



Bateman Civil Survey Company, PC

2524 Reliance Avenue
Apex, NC 27539
(919) 577-1080/fax (919) 577-1080

July 16, 2025

Harnett County Environmental Health Department
Harnett County Environmental Health,
900 S 9th St.
Lillington NC 27546

RE: Wastewater Daily Flow Calculations

Honeycutt Hills Lot 22
345 Adams Pointe Court, Angier, Harnett County, NC
Project #3806

Dear Harnett County Staff:

Bateman Civil Survey Company in conjunction with Central Carolina Soil Consulting (CCSC) are proposing wastewater daily flow calculations for a single-family home located at Honeycutt Hills Lot 22 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 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 18E section of the state rules relied on fixture flow rates from 1982, and calculated the flows for common fixtures to established average flows for the purpose of calculating household daily flows and septic system 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 Honeycutt Hills Lot 22. 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 40% 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 house.

Calculations for effluent strength are shown below based on a 25% reduction in flow with a base flow concentration of 220 mg/l for both BODs and TSS. High strength effluent levels are considered to be higher than 350 mg/l for both BODs and TSS. Based on a reduction in flow of 25% we anticipate the concentration levels of both BODs and TSS to be around 293 mg/l well below the 350 mg/l threshold.

If you need further information or have any questions, please contact Matt Burdette at (919) 422-2827 or Tom Speight at 919-577-1080 2524 Reliance Ave, Apex NC 27539.

Sincerely,

BATEMAN CIVIL SURVEY COMPANY
NCBELS# C-2378.

DocuSigned by:
Thomas Speight, Jr, P.E, PLS
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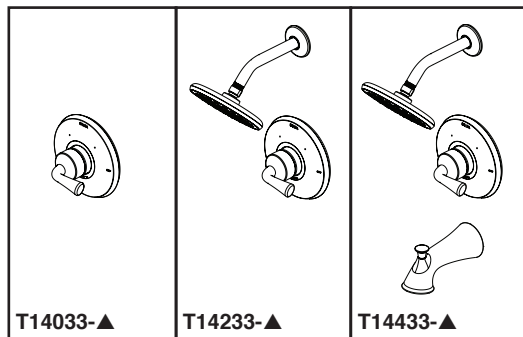


7/24/2025

Thomas Speight, P.E
(seal)

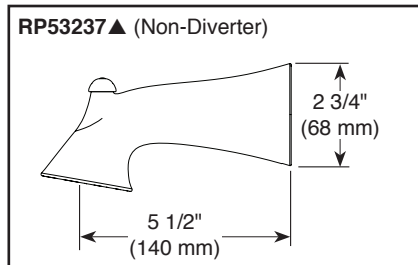
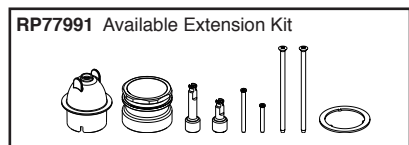
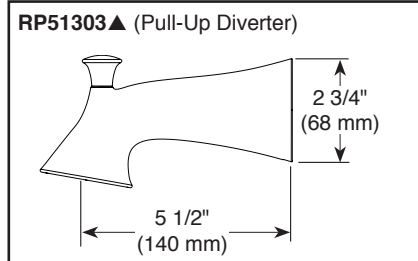
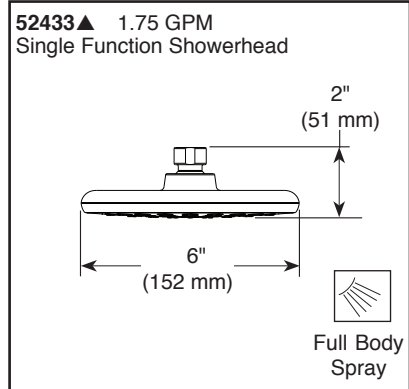
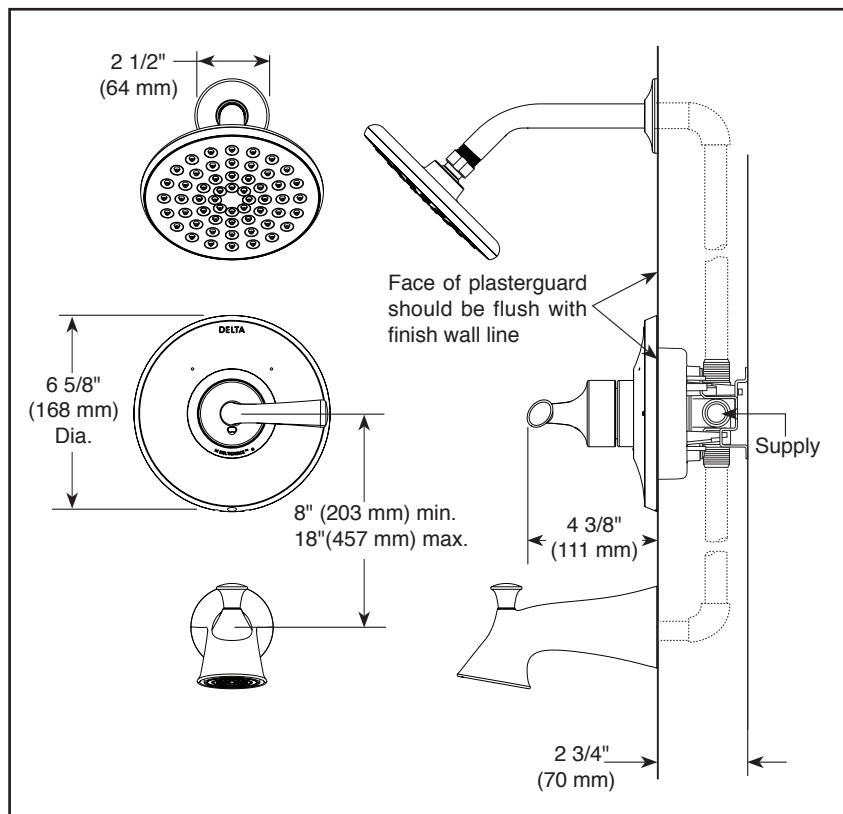
Honeycutt Hills Lot 22						
	Item	Model	Gal/min. or flush	Number of Fixures	Base Flow From 1982	Percent Water Savings
Master	Shower Head	Delta T14233	1.8 gal/minute	1	5.5 gal/minute	67%
	Lavatory Faucet	Delta 2533	1.2 gal/minute	2	3.0 gal/minute	60%
Kitchen	Kitchen Sink Faucet	Delta 9179	1.8 gal/minute	1	3.0 gal/minute	40%
Bath 2	Shower Head	Delta T14433	1.8 gal/minute	1	5.5 gal/minute	67%
	Lavatory Faucet	Delta 2533	1.2 gal/minute	2	3.0 gal/minute	60%
Bath 3	Shower Head	Delta T14233	1.8 gal/minute	1	5.5 gal/minute	67%
	Lavatory Faucet	Delta 2533	1.2 gal/minute	1	3.0 gal/minute	60%
Toilets	Master, 2, 3	Kohler K-3828	1.3 gal /flush avg	3	3.5 gal/minute	63%

FIXTURES	TOILET	FAUCET	SHOWER	LEAK	BATH	OTHER	DISHWASHER	CLOTHES WASHER	TOTALS
PERCENT OF HOUSE HOLD 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 OF SAVINGS FROM WATER SAVING FIXURES	63%	57% avg	67%	0%	0%	0%	0%	0%	40%
ADJUSTED FLOW (GALLONS)	43	41	32	58	14	14	10	77	289



Submitted Model No.: _____

Specific Features: _____



▲ Designate proper finish suffix

Delta reserves the right (1) to make changes in specifications and materials, and (2) to change or discontinue models, both without notice or obligation. Dimensions are for reference only. See current full-line price book or www.deltafaucet.com for finish options and product availability.

DSP-B-T14033 Rev. A



see what Delta can do™

TUB AND SHOWER FAUCET TRIM

- Kayra™ Bath Collection
- Valve Only (T14033)
- Shower Only (T14233)
- Tub/Shower (T14433)

FEATURES:

- Monitor® 14 Series pressure balanced single handle bath mixing valve trim

STANDARD SPECIFICATIONS:

- Maintains a balanced pressure of hot and cold water even when a valve is turned on or off elsewhere in the system
- For use with MultiChoice® Universal rough valve body (R10000 Series)
- Temperature only controlled with handle
- Field adjustable to limit handle rotation into hot water zone
- 120° maximum handle rotation
- All parts replaceable from the front of the valve
- Maximum 1.75 gpm @ 80 psi, 6.6 L/min @ 550 kPa
- Tub port maximum flow rate 6.0 gpm @ 60 psi with R10000-UNBX
- Shower arm overall horizontal length = 5 1/2" (138 mm), including threaded ends
- Stem extension kit RP77991 can be ordered to allow for an additional 1 3/4" wall thickness. RP77991 ships with chrome escutcheon screws. For special finishes also order RP12630 escutcheon screws in desired finish
- Universal adapter included allows for thread, sweat or slip-on installation for tub spouts

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.
- Electronic Parts and Batteries (if applicable) - 5 years from the date of purchase; or for commercial purchasers, 1 year from the date of purchase. No warranty is provided on batteries.

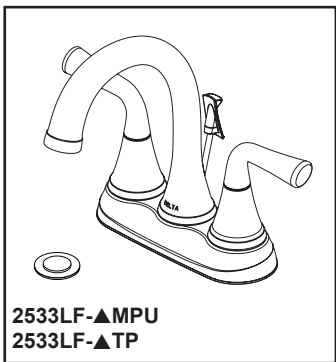


COMPLIES WITH

- ASME A112.18.1 / CSA B125.1
- Indicates compliance to ICC/ANSI A117.1 - Valve control only
- EPA WaterSense® - Applies to T14233, T14433, & 52433 only

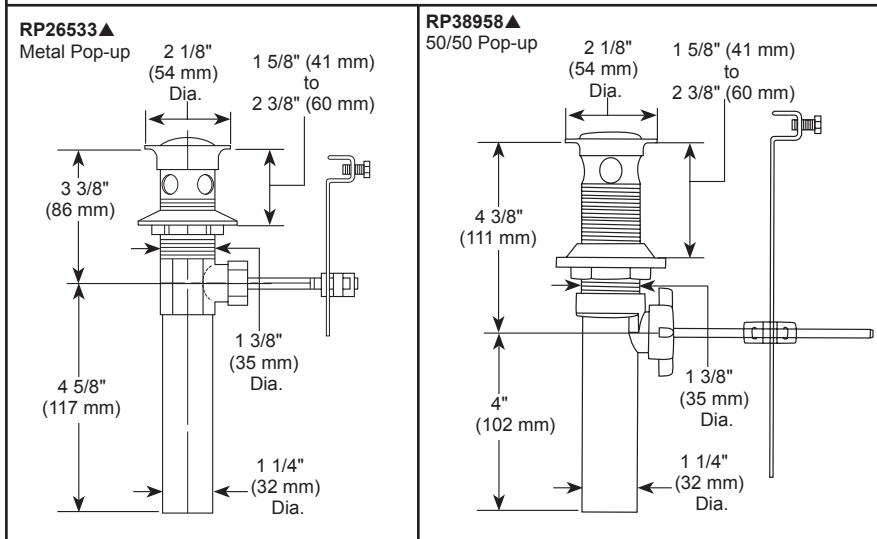
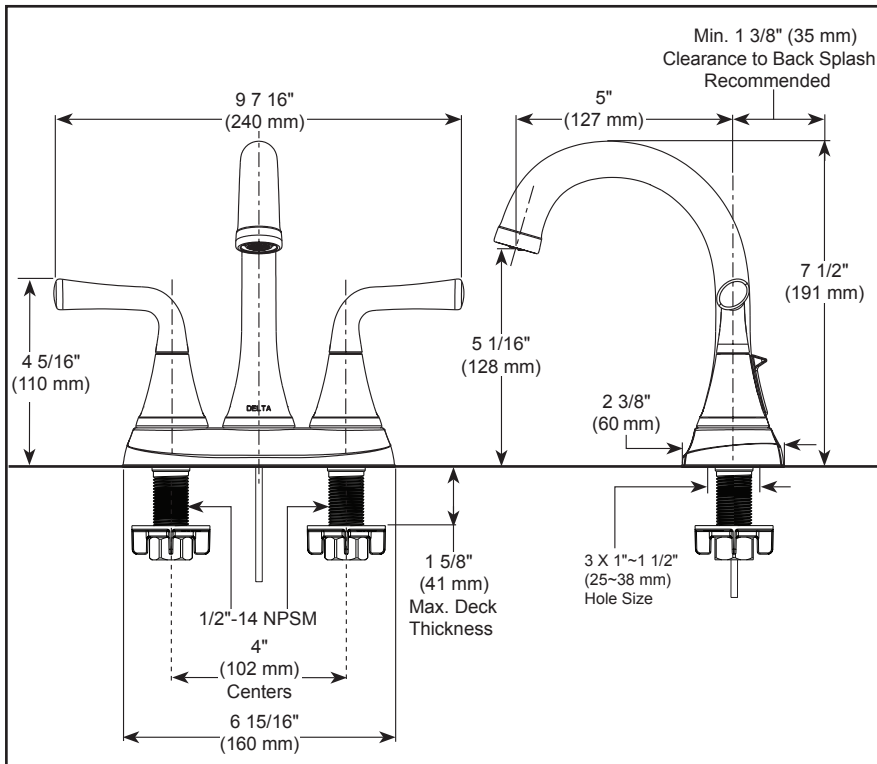
Delta Faucet Company

55 E. 111th Street, Indianapolis, Indiana 46280
350 South Edgeware Road, St. Thomas, Ontario Canada N5P 4L1
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Submitted Model No.: _____

Specific Features: _____



▲ Designate proper finish suffix

Delta reserves the right (1) to make changes in specifications and materials, and (2) to change or discontinue models, both without notice or obligation. Dimensions are for reference only. See current full-line price book or www.deltafaucet.com for finish options and product availability.

DSP-L-2533LF-MPU Rev. A



see what Delta can do™

BATHROOM FAUCET

■ Kayra™ Collection

■ Two Handle Deck Mount

STANDARD SPECIFICATIONS:

- Max flow rate 1.2 gpm @ 60 psi, 4.5 L/min @ 414 kPa
- Order aerator RP100071-1.0 for max flow rate 1.0 gpm @ 60 psi, 3.8 L/min @ 414 kPa
- Order aerator RP100072-0.5 for max flow rate 0.5 gpm @ 60 psi, 1.9 L/min @ 414 kPa
- Three hole mount
- Hot and cold handle stems are interchangeable
- 1/4 turn handle stops
- 1/2"-14 NPSM threaded male inlet shanks
- Control mechanism is a rotating cylinder type with stainless steel plate and 90° rotation, with replaceable non-metallic seats
- Models with suffix "TP" have 50/50 pop-up type fitting with plated flange and stopper
- Models with suffix "MPU" have metal drain with pop-up type fitting with plated flange and stopper
- Standard mounting deck thickness can be extended by 1 1/4" (32 mm) with RP76691

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.
- Electronic Parts and Batteries (if applicable) - 5 years from the date of purchase; or for commercial purchasers, 1 year from the date of purchase. No warranty is provided on batteries.

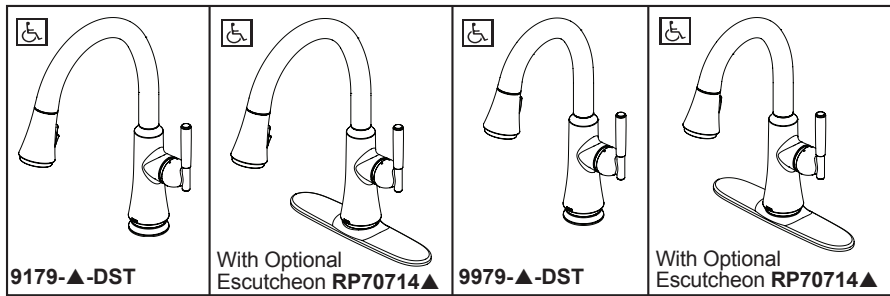


COMPLIES WITH:

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

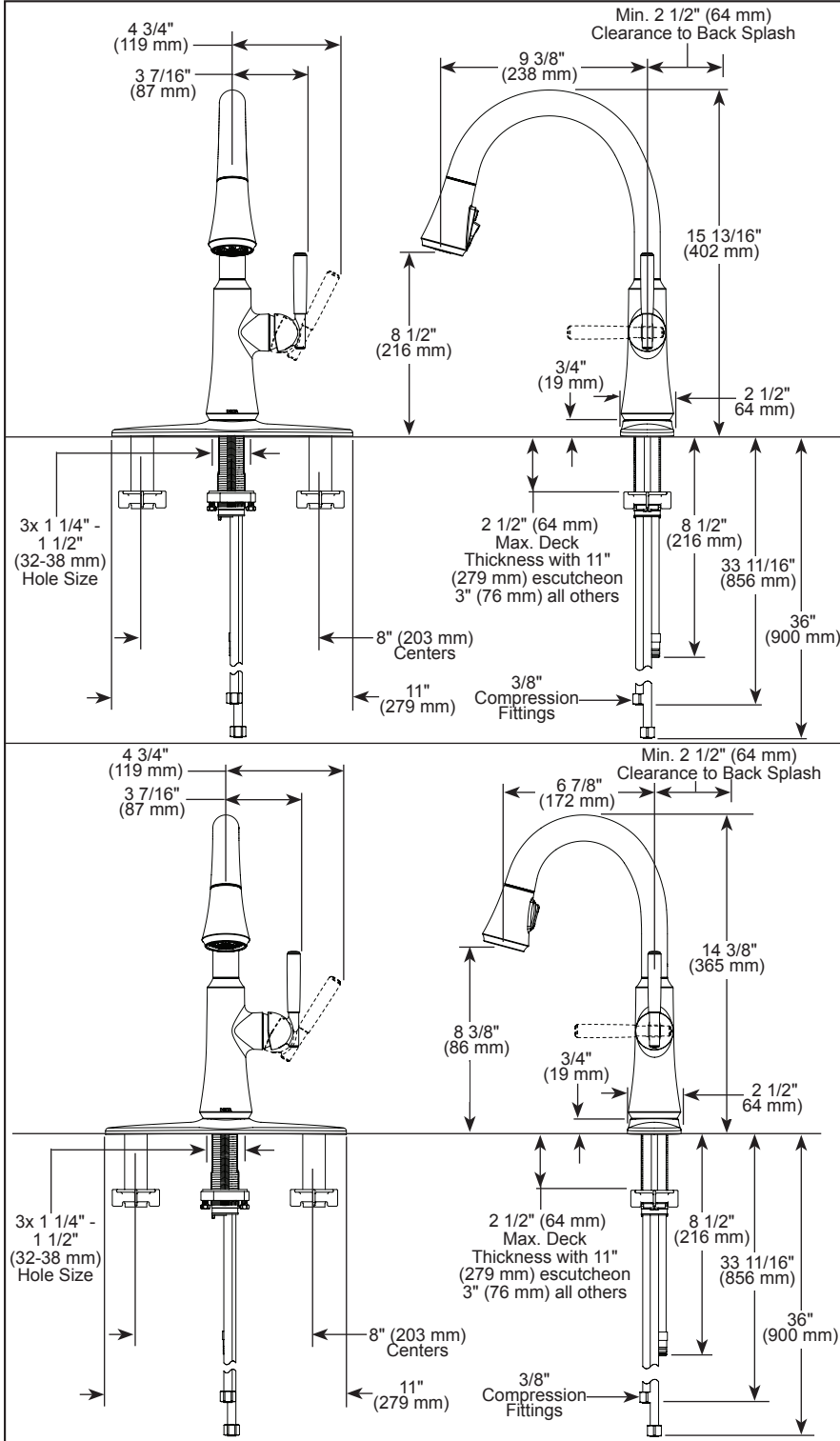
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Submitted Model No.: _____

Specific Features: _____



▲ Designate proper finish suffix

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DSP-K-9179-DST Rev. A



see what Delta can do™

KITCHEN FAUCETS

- Coranto™ Collection
- Single Handle Pull-Down

FEATURES:

- DIAMOND Seal® Technology
- Touch-Clean® Technology
- MagnaTite® Docking System
- ShieldSpray™ Technology (kitchen models only)


STANDARD SPECIFICATIONS:

- Maximum 1.8 gpm @ 60 psi, 6.8 L/m in @ 414 kPa
- One or three hole mount (escutcheon included with kitchen models, for prep models order separately)
- Diamond coated ceramic cartridge
- 3/8" O.D. straight, staggered PEX supply lines
- Spout rotates 360°
- Dual integral check valves in sprayer assembly
- Three-function wand; Aerated stream, spray or ShieldSpray™ (kitchen models only)
- Two-function wand; Aerated stream or spray (bar/prep models only)

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.
- Electronic Parts and Batteries (if applicable) - 5 years from the date of purchase; or for commercial purchasers, 1 year from the date of purchase. No warranty is provided on batteries.

COMPLIES WITH:

- ASME A112.18.1 / CSA B125.1
- ASME A112.18.6
-  Indicates compliance to ICC/ANSI A117.1
- Verified compliant with .25% weighted average Pb content regulations.

Delta Faucet Company

55 E. 111th Street, Indianapolis, IN 46280
350 South Edgeware Road, St. Thomas, ON N5P 4L1
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Cimarron®
One-piece elongated toilet, 1.28 gpf
K-3828

Features

- One-piece toilets integrate the tank and bowl into a seamless, easy-to-clean design
- Elongated bowl offers added room and comfort
- Comfort Height® feature offers chair-height seating that makes sitting down and standing up easier for most adults
- 1.28 gpf (4.8 lpf)
- 2-1/8" (54 mm) fully glazed trapway
- Left-hand Polished Chrome trip lever
- Coordinates with other products in the Cimarron collection
- Includes Reveal® Quiet-Close™ seat
- Easy-to-flush canister design requires less force to actuate than a 3" (76 mm) flapper, and has 90% less exposed seal material which resists conditions that cause wear, tear, shrinkage and swelling
- Eligible for consumer rebates in some municipalities
- AquaPiston® canister optimizes the flow out of the tank, harnessing gravity and the natural powerful reducing cascade of water to increase the power and effectiveness of the flush

Installation

- Standard 12" (305 mm) rough-in
- Supply line sold separately

Recommended Products/Accessories

- K-4108 PureWash® E750 Elongated bidet toilet seat with remote control
- K-5420 Low-Profile Bolt Caps
- K-9466-L Left-Hand Trip Lever
- 1023457 Wax Ring/Hardware Kit
- 1265114 Connector Hose
- K-23726 Drain treatment

Included Components

- K-4008 Reveal® Quiet-Close™ elongated toilet seat



ADA	CSA B651	OBC
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Codes/Standards

ASME A112.19.2/CSA B45.1
EPA WaterSense®
ADA
ICC/ANSI A117.1
CSA B651
OBC


KOHLER® Toilets and Seats Limited Warranty

See website for detailed warranty information.

Available Colors/Finishes

Color tiles intended for reference only.

Color Code Description

	0	White
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