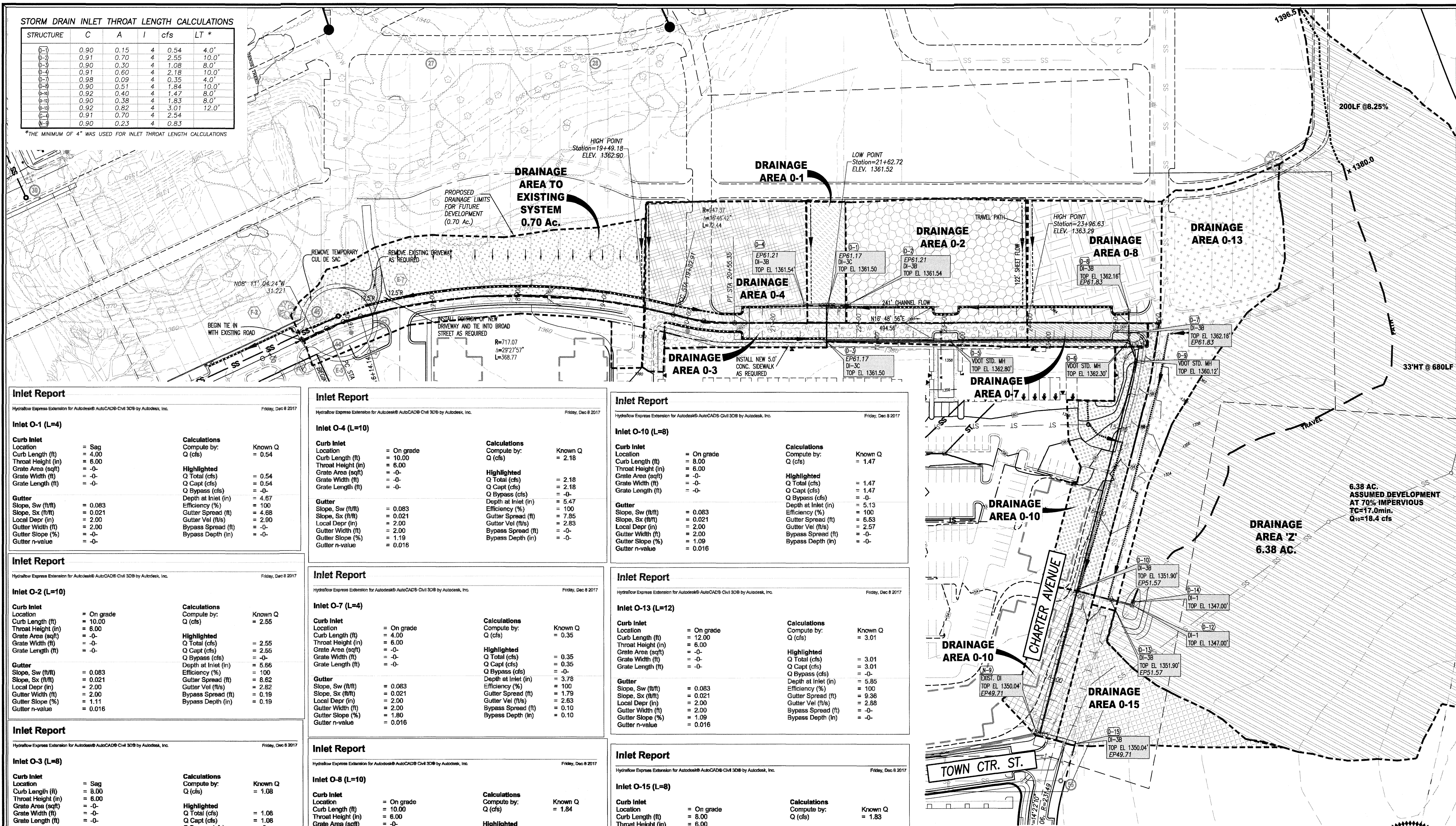


STORM DRAIN INLET THROAT LENGTH CALCULATIONS

STRUCTURE	C	A	I	cfs	LT *
0-1	0.90	0.15	4	0.54	4.0'
0-2	0.91	0.70	4	2.55	10.0'
0-3	0.90	0.30	4	1.08	8.0'
0-4	0.91	0.60	4	2.18	10.0'
0-5	0.98	0.09	4	0.35	4.0'
0-6	0.90	0.51	4	1.84	10.0'
0-7	0.92	0.40	4	1.47	8.0'
0-8	0.90	0.38	4	1.83	8.0'
0-9	0.92	0.82	4	3.01	12.0'
0-10	0.91	0.70	4	2.54	10.0'
0-11	0.90	0.23	4	0.83	8.0'

*THE MINIMUM OF 4" WAS USED FOR INLET THROAT LENGTH CALCULATIONS



Inlet Report

Hydroware Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc.

Friday, Dec 8 2017

Inlet 0-1 (L=4)

Curb Inlet			
Location	= Sag	Calculations	Known Q
Curb Length (ft)	= 4.00	Compute by:	Q (cfs)
Throat Height (in)	= 6.00	Highlighted	
Grate Area (sqft)	= 0	Q Total (cfs)	= 0.54
Grate Width (ft)	= 0	Q Capt (cfs)	= 0.54
Grate Length (ft)	= 0	Q Bypass (cfs)	= 0
Gutter		Depth at Inlet (in)	= 4.67
Slope, Sw (ft/ft)	= 0.083	Efficiency (%)	= 100
Slope, Sx (ft/ft)	= 0.021	Gutter Spread (ft)	= 4.68
Local Depr (in)	= 2.00	Gutter Vel (ft/s)	= 2.90
Gutter Width (ft)	= 2.00	Bypass Spread (ft)	= 0
Gutter Slope (%)	= 0	Bypass Depth (in)	= 0
Gutter n-value	= 0		

Inlet Report

Hydroware Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc.

Friday, Dec 8 2017

Inlet 0-2 (L=10)

Curb Inlet			
Location	= On grade	Calculations	Known Q
Curb Length (ft)	= 10.00	Compute by:	Q (cfs)
Throat Height (in)	= 6.00	Highlighted	
Grate Area (sqft)	= 0	Q Total (cfs)	= 2.55
Grate Width (ft)	= 0	Q Capt (cfs)	= 2.55
Grate Length (ft)	= 0	Q Bypass (cfs)	= 0
Gutter		Depth at Inlet (in)	= 5.66
Slope, Sw (ft/ft)	= 0.083	Efficiency (%)	= 100
Slope, Sx (ft/ft)	= 0.021	Gutter Spread (ft)	= 8.82
Local Depr (in)	= 2.00	Gutter Vel (ft/s)	= 2.82
Gutter Width (ft)	= 2.00	Bypass Spread (ft)	= 0.19
Gutter Slope (%)	= 1.11	Bypass Depth (in)	= 0.19
Gutter n-value	= 0.016		

Inlet Report

Hydroware Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc.

Friday, Dec 8 2017

Inlet 0-3 (L=8)

Curb Inlet			
Location	= Sag	Calculations	Known Q
Curb Length (ft)	= 8.00	Compute by:	Q (cfs)
Throat Height (in)	= 6.00	Highlighted	
Grate Area (sqft)	= 0	Q Total (cfs)	= 1.08
Grate Width (ft)	= 0	Q Capt (cfs)	= 1.08
Grate Length (ft)	= 0	Q Bypass (cfs)	= 0
Gutter		Depth at Inlet (in)	= 4.90
Slope, Sw (ft/ft)	= 0.083	Efficiency (%)	= 100
Slope, Sx (ft/ft)	= 0.021	Gutter Spread (ft)	= 5.61
Local Depr (in)	= 2.00	Gutter Vel (ft/s)	= 2.90
Gutter Width (ft)	= 2.00	Bypass Spread (ft)	= 0
Gutter Slope (%)	= 0	Bypass Depth (in)	= 0
Gutter n-value	= 0		

Inlet Report

Hydroware Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc.

Friday, Dec 8 2017

Inlet 0-4 (L=10)

Curb Inlet			
Location	= On grade	Calculations	Known Q
Curb Length (ft)	= 10.00	Compute by:	Q (cfs)
Throat Height (in)	= 6.00	Highlighted	
Grate Area (sqft)	= 0	Q Total (cfs)	= 2.18
Grate Width (ft)	= 0	Q Capt (cfs)	= 2.18
Grate Length (ft)	= 0	Q Bypass (cfs)	= 0
Gutter		Depth at Inlet (in)	= 5.47
Slope, Sw (ft/ft)	= 0.083	Efficiency (%)	= 100
Slope, Sx (ft/ft)	= 0.021	Gutter Spread (ft)	= 7.85
Local Depr (in)	= 2.00	Gutter Vel (ft/s)	= 2.83
Gutter Width (ft)	= 2.00	Bypass Spread (ft)	= 0
Gutter Slope (%)	= 1.19	Bypass Depth (in)	= 0
Gutter n-value	= 0.016		

Inlet Report

Hydroware Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc.

Friday, Dec 8 2017

Inlet 0-7 (L=4)

Curb Inlet			
Location	= On grade	Calculations	Known Q
Curb Length (ft)	= 4.00	Compute by:	Q (cfs)
Throat Height (in)	= 6.00	Highlighted	
Grate Area (sqft)	= 0	Q Total (cfs)	= 0.35
Grate Width (ft)	= 0	Q Capt (cfs)	= 0.35
Grate Length (ft)	= 0	Q Bypass (cfs)	= 0
Gutter		Depth at Inlet (in)	= 3.78
Slope, Sw (ft/ft)	= 0.083	Efficiency (%)	= 100
Slope, Sx (ft/ft)	= 0.021	Gutter Spread (ft)	= 1.79
Local Depr (in)	= 2.00	Gutter Vel (ft/s)	= 2.63
Gutter Width (ft)	= 2.00	Bypass Spread (ft)	= 0.10
Gutter Slope (%)	= 1.80	Bypass Depth (in)	= 0.10
Gutter n-value	= 0.016		

Inlet Report

Hydroware Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc.

Friday, Dec 8 2017

Inlet 0-8 (L=10)

Curb Inlet			
Location	= On grade	Calculations	Known Q
Curb Length (ft)	= 10.00	Compute by:	Q (cfs)
Throat Height (in)	= 6.00	Highlighted	
Grate Area (sqft)	= 0	Q Total (cfs)	= 1.84
Grate Width (ft)	= 0	Q Capt (cfs)	= 1.84
Grate Length (ft)	= 0	Q Bypass (cfs)	= 0
Gutter		Depth at Inlet (in)	= 5.11
Slope, Sw (ft/ft)	= 0.083	Efficiency (%)	= 100
Slope, Sx (ft/ft)	= 0.021	Gutter Spread (ft)	= 6.43
Local Depr (in)	= 2.00	Gutter Vel (ft/s)	= 3.29
Gutter Width (ft)	= 2.00	Bypass Spread (ft)	= 0
Gutter Slope (%)	= 1.80	Bypass Depth (in)	= 0
Gutter n-value	= 0.016		

Inlet Report

Hydroware Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc.

Friday, Dec 8 2017

Inlet 0-10 (L=8)

Curb Inlet			
Location	= On grade	Calculations	Known Q
Curb Length (ft)	= 8.00	Compute by:	Q (cfs)
Throat Height (in)	= 6.00	Highlighted	
Grate Area (sqft)	= 0	Q Total (cfs)	= 1.47
Grate Width (ft)	= 0	Q Capt (cfs)	= 1.47
Grate Length (ft)	= 0	Q Bypass (cfs)	= 0
Gutter		Depth at Inlet (in)	= 5.13
Slope, Sw (ft/ft)	= 0.083	Efficiency (%)	= 100
Slope, Sx (ft/ft)	= 0.021	Gutter Spread (ft)	= 6.53
Local Depr (in)	= 2.00	Gutter Vel (ft/s)	= 2.57
Gutter Width (ft)	= 2.00	Bypass Spread (ft)	= 0
Gutter Slope (%)	= 1.09	Bypass Depth (in)	= 0
Gutter n-value	= 0.016		

Inlet Report

Hydroware Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc.

Friday, Dec 8 2017

Inlet 0-13 (L=12)

Curb Inlet			
Location	= On grade	Calculations	Known Q
Curb Length (ft)	= 12.00	Compute by:	Q (cfs)
Throat Height (in)	= 6.00	Highlighted	
Grate Area (sqft)	= 0	Q Total (cfs)	= 3.01
Grate Width (ft)	= 0	Q Capt (cfs)	= 3.01
Grate Length (ft)	= 0	Q Bypass (cfs)	= 0
Gutter		Depth at Inlet (in)	= 5.85
Slope, Sw (ft/ft)	= 0.083	Efficiency (%)	= 100
Slope, Sx (ft/ft)	= 0.021	Gutter Spread (ft)	= 9.36
Local Depr (in)	= 2.00	Gutter Vel (ft/s)	= 2.88
Gutter Width (ft)	= 2.00	Bypass Spread (ft)	= 0
Gutter Slope (%)	= 1.09	Bypass Depth (in)	= 0
Gutter n-value	= 0.016		

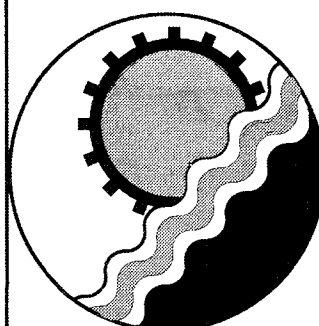
Inlet Report

Hydroware Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc.

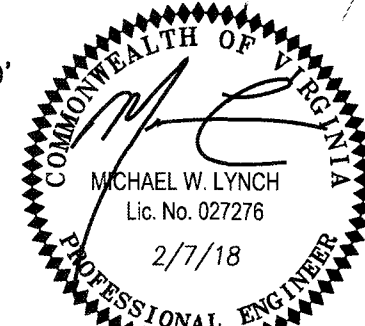
Friday, Dec 8 2017

Inlet 0-15 (L=8)

Curb Inlet			
Location	= On grade	Calculations	Known Q
Curb Length (ft)	= 8.00	Compute by:	Q (cfs)
Throat Height (in)	= 6.00	Highlighted	
Grate Area (sqft)	= 0	Q Total (cfs)	= 1.83
Grate Width (ft)	= 0	Q Capt (cfs)	= 1.83
Grate Length (ft)	= 0	Q Bypass (cfs)	= 0
Gutter		Depth at Inlet (in)	= 5.34
Slope, Sw (ft/ft)	= 0.083	Efficiency (%)	= 100
Slope, Sx (ft/ft)	= 0.021	Gutter Spread (ft)	= 7.34
Local Depr (in)	= 2.00	Gutter Vel (ft/s)	= 2.65
Gutter Width (ft)	= 2.00	Bypass Spread (ft)	= 0.35
Gutter Slope (%)	= 1.09	Bypass Depth (in)	= 0.35
Gutter n-value	= 0.016		



ENGINEERING CONCEPTS, INC.

94 GREENFIELD STREET
DALEVILLE, VIRGINIA 24083
540.473.125350' 0' 50' 100'
SCALE: 1"=50'

Drawn	ECI	STORM DRAIN INLET CALCULATIONS
Designed	ECI	BROAD ST. & CHARTER AVE. EXTENSIONS
Checked	ECI	DALEVILLE TOWN CENTER
Approved	ECI	BOTETOURT COUNTY, VIRGINIA

SCALE: 1" = 50'
DATE: FEB. 7, 2018
PROJECT: 17056
C09