



Submittal Review Response

Project Name: Hilo WWTP Rehabilitation and Replacement Project Phase 1
Submittal No.: 15110-001.0
Date: 9/4/2025

Client: County of Hawai'i Carollo Project No.: 203975
Contractor: Nan, Inc.
Submittal Name: COMMON WORK RESULTS FOR VALVES
Reviewed By: Adrienne Fung

SUBMITTAL REVIEW

Review is for general compliance with contract documents. No responsibility is assumed by Carollo for correctness of quantities, dimensions, and details. No deviation or variation is approved unless specifically addressed in these review comments. Refer to Section 01330 for additional requirements. The Contractor shall assume full responsibility for coordination with all other trades and deviations from contract requirements.

Approved	<input checked="" type="checkbox"/>	No Exceptions
	<input type="checkbox"/>	Make Corrections Noted - See Comments
	<input type="checkbox"/>	Make Corrections Noted - Confirm
Not Approved	<input type="checkbox"/>	Correct and Resubmit
	<input type="checkbox"/>	Rejected - See Remarks
Receipt Acknowledged	<input type="checkbox"/>	Filed for Record
	<input type="checkbox"/>	With Comments - Resubmit


Review Comments:

1. No additional comments.

CONTRACTOR SUBMITTAL TRANSMITTAL FORM

Owner: County of Hawaii **Date:** 6/5/2025
Contractor: Nan, Inc. **Project No.:** WW-4705R
Project Name: Hilo WWTP Phase 1 **Submittal Number:** 15110-001.0
Submittal Title: Product submittal: Sliding valve boxes
To: Engineer
From: Nan, Inc.

Specification No. and Subject of Submittal / Equipment Supplier			
Spec ##:	15110	Subject:	Sliding valve boxes
Authored By:	Nishant More, Project Engineer	Date Submitted:	6/5/2025

Submittal Certification	
Check Either (A) or (B):	
<input checked="" type="checkbox"/> (A)	We have verified that the equipment or material contained in this submittal meets all the requirements specified in the project manual or shown on the contract drawings with no exceptions.
<input type="checkbox"/> (B)	We have verified that the equipment or material contained in this submittal meets all the requirements specified in the project manual or shown on the contract drawings except for the deviations listed.
Certification Statement: By this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and similar data, and I have checked and coordinated each item with other applicable approved shop drawings and all Contract requirements.	
General Contractor's Reviewer's Signature: 	
Printed Name and Title: Nishant More, Project Engineer	
In the event, Contractor believes the Submittal response does or will cause a change to the requirements of the Contract, Contractor shall immediately give written notice stating that Contractor considers the response to be a Change Order.	
Firm:	Signature: Date Returned:

PM/CM Office Use
Date Received GC to PM/CM:
Date Received PM/CM to Reviewer:
Date Received Reviewer to PM/CM:
Date Sent PM/CM to GC:

Nan, Inc

PROJECT: HILO WWTP REHABILITATION
AND REPLACEMENT PROJECT - PHASE 1

JOB NO. WW-4705R

THIS SUBMITTAL HAS BEEN CHECKED BY THIS CONTRACTOR. IT IS
CERTIFIED CORRECT, COMPLETE, AND IN COMPLIANCE WITH
CONTRACT DRAWINGS AND SPECIFICATIONS. ALL AFFECTED
CONTRACTORS AND SUPPLIERS ARE AWARE OF, AND WILL
INTEGRATE THIS SUBMITTAL (UPON APPROVAL) INTO THEIR OWN
WORK.

DATE RECEIVED 6/5/2025
SPECIFICATION SECTION # 15110
SPECIFICATION Common work results for valves
PARAGRAPH 2.06
DRAWING 00-T-05-701
SUBCONTRACTOR N/A
SUPPLIER Core & Main
MANUFACTURER N/A

CERTIFIED BY: Nishant More

- 2) Verify lining integrity with a wet sponge-testing unit operating at approximately 60 volts, or as recommended by the lining manufacturer.
 - 3) Consider tests successful when lining thickness meets specified requirements and when no pinholes are found.
 - 4) Correct defective lining disclosed by unsuccessful tests, and repeat test.
 - 5) Repair pinholes with liquid epoxy recommended by manufacturer of the epoxy used for lining.
2. High solids epoxy:
- a. Product equivalent to high solids epoxy as specified in Section 09960 - High-Performance Coatings.
 - 1) Certified in accordance with NSF 61 for drinking water use.
 - 2) Interior: Coat valve interior with manufacturer's equivalent high performance high solids epoxy coating system with a certifiable performance history for the service conditions and as approved by the Engineer. Manufacturer shall provide for approval, coating information sufficient to allow Engineer to assess equivalence to the specified high solids epoxy as specified in Section 09960 - High-Performance Coatings.
 - b. Clean surfaces to meet SP-7 or SP-10, or as recommended by coating manufacturer.
 - c. Quality control: After coating is cured, check coated surface for porosity with a holiday detector set at 1,800 volts, or as recommended by coating manufacturer.
 - 1) Repair holidays and other irregularities and retest coating.
 - 2) Repeat procedure until holidays and other irregularities are corrected.

2.04 UNDERGROUND VALVES

- A. Provide underground valves with flanged, mechanical, or other type of joint required for the type of pipe to which the valve is to be connected.
- B. Coating and wrapping:
 1. Prior to installation, coat buried valves with 2 coats of protective coal tar as specified in Section 09960 - High-Performance Coatings.
 2. After installation, encase valves in polyethylene wrap as specified for ductile iron piping in Section 15211 - Ductile Iron Pipe: AWWA C151.
 - a. Ascertain that polyethylene wrapping does not affect operation of valve.

2.05 STEAM VALVES

- A. Valves in steam or steam condensate piping: Ductile iron body in accordance with ASTM A536, Grade 65-45-12 minimum or cast steel or forged steel.



2.06 VALVE BOXES

- A. Provide cast-iron valve boxes at each buried valve to access valve and valve operators.

B. Do not support boxes on valve, valve operator, or pipe.



C. Boxes:

1. 2-piece, fabricated of cast iron; provide cover, with asphalt varnish or enamel protective coating.
2. Adjustable to grade, install centered around the upper portions of the valve and valve operator.



D. Manufacturers: One of the following or equal:

1. Tyler Pipe Industries, Inc.
2. Neenah Foundry Co.

2.07 VALVE OPERATORS

A. Valve operator "Open" direction: Open counterclockwise.

B. Provide valves located below operating level or deck with extensions for key operation or floor stands and handwheels, as indicated on the Drawings.

C. Provide manually operated valves located not more than 6 feet above the operating level with tee handles, wrenches, or handwheels:

1. Make the valve operator more conveniently accessible by rolling valves, located more than 5 feet but less than 6 feet above the operating level, toward the operating side.
2. Secure tee handles and wrenches to the valve head or stem, except where a handle or wrench so secured constitutes a hazard to personnel; in which case, stow handle or wrench immediately adjacent to the valve on or in a suitable hanger, bracket, or receptacle.

D. Fit valves located more than 6 feet above operating level with chain operated handles or valve wheels.

1. Chains: Sufficient length to reach approximately 4 feet above the operating level.
2. Where chains constitute a nuisance or hazard to operating personnel, provide holdbacks or other means for keeping the chains out of the way.

E. Provide an operator shaft extension from valve or valve operator to finished grade or deck level when buried valves, and other valves located below the operating deck or level, are specified or indicated on the Drawings to be key operated; provide 2 inches square AWWA operating nut, and box and cover as specified, or a cover where a box is not required.

2.08 POSITION INDICATORS

A. Provide clearly marked position indicator on all valves 6 inches and larger.

B. Visibility: clearly visible from a distance of at least 10 feet. Orient to provide visibility from nearest, accessible operator work area, subject to Engineer's approval. Raised surfaces on a valve that clearly indicate position shall be painted a contrasting color.

Valve Box

CAST IRON TWO-PIECE VALVE BOXES

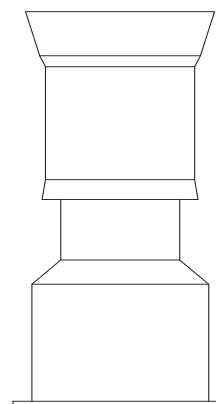
for 4" through 12" valves, 5 1/4 shaft, screw type

Tyler Union Valve boxes are available either assembled or as individual tops and bottoms.

NOTE: Domestic valve boxes available in Heavy Duty only. Non-Domestic available in Standard or Heavy Duty.

6850 ASSEMBLED BOXES (LESS LID)						
Box (Components)	Extension Height	** (D-HD) UPC 670610	** (ND-HD) UPC 670610	Weight	** (ND-Std) UPC 670610	Weight
461-S (10T + 15B)	19-22	145776	502098	50	112280	35
462-S (10T + 24B)	27-32	145783	502104	58	112297	43
562-S (16T + 24B)	27-37	145790	502111	71	112303	50
563-S (16T + 30B)	33-43	145752	—	78	112310	60
564-S (16T + 36B)	39-50	145806	502128	85	112327	66
662-S (26T + 30B)	36-54	145769	—	93	112341	76
664-S (26T + 36B)	43-60	145813	—	100	112358	82
665-S (26T + 24B)	36-46	375296	—	87	—	—
666-S (26T+24B+60 Ext)	53-71	145820	502135	128	112365	95
668-S (26T+36B+60 Ext)	64-82	145837	—	136	112372	111

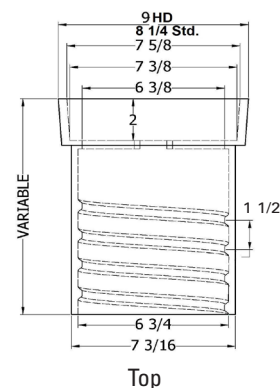
** D = Domestic ND = Import HD = Heavy Duty Weight Std. = Standard Weight



6850 Assembly
(Less Lid)

6850 INDIVIDUAL TOPS (LESS LID)							
Box	Top length	** (D-HD) UPC 670610	Weight	** (ND-HD) UPC 670610	Weight	** (ND-Std) UPC 670610	Weight
461-S	(10T)	144939	22	502142	22	112402	15
462-S	(10T)	144939	22	502142	22	112402	15
562-S	(16T)	144946	36	502159	36	112419	22
563-S	(16T)	144946	36	502159	36	112419	22
564-S	(16T)	144946	36	502159	36	112419	22
662-S	(26T)	144953	51	502166	51	112426	38
664-S	(26T)	144953	51	502166	51	112426	38
666-S	(26T)	144953	51	502166	51	112426	38
668-S	(26T)	144953	51	502166	51	112426	38

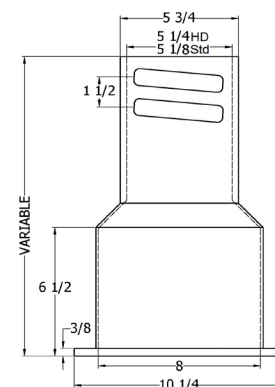
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Top

6850 INDIVIDUAL BOTTOMS							
Box	Bottom Length	** (D-HD) UPC 670610	Weight	** (ND-HD) UPC 670610	Weight	** (ND-Std) UPC 670610	Weight
461-S	(15B)	145004	27	502173	27	112242	20
462-S	(24B)	145011	35	502180	35	112259	28
562-S	(24B)	145011	35	502180	35	112259	28
563-S	(30B)	144991	42	502197	42	112266	38
564-S	(36B)	145028	49	502203	49	112273	44
662-S	(30B)	144991	42	502197	42	112266	38
664-S	(36B)	145028	49	502203	49	112273	44
666-S	(24B)	145011	35	502180	35	112259	28
668-S	(36B)	145028	49	502203	49	112273	44
—	(48B)	—	—	—	—	452737	62
—	(60B)	—	—	—	—	452744	85

** D = Domestic ND = Import HD = Heavy Duty Weight Std. = Standard Weight



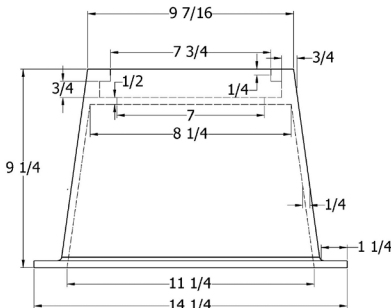
Bottom

See page 50 for extensions.

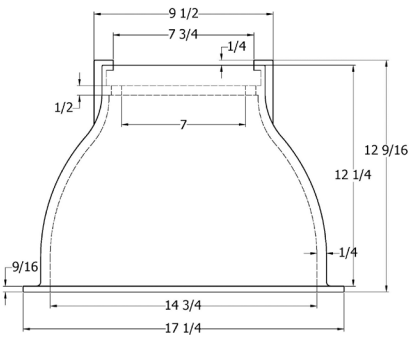
CAST IRON THREE-PIECE VALVE BOXES

for 3" through 20" valves, 5 1/4 shaft, screw type

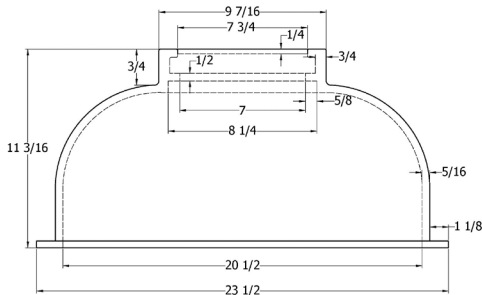
(Base required, order separately)



#4 Base



#6 Base



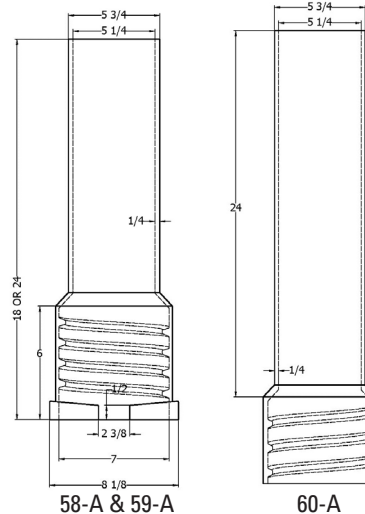
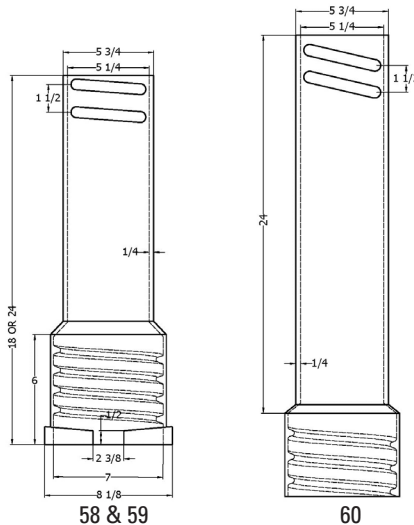
#160 Base

6860 BASES						
Item Description	** (D-HD) UPC 670610	Weight	** (ND) UPC 670610	Weight	** (ND-Std) UPC 670610	Weight
#4, 11 1/4" Wide	145653	42	—	34	381532	22
#6, 14 3/4" Wide	145660	38	502432	45	381525	36
#160, 20 1/2" Wide	145684	71	502425	68	256861	55

** D = Domestic ND = Import HD = Heavy Duty Weight Std. = Standard Weight

6850/60 EXTENSIONS							
Item/Description	Height Increase	** (D-HD) UPC 670610	Weight	** (ND-HD) UPC 670610	Weight	** (ND-Std.) UPC 670610	Weight
#58 Screw-Type	14	145141	32	505594	29	250517	23
#59 Screw-Type	18	145158	30	—	—	136958	29
#60 Screw-Type	24	145059	39	502210	36	112389	29

** D = Domestic ND = Import HD = Heavy Duty Weight Std. = Standard Weight

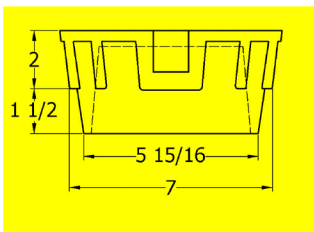
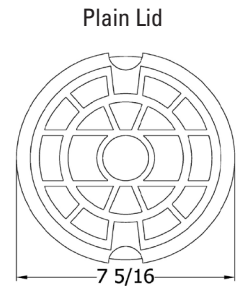
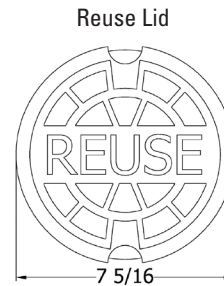
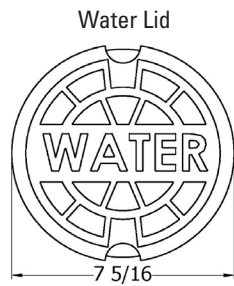


6855 EXTENSIONS					
Item/Description	Height Increase	** (D-HD) UPC 670610	Weight	** (ND-Std.) UPC 670610	Weight
#58-A Slip-Type	6-14	145233	29	136637	26
#59-A Slip-Type	6-18	145240	30	136644	28
#60-A Slip-Type	6-24	145066	36	112198	37

***NOTE:** When installing these extensions, a 6850 screw type bottom is required.

** D = Domestic ND = Import HD = Heavy Duty Weight Std. = Standard Weight

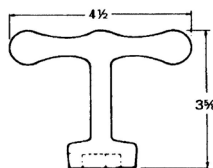
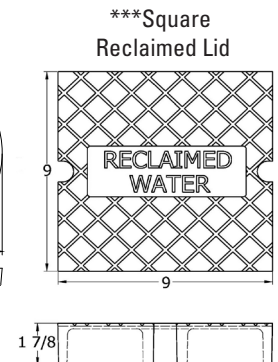
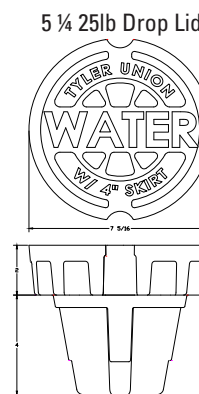
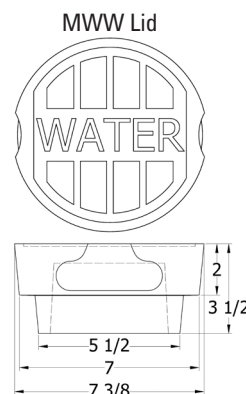
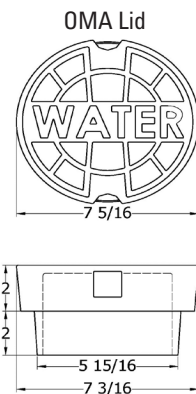
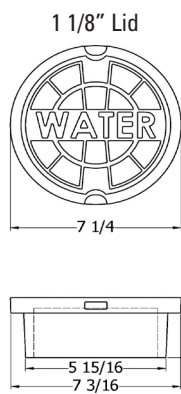
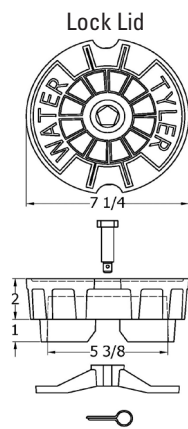
DROP AND LOCK LIDS



*5 1/4 DROP LID					
Item Description	** (D-HD) UPC 670610	Weight	** (ND) UPC 670610	Weight	Marking
5 1/4 Drop Lid	145325	12	136910	9	WATER
5 1/4 Drop Lid	145349	12	136903	9	SEWER
5 1/4 Drop Lid	145332	12	136873	9	GAS
5 1/4 Drop Lid	458975	12	—	—	REUSE
5 1/4 Drop Lid	145356	12	136897	9	PLAIN

** D = Domestic ND = Import HD = Heavy Duty Weight Std. = Standard Weight

*Lids marked WATER will be shipped unless otherwise specified.



Wrench
Fits Standard Waterworks
Pentagon Head 27/32" Brass
Screws

WRENCH		
Description	UPC 670610	Weight
Wrench	144908	0.5

SPECIALTY LIDS					
Item Description	** (D-HD) UPC 670610	Weight	** (ND) UPC 670610	Weight	Marking
5 1/4 Lock Lid	145462	11	136866	11	WATER
*1 1/8 Lid	145509	11	112532	9	WATER
5 1/4 OMA Drop Lid	145370	12	136927	12	WATER
5 1/4 MWW Drop Lid	145370	12	136880	12	WATER
5 1/4 25lb Drop Lid	145451	25	—	—	WATER
***Square Drop Lid	458982	14	—	—	RECLAIMED WATER

*Note: Use with 1 1/8 riser only.

** D = Domestic ND = Non-Domestic HD = Heavy Duty Weight Std. = Standard Weight

***Note: Use with 9T Top #144622.

2024 - Certificate of Compliance • Waterworks Division

Tyler Union Waterworks manufactures and distributes ductile iron water main fittings with accessories. Tyler Union 2 inch through *64 inch fittings are cast with tested and traceable ASTM A536 compliant ductile iron that is designed for use with and conforms to the applicable terms and requirements (including markings) of ANSI/AWWA C153/A21.53, ANSI/AWWA C151/A21.51, ANSI/AWWA C115/A21.15, ANSI/AWWA C111/A21.11, ANSI/AWWA C116/A21.16, ANSI/AWWA C110/A21.10, and ANSI/AWWA C104/A21.4. Tyler Union Waterworks mechanical and push on joint fittings are compatible with PVC pipe conforming to AWWA C900. Fittings are also approved and listed by UL (Underwriter Laboratories) and FM (Factory Mutual). Current revisions apply for each noted standard. Tyler Union offers a full line of ANSI/AWWA Imported products as well as a **full line of Domestic products made in the U.S.A.** If you have a product preference, you must specify upon order placement. *Note: For certification of 54" to 64" fittings, contact your Tyler Union Waterworks representative.

*Note : Refer to UL website for sizes and configuration. Sizes 3-12 are approved by FM.

****Tyler Union Waterworks ANSI/AWWA C153/A21.53 ductile iron Mechanical and Push-On joint fittings "2 inch through 24 inch" shall be rated for 350 PSI working pressure and a surge allowance of 100 PSI. Mechanical and Push-On joint fittings "30 inch through 48 inch" shall be rated for 250 PSI working pressure and a surge allowance of 100 PSI.**

****Tyler Union Waterworks ANSI/AWWA C110/A21.10 ductile iron Mechanical joint fittings in "2 inch through 24 inch" shall be rated for 350 PSI working pressure and a surge allowance of 100 PSI. Mechanical joint fittings "30 inch through 48 inch" shall be rated for 250 PSI working pressure and a surge allowance of 100 PSI.**

****Tyler Union Waterworks ANSI/AWWA C110/A21.10 and ANSI/AWWA C153/A21.53 ductile iron Flanged joint fittings in 2 inch through 48 inch shall be rated for 250 PSI working pressure and a surge allowance of 100 PSI. Flange fittings 24 inches (610 millimeters) and smaller may be rated for 350 PSI (2,413 kPa) working pressure with the use of special gaskets. Per Section A.3 of ANSI/AWWA C110/A21.10 ductile iron Flange joint fittings are not recommended for underground installation due to the rigid design of the fitting flange and joint.**

**Note – Exceptions: Mechanical and Push-On joint fittings with flanged branches are rated for working pressure of 250 PSI. ¹Flange fittings 24 inches and smaller may be rated for 350 PSI working pressure with the use of special flange gaskets. ²For 350 PSI flange joint applications we recommend the use of annular ring type gasket or comparable. ³AWWA C153 MJ and Push on joint wyes 14" and larger are not pressure rated; contact Tyler Union for the allowable pressure ratings.

Tyler Union Waterworks ANSI/AWWA C110/A21.10 and ANSI/AWWA C153/A21.53 ductile iron Mechanical joint fittings and ANSI/AWWA C153/A21.53-06 (manufacturer's standards) Push-On joint fittings when installed per AWWA C600/651 are rated for a *maximum 5 degrees of deflection for "3 inch through 12 inch" fittings and a *maximum 3 degrees of deflection for "14 inch through 48 inch" fittings.

*Note : The total joint deflection is determined by the O.D. of the pipe and the I.D. of the fitting. When both the pipe and the fitting are at nominal; the joint deflection will be approximately 50% of the maximum listed.

Tyler Union Waterworks coated and/or cement lined Potable water ductile iron fittings meet all the applicable terms and requirements of ANSI/AWWA C116/A21.16, ANSI/AWWA C104/A21.4, and AWWA C550. Potable water products manufactured and distributed by Tyler Union Waterworks are National Sanitation Foundation NSF 61, NSF-372, and Annex G compliant. Current revisions apply for each noted standard.

Tyler Union Waterworks Valve and Service boxes are produced in accordance with and meet all applicable terms and provisions of ASTM-A48. Cast iron Service and Valve box products when properly selected and installed per the guidelines provided by AWWA M44 (Manual of Water Supply Practices) will provide accessibility for testing and maintenance of a water supply system and will meet the Wheel load designation as provided by the American Association of State Highway Transportation Officials (AASHTO).

Tyler Union Waterworks Mechanical joint fittings, Glands, T-Head bolts, and Nuts are produced in accordance with and meet all applicable terms and provisions of ANSI/AWWA C111/A21.11. Tyler Union Mechanical and Push-On joint gaskets are produced in accordance with and meet all applicable terms and provisions of ANSI/AWWA C111/A21.11. Tyler Union manufacturer's standard design Mechanical and Push-On joint Transition gaskets are produced in accordance with and will meet all applicable terms and provisions of ANSI/AWWA C111/A21.11.

All applicable design tests as required by AWWA have been performed and results maintained with all materials supplied being of the same quality, manufacture, and make as those tested.

Sincerely,


Mark Vess
Quality Manager
Tyler Union Waterworks
Email: mark.vess@tylerunion.com
Tel.: (800) 226-7601

Project Name: _____
Project Material: _____
Product Supplier: _____
Contractor: _____
File: COC TU Products

Tyler Union Waterworks Contact Information

Anniston: (800) 226-7601

Riverside: (866) 527-8471

Tyler: (800) 527-8478

www.tylerunion.com

This document is void if modified in any manner other than the addition on project information.