



This form is required to be the first page of the Application (APP) file. For help with submittals, see the [ePlan User Guide & ePlan Video Series](#)

The preparer is legally responsible for signatures whether a graphic, typewritten, or handwritten. Documents may not be restricted by digital signatures or otherwise.

Notice to Building Permit Applicant

- Building permit questions: Planning_BuildingInfo@santacruzcounty.us. Visit our website for hours of operation and other contact information.
- Effective 11/1/20:** [ePlan](#) electronic submittal required for all projects requiring a review. Permit status and corrections must be tracked [online](#).
- Application fees are not refundable, except as specified in the Planning Department Fee Schedule.
- You must advise residents of the subject property that Planning Department staff may be visiting the site. The site must be clearly marked/staked for staff inspection. Incomplete directions or markings will delay the review of the project.
- If you have begun any activity requiring County review or approval without first obtaining a permit, you will be charged for staff time incurred to investigate the violation and costs for staff time that accrue until the violation is resolved. Authority for these charges is found in Chapter 1.12 of the Santa Cruz County Code.
- Actions by County staff regarding your Building Permit Application may be appealed. For guidance on how to file an appeal, contact the Building Counter of the Planning Department or refer visit our website.
- Extension Policy: You have until the expiration date of this application to resolve all deficiencies and obtain your permit. Per County Code, the expiration date is two years after the application date or six months from the date the application is approved whichever comes first. Extensions of the expiration date are rarely granted and only in extreme cases where extenuating circumstances can be shown.
- Notice to Applicants for Commercial Building Permits: [AB3002](#)

The undersigned applicant hereby authorizes the filing of this application and authorizes staff to visit the subject property. I understand that staff may visit the property both during the review process and following the issuance of the permit. I certify to the best of my ability that the submittal information is true and correct, and that I have read and understand the above.

Applicant Signature

Signature: _____

Date: _____

Application

Upload Submittal files (see below) and notify the Planning Department (option 1 or 2). Staff will create an application and notify you of required intake fees. Payments can be made at the Planning Department or [online](#).

Option 1: Call the Planning Department to schedule an appointment. Tel: 831-454-3252

Option 2: Click the [green Send Notification](#) button online. (staff response times shown online or in emails are contingent on current workload)

Submittal Files

New Applications

Application (APP) file, Plans (PLN) **and/or** Supplemental (SUP).

Resubmittals

Letter (LTR), Plans (PLN) **and/or** Supplemental (SUP). Resubmit new APP, PLN, or SUP file if it was revised. To replace existing files, simply upload new ones.

The Application (APP) file must include the [applicable Intake Items](#) to initiate the permit. After approval by all agencies, the approval letter will identify the *Final Items*. Prior to permit issuance, add the *Final Items* to the Application (APP) file (*Intake Items + Final Items*) and reupload.

[•] Bullet items are mandatory. Mark other included items.

APP file (intake) - Intake Items at initial submittal

- ePlan Submittal Checklist – PLG230 (must be 1st page)
- Building Permit Application – [PLG200](#) or [PLG205](#) or [PLG206](#)
- Owner-Agent Authorization – [PLG210](#)
- Zoning Review/Prescreen (4th Floor)
- Discretionary Permit No. _____
- Parcels with Septic: Environmental Health clearance (3rd Floor)
- Non-Public water: Environmental Health approval (3rd Floor)
- Public water: Conditional Will Serve Letter
- Other(s): _____

File Standards & Submittal Requirements

- 1 of each file type allowed (APP, PLN, SUP) in PDF format.
- Files contain all sheets/documents (not simply revised items).
- Unlocked & flattened (no layers).
- Bookmarks set to [Fit Page](#) with names matching the index.
- Stamps/signatures are embedded. (Digital signatures not allowed)
- Submittals must meet all County submittal requirements.

APP file (final) – add final items to APP file & upload prior to permit issuance

- APP file Intake Items
- Owner-Builder Acknowledgement – [PLG220](#)
- Fire Department Payment Receipt
- School Certificate of Payment
- Public water: Unconditional Will Serve Letter
- Other(s): _____

Plans (PLN) & Supplemental (SUP) (see File Standards & Submittal Requirements)

- Plans (PLN)
- Supplemental (SUP) (PLG235 must be first page)



The preparer is legally responsible for signatures whether a graphic, typewritten, or handwritten. Documents may not be restricted by digital signatures or otherwise.

Project Information All applicants must fill out this section Staff will assign Permit No. _____

Notice to Applicants for Commercial Building Permits: [AB3002](#)

[ePlan](#) electronic submittal required. Effective 11/1/2020: Paper processing is discontinued.

APN:	<div style="background-color: black; width: 100%; height: 1.2em;"></div>	Date:	
Project Address:	<div style="background-color: black; width: 100%; height: 1.2em;"></div>	Email:	<div style="background-color: black; width: 100%; height: 1.2em;"></div>
Legal Owner:	<div style="background-color: black; width: 100%; height: 1.2em;"></div>	Phone:	<div style="background-color: black; width: 100%; height: 1.2em;"></div>
Owner Address:	<div style="background-color: black; width: 100%; height: 1.2em;"></div>		

Applicant

Name:	<div style="background-color: black; width: 100%; height: 1.2em;"></div>	License No.:	<div style="background-color: black; width: 100%; height: 1.2em;"></div>
Address:	<div style="background-color: black; width: 100%; height: 1.2em;"></div>	Email:	<div style="background-color: black; width: 100%; height: 1.2em;"></div>
		Phone:	<div style="background-color: black; width: 100%; height: 1.2em;"></div>

Design Professional in Charge (if any)

Name:	<div style="background-color: black; width: 100%; height: 1.2em;"></div>	License No.:	<div style="background-color: black; width: 100%; height: 1.2em;"></div>
Address:	<div style="background-color: black; width: 100%; height: 1.2em;"></div>	Email:	<div style="background-color: black; width: 100%; height: 1.2em;"></div>
		Phone:	<div style="background-color: black; width: 100%; height: 1.2em;"></div>

Briefly Describe Scope of Work Indicate square footages of buildings, additions, remodel, retaining walls (face), decks, pools, sheds, trellis, etc.

Declarations All applicants must fill out this section. Signature applies to both declarations.

A. Worker's Compensation Declaration. Warning: Failure to secure workers' compensation coverage is unlawful, and shall subject an employer to criminal penalties and civil fines up to \$100,000, in addition to the cost of compensation, damages as provided for in Section 3706 of the Labor Code, interest, and attorney's fees. I hereby affirm under penalty of perjury one of the following declarations:

- Check only one box:
- a) I have and will maintain a certificate of consent to self-insure for workers' compensation, issued by the Director of Industrial Relations as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.
My policy number is: _____
 - b) I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Carrier:	<div style="background-color: black; width: 100%; height: 1.2em;"></div>	Phone:	<div style="background-color: black; width: 100%; height: 1.2em;"></div>
Policy No.:	<div style="background-color: black; width: 100%; height: 1.2em;"></div>	Expires:	<div style="background-color: black; width: 100%; height: 1.2em;"></div>
 - c) I certify that, in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California, and agree that, if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

B. Declaration Regarding Construction Lending Agency. I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Civil Code Section 3097). *If not using a construction lending agency, write N/A.*

Lender's Name: _____
 Address: _____

Licensed Contractor, Property Owner, or Authorized Agent Sign and print name below

Signature: <div style="background-color: black; width: 100%; height: 1.2em;"></div>	Date: <div style="background-color: black; width: 100%; height: 1.2em;"></div>
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Applicant Information Fill out only the applicant section that applies to you.

A. Licensed Contractor or Authorized Agent as Applicant.

Company: _____ License No. _____
License Class: _____

Licensed Contractor Declaration: I hereby affirm under penalty of perjury that I am licensed under provisions of Business and Professions Code Division 3, Section 7000 of Chapter 9, and my license is in full force and effect.

Licensed Contractor or Authorized Agent Sign and print name below

Signature: _____ Date: _____

B. Owner-Builder or Authorized Agent as Applicant

Owner-Builder's Declaration

I hereby affirm under penalty of perjury that I am exempt from the Contractors' State License Law for the reason indicated below. Per Business and Professions Code Section 7031.5, Business and Professions Code: Any city or county that requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for the permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors' State License Law (Chapter 9, commencing with Section 7000, of Division 3 of the Business and Professions Code) or that he or she is exempt from licensure and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars (\$500). Check only one (a, b, c):

- a) I, as owner of the property, or my employees with wages as their sole compensation, will do ALL of or PORTIONS of the work, and the structure is not intended or offered for sale. Per Business and Professions Code Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who, through employees' or personal effort, builds or improves the property, provided that the improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the Owner-Builder will have the burden of proving that it was not built or improved for the purpose of sale.
- b) I, as owner of the property, am exclusively contracting with licensed Contractors to construct the project. Section 7044, Business and Professions Code: The Contractors' State License Law does not apply to an owner of property who builds or improves thereon, and who contracts for the projects with a licensed Contractor pursuant to the Contractors' State License Law.
- c) I am exempt from licensure under the Contractors' State License Law for the following reason: (explain below)

By my signature below, I acknowledge that, except for my personal residence in which I must have resided for at least one year prior to completion of the improvements covered by this permit, I cannot legally sell a structure that I have built as an owner-builder if it has not been constructed in its entirety by licensed contractors. I understand that a copy of the applicable law, Section 7044 of the Business and Professions Code, is available upon request when this application is submitted or at the following Web site: <http://www.leginfo.ca.gov/calaw.html>. I also certify the following:

- I am the property owner or authorized to act on the property owner's behalf.
- I have read this application and the information I have provided is correct.
- I agree to comply with all applicable county ordinances and state laws relating to building construction.
- I authorize representatives of this county to enter the above identified property for inspection purposes.

Property Owner or Authorized Agent Signature Sign and print name below

Signature: _____ Date: _____

C. Authorizing an Agent to be the Applicant To be completed by the Licensed Contractor or Owner-Builder

Agent Name: _____ Phone: _____
Agent Address: _____
Project Address: _____

For the Licensed Contractor who is Authorizing an Agent: I authorize the above-named person to act as my agent to apply for, sign, and file the documents required to obtain a building permit for the project at the listed address. I declare under penalty of perjury that I am the Licensed Contractor for the property listed at the above Project Address, I have filled out this section, and I certify the accuracy of the information provided.

For the Owner-Builder who is Authorizing an Agent: Except for the Owner Builder Acknowledgement [PLG220](#) which is my personal responsibility, I authorize the above-named person to act as my agent to apply for, sign, and file the documents required to obtain a building permit for my property. I declare under penalty of perjury that I am the Property Owner at the above Project Address; I have filled out this section; and I certify the accuracy of the information provided.

Owner-Builder or Authorized Agent Sign and print name below

Signature: _____ Date: _____



The preparer is legally responsible for signatures whether a graphic, typewritten, or handwritten. Documents may not be restricted by digital signatures or otherwise.

Project Information Permit No. _____

APN: _____ Date: 11-10-2020
 Project Address: _____
 Legal Owner: _____ Email: _____
 Owner Address: _____ Phone: _____

Authorized Agent

Firm Name: _____ License No. _____
 Name: _____ Email: _____
 Address: _____ Phone: _____

Authorization Statement

This is the County's authorization to issue a permit to the Agent shown above.
 One Owner-Agent Authorization form will be required for each permit required. In the case where there is more than one owner of a parcel, the owner signing this form represents that he/she has the consent from all other owners of the parcel. For development permits, by signing this form, the owner is authorizing the agent to legally bind the owner to responsibility for payment of the County's cost for inspections and all other actions related to noncompliance with permit conditions. The agent will be required to provide the department with proof of service by mail, that the owner was mailed a copy of the executed acceptance of permit conditions. Finally, by signing this form, the owner is designating the agent as their Agent for Service of Process for all matters relating to this application.
 Refunds will be made to whomever made the payment.

Effective 11/1/20: Owners and applicants must track permit status online. The legacy process of sending correction letters will be discontinued. Approval letters will continue until transitioned by 2021.

AB3002 Notice to Applicants for Commercial Building Permits online: [AB3002](#)

I declare under penalty of perjury that I am the Property Owner at the above Project Address; I have filled out this document; and I certify the accuracy of the information provided.

Signature of the Owner (who is authorizing the agent)

Signature: _____ Date: _____



Notice to Property Owner

Dear [REDACTED]

An application for a building permit has been submitted in your name listing yourself as the builder of the property improvements specified at the below address:

[REDACTED]

We are providing you with an Owner-Builder Acknowledgement form to make you aware of your responsibilities and possible risk you may incur by having this permit issued in your name as the Owner-Builder. We will not issue a building permit until you have read, initialed your understanding of each provision, signed, and returned this form to us at our official address:

County of Santa Cruz Planning Department
701 Ocean Street 4th Floor
Santa Cruz, CA 95060

An agent of the owner cannot execute this notice.

The **Owner-Builder Acknowledgement PLG220** to be completed and returned is on the opposite side of this notice.



The preparer is legally responsible for signatures whether a graphic, typewritten, or handwritten. Documents may not be restricted by digital signatures or otherwise.

Owner-Builders Applying for Construction Permits

Permit No. _____

Provision of this information is required by state law AB 2335, effective as of 2009. **Before issuance of a building permit, the Property Owner must complete and submit this form;** an agent of the owner may not execute this form. **Please read and initial each statement below to signify that you understand and verify this information:**

1. I understand a frequent practice of unlicensed persons is to have the property owner obtain an "Owner-Builder" building permit that erroneously implies that the property owner is providing his or her own labor and material personally. I, as an Owner-Builder, may be held liable and subject to serious financial risk for any injuries sustained by an unlicensed person and his or her employees while working on my property. My homeowner's insurance may not provide coverage for those injuries. I am willfully acting as an Owner-Builder and am aware of the limits of my insurance coverage for injuries to workers on my property.
2. I understand building permits are not required to be signed by property owners unless they are responsible for the construction and are not hiring a licensed Contractor to assume this responsibility.
3. I understand as an "Owner-Builder" I am the responsible party of record on the permit. I understand that I may protect myself from potential financial risk by hiring a licensed Contractor and having the permit filed in his or her name instead of my own.
4. I understand Contractors are required by law to be licensed and bonded in California and to list their license numbers on permits and contracts.
5. I understand if I employ or otherwise engage any persons, other than California licensed Contractors, and the total value of my construction is at least five hundred dollars (\$500), including labor and materials, I may be considered an "employer" under state and federal law.
6. I understand if I am considered an "employer" under state and federal law, I must register with the state and federal government, withhold payroll taxes, provide workers' compensation disability insurance, and contribute to unemployment compensation for each "employee." I also understand my failure to abide by these laws may subject me to serious financial risk.
7. I understand under California Contractors' State License Law, an Owner-Builder who builds single-family residential structures cannot legally build them with the intent to offer them for sale, unless all work is performed by licensed subcontractors and the number of structures does not exceed four within any calendar year, or all of the work is performed under contract with a licensed general building Contractor.
8. I understand as an Owner-Builder if I sell the property for which this permit is issued, I may be held liable for any financial or personal injuries sustained by any subsequent owner(s) that result from any latent construction defects in the workmanship or materials.
9. I understand I may obtain more information regarding my obligations as an "employer" from the Internal Revenue Service, the United States Small Business Administration, the California Department of Benefit Payments, and the California Division of Industrial Accidents. I also understand I may contact the California Contractors' State License Board (CSLB) at 1-800-321-CSLB (2752) or www.cslb.ca.gov for more information about licensed contractors.
10. I am aware of and consent to an Owner-Builder building permit applied for in my name, and understand that I am the party legally and financially responsible for proposed construction activity at the following address:

11. I agree that, as the party legally and financially responsible for this proposed construction activity, I will abide by all applicable laws and requirements that govern Owner-Builders as well as employers.
12. I agree to notify the County of Santa Cruz, Planning Department immediately of any additions, deletions, or changes to any of the information I have provided on this form. Licensed contractors are regulated by laws designed to protect the public. If you contract with someone who does not have a license, the Contractors' State License Board may be unable to assist you with any financial loss you may sustain as a result of a complaint. Your only remedy against unlicensed Contractors may be in civil court. It is also important for you to understand that if an unlicensed Contractor or employee of that individual or firm is injured while working on your property, you may be held liable for damages. If you obtain a permit as Owner-Builder and wish to hire Contractors, you will be responsible for verifying whether or not those Contractors are properly licensed and the status of their workers' compensation insurance coverage.

Notice to Applicants for Commercial Building Permits online: [AB3002](#)
Please print name, sign, date, and return to the agency responsible for issuing the permit.

Name: _____

Signature: _____

Date: _____



CENTRAL FIRE DISTRICT
of Santa Cruz County

COMMUNITY RISK REDUCTION DIVISION

6934 Soquel Drive, Aptos CA 95003
(831) 685-6698

FIRE DISTRICT INVOICE

DATE: 1/13/2022

APN: [REDACTED] APP/PERMIT # APP-221000

NAME: [REDACTED]

ADDRESS: [REDACTED]

RE: FIRE REVIEW – DUPLEX STYLE TOWNHOME UNITS 9 & 10

Send my receipt via:

EMAIL, TO: _____

MAIL, TO: _____

FIRE DISTRICT FEES \$ 699.60

TOTAL AMOUNT DUE \$ 699.60

An additional \$75.00 late fee will be added to the total if payment is not received within 30 days of the invoice date.

CASH OR CHECK - Make payment out to "Central Fire District" and reference the APN.
Mail payment to "Fire Prevention" at 6934 Soquel Drive, Aptos CA 95003 or call (831)685-6698 to schedule an appointment.

Credit Card Online - Central Fire District of Santa Cruz County
www.centrafire.org "Make-a-Payment"

RECEIPT – OFFICE USE ONLY

DATE PAID: 1/28/2022	CHECK #/CASH: 11783
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SANTA CRUZ COUNTY OFFICE OF EDUCATION

www.santacruzcoe.org

CERTIFICATION OF PAYMENT OF DEVELOPER FEES

(Bonny Doon, Live Oak, Mountain, Pacific, Santa Cruz City, San Lorenzo Valley and Soquel School Districts)

Developments in the Live Oak School District MUST have a signature of a District representative in part III PRIOR to certification at the County Office of Education. Call Live Oak for more information.

PART I: To Be Completed by Developer:

Name: [Redacted] Daytime Telephone #: [Redacted]

Mailing Address: [Redacted] (Street) [Redacted] (City) [Redacted] (State) [Redacted] (Zip)

Date: 7/7/2022 Signature: [Redacted]

PART II: To Be Completed by Planning/Building Department

APN #: [Redacted] Application #: B-221066

Job Address: [Redacted]

Type of Construction: New [X] Addition [] Street City Zip

Project Square Feet: 1,268

Credit for Removed: 0

Sq. Ft. of Like Kind: 0

TOTAL ADJUSTED SQ. FT.: 1,268

Senior Citizen Project: Yes [] No [X] (Civil Code Section 51.3 and Health/Safety Code 1569.2)

I CERTIFY THAT ALL DOCUMENTS HAVE BEEN FILED WITH THE PLANNING/BUILDING DEPARTMENT.

Authorized Representative (Signature): Bob Callacino Date: 7-7-2022

Authorized Representative (Printed Name): Bob Callacino Agency: County Planning

PART III: To Be Completed by Live Oak School District (If Applicable) Collection of Mitigation Fees (Mello-Roos)

Fees Collected by School District Official: Signature: [Redacted] Date: 7/7/22 Printed Name: [Redacted]

PART IV: To Be Completed by the County Office of Education 400 Encinal St., Santa Cruz, CA 95060 Telephone (831) 466-5600

- [] Exempt: 500 Sq. Ft. or less [] Senior Housing Rate

The Live Oak School District has received: \$ 2,599.40 Check Number: 12094

From [Redacted] covering the construction of 1,268 Square feet of Residential Construction.

Authorized Representative - Signature: [Redacted] Date: [Redacted] Printed Name: [Redacted]

Form must be validated by Santa Cruz County Office of Education Seal

You have 90 days from date of payment of these fees to file a protest against the imposition of these fees. (Government Code Sec. 66020) Fees paid shall be used for the construction or reconstruction of school facilities.

SANTA CRUZ COUNTY OFFICE OF EDUCATION

www.santacruzcoe.org

CERTIFICATION OF PAYMENT OF DEVELOPER FEES

(Bonny Doon, Live Oak, Mountain, Pacific, Santa Cruz City, San Lorenzo Valley and Soquel School Districts)

Developments in the Live Oak School District MUST have a signature of a District representative in part III PRIOR to certification at the County Office of Education. Call Live Oak for more information.

PART I: To Be Completed by Developer:

Name: [Redacted] Daytime Telephone #: [Redacted]

Mailing Address: [Redacted] (Street) (City) (State) (Zip)

Date: 7/7/2022 Signature: [Redacted]

PART II: To Be Completed by Planning/Building Department.

APN #: [Redacted] Application #: B-221065

Job Address: [Redacted]

Type of Construction: New [X] Addition [] Street City Zip

Project Square Feet: 1,268

Credit for Removed: 0

Sq. Ft. of Like Kind: 0

TOTAL ADJUSTED SQ. FT.: 1,268

Senior Citizen Project: Yes [] No [X] (Civil Code Section 51.3 and Health/Safety Code 1569.2)

I CERTIFY THAT ALL DOCUMENTS HAVE BEEN FILED WITH THE PLANNING/BUILDING DEPARTMENT.

Authorized Representative (Signature): Bob Colacino Date: 7-7-2022

Authorized Representative (Printed Name): Bob Colacino Agency: County Planning

PART III: To Be Completed by Live Oak School District (If Applicable) Collection of Mitigation Fees (Mello-Roos)

Fees Collected by School District Official: Signature: Chris Breeman Date: 7/1/22

PART IV: To Be Completed by the County Office of Education

400 Encinal St., Santa Cruz, CA 95060 Telephone (831) 466-5600

- [] Exempt: 500 Sq. Ft. or less [] Senior Housing Rate

The Live Oak

School District has received: \$ 2,599.40 Check Number: 12094

From [Redacted] covering the construction of

1,268 Square feet of Residential Construction.

Authorized Representative - Signature: [Redacted] Date: [Redacted]

Form must be validated by Santa Cruz County Office of Education Seal

You have 90 days from date of payment of these fees to file a protest against the imposition of these fees. (Government Code Sec. 66020) Fees paid shall be used for the construction or reconstruction of school facilities.



WATER SERVICE INFORMATION FORM

March 27, 2018

Owner: [REDACTED]
Site Address: [REDACTED]
Site APN: [REDACTED]
Project Description: Development of a 12-unit affordable housing proj

Dear [REDACTED]

Your project is located within the City of Santa Cruz Water Service area. The subject parcel is currently an undeveloped lot, with an existing water service, and is subject to the following conditions:

1. Fire service as required by Central Fire. Please complete a Fire Protection Requirements Form for each unit with Central Fire and submit completed form to SCWD prior to obtaining water permit. Central Fire phone number: (831) 479-6842.
2. A new 3/4" sized domestic by fire combination service is required to be installed to separately serve each unit as per SCWD Detail 4A.
3. Water Conservation and Engineering to review irrigation/landscape plans to determine final irrigation water service requirements. The existing 3/4" service is estimated to become a dedicated irrigation service with a 3/4" Reduced Principle Backflow Prevention Assembly installed behind the water meter as per SCWD Detail 5 & 8.
4. When applying for a building permit, please provide a utility site plan with existing water main & service locations, types and sizes. Provide new water service locations, types and sizes with new domestic, irrigation and fire service backflow device type, size and locations. Provide call outs to new or existing services referencing SCWD standard details.
5. Please see attached customer handout, standard details and list of certified water service installation contractors which are required to perform water service work. All water permit fees are due and water service retrofit work to be completed for this project prior to signing off on the building permit final.

If you have any questions, please contact the Water Department Engineering Division at (831) 420-5210

Sincerely,

BJ Dericco
City of Santa Cruz | Water Dept., Engineering
212 Locust Street, Suite C
Santa Cruz, CA 95060

NEW WATER SERVICE - Permits Fee Estimate

WTP18-0058

Mtr Config	Use Type	Type/Size	Fee Description	Num of Units	Unit Cost	Sub Total
	MASTER WATER PERMIT		BACKFLOW REVIEW	1	\$126.00	\$126.00
PERMIT FEE TOTALS:						\$126.00

WIRR18-0003

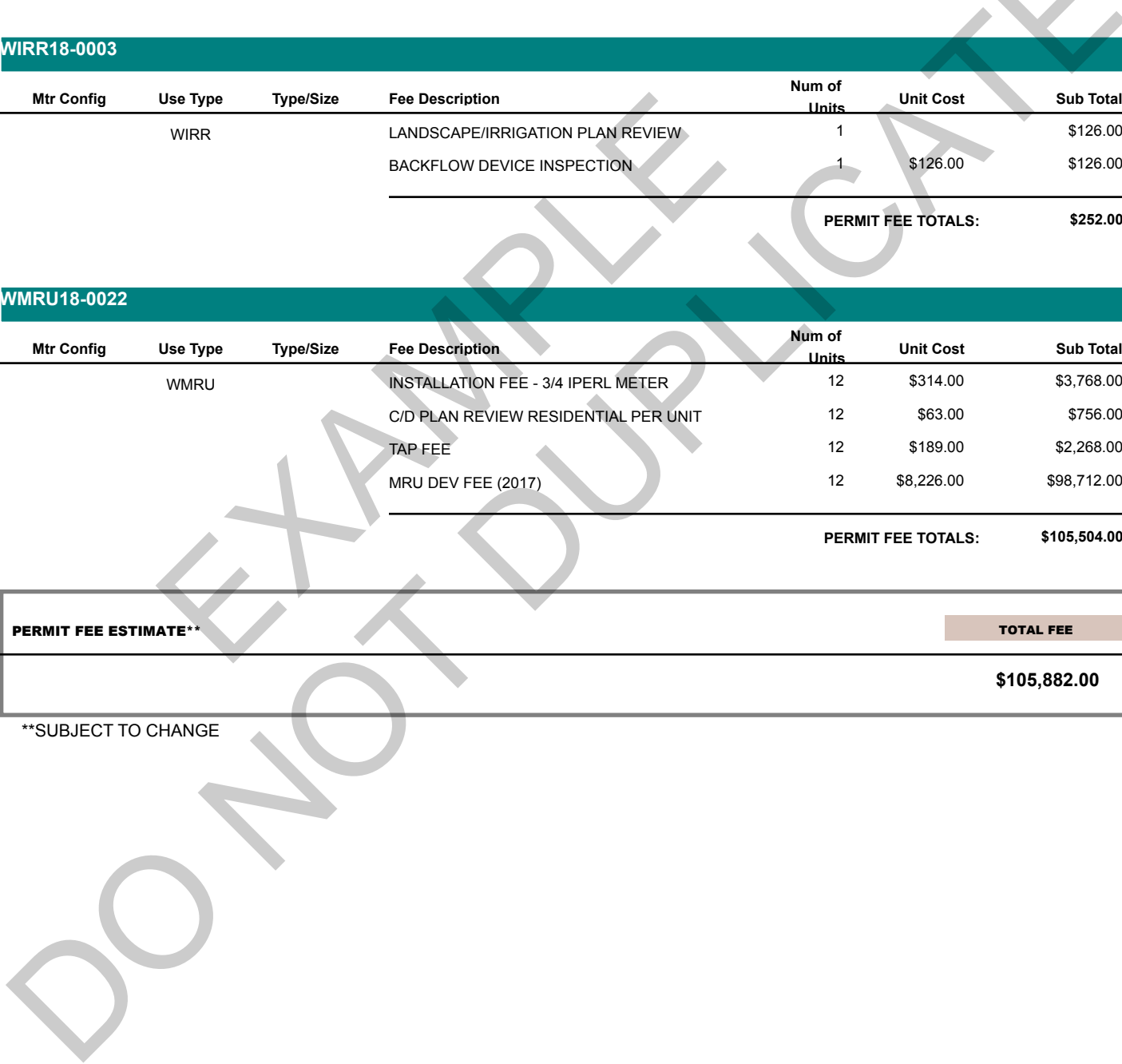
Mtr Config	Use Type	Type/Size	Fee Description	Num of Units	Unit Cost	Sub Total
	WIRR		LANDSCAPE/IRRIGATION PLAN REVIEW	1		\$126.00
			BACKFLOW DEVICE INSPECTION	1	\$126.00	\$126.00
PERMIT FEE TOTALS:						\$252.00

WMRU18-0022

Mtr Config	Use Type	Type/Size	Fee Description	Num of Units	Unit Cost	Sub Total
	WMRU		INSTALLATION FEE - 3/4 IPERL METER	12	\$314.00	\$3,768.00
			C/D PLAN REVIEW RESIDENTIAL PER UNIT	12	\$63.00	\$756.00
			TAP FEE	12	\$189.00	\$2,268.00
			MRU DEV FEE (2017)	12	\$8,226.00	\$98,712.00
PERMIT FEE TOTALS:						\$105,504.00

PERMIT FEE ESTIMATE**	TOTAL FEE
	\$105,882.00

**SUBJECT TO CHANGE





WATER DEPARTMENT
Approved Water Service Installation Contractors List

Santa Cruz Water Department

212 Locust Street, Suite C

Santa Cruz, CA 95060

Phone 831-420-5210

Fax 831-420-5201

www.cityofsantacruz.com

COMPANY NAME	STATE LICENSE	ADDRESS	CITY	STATE	ZIP	OFFICE PH	FAX
Anderson Pacific Engineering Construction	#245215	1390 Norman Avenue	Santa Clara	CA	95054	408-970-9900	408-213-0532
Associated Plumbing	#577085	90 Leavesley Road	Gilroy	CA	95020	408-847-4406	408-847-1640
Bindel Bros. Grading & Backhoe Services, Inc.	#668920	1104 Madison Lane	Salinas	CA	93907	831-754-1490	831-754-1491
Coast Pipeline	#355201	1405 Day Valley Road	Aptos	CA	95003	831-688-6255	831-688-3617
Don Chapin Company, Inc.	#406512	560 Crazy Horse Canyon Road	Salinas	CA	93907	831-449-4273	831-449-0700
Durden Construction, Inc.	#523203	PO Box 966	San Juan Bautista	CA	95045	831-623-1200	831-623-1201
E&S Trucking Company	#713788	1770 El Rancho Drive	Santa Cruz	CA	95060	831-438-7940	831-438-8000
Earthworks	#807689	310A Kennedy Drive	Capitola	CA	95010	831-475-1223	831-475-1173
George H. Wilson, Inc.	#128655	PO Box 1140	Santa Cruz	CA	95061	831-423-9522	831-423-9903
Granite Construction	#89	PO Box 720	Watsonville	CA	95077	831-763-6100	831-761-1042
Graniterock Company	#22	120 Granite Rock Way	San Jose	CA	95136	408-574-1400	408-365-8349
Johnson & Company	#794964	600 Calabasas Road	Watsonville	CA	95076	831-722-8452	
Lindex Excavating	#654201	2725B S. Rodeo Gulch Road	Soquel	CA	95073	831-462-5519	831-462-5519
Sanco Pipeline, Inc.	#160382	727 University Avenue	Los Gatos	CA	95032	408-377-2793	408-354-7599
Santa Cruz Underground Paving	#863687	PO Box 699	Aptos	CA	95001	831-688-1382	831-722-3127

Revised March 2018



WATER DEPARTMENT

212 Locust Street, Suite C, Santa Cruz, CA 95060 ♦ Ph: 831-420-5210

New/Existing Combination Domestic and Fire Service for Residential Construction Projects

The City of Santa Cruz Water Department (SCWD) requires a single, small diameter water service to serve domestic demands and a residential fire sprinkler system. Where applicable, domestic and fire water will be provided from a single service as shown by Detail 4A. The following information is provided as a guideline for an applicant seeking water service for a new building or a remodel.

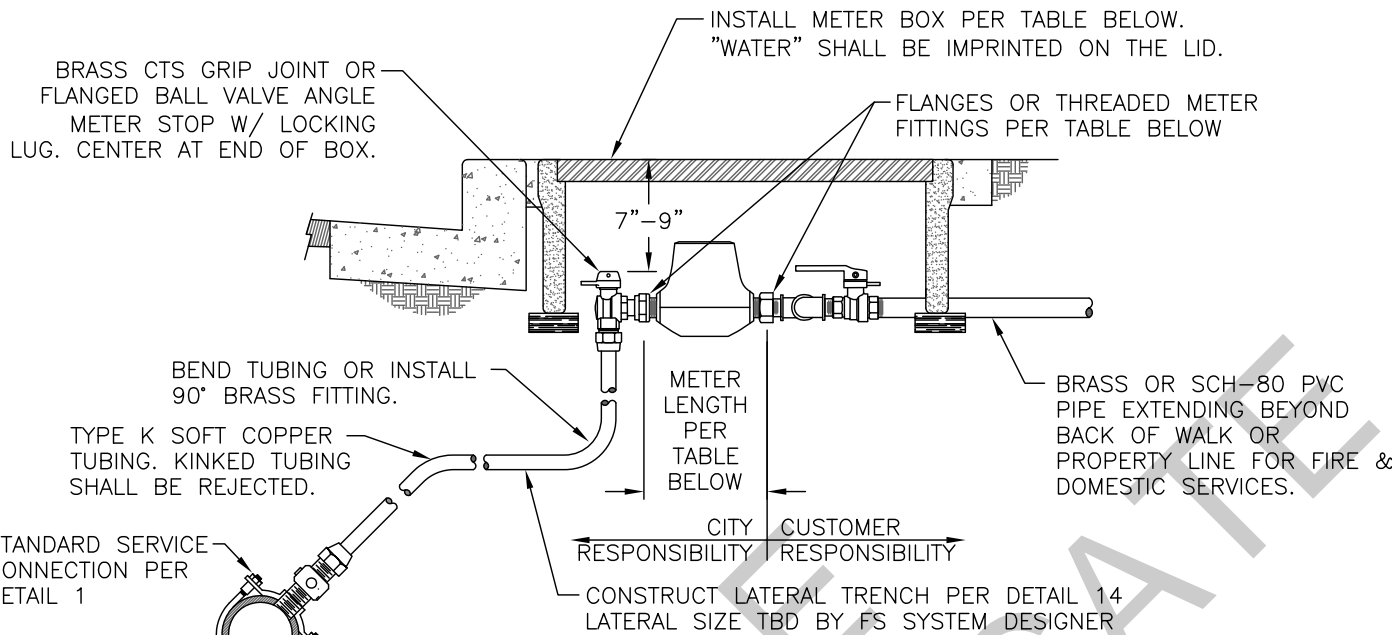
Planning for your water service:

- You must provide SCWD with a completed and signed “Fire Protection Requirements Form” (attached). The form must state the service size that your fire sprinkler system design professional and fire agency has determined to be adequate for your system.
- You must provide SCWD with plans that show all existing and proposed plumbing fixtures. SCWD will determine the size of the service required to meet your domestic water demand and ensure accurate meter operation. The actual size of the water service will be determined by SCWD. The size will typically be the larger of that required for fire protection, or domestic use.

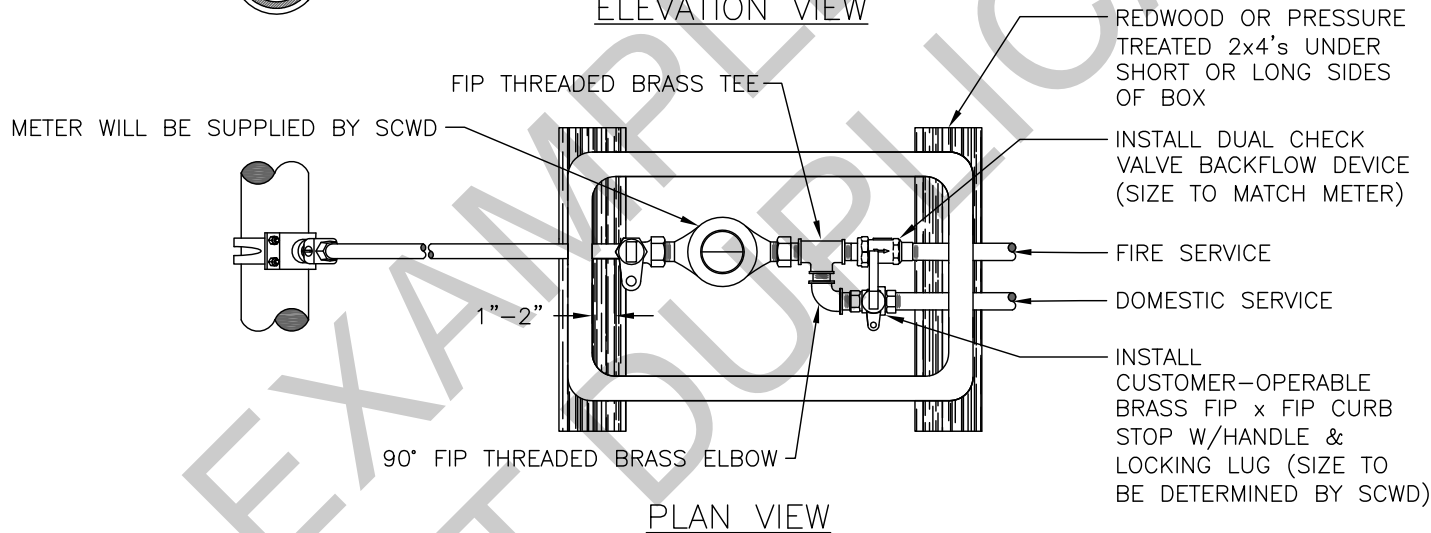
Installing your water service:

- Once the size of the service is finalized, SCWD will determine fees that you will be required to pay. You must pay all of the fees before SCWD will issue a permit to your approved SCWD contractor to install a new service, or retrofit an existing service.
- When installation is complete, your contractor must contact SCWD for a final inspection of the installation. Inspections must be scheduled at least 2 working days in advance.
- Once final inspection is completed, SCWD will supply and install the water meter, and turn on the service. If inside the City limits, the building permit can then be provided with a final clearance by SCWD.

If you have any questions regarding our procedures, or your particular project, please call the SCWD Engineering Division at 831-420-5210.



ELEVATION VIEW



METER SIZE AND TYPE DETERMINED BY FS SYSTEM DESIGNER	BOX TYPE	METER LENGTH
3/4" THREADED	"16"	7 3/4"
1" THREADED	"36"	11"
1 1/2" FLANGED	"36"	13"

BOX TYPE	NON-TRAFFIC	TRAFFIC
TYPE "16"	CHRISTY B16 BOX W/ N16R LID OR EQUAL	CHRISTY B1324 BOX W/ B1324-51JH LID OR EQUAL
TYPE "36"	CHRISTY N36 BOX W/ FL36D LID OR EQUAL	CHRISTY B1730 BOX W/ B1730-51JH LID OR EQUAL

NOTES

- BRASS FITTINGS, VALVES AND PIPE SHALL CONSIST OF LOW-LEAD BRASS ALLOY AND SHALL HAVE A MINIMUM WORKING PRESSURE OF 150 PSI.
- FIRE SERVICE LINE SHALL BE TESTED FOR LEAKS PRIOR TO BACKFILLING.
- CUSTOMER SIDE FIRE SERVICE PIPE TYPE AND CONNECTION SHALL MEET LOCAL FIRE AGENCY REQUIREMENTS.



WATER DEPARTMENT
CITY OF SANTA CRUZ, CALIFORNIA

DETAIL 4A

DOMESTIC BY FIRE COMBINATION
SERVICE INSTALLATION

NOT TO SCALE

Hudi R. Luckenbach

APPROVED

RCE 37391

BRASS CTS GRIP JOINT ANGLE
METER STOP W/ LOCKING LUG.
CENTER AT END OF BOX.

INSTALL METER BOX PER DETAIL 2. BOX TYPE
PER TABLE BELOW. "WATER" SHALL BE
IMPRINTED ON THE LID.

FLANGES OR THREADED METER
FITTINGS PER TABLE BELOW

7"-9"

1"-2"

'a' - SEE
TABLE BELOW

BEND TUBING OR INSTALL
90° BRASS FITTING.

INSTALL
CUSTOMER-OPERABLE
BRASS FIP x FIP CURB
STOP WITH HANDLE

CITY RESPONSIBILITY CUSTOMER
RESPONSIBILITY

CONSTRUCT LATERAL
TRENCH PER DETAIL 14

BRASS OR SCH-80 PVC PIPE
EXTENDING BEYOND BACK OF
WALK, PROPERTY LINE OR TO
BACKFLOW PREVENTION DEVICE,
WHICHEVER IS FURTHEST.

TYPE K SOFT COPPER TUBING.
KINKED TUBING SHALL BE REJECTED.


STANDARD SERVICE
CONNECTION PER
DETAIL 1

ELEVATION VIEW

METER SIZE AND TYPE (ASSIGNED BY SCWD)	BOX TYPE (SEE DETAIL 2)	METER LENGTH, a
5/8" THREADED	"16"	7 3/4"
3/4" THREADED	"16"	7 3/4"
1" THREADED	"16"	11"
1 1/2" FLANGED	"36"	13"
2" FLANGED	"36"	15 1/4"

NOTES

- BRASS FITTINGS, VALVES AND PIPE SHALL CONSIST OF LOW-LEAD BRASS ALLOY AND SHALL HAVE A MINIMUM WORKING PRESSURE OF 150 PSI.
- METER WILL BE FURNISHED AND INSTALLED BY CITY FORCES
- A BACKFLOW PREVENTION ASSEMBLY SHALL BE INSTALLED PER DETAIL 8 IF REQUIRED BY THE ENGINEER.



**CITY OF
SANTA CRUZ**

WATER DEPARTMENT
CITY OF SANTA CRUZ, CALIFORNIA

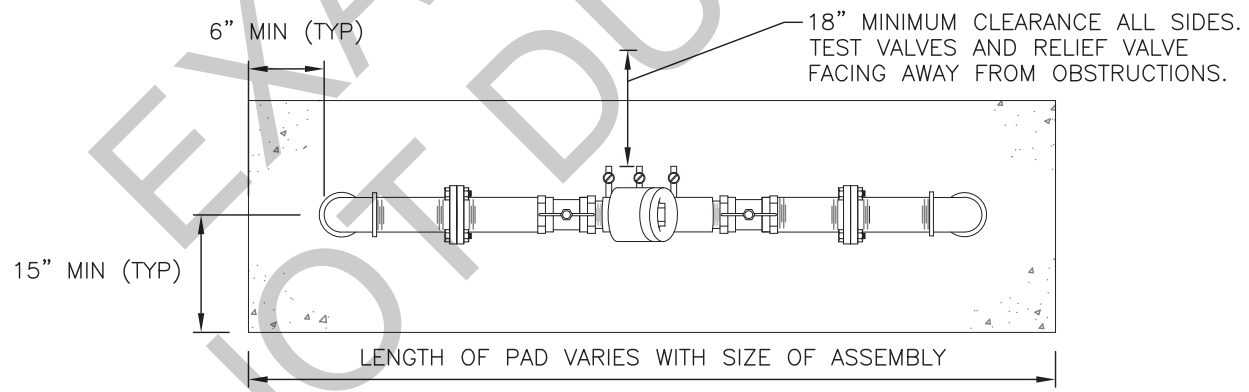
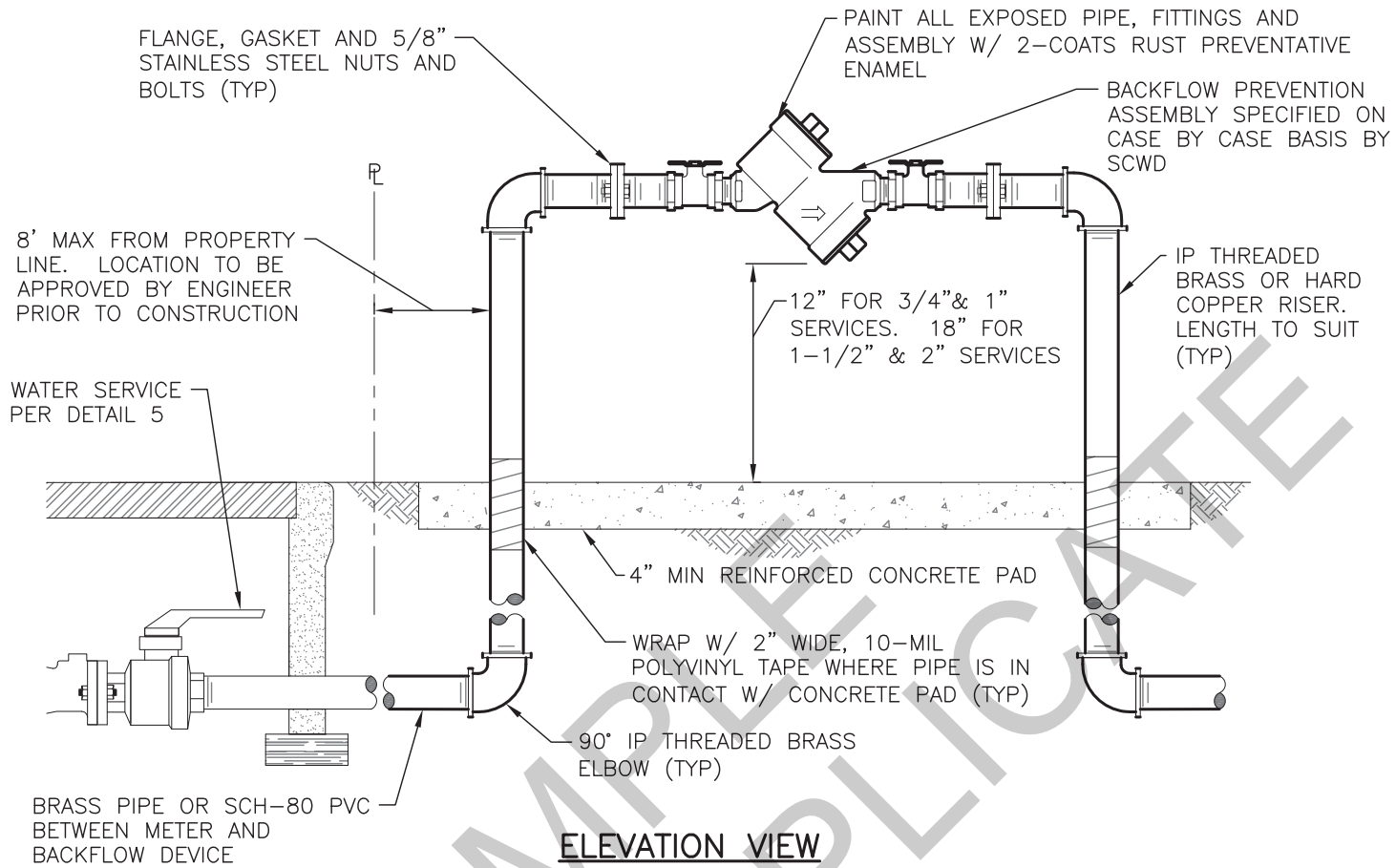
DETAIL 5
**2-INCH AND SMALLER SERVICE
INSTALLATION**

NOT TO SCALE


APPROVED *[Signature]*

RCE 37391

DRAWING No. 3714 A REVISED DECEMBER 2009
C:\DOCUMENTS\LOCALS\1\Temp\AcPublish_3460\DEC2009.dwg



- NOTES**
1. APPROVED BACKFLOW ASSEMBLY SHALL BE INSTALLED SUCH THAT IT IS READILY ACCESSIBLE FOR REPAIR AND INSPECTION.
 2. BRASS FITTINGS, VALVES AND PIPE SHALL CONSIST OF LOW-LEAD BRASS ALLOY AND SHALL HAVE A MINIMUM WORKING PRESSURE OF 150 PSI.
 3. BRASS OR PLASTIC PLUGS SHALL BE INSTALLED ON ALL TEST PORTS.
 4. ALL ABOVE GROUND PIPE, FITTINGS AND ASSEMBLY SHOULD BE PAINTED WITH TWO COATS OF ENAMEL.
 5. AN ENCLOSURE OR CAGE MAY BE INSTALLED AT THE OPTION OF THE PROPERTY OWNER.



CITY OF SANTA CRUZ

WATER DEPARTMENT
CITY OF SANTA CRUZ, CALIFORNIA

DETAIL 8
2-INCH AND SMALLER BACKFLOW PREVENTION ASSEMBLY INSTALLATION

NOT TO SCALE

APPROVED *SanctiDmond*

RCE 37391

DRAWING No. 2983 A REVISED DECEMBER, 2009 C:\DOCUMENTS\LOCALS\1\Temp\AcPublish_3460\DEC2009.dwg

EXAMPLE OF APPROVED 2" & SMALLER REDUCED PRESSURE
BACKFLOW DEVICE INSTALLATIONS



CITY OF SANTA CRUZ WATER DEPARTMENT
 APPROVED BACKFLOW PREVENTION ASSEMBLIES FOR SERVICE ISOLATION

APPROVED NO-LEAD REDUCED PRESSURE PRINCIPLE DEVICES												
COMPANY	MODEL	SIZE (INCHES)										
		3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	6	8	10
AMES	4000SS						A	A	A	A		
	Colt 400						A	A	A	A	A	A
	Maxim 400						A	A	A	A	A	A
FEBCO	760						A	A	A	A	A	A
	LF825Y	A	A		A	A						
	LF825YA	Av	Av		Av	Av						
	LF860	A	A	A	A	A						
WILKINS	375						A	A	A	A	A	A
	375A						A	A	A	A	A	A
	375MS						A	A	A	A	A	A
	475						vA	vA	vA	vA	vA	vA
	475MS						vA	vA	vA	vA	vA	A
	475V						vA	vA	vA	vA	vA	vA
	475VMS						vA	vA	vA	vA	vA	A
	975XL2	A	A	A	A	A						
WATTS	957						Av	Av	Av	Av	Av	Av
	LF009						A	A				
	LF009M2QT		A	A	A	A						
	LF009M3QT	A										
	LF909						A	A				
	LF909QT	A	A									
	LF909M1QT			A	A	A						
	LF919QT	vA	vA	vA	vA	vA						
	LF919ZQT	vAv	vAv	vAv	vAv	vAv						
	LF919AQT	vA	vA	vA	vA	vA						
LFU919QT	A	A	A	A								

A signifies that these models are approved backflow prevention assemblies for horizontal installations only.

Av signifies that these models are approved for both horizontal and vertical up installations.

vAv signifies that these models are approved only for vertical up inlet/vertical up outlet configurations.

vA signifies that these models are approved only for vertical up inlet/vertical down outlet configurations.

Az signifies that these models are approved only for N and Z configurations.



212 Locust Street, Suite C, Santa Cruz, CA 95060 • (831) 420-5200 • Fax (831) 420-5201

FIRE PROTECTION REQUIREMENTS FORM FOR RESIDENTIAL

To be completed and returned to the Santa Cruz Water Department by the appropriate Fire Protection District for all building permit application submittals. Please provide Fire Dept approved plans for all new fire hydrants and commercial sprinkler systems.

APPLICANT INFORMATION-To be completed by Applicant

Name: _____ Email: _____

Mailing Address: _____

Phone No.: _____ Fax No.: _____

Owner's Agent/Representative (if applicable): _____ Phone No: _____

Property Address/Location: _____

Assessors Parcel Number: _____ Building Permit Application Number: _____

Proposed Land Use: (check one) Commercial Single-Family Multi-Residential
 MLD (less than 4 units) Subdivision (more than 4 units)

FIRE PROTECTION DISTRICT INFORMATION-To be completed by Fire District

The Fire District requires the following improvements to be made by the owner as a condition for project acceptance:

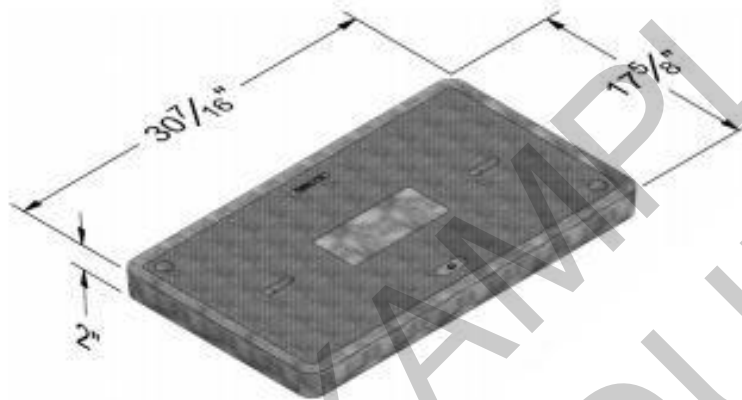
- COMBINATION FIRE X DOMESTIC SERVICE AS PER DETAIL 4A (3/4" or 1"): _____
- _____
- 2" FIRE SERVICE INSTALLATION AS PER DETAIL 4: _____
- _____
- FIRE HYDRANT (Quantity, Location(s)): _____
- _____

COMMENTS: _____

Signed _____ Date _____

Title _____ District _____

FL36



COVER:

Style:	Flush Solid
Material:	Composite
Model:	17" x 30"
Weight:	35 lbs
Std. Fasteners:	3/8-16 Stainless Steel Hex Head Bolt, Washer and Floating Nut
Options:	Logos and Special Markings
Surface:	Slip Resistant & Marked*
Coefficient of Friction:	>0.6 ASTM 1028
Performance:	ANSI/SCTE-77 Tier 8, WUC 3.6, ASTM C857 A-8

FOR USE ON 1" THROUGH 2" FIRE x DOMESTIC COMBINATION WATER SERVICES

REQUIRING B36 BOXES AS PER SCWD DETAIL 4A

(NOT FOR USE FOR TRAFFIC RATED BOXES)

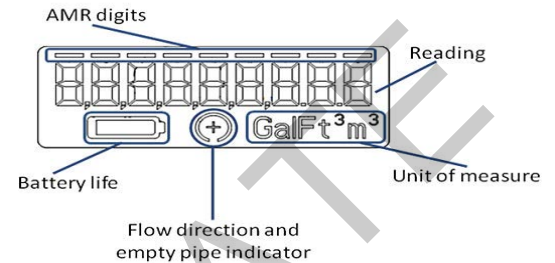
iPERL™ Water Management System Fire Service

Electromagnetic Flow Measurement System

Description

UL Listed 3/4" (DN 20mm) and 1" (DN 25mm) Sizes

With no moving parts, the Sensus iPERL water management system is based on innovative electromagnetic flow measurement technology. The iPERL system family has an operating range of 0.03 gpm (0.007 m³/hr) @ 95% minimum to 55 gpm (12.5 m³/hr) @ 100% ± 1.5% registration of actual throughput.



Features

CONFORMANCE TO STANDARDS

The iPERL system far exceeds the most recent revision of ANSI/AWWA Standard C-700 and C-710 for accuracy and pressure loss requirements. All iPERL systems are NSF/ANSI Standard 61 Annex F and G compliant and tested to AWWA standards. The iPERL meter is UL (Underwriters Laboratories) Listed and approved for use on fire protection and domestic water applications.

PERFORMANCE

The patented measurement technology of the iPERL system allows enhanced accuracy ranges at both low and high flows and perpetual accuracy over the life of the product over the full measurement range when installed horizontal, vertical or diagonal.

CONSTRUCTION

The iPERL system is an integrated unit that incorporates an electronic register and measuring device encased in an external housing. The measuring device is comprised of a composite alloy

flowtube with externally-threaded spud ends. Embedded in the flowtube are magnetic flow sensors. The all electronic, programmable register is hermetically sealed with a tempered glass cover. The iPERL system has a 20 year life cycle, along with a 20 year battery life guarantee.

ELECTRONIC REGISTER

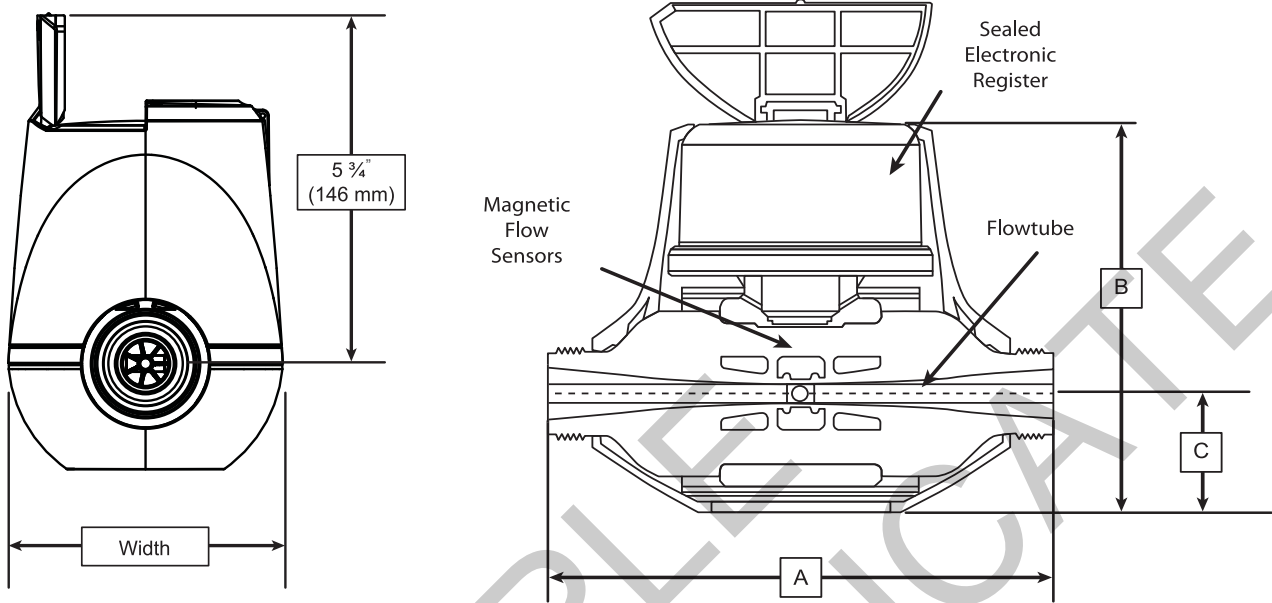
The high resolution 9-digit hermetically sealed electronic register with LCD display was designed to eliminate dirt, lens fogging issues and moisture contamination in pit settings with built in tamper protection. The tempered glass register cover displays readings with the AMR digits highlighted. Direction of flow and units of measure are also easily readable on the register display. The iPERL register features; AMR resolution and unit of measure that are fully programmable, integral customer data logging compatible with UniPro software tools. The large, easy to read display also includes battery life, empty pipe and forward/reverse flow indicators.

TAMPERPROOF FEATURES

The integrated construction of the iPERL system prevents removal of the register to obtain free water. The magnetic tamper and low field alarms will both indicate any attempt to tamper with the magnetic field of the iPERL system.

AMR / AMI SYSTEMS

The iPERL systems are compatible with current Sensus AMR/AMI systems.



DIMENSIONS AND NET WEIGHTS

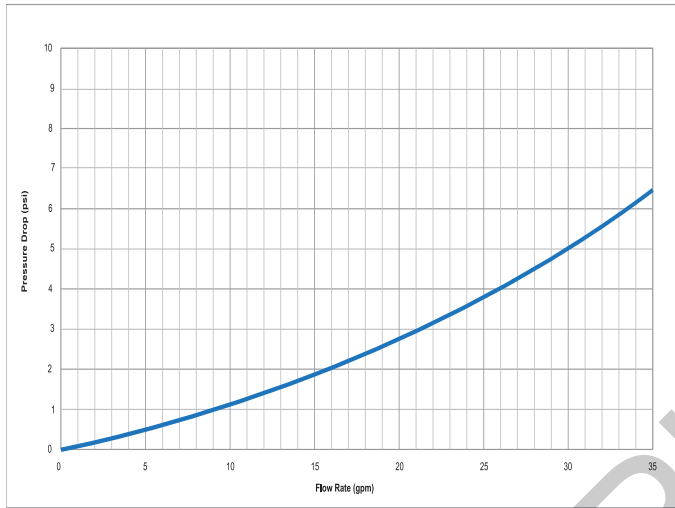
Size	A (lay length)	B	C	Spud Ends	NPSM Thread Size	Width	Net Weight
3/4" S (DN 20 mm)	7-1/2" (190 mm)	6-1/10" (155 mm)	1-3/4" (44 mm)	3/4" (20 mm)	1" (25 mm)	4-1/2" (114 mm)	3.1 lb. (1.4 kg)
3/4" (DN 20 mm)	9" (229 mm)	6-1/10" (155 mm)	1-3/4" (44 mm)	3/4" (20 mm)	1" (25 mm)	4-1/2" (114 mm)	3.2 lb. (1.5 kg)
1" (DN 25 mm)	10-3/4" (273 mm)	6-1/10" (155 mm)	1-3/4" (44 mm)	1" (25 mm)	1-1/4" (32 mm)	4-1/2" (114 mm)	3.3 lb. (1.6 kg)

SPECIFICATIONS

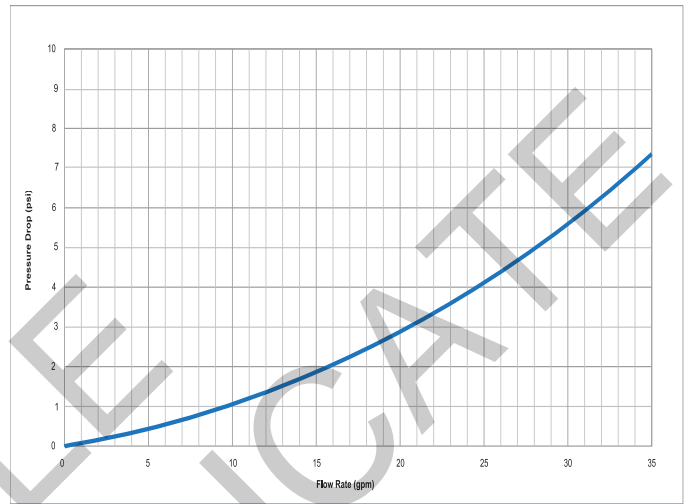
SERVICE	Measurement of potable and reclaim water. Operating temperature range of 33 °F (0.56 °C) - 150 °F (65.6 °C)
NORMAL OPERATING FLOW RANGE (100%±1.5%)	3/4" (DN 20mm) size: 0.11 to 35 gpm (0.02 to 8.0 m³/hr) 1" (DN 25mm) size: 0.4 to 55 gpm (0.09 to 12.5 m³/hr)
LOW FLOW REGISTRATION (95% - 101.5%)	3/4" (DN 20mm) size: 0.03 gpm (0.007 m³/h) 1" (DN 25mm) size: 0.11 gpm (0.025 m³/h)
MAXIMUM PRESSURE LOSS	3/4" (DN 20mm) size: 2 psi at 15 gpm (0.1 bar at 3.4 m³/h) 1" (DN 25mm) size: 2 psi at 25 gpm (0.1 bar at 5.7 m³/h)
MAXIMUM OPERATING PRESSURE	175 psi (12.1 bar)
MEASUREMENT TECHNOLOGY	Solid state electromagnetic flow

REGISTER	Hermetically sealed, 9-digit programmable electronic register AMR/AMI compatible iPERL system register programmable using the UniPro programming package
MATERIALS	External housing – Thermal plastic Flowtube – Polyphenylene sulfide alloy Electrode – Silver/silver chloride Register cover – Tempered glass
ALARM DEFAULTS	Alarm Duration – 90 days Leak Duration – 24 hours Datalog Interval – 1 hour Alarm Mask – All alarms reported History Mask – All event types reported

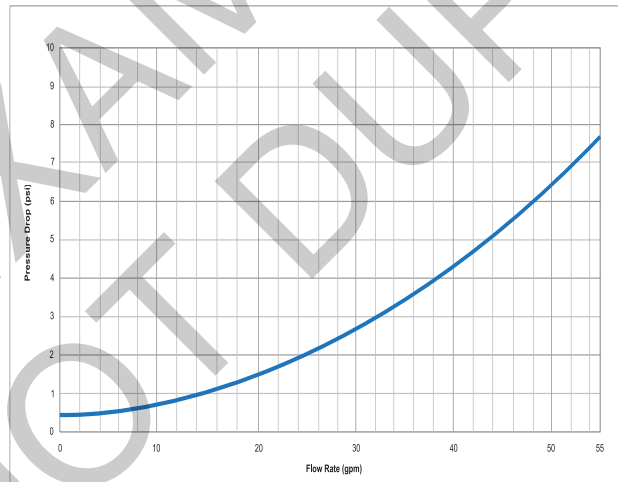
HEADLOSS CURVES



3/4" Short Headloss Curve



3/4" Headloss Curve



1" Headloss Curve

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iPERL is a trademark of Sensus USA Inc.

Technology for the iPERL system is licensed from Sentec Limited.

Application

Designed for installation on water lines to protect against both backsiphonage and backpressure of polluted water into the potable water supply. The Model 700 shall provide protection where a potential health hazard does not exist.

Standards Compliance

- ASSE® Listed 1024
- CSA® Certified

Materials

Main valve body Cast Bronze ASTM B 584
 Elastomers Buna Nitrile (FDA approved)
 Polymers Noryl®, NSF Listed (1/4"-1/2")
 Delrin®, NSF Listed (3/4"-1")
 Springs Stainless Steel, 300 Series

Features

Sizes: 1/4", 3/8", 1/2", 3/4", 1", 1-1/4"
 Max. pressure: 175 PSI
 Max. temp: 180°F
 Connections: Threaded ANSI B 1.20.1
 Copper sweat ANSI B 16.22
 Meter thread ANSI B 1.20.7



Options

(Suffixes can be combined)

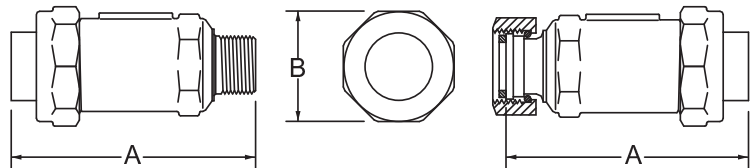
- with female NPT connection (standard)
- C - with female copper sweat connection
- FMTC - with female meter thread connection
- M - with male NPT connection
- MMTC - with male meter thread connection
- CH - with chrome finish (1/4", 3/8" & 1/2" sizes)

Accessories

- Repair kit (RK14-700 and RK34-700)
- Thermal expansion tank (Model XT)

Dimensions & Weights (do not include pkg.)

MODEL SIZE		DIMENSIONS				WEIGHT	
		A		B			
in.	mm	in.	mm	in.	mm	lbs.	kg
1/4	6	3 3/16	81	1 3/4	45	1	0.5
3/8	9	3 3/16	81	1 3/4	45	1	0.5
1/2	15	3 3/16	81	1 3/4	45	1	0.5
3/4	20	4 1/2	114	2	51	2	0.9
1	25	4 1/2	114	2	51	2	0.9
1 1/4	32	4 3/4	121	2	51	2	0.9



Model 700 • Connections Legend

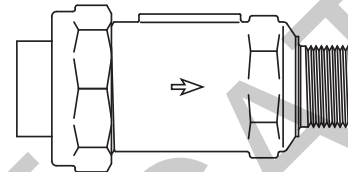
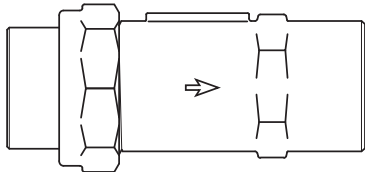
- U = Indicates location of "union" connection
- FNPT = Female National Pipe Tapered Thread
- MNPT = Male National Pipe Tapered Thread
- FC = Female Copper Sweat
- FMTC = Female Meter Thread Connection (National Hose Straight Thread)
- MMTC = Male Meter Thread Connection (National Hose Straight Thread)

Meter Thread Connections

When ordering a Model 700 with meter thread connections, order the connection one size larger than the water meter. For example, if your water meter is 1/2" or 5/8" your connection size would be a 3/4" meter thread. If the water meter is 5/8" x 3/4" or 3/4", your connection size would be 1" meter thread.

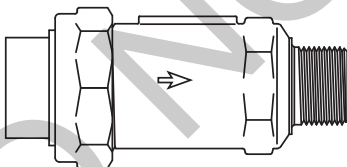
Configurations

All Configurations Are Reversible

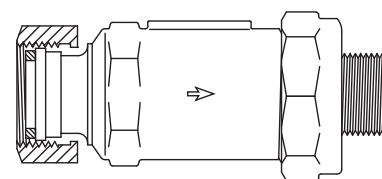


FEMALE UNION INLET X FEMALE OUTLET		
INLET (UNION)	OUTLET	PART NUMBER
3/4" FNPT	3/4" FNPT	34UFX34F-700
3/4" FMTC	3/4" FNPT	34UFMX34F-700
1" FNPT	1" FNPT	1UFX1F-700
1" FNPT	3/4" FNPT	1UFX34F-700
1" FMTC	1" FNPT	1UFMX1F-700
1" FMTC	3/4" FNPT	1UFMX34F-700

FEMALE UNION INLET X MALE OUTLET		
INLET (UNION)	OUTLET	PART NUMBER
3/4" FNPT	3/4" MNPT	34UFX34M-700
3/4" FNPT	3/4" MMTC	34UFX34MM-700
3/4" FMTC	3/4" MNPT	34UFMX34M-700
3/4" FMTC	3/4" MMTC	34UFMX34MM-700
3/4" FNPT	1" MMTC	34UFX1MM-700
3/4" FMTC	1" MNPT	34UFMX1M-700
1" FNPT	1" MNPT	1UFX1M-700
1" FNPT	1" MMTC	1UFX1MM-700
1" FMTC	1" MNPT	1UFMX1M-700
1" FMTC	1" MMTC	1UFMX1MM-700
1" FNPT	3/4" MNPT	1UFX34M-700
1" FNPT	3/4" MMTC	1UFX34MM-700
1" FMTC	3/4" MNPT	1UFMX34M-700
1" FMTC	3/4" MMTC	1UFMX34MM-700



FEMALE UNION "COPPER SWEAT" INLET X MALE		
INLET (UNION)	OUTLET	PART NUMBER
3/4" FC	3/4" MNPT	34UFCX34M-700
3/4" FC	1" MNPT	34UFCX1M-700
1" FC	1" MNPT	1UFCX1M-700



FEMALE "METER" UNION INLET X MALE UNION		
INLET (UNION)	OUTLET (UNION)	PART NUMBER
1" FMTC	1" MNPT	1UFMX1UM-700
1-1/4" FMTC	1" FNPT	114UFMX1UF-700

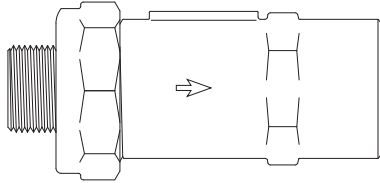
Model 700 • How to Order

The Model 700 is available in a variety of inlet and outlet sizes, thread types and connection types. Simply determine the inlet and outlet connection as well as the location of the union, then, select from the available configurations. The inlet connection will always be specified first in the model number. A union inlet connection with integral body outlet connection is standard. For connections other than shown below, such as BSP threads, contact your local ZURN WILKINS representative or factory.

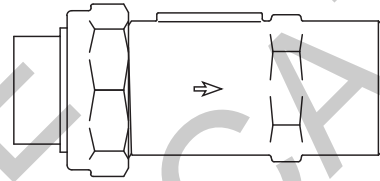
Example: A dual check valve is to be located on the outlet side of a 3/4" water meter with male inlet and outlet connections (see "Meter Thread Connections" on previous page). The union will be located on the inlet side of the valve. The outlet requires a 1" female NPT connection.

<u>Inlet</u>	<u>Outlet</u>	<u>Model No.</u>
1UFM	1F	1UFMX1F-700

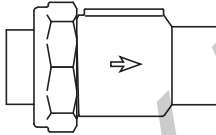
Configurations (cont.)



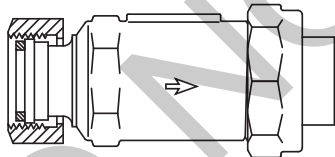
MALE UNION INLET X FEMALE OUTLET		
INLET (UNION)	OUTLET	PART NUMBER
1" MNPT	1" FNPT	1UMX1F-700



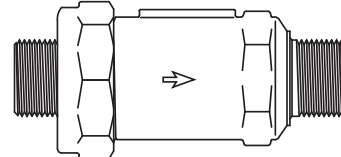
FEMALE UNION "COPPER SWEAT" INLET X FEMALE		
INLET (UNION)	OUTLET	PART NUMBER
3/4" FC	3/4" FNPT	34UFCX34F-700
3/4" FC	1" FNPT	34UFCX1F-700
1" FC	1" FNPT	1UFCX1F-700
1" FC	3/4" FNPT	1UFCX34F-700



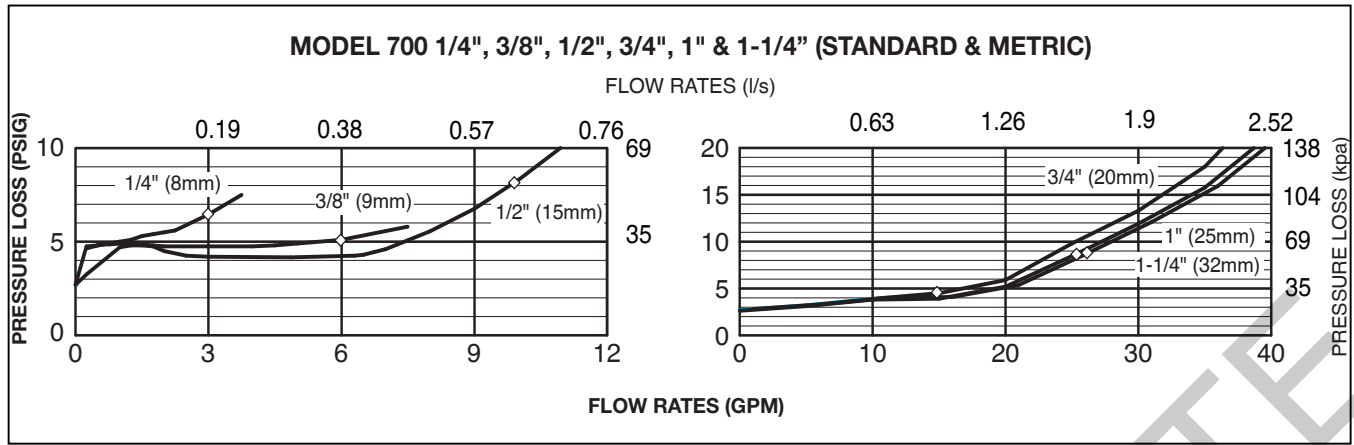
FEMALE UNION INLET X FEMALE OUTLET		
INLET (UNION)	OUTLET	PART NUMBER
1/4" FNPT	1/4" FNPT	14UFX14F-700
3/8" FNPT	3/8" FNPT	38UFX38F-700
1/2" FNPT	1/2" FNPT	12UFX12F-700
1/2" FC	1/2" FC	12UFCX12FC-700



FEMALE "METER UNION INLET X FEMALE UNION		
INLET (UNION)	OUTLET (UNION)	PART NUMBER
1" FMTC	3/4" FNPT	1UFMX34UF-700
1" FMTC	1" FNPT	1UFMX1UF-700
1" FMTC	1" FMTC	1UFMX1UFM-700
1 1/4" FMTC	1" FNPT	114UFMX1UF-700



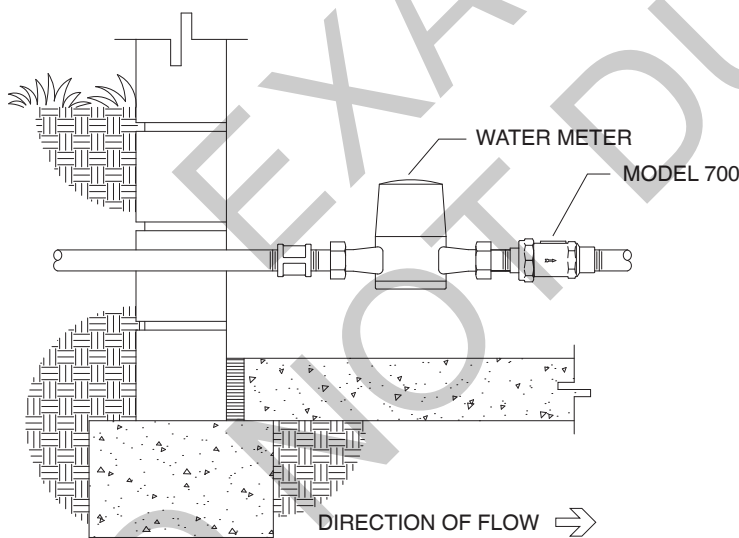
MALE UNION INLET X MALE OUTLET		
INLET (UNION)	OUTLET	PART NUMBER
1" MNPT	1" MNPT	1UMX1M-700



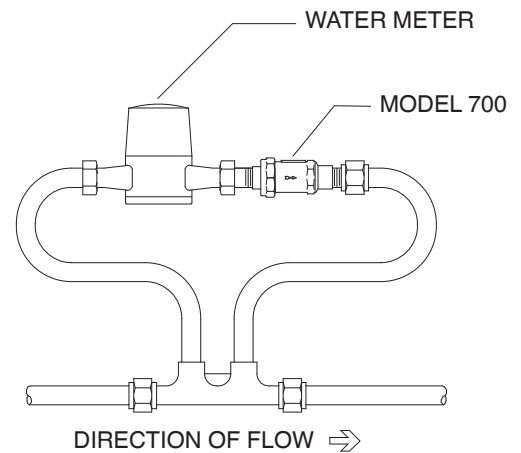
Typical Installation

Local codes shall govern installation requirements. Unless otherwise specified, the installation shall be in accordance with the manufacturer’s instructions and the latest edition of the Uniform Plumbing Code. The installation shall be made so that no part of the unit can be submerged.

Capacity thru Schedule 40 Pipe				
Pipe size	5 ft/sec	7.5 ft/sec	10 ft/sec	15 ft/sec
1/8"	1	1	2	3
1/4"	2	2	3	5
3/8"	3	4	6	9
1/2"	5	7	9	14
3/4"	8	12	17	25
1"	13	20	27	40
1 1/4"	23	35	47	70
1 1/2"	32	48	63	95
2"	52	78	105	167



INDOOR INSTALLATION



METER SETTER INSTALLATION

Specifications

The Dual Check Valve Backflow Preventer shall be ASSE® Listed 1024. The main body shall be cast bronze (ASTM B 584), the check assemblies shall be NORYL® (1/4"-1/2") or DELRIN® (3/4"-1"). The seal ring and o-rings shall be Buna Nitrile. The Dual Check Valve shall be a ZURN WILKINS Model 700.