 8800-006
Cc: "Patel, Kelvin" <kpatel@CANNONDESIGN.COM>
Attachments: 238800-006 Ductwork Hangers and Supports.pdf

Attached for review.

Melissa Pirtle
Construction Admin
CANNONDESIGN
1100 Clark Ave
St. Louis, Missouri 63102
T 314.425.8797 • M
cannondesign.com

CANNONDESIGN

SUBMITTAL IDENTIFICATION SHEET

To be completed by Contractor/CM

WEBSTER UNIVERSITY ISB
PROJECT NAME

8274 BIG BEND BLVD
ADDRESS

NUMBER

WEBSTER UNIVERSITY
OWNER

CANNON DESIGN
ARCHITECT / ENGINEER

Joe Voypick
SUBMITTED BY

238800-006
CONTRACTOR / CM SUBMITTAL NO.

CANNON DESIGN SUBMITTAL NO.

DRAWING / DETAIL REFERENCE

238800
SPECIFICATION SECTION / PARAGRAPH

Icon Mechanical
MANUFACTURER / SUPPLIER

ITEM / PRODUCT ID

REQUIRED DATE

PRIORITY

☐ CRITICAL

ITEM BEING SUBMITTED (check only one)

- ○ Shop Drawings
- ○ Samples (_____ copies)
- ○ LEED Submittal
- ○ Certification / Qualifications
- ○ Record Documents
- ○ Product Data
- ○ Coordination Drawing
- ○ Calculations
- ○ Schedules
- ○ O&M Manuals
- ○ Other _____

ITEM BEING SUBMITTED FOR (check only one)

○ Action ○ Information Only ○ Record

REMARKS OR DEVIATIONS

CONTRACTOR / CM CERTIFICATION
(SUBMITTALS NOT CERTIFIED WILL BE RETURNED WITHOUT REVIEW)

PARIC

PARIC CORPORATION
SUBMITTAL STAMP

THIS SHOP DRAWING HAS BEEN REVIEWED BY PARIC CORPORATION

Subcontractor remains responsible for dimensions, quantities, coordination with other trades and compliance with contract documents.

By:
Devin D. Gates

Joe Voypick
REVIEWED BY

8/19/16
DATE

To be completed by Reviewer

23 8800-006
CANNON DESIGN SUBMITTAL NUMBER

8/19/16
RECEIVED DATE

- ○ A. No Exceptions Taken
  No further review of submittal is required.
- ○ B. Make Corrections Noted
  Incorporate corrections in work; resubmission is not required.
- ○ C. Revise and Resubmit
  Revise as noted, and resubmit for review.
- ○ D. Rejected
  Submittal is not in compliance with Contract Documents; provide new submittal.
- ○ E. For Record / Information Only
  Submittal was reviewed for Record / Information purposes only.
- ○ F. Not Required for Review
  Submittal is not required by Contract Documents and has not been reviewed.

Review is for conformance with the design concept of this project and for general compliance with contract documents. Contractor is responsible for quantities, dimensions and compliance with contract documents and for information that pertains to fabrication processes, construction techniques and coordination of this work with all trades which will be affected thereby. This review is null and void if submittal deviates from contract documents and does not indicate or note deviations.

A/E COMMENTS ○ See attached sheet(s) for additional comments

REVIEWED BY

DATE

77 Westport Plaza
Suite 250
St. Louis, MO 63146

TRANSMITTAL

No. 15051-0194

Paric Corporation

PROJECT: 15051-Webster University Interdisciplinary Science Building

DATE: 08/18/2016

TO: Cannon Design
1100 Clark Ave
St Louis MO 63102

RE: Ductwork Hangers and Supports

ATTN: Kelvin Patel

JOB: 15051

WE ARE SENDING:	SUBMITTED FOR:	ACTION TAKEN:
☐ Shop Drawings	☑ Approval	☐ Approved as Submitted
☐ Letter	☐ Your Use	☐ Approved as Noted
☐ Prints	☐ As Requested	☐ Returned After Loan
☐ Change Order	☐ Review and Comment	☐ Resubmit
☐ Plans		☐ Submit
☐ Samples	**SENT VIA:**	☐ Returned
☐ Specifications	☐ Attached	☐ Returned for Corrections
☑ Other: Product Data	☐ Separate Cover Via:	☐ Due Date:

Item	*Package*	*Code*	*Rev.*	*Copies*	*Date*	*Description*	*Status*
Submittal		238800-006	1		08/18/2016	Ductwork Hangers and Supports	Submitted

NOTES:

CC:

Signed: _____

Devin Gates

LETTER OF TRANSMITTAL

TO: Paric Corporation
77 West Port Plaza #250
St. Louis, MO 63146

ATTN: Jason Szachnieski, Devin Gates

DATE: 8/17/16
JOB # : 5768
RE: Webster ISB

We are sending you
( ) Attached ( ) Under separate cover
(X) Shop drawings ( ) Prints ( ) Plans ( ) Samples ( ) Specifications
( ) Copy of letter ( ) Change order ( ) Other

COPIES	DATE	NO.	DESCRIPTION
1	8/17/16	238800-2.5	Ductwork Hangers and Supports

These are transmitted as checked below:

( ) For signature ( ) Approved as submitted ( ) Resubmit ( ) copies for approval
( ) For your use ( ) Approved as noted (X) Submit ( ) copies for distribution
( ) As requested ( ) Returned for corrections ( ) Return ( ) corrected prints
( ) For bids due ( ) Prints returned after loan to us
(X) For review and comment ( ) Other

Remarks: Please return by 8/24/16
Gripple Pending AHJ Approval. Verbal Approval given. Waiting on Formal Approval Document. Will Forward to Design Team Once in Hand.

COPY TO: file

SIGNED: Alex Chambers

icon Mechanical

Webster University ISB
Webster Groves, MO

Submittal #:	238800-2.5
Submittal Description:	Ductwork Hangers and Supports
Return By:	8/24/16

Please Note: To avoid scheduling delays and equipment release delays, please submit by the "Return By" date.

CHECKED BY:

DESIGNER: ENGINEER:

X	NO EXCEPTION TAKEN		MAKE CORRECTIONS NOTED
	SUBMIT SPECIFIED ITEM		REVISE AND RESUBMIT
	REJECTED		

Checking is only for general conformance with the design concept of the project and general compliance with the information given in the contract documents. Any action shown is subject to the requirements of the plans and specifications. Equipment supplier is responsible for: dimensions which shall be confirmed and correlated at the job site; fabrication processes and techniques of construction; coordination of his work with that of all other trades; and satisfactory performance of his work.

icon Mechanical

Job #:	5768
Date:	8/17/16
By:	ARC