



# Commercial U-drain Installation Guide



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## Before Your Start

Before you begin your project, it is recommended to have the following tools on hand to aid in the installation of your Norstar Industries Commercial U-drain System;

- 9/16" Wrench and Socket
- Cordless Drill (optional)
- Sledge Hammer (to drive rebar)
- Level (transit or laser is optional)
- Duct Tape

## Safety and Installation Tips

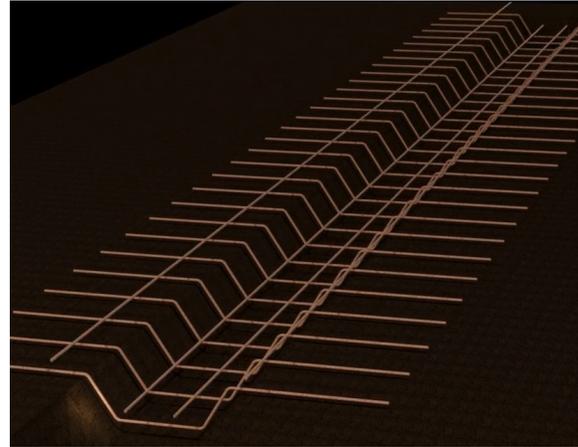
- Make sure the trench excavation allows for proper thickness and reinforcement specified by designer or engineer.
- Pre-pour concrete to the warning sticker (bend in steel) on the U-drain, prior to completing the concrete slab.
- Use a pencil vibrator to ensure that there are no air pockets around the drain assemblies.
- Lay out all U-drain sections using lettered sequence, prior to installation.
- Make all PVC pipe connections and sump pit installations, prior to connecting U-drain channels.
- Begin the installation at the outlet or discharge end and work backwards or upstream.
- Loosely tighten bolts until full drain length is installed and straightened. Tighten bolts after all adjustments are made.
- After the concrete has set, remove all the Tape from the drain slot and use the Paddle to remove all debris from the U-Drain channel and Sump Pit.



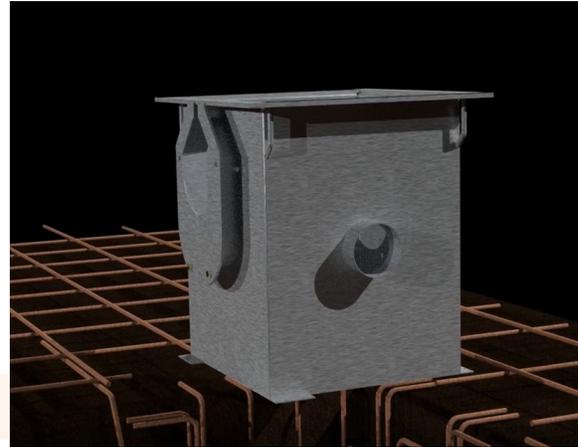
**IMPORTANT!** *Before starting, check building codes and local government ordinances for water drainage.*

# U-drain Installation

1. Excavate a trench allowing room underneath and on both sides of the U-drain. There should be a minimum of 6" of concrete surrounding the U-drain.

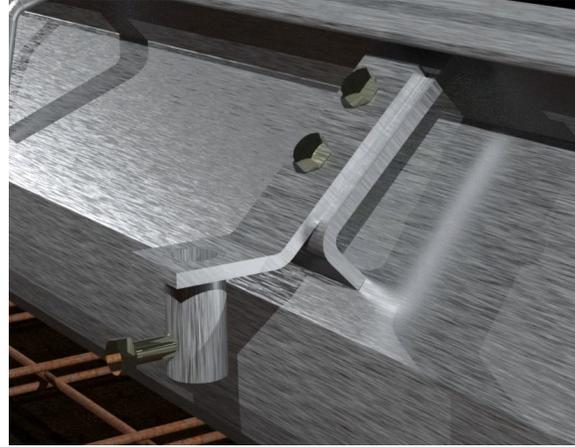
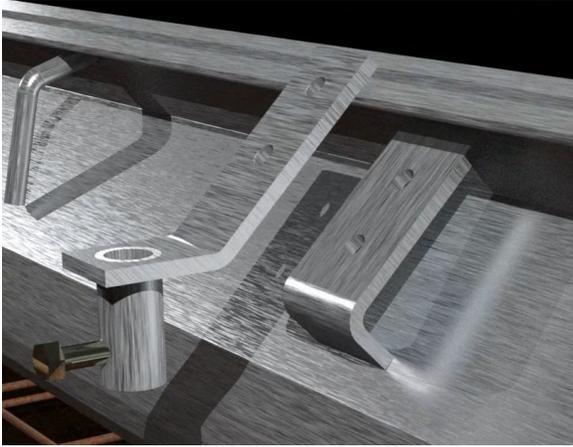


2. It is recommended to pre-pour a concrete pad underneath the sump pit to it can be properly secured. If no pad is poured, peg the sump pit down before the U-Drain is connected.
3. Install all sump pits and PVC piping, making sure that the sump pit walls are reinforced to prevent sidewall bowing.

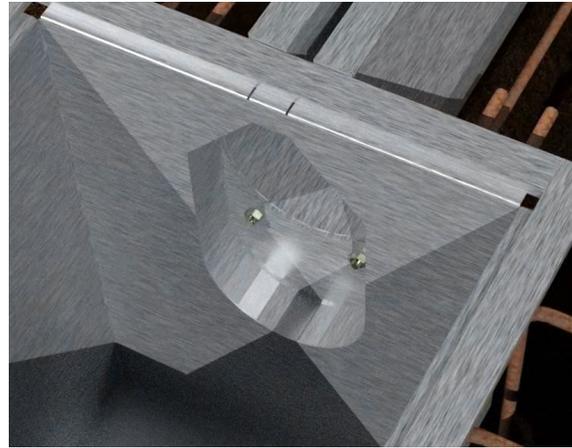




4. Fasten the E-Z Mount Brackets at each U-drain bracket interval on each section of U-drain, using the hardware supplied.



4. Bolt the last section of U-drain (deepest) to the sump pit. If there is a pre-existing sump pit or no pit at all, install the deepest U-drain section against the forming.



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5. Bolt all remaining sections of U-drain together using the lettered flanges as a guide. Loosely tighten bolts until full length of drain is installed. Ensure that the drain run is straight and make adjustments as necessary. Tighten the bolts.  
Ex. Section End-A bolts to A-B and A-B bolts to B-C, etc.



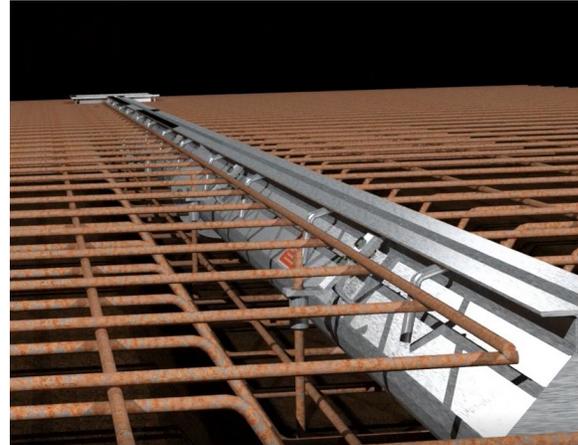
6. Fasten the E-Z Mount Brackets at each U-drain bracket interval, using the hardware supplied. Pound appropriate lengths of rebar into your base material with the rebar running through the conduit portion of the E-Z Mount Bracket. Make sure that all section tops are level. When the correct levels are achieved, tighten the set bolts on the E-Z Mount Brackets to secure the U-Drain.





7. Once the U-drain is secured to the E-Z Mount Brackets and the appropriate floor height is found, tie rebar from the floor grid into the rebar on the U-drain assembly, for structural support. Cover the slot opening with duct tape.

Ex: Norstar recommends that you extend the rebar lengths running perpendicular to the drain run by tying on rebar extensions that reach to the drain length. Then place longer rebar lengths running parallel to the drain run and tie them to the rebar grid AND to the U-drain's rebar tie-in brackets.



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8. To guarantee that the U-drain will not float, it is recommended that the concrete be poured in two stages. First, pour the concrete till the warning sticker on the U-drain assembly and let the concrete sit. Once adequate time for the concrete to set has elapsed, complete the floor slab. The use of a pencil vibrator is strongly recommended to make sure that the concrete has completely surrounded the U-drain leaving no bubbles or voids.



9. Once the concrete slab is firm, remove the tape from the slot and clean out the U-drain and sump pit using the Paddle.





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Project **U-drain**

Sheet No. **SK-1**

Job No. **06-655**

Re **RECOMMENDED SLAB  
 INSTALLATION  
 DETAIL**

Date **JAN 10/07**

\* **NOTE #2**

- **CONCRETE MIN  
 25 MPa C 18 DAYS**

\* **NOTE #1**

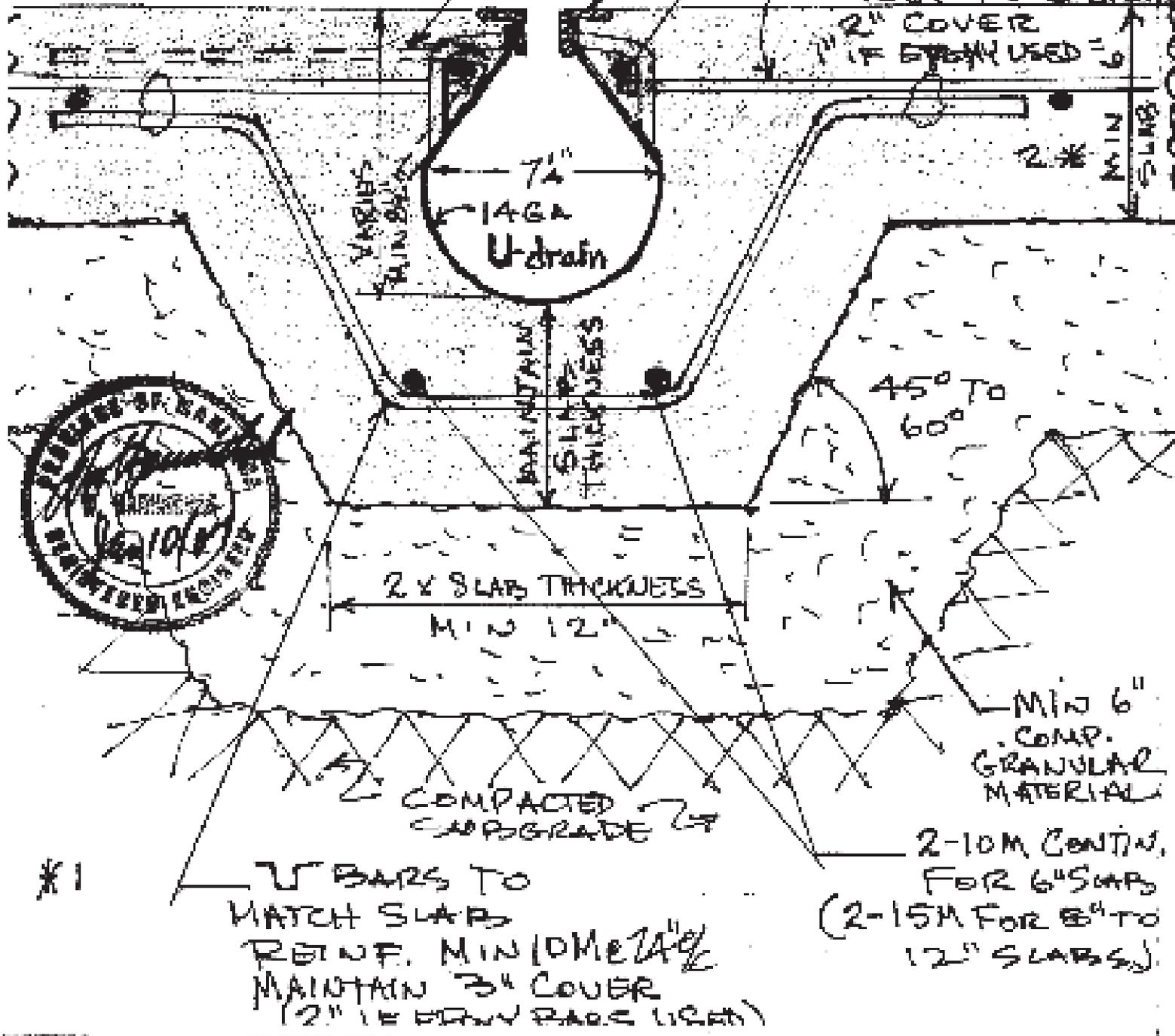
**EPXY REBAR OPTIONAL  
 (RECOMMENDED)**

**MAINTAIN FLUSH  
 (USE AS SCREED)**

**#1 12"**  
**OPTIONAL 10M DOWELS  
 LAP WITH SLAB REINF**

**CONTINUOUS  
 10M BAR EA. SIDE**

**#1 SLAB REINFORCING  
 TIGHT TO U-drain  
 2" COVER  
 IF EPXY USED**



**#1**  
**U-BARS TO  
 MATCH SLAB  
 REINF. MIN 10M U-BAR  
 MAINTAIN 3" COVER  
 (2" IF EPXY REBAR USED)**

**MIN 6"  
 COMP.  
 GRANULAR  
 MATERIAL**  
**2-10M CONTIN.  
 FOR 6" SLABS  
 (2-15M FOR 8" TO  
 12" SLABS)**









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