Interior Combined Water Piping per Detail 1/P0403

Size per drawings to be 8"

WHEATLAND TUBE COMPANY

SUBMITTAL DATA
Rev. 01/07/05

ASTM A 53 TYPE F GRADE A PIPE

SCOPE

Covers black and hot-dipped galvanized furnace-butt welded (continuous welded) Grade A pipe. Pipe is intended for mechanical and pressure applications and is acceptable for ordinary uses in steam, water, gas and air lines. Wheatland ASTM A 53 is UL Listed and FM Approved, sizes 1" through 6" nominal, for use in Fire Sprinkler Pipe Applications. Pipe is suitable for welding, threading, grooving and bending. Pipe is not intended for flanging. Produced to latest revisions of ASTM A53/A 53M, Federal Specification WW-P404 and ASME B36.10M.

HOT-DIPPED GALVANIZED

The average weight of zinc coating shall be not less than 1.8 oz. per sq. ft. of surface (inside and outside).

When galvanized pipe is bent or otherwise fabricated to a degree which causes zinc coating to stretch or compress beyond the limit of elasticity, some flaking of the coating may occur.

HYDROSTATIC TESTING

Hydrostatic test pressures for plain-end pipe are indicated below.

NPS	Standard Weight - PSI	Extra Strong Weight - PSI
1/8 through 3/8	700	850
1/2 through 1	1500	1500
1-1/4 - 1-1/2	2000	2000
2 through 3	2500	2500
3 ½ - 4	2800	2800

END FINISH

Plain End:
NPS 1-1/2 and smaller: unless otherwise specified on order, end finish shall be at the option of the manufacturer.

NPS 2 and larger: STD and Sch 80 weights: ends beveled to angle of 30º, +5º, -0º with a root face of 1/16" ± 1/32".

Threaded: To ANSI Standard B 1.20.1

Couplings: To ASTM Standard A 865.

CHEMICAL REQUIREMENTS

Composition, max. %

Carbon	Manganese	Phosphorus	Sulfur
.30	1.20	.05	.045

*Copper	*Nickel	*Chromium	*Molybdenum	*Vanadium
.40	.40	.40	.15	.08

*The combination of these five elements shall not exceed 1.00%.

TENSILE REQUIREMENTS

Tensile Strength, min.	48 000 psi
Yield Strength, min.	30 000 psi.
Elongation in 2"	Refer to A 53 Table x 4.1, latest revision – ASTM A53/A 53M

BENDING TEST (COLD) FOR NPS 2 and UNDER:

	Degree of Bend	Diameter of Mandrel
Standard	90º	12 x outside pipe diameter
Close Coiling	90º	8 x outside pipe diameter

FLATTENING TEST - NPS 2-1/2 and Greater

As a test for quality of the weld, position the weld at 90º from the direction of force and flatten until the OD is 3/4 of the original outside diameter. No cracks shall occur along the inside or outside surface of the weld.

DIMENSIONS and WEIGHTS

BLACK PLAIN END					
Nominal Size	OD Inches	Sch. 40		Sch. 80	
		Wall Inches	Weight Lb./Ft.	Wall Inches	Weight Lb./Ft.
1/8"	.405	.068	.24	.095	.31
1/4"	.540	.088	.43	.119	.54
3/8"	.675	.091	.57	.126	.74
1/2"	.840	.109	.85	.147	1.09
3/4"	1.050	.113	1.13	.154	1.48
1"	1.315	.133	1.68	.179	2.17
1-1/4"	1.660	.140	2.27	.191	3.00
1-1/2"	1.900	.145	2.72	.200	3.63
2"	2.375	.154	3.66	.218	5.03
2-1/2"	2.875	.203	5.80	.276	7.67
3"	3.500	.216	7.58	.300	10.26
3-1/2"	4.000	.226	9.12	.318	12.52
4"	4.500	.237	10.80	.337	15.00

PERMISSIBLE VARIATIONS IN WALL THICKNESS

Minimum wall thickness at any point shall not be more than 12.5% under nominal wall thickness specified.

PERMISSIBLE VARIATIONS IN OUTSIDE DIAMETER

NPS	1-1/2 and under	± .016"
NPS	2 and over	± 1%

PERMISSIBLE VARIATIONS IN WEIGHT PER FOOT

Pipe shall not vary more than ± 10% from the standard specified.

PRODUCT MARKING

Each length of pipe 1/2 NPS and larger is continuously stenciled to show the manufacturer, the grade of pipe (ASTM A 53), the kind of pipe (F for Continuous Weld, A for Grade A,) the size (Sch 80 for extra strong), and length. Stencil markings indicate UL Listing and FM Approval for sizes 1" through 6" nominal for use in Fire Sprinkler Pipe Applications. Bar Coding is acceptable as a supplementary identification method.

Submittal does not address service pipe size. The submittal data sheet does not show piping above 4 inch. The combination service size is 8". Submit a data sheet that covers service pipe size.

All information contained herein is accurate as known at the time specifications without notice and without incurring obligations.

WHEATLAND TUBE COMPANY – 900 HAD
Phone: 800-257-8182 ► Fax: 856-854-0616 ► EMAIL: info@wheatland.com Made in USA

WM TAO & ASSOCIATES
CONSULTING ENGINEERS

Shop Drawing Submittal Review

Transmitted To: Cannon Design

Date: October 11, 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 [X] **Email**

Copies	No.	Description
1 PDF	221116P01A	(Submittal No.'s) -
		(Cannon #221116-001) – (Paric #15051-0257) – (WES #607)
		• **Domestic Water Piping Product Data REV 1 - Resubmittal**

*Remarks: See Submittal Review from Webb Enginnering.

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

[X] ***Reviewed**

[X] ***No Exceptions Taken**

[ ]

[X] ***Amend and Resubmit**

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.

WEBB
ENGINEERING
SERVICES INC.

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: October 8, 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 – Resubmittal 22 1116 Domestic Water Piping	1	10-10-2016

•Signature: Mike Whitworth

WES
WEBB ENGINEERING SERVICES INC.
1400 S. 3rd Street, Suite 201 • St. Louis, Missouri 63104 • 314.588.0600 • *fax* 314.588.0604
www.webb-engineering.com

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 ISB
LOCATION: St. Louis Missouri
CLIENT PROJ. No.: N/A
WES PROJ. No.: 607
SPEC SECTION: 22 1116 Domestic Water Piping
SUBMITTAL ITEM:: See Below -

CONTRACTOR: Deluca Plumbing, LLC.
CTR. SUBMITTAL # 22 1116-01R (RESUBMITTA)L
SUBMITTAL DATE: August 31, 2016
DATE RECEIVED: October 04, 2016
RECEIVED VIA: E-Mail
RECEIVED FROM: WTA
DATE RETURNED: OCTOBER 08, 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
This resubmittal is the same as what was reviewed and commented on prior, without addressing the comments on that submittal review.						
X					Copper Tubing Mueller Industries, Inc. Type 'L' Copper	
X					Copper Fittings – 2" and smaller Elkhart Products Corp. Wrought Copper Solder Joint	
		X			Fabricated Flange Pipes U.S. Pipe Fabrication, LLC	1. Type and size not indicated on submittal. Mark on the submittal page the type/style that is intended for this project.
		X			Wheatland Tube Co. Hot Dipped Galvanized Interior Combined Domestic Water/Fire Service	1. Submittal does not address service pipe size. The submittal data sheet does not show piping above 4 inch. The combination service size is 8". Submit a data sheet that covers service pipe size.
X					Grooved End Fittings Victaulic Cat. 07.01, Pgs 1, 2 3	
X					Rigid Coupling Victaulic Style 107N Cat. 06.023, Pgs 1 ,2	

REVIEWED BY: Michael R. Whitworth DATE: October 08, 2016

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

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

221116-01
CONTRACTOR / CM SUBMITTAL NO.

CANNON DESIGN SUBMITTAL NO.

DRAWING / DETAIL REFERENCE

221116
SPECIFICATION SECTION / PARAGRAPH

DeLuca Plumbing
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

9/30/16
DATE

To be completed by Reviewer

22 1116-001
CANNON DESIGN SUBMITTAL NUMBER

10/3/16
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. 15051-0257

Paric Corporation

PROJECT: 15051-Webster University Interdisciplinary Science Building

DATE: 09/30/2016

TO: Cannon Design
1100 Clark Ave
St Louis MO 63102

RE: Domestic water piping product data REV 1

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: 08/26/2016

Item	*Package*	*Code*	*Rev.*	*Copies*	*Date*	*Description*	*Status*
Submittal		221116-001	2		09/30/2016	Domestic water piping product data REV 1	Submitted

NOTES:

CC:

Signed: _____

Devin Gates

Shop Drawing Submittal

Project Name: **WEBSTER ISB**

Specification # **221116-01**R

Specification Description: Domestic Water Piping

Schedule
- Ductile Iron from 5' out through Foundation Wall - 8"
- Grooved Galvanized Pipe (combined Fire / Water Inside Building) - 8"
- Copper w/ Sweat Fittings (2" and Smaller)
- Grooved Copper with Victaulic Fittings (2.5" and Larger)

Date: 08-31-16

General Contractor / Construction Manager: Paric

Contractor: DeLuca Plumbing, L.L.C.
8465 Delport Drive
St. Louis, MO 63114

Supplier: Various

Manufacturer: Various

Reviewed & Approved by: DeLuca Plumbing 08-31-16

Action: Forward to GC/CM for Review & Approval

EoR Comments in Blue Text and Clouds