



Bateman Civil Survey Company, PC
 2524 Reliance Avenue
 Apex, NC 27539
 (919) 577-1080/fax (919) 577-1080

2520 Reliance Avenue • Apex, NC, 27539 • smithdouglas.com

August 1, 2022

Oliver Tolksdorf, REHS, EH Supervisor
 Harnett County Environmental Health Department
 307 W Cornelius Harnett Boulevard
 Lillington, NC 27546

Re: Wastewater Daily Flow Calculations
 Duncan's Crossing Lot 75
 Lillington, Harnett County, NC

Dear Oliver:

Smith Douglas Homes, in conjunction with Bateman Civil Survey Company, are proposing wastewater daily flow calculations for a single-family home located at Duncan's Crossing Lot 75, pursuant to Session Law 2014-120 and 2013-413. The proposed home will have **4** bedrooms and under the current flow calculations provided in the State Rules, it would have a daily flow of **480** gallons per day. That would be based on 120 gallons per bedroom.

Household flow rates from the 15 NCAC 18A section of the State Rules relied on fixture rates from 1982 and calculated the flows for common fixtures to establish average flows for the purpose of calculating household daily flows and septic system designs based on those flows. The data for the historic fixture flows was taken from the EPA 2002 Onsite Wastewater Treatment Systems Manual.

The attached spreadsheet contains the flow reducing fixtures that are proposed for this home. The Table includes flow rates for the flow reducing fixtures as well as flow rates from the State Rules and the percentage of water savings. On average, the proposed fixtures provide a 41% savings.

We are requesting a reduction of 25% for the use of low flow fixtures. This will provide an adjusted daily flow of 90 gallons per bedroom per day and a total flow of **360** gallons per day for the proposed 4-bedroom home.

If you should have any questions regarding this request, please do not hesitate to contact the undersigned.

Sincerely,

SMITH DOUGLAS HOMES

Natascha Clark

Natascha Clark
 Land Development Manager
 (919) 948-8390

Enclosures

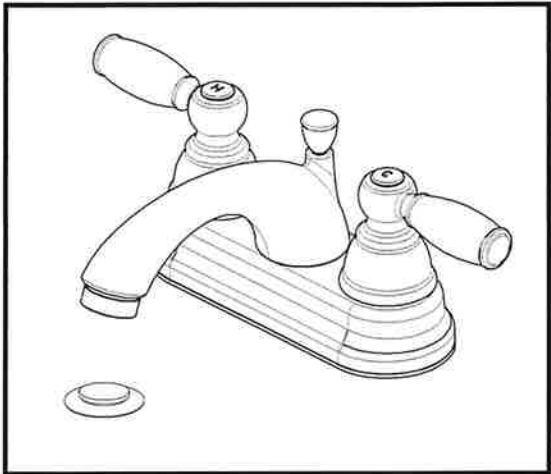
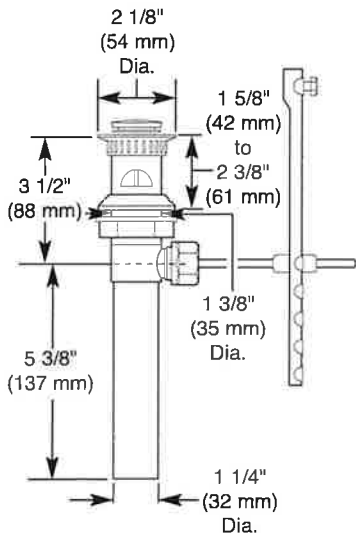
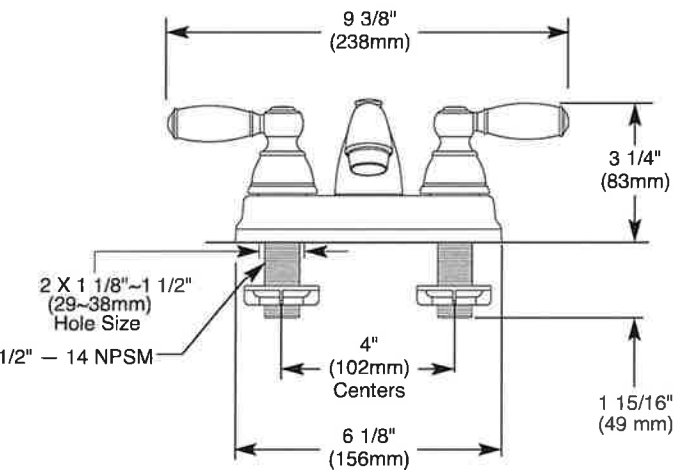
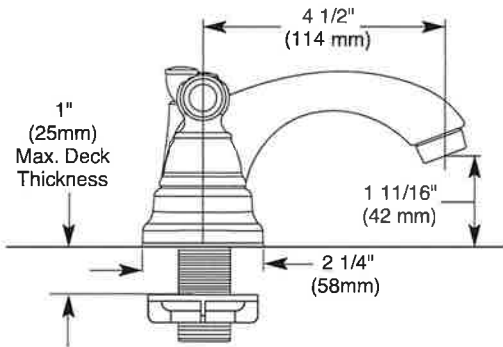
BATEMAN CIVIL SURVEY COMPANY
 NCBELS #C-2378

Thomas S. Speight, Jr., PE, PLS
 Vice President



Duncan's Crossing Lot 75						
Room	Item	Gal/min or Flush	Number of Fixtures	Base Flow from 1982	Percent Water Savings	
Powder	Lavatory Faucet	Peerless P299675LF 1.2 gal/minute	1	3.0 gal/minute	60%	
Master	Lavatory Faucet	Peerless P299675LF 1.2 gal/minute	2	3.0 gal/minute	60%	
	Shower Head	Peerless PTT188763 1.5 gal/minute	1	5.5 gal/minute	73%	
Kitchen	Kitchen Sink Faucet	Peerless P18550LF 1.8 gal/minute	1	3.0 gal/minute	40%	
Hall Bath	Lavatory Faucet	Peerless P299675LF 1.2 gal/minute	2	3.0 gal/minute	60%	
	Shower Head	Peerless PTT188763 1.5 gal/minute	1	5.5 gal/minute	73%	
Toilets	Master, Powder, Hall	Mansfield 135-1373 1.28 gal/flush	3	3.5 gal/minute	63%	

FIXTURES	TOILET	FAUCET	SHOWER	LEAK	BATH	OTHER	DISHWASHER	CLOTHES WASHER	TOTALS
PERCENT OF HOUSEHOLD WATER USE	24%	20%	20%	12%	3%	3%	2%	16%	100%
GALLONS PER DAY (480 BASE)	115	96	96	58	14	14	10	77	480
PERCENT SAVINGS FROM WATER SAVING FIXTURES	63%	57% avg.	73%	0%	0%	0%	0%	0%	41%
ADJUSTED FLOW (GALLONS)	43	41	26	58	14	14	10	77	283



BATHROOM FAUCET

- Two handle, metal lever, centerset bathroom faucet with pop-up drain assembly.

STANDARD SPECIFICATIONS:

- Maximum flow rate 1.2 gpm @ 60 psi, 4.5 L/min @ 414 kPa
- Three hole mount
- The fully replaceable, washerless valve design rotates from the full-off position to the full-on position in 90°
- The valve stems on the hot and cold stems are interchangeable
- 1/2"-14 NPSM threaded male inlet shanks

WARRANTY

- Parts and Finish - Lifetime limited warranty; or for commercial purchasers, 10 years for multi-family residential (apartments and condominiums) and 5 years for all other commercial uses, in each case from the date of purchase.

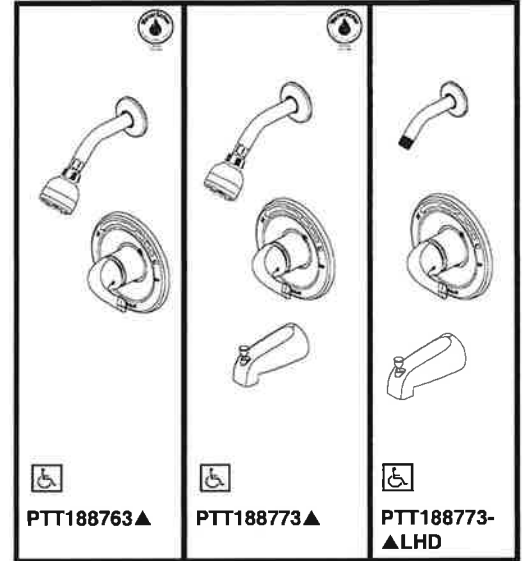
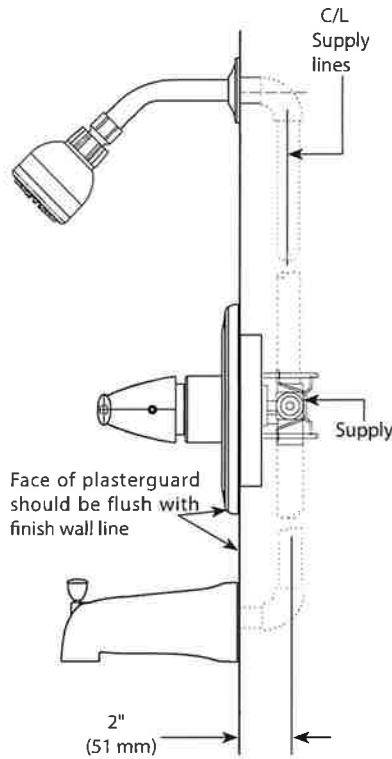
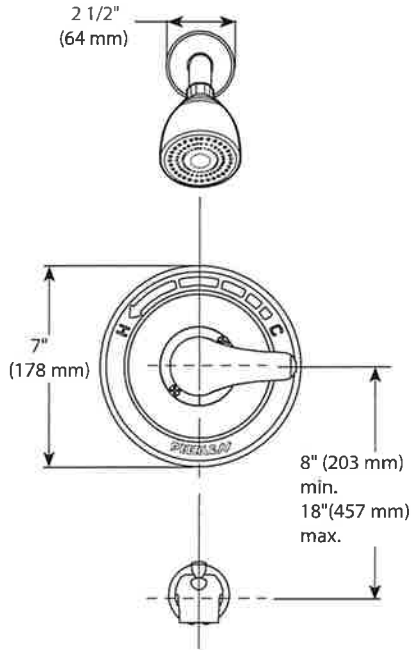


COMPLIES WITH:

- ASME A112.18.1 / CSA B125.1
- ASME A112.18.2 / CSA B125.2
- Indicates compliance to ICC/ANSI A117.1
- EPA WaterSense®

PEERLESS®

PTT188763▲
 PTT188773▲
 PTT188773-▲LHD



TUB AND SHOWER FAUCET

- Shower Only (PTT188763 Series)
- Tub/Shower (PTT188773 Series)

STANDARD SPECIFICATIONS:

- Slip-on tub spout, model PTT188773 & PTT188773-LHD.
- Pressure balanced bath mixing valve.
- Tub/Shower. Requires 1 1/2" wall cavity.
- Back-to-back installation capability.
- Temperature control to rotate a maximum of 120° from full cold to the maximum temperature.
- Temperature only controlled with handle.
- "-LHD" models indicate less shower head.
- Shower head maximum flow rate is 1.5 gpm @ 80 psi, 5.7 L/min @ 550 kPa.
- For use with MultiChoice® universal rough valve body (R10000 Series); not included.

WARRANTY:

- Lifetime limited warranty on parts (other than electronic parts and batteries) and finishes; or, for commercial users, for 5 years from the date of purchase.
- 5 year limited warranty on electronic parts (other than batteries); or for commercial users, for 1 year from the date of purchase. No warranty is provided on batteries.

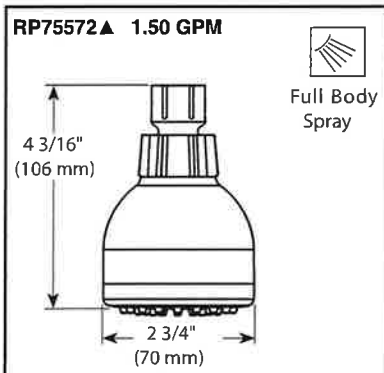
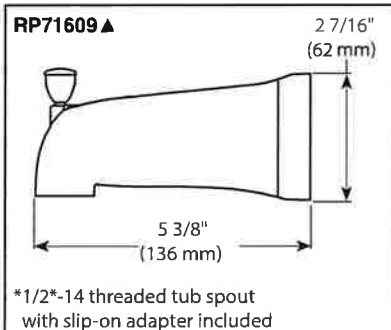
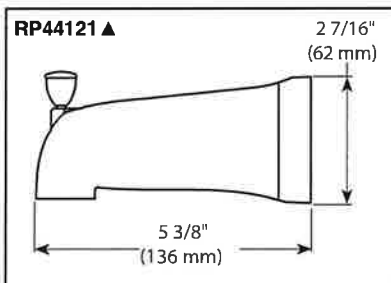


COMPLIES WITH

- ASME A112.18.1 / CSA B125.1
- EPA WaterSense®
- ASSE 1016

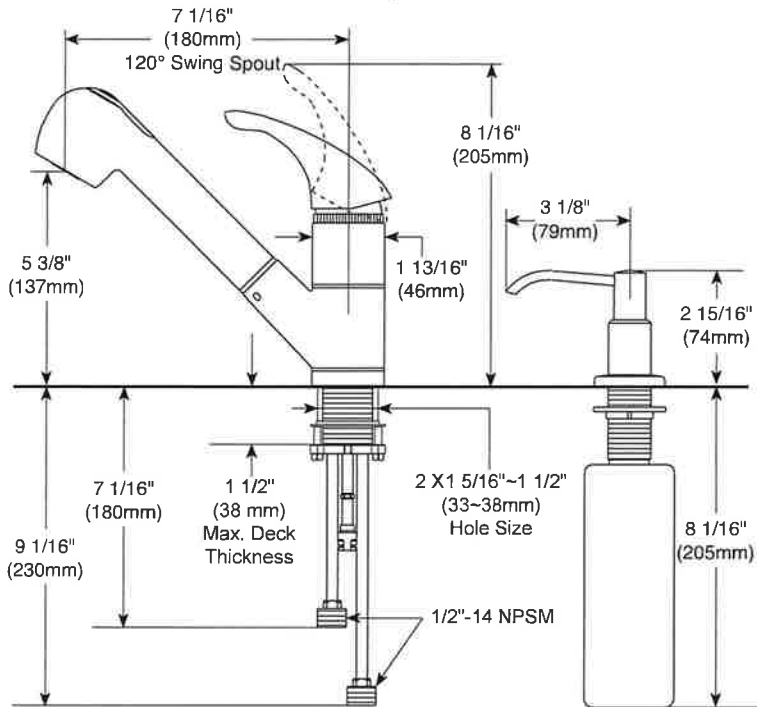


Indicates compliance to ICC/ANSI A117.1 - Valve control only

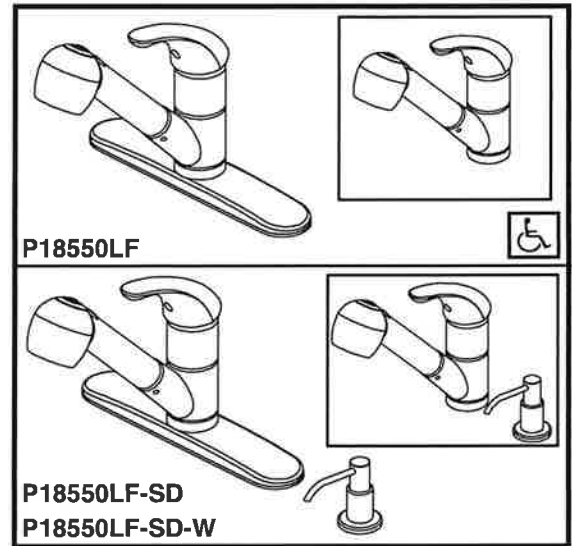
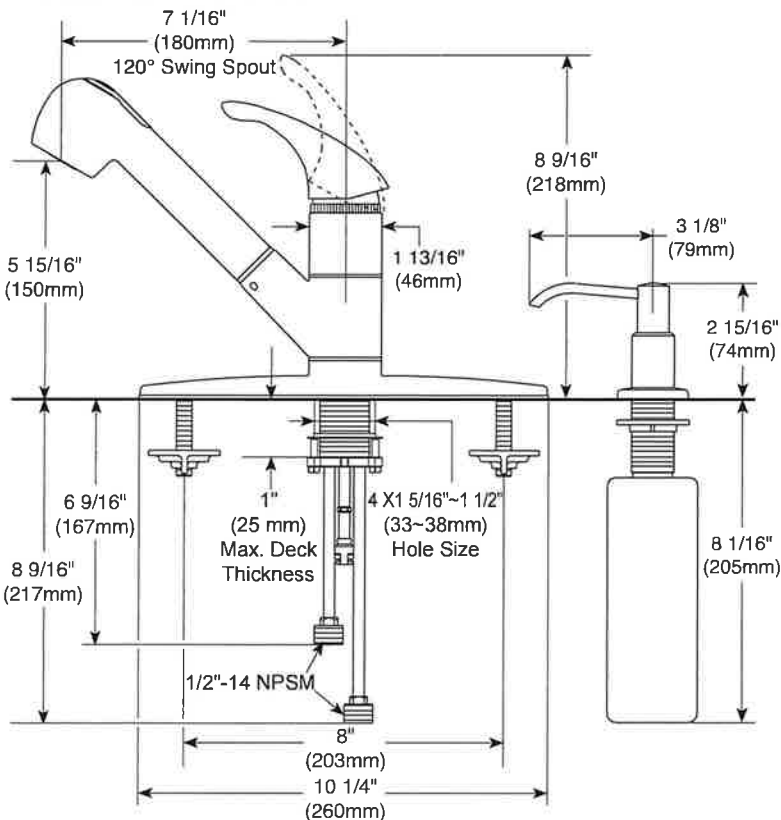


▲ Designate Proper Finish Suffix

Mounting without escutcheon plate:



Mounting with escutcheon plate:



KITCHEN FAUCET

- Single handle, lever, pull-out kitchen faucet, 2 function wand.

STANDARD SPECIFICATIONS

- Single handle kitchen faucet for exposed mountings on 1 and 3 hole sinks with 8" centers. (P18550LF only)
- Single handle kitchen faucet for exposed mountings on 2 and 4 hole sinks with 8" centers. (P18550LF-SD & P18550LF-SD-W)
- Standard 7 1/16" (180mm) long spout swings 120°.
- Replaceable rotating ball valve with replaceable non-metallic seats.
- 1/2"-14 NPSM threaded male inlet adapters.

WARRANTY

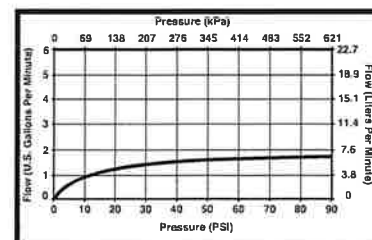
- Lifetime limited warranty on parts (other than electronic parts and batteries) and finishes; or, for commercial users, for 5 years from the date of purchase.
- 5 year limited warranty on electronic parts (other than batteries); or for commercial users, for 1 year from the date of purchase. No warranty is provided on batteries.

COMPLIES WITH

- ASME A112.18.1/CSA B125.1

Indicates compliance to ICC/ANSI A117.1

- Verified compliant with 0.25% weighted average Pb content regulations.



135-3173

Alto® 1.28

Elongated Front, Vitreous China, Two-Piece Toilet



Features

- 3 bolt tank-to-bowl connection
- 1.28 gpf / 4.86 lpf low water consumption
- Uses 20% less water than conventional toilets
- Elongated front bowl
- 3" hybrid flush valve
- Pilot operated fill valve
- 12" rough-in
- Color-match trip lever
- 2" glazed trapway
- The Mansfield® limited lifetime warranty
- Available in white and standard colors: biscuit & bone






Model 135-3173
Toilet seat not included





*Also available as a complete toilet package.

Components

Model #	Description	Codes/Standards
135-3173	Elongated front, two-piece toilet. Less toilet seat and supply. Specify color.	  
135	Elongated front toilet bowl only. Less toilet seat. Specify color.	
3173	Tank and cover only, with left hand, front-mount, color-match trip lever. Pilot valve. Less supply. Specify color.	
3121	Same as 3173 with Fluidmaster pilot valve and hybrid flush valve.	
3125	Tank and cover only, for 14" rough-in, with left hand, front-mount, color-match, plastic trip lever. Less supply. Specify color.	
*4135CTK	Elongated front, complete toilet kit. Includes toilet seat, tank and bowl, flange bolts, wax ring with polyethylene flange and instructions.	

Other Options:

3173RH	Same as model 3173, with right hand, color-match trip lever. Less supply. Specify color.	 
3174	Same as model 3173, with tank liner.	
3122	Same as model 3121, with tank liner.	
3121RH	Same as 3121 with right hand trip lever.	
3120	Same as 3121 with chrome trip lever.	
3120RH	Same as 3120 with right hand trip lever.	
*4135LTCTK	Same as 4135CTK, with tank liner.	
SB200	Alto Elongated, toilet seat. Specify color.	



MADE IN USA