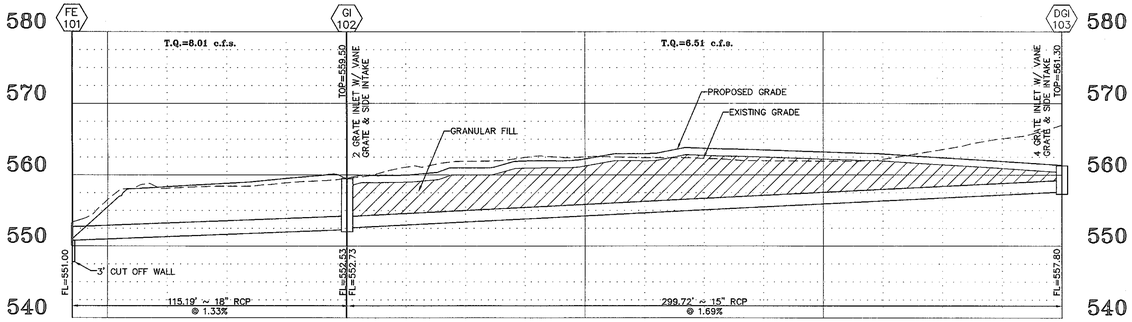


STORM SEWER PROFILE
(PRIVATE)

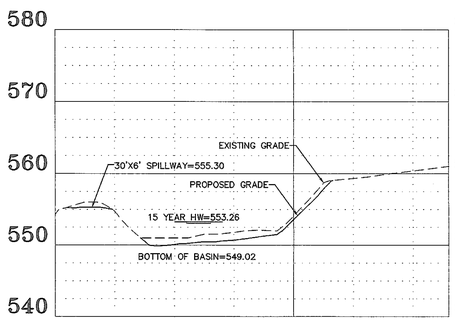
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'

NOTE: ALL STORM INLETS TO HAVE FILTREXX FILTER. SEE DETAIL ON SHEET 10. CONTRACTOR SHALL COORDINATE WITH FLEXSTORM SUPPLIER TO ENSURE PROPERLY SIZED POST CONSTRUCTION INLET FILTERS ARE SUPPLIED FOR STORM STRUCTURES.

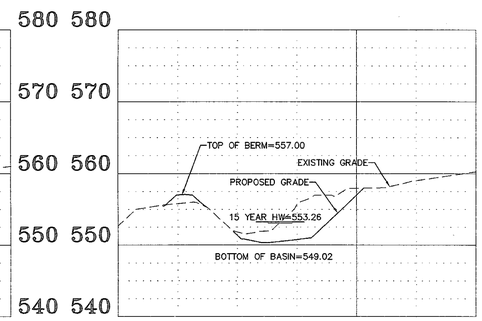
BAX PROJECT NAME :CITY OF O'FALLON ENVIRONMENTAL SERVICES BUILDING
BAX PROJECT NO. : 06-13742A
DESIGN DATE : 08-15-16
FILENAME : 13742A

UPP STR	LOW STR	L	DIA	UPPER FL LN	LOWER FL LN	PS	UPPER ST EL	DEPTH HY GR	UPPER HY EL	LOWER HY EL	HYDR GRADE	FR HEAD	VEL	VEL HEAD	JUNC LOSS	TURN LOSS	CURVE LOSS	STR GRADE	TNL CAP	DR AREA	PI	Q	TQ	PIPE CAP	LINE NUMBER	REMARKS
DI103	GI102	300	15	557.80	552.73	1.69	561.30	2.68	558.62*	553.98	.01020	3.04	5.30	0.44	0.44	0.00	0.00		0.00	2.04	3.19	6.51	6.51	8.40	1	
GI102	FE101	115	18	552.53	551.00	1.33	559.50	5.56	553.94	553.26	.00580	0.67	4.53	0.32	0.01	0.06	0.00		0.00	0.43	3.49	1.50	8.01	12.11	2	HW=553.26

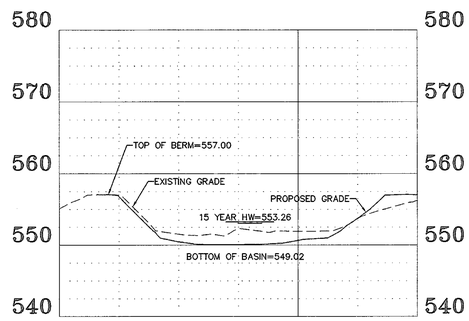
* INDICATES CRITICAL DEPTH



BASIN SECTION AA
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



BASIN SECTION BB
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'



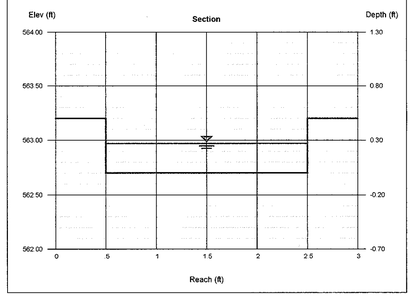
BASIN SECTION CC
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'

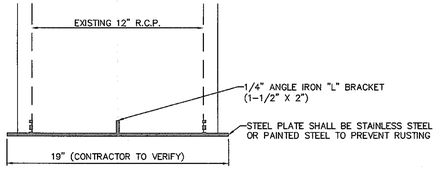
Channel Report

Hydraflow Express Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. — Thursday, Aug 11 2016

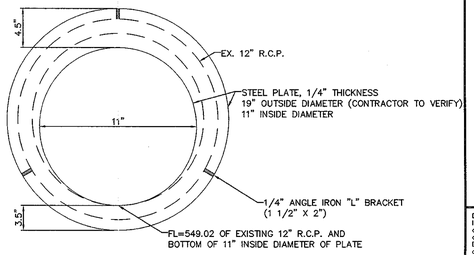
13742A Curb Slot

Rectangular		Highlighted	
Bottom Width (ft)	= 2.00	Depth (ft)	= 0.27
Total Depth (ft)	= 0.50	Q (cfs)	= 2.460
		Area (sqft)	= 0.54
Invert Elev (ft)	= 562.70	Velocity (ft/s)	= 4.56
Slope (%)	= 1.27	Wetted Perim (ft)	= 2.54
N-Value	= 0.013	Crit Depth, Yc (ft)	= 0.37
		Top Width (ft)	= 2.00
Calculations		EGL (ft)	= 0.59
Compute by:	Known Q		
Known Q (cfs)	= 2.46		

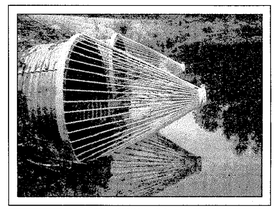




STEEL PLATE SHALL BE INSTALLED BY WELDING "L" BRACKETS (1-1/2" LENGTH) TO PLATE. THE 2" LENGTH OF "L" BRACKET SHALL BE BOLTED INTO EXISTING 12" R.C.P. WITH 3/8" STAINLESS STEEL BOLT. STEEL PLATE MAY REQUIRE AN INCREASED OUTSIDE DIAMETER DUE TO INSTALLATION OF BEAVER CONE. PRIOR TO STEEL PLATE FABRICATION, CONTRACTOR SHALL COORDINATE WITH BEAVER CONE MANUFACTURER TO DETERMINE METHOD TO ATTACH CONE TO STEEL PLATE.



DETENTION OUTFALL PIPE MODIFICATION DETAIL
NOT TO SCALE



BEAVER CONE DETAIL
*OR EQUIVALENT

Tensar NORTH AMERICAN GREEN

Tensar International Corporation
5401 St. Wendel-Cynthiana Road
Poseyville, Indiana 47633
Tel. 800.772.2040
Fax 812.867.0247
www.nagreen.com

Material and Performance Specification
S75 Erosion Control Blanket

Description

The short-term single net erosion control blanket shall be a machine-produced mat of 100% agricultural straw with a photodegradable plastic net on the top side. Performance and longevity may vary depending upon climatic conditions, soil, geographical location, and elevation). The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the mat. The blanket shall be covered on the top side with a lightweight photodegradable polypropylene netting having an approximate 0.50 x 0.50 (1.27 x 1.27 cm) mesh. The netting shall be attached to the mat by a 100% cotton thread with degradable thread. The blanket shall be manufactured with a colored thread stitched along both outer edges (approximately 2-5 inches [5-12.5 cm] from the edge) as an overlap guide for adjacent mats.

The S75 shall meet Type 2.C specification requirements established by the Erosion Control Technology Council (ECTC) and National Highway Administration's (FHWA) *FP-03 Section 713.17*

Physical Properties	Test Method	Typical Value
Thickness	ASTM D6525	0.37 in (9.4 mm)
Resiliency	ECTC Guidelines	78.8%
Water Absorbency	ASTM D1117	436%
Mass/Unit Area	ASTM 6475	11.97 oz/yd² (407 g/m²)
Swell	ECTC Guidelines	15%
Smolder Resistance	ECTC Guidelines	Yes
Stiffness	ASTM D1388	6.33 oz-in
Light Penetration	ECTC Guidelines	7.3%
Tensile Strength –MD	ASTM D6818	130.8 lbs/ft (1.94 kN/m)
Elongation – MD	ASTM D6818	24.4%
Tensile Strength – TD	ASTM D6818	85.2 lbs/ft (1.26 kN/m)
Elongation – TD	ASTM D6818	20.8%

Erosion Control Material Composition		
Matrix	100% Straw Fiber	0.5 lbs/yd² (0.27 kg/m²)
Netting	Top side only, lightweight photodegradable	1.5 lb/1000 ft² (0.73 kg/100 m²) approx. weight
Thread	degradable	

Unvegetated Shear Stress	
Unvegetated Shear Stress	1.55 lbs/ft² (74 Pa)
Unvegetated Velocity	5.00 ft/s (1.52 m/s)

Slope Design Guidelines Factors	Slope Gradients (S)		
Slope Length (L)	≤ 3:1	3:1 – 2:1	≥ 2:1
≤ 20 ft (6 m)	0.029	NA	NA
20-50 ft	0.11	NA	NA
≥ 50 ft (15.2 m)	0.19	NA	NA

Standard Roll Sizes			
Width	6.67 ft (2.03 m)	8.0 ft (2.44 m)	16.0 ft (4.87 m)
Length	108 ft (32.92 m)	112 ft (34.14 m)	108 ft (32.92 m)
Weight ± 10%	40 lbs (18.14 kg)	50 lbs (22.68 kg)	96 lbs (43.54 kg)
Area	80 yd² (66.9 m²)	100 yd² (83.61 m²)	192 yd² (160.5 m²)

Manning's n Values	
Flow Depth	Manning's n
≤ 0.50 ft (0.15 m)	0.055
0.50 – 2.0 ft	0.055 – 0.021
≥ 2.0 ft (0.60 m)	0.021

Performance Data (ASTM D6459)		
Test Method	Test Parameters	Results
ECTC 2 Rainfall	50 mm (2 in)/hr-30 min 100mm (4 in)/hr-30 min 150 mm (6 in)/hr-30 min	SLR** = 8.80 SLR** = 8.16 SLR** = 7.81
ECTC 3 Shear Res.	Shear at 0.50 inch soil loss	1.80 lbs/ft²
ECTC 4 Germination	Top Soil, Fescue, 21 day incubation	228% improvement of biomass

* Bench Scale tests should not be used for design purposes
** Soil Loss Ratio – Soil also Bare Soil/Soil Loss with RECP

Proud Participant of:

Tensar International Corporation warrants that at the time of delivery the product furnished hereunder shall conform to the specification stated herein. Any other warranty including merchantability and fitness for a particular purpose, are hereby excluded. If the product does not meet specifications on this page and Tensar is notified prior to installation, Tensar will replace the product at no cost to the customer. **This product specification supersedes all prior specifications for the product described above is and is not applicable to any products shipped prior to January 1, 2011.**

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UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE THEIR LOCATIONS SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE LOCATED PRIOR TO ANY GRADING OR CONSTRUCTION OF THE IMPROVEMENTS.

PROJECT TITLE:
RENOVATIONS FOR THE CITY OF O'FALLON ENVIRONMENTAL SERVICES BUILDING

Bax Project # 06-13742A | Issue Date: 07/22/2016

ENGINEERING PLANNING SURVEYING
221 Point West Blvd.
St. Charles, MO 63301
636-928-5552
FAX 928-1718

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STATE OF MISSOURI — LARRY DAVID WALKER — NUMBER PE-2007020343 — PROFESSIONAL ENGINEER
09/01/16

Larry D. Walker
Civil Engineer
Engineer License No. 2007020343

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Surveying Authority No. 000144

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REVISIONS

08-19-16	CITY COMMENTS
08-31-16	ADDENDUM 1

Developer / Owner:
CITY OF O'FALLON
100 N. MAIN STREET
O'FALLON, MO 63366
636-379-5513

PROFILES

P-I-Z No.
#05-11.01
Approved 06-02-16
City No.
#