



Model 350A

Double Check Valve Assembly

228A

Application

Designed for installation on potable water lines to protect against both backsiphonage and backpressure of polluted water into the potable water supply. The Model 350A shall provide protection where a potential health hazard does not exist. Ideal for use where Lead-Free* valves are required.

Standards Compliance (Horizontal & Vertical)

- ASSE® Listed 1015
- AWWA Compliant C510 (with gates only), and C550
- IAPMO® Listed
- Certified to NSF/ANSI 372* by IAPMO R&T
- CSA® Certified
- UL® Classified
- C-UL® Classified
- FM® Approved
- NYC MEA 220-04-M Vol 2 (2 1/2" - 8")
- Approved by the Foundation for Cross Connection Control and Hydraulic Research at the University of Southern California
- NSF® Listed-Standard 61, Annex G*

*(0.25% MAX. WEIGHTED AVERAGE LEAD CONTENT)

Materials

Main valve body	Ductile Iron ASTM A 536 Grade 4
Access covers	Ductile Iron ASTM A 536 Grade 4
Coatings	FDA Approved electrostatic epoxy finish
Internals	Stainless steel, 300 Series NORYL™, NSF Listed
Fasteners & springs	Stainless Steel, 300 Series
Seal ring	EPDM (FDA approved)
O-ring	Buna Nitrile (FDA approved)

Features

Sizes: 2 1/2", 3", 4", 6", 8", 10"
 Maximum working water pressure 175 PSI
 Maximum working water temperature 140°F
 Hydrostatic test pressure 350 PSI

End connections

(Grooved for steel pipe)	AWWA C606
(Flanged)	ANSI B16.1 Class 125



(with OSY gates)

(with BG valves)



Options

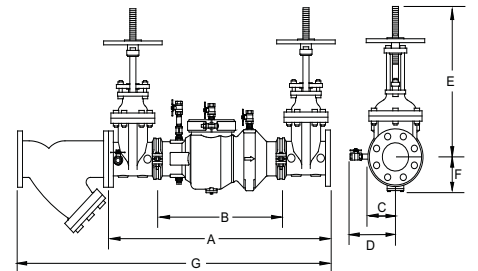
(Suffixes can be combined)

- ☐ - with flanged end NRS gate valves (standard)
- ☐ FSC - with epoxy coated wye type strainer (flanged only)
- ☐ G - with grooved end connections
- ☐ GF - with grooved inlet connection and flanged outlet connection
- ☐ FG - with flanged inlet connection and grooved outlet connection
- ☐ L - less shut-off valves (grooved body connections)
- ☐ OSY - with flanged end OS&Y gate valves
- ☐ OSYG - with grooved end OS&Y gate valves
- ☐ PI - with Post Indicator Gate Valves
- ☐ BG - with grooved end butterfly valves with integral supervisory switches
- ☐ BF - with flanged end butterfly valves with integral supervisory switches

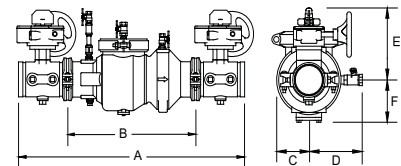
Accessories

- ☐ Repair kit (rubber only)
- ☐ Thermal expansion tank (Model XT)
- ☐ OS & Y Gate valve tamper switch (OSY-40)

MODEL 350A with OSY & FSC option



MODEL 350A with BG option



Dimensions & Weights (do not include pkg.)

MODEL 350A SIZE		WEIGHT													
		LESS SHUTOFF VALVES		NRS GATE VALVES FLANGED		NRS GATE VALVES GROOVED		OSY GATE VALVES FLANGED		OSY GATE VALVES GROOVED		BUTTERFLY VALVES FLANGED		BUTTERFLY VALVES GROOVED	
		in.	mm	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg
2 1/2	65	90	41	184	83	176	80	192	87	184	83	142	65	132	60
3	80	89	40	204	93	194	88	210	95	200	91	147	66	133	61
4	100	76	34	220	100	194	88	230	104	204	93	147	66	124	56
6	150	126	57	346	157	316	143	362	164	332	151	231	105	200	91
8	200	286	130	738	335	738	335	762	346	738	335	476	216	430	195
10	250	339	154	966	438	844	383	1024	464	902	409	613	278	555	252

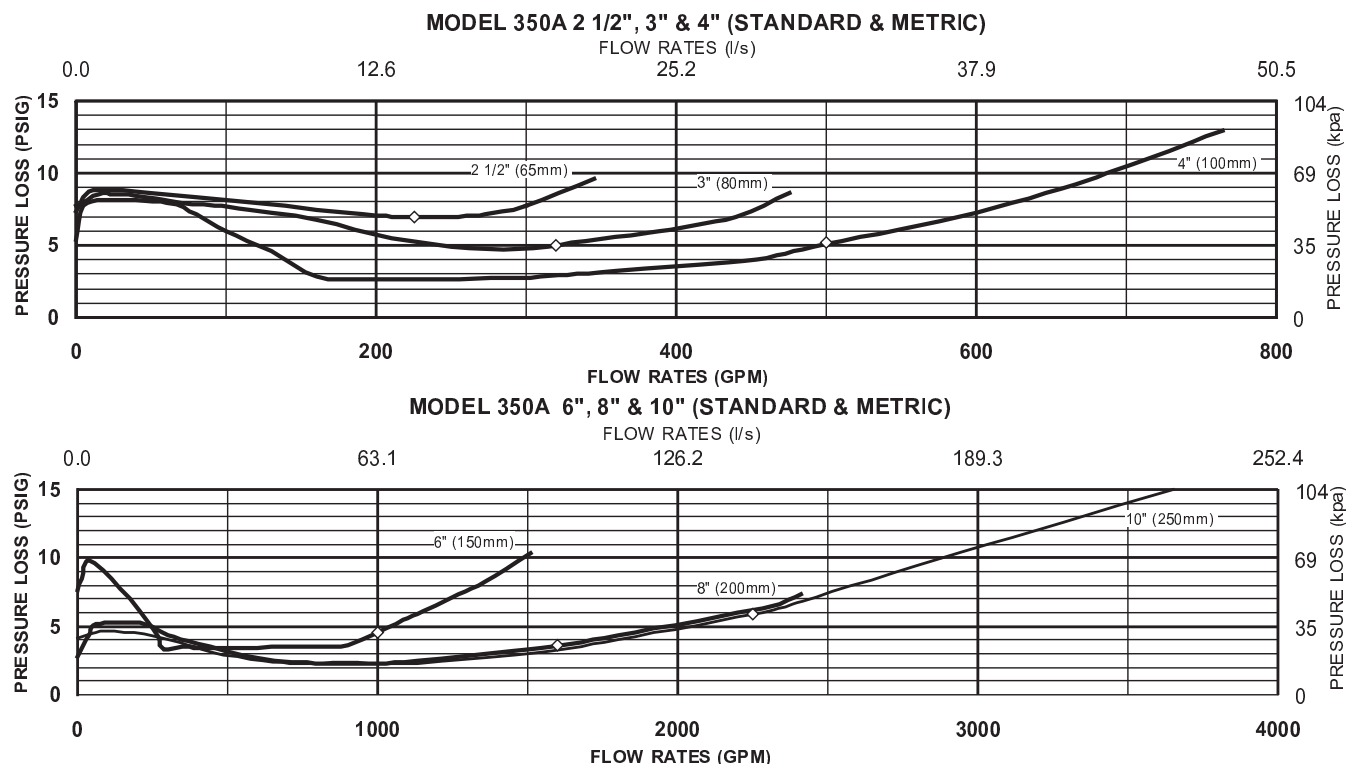
MODEL 350A SIZE		DIMENSION (approximate)																							
		A		A WITH BUTTERFLY VALVES		B LESS GATE VALVES		C		D		E OS&Y OPEN		E OS&Y CLOSED		E NRS GATE		E WITH BUTTERFLY VALVES		F		G WITH GATE VALVES		G WITH BUTTERFLY VALVES	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
2 1/2	65	35 1/8	892	32 1/8	816	20 1/8	511	4 1/2	114	7 1/4	184	17 3/4	451	15 3/8	391	11 1/2	292	8 1/4	210	6	152	45 1/4	1149	42 1/4	1073
3	80	36 1/8	918	33	838	20 1/8	511	4 1/2	114	7 1/4	184	20 1/4	514	17	432	12 3/4	324	8 1/2	216	6	152	46 7/8	1191	43 3/4	1111
4	100	38 1/4	972	33 1/4	845	19 7/8	505	4 1/2	114	8	203	22 1/2	572	18 1/4	464	14 1/2	368	9	229	6	152	53 3/8	1356	48 3/8	1229
6	150	47 1/4	1200	40 1/4	1022	25 7/8	657	5 1/2	140	10	254	30 1/2	775	24 1/4	616	18	457	10 1/4	260	7	178	65 3/8	1661	58 3/8	1483
8	200	62	1575	55	1397	38 1/2	978	10	254	11	279	37	940	28 1/2	724	21 1/8	537	12	305	8 1/2	216	86 3/8	2194	79 3/8	2016
10	250	64 5/8	1641	58 1/2	1486	38 1/2	978	10	254	12	305	45 5/8	1159	34 3/4	883	24 3/4	629	13	330	8 1/2	216	94 3/8	2397	88 1/4	2242

Attention: Model 350A (grooved body) & Model 350 (flange body) have different lay lengths.

Zurn Industries, LLC | Wilkins
 1747 Commerce Way, Paso Robles, CA U.S.A. 93446 Ph. 855-663-9876, Fax 805-238-5766
 In Canada | Zurn Industries Limited
 3544 Nashua Drive, Mississauga, Ontario L4V 1L2 Ph. 905-405-8272, Fax 905-405-1292

www.zurn.com

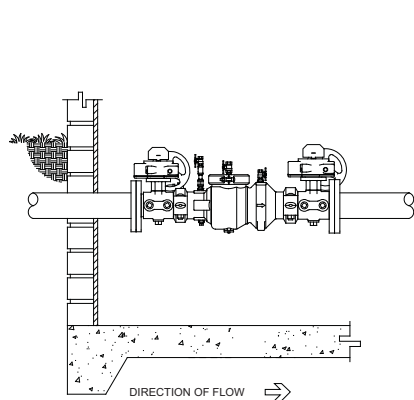
Rev. D
 Date: 1/15
 Document No. BF-350A
 Patent No. 5, 913, 331
 Product No. Model 350A



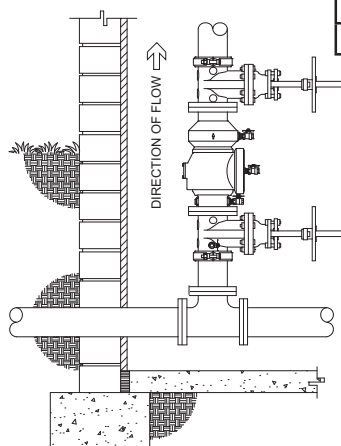
Typical Installation

Local codes shall govern installation requirements. Unless otherwise specified, the assembly shall be mounted at a minimum of 12" (305mm) and a maximum of 30" (762mm) above adequate drains with sufficient side clearance for testing and maintenance. The installation shall be made so that no part of the unit can be submerged.

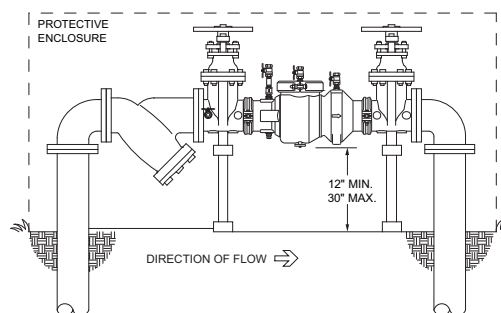
Capacity thru Schedule 40 Pipe (GPM)				
Pipe size	5 ft/sec	7.5 ft/sec	10 ft/sec	15 ft/sec
2 1/2"	75	112	149	224
3"	115	173	230	346
4"	198	298	397	595
6"	450	675	900	1351
8"	780	1169	1559	2339
10"	1229	1843	2458	3687
12"	1763	2644	3525	5288



**INDOOR INSTALLATION
MODEL 350ABF**



**INDOOR INSTALLATION
(VERT.) MODEL 350A**



**OUTDOOR INSTALLATION
MODEL 350AFS**

Specifications

The Double Check Backflow Prevention Assembly shall be certified to NSF/ANSI 372, ASSE® Listed 1015, and supplied with full port gate valves. The main body and access cover shall be epoxy coated ductile iron (ASTM A 536 Grade 4), the seat ring and check valve shall be NORYL™, the stem shall be stainless steel (ASTM A 276) and the seat disc elastomers shall be EPDM. The checks shall be accessible for maintenance without removing the device from the line. The Double Check Backflow Prevention Assembly shall be a ZURN WILKINS Model 350A.

Shop Drawing Submittal Review

Transmitted To: Cannon Design

Date: December 20, 2016

Attention: stl-cac@cannondesign.com

Contact Person / WTA Field Inspector:
Patrick Garner

Project Name: Webster University-**ISB**

Reviewed by: Mike Whitworth (WES)

Project No. WT 14127.01
WES 607

☐

UPS

☐

Courier

☒

Email

Copies	No.	Description
1 PDF	211313F02	(Submittal No.'s:)
		(Cannon #211313-015) - (Paric #15051-0349) – (WES #607)
		➤ Wet Pipe Sprinkler System Product Data

***Remarks: See Submittal Review from Webb Engineering.**

c: Kelvin Patel
Kpatel@cannondesign.com

☒

***Reviewed**

☒

***No Exceptions Taken -**

☒

***Amend and Resubmit**

☒

***Make Corrections As Noted,
No Resubmittal Required**

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.



1400 S. 3rd Street, Suite 201
St. Louis, Missouri 63104
Phone: (314) 588-0600
Fax: (314) 588-0604

Letter of Transmittal

To: wtashop@wmtao.com

From: Mike Whitworth

Date: December 20, 2016

Re: Webster University ISB

WES No: 607

☐ For your Files

☐ For Review

☐ Please Comment

☐ Please Reply

Item No.	Description	No. of Copies	Date
1	Shop Drawing Review – (213113-015) 211313 Wet Pipe Sprinkler System	1	12/20/16

•Signature: Mike Whitworth

The review of this submittal is limited to the general conformance with the designated design concept and intent of this project and with the general compliance of the information provided in the contract documents. All comments, remarks and notations made on the submittal(s) as a result of this review do not relieve the contractor from full compliance with requirements of the contract documents. Approval for a specific item shall not include approval of an assembly of which the item is not a component. The contractor is solely responsible for rough-in and installation confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordination of this work with that of other trades on this project; and in a safe and satisfactory manner. All work shall be installed in full compliance with the manufacturer's recommendation, Federal, State and Local rules and regulation and the Authority Having Jurisdiction (AHJ) and applicable adopted codes and standards.

PROJECT NAME: Webster University I

LOCATION: St. Louis Missouri

CLIENT PROJ. NO.: N/A

WES PROJ. NO.: 607

SPECIFICATION 211313
SECTION: Wet Pipe Sprinkler System

SUBMITTAL ITEM: See Below -

CONTRACTOR: J.F. Ahern Co.
CTR. SUBMITTAL #: 21 1313-015
SUBMITTAL DATE: November 29, 2016
DATE RECEIVED: December 07, 2016
RECEIVED VIA: E-Mail
RECEIVED FROM: WTA
DATE RETURNED: DECEMBER 20, 2016
RETURNED VIA: E-MAIL
RETRURNED TO: WTASHOP@WMTAO.COM

STATUS KEY:

NO EXCEPTION TAKEN

MAKE CORRECTIONS NOTED, NO RESUBMITTAL:

AMEND AND RESUBMIT

REJECTED, SEE REMARKS:

REVIEWED ONLY

NEC	MCN	AAR	REJ	REV	ITEM	REMARKS
Pages numbers have been added to cut sheets for referencing						
X					Page 001 Schedule 10 Pipe Various Manufacturers	
X					Page 002 Schedule 40 Pipe Various Manufacturers	
X					Pages 003 – 004 Test and Drain Valve AGF Manufacture ring Model – 1011A	
X					Pages 005 – 006 Backflow Preventer Zurn Industries Model – 350A	
X					Pages 007 – 008 Standard Duty Loop Hanger Caddy Model – 115 Series	

X				Pages 009 – 010 Universal Beam Clamp Caddy Model – 300 Series	
X				Pages 011 – 016 Carbon Steel Anchor Screw Hilti Model – 3.3.5 KWIK HUS- EZ (KH-EZ1)	
X				Page 017 Riser Clamp PHD Manufacturing Model – Fig. 550-551-553	
X				Page 018 Universal Restraining Strap Afcon Model - 162	
X				Pages 019 – 027 Sleeve Expansion Anchors Powers Fasteners Model – Lok-Bolt Hex Head and Rod Hanger	
X				Pages 028 – 031 Strut Channel Gregory Strut Products Model – G712OS, G712A, G5820S, G582A and G1320OS	
X				Page 032 Surge Restraint 115 Caddy Model – SR6	
X				Page 033 Screw Anchor/Hanger ITW Model – Sammy X-Press	
		X		Pages 034 – 039 Quick Response Dry Pendent Sprinkler Viking Model - SIN Not Specified	1. SIN numbers listed in submittal (VK172, VK176, VK180 on pages 037/038) is not listed on the FP drawings in the Sprinkler schedule.
X				Pages 040 -043 Microfast Quick Response Upright Sprinkler Viking Model – SIN VK300	
		X		Pages 044 -049 Microfast Quick Response Pendent Sprinkler Viking Model – SIN VK302	1. SIN number listed in submittal (VK302 on pages 047/048) is not listed on the FP drawings in the Sprinkler schedule.

X				Pages 050 – 055 Microfast Quick Response Horizontal Sidewall Sprinkler Viking Model – SIN VK305	
X				Pages 056 – 059 Microfast Quick Response Upright Sprinkler Viking Model – SIN VK350	
		X		Pages 060 – 065 Microfast Quick Response Pendent Sprinkler Viking Model – SIN VK352 (K8.0)	1. SIN number listed in submittal (VK352 on pages 063/064) is not listed on the FP drawings in the Sprinkler schedule.
		X		Pages 066 – 071 Microfast Quick Response Pendent Sprinkler Viking Model – SIN VK352 (K8.0)	1. SIN number listed in submittal (VK352 on pages 069/070) is not listed on the FP drawings in the Sprinkler schedule.
X				Pages 072 – 077 Mirage Standard and QR Concealed Pendent Sprinkler Viking Model – SIN VK462	
X				Page 078 Spare Sprinkler Head Cabinet FPPI Model – Not indicated	
X				Page 079 – 089-091 Spare Sprinkler Head Cabinet TYCO Model – Not Indicated	
X				Pages 080 – 088 Sprinkler Escutcheons Viking Model -	
X				Pages 092 – 094 Sprinkler Guards Viking Model – D-1	
X				Pages 095 – 100 Standard / QR Extended Coverage Upright Sprinkler Viking Model – SIN VK532	
X				Pages 101 – 106 Standard / QR Extended Coverage Pendent Sprinkler Viking Model – SIN VK534	

X				Pages 107 – 112 Mirage QR Extended Coverage Concealed Pendent Sprinkler Viking Model – SIN VK634	
		X		Pages 113 – 120 Concealed Dry Pendent Sprinkler Reliable Model – G5-56 Dry (SIN RA5114)	1. Manufacturer and model/SIN number listed in submittal is not listed on the FP drawings in the Sprinkler schedule. 2. Color/finish of cover plate to be submitted to the Architect for review and approval.
X				Pages 121 - 124 Flexible Coupling Victaulic Model – Style 75	
X				Pages 125 - 128 Reducing Coupling Victaulic Model – Style 750	
X				Pages 129 – 131 FireLock Fittings Victaulic Model – Fire lock	
X				Pages 132 – 134 FireLock Rigid Coupling Victaulic Model – Style 005H	
X				Pages 135 – 136 Fire lock Flange Adapter Victaulic Model – Style 744	
X				Pages 137 – 144 Mechanical T Bolted Branch Outlets Victaulic Model – Styles 920 and 920N	
X				Pages 145 – 149 Firelock Rigid Coupling Victaulic Model – Style 009N	
X				Pages 150 – 151 Threaded Mechanical Branch Tee Anvil Model – Fig. MT-30	
X				Pages 152 – 153 Grooved Welded Steel Pipe Outlets Vandewater International Inc. Model - Various	
X				Pages 154 – 155 Welded Steel Pipe Outlets Vandewater International Inc. Model - Various	

X					Page 156 DI Threaded Fitting – 90 Elbow Anvil Model – Fig 3201	
X					Page 157 DI Threaded Fitting – 45 Elbow Anvil Model – Fig 3202	
X					Page 158 DI Threaded Fitting – Reducing 90 Elbow Anvil Model – Fig 3201R	
X					Page 159 DI Threaded Fitting – Straight T Anvil Model – Fig 3205	
X					Pages 160 - 161 DI Threaded Fitting – Reducing T Anvil Model – Fig 3205R	
X					Page 162 DI Threaded Fitting Anvil Model – Bull Head T	
X					Page 163 DI Threaded Fitting Cross Anvil Model - 3207	
X					Page 164 DI Threaded Fitting Anvil Model – 3221R	
X					Page 165 DI Threaded Fitting Anvil Anvil Model - 3121	
X					Page 166 DI Threaded Fitting Cap Anvil Model - 3224	
X					Page 167-168 DI Threaded Fitting Bushing Anvil Model - 3283	

				X	Pages 169 – 183 Flexible Sprinkler Hose Victaulic Model – Series AH2 Bracket AB1, AB7 and AB7 Adjustable	1. This product is not listed in the construction documents for use on this project. Contractor has elected to incorporate into the delegated design.
X					Pages 184 – 185 Water Flow Detector System Sensor Model – WFD Series	
X					Pages 186 – 192 Supervisory Switch Potter Electrical Model – PCVS Series	
	X				Pages 193 – 194 Electric Bell Potter Electric Model – Not Indicated	1. Specified to be 10 inch diameter. Refer to specification section 211313, part 2.6, B4 and B-7.
X					Page 195 Service Gauge Ashcroft Model – 35W1005PH02LXUL300	
X					Pages 196 – 199 Intumescent Sealant STI Model - Series LCI	
X					Page 200 Fire Pump Suction and Discharge Gauges Alenco Series AG-1000L	
X					Page 201 Suction and Discharge Gauge Assembly A-C Fire Pump systems Model – Not Indicated	
	X				Pages 202 – 203 Fire Pump Test Header Potter Roemer Model – 5864-x-x-6-D- NST	1. Assembly to be mounted vertically, in space available.
Note: Fire protection drawings list sprinkler Viking model Mirage, SIN VK464 (31 total) and Viking model Dry, Sin VK194, (24 total) in the Sprinkler Schedule. These two sprinkler heads are not included in this submittal.						

REVIEWED BY: Michael R. Whitworth DATE: December 20, 2016

THESE COMMENTS ARE TO BE ATTACHED TO ALL COPIES OF THE SHOP DRAWING REFERENCED ABOVE.

SUBMITTAL IDENTIFICATION SHEET

To be completed by Contractor/CM

PROJECT NAME	
ADDRESS	
NUMBER	
OWNER	
ARCHITECT / ENGINEER	
SUBMITTED BY	
CONTRACTOR / CM SUBMITTAL NO.	CANNON DESIGN SUBMITTAL NO.
DRAWING / DETAIL REFERENCE	SPECIFICATION SECTION / PARAGRAPH
MANUFACTURER / SUPPLIER	ITEM / PRODUCT ID
REQUIRED DATE	PRIORITY
CRITICAL	☐

To be completed by Reviewer

CANNON DESIGN SUBMITTAL NUMBER
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.

ITEM BEING SUBMITTED (check only one)

- ☐ Shop Drawings ☐ Certification / Qualifications ☐ Coordination Drawing
☐ Samples ☐ Record Documents ☐ Calculations
 (_____ copies) ☐ Product Data ☐ Schedules
☐ LEED Submittal ☐ 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 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.

Ry:

By:
Devin D. Gates

REVIEWED BY	DATE

A/E COMMENTS

- ☐
- See attached sheet(s) for additional comments

REVIEWED BY	DATE



77 Westport Plaza
Suite 250
St. Louis, MO 63146

TRANSMITTAL

No. 15051-0349

Paric Corporation

PROJECT: 15051-Webster University Interdisciplinary Science Building

DATE: 11/29/2016

TO: Cannon Design
1100 Clark Ave
St Louis MO 63102

Fax;
314-241-2203

RE: Wet Pipe Sprinkler System Product Data

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		211313-015	1		11/29/2016	Wet Pipe Sprinkler System Product Data	Submitted

NOTES:

CC:

Signed: _____
Devin Gates