

UD-02a

**CITY REQUIREMENTS**

1. BARRIER CURB: USE NEENAH R-3502-A; EJIW 7235 / TYPE M2 GRATE; OR APPROVED EQUAL.
2. MOUNTABLE CURB OR DRIVEWAYS: USE NEENAH R-3511; EJIW 7210 / TYPE M3 GRATE; OR APPROVED EQUAL.
3. CONCRETE MUST BE POURED A MINIMUM OF 8" AROUND THE CIRCUMFERENCE OF THE FRAME AND AT LEAST 6" BELOW THE FRAME TO ENSURE THAT THERE WILL BE NO INFILTRATION BETWEEN THE FRAME AND STRUCTURE.

Approved: City Engineer  
*Victor C. Ramirez, P.E.*  
Victor C. Ramirez, P.E.  
Director of Engineering and Building

Drawing Name  
**CURB INLET  
FRAME AND GRATE**

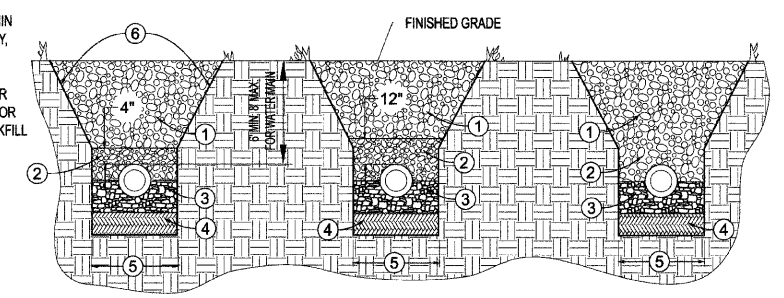
Drawing Number  
**UD-02a**

Date: 11/2/2007

Drawn: EM    Checked: TH

ENGINEERING AND BUILDING ENGINEERING DETAILS AND STANDARDS

1. TRENCH BACKFILL TO SUBGRADE AND WITHIN 2 FEET OF PROPOSED PAVEMENT, DRIVEWAY, CURB AND GUTTER OR SIDEWALK. TRENCH BACKFILL MATERIALS SHALL BE IDOT APPROVED GRADATION CA-6, GRADE 7, 8, OR 9 COMPACTED TO 90% OF MODIFIED PROCTOR DENSITY. IN NON-STRUCTURAL AREAS BACKFILL WITH APPROVED EXCAVATED MATERIALS.
2. INITIAL BACKFILL TO DEPTH AS INDICATED. MATERIAL SHALL BE IDOT APPROVED GRADATION CA-6, GRADE 7, 8, OR 9.
3. PIPE BEDDING SHALL BE FRACTURED GRANULAR MATERIAL IDOT GRADATION CA-7 OR CA-11 FROM 4 INCHES BELOW HORIZONTAL CENTER OF PIPE.
4. UNSUITABLE MATERIAL TO BE REMOVED WHERE DIRECTED BY THE ENGINEER AND REPLACED WITH COMPACTED SUITABLE MATERIAL.
5. TRENCH WIDTH:  
PIPE O.D. + 12 INCHES MINIMUM  
PIPE I.D. + 18 INCHES MAXIMUM
6. CONTRACTORS SHALL COMPLY WITH THE LATEST OSHA STANDARDS INCLUDING, BUT NOT LIMITED TO: SLOPING AND BENCHING TRENCHING WALLS; TRENCH SUPPORT AND SHORING SYSTEMS; SHIELD SYSTEMS; AND HAZARDOUS ATMOSPHERES.



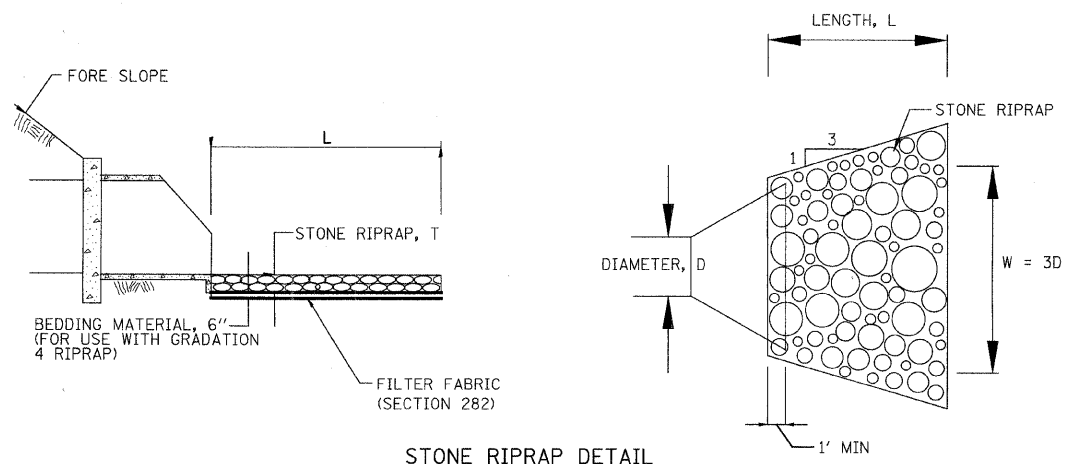
**SECTION A:**  
WATER MAIN (DIP\*)  
FORCE MAIN (DIP\*)  
SANITARY SEWER MAIN & SERVICES (ESVCP, DIP\*)

**SECTION B:**  
SANITARY SEWER & SERVICES (PVC)  
STORM SEWER (PVC)  
SANITARY MAIN & WATER MAIN (HDPE)

**SECTION C:**  
STORM SEWER (RCP)

\* NOTE: ALL DUCTILE IRON SHALL BE SUBJECT TO POLY WRAP PER CITY ENGINEER

TYPICAL TRENCH CROSS SECTION



STONE RIPRAP, CLASS A								
LOCATION	OFFSET	GRADATION	WIDTH (W)	LENGTH (L)	THICKNESS (T)	RIPRAP	FABRIC	
STATION	RT/LT	TYPE	FT	FT	FT	SQ YD	SQ YD	
*207+08 RTE 176	RT	A3	1.5	2	.84	0.5	0.5	
*210+77 RTE 176	LT**	A4	12	16	1.9	30.8	30.8	

\*RIPRAP FOR PERMANENT USE  
\*\*OFFSITE STORM SEWER OUTFALL

REVISIONS	
NAME	DATE

CITY OF CRYSTAL LAKE  
ERICK STREET (FAU 0125)  
DRAINAGE & UTILITIES  
DRAINAGE DETAILS

SCALE: NTS  
DATE: DECEMBER 15, 2008

DRAWN BY: JJS  
CHECKED BY: ADJ