



Surface and Floor Drainage System

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

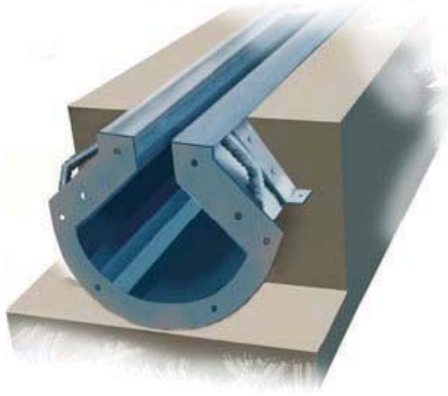
- Make sure the trench excavation allows for proper thickness and reinforcement specified by designer or engineer.
- Pre-pour concrete to the warning sticker (bend in steel) on the U-drain, prior to completing the concrete slab.
- Use a pencil vibrator to ensure that there are no air pockets around the 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.
- 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.
- After the concrete has set, break out all metal tabs with a steel bar to ensure a continuous open slot in the U-Drain.



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. 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.
5. Bolt all remaining sections of U-drain together using the lettered flanges as a guide.
Ex. Section End-A bolts to A-B and A-B bolts to B-C, etc.

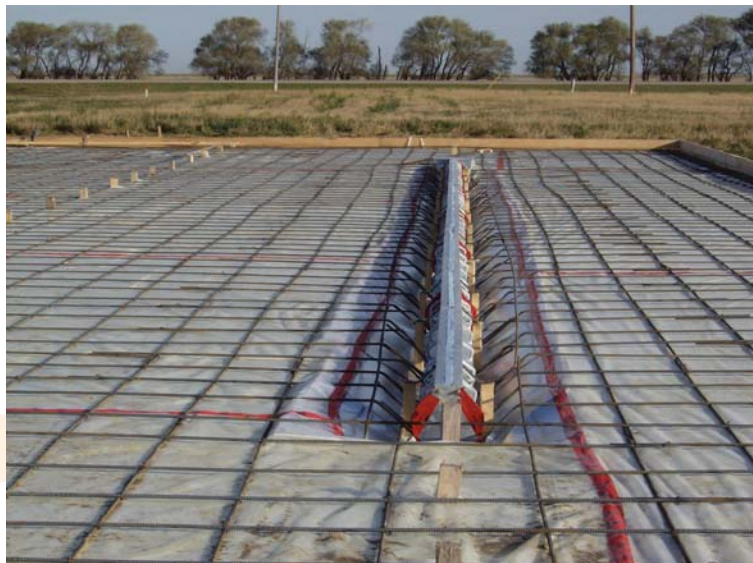
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6. Fasten the E-Z Mount Brackets at each U-drain bracket interval, using the hardware supplied. Pound appropriate lengths of rebar into your base material with the rebar running through the conduit portion of the E-Z Mount Bracket. Make sure that all 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.



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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, break out all metal tabs with a steel bar to ensure a continuous open slot. Remove the tape from the slot and, using the Paddle, clean out the U-drain and sump pit.





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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 #1**

EPOXY REBAR OPTIONAL
 (RECOMMENDED)

*** NOTE #2**

- CONCRETE MIN
 25 MPAC 28 DAYS

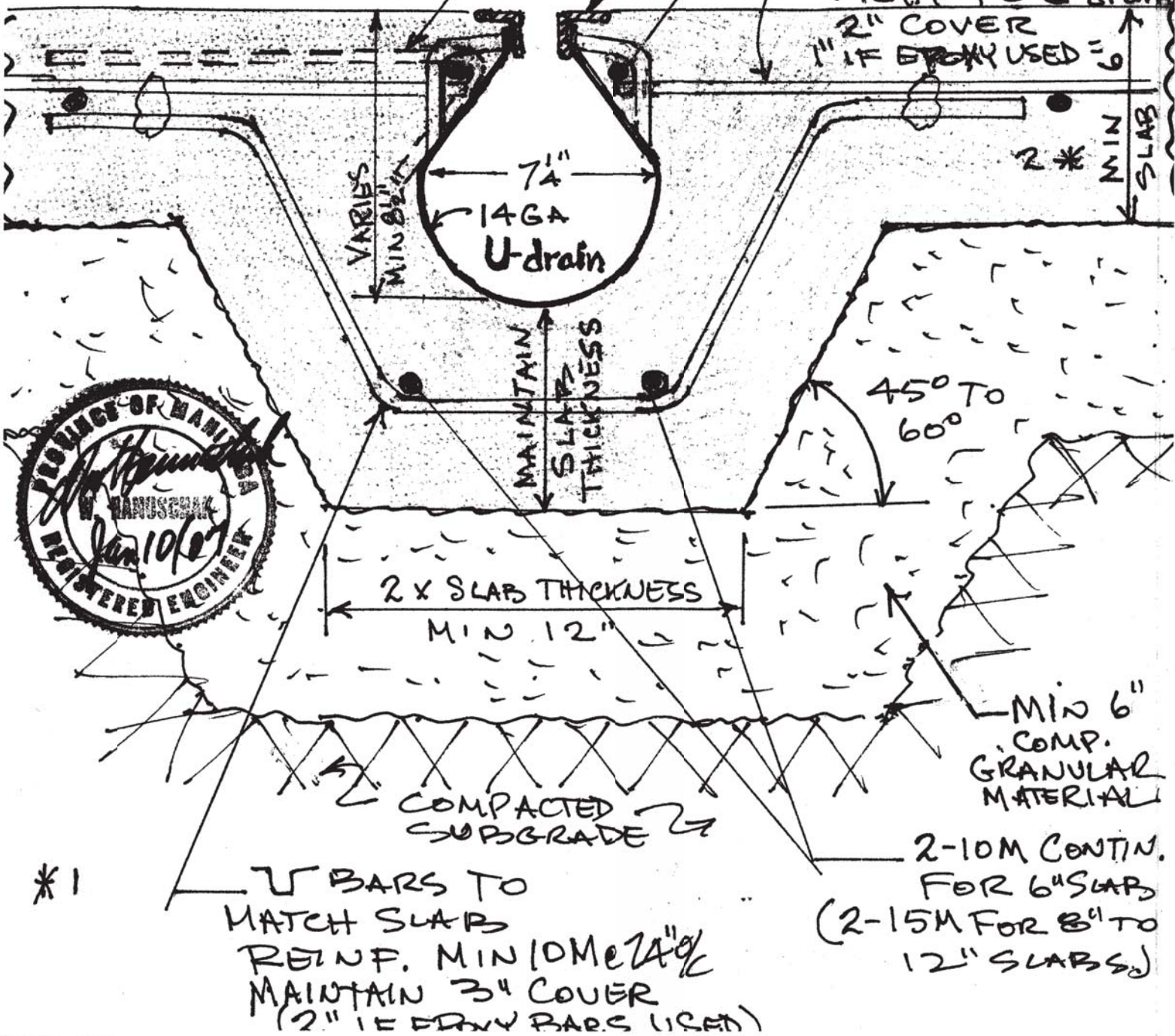
***1**

OPTIONAL 10M DOWELS
 LAP WITH SLAB REINFC

MAINTAIN FLUSH
 (USE AS SCREEN)

CONTINUOUS
 10M BAR EA. SIDE

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





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