SUPPORTING INFORMATION

UNIFIED SOIL CLASSIFICATION SYSTEM

Portillo's Restaurant-Madison WI ■ Madison, Dane County, WI

September 29, 2017 ■ Terracon Project No. MR165426

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests [A]					Soil Classification	
					Group Symbol	Group Name [B]
Coarse-Grained Soils: More than 50% retained on No. 200 sieve	**Gravels:** More than 50% of coarse fraction retained on No. 4 sieve	**Clean Gravels:** Less than 5% fines [C]	$Cu \geq 4$ and $1 \leq Cc \leq 3$ [E]		GW	Well-graded gravel [F]
			$Cu < 4$ and/or $1 > Cc > 3$ [E]		GP	Poorly graded gravel [F]
		Gravels with Fines: More than 12% fines [C]	Fines classify as ML or MH		GM	Silty gravel [F,G,H]
			Fines classify as CL or CH		GC	Clayey gravel [F,G,H]
	Sands: 50% or more of coarse fraction passes No. 4 sieve	**Clean Sands:** Less than 5% fines [D]	$Cu \geq 6$ and $1 \leq Cc \leq 3$ [E]		SW	Well-graded sand [I]
			$Cu < 6$ and/or $1 > Cc > 3$ [E]		SP	Poorly graded sand [I]
		Sands with Fines: More than 12% fines [D]	Fines classify as ML or MH		SM	Silty sand [G,H,I]
			Fines classify as CL or CH		SC	Clayey sand [G,H,I]
Fine-Grained Soils: 50% or more passes the No. 200 sieve	**Silts and Clays:** Liquid limit less than 50	**Inorganic:**	PI > 7 and plots on or above "A"		CL	Lean clay [K,L,M]
			PI < 4 or plots below "A" line [J]		ML	Silt [K,L,M]
		Organic:	Liquid limit - oven dried / Liquid limit - not dried	< 0.75	OL	Organic clay [K,L,M,N]
						Organic silt [K,L,M,O]
	Silts and Clays: Liquid limit 50 or more	**Inorganic:**	PI plots on or above "A" line		CH	Fat clay [K,L,M]
			PI plots below "A" line		MH	Elastic Silt [K,L,M]
		Organic:	Liquid limit - oven dried / Liquid limit - not dried	< 0.75	OH	Organic clay [K,L,M,P]
						Organic silt [K,L,M,Q]
Highly organic soils:	Primarily organic matter, dark in color, and organic odor				PT	Peat

[A] Based on the material passing the 3-inch (75-mm) sieve

[B] If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

[C] Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

[D] Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay

[E] $Cu = D_{60}/D_{10}$ $\quad Cc = \dfrac{(D_{30})^2}{D_{10} \times D_{60}}$

[F] If soil contains ≥ 15% sand, add "with sand" to group name.

[G] If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

[H] If fines are organic, add "with organic fines" to group name.

[I] If soil contains ≥ 15% gravel, add "with gravel" to group name.

[J] If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

[K] If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

[L] If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name.

[M] If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.

[N] PI ≥ 4 and plots on or above "A" line.

[O] PI < 4 or plots below "A" line.

[P] PI plots on or above "A" line.

[Q] PI plots below "A" line.

UNIFIED SOIL CLASSIFICATION SYSTEM

Portillo's Restaurant-Madison WI ■ Madison, Dane County, WI

September 29, 2017 ■ Terracon Project No. MR165426

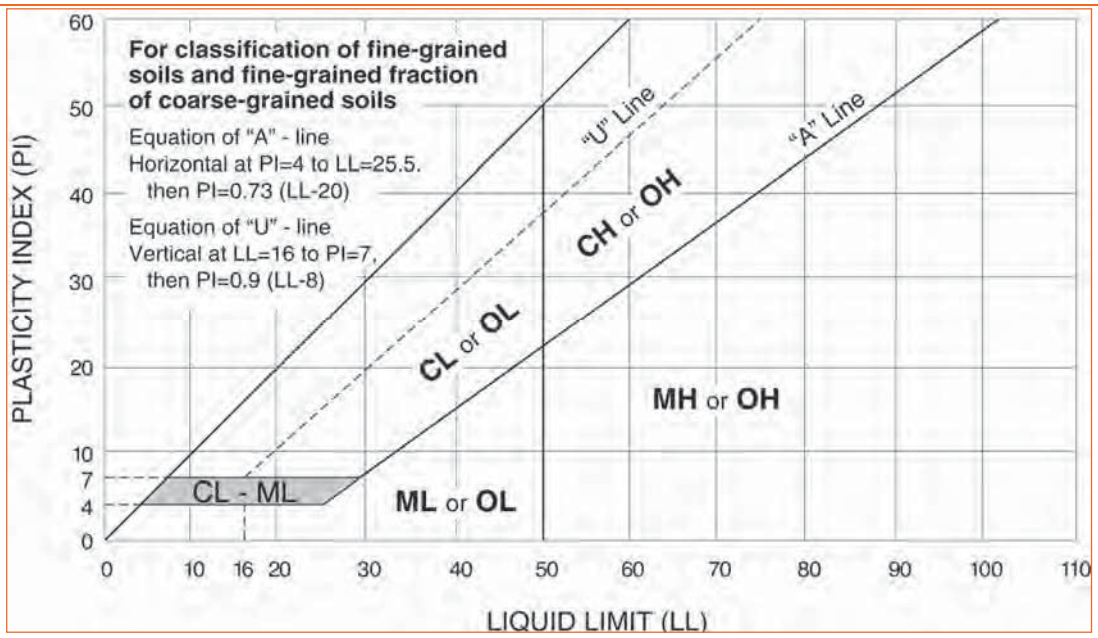
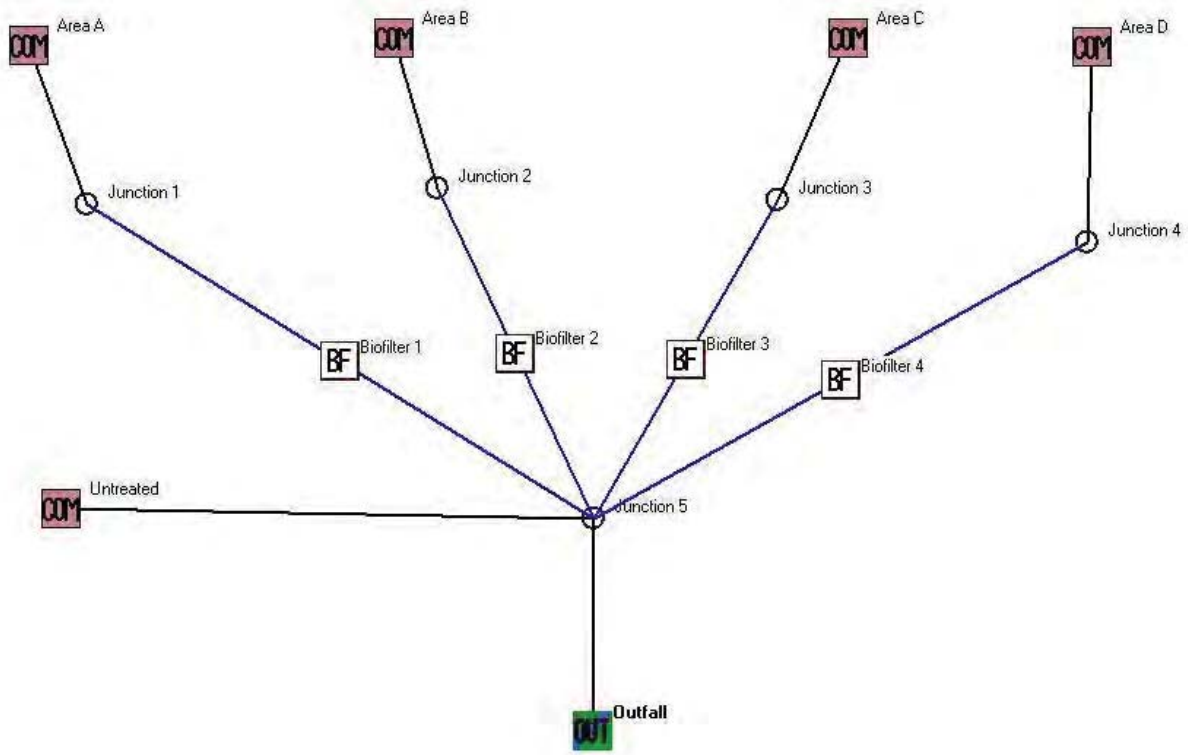


EXHIBIT D

WINSLAMM TSS CALCULATIONS



Outfall Output Summary

	Runoff Volume (cu. ft.)	Percent Runoff Reduction	Runoff Coefficient (Rv)	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Total of All Land Uses without Controls	48048		0.65	138.8	416.2	
Outfall Total with Controls	26823	44.17 %	0.36	95.89	160.6	61.41 %
Current File Output: Annualized Total After Outfall Controls	26897	Years in Model Run:	1.00		161.0	

Data file name: Y:\PROJECTS\2016\167567\SWMP\MODELING\167567-CURRENT-.mdb
WinSLAMM Version 10.3.2
Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:
Seed for random number generator: -42
Study period starting date: 01/01/81 Study period ending date: 12/31/81
Start of Winter Season: 12/02 End of Winter Season: 03/12
Date: 10-13-2017 Time: 08:44:55
Site information:

LU# 1 - Commercial: Area A Total area (ac): 0.180
25 - Driveways 1: 0.180 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 2 - Commercial: Area B Total area (ac): 0.149
13 - Paved Parking 1: 0.120 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
25 - Driveways 1: 0.029 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 3 - Commercial: Area D Total area (ac): 0.144
13 - Paved Parking 1: 0.144 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 4 - Commercial: Area C Total area (ac): 0.039
13 - Paved Parking 1: 0.017 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
25 - Driveways 1: 0.022 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 5 - Commercial: Untreated Total area (ac): 0.121
13 - Paved Parking 1: 0.121 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Biofilter CP# 1 (DS) - Biofilter 1
1. Top area (square feet) = 1005
2. Bottom aea (square feet) = 1005
3. Depth (ft): 5

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   4.  Biofilter width (ft) - for Cost Purposes Only:   15
   5.  Infiltration rate (in/hr) =  0.5
   6.  Random infiltration rate generation?  No
   7.  Infiltration rate fraction (side):   0.01
   8.  Infiltration rate fraction (bottom):   1
   9.  Depth of biofilter that is rock filled (ft) 1.5
   10.  Porosity of rock filled volume =  0.33
   11.  Engineered soil infiltration rate:   3.6
   12.  Engineered soil depth (ft) =  2
   13.  Engineered soil porosity =  0.27
   14. Percent solids reduction due to flow through engineered soil =  80
   15. Biofilter peak to average flow ratio =  3.8
   16. Number of biofiltration control devices =  1
   17. Particle size distribution file:  Not needed - calculated by program
   18. Initial water surface elevation (ft):   0
   Soil Data                        Soil Type Fraction in Eng. Soil
       User-Defined Soil Type         1.000
        Saturation water content percent (Porosity) =   0
        Field capacity (%) =   0
        Permanent Wilting Point (%) =   0
        Infiltration rate (in/hr) =   3.6
   Biofilter Outlet/Discharge Characteristics:
       Outlet type:  Broad Crested Weir
               1.  Weir crest length (ft):   5
               2.  Weir crest width (ft):   2
               3.  Height of datum to bottom of weir opening:   4.5
       Outlet type:  Vertical Stand Pipe
               1.  Stand pipe diameter (ft):   2
               2.  Stand pipe height above datum (ft):   4.25
       Outlet type:  Drain Tile/Underdrain
               1.  Underdrain outlet diameter (ft):   0.5
               2.  Invert elevation above datum (ft):   1.5
               3.  Number of underdrain outlets:   1


Control Practice 2:  Biofilter CP# 2 (DS) - Biofilter 2
   1.  Top area (square feet) =  42
   2.  Bottom aea (square feet) =  42
   3.  Depth (ft):   5
   4.  Biofilter width (ft) - for Cost Purposes Only:   10
   5.  Infiltration rate (in/hr) =  0.5
   6.  Random infiltration rate generation?  No
   7.  Infiltration rate fraction (side):   0.01
   8.  Infiltration rate fraction (bottom):   1
   9.  Depth of biofilter that is rock filled (ft) 1.5
   10.  Porosity of rock filled volume =  0.33
   11.  Engineered soil infiltration rate:   3.6
   12.  Engineered soil depth (ft) =  2
   13.  Engineered soil porosity =  0.27
   14. Percent solids reduction due to flow through engineered soil =  80
   15. Biofilter peak to average flow ratio =  3.8
   16. Number of biofiltration control devices =  1
   17. Particle size distribution file:  Not needed - calculated by program
   18. Initial water surface elevation (ft):   0
   Soil Data                        Soil Type Fraction in Eng. Soil
       User-Defined Soil Type         1.000
        Saturation water content percent (Porosity) =   0
        Field capacity (%) =   0
        Permanent Wilting Point (%) =   0
        Infiltration rate (in/hr) =   3.6
   Biofilter Outlet/Discharge Characteristics:
       Outlet type:  Broad Crested Weir
               1.  Weir crest length (ft):   2
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2. Weir crest width (ft): 2
3. Height of datum to bottom of weir opening: 4.5
Outlet type: Vertical Stand Pipe
1. Stand pipe diameter (ft): 2
2. Stand pipe height above datum (ft): 4.25
Outlet type: Drain Tile/Underdrain
1. Underdrain outlet diameter (ft): 0.5
2. Invert elevation above datum (ft): 1.5
3. Number of underdrain outlets: 1

Control Practice 3: Biofilter CP# 3 (DS) - Biofilter 4
1. Top area (square feet) = 130
2. Bottom aea (square feet) = 130
3. Depth (ft): 5
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 0.5
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 0.01
8. Infiltration rate fraction (bottom): 1
9. Depth of biofilter that is rock filled (ft) 1.5
10. Porosity of rock filled volume = 0.33
11. Engineered soil infiltration rate: 3.6
12. Engineered soil depth (ft) = 2
13. Engineered soil porosity = 0.27
14. Percent solids reduction due to flow through engineered soil = 80
15. Biofilter peak to average flow ratio = 3.8
16. Number of biofiltration control devices = 1
17. Particle size distribution file: Not needed - calculated by program
18. Initial water surface elevation (ft): 0
Soil Data Soil Type Fraction in Eng. Soil
User-Defined Soil Type 1.000
Saturation water content percent (Porosity) = 0
Field capacity (%) = 0
Permanent Wilting Point (%) = 0
Infiltration rate (in/hr) = 3.6
Biofilter Outlet/Discharge Characteristics:
Outlet type: Broad Crested Weir
1. Weir crest length (ft): 2
2. Weir crest width (ft): 2
3. Height of datum to bottom of weir opening: 4.5
Outlet type: Vertical Stand Pipe
1. Stand pipe diameter (ft): 2
2. Stand pipe height above datum (ft): 4.25
Outlet type: Drain Tile/Underdrain
1. Underdrain outlet diameter (ft): 0.5
2. Invert elevation above datum (ft): 1.5
3. Number of underdrain outlets: 1

Control Practice 4: Biofilter CP# 4 (DS) - Biofilter 3
1. Top area (square feet) = 65
2. Bottom aea (square feet) = 65
3. Depth (ft): 5
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 0.5
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 0.01
8. Infiltration rate fraction (bottom): 1
9. Depth of biofilter that is rock filled (ft) 1.5
10. Porosity of rock filled volume = 0.33
11. Engineered soil infiltration rate: 3.6
12. Engineered soil depth (ft) = 2

13. Engineered soil porosity = 0.27
14. Percent solids reduction due to flow through engineered soil = 80
15. Biofilter peak to average flow ratio = 3.8
16. Number of biofiltration control devices = 1
17. Particle size distribution file: Not needed - calculated by program
18. Initial water surface elevation (ft): 0

Soil Data Soil Type Fraction in Eng. Soil

User-Defined Soil Type 1.000

Saturation water content percent (Porosity) = 0

Field capacity (%) = 0

Permanent Wilting Point (%) = 0

Infiltration rate (in/hr) = 3.6

Biofilter Outlet/Discharge Characteristics:

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 2
2. Weir crest width (ft): 2
3. Height of datum to bottom of weir opening: 4.5

Outlet type: Vertical Stand Pipe

1. Stand pipe diameter (ft): 2
2. Stand pipe height above datum (ft): 4.25

Outlet type: Drain Tile/Underdrain

1. Underdrain outlet diameter (ft): 0.5
2. Invert elevation above datum (ft): 1.5
3. Number of underdrain outlets: 1

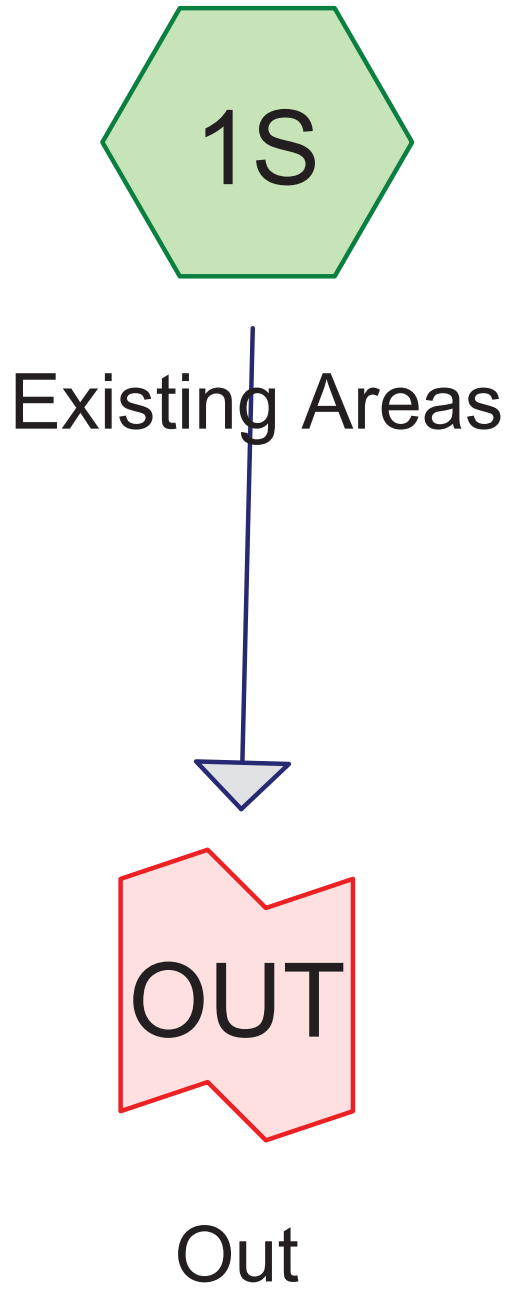
167567-CURRENT- - Output Summary
SLAMM for Windows Version 10.3.2
(c) Copyright Robert Pitt and John Voorhees 2012
All Rights Reserved

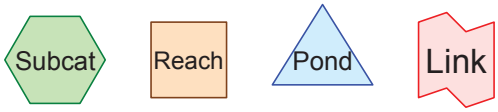
Data file name: Y:\PROJECTS\2016\167567\SWMP\MODELING\167567-CURRENT-.mdb
Data file description:
Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx
Start of Winter Season: 12/02 End of Winter Season: 03/12
Model Run Start Date: 01/01/81 Model Run End Date: 12/31/81
Date of run: 10-13-2017 Time of run: 08:42:51
Total Area Modeled (acres): 0.633
Years in Model Run: 1.00

	Runoff Volume (cu ft)	Percent Runoff Volume Reduction	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Total of all Land Uses without Controls:	48048	-	138.8	416.2	-
Outfall Total with Controls:	26823	44.17%	95.89	160.6	61.41%
Annualized Total After Outfall Controls:	26897			161.0	

EXHIBIT E

HydroCAD Calculations





Routing Diagram for 167567-Hydrocad-Existing
Prepared by {enter your company name here}, Printed 10/13/2017
HydroCAD® 10.00-20 s/n 09953 © 2017 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.128	74	>75% Grass cover, Good, HSG C (1S)
1.091	98	Paved parking, HSG C (1S)
1.219	**95**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
1.219	HSG C	1S
0.000	HSG D	
0.000	Other	
1.219		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.128	0.000	0.000	0.128	>75% Grass cover, Good	1S
0.000	0.000	1.091	0.000	0.000	1.091	Paved parking	1S
0.000	**0.000**	**1.219**	**0.000**	**0.000**	**1.219**	**TOTAL AREA**	

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Existing Areas Runoff Area=53,096 sf 89.53% Impervious Runoff Depth>1.95"
Tc=6.0 min CN=95 Runoff=3.83 cfs 0.198 af

Link OUT: Out Inflow=3.83 cfs 0.198 af
Primary=3.83 cfs 0.198 af

Total Runoff Area = 1.219 ac Runoff Volume = 0.198 af Average Runoff Depth = 1.95"
10.47% Pervious = 0.128 ac 89.53% Impervious = 1.091 ac

Summary for Subcatchment 1S: Existing Areas

Runoff = 3.83 cfs @ 11.96 hrs, Volume= 0.198 af, Depth> 1.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year Rainfall=2.49"

Area (sf)	CN	Description
47,539	98	Paved parking, HSG C
5,557	74	>75% Grass cover, Good, HSG C
53,096	95	Weighted Average
5,557		10.47% Pervious Area
47,539		89.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Time of Concentration**

Summary for Link OUT: Out

Inflow Area = 1.219 ac, 89.53% Impervious, Inflow Depth > 1.95" for 1-year event
Inflow = 3.83 cfs @ 11.96 hrs, Volume= 0.198 af
Primary = 3.83 cfs @ 11.96 hrs, Volume= 0.198 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Existing Areas Runoff Area=53,096 sf 89.53% Impervious Runoff Depth>2.29"
Tc=6.0 min CN=95 Runoff=4.45 cfs 0.233 af

Link OUT: Out Inflow=4.45 cfs 0.233 af
Primary=4.45 cfs 0.233 af

Total Runoff Area = 1.219 ac Runoff Volume = 0.233 af Average Runoff Depth = 2.29"
10.47% Pervious = 0.128 ac 89.53% Impervious = 1.091 ac

Summary for Subcatchment 1S: Existing Areas

Runoff = 4.45 cfs @ 11.96 hrs, Volume= 0.233 af, Depth> 2.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year Rainfall=2.84"

Area (sf)	CN	Description
47,539	98	Paved parking, HSG C
5,557	74	>75% Grass cover, Good, HSG C
53,096	95	Weighted Average
5,557		10.47% Pervious Area
47,539		89.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Time of Concentration**

Summary for Link OUT: Out

Inflow Area = 1.219 ac, 89.53% Impervious, Inflow Depth > 2.29" for 2-year event
Inflow = 4.45 cfs @ 11.96 hrs, Volume= 0.233 af
Primary = 4.45 cfs @ 11.96 hrs, Volume= 0.233 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Existing Areas Runoff Area=53,096 sf 89.53% Impervious Runoff Depth>1.95"
Tc=6.0 min CN=95 Runoff=3.83 cfs 0.198 af

Link OUT: Out Inflow=3.83 cfs 0.198 af
Primary=3.83 cfs 0.198 af

Total Runoff Area = 1.219 ac Runoff Volume = 0.198 af Average Runoff Depth = 1.95"
10.47% Pervious = 0.128 ac 89.53% Impervious = 1.091 ac

Summary for Subcatchment 1S: Existing Areas

Runoff = 3.83 cfs @ 11.96 hrs, Volume= 0.198 af, Depth> 1.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year Rainfall=2.49"

Area (sf)	CN	Description
47,539	98	Paved parking, HSG C
5,557	74	>75% Grass cover, Good, HSG C
53,096	95	Weighted Average
5,557		10.47% Pervious Area
47,539		89.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Time of Concentration**

Summary for Link OUT: Out

Inflow Area = 1.219 ac, 89.53% Impervious, Inflow Depth > 1.95" for 10-year event
Inflow = 3.83 cfs @ 11.96 hrs, Volume= 0.198 af
Primary = 3.83 cfs @ 11.96 hrs, Volume= 0.198 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Existing Areas Runoff Area=53,096 sf 89.53% Impervious Runoff Depth>6.06"
Tc=6.0 min CN=95 Runoff=11.09 cfs 0.616 af

Link OUT: Out Inflow=11.09 cfs 0.616 af
Primary=11.09 cfs 0.616 af

Total Runoff Area = 1.219 ac Runoff Volume = 0.616 af Average Runoff Depth = 6.06"
10.47% Pervious = 0.128 ac 89.53% Impervious = 1.091 ac

Summary for Subcatchment 1S: Existing Areas

Runoff = 11.09 cfs @ 11.96 hrs, Volume= 0.616 af, Depth> 6.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year Rainfall=6.66"

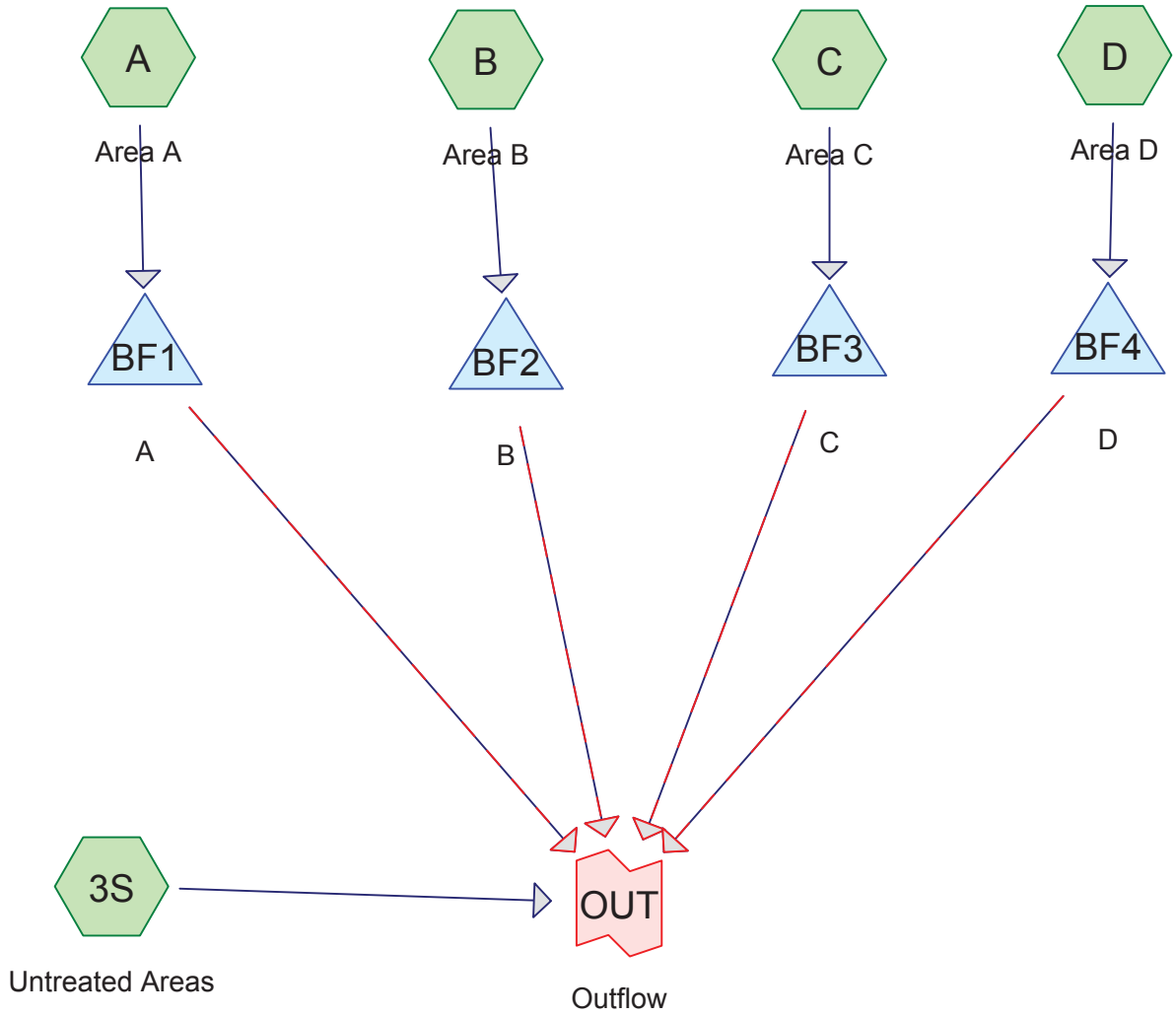
Area (sf)	CN	Description
47,539	98	Paved parking, HSG C
5,557	74	>75% Grass cover, Good, HSG C
53,096	95	Weighted Average
5,557		10.47% Pervious Area
47,539		89.53% Impervious Area

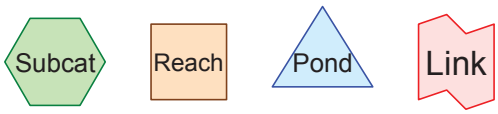
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Time of Concentration**

Summary for Link OUT: Out

Inflow Area = 1.219 ac, 89.53% Impervious, Inflow Depth > 6.06" for 100-year event
Inflow = 11.09 cfs @ 11.96 hrs, Volume= 0.616 af
Primary = 11.09 cfs @ 11.96 hrs, Volume= 0.616 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs





Routing Diagram for 167567-Hydrocad-Current(10-12-17)
Prepared by {enter your company name here}, Printed 10/13/2017
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.045	74	>75% Grass cover, Good, HSG C (3S)
0.169	71	>75% Grass cover, Good, HSG C (A, B, C, D)
0.411	98	Impervious, Pavement (B, C, D)
0.316	98	Paved parking, HSG C (3S, A)
0.940	**92**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.530	HSG C	3S, A, B, C, D
0.000	HSG D	
0.411	Other	B, C, D
0.940		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.214	0.000	0.000	0.214	>75% Grass cover, Good	3S, A, B, C, D
0.000	0.000	0.000	0.000	0.411	0.411	Impervious, Pavement	B, C, D
0.000	0.000	0.316	0.000	0.000	0.316	Paved parking	3S, A
0.000	**0.000**	**0.530**	**0.000**	**0.411**	**0.940**	**TOTAL AREA**	

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment3S: Untreated Areas Runoff Area=5,210 sf 62.09% Impervious Runoff Depth>1.44"
Tc=6.0 min CN=89 Runoff=0.29 cfs 0.014 af

SubcatchmentA: Area A Runoff Area=14,929 sf 70.45% Impervious Runoff Depth>1.52"
Tc=6.0 min CN=90 Runoff=0.88 cfs 0.043 af

SubcatchmentB: Area B Runoff Area=9,425 sf 90.07% Impervious Runoff Depth>1.95"
Tc=6.0 min CN=95 Runoff=0.68 cfs 0.035 af

Pond BF1: A Peak Elev=870.50' Storage=411 cf Inflow=0.88 cfs 0.043 af
Discarded=0.17 cfs 0.035 af Primary=0.26 cfs 0.008 af Secondary=0.00 cfs 0.000 af Outflow=0.43 cfs 0.043 af

Pond BF2: B Peak Elev=871.93' Storage=9 cf Inflow=0.68 cfs 0.035 af
Discarded=0.00 cfs 0.005 af Primary=0.67 cfs 0.030 af Secondary=0.00 cfs 0.000 af Outflow=0.67 cfs 0.035 af

Pond BF3: C Peak Elev=871.53' Storage=5 cf Inflow=0.22 cfs 0.011 af
Discarded=0.01 cfs 0.004 af Primary=0.21 cfs 0.008 af Secondary=0.00 cfs 0.000 af Outflow=0.22 cfs 0.011 af

Pond BF4: D Peak Elev=872.36' Storage=20 cf Inflow=0.54 cfs 0.027 af
Discarded=0.01 cfs 0.009 af Primary=0.53 cfs 0.017 af Secondary=0.00 cfs 0.000 af Outflow=0.54 cfs 0.027 af

SubcatchmentC: Area C Runoff Area=3,059 sf 90.29% Impervious Runoff Depth>1.95"
Tc=6.0 min CN=95 Runoff=0.22 cfs 0.011 af

SubcatchmentD: Area D Runoff Area=8,339 sf 79.59% Impervious Runoff Depth>1.68"
Tc=6.0 min CN=92 Runoff=0.54 cfs 0.027 af

Link OUT: Outflow Inflow=1.88 cfs 0.077 af
Primary=1.88 cfs 0.077 af

Total Runoff Area = 0.940 ac Runoff Volume = 0.131 af Average Runoff Depth = 1.68"
22.76% Pervious = 0.214 ac 77.24% Impervious = 0.726 ac

Summary for Subcatchment 3S: Untreated Areas

Runoff = 0.29 cfs @ 11.97 hrs, Volume= 0.014 af, Depth> 1.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year Rainfall=2.49"

Area (sf)	CN	Description
1,975	74	>75% Grass cover, Good, HSG C
3,235	98	Paved parking, HSG C
5,210	89	Weighted Average
1,975		37.91% Pervious Area
3,235		62.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Time of Concentration**

Summary for Subcatchment A: Area A

Runoff = 0.88 cfs @ 11.97 hrs, Volume= 0.043 af, Depth> 1.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year Rainfall=2.49"

	Area (sf)	CN	Description
*	4,411	71	>75% Grass cover, Good, HSG C
	10,518	98	Paved parking, HSG C
	14,929	90	Weighted Average
	4,411		29.55% Pervious Area
	10,518		70.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Time of concentration**

Summary for Subcatchment B: Area B

Runoff = 0.68 cfs @ 11.96 hrs, Volume= 0.035 af, Depth> 1.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year Rainfall=2.49"

	Area (sf)	CN	Description
*	936	71	>75% Grass cover, Good, HSG C
*	8,489	98	Impervious, Pavement
	9,425	95	Weighted Average
	936		9.93% Pervious Area
	8,489		90.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Pond BF1: A

Inflow Area = 0.343 ac, 70.45% Impervious, Inflow Depth > 1.52" for 1-year event
Inflow = 0.88 cfs @ 11.97 hrs, Volume= 0.043 af
Outflow = 0.43 cfs @ 12.07 hrs, Volume= 0.043 af, Atten= 52%, Lag= 6.2 min
Discarded = 0.17 cfs @ 12.07 hrs, Volume= 0.035 af
Primary = 0.26 cfs @ 12.07 hrs, Volume= 0.008 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 870.50' @ 12.07 hrs Surf.Area= 2,010 sf Storage= 411 cf

Plug-Flow detention time= 8.5 min calculated for 0.043 af (100% of inflow)
Center-of-Mass det. time= 7.9 min (821.1 - 813.2)

Volume	Invert	Avail.Storage	Storage Description
#1	870.18'	3,550 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
#2	870.18'	543 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 2,010 cf Overall x 27.0% Voids
		4,093 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
870.18	1,005	0	0
872.18	1,005	2,010	2,010
873.19	2,045	1,540	3,550

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
870.18	1,005	0	0
872.18	1,005	2,010	2,010

Device	Routing	Invert	Outlet Devices
#1	Primary	869.93'	**6.0" Round Culvert** L= 180.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 869.93' / 867.78' S= 0.0119 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#2	Device 1	870.18'	**6.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	872.93'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	873.18'	**2.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

#5 Discarded 870.18' **3.600 in/hr Exfiltration over Surface area**
Conductivity to Groundwater Elevation = 1.00'

Discarded OutFlow Max=0.17 cfs @ 12.07 hrs HW=870.50' (Free Discharge)
└─**5=Exfiltration** (Controls 0.17 cfs)

Primary OutFlow Max=0.25 cfs @ 12.07 hrs HW=870.50' (Free Discharge)
└─**1=Culvert** (Passes 0.25 cfs of 0.53 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.25 cfs @ 1.92 fps)
  └─**3=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=870.18' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond BF2: B

Inflow Area =	0.216 ac, 90.07% Impervious, Inflow Depth > 1.95" for 1-year event				
Inflow =	0.68 cfs @	11.96 hrs,	Volume=	0.035 af	
Outflow =	0.67 cfs @	11.97 hrs,	Volume=	0.035 af,	Atten= 1%, Lag= 0.4 min
Discarded =	0.00 cfs @	11.97 hrs,	Volume=	0.005 af	
Primary =	0.67 cfs @	11.97 hrs,	Volume=	0.030 af	
Secondary =	0.00 cfs @	0.00 hrs,	Volume=	0.000 af	

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 871.93' @ 11.97 hrs Surf.Area= 45 sf Storage= 9 cf

Plug-Flow detention time= 0.5 min calculated for 0.035 af (100% of inflow)
Center-of-Mass det. time= 0.4 min (785.6 - 785.2)

Volume	Invert	Avail.Storage	Storage Description
#1	871.18'	73 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 163 cf Overall - 90 cf Embedded = 73 cf
#2	871.18'	24 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) Inside #1 90 cf Overall x 27.0% Voids
		98 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.18	45	0	0
873.18	45	90	90
874.19	100	73	163

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.18	45	0	0
873.18	45	90	90

Device	Routing	Invert	Outlet Devices
#1	Primary	871.08'	**6.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 871.08' / 870.88' S= 0.0100 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#2	Device 1	873.93'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	871.18'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Secondary	874.18'	**2.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	871.18'	**3.600 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 1.00'

Discarded OutFlow Max=0.00 cfs @ 11.97 hrs HW=871.90' (Free Discharge)
└─**5=Exfiltration** (Controls 0.00 cfs)

Primary OutFlow Max=0.65 cfs @ 11.97 hrs HW=871.90' (Free Discharge)
└─**1=Culvert** (Passes 0.65 cfs of 0.70 cfs potential flow)
  ├─**2=Orifice/Grate** (Controls 0.00 cfs)
  └─**3=Orifice/Grate** (Orifice Controls 0.65 cfs @ 3.32 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=871.18' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond BF3: C

Inflow Area =	0.070 ac, 90.29% Impervious, Inflow Depth > 1.95" for 1-year event			
Inflow =	0.22 cfs @	11.96 hrs, Volume=	0.011 af	
Outflow =	0.22 cfs @	11.97 hrs, Volume=	0.011 af, Atten= 1%, Lag= 0.3 min	
Discarded =	0.01 cfs @	11.97 hrs, Volume=	0.004 af	
Primary =	0.21 cfs @	11.97 hrs, Volume=	0.008 af	
Secondary =	0.00 cfs @	0.00 hrs, Volume=	0.000 af	

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 871.53' @ 11.97 hrs Surf.Area= 65 sf Storage= 5 cf

Plug-Flow detention time= 0.8 min calculated for 0.011 af (100% of inflow)
Center-of-Mass det. time= 0.6 min (785.8 - 785.2)

Volume	Invert	Avail.Storage	Storage Description
#1	871.24'	106 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 236 cf Overall - 130 cf Embedded = 106 cf
#2	871.24'	35 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) Inside #1 130 cf Overall x 27.0% Voids
		141 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.24	65	0	0
873.24	65	130	130
874.25	145	106	236

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.24	65	0	0
873.24	65	130	130

Device	Routing	Invert	Outlet Devices
#1	Primary	871.14'	**6.0" Round Culvert** L= 15.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 871.14' / 870.84' S= 0.0200 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#2	Device 1	873.99'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	871.24'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Secondary	874.24'	**2.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	871.24'	**3.600 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 1.00'

Discarded OutFlow Max=0.01 cfs @ 11.97 hrs HW=871.52' (Free Discharge)
└─**5=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.21 cfs @ 11.97 hrs HW=871.52' (Free Discharge)
└─**1=Culvert** (Passes 0.21 cfs of 0.34 cfs potential flow)
  ├─**2=Orifice/Grate** (Controls 0.00 cfs)
  └─**3=Orifice/Grate** (Orifice Controls 0.21 cfs @ 1.81 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=871.24' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond BF4: D

Inflow Area =	0.191 ac, 79.59% Impervious, Inflow Depth > 1.68" for 1-year event			
Inflow =	0.54 cfs @	11.97 hrs, Volume=	0.027 af	
Outflow =	0.54 cfs @	11.98 hrs, Volume=	0.027 af, Atten= 0%, Lag= 0.8 min	
Discarded =	0.01 cfs @	11.98 hrs, Volume=	0.009 af	
Primary =	0.53 cfs @	11.98 hrs, Volume=	0.017 af	
Secondary =	0.00 cfs @	0.00 hrs, Volume=	0.000 af	

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 872.36' @ 11.98 hrs Surf.Area= 130 sf Storage= 20 cf

Plug-Flow detention time= 1.1 min calculated for 0.027 af (100% of inflow)
Center-of-Mass det. time= 0.9 min (804.2 - 803.4)

Volume	Invert	Avail.Storage	Storage Description
#1	871.80'	217 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 477 cf Overall - 260 cf Embedded = 217 cf
#2	871.80'	70 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) Inside #1 260 cf Overall x 27.0% Voids
		287 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.80	130	0	0
873.80	130	260	260
874.81	300	217	477

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.80	130	0	0
873.80	130	260	260

Device	Routing	Invert	Outlet Devices
#1	Primary	871.70'	**6.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 871.70' / 870.90' S= 0.0200 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#2	Device 1	874.55'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	871.80'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Secondary	874.80'	**2.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	871.80'	**3.600 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 1.00'

Discarded OutFlow Max=0.01 cfs @ 11.98 hrs HW=872.34' (Free Discharge)
└─**5=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.51 cfs @ 11.98 hrs HW=872.34' (Free Discharge)
└─**1=Culvert** (Passes 0.51 cfs of 0.59 cfs potential flow)
  ├─**2=Orifice/Grate** (Controls 0.00 cfs)
  └─**3=Orifice/Grate** (Orifice Controls 0.51 cfs @ 2.58 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=871.80' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Subcatchment C: Area C

Runoff = 0.22 cfs @ 11.96 hrs, Volume= 0.011 af, Depth> 1.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year Rainfall=2.49"

	Area (sf)	CN	Description
*	297	71	>75% Grass cover, Good, HSG C
*	2,762	98	Impervious, Pavement
	3,059	95	Weighted Average
	297		9.71% Pervious Area
	2,762		90.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment D: Area D

Runoff = 0.54 cfs @ 11.97 hrs, Volume= 0.027 af, Depth> 1.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-year Rainfall=2.49"

	Area (sf)	CN	Description
*	1,702	71	>75% Grass cover, Good, HSG C
*	6,637	98	Impervious, Pavement
	8,339	92	Weighted Average
	1,702		20.41% Pervious Area
	6,637		79.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Link OUT: Outflow

Inflow Area = 0.940 ac, 77.24% Impervious, Inflow Depth > 0.99" for 1-year event
Inflow = 1.88 cfs @ 11.98 hrs, Volume= 0.077 af
Primary = 1.88 cfs @ 11.98 hrs, Volume= 0.077 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment3S: Untreated Areas Runoff Area=5,210 sf 62.09% Impervious Runoff Depth>1.75"
Tc=6.0 min CN=89 Runoff=0.36 cfs 0.017 af

SubcatchmentA: Area A Runoff Area=14,929 sf 70.45% Impervious Runoff Depth>1.84"
Tc=6.0 min CN=90 Runoff=1.06 cfs 0.052 af

SubcatchmentB: Area B Runoff Area=9,425 sf 90.07% Impervious Runoff Depth>2.29"
Tc=6.0 min CN=95 Runoff=0.79 cfs 0.041 af

Pond BF1: A Peak Elev=870.58' Storage=507 cf Inflow=1.06 cfs 0.052 af
Discarded=0.17 cfs 0.040 af Primary=0.36 cfs 0.012 af Secondary=0.00 cfs 0.000 af Outflow=0.53 cfs 0.052 af

Pond BF2: B Peak Elev=872.10' Storage=11 cf Inflow=0.79 cfs 0.041 af
Discarded=0.00 cfs 0.006 af Primary=0.78 cfs 0.036 af Secondary=0.00 cfs 0.000 af Outflow=0.78 cfs 0.041 af

Pond BF3: C Peak Elev=871.56' Storage=6 cf Inflow=0.26 cfs 0.013 af
Discarded=0.01 cfs 0.004 af Primary=0.25 cfs 0.009 af Secondary=0.00 cfs 0.000 af Outflow=0.25 cfs 0.013 af

Pond BF4: D Peak Elev=872.48' Storage=24 cf Inflow=0.64 cfs 0.032 af
Discarded=0.01 cfs 0.010 af Primary=0.62 cfs 0.022 af Secondary=0.00 cfs 0.000 af Outflow=0.63 cfs 0.032 af

SubcatchmentC: Area C Runoff Area=3,059 sf 90.29% Impervious Runoff Depth>2.29"
Tc=6.0 min CN=95 Runoff=0.26 cfs 0.013 af

SubcatchmentD: Area D Runoff Area=8,339 sf 79.59% Impervious Runoff Depth>2.01"
Tc=6.0 min CN=92 Runoff=0.64 cfs 0.032 af

Link OUT: Outflow Inflow=2.27 cfs 0.096 af
Primary=2.27 cfs 0.096 af

Total Runoff Area = 0.940 ac Runoff Volume = 0.157 af Average Runoff Depth = 2.00"
22.76% Pervious = 0.214 ac 77.24% Impervious = 0.726 ac

Summary for Subcatchment 3S: Untreated Areas

Runoff = 0.36 cfs @ 11.97 hrs, Volume= 0.017 af, Depth> 1.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year Rainfall=2.84"

Area (sf)	CN	Description
1,975	74	>75% Grass cover, Good, HSG C
3,235	98	Paved parking, HSG C
5,210	89	Weighted Average
1,975		37.91% Pervious Area
3,235		62.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Time of Concentration**

Summary for Subcatchment A: Area A

Runoff = 1.06 cfs @ 11.97 hrs, Volume= 0.052 af, Depth> 1.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year Rainfall=2.84"

	Area (sf)	CN	Description
*	4,411	71	>75% Grass cover, Good, HSG C
	10,518	98	Paved parking, HSG C
	14,929	90	Weighted Average
	4,411		29.55% Pervious Area
	10,518		70.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Time of concentration**

Summary for Subcatchment B: Area B

Runoff = 0.79 cfs @ 11.96 hrs, Volume= 0.041 af, Depth> 2.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year Rainfall=2.84"

	Area (sf)	CN	Description
*	936	71	>75% Grass cover, Good, HSG C
*	8,489	98	Impervious, Pavement
	9,425	95	Weighted Average
	936		9.93% Pervious Area
	8,489		90.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Pond BF1: A

Inflow Area = 0.343 ac, 70.45% Impervious, Inflow Depth > 1.84" for 2-year event
Inflow = 1.06 cfs @ 11.97 hrs, Volume= 0.052 af
Outflow = 0.53 cfs @ 12.07 hrs, Volume= 0.052 af, Atten= 50%, Lag= 6.1 min
Discarded = 0.17 cfs @ 12.07 hrs, Volume= 0.040 af
Primary = 0.36 cfs @ 12.07 hrs, Volume= 0.012 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 870.58' @ 12.07 hrs Surf.Area= 2,010 sf Storage= 507 cf

Plug-Flow detention time= 9.0 min calculated for 0.052 af (100% of inflow)
Center-of-Mass det. time= 8.4 min (816.2 - 807.8)

Volume	Invert	Avail.Storage	Storage Description
#1	870.18'	3,550 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
#2	870.18'	543 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 2,010 cf Overall x 27.0% Voids
		4,093 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
870.18	1,005	0	0
872.18	1,005	2,010	2,010
873.19	2,045	1,540	3,550

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
870.18	1,005	0	0
872.18	1,005	2,010	2,010

Device	Routing	Invert	Outlet Devices
#1	Primary	869.93'	**6.0" Round Culvert** L= 180.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 869.93' / 867.78' S= 0.0119 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#2	Device 1	870.18'	**6.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	872.93'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	873.18'	**2.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

#5 Discarded 870.18' **3.600 in/hr Exfiltration over Surface area**
Conductivity to Groundwater Elevation = 1.00'

Discarded OutFlow Max=0.17 cfs @ 12.07 hrs HW=870.57' (Free Discharge)
└─**5=Exfiltration** (Controls 0.17 cfs)

Primary OutFlow Max=0.35 cfs @ 12.07 hrs HW=870.57' (Free Discharge)
└─**1=Culvert** (Passes 0.35 cfs of 0.59 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.35 cfs @ 2.13 fps)
  └─**3=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=870.18' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond BF2: B

Inflow Area =	0.216 ac, 90.07% Impervious, Inflow Depth > 2.29" for 2-year event				
Inflow =	0.79 cfs @	11.96 hrs,	Volume=	0.041 af	
Outflow =	0.78 cfs @	11.97 hrs,	Volume=	0.041 af,	Atten= 1%, Lag= 0.5 min
Discarded =	0.00 cfs @	11.97 hrs,	Volume=	0.006 af	
Primary =	0.78 cfs @	11.97 hrs,	Volume=	0.036 af	
Secondary =	0.00 cfs @	0.00 hrs,	Volume=	0.000 af	

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 872.10' @ 11.97 hrs Surf.Area= 45 sf Storage= 11 cf

Plug-Flow detention time= 0.5 min calculated for 0.041 af (100% of inflow)
Center-of-Mass det. time= 0.4 min (781.2 - 780.8)

Volume	Invert	Avail.Storage	Storage Description
#1	871.18'	73 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 163 cf Overall - 90 cf Embedded = 73 cf
#2	871.18'	24 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) Inside #1 90 cf Overall x 27.0% Voids
		98 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.18	45	0	0
873.18	45	90	90
874.19	100	73	163

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.18	45	0	0
873.18	45	90	90

Device	Routing	Invert	Outlet Devices
#1	Primary	871.08'	**6.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 871.08' / 870.88' S= 0.0100 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#2	Device 1	873.93'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	871.18'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Secondary	874.18'	**2.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	871.18'	**3.600 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 1.00'

Discarded OutFlow Max=0.00 cfs @ 11.97 hrs HW=872.07' (Free Discharge)
└─**5=Exfiltration** (Controls 0.00 cfs)

Primary OutFlow Max=0.76 cfs @ 11.97 hrs HW=872.07' (Free Discharge)
└─**1=Culvert** (Passes 0.76 cfs of 0.81 cfs potential flow)
  ├─**2=Orifice/Grate** (Controls 0.00 cfs)
  └─**3=Orifice/Grate** (Orifice Controls 0.76 cfs @ 3.85 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=871.18' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond BF3: C

Inflow Area =	0.070 ac, 90.29% Impervious, Inflow Depth > 2.29" for 2-year event			
Inflow =	0.26 cfs @	11.96 hrs, Volume=	0.013 af	
Outflow =	0.25 cfs @	11.97 hrs, Volume=	0.013 af, Atten= 1%, Lag= 0.3 min	
Discarded =	0.01 cfs @	11.97 hrs, Volume=	0.004 af	
Primary =	0.25 cfs @	11.97 hrs, Volume=	0.009 af	
Secondary =	0.00 cfs @	0.00 hrs, Volume=	0.000 af	

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 871.56' @ 11.97 hrs Surf.Area= 65 sf Storage= 6 cf

Plug-Flow detention time= 0.8 min calculated for 0.013 af (100% of inflow)
Center-of-Mass det. time= 0.6 min (781.5 - 780.8)

Volume	Invert	Avail.Storage	Storage Description
#1	871.24'	106 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 236 cf Overall - 130 cf Embedded = 106 cf
#2	871.24'	35 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) Inside #1 130 cf Overall x 27.0% Voids
		141 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.24	65	0	0
873.24	65	130	130
874.25	145	106	236

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.24	65	0	0
873.24	65	130	130

Device	Routing	Invert	Outlet Devices
#1	Primary	871.14'	**6.0" Round Culvert** L= 15.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 871.14' / 870.84' S= 0.0200 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#2	Device 1	873.99'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	871.24'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Secondary	874.24'	**2.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	871.24'	**3.600 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 1.00'

Discarded OutFlow Max=0.01 cfs @ 11.97 hrs HW=871.55' (Free Discharge)
└─**5=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.24 cfs @ 11.97 hrs HW=871.55' (Free Discharge)
└─**1=Culvert** (Passes 0.24 cfs of 0.38 cfs potential flow)
  ├─**2=Orifice/Grate** (Controls 0.00 cfs)
  └─**3=Orifice/Grate** (Orifice Controls 0.24 cfs @ 1.89 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=871.24' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond BF4: D

Inflow Area =	0.191 ac, 79.59% Impervious, Inflow Depth > 2.01" for 2-year event			
Inflow =	0.64 cfs @	11.97 hrs, Volume=	0.032 af	
Outflow =	0.63 cfs @	11.98 hrs, Volume=	0.032 af, Atten= 0%, Lag= 0.9 min	
Discarded =	0.01 cfs @	11.98 hrs, Volume=	0.010 af	
Primary =	0.62 cfs @	11.98 hrs, Volume=	0.022 af	
Secondary =	0.00 cfs @	0.00 hrs, Volume=	0.000 af	

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 872.48' @ 11.98 hrs Surf.Area= 130 sf Storage= 24 cf

Plug-Flow detention time= 1.1 min calculated for 0.032 af (100% of inflow)
Center-of-Mass det. time= 0.9 min (799.2 - 798.4)

Volume	Invert	Avail.Storage	Storage Description
#1	871.80'	217 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 477 cf Overall - 260 cf Embedded = 217 cf
#2	871.80'	70 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) Inside #1 260 cf Overall x 27.0% Voids
		287 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.80	130	0	0
873.80	130	260	260
874.81	300	217	477

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.80	130	0	0
873.80	130	260	260

Device	Routing	Invert	Outlet Devices
#1	Primary	871.70'	**6.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 871.70' / 870.90' S= 0.0200 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#2	Device 1	874.55'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	871.80'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Secondary	874.80'	**2.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	871.80'	**3.600 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 1.00'

Discarded OutFlow Max=0.01 cfs @ 11.98 hrs HW=872.45' (Free Discharge)
└─**5=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.60 cfs @ 11.98 hrs HW=872.45' (Free Discharge)
└─**1=Culvert** (Passes 0.60 cfs of 0.67 cfs potential flow)
  ├─**2=Orifice/Grate** (Controls 0.00 cfs)
  └─**3=Orifice/Grate** (Orifice Controls 0.60 cfs @ 3.05 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=871.80' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Subcatchment C: Area C

Runoff = 0.26 cfs @ 11.96 hrs, Volume= 0.013 af, Depth> 2.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year Rainfall=2.84"

	Area (sf)	CN	Description
*	297	71	>75% Grass cover, Good, HSG C
*	2,762	98	Impervious, Pavement
	3,059	95	Weighted Average
	297		9.71% Pervious Area
	2,762		90.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment D: Area D

Runoff = 0.64 cfs @ 11.97 hrs, Volume= 0.032 af, Depth> 2.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-year Rainfall=2.84"

	Area (sf)	CN	Description
*	1,702	71	>75% Grass cover, Good, HSG C
*	6,637	98	Impervious, Pavement
	8,339	92	Weighted Average
	1,702		20.41% Pervious Area
	6,637		79.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Link OUT: Outflow

Inflow Area = 0.940 ac, 77.24% Impervious, Inflow Depth > 1.22" for 2-year event
Inflow = 2.27 cfs @ 11.98 hrs, Volume= 0.096 af
Primary = 2.27 cfs @ 11.98 hrs, Volume= 0.096 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment3S: Untreated Areas Runoff Area=5,210 sf 62.09% Impervious Runoff Depth>2.90"
Tc=6.0 min CN=89 Runoff=0.57 cfs 0.029 af

SubcatchmentA: Area A Runoff Area=14,929 sf 70.45% Impervious Runoff Depth>3.00"
Tc=6.0 min CN=90 Runoff=1.69 cfs 0.086 af

SubcatchmentB: Area B Runoff Area=9,425 sf 90.07% Impervious Runoff Depth>3.52"
Tc=6.0 min CN=95 Runoff=1.18 cfs 0.063 af

Pond BF1: A Peak Elev=870.86' Storage=873 cf Inflow=1.69 cfs 0.086 af
Discarded=0.17 cfs 0.058 af Primary=0.62 cfs 0.028 af Secondary=0.00 cfs 0.000 af Outflow=0.79 cfs 0.086 af

Pond BF2: B Peak Elev=872.92' Storage=21 cf Inflow=1.18 cfs 0.063 af
Discarded=0.00 cfs 0.006 af Primary=1.16 cfs 0.057 af Secondary=0.00 cfs 0.000 af Outflow=1.16 cfs 0.063 af

Pond BF3: C Peak Elev=871.65' Storage=7 cf Inflow=0.38 cfs 0.021 af
Discarded=0.01 cfs 0.006 af Primary=0.37 cfs 0.015 af Secondary=0.00 cfs 0.000 af Outflow=0.38 cfs 0.021 af

Pond BF4: D Peak Elev=873.07' Storage=45 cf Inflow=0.99 cfs 0.051 af
Discarded=0.01 cfs 0.014 af Primary=0.96 cfs 0.037 af Secondary=0.00 cfs 0.000 af Outflow=0.97 cfs 0.051 af

SubcatchmentC: Area C Runoff Area=3,059 sf 90.29% Impervious Runoff Depth>3.52"
Tc=6.0 min CN=95 Runoff=0.38 cfs 0.021 af

SubcatchmentD: Area D Runoff Area=8,339 sf 79.59% Impervious Runoff Depth>3.20"
Tc=6.0 min CN=92 Runoff=0.99 cfs 0.051 af

Link OUT: Outflow Inflow=3.60 cfs 0.166 af
Primary=3.60 cfs 0.166 af

Total Runoff Area = 0.940 ac Runoff Volume = 0.250 af Average Runoff Depth = 3.19"
22.76% Pervious = 0.214 ac 77.24% Impervious = 0.726 ac

Summary for Subcatchment 3S: Untreated Areas

Runoff = 0.57 cfs @ 11.97 hrs, Volume= 0.029 af, Depth> 2.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year Rainfall=4.09"

Area (sf)	CN	Description
1,975	74	>75% Grass cover, Good, HSG C
3,235	98	Paved parking, HSG C
5,210	89	Weighted Average
1,975		37.91% Pervious Area
3,235		62.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Time of Concentration**

Summary for Subcatchment A: Area A

Runoff = 1.69 cfs @ 11.97 hrs, Volume= 0.086 af, Depth> 3.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year Rainfall=4.09"

	Area (sf)	CN	Description
*	4,411	71	>75% Grass cover, Good, HSG C
	10,518	98	Paved parking, HSG C
	14,929	90	Weighted Average
	4,411		29.55% Pervious Area
	10,518		70.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Time of concentration**

Summary for Subcatchment B: Area B

Runoff = 1.18 cfs @ 11.96 hrs, Volume= 0.063 af, Depth> 3.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year Rainfall=4.09"

	Area (sf)	CN	Description
*	936	71	>75% Grass cover, Good, HSG C
*	8,489	98	Impervious, Pavement
	9,425	95	Weighted Average
	936		9.93% Pervious Area
	8,489		90.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Pond BF1: A

Inflow Area = 0.343 ac, 70.45% Impervious, Inflow Depth > 3.00" for 10-year event
Inflow = 1.69 cfs @ 11.97 hrs, Volume= 0.086 af
Outflow = 0.79 cfs @ 12.07 hrs, Volume= 0.086 af, Atten= 53%, Lag= 6.4 min
Discarded = 0.17 cfs @ 12.07 hrs, Volume= 0.058 af
Primary = 0.62 cfs @ 12.07 hrs, Volume= 0.028 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 870.86' @ 12.07 hrs Surf.Area= 2,010 sf Storage= 873 cf

Plug-Flow detention time= 10.2 min calculated for 0.085 af (100% of inflow)
Center-of-Mass det. time= 9.6 min (803.6 - 794.0)

Volume	Invert	Avail.Storage	Storage Description
#1	870.18'	3,550 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
#2	870.18'	543 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
			2,010 cf Overall x 27.0% Voids
		4,093 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
870.18	1,005	0	0
872.18	1,005	2,010	2,010
873.19	2,045	1,540	3,550

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
870.18	1,005	0	0
872.18	1,005	2,010	2,010

Device	Routing	Invert	Outlet Devices
#1	Primary	869.93'	**6.0" Round Culvert** L= 180.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 869.93' / 867.78' S= 0.0119 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#2	Device 1	870.18'	**6.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	872.93'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	873.18'	**2.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

#5 Discarded 870.18' **3.600 in/hr Exfiltration over Surface area**
Conductivity to Groundwater Elevation = 1.00'

Discarded OutFlow Max=0.17 cfs @ 12.07 hrs HW=870.85' (Free Discharge)
└─**5=Exfiltration** (Controls 0.17 cfs)

Primary OutFlow Max=0.62 cfs @ 12.07 hrs HW=870.85' (Free Discharge)
└─**1=Culvert** (Passes 0.62 cfs of 0.74 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.62 cfs @ 3.14 fps)
  └─**3=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=870.18' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond BF2: B

Inflow Area =	0.216 ac, 90.07% Impervious, Inflow Depth > 3.52" for 10-year event				
Inflow =	1.18 cfs @	11.96 hrs,	Volume=	0.063 af	
Outflow =	1.16 cfs @	11.97 hrs,	Volume=	0.063 af,	Atten= 2%, Lag= 0.7 min
Discarded =	0.00 cfs @	11.97 hrs,	Volume=	0.006 af	
Primary =	1.16 cfs @	11.97 hrs,	Volume=	0.057 af	
Secondary =	0.00 cfs @	0.00 hrs,	Volume=	0.000 af	

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 872.92' @ 11.97 hrs Surf.Area= 45 sf Storage= 21 cf

Plug-Flow detention time= 0.5 min calculated for 0.063 af (100% of inflow)
Center-of-Mass det. time= 0.3 min (770.0 - 769.6)

Volume	Invert	Avail.Storage	Storage Description
#1	871.18'	73 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 163 cf Overall - 90 cf Embedded = 73 cf
#2	871.18'	24 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) Inside #1 90 cf Overall x 27.0% Voids
		98 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.18	45	0	0
873.18	45	90	90
874.19	100	73	163

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.18	45	0	0
873.18	45	90	90

Device	Routing	Invert	Outlet Devices
#1	Primary	871.08'	**6.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 871.08' / 870.88' S= 0.0100 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#2	Device 1	873.93'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	871.18'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Secondary	874.18'	**2.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	871.18'	**3.600 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 1.00'

Discarded OutFlow Max=0.00 cfs @ 11.97 hrs HW=872.85' (Free Discharge)
└─**5=Exfiltration** (Controls 0.00 cfs)

Primary OutFlow Max=1.13 cfs @ 11.97 hrs HW=872.85' (Free Discharge)
└─**1=Culvert** (Passes 1.13 cfs of 1.17 cfs potential flow)
  ├─**2=Orifice/Grate** (Controls 0.00 cfs)
  └─**3=Orifice/Grate** (Orifice Controls 1.13 cfs @ 5.74 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=871.18' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond BF3: C

Inflow Area =	0.070 ac, 90.29% Impervious, Inflow Depth > 3.52" for 10-year event			
Inflow =	0.38 cfs @	11.96 hrs, Volume=	0.021 af	
Outflow =	0.38 cfs @	11.97 hrs, Volume=	0.021 af, Atten= 1%, Lag= 0.3 min	
Discarded =	0.01 cfs @	11.97 hrs, Volume=	0.006 af	
Primary =	0.37 cfs @	11.97 hrs, Volume=	0.015 af	
Secondary =	0.00 cfs @	0.00 hrs, Volume=	0.000 af	

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 871.65' @ 11.97 hrs Surf.Area= 65 sf Storage= 7 cf

Plug-Flow detention time= 0.7 min calculated for 0.021 af (100% of inflow)
Center-of-Mass det. time= 0.6 min (770.2 - 769.6)

Volume	Invert	Avail.Storage	Storage Description
#1	871.24'	106 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 236 cf Overall - 130 cf Embedded = 106 cf
#2	871.24'	35 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) Inside #1 130 cf Overall x 27.0% Voids
		141 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.24	65	0	0
873.24	65	130	130
874.25	145	106	236

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.24	65	0	0
873.24	65	130	130

Device	Routing	Invert	Outlet Devices
#1	Primary	871.14'	**6.0" Round Culvert** L= 15.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 871.14' / 870.84' S= 0.0200 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#2	Device 1	873.99'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	871.24'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Secondary	874.24'	**2.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	871.24'	**3.600 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 1.00'

Discarded OutFlow Max=0.01 cfs @ 11.97 hrs HW=871.64' (Free Discharge)
└─**5=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.36 cfs @ 11.97 hrs HW=871.64' (Free Discharge)
└─**1=Culvert** (Passes 0.36 cfs of 0.47 cfs potential flow)
  ├─**2=Orifice/Grate** (Controls 0.00 cfs)
  └─**3=Orifice/Grate** (Orifice Controls 0.36 cfs @ 2.16 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=871.24' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond BF4: D

Inflow Area =	0.191 ac, 79.59% Impervious, Inflow Depth > 3.20" for 10-year event			
Inflow =	0.99 cfs @	11.96 hrs, Volume=	0.051 af	
Outflow =	0.97 cfs @	11.98 hrs, Volume=	0.051 af, Atten= 2%, Lag= 1.2 min	
Discarded =	0.01 cfs @	11.98 hrs, Volume=	0.014 af	
Primary =	0.96 cfs @	11.98 hrs, Volume=	0.037 af	
Secondary =	0.00 cfs @	0.00 hrs, Volume=	0.000 af	

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 873.07' @ 11.98 hrs Surf.Area= 130 sf Storage= 45 cf

Plug-Flow detention time= 1.1 min calculated for 0.051 af (100% of inflow)
Center-of-Mass det. time= 0.9 min (786.2 - 785.4)

Volume	Invert	Avail.Storage	Storage Description
#1	871.80'	217 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 477 cf Overall - 260 cf Embedded = 217 cf
#2	871.80'	70 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) Inside #1 260 cf Overall x 27.0% Voids
		287 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.80	130	0	0
873.80	130	260	260
874.81	300	217	477

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.80	130	0	0
873.80	130	260	260

Device	Routing	Invert	Outlet Devices
#1	Primary	871.70'	**6.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 871.70' / 870.90' S= 0.0200 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#2	Device 1	874.55'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	871.80'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Secondary	874.80'	**2.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	871.80'	**3.600 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 1.00'

Discarded OutFlow Max=0.01 cfs @ 11.98 hrs HW=873.01' (Free Discharge)
└─**5=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.93 cfs @ 11.98 hrs HW=873.01' (Free Discharge)
└─**1=Culvert** (Passes 0.93 cfs of 0.97 cfs potential flow)
  ├─**2=Orifice/Grate** (Controls 0.00 cfs)
  └─**3=Orifice/Grate** (Orifice Controls 0.93 cfs @ 4.72 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=871.80' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Subcatchment C: Area C

Runoff = 0.38 cfs @ 11.96 hrs, Volume= 0.021 af, Depth> 3.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year Rainfall=4.09"

	Area (sf)	CN	Description
*	297	71	>75% Grass cover, Good, HSG C
*	2,762	98	Impervious, Pavement
	3,059	95	Weighted Average
	297		9.71% Pervious Area
	2,762		90.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment D: Area D

Runoff = 0.99 cfs @ 11.96 hrs, Volume= 0.051 af, Depth> 3.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-year Rainfall=4.09"

	Area (sf)	CN	Description
*	1,702	71	>75% Grass cover, Good, HSG C
*	6,637	98	Impervious, Pavement
	8,339	92	Weighted Average
	1,702		20.41% Pervious Area
	6,637		79.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Link OUT: Outflow

Inflow Area = 0.940 ac, 77.24% Impervious, Inflow Depth > 2.12" for 10-year event
Inflow = 3.60 cfs @ 11.98 hrs, Volume= 0.166 af
Primary = 3.60 cfs @ 11.98 hrs, Volume= 0.166 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment3S: Untreated Areas Runoff Area=5,210 sf 62.09% Impervious Runoff Depth>5.37"
Tc=6.0 min CN=89 Runoff=1.02 cfs 0.054 af

SubcatchmentA: Area A Runoff Area=14,929 sf 70.45% Impervious Runoff Depth>5.49"
Tc=6.0 min CN=90 Runoff=2.97 cfs 0.157 af

SubcatchmentB: Area B Runoff Area=9,425 sf 90.07% Impervious Runoff Depth>6.06"
Tc=6.0 min CN=95 Runoff=1.97 cfs 0.109 af

Pond BF1: A Peak Elev=871.58' Storage=1,787 cf Inflow=2.97 cfs 0.157 af
Discarded=0.17 cfs 0.092 af Primary=0.84 cfs 0.064 af Secondary=0.00 cfs 0.000 af Outflow=1.00 cfs 0.157 af

Pond BF2: B Peak Elev=874.42' Storage=98 cf Inflow=1.97 cfs 0.109 af
Discarded=0.01 cfs 0.007 af Primary=1.67 cfs 0.101 af Secondary=0.47 cfs 0.002 af Outflow=2.13 cfs 0.109 af

Pond BF3: C Peak Elev=871.93' Storage=12 cf Inflow=0.64 cfs 0.035 af
Discarded=0.01 cfs 0.008 af Primary=0.63 cfs 0.028 af Secondary=0.00 cfs 0.000 af Outflow=0.63 cfs 0.035 af

Pond BF4: D Peak Elev=874.30' Storage=157 cf Inflow=1.70 cfs 0.091 af
Discarded=0.02 cfs 0.017 af Primary=1.38 cfs 0.074 af Secondary=0.00 cfs 0.000 af Outflow=1.40 cfs 0.091 af

SubcatchmentC: Area C Runoff Area=3,059 sf 90.29% Impervious Runoff Depth>6.06"
Tc=6.0 min CN=95 Runoff=0.64 cfs 0.035 af

SubcatchmentD: Area D Runoff Area=8,339 sf 79.59% Impervious Runoff Depth>5.71"
Tc=6.0 min CN=92 Runoff=1.70 cfs 0.091 af

Link OUT: Outflow Inflow=5.90 cfs 0.322 af
Primary=5.90 cfs 0.322 af

Total Runoff Area = 0.940 ac Runoff Volume = 0.446 af Average Runoff Depth = 5.69"
22.76% Pervious = 0.214 ac 77.24% Impervious = 0.726 ac

Summary for Subcatchment 3S: Untreated Areas

Runoff = 1.02 cfs @ 11.96 hrs, Volume= 0.054 af, Depth> 5.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year Rainfall=6.66"

Area (sf)	CN	Description
1,975	74	>75% Grass cover, Good, HSG C
3,235	98	Paved parking, HSG C
5,210	89	Weighted Average
1,975		37.91% Pervious Area
3,235		62.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Time of Concentration**

Summary for Subcatchment A: Area A

Runoff = 2.97 cfs @ 11.96 hrs, Volume= 0.157 af, Depth> 5.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year Rainfall=6.66"

	Area (sf)	CN	Description
*	4,411	71	>75% Grass cover, Good, HSG C
	10,518	98	Paved parking, HSG C
	14,929	90	Weighted Average
	4,411		29.55% Pervious Area
	10,518		70.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, Time of concentration**

Summary for Subcatchment B: Area B

Runoff = 1.97 cfs @ 11.96 hrs, Volume= 0.109 af, Depth> 6.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year Rainfall=6.66"

	Area (sf)	CN	Description
*	936	71	>75% Grass cover, Good, HSG C
*	8,489	98	Impervious, Pavement
	9,425	95	Weighted Average
	936		9.93% Pervious Area
	8,489		90.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Pond BF1: A

Inflow Area = 0.343 ac, 70.45% Impervious, Inflow Depth > 5.49" for 100-year event
Inflow = 2.97 cfs @ 11.96 hrs, Volume= 0.157 af
Outflow = 1.00 cfs @ 12.10 hrs, Volume= 0.157 af, Atten= 66%, Lag= 8.2 min
Discarded = 0.17 cfs @ 12.10 hrs, Volume= 0.092 af
Primary = 0.84 cfs @ 12.10 hrs, Volume= 0.064 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 871.58' @ 12.10 hrs Surf.Area= 2,010 sf Storage= 1,787 cf

Plug-Flow detention time= 13.4 min calculated for 0.157 af (100% of inflow)
Center-of-Mass det. time= 12.9 min (790.3 - 777.5)

Volume	Invert	Avail.Storage	Storage Description
#1	870.18'	3,550 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
#2	870.18'	543 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
			2,010 cf Overall x 27.0% Voids
		4,093 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
870.18	1,005	0	0
872.18	1,005	2,010	2,010
873.19	2,045	1,540	3,550

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
870.18	1,005	0	0
872.18	1,005	2,010	2,010

Device	Routing	Invert	Outlet Devices
#1	Primary	869.93'	**6.0" Round Culvert** L= 180.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 869.93' / 867.78' S= 0.0119 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#2	Device 1	870.18'	**6.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	872.93'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	873.18'	**2.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

#5 Discarded 870.18' **3.600 in/hr Exfiltration over Surface area**
Conductivity to Groundwater Elevation = 1.00'

Discarded OutFlow Max=0.17 cfs @ 12.10 hrs HW=871.58' (Free Discharge)
└─**5=Exfiltration** (Controls 0.17 cfs)

Primary OutFlow Max=0.84 cfs @ 12.10 hrs HW=871.58' (Free Discharge)
└─**1=Culvert** (Barrel Controls 0.84 cfs @ 4.26 fps)
├─**2=Orifice/Grate** (Passes 0.84 cfs of 1.01 cfs potential flow)
└─**3=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=870.18' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond BF2: B

[93] Warning: Storage range exceeded by 0.23'
[88] Warning: Qout>Qin may require smaller dt or Finer Routing
[85] Warning: Oscillations may require smaller dt or Finer Routing (severity=4)

Inflow Area =	0.216 ac,	90.07% Impervious,	Inflow Depth >	6.06"	for 100-year event
Inflow =	1.97 cfs @	11.96 hrs,	Volume=	0.109 af	
Outflow =	2.13 cfs @	12.00 hrs,	Volume=	0.109 af,	Atten= 0%, Lag= 2.0 min
Discarded =	0.01 cfs @	11.98 hrs,	Volume=	0.007 af	
Primary =	1.67 cfs @	11.98 hrs,	Volume=	0.101 af	
Secondary =	0.47 cfs @	12.00 hrs,	Volume=	0.002 af	

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 874.42' @ 11.99 hrs Surf.Area= 100 sf Storage= 98 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.4 min (757.2 - 756.8)

Volume	Invert	Avail.Storage	Storage Description
#1	871.18'	73 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 163 cf Overall - 90 cf Embedded = 73 cf
#2	871.18'	24 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) Inside #1 90 cf Overall x 27.0% Voids
		98 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.18	45	0	0
873.18	45	90	90
874.19	100	73	163

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.18	45	0	0
873.18	45	90	90

Device	Routing	Invert	Outlet Devices
#1	Primary	871.08'	**6.0" Round Culvert** L= 20.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 871.08' / 870.88' S= 0.0100 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#2	Device 1	873.93'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	871.18'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Secondary	874.18'	**2.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	871.18'	**3.600 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 1.00'

Discarded OutFlow Max=0.01 cfs @ 11.98 hrs HW=874.28' (Free Discharge)
└─**5=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=1.63 cfs @ 11.98 hrs HW=874.31' (Free Discharge)
└─**1=Culvert** (Inlet Controls 1.63 cfs @ 8.31 fps)
  ├─**2=Orifice/Grate** (Passes < 4.82 cfs potential flow)
  └─**3=Orifice/Grate** (Passes < 1.60 cfs potential flow)

Secondary OutFlow Max=0.47 cfs @ 12.00 hrs HW=874.38' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Weir Controls 0.47 cfs @ 1.15 fps)

Summary for Pond BF3: C

Inflow Area = 0.070 ac, 90.29% Impervious, Inflow Depth > 6.06" for 100-year event
Inflow = 0.64 cfs @ 11.96 hrs, Volume= 0.035 af
Outflow = 0.63 cfs @ 11.97 hrs, Volume= 0.035 af, Atten= 1%, Lag= 0.5 min
Discarded = 0.01 cfs @ 11.97 hrs, Volume= 0.008 af
Primary = 0.63 cfs @ 11.97 hrs, Volume= 0.028 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 871.93' @ 11.97 hrs Surf.Area= 65 sf Storage= 12 cf

Plug-Flow detention time= 0.7 min calculated for 0.035 af (100% of inflow)
Center-of-Mass det. time= 0.6 min (757.3 - 756.8)

Volume	Invert	Avail.Storage	Storage Description
#1	871.24'	106 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 236 cf Overall - 130 cf Embedded = 106 cf
#2	871.24'	35 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) Inside #1 130 cf Overall x 27.0% Voids
		141 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.24	65	0	0
873.24	65	130	130
874.25	145	106	236

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.24	65	0	0
873.24	65	130	130

Device	Routing	Invert	Outlet Devices
#1	Primary	871.14'	**6.0" Round Culvert** L= 15.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 871.14' / 870.84' S= 0.0200 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#2	Device 1	873.99'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	871.24'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Secondary	874.24'	**2.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	871.24'	**3.600 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 1.00'

Discarded OutFlow Max=0.01 cfs @ 11.97 hrs HW=871.91' (Free Discharge)
└─**5=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.61 cfs @ 11.97 hrs HW=871.91' (Free Discharge)
└─**1=Culvert** (Passes 0.61 cfs of 0.68 cfs potential flow)
  ├─**2=Orifice/Grate** (Controls 0.00 cfs)
  └─**3=Orifice/Grate** (Orifice Controls 0.61 cfs @ 3.10 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=871.24' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond BF4: D

Inflow Area =	0.191 ac, 79.59% Impervious, Inflow Depth > 5.71" for 100-year event			
Inflow =	1.70 cfs @	11.96 hrs, Volume=	0.091 af	
Outflow =	1.40 cfs @	12.01 hrs, Volume=	0.091 af, Atten= 17%, Lag= 2.9 min	
Discarded =	0.02 cfs @	12.01 hrs, Volume=	0.017 af	
Primary =	1.38 cfs @	12.01 hrs, Volume=	0.074 af	
Secondary =	0.00 cfs @	0.00 hrs, Volume=	0.000 af	

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 874.30' @ 12.01 hrs Surf.Area= 215 sf Storage= 157 cf

Plug-Flow detention time= 1.2 min calculated for 0.091 af (100% of inflow)
Center-of-Mass det. time= 1.0 min (771.1 - 770.0)

Volume	Invert	Avail.Storage	Storage Description
#1	871.80'	217 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 477 cf Overall - 260 cf Embedded = 217 cf
#2	871.80'	70 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) Inside #1 260 cf Overall x 27.0% Voids
		287 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.80	130	0	0
873.80	130	260	260
874.81	300	217	477

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
871.80	130	0	0
873.80	130	260	260

Device	Routing	Invert	Outlet Devices
#1	Primary	871.70'	**6.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 871.70' / 870.90' S= 0.0200 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#2	Device 1	874.55'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	871.80'	**6.0" Vert. Orifice/Grate** C= 0.600
#4	Secondary	874.80'	**2.0' long x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#5	Discarded	871.80'	**3.600 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 1.00'

Discarded OutFlow Max=0.02 cfs @ 12.01 hrs HW=874.27' (Free Discharge)
└─**5=Exfiltration** (Controls 0.02 cfs)

Primary OutFlow Max=1.38 cfs @ 12.01 hrs HW=874.27' (Free Discharge)
└─**1=Culvert** (Barrel Controls 1.38 cfs @ 7.01 fps)
  ├─**2=Orifice/Grate** (Controls 0.00 cfs)
  └─**3=Orifice/Grate** (Passes 1.38 cfs of 1.41 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=871.80' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Subcatchment C: Area C

Runoff = 0.64 cfs @ 11.96 hrs, Volume= 0.035 af, Depth> 6.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year Rainfall=6.66"

	Area (sf)	CN	Description
*	297	71	>75% Grass cover, Good, HSG C
*	2,762	98	Impervious, Pavement
	3,059	95	Weighted Average
	297		9.71% Pervious Area
	2,762		90.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment D: Area D

Runoff = 1.70 cfs @ 11.96 hrs, Volume= 0.091 af, Depth> 5.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-year Rainfall=6.66"

	Area (sf)	CN	Description
*	1,702	71	>75% Grass cover, Good, HSG C
*	6,637	98	Impervious, Pavement
	8,339	92	Weighted Average
	1,702		20.41% Pervious Area
	6,637		79.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Link OUT: Outflow

Inflow Area = 0.940 ac, 77.24% Impervious, Inflow Depth > 4.11" for 100-year event
Inflow = 5.90 cfs @ 11.99 hrs, Volume= 0.322 af
Primary = 5.90 cfs @ 11.99 hrs, Volume= 0.322 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

EXHIBIT F

UNIVERSAL SOIL LOSS RATE INFORMATION

Soil Loss & Sediment Discharge Calculation Tool

for use on Construction Sites in the State of Wisconsin

WDNR Official Version 1.0 (05-15-2015)

WISCONSIN DEPT. OF NATURAL RESOURCES

YEAR 1

Developer: CBL & Associates Properties, Inc

Project: Portillo's Restaurant- East Towne Mall

Date: 10/13/2017

County: Dane

Version 1.0

Activity	Begin Date	End Date	Period % R	Annual R Factor	Sub Soil Texture	Soil Erodibility K Factor	Slope (%)	Slope Length (feet)	LS Factor	Land Cover C Factor	Soil loss A (tons/acre)	Sediment Control Practice	Sediment Discharge (tons/acre)
Bare Ground	4/1/2018	8/1/2018	59.0%	150	Sand	0.15	2.0%	130	0.22	1.00	2.9	Inlet Protection	1.8
Seeding	8/1/2018	10/31/2018	33.8%	150	Sand	0.15	2.0%	130	0.22	0.40	0.7	Inlet Protection	0.3
End	10/31/2018	-----	-----	-----	-------	-----	2.0%	130	0.22	------	-----	Inlet Protection	0.0
		-----	-----	-----	-------	-----			-----	-----	-----		0.0
		-----	-----	-----	-------	-----			-----	-----	-----		0.0
		-----	-----	-----	-------	-----			-----	-----	-----		0.0
										TOTAL	**3.5**	**TOTAL**	**2.2**
												% Reduction Required	**NONE**

Notes:

See Help Page for further descriptions of variables and items in drop-down boxes.
The last land disturbing activity on each sheet must be 'End'. This is either 12 months from the start of construction or final stabilization.
For periods of construction that exceed 12 months, please demonstrate that 5 tons/acre/year is not exceeded in any given 12 month period.

NOTE: THIS TOOL ONLY ADDRESSED SOIL EROSION DUE TO SHEET FLOW. MEASURES TO CONTROL CHANNEL EROSION MAY ALSO BE REQUIRED TO MEET SEDIMENT DISCHARGE REQUIREMENTS.

Recommended Permanent Seeding Dates:

4/1-5/15	and	8/7-8/29	Turf, introduced grasses and legumes
Thaw-6/30			Native Grasses, forbs, and legumes

Designed By:	EJD
Date	10/18/2017

EXHIBIT G

STORM SEWER SIZING

STORMWATER PIPE SIZING

Client: Portillos
Project: Portillo's Restaurant
Project No: 16-7567

MADISON REGIONAL OFFICE
161 Horizon Drive, Suite 101
Verona, Wisconsin 53593
Ph: (608) 848-5060Fax: (608) 848-2255

MILWAUKEE REGIONAL OFFICE
N22 W22931 Nancy Court, Suite 3
Waukesha, Wisconsin 53186
Ph: (262) 513-0666 Fax: (262) 513-1232

JSD - Engineers - Surveyors
Jenkins Survey & Design, Inc.

FR	-	TO	PIPE LABEL	LAWN AREA (SF)	PAVED AREA (SF)	ROOF AREA (SF)	FLOW Q (GPM)	FLOW Q (CFS)	SUM Q (CFS)	DIA. (IN)	REQ'D SLOPE	ACT. SLOPE	INLET ELEV	OUTLET ELEV.	LENGTH	VEL.	ELEV.	INLET RIM COVER	ELEV.	OUTLET RIM COVER
STAND PIPE NO.1		MH NO.1	P-1	0	8500	9075	610.6	1.4	1.4	10	0.005	0.007	869.850	868.660	182	2.82	874.48	3.80	874.78	5.29
ROOF DRAIN		P-1	P-1-1	0	0	9075	349.0	0.8	0.8	8	0.006	0.067	870.500	869.430	16	7.76				
INL NO.1		MH NO.1	P-2	0	25000	0	769.2	1.7	1.7	10	0.008	0.012	870.710	869.500	102	3.79	874.04	2.50	874.48	4.15
STAND PIPE NO.2		P-2	P-2-1	0	18000	0	553.8	1.2	1.2	8	0.014	0.023	871.010	870.490	23	4.51				
STAND PIPE NO.3		P-2	P-2-2	0	5500	0	169.2	0.4	0.4	8	0.001	0.068	871.070	869.920	17	7.81				
STAND PIPE NO.4		MH NO.1	P-3	0	14500	0	446.2	1.0	1.0	8	0.009	0.030	871.630	869.667	66	5.18				
MH NO.1		EXITSTING CB NO.3	P-4	430	47000	9075	1799.3	4.0	4.0	12	0.017	0.021	868.560	866.000	120	5.74	874.48	4.92	871.23	4.23

NOTE: Pavement area equivalents were input to match outflow of Bio-filters from HydroCAD.

PROPOSED STORM SEWER PIPE SCHEDULE

PIPE LABEL	FROM	TO	LENGTH (FT)	INVERT ELEVATION (FT)	DISCHARGE ELEVATION (FT)	SLOPE (%)	PIPE SIZE (IN)
P-1	STAND PIPE NO.1	MH NO.1	182.0	869.85	868.66	0.65%	10
P-1-1	ROOF DRIAN	P-1	16.0	870.50	869.43	6.69%	8
P-2	INL NO.1	MH NO.1	102.0	870.71	869.50	1.19%	10
P-2-1	STAND PIPE NO.2	P-2	23.0	871.01	870.49	2.26%	8
P-2-2	STAND PIPE NO.3	P-2	17.0	871.07	869.92	6.76%	8
P-3	STAND PIPE NO.4	MH NO.1	66.0	871.63	869.67	2.97%	8
P-4	MH NO.1	EXISTING STM CB-3	120.0	868.56	866.00	2.13%	12

EXHIBIT H

STORMWATER MAINTENANCE AGREEMENT

Memorandum / Letter of Intent

www.jsdinc.com

To:	City of Madison Plan Commission, Urban Design Commission & City Staff
From:	Justin Frahm, JSD Professional Services, Inc.
Re:	Portillo's Restaurant – East Towne Mall, 4505 East Towne Blvd. Madison, WI
JSD Project #:	16-7567
Date:	November 8, 2017
cc:	Skip Alexander, CBL; Wendy Hunter, Hunter Development Group; Peggy Hart, Portillo's; Walter Sydor, Portillo's; Jarrett Jensen, Jensen & Jensen

City of Madison Staff, Plan Commission & Urban Design Commission:

On behalf of CBL & Associates Properties, Inc, and Portillo's Hot Dogs, LLC, JSD is submitting and requesting an initial-final Urban Design Commission review and subsequent Plan Commission review and approval for the issuance of a Conditional Use Permit and construction of a Portillo's Hot Dogs restaurant at the East Town Mall, in Madison, WI.

CBL and Portillo's are proposing a 9,075 SF restaurant with a drive through vehicle service window to be constructed on an outlot to be subdivided via CSM on an underlying parcel owned by JC Penney northwest of East Towne Mall. The City anticipates the address of the restaurant outlot to be 4505 East Towne Blvd, Madison, WI 53704-3713.

The proposed Portillo's restaurant building will include 209 interior seats and 26 additional seats on the covered, outdoor patio. Hours of operation will typically be 10:30 AM to 11 PM.

Portillo's new freestanding building design will include an upgraded brick structure with accents of clear stainless steel, creating an Art Deco-based diner building. Access to the site will be limited to the interior mall ring road, with no vehicular access to adjacent public right-of-ways. The building entrance will face the parking lot, with drive through circulation circling the building. Parking is provided on site, along with bicycle parking and pedestrian sidewalks connecting to the public sidewalks along East Towne Blvd and existing bus stops, as well as the rear of the JCPenney facility for Mall access. An outdoor patio, accessible from the interior of the restaurant, will provide seasonal outdoor service. Site parking area, foundation and site landscaping will provide screening of the drive through lane, with foundation planting accenting the building design.

CBL and Portillo's have worked together with the City Staff, Development Assistance Team and UDC to review and inform plan development for the proposed site layout/circulation, building design, and sign package. Further, the project information has been presented to Alder Samba Baldeh at a public neighborhood meeting, with attendance of local constituents.

Construction is proposed to start in the spring of 2018, with an opening in fall 2018.

Enclosures

- Letter of Transmittal – Land Use Application
- Letter of Transmittal – Urban Design Commission Application (Initial & Final Combined Request)
- Land Use Application (Conditional Use Request – Vehicular service window)
- Land Use Application Checklist

- Land Use Application Fee ($700 for Conditional Use - $600 + $100 for each addt'l acre 2-7)
- Urban Design Commission Application (Initial-Final Combined Request)
- Urban Design Commission Fee ($300)
- Memorandum / Letter of Intent
- Legal Description of Proposed Parcel
- Pre-Application Notification to Alder
- Development Plans:
    - Ex. A – Location Map
    - Ex. B – Context Photos
    - C1.0 - Title Sheet
    - C2.0 – Existing Conditions Survey
    - C3.0 – Demolition Plan
    - C4.0 – Site Plan
    - C5.0 – Grading and Erosion Control Plan
    - C6.0 – Utility Plan
    - C7.0 – Fire Access Exhibit
    - C8.0 – Details
    - C8.1 – Details
    - L1.0 – Landscape Plan
    - L2.0 – Landscape Details Notes and Specifications
    - Photometric Plan
    - Photometric Specifications (2 copies)
    - Architectural Plans
        - Floor Plans
        - Roof Plan
        - Line Elevations w/ Material Callouts
        - Color Elevations w/ Material Callouts
        - Material Board
        - Renderings
    - Signage Plans
        - Aerial Site Plan
        - Proposed Site Plan / Locator Map
        - Site Photographs
        - Building Signage – Elevation
        - Building Signage – Details
        - Site Signage - Details
- Stormwater Management Memorandum (2 copies)

Additional requests for information and/or questions can be directed to JSD Professional Services, Inc.

LOCATION MAP
SCALE: 1:2000

north

SCALE IN FEET
100' 0 100'

DIGGERS HOTLINE
Toll Free (800) 242-8511

JSD Professional Services, Inc.
Engineers • Surveyors • Planners

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KENOSHA | APPLETON | WAUSAU

MADISON REGIONAL OFFICE
161 HORIZON DRIVE, SUITE 101
VERONA, WISCONSIN 53593
P. 608.848.5060

CLIENT:
CBL & ASSOCIATES PROPERTIES

CLIENT ADDRESS:
2030 HAMILTON PLACE BLVD., STE. 500, CHATANOOGA, TN 34721

PROJECT:
PORTILLO'S, EAST TOWNE MALL

PROJECT LOCATION:
CITY OF MADISON, WI
DANE COUNTY

PLAN MODIFICATIONS:

#	Date:	Description:
1	11-06-17	Land Use - UDC Initial/Final
2		
3		
4		
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14		
15		

Design/Drawn:	JLF / TKG	10-13-2017
Approved:	PMP	10-13-2017
Submitted:		10-13-2017

SHEET TITLE:
LOCATION MAP

SHEET NUMBER:
EX. A

JSD PROJECT NO. 16-7567

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF JSD PROFESSIONAL SERVICES, INC.

File: Y:\PROJECTS\2016\167567\DWG\167567- Construction Documents.dwg Layout: Location Map User: tgustin Plotted: Nov 01, 2017 - 2:46pm Xref's:

IMAGE 1: FROM SITE FACING NORTHEAST TOWARD OUTBACK STEAKHOUSE

IMAGE 2: FROM SITE FACING NORTH TOWARD RED LOBSTER

IMAGE 3: FROM SITE FACING NORTHWEST TOWARD ASSOCIATED BANK

IMAGE 4: FROM SITE FACING WEST TOWARD ASSOCIATED BANK LOT

IMAGE 5: FROM SITE FACING EAST TOWARD FIRESTONE AUTO

IMAGE 6: FROM SITE FACING SOUTHEAST TOWARD JC PENNY LOT

IMAGE 7: FROM SITE FACING SOUTH TOWARD JC PENNY

IMAGE 8: FROM SITE FACING SOUTHWEST TOWARD MALL ENTRANCE

IMAGE 9: FROM SITE FACING SOUTHWEST TOWARD INDEPENDENCE LANE

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2030 HAMILTON PLACE BLVD., STE. 500, CHATANOOGA, TN 34721

PROJECT:
PORTILLO'S, EAST TOWNE MALL

PROJECT LOCATION:
CITY OF MADISON, WI
DANE COUNTY

PLAN MODIFICATIONS:

#	Date:	Description:
1	11-08-17	Land Use - UDC Initial/Final
2		
3		
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14		
15		

Design/Drawn:	JLF / TKG	10-13-2017
Approved:	PMP	10-13-2017
Submitted:		10-13-2017

SHEET TITLE:
EXISTING SITE IMAGES

SHEET NUMBER:
EX. B

JSD PROJECT NO. 16-7567

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File: Y:\PROJECTS\2016\167567\DWG\167567- Construction Documents.dwg Layout: Site Images User: tgustin Plotted: Nov 01, 2017 – 2:41pm XrefS:

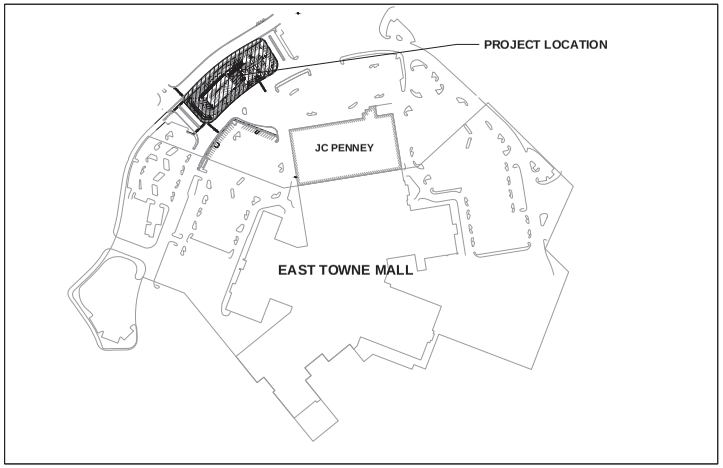
PORTILLO'S EAST TOWNE MALL

CITY OF MADISON, WISCONSIN

NE 1/4, SE 1/4, SECTION 28, TOWNSHIP 08 NORTH, RANGE 10 EAST

DRAWING INDEX

C1.0	TITLE SHEET
C2.0	SURVEY
C3.0	DEMOLITION PLAN
C4.0	SITE PLAN
C5.0	EROSION CONTROL
C6.0	GRADING PLAN
C7.0	UTILITY PLAN
C8.0	DETAILS
C8.1	DETAILS
L1.0	LANDSCAPE PLAN
L2.0	LANDSCAPE DETAILS & NOTES



PROJECT AREA

NOT TO SCALE

north

PROJECT INFORMATION

OWNER

CBL Properties/Skip Alexander
CBL Center, Suite 500, 2030 Hamilton Place Blvd.
Chattanooga, TN 37421-6000
P: 423-855-0001

CIVIL CONSULTANT

JSD Weston/Justin Frahm
7402 Stone Ridge Drive ,Suite 4
Weston, WI 54476
P: 715-298-6330
justin.frahm.@jsdinc.com

ARCHITECT / INTERIOR DESIGN

Jensen & Jensen Architects/Jarrett Jensen
Midwest Plaza Center, 2001 Midwest Road, Suite 301
Oak Brook, IL 60523
P:630-573-1770

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PROJECT:
PORTILLO'S, EAST TOWNE MALL

PROJECT LOCATION:
CITY OF MADISON, WI
DANE COUNTY

PLAN MODIFICATIONS:

#	Date:	Description:
1.	11-08-17	Land Use - UDC Initial/Final
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15.		

Design/Drawn:	JLF / TKG	10-13-2017
Approved:	PMP	10-13-2017
Submitted:		10-13-2017

SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
C1.0

JSD PROJECT NO. 16-7567

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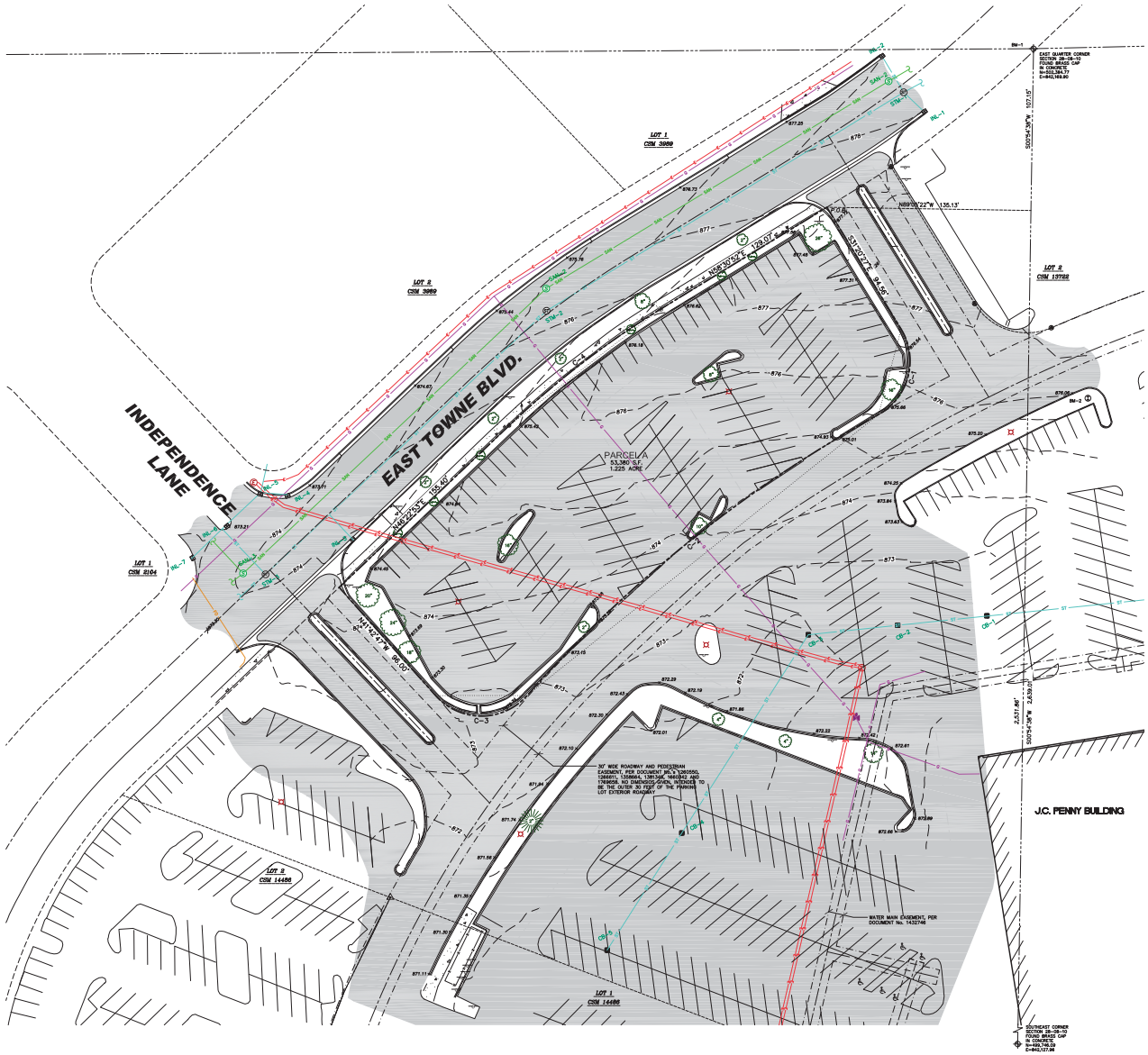
File: Y:\PROJECTS\2016\16-7567\DWG\16-7567- Construction Documents.dwg Layout: 22X34TS User: tjustin Plotted: Nov 01, 2017 – 2:37pm Xref's:

EXISTING CONDITIONS SURVEY

PART OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER SECTION 28, TOWNSHIP 08 NORTH, RANGE 10 EAST, CITY OF MADISON, DANE COUNTY, WISCONSIN.



LEGEND

- GOVERNMENT CORNER
- PK/MAG NAIL FOUND
- 1¼" REBAR FOUND
- BENCHMARK
- SIGN
- SANITARY MANHOLE
- WATERMAIN OR GASMAIN VALVE
- HYDRANT
- STORM MANHOLE
- SQUARE CASTED INLET
- CURB INLET
- STORM SEWER ACCESS
- ELECTRIC MANHOLE
- LIGHT POLE
- DECIDUOUS TREE
- HANDICAP PARKING
- PARCEL BOUNDARY
- SECTION LINE
- RIGHT-OF-WAY LINE
- CENTERLINE
- PLATTED LOT LINE
- CHORD LINE
- EASEMENT LINE
- FENCE LINE
- CONCRETE CURB & GUTTER
- SAN — SANITARY SEWER
- W — WATER LINE
- ST — STORM SEWER
- G — NATURAL GAS
- E — UNDERGROUND ELECTRIC
- FO — FIBER OPTIC
- BUILDING
- 875 — INDEX CONTOUR
- 874 — INTERMEDIATE CONTOUR
- 874.25 SPOT ELEVATION
- BITUMINOUS PAVEMENT
- CONCRETE PAVEMENT
- END OF FLAGGED UTILITIES

NOTES

1. FIELD WORK PERFORMED BY JSD PROFESSIONAL SERVICES, INC. ON AUGUST 28 AND 30, 2017.
2. BEARINGS FOR THIS SURVEY AND MAP ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (DANE COUNTY). THE EAST LINE OF THE SOUTHEAST QUARTER OF SECTION 28, T08N, R10E, BEARS S00°54'38"W.
3. ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). BENCHMARK IS A BRASS CAP IN CONCRETE MARKING THE EAST QUARTER CORNER OF SECTION 28, T08N, R10E, ELEVATION = 879.55'.
4. CONTOUR INTERVAL IS ONE FOOT.
5. SPOT ELEVATIONS IN CURBED AREAS REFERENCE THE PAVEMENT EDGE ELEVATIONS.
6. SUBSURFACE UTILITIES AND FEATURES SHOWN ON THIS MAP HAVE BEEN APPROXIMATED BY LOCATING SURFICIAL FEATURES AND APPURTENANCES, LOCATING DIGGERS HOTLINE FIELD MARKINGS AND BY REFERENCE TO UTILITY RECORDS AND MAPS. DIGGER'S HOTLINE TICKET NO. 20173313821 AND 20173313829, WITH A CLEAR DATE OF AUGUST 21, 2017.
7. UTILITY COMPANIES CONTACTED THRU DIGGERS HOTLINE:
   CITY OF MADISON ENGINEERING
   MADISON GAS AND ELECTRIC (ELECTRIC AND GAS)
   CHARTER COMMUNICATIONS
   AMERICAN TRANSMISSION COMPANY
   AT&T DISTRIBUTION
   CENTURYLINK KMC
   MADISON METRO SEWERAGE DISTRICT
8. BEFORE EXCAVATION, APPROPRIATE UTILITY COMPANIES SHOULD BE CONTACTED. FOR EXACT LOCATION OF UNDERGROUND UTILITIES, CONTACT DIGGERS HOTLINE, AT 1.800.242.8511.
9. JSD DOES NOT GUARANTEE THAT THE BENCHMARKS LISTED ON THIS MAP HAVE NOT BEEN DISTURBED SINCE THE DATE OF THIS SURVEY AND SHOULD BE VERIFIED PRIOR TO CONSTRUCTION ACTIVITIES.
11. THIS PARCEL IS SUBJECT TO ALL EASEMENTS AND AGREEMENTS, BOTH RECORDED AND UNRECORDED.

LEGAL DESCRIPTION

PART OF LOT 1, CERTIFIED SURVEY MAP NO. 13722, RECORDED IN VOLUME 90 OF DANE COUNTY CERTIFIED SURVEY MAPS ON PAGES 215-223 AS DOCUMENT NUMBER 5071049, CITY OF MADISON, DANE COUNTY, WISCONSIN MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE EAST QUARTER OF SECTION 28, AFORESAID; THENCE SOUTH 00 DEGREES 54 MINUTES 38 SECONDS WEST ALONG THE EAST LINE OF THE SOUTHEAST QUARTER OF SAID SECTION A DISTANCE OF 107.15 FEET; THENCE NORTH 89 DEGREES 05 MINUTES 22 SECONDS WEST, 135.13 FEET TO A POINT ON THE SOUTHEASTERLY RIGHT-OF-WAY LINE OF EAST TOWNE BOULEVARD, SAID POINT BEING THE POINT OF BEGINNING; THENCE SOUTH 31 DEGREES 20 MINUTES 27 SECONDS EAST, 96.00 FEET TO A POINT OF CURVE; THENCE SOUTHWESTERLY 65.30 FEET ALONG AN ARC OF A CURVE TO THE RIGHT, HAVING A RADIUS OF 40.50 FEET, THE CHORD BEARS SOUTH 14 DEGREES 50 MINUTES 53 SECONDS WEST, 58.45 FEET TO A POINT OF REVERSE CURVE; THENCE SOUTHWESTERLY 299.37 FEET ALONG AN ARC OF A CURVE TO THE LEFT, HAVING A RADIUS OF 885.34 FEET, THE CHORD BEARS SOUTH 51 DEGREES 21 MINUTES 00 SECONDS WEST, 297.94 FEET TO A POINT OF REVERSE CURVE; THENCE SOUTHWESTERLY 68.30 FEET ALONG AN ARC OF A CURVE TO THE RIGHT, HAVING A RADIUS OF 40.50 FEET, THE CHORD BEARS SOUTH 89 DEGREES 58 MINUTES 30 SECONDS WEST, 60.49 FEET; THENCE NORTH 41 DEGREES 42 MINUTES 47 SECONDS WEST, 96.00 FEET TO THE SOUTHEASTERLY RIGHT-OF-WAY LINE OF EAST TOWNE BOULEVARD; THENCE NORTH 46 DEGREES 22 MINUTES 53 SECONDS EAST ALONG SAID RIGHT-OF-WAY LINE, 155.40 FEET TO A POINT OF CURVE; THENCE NORTHEASTERLY 126.72 FEET ALONG AN ARC OF A CURVE TO THE RIGHT, HAVING A RADIUS OF 126.72 FEET, THE CHORD BEARS NORTH 52 DEGREES 26 MINUTES 43 SECONDS EAST, 126.49 FEET; THENCE NORTH 58 DEGREES 30 MINUTES 52 SECONDS EAST, 129.07 FEET TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINS 53,380 SQUARE FEET OR 1.225 ACRES.

TAX KEY NO: 251/0810-273-0097-0

SURVEYOR'S CERTIFICATE

I, JOHN KREBS, WISCONSIN PROFESSIONAL LAND SURVEYOR NO. S-1878, HEREBY CERTIFY THAT THIS EXISTING CONDITIONS SURVEY AND MAP IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF IN ACCORDANCE WITH THE INFORMATION PROVIDED.

JOHN KREBS, S-1878
PROFESSIONAL LAND SURVEYOR

DATE

SANITARY SEWER MANHOLES

STRUCT. ID	RIM ELEVATION	INVERT	ELEVATION	PIPE SIZE	PIPE TYPE
SAN-1	878.66	NE	867.84	8"	VCP
		W	868.16	8"	VCP
		SW	867.82	8"	VCP
SAN-2	876.20	NE	865.40	8"	VCP
		W	865.74	8"	VCP
		SW	865.40	8"	VCP
SAN-3	874.20	NE	862.85	8"	VCP
		W	862.90	8"	VCP
		SW	865.85	8"	VCP

BENCHMARKS

BENCH MARK	ELEVATION	DESCRIPTION
BM-1	879.55	CONCRETE MONUMENT AT THE EAST QUARTER CORNER OF SECTION 28-08-10
BM-2	876.20	3/4" REBAR EAST OF SITE

*JSD DOES NOT GUARANTEE THAT THE BENCHMARK ELEVATIONS LISTED ON THIS MAP HAVE NOT BEEN DISTURBED SINCE THE DATE OF THIS SURVEY AND SHOULD BE VERIFIED PRIOR TO CONSTRUCTION ACTIVITIES.

STORM SEWER MANHOLES

STRUCT. ID	RIM ELEVATION	INVERT	ELEVATION	PIPE SIZE	PIPE TYPE
CB-1	871.72	NE	865.75	30"	RCP
		SW	865.67	30"	RCP
CB-2	871.46	NE	865.57	30"	RCP
		SW	865.54	30"	RCP
CB-3	871.23	NE	865.43	30"	RCP
		SW	865.48	30"	RCP
CB-4	870.53	NE	864.73	30"	RCP
		SW	864.66	30"	RCP
CB-6	869.39	CENTER	864.19	30"	RCP
STM-1	876.78	NE	871.63	48"	RCP
		E	*	12"	RCP
		W	*	12"	RCP
		SW	871.64	48"	RCP
STM-2	876.50	NE	869.45	48"	RCP
		SW	869.45	48"	RCP
STM-3	874.38	NE	*	48"	RCP
		W	*	30"	RCP
		SW	*	60"	RCP

CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA	CHORD	CHORD BEARING
C-1	65.30'	40.50'	92°22'40"	58.45'	S14°50'53"W
C-2	299.37'	885.34'	19°22'26"	297.94'	S51°21'00"W
C-3	68.30'	40.50'	96°37'26"	60.49'	S89°58'30"W
C-4	126.72'	603.56'	12°01'46"	126.49'	N52°26'43"E

STORM SEWER INLETS

INLET ID	RIM ELEVATION	INVERT	ELEVATION	PIPE SIZE	PIPE TYPE
INL-1	877.63	W	875.76	12"	RCP
INL-2	877.64	E	875.79	12"	RCP
INL-3	873.65	NW	871.50	12"	RCP
INL-4	873.30	SW	871.30	12"	RCP
INL-5	872.90	N	870.90	12"	RCP
		NE	870.70	12"	RCP
		SW	870.45	12"	RCP
INL-6	872.97	SW	869.72	12"	RCP
		NE	869.67	18"	RCP
INL-7	872.65	E	870.65	12"	RCP

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P. 608.848.5060

CLIENT:
CBL & ASSOCIATES PROPERTIES, INC

CLIENT ADDRESS:
2030 HAMILTON PLACE BLVD,,
STE. 500, CHATAGOONA, TN 34721

PROJECT:
PORTILLO'S, EAST TOWNE MALL

PROJECT LOCATION:
CITY OF MADISON
DANE COUNTY, WISCONSIN

north

SCALE IN FEET
30' 0 30'

PLAN MODIFICATIONS:

#	Date	Description
1	09.07.17	X
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Design/Drawn: JK
Approved: TJB

SHEET TITLE:
EXISTING CONDITIONS SURVEY

MAP NO: E-376

SHEET NUMBER:
1 OF 1

JSD PROJECT NO: 16-7587

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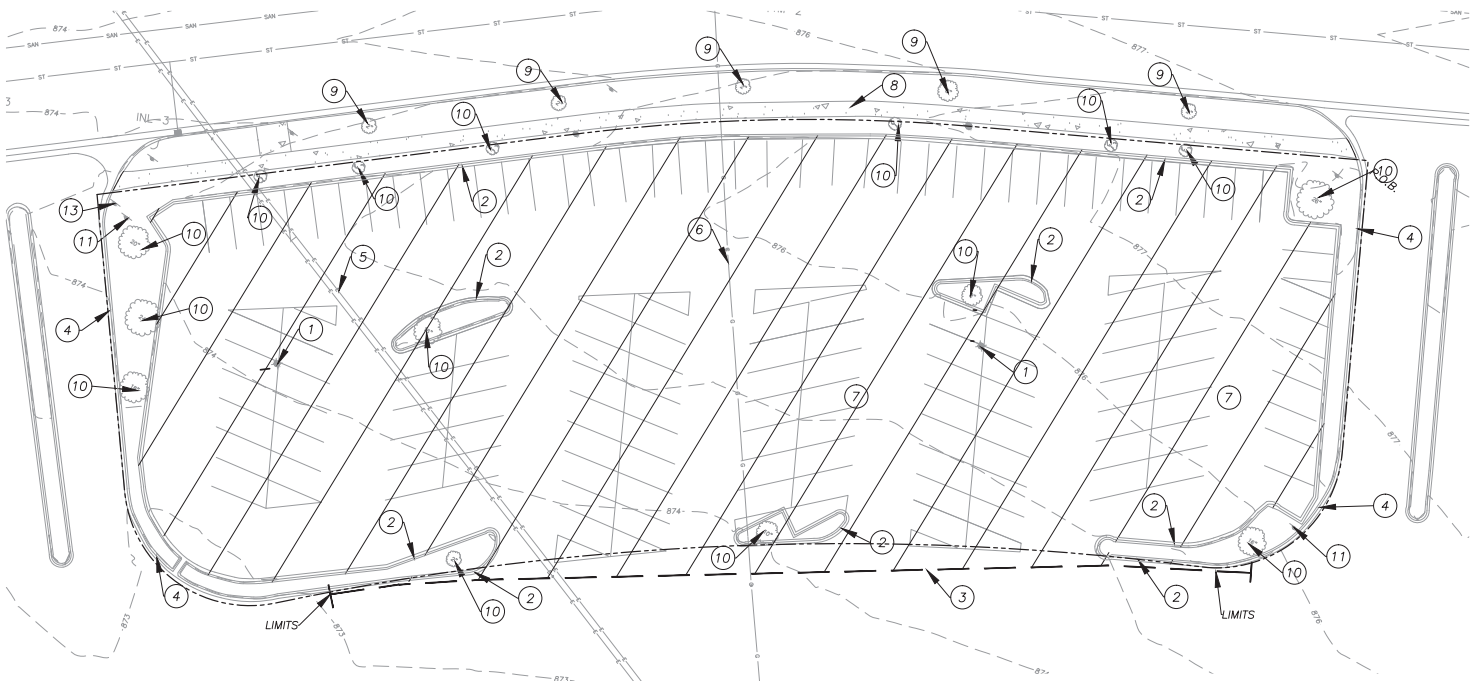

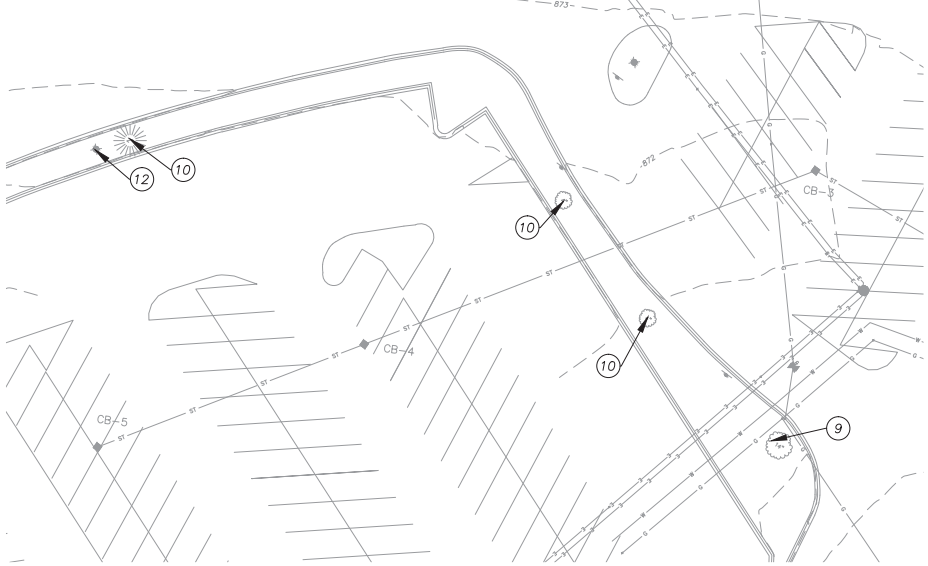

LEGEND (GRADING & EROSION CONTROL)

- PAVEMENT REMOVAL
- CONCRETE PAVEMENT
- CONSTRUCTION LIMITS
- SAN — SANITARY SEWER
- W — WATERMAIN
- ST — STORM SEWER
- STANDARD CURB AND GUTTER
- (4) DEMOLITION KEY NOTE NUMBER

DEMOLITION KEY NOTES

1. REMOVE EXISTING LIGHT POLE AND BASE. COVERED UNDER NOTE 5 BELOW.
2. REMOVE EXISTING CURB TO LIMITS SHOWN.
3. SAW CUT EXISTING ASPHALT PAVEMENT.
4. EXISTING CURB & GUTTER TO REMAIN.
5. EXISTING ELECTRIC SERVICE TO BE RELOCATED. COORDINATE WITH MG & E.
6. EXISTING GAS SERVICE TO BE RELOCATED. COORDINATE WITH MG & E.
7. REMOVE EXISTING ASPHALT PAVEMENT.
8. EXISTING WALK TO REMAIN.
9. EXISITING TREES TO REMAIN.
10. EXISTING TREE TO BE REMOVED.
11. EXISTING SIGN TO REMAIN.
12. EXISTING LIGHT POLE TO BE RELOCATED.
13. EXISTING SIGN TO BE RELOCATED.

DEMOLITION NOTES

1. THIS PLAN INDICATES ITEMS ON THE PROPERTY INTENDED FOR DEMOLITION BASED ON THE CURRENT SITE DESIGN THAT HAVE BEEN IDENTIFIED BY A REASONABLE OBSERVATION OF THE EXISTING CONDITIONS THROUGH FIELD SURVEY RECONNAISSANCE, "DIGGER'S HOTLINE" LOCATION, AND GENERAL "STANDARD OF CARE". THERE MAY BE ADDITIONAL ITEMS THAT CAN NOT BE IDENTIFIED BY A REASONABLE ABOVE GROUND OBSERVATION, OF WHICH THE ENGINEER WOULD HAVE NO KNOWLEDGE OR MAY BE A PART OF ANOTHER DESIGN DISCIPLINE. IT IS THE CONTRACTOR'S/BIDDER'S RESPONSIBILITY TO REVIEW THE PLANS, INSPECT THE SITE AND PROVIDE HIS OWN DUE DILIGENCE TO INCLUDE IN HIS BID WHAT ADDITIONAL ITEMS, IN HIS OPINION, MAY BE NECESSARY FOR DEMOLITION. ANY ADDITIONAL ITEMS IDENTIFIED BY THE CONTRACTOR/BIDDER SHALL BE IDENTIFIED IN THE BID AND REPORTED TO THE ENGINEER OF RECORD. JSD TAKES NO RESPONSIBILITY FOR ITEMS ON THE PROPERTY THAT COULD NOT BE LOCATED BY A REASONABLE OBSERVATION OF THE PROPERTY OR OF WHICH THEY WOULD HAVE NO KNOWLEDGE.
2. ALL PERIMETER EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE START OF DEMOLITION ACTIVITIES. CONTRACTOR SHALL KEEP ALL STREETS AND PAVEMENT FREE AND CLEAR OF ALL CONSTRUCTION RELATED DIRT, DUST, AND DEBRIS.
3. ALL TREES WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED UNLESS SPECIFICALLY CALLED OUT FOR PROTECTION. ALL TREES TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY AND STUMPS SHALL BE GROUND TO PROPOSED SUBGRADE.
4. PERFORM TREE PRUNING IN ALL LOCATIONS WHERE PROPOSED PAVEMENT AND/OR UTILITY INSTALLATION ENCROACH WITHIN THE EXISTING DRIP LINE OF THE TREES TO REMAIN. ALL TRENCHING WITHIN THE EXISTING DRIP LINE OF THE TREES TO REMAIN SHALL BE DONE RADIALLY AWAY FROM THE TRUNK IF ROOTS IN EXCESS OF 1" DIAMETER ARE EXPOSED. ROOTS MUST BE CUT BY REPUTABLE TREE PRUNING SERVICE PRIOR TO ANY TRANSVERSE TRENCHING.
5. ALL LIGHT POLES TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY, INCLUDING BASE AND ALL APPURTENANCES. SALVAGE FOR RELOCATION. COORDINATE RELOCATION AND/OR ABANDONMENT OF ALL ELECTRIC LINES WITH ELECTRICAL ENGINEER AND OWNER PRIOR TO DEMOLITION.
6. ABANDONED/REMOVED ITEMS SHALL BE DISPOSED OF OFF SITE UNLESS OTHERWISE NOTED.
7. THE CONTRACTOR SHALL INSTALL A PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVERNIGHT AS REQUIRED.
8. CONTRACTOR TO REPLACE ALL SIDEWALK AND CURB AND GUTTER ABUTTING THE PROPERTIES, WHICH IS DAMAGED BY THE CONSTRUCTION.
9. GRANULAR BACKFILL MATERIALS ARE REQUIRED IN ALL UTILITY TRENCHES UNDER SIDEWALKS AND PROPOSED PAVED AREAS, ALL UTILITY TRENCH BACKFILL SHALL BE COMPACTED PER SPECIFICATIONS.
10. PRIOR TO CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR:
    - 10.1. EXAMINGING ALL SITE CONDITIONS RELATIVE TO THE CONDITIONS INDICATED ON THE ENGINEERING DRAWINGS. ANY DISCREPANCIES ARE TO BE REPORTED IMMEDIATELY TO THE ENGINEER AND RESOLVED PRIOR TO THE START OF CONSTRUCTION.
    - 10.2. VERIFYING UTILITY ELEVATIONS AND NOTIFYING ENGINEER OF ANY DISCREPANCIES. NO WORK SHALL BE PERFORMED UNTIL THE DISCREPANCIES ARE RESOLVED.
    - 10.3. NOTIFYING ALL UTILITIES PRIOR TO THE REMOVAL OF ANY UNDERGROUND UTILITIES.
    - 10.4. NOTIFYING THE DESIGN ENGINEER AND LOCAL CONTROLLING MUNICIPALITY 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE FOR APPROPRIATE CONSTRUCTION INSPECTION.
11. ANY SANITARY SEWER, SANITARY SEWER SERVICES, WATER MAIN, WATER SERVICES, STORM SEWER, OR OTHER UTILITIES, WHICH ARE DAMAGED BY THE CONTRACTORS, SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
12. CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY DURING THE CONSTRUCTION OF THESE IMPROVEMENTS.
13. CONTRACTOR TO COORDINATE PRIVATE UTILITY REMOVAL / ABANDONMENT AND NECESSARY RELOCATION WITH RESPECTIVE UTILITY COMPANY. COORDINATION REQUIRED PRIOR TO CONSTRUCTION.
14. ALL DEMOLITION SHALL BE IN ACCORDANCE WITH THE APPROVED CITY OF MADISON RECYCLING PLAN.
15. ANY CONTAMINATED SOILS SHALL BE REMOVED IN ACCORDANCE WITH FEDERAL AND STATE REGULATIONS TO AN APPROVED LANDFILL.
16. ALL EXISTING UTILITIES TO BE FIELD LOCATED AND FLAGGED BY CONTRACTOR.
17. RESTORATION OF THE EXISTING ROADWAY RIGHT-OF-WAYS ARE CONSIDERED INCIDENTAL AND SHOULD BE PART OF THE COST OF THE UNDERGROUND IMPROVEMENTS, DEMOLITION AND REMOVAL. THIS INCLUDES CURB & GUTTER, SIDEWALK, TOPSOIL, SEEDING AND MULCHING.

north

SCALE IN FEET
20' 0 20'

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CLIENT:
CBL & ASSOCIATES PROPERTIES

CLIENT ADDRESS:
2030 HAMILTON PLACE BLVD., STE. 500, CHATANOOGA, TN 34721

PROJECT:
PORTILLO'S, EAST TOWNE MALL

PROJECT LOCATION:
CITY OF MADISON, WI
DANE COUNTY

PLAN MODIFICATIONS:

#	Date:	Description:
1	11-08-17	Land Use - UDC Initial/Final
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Design/Drawn:	JLF / TKG	10-13-2017
Approved:	PMP	10-13-2017
Submitted:		10-13-2017

SHEET TITLE:
DEMOLITION PLAN

SHEET NUMBER:
C3.0

JSD PROJECT NO: 16-7567

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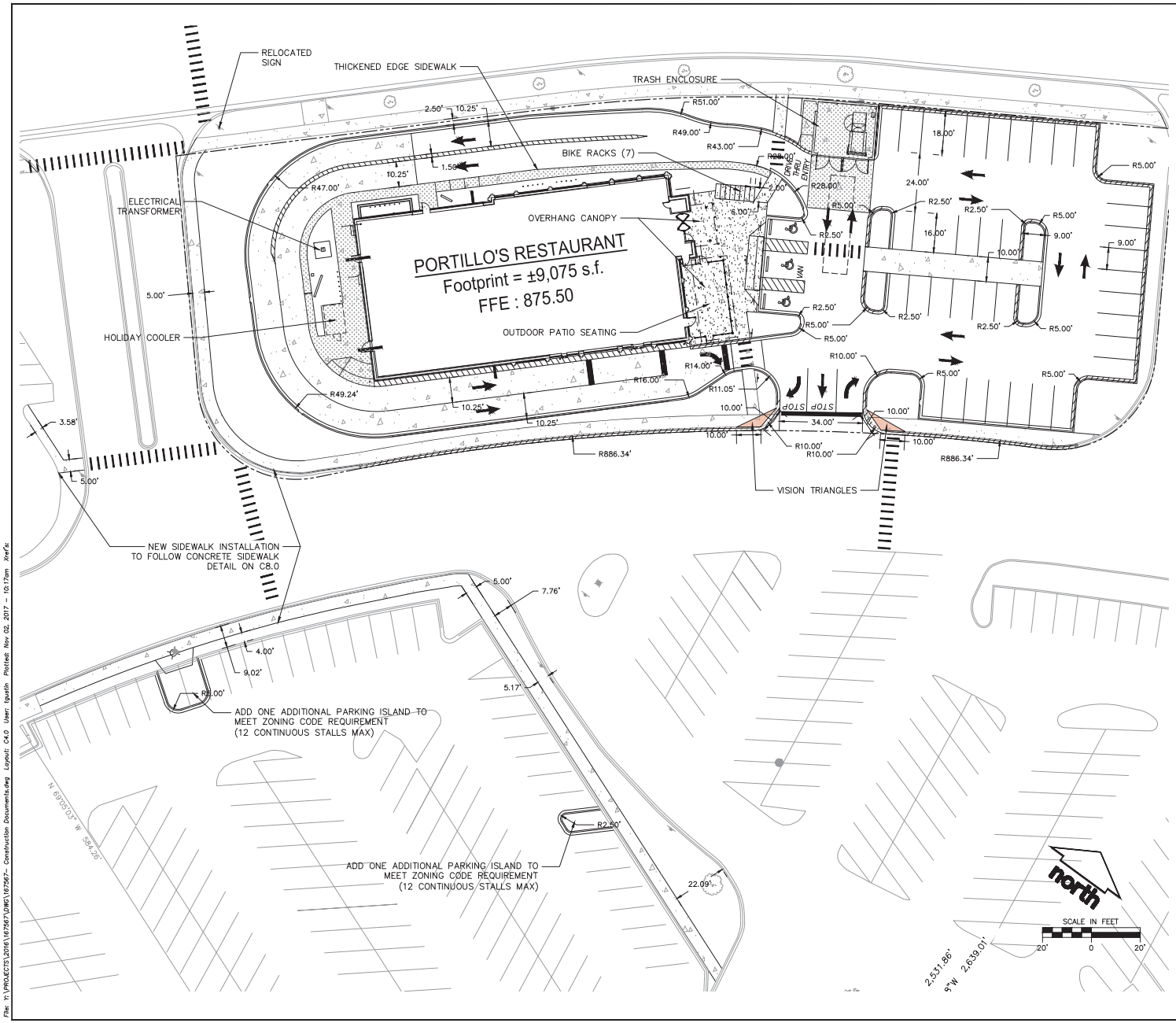

LEGEND (SITE PLAN)

- PROPERTY LINE
- RIGHT-OF-WAY
- EASEMENT LINE
- BUILDING SETBACK LINE
- PAVEMENT SETBACK LINE
- BUILDING OUTLINE
- BUILDING OVERHANG
- EDGE OF PAVEMENT
- STANDARD CURB AND GUTTER
- REJECT CURB AND GUTTER
- MOUNTABLE CURB
- ASPHALT PAVEMENT
- HEAVY DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE PAVEMENT– DEEP CHARCOAL U49
- CONCRETE PAVEMENT– SIENNA U37
- SAWCUT EXISTING PAVEMENT
- STORMWATER MANAGEMENT AREA
- LIGHT POLE (REFER TO PHOTOMETRIC PLAN)
- ADA PARKING BOLLARDS/SIGNS

GENERAL NOTES:

1. REFER TO THE EXISTING CONDITIONS SURVEY FOR EXISTING CONDITIONS NOTES AND LEGENDS.
2. JSD SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER/CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY ANY OR ALL REGULATORY AGENCIES.

SITE PLAN NOTES

1. ALL DIMENSIONS TO FACE OF CURB AND/OR EDGING OF CONCRETE UNLESS OTHERWISE NOTED.
2. ALL RADII TO FACE OF CURB AND/OR EDGING OF CONCRETE UNLESS OTHERWISE NOTED.
3. ANY REQUIRED REPLACEMENT OF PUBLIC CURB AND GUTTER SHALL MATCH EXISTING AND MEET THE REQUIREMENTS OF THE CITY OF MADISON.
4. CONTRACTOR SHALL PROVIDE CONTROL JOINTS AND CONSTRUCTION JOINTS OF ONE-QUARTER CONCRETE THICKNESS AT AN EQUAL RATIO OF LENGTH TO WIDTH WHEREVER POSSIBLE WITH A MAXIMUM LENGTH BETWEEN JOINTS OF 8' ON CENTER
5. CONTRACTOR SHALL PROVIDE EXPANSION JOINTS IN SIDEWALKS AT A MAXIMUM 24' ON CENTER
6. EXTERIOR CONCRETE SURFACES SHALL BE BROOM FINISHED.
7. ALL CONCRETE SURFACES TO BE SEALED WITH TYPE TK-26UV CONCRETE SEALANT.
8. MARK AND STRIPE ADA PARKING SPACES APPROPRIATELY.
9. 2' x 4' TRUNCATED DOME WARNING DETECTION FIELD SHALL BE PLACED AT ALL ADA RAMPS.
10. ALL PAVEMENT MARKINGS INCLUDING: STOP BARS, CROSSWALKS, DIRECTIONAL ARROWS, PARKING STALL LINES, ADA STALL MARKINGS, NO PARKING ZONES, DROP-OFF/PICK-UP ZONES SHALL BE PAINTED WITH HIGH VISIBILITY YELLOW LATEX PAINT PER SPECIFICATIONS.

SITE INFORMATION BLOCK	
Site Address	EAST TOWNE MALL MADISON, WI
Site Acreage (total)	1.22 (53,100 SF)
Number of Building Stories (above grade)	1
Total Building Square Footage	9,075 SF
Use of property	COMMERCIAL
Parking Stalls:	
Large Stall	38
Accessible	3
Total Stalls	41
Existing vs. Proposed Site Coverage:	
Existing Impervious Surface Area	47,540 S.F.
Existing Pervious Surface Area	5,560 S.F.
Proposed Impervious Surface Area	43,710 S.F.
Proposed Pervious Surface Area	9,390 S.F.
Proposed Impervious Surface Area Ratio	4.66
Offsite Areas (Sidewalk & Terrace South of Main Site)	
Proposed Offsite Impervious Surface Area	2,160 S.F.
Proposed Offsite Pervious Surface Area	390 S.F.

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Design/Drawn:	JLF / TKG	10-13-2017
Approved:	PMP	10-13-2017
Submitted:		10-13-2017

SHEET TITLE:
SITE PLAN

SHEET NUMBER:
C4.0

JSD PROJECT NO. 16-7567

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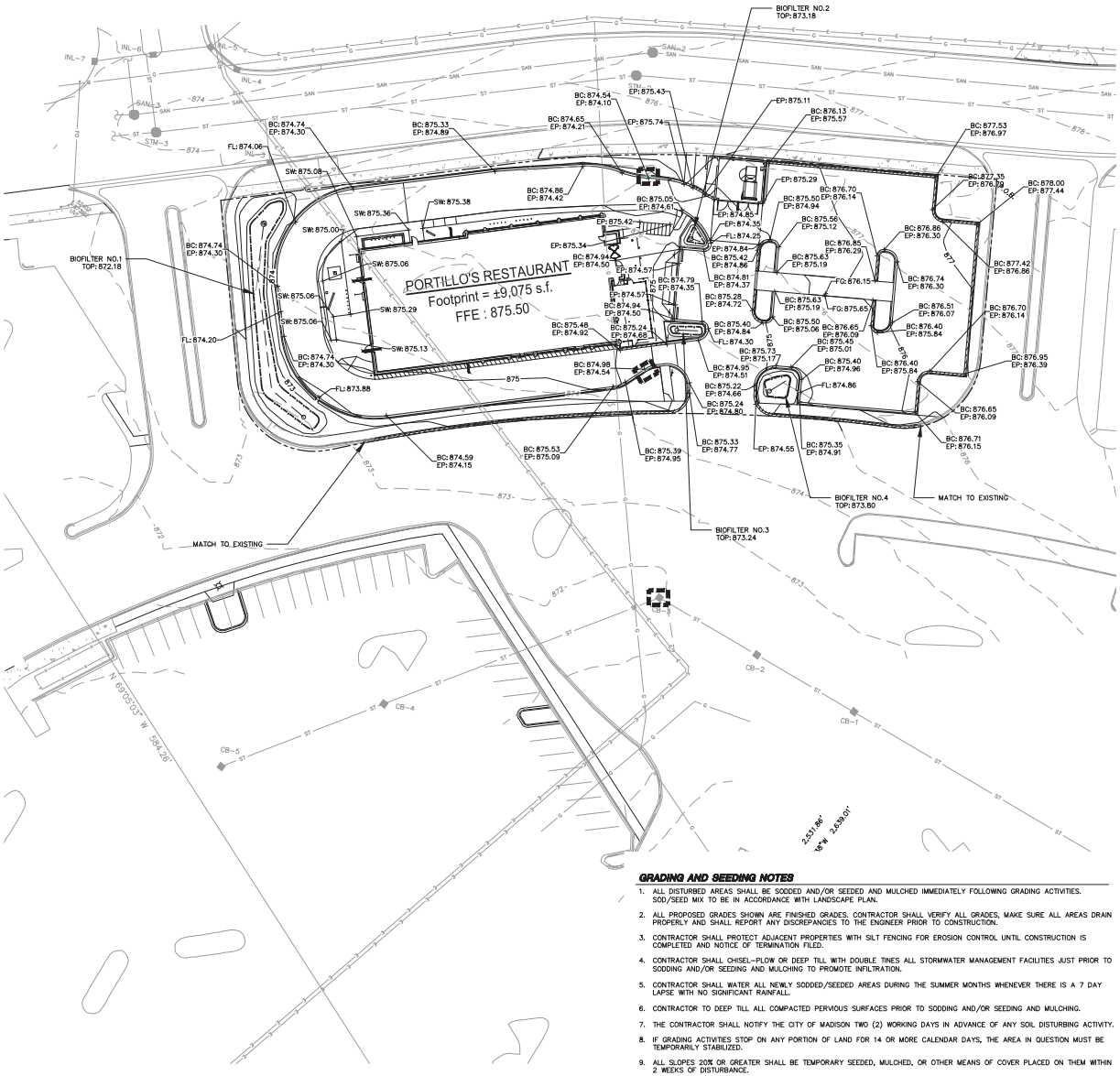

LEGEND (GRADING & EROSION CONTROL PLAN)

- PROPERTY LINE
- RIGHT-OF-WAY
- EASEMENT LINE
- BUILDING OUTLINE
- BUILDING OVERHANG
- EDGE OF PAVEMENT
- STANDARD CURB AND GUTTER
- REJECT CURB AND GUTTER
- ASPHALT PAVEMENT
- HEAVY DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- HEAVY DUTY CONCRETE PAVEMENT
- STORMWATER MANAGEMENT AREA
- BOULDER RETAINING WALL
- MODULAR BLOCK RETAINING WALL
- LIGHT POLE (REFER TO PHOTOMETRIC PLAN)
- ADA PARKING BOLLARDS/SIGNS
- 934 — PROPOSED 1 FOOT CONTOUR
- 935 — PROPOSED 1 FOOT CONTOUR
- DRAINAGE DIRECTION
- ST — STORM SEWER
- SILT FENCE
- CONSTRUCTION LIMITS
- INLET PROTECTION, TYPE D
- 934.20 FG — SPOT ELEVATION
  - EP – EDGE OF PAVEMENT
  - FG – FINISH GRADE
  - EC – EDGE OF CONCRETE
  - TS – TOP OF STEP
  - TS – BOTTOM OF STEP
  - RIM – RIM ELEVATION
- GRADE BREAK

CONSTRUCTION SITE EROSION CONTROL REQUIREMENTS (CSECR) NOTES:

1. ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE DESIGNED AND IMPLEMENTED IN ACCORDANCE WITH THE CURRENT DEPARTMENT OF NATURAL RESOURCES EROSION AND SEDIMENT CONTROL TECHNICAL STANDARDS WHICH ARE AVAILABLE AT: http://www.dnr.state.wi.us/runoff/stormwater/techstds.htm
2. INSTALL EROSION CONTROL MEASURES PRIOR TO ANY SITE WORK, INCLUDING GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIALS AS SHOWN ON PLAN. MODIFICATIONS TO SEDIMENT CONTROL DESIGN MAY BE CONDUCTED TO MEET UNFORESEEN FIELD CONDITIONS IF MODIFICATIONS CONFORM TO WDNR TECHNICAL STANDARDS.
3. INSPECTIONS AND MAINTENANCE OF ALL EROSION CONTROL MEASURES SHALL BE ROUTINE (ONCE PER WEEK MINIMUM) TO ENSURE PROPER FUNCTION OF EROSION CONTROLS AT ALL TIMES. EROSION CONTROL MEASURES ARE TO BE IN WORKING ORDER AT THE END OF EACH WORK DAY.
4. INSPECT EROSION CONTROL MEASURES AFTER EACH 1/2" OR GREATER RAINFALL. REPAIR ANY DAMAGE OBSERVED DURING THE INSPECTION.
5. EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL ALL LAND DISTURBING CONSTRUCTION ACTIVITY AT THE SITE HAS BEEN COMPLETED AND THAT A UNIFORM PERENNIAL VEGETATIVE COVER HAS BEEN ESTABLISHED WITH A DENSITY OF AT LEAST 70% OF THE COVER FOR THE UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES OR THAT EMPLOY EQUIVALENT PERMANENT STABILIZATION MEASURES.
6. INSTALL EROSION CONTROLS ON THE DOWNSTREAM SIDE OF STOCKPILES.
7. EROSION CONTROL FOR UTILITY CONSTRUCTION (STORM SEWER, SANITARY SEWER, WATER MAIN, ETC.):
   A. PLACE EXCAVATED TRENCH MATERIAL ON THE HIGH SIDE OF THE TRENCH.
   B. BACKFILL, COMPACT, AND STABILIZE THE TRENCH IMMEDIATELY AFTER PIPE CONSTRUCTION.
   C. DISCHARGE TRENCH WATER INTO A SEDIMENTATION BASIN OR FILTERING TANK IN ACCORDANCE WITH THE DEWATERING TECHNICAL STANDARD NO. 1061 PRIOR TO RELEASE INTO THE STORM SEWER, RECEIVING STREAM, OR DRAINAGE DITCH.
8. ADDITIONAL EROSION CONTROL MEASURES, AS REQUESTED BY STATE INSPECTORS, LOCAL INSPECTORS, AND/OR ENGINEER SHALL BE INSTALLED WITHIN 24 HOURS OF REQUEST.
9. CONTRACTOR/OWNER SHALL FILE A NOTICE OF TERMINATION UPON VEGETATIVE STABILIZATION AND/OR PROPERTY SALE IN ACCORDANCE WITH WDNR REQUIREMENTS.
10. CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO CONTROL DUST ARISING FROM CONSTRUCTION OPERATIONS. REFER TO WDNR TECHNICAL STANDARD 1068.
11. STABILIZATION PRACTICES:

11.1. * STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. NO MORE THAN SEVEN (7) DAYS SHALL PASS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS CEASED UNLESS:

11.2. * THE INITIATION STABILIZATION MEASURES BY THE SEVENTH (7) DAY AFTER CONSTRUCTION ACTIVITY HAS CEASED IS PRECLUDED BY SNOW COVER. IN THAT EVENT, STABILIZATION SHALL BE INITIATED AS SOON AS PRACTICABLE.

11.3. * CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN FOURTEEN (14) DAYS FROM WHEN ACTIVITY CEASED, (I.E. THE TOTAL TIME PERIOD THAT THE CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED IS LESS THAN FOURTEEN (14) DAYS. IN THAT EVENT, STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE BY THE SEVENTH (7) DAY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY CEASED.

11.4. * STABILIZATION MEASURES SHALL BE DETERMINED BASED ON SITE CONDITIONS AT THE TIME OF CONSTRUCTION ACTIVITY HAS CEASED, INCLUDING BUT NOT LIMITED TO WEATHER CONDITIONS AND LENGTH OF TIME MEASURE MUST BE EFFECTIVE. THE FOLLOWING ARE ACCEPTABLE STABILIZATION MEASURES:
   * PERMANENT SEEDING; IN ACCORDANCE WITH APPROVED CONSTRUCTION SPECIFICATION
   * TEMPORARY SEEDING; MAY CONSIST OF SPRING OATS(100LBS/ACRE) AND/OR WHEAT OR CEREAL RYE (150LB/ACRE)
   * HYDRO-MULCHING WITH A TACKIFIER
   * GEOTEXTILE EROSION MATTING
   * SODDING

CONSTRUCTION SEQUENCING

1. INSTALL EROSION CONTROL MEASURES PRIOR TO ANY CONSTRUCTION ACTIVITIES.
2. REMOVE EXISTING SURFACE MATERIALS PER DEMOLITION PLAN.
3. EXCAVATE BUILDING FOUNDATIONS.
4. COMPLETE ALL OTHER GRADING.
5. EXCAVATE BIO-FILTER AREAS.
6. INSTALL STORM SEWER & INLET PROTECTION MEASURES.
7. INSTALL AGGREGATE BASE COURSE AND PAVING IN PARKING AREAS.
8. STABILIZE NEWLY GRADED SOILS.
9. COMPLETE EXTERIOR BUILDING WORK AND DOWNSPOUTS.
10. INSTALL BIO-FILTER MATERIAL.

GRADING AND SEEDING NOTES

1. ALL DISTURBED AREAS SHALL BE SODDED AND/OR SEEDED AND MULCHED IMMEDIATELY FOLLOWING GRADING ACTIVITIES. SOD/SEED MIX TO BE IN ACCORDANCE WITH LANDSCAPE PLAN.
2. ALL PROPOSED GRADES SHOWN ARE FINISHED GRADES. CONTRACTOR SHALL VERIFY ALL GRADES, MAKE SURE ALL AREAS DRAIN PROPERLY AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL PROTECT ADJACENT PROPERTIES WITH SILT FENCING FOR EROSION CONTROL UNTIL CONSTRUCTION IS COMPLETED AND NOTICE OF TERMINATION FILED.
4. CONTRACTOR SHALL CHISEL-PLOW OR DEEP TILL WITH DOUBLE TINES ALL STORMWATER MANAGEMENT FACILITIES JUST PRIOR TO SODDING AND/OR SEEDING AND MULCHING TO PROMOTE INFILTRATION.
5. CONTRACTOR SHALL WATER ALL NEWLY SODDED/SEEDED AREAS DURING THE SUMMER MONTHS WHENEVER THERE IS A 7 DAY LAPSE WITH NO SIGNIFICANT RAINFALL.
6. CONTRACTOR TO DEEP TILL ALL COMPACTED PERVIOUS SURFACES PRIOR TO SODDING AND/OR SEEDING AND MULCHING.
7. THE CONTRACTOR SHALL NOTIFY THE CITY OF MADISON TWO (2) WORKING DAYS IN ADVANCE OF ANY SOIL DISTURBING ACTIVITY.
8. IF GRADING ACTIVITIES STOP ON ANY PORTION OF LAND FOR 14 OR MORE CALENDAR DAYS, THE AREA IN QUESTION MUST BE TEMPORARILY STABILIZED.
9. ALL SLOPES 20% OR GREATER SHALL BE TEMPORARY SEEDED, MULCHED, OR OTHER MEANS OF COVER PLACED ON THEM WITHIN 2 WEEKS OF DISTURBANCE.

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CLIENT:
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2030 HAMILTON PLACE BLVD., STE. 500, CHATANOOGA, TN 34721

PROJECT:
PORTILLO'S, EAST TOWNE MALL

PROJECT LOCATION:
CITY OF MADISON, WI
DANE COUNTY

PLAN MODIFICATIONS:

#	Date:	Description:
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Design/Drawn:	JLF / TKG	10-13-2017
Approved:	PMP	10-13-2017
Submitted:		10-13-2017

SHEET TITLE:
GRADING & EROSION CONTROL PLAN

SHEET NUMBER:
C5.0

JSD PROJECT NO. 16-7567

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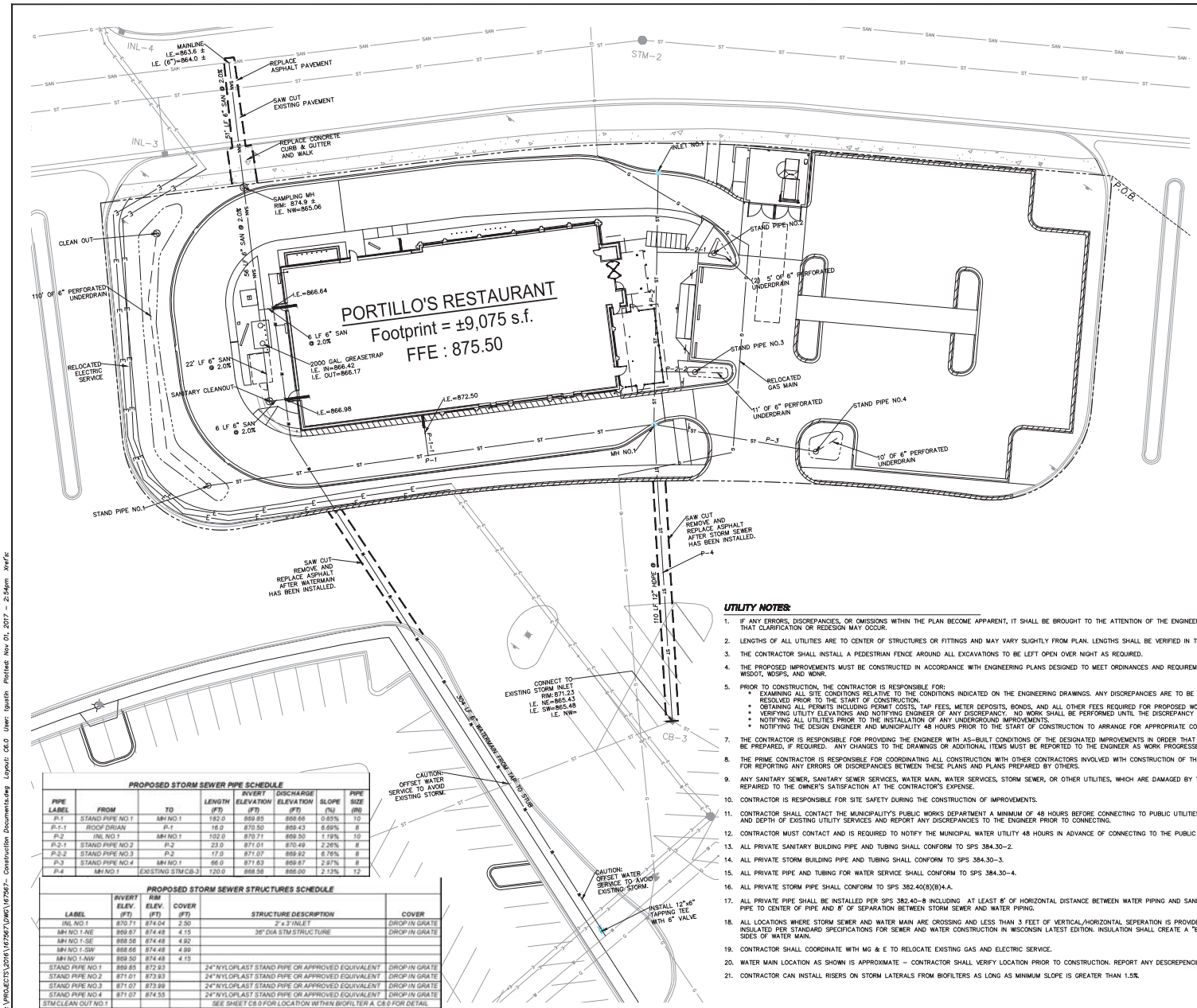

LEGEND (UTILITY PLAN)

- PROPERTY LINE
- RIGHT-OF-WAY
- EASEMENT LINE
- BUILDING OUTLINE
- SAW CUT
- EDGE OF PAVEMENT
- STORMWATER MANAGEMENT AREA
- SAN — SANITARY SEWER
- W — WATERMAIN
- ST — STORM SEWER
- STORM SEWER UNDERDRAIN
- G — UNDERGROUND GAS
- E — UNDERGROUND ELECTRIC
- ST — EXISTING STORM SEWER
- SAN — EXISTING SANITARY SEWER
- W — EXISTING WATERMAIN
- G — EXISTING UNDERGROUND GAS
- E — EXISTING UNDERGROUND ELECTRIC

UTILITY NOTES:

1. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS WITHIN THE PLAN BECOME APPARENT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.
2. LENGTHS OF ALL UTILITIES ARE TO CENTER OF STRUCTURES OR FITTINGS AND MAY VARY SLIGHTLY FROM PLAN. LENGTHS SHALL BE VERIFIED IN THE FIELD DURING CONSTRUCTION.
3. THE CONTRACTOR SHALL INSTALL A PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVER NIGHT AS REQUIRED.
4. THE PROPOSED IMPROVEMENTS MUST BE CONSTRUCTED IN ACCORDANCE WITH ENGINEERING PLANS DESIGNED TO MEET ORDINANCES AND REQUIREMENTS OF THE MUNICIPALITY AND WISDOT, WDSPS, AND WDNR.
5. PRIOR TO CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR:
   * EXAMINING ALL SITE CONDITIONS RELATIVE TO THE CONDITIONS INDICATED ON THE ENGINEERING DRAWINGS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER AND RESOLVED PRIOR TO THE START OF CONSTRUCTION.
   * OBTAINING ALL PERMITS INCLUDING PERMIT COSTS, TAP FEES, METER DEPOSITS, BONDS, AND ALL OTHER FEES REQUIRED FOR PROPOSED WORK TO OBTAIN OCCUPANCY.
   * VERIFYING UTILITY ELEVATIONS AND NOTIFYING ENGINEER OF ANY DISCREPANCY. NO WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS RESOLVED.
   * NOTIFYING AG UTILITIES PRIOR TO THE INSTALLATION OF ANY UNDERGROUND IMPROVEMENTS.
   * NOTIFYING THE DESIGN ENGINEER AND MUNICIPALITY 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE FOR APPROPRIATE CONSTRUCTION OBSERVATION.
7. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE ENGINEER WITH AS-BUILT CONDITIONS OF THE DESIGNATED IMPROVEMENTS IN ORDER THAT THE APPROPRIATE DRAWINGS CAN BE PREPARED, IF REQUIRED. ANY CHANGES TO THE DRAWINGS OR ADDITIONAL ITEMS MUST BE REPORTED TO THE ENGINEER AS WORK PROGRESSES.
8. THE PRIME CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CONSTRUCTION WITH OTHER CONTRACTORS INVOLVED WITH CONSTRUCTION OF THE PROPOSED DEVELOPMENT AND FOR REPORTING ANY ERRORS OR DISCREPANCIES BETWEEN THESE PLANS AND PLANS PREPARED BY OTHERS.
9. ANY SANITARY SEWER, SANITARY SEWER SERVICES, WATER MAIN, WATER SERVICES, STORM SEWER, OR OTHER UTILITIES, WHICH ARE DAMAGED BY THE CONTRACTORS, SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
10. CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY DURING THE CONSTRUCTION OF IMPROVEMENTS.
11. CONTRACTOR SHALL CONTACT THE MUNICIPALITY'S PUBLIC WORKS DEPARTMENT A MINIMUM OF 48 HOURS BEFORE CONNECTING TO PUBLIC UTILITIES. CONTRACTOR TO VERIFY SIZE AND DEPTH OF EXISTING UTILITY SERVICES AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONNECTING.
12. CONTRACTOR MUST CONTACT AND IS REQUIRED TO NOTIFY THE MUNICIPAL WATER UTILITY 48 HOURS IN ADVANCE OF CONNECTING TO THE PUBLIC UTILITY.
13. ALL PRIVATE SANITARY BUILDING PIPE AND TUBING SHALL CONFORM TO SPS 384.30-2.
14. ALL PRIVATE STORM BUILDING PIPE AND TUBING SHALL CONFORM TO SPS 384.30-3.
15. ALL PRIVATE PIPE AND TUBING FOR WATER SERVICE SHALL CONFORM TO SPS 384.30-4.
16. ALL PRIVATE STORM PIPE SHALL CONFORM TO SPS 382.40(8)(B)4.A.
17. ALL PRIVATE PIPE SHALL BE INSTALLED PER SPS 382.40-8 INCLUDING AT LEAST 8' OF HORIZONTAL DISTANCE BETWEEN WATER PIPING AND SANITARY SEWER FROM CENTER OF PIPE TO CENTER OF PIPE AND 8' OF SEPARATION BETWEEN STORM SEWER AND WATER PIPING.
18. ALL LOCATIONS WHERE STORM SEWER AND WATER MAIN ARE CROSSING AND LESS THAN 3 FEET OF VERTICAL/HORIZONTAL SEPERATION IS PROVIDED, WATER MAIN SHALL BE INSULATED PER STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN LATEST EDITION. INSULATION SHALL CREATE A "BOX" ENCLOSING THE TOP AND SIDES OF WATER MAIN.
19. CONTRACTOR SHALL COORDINATE WITH MG & E TO RELOCATE EXISTING GAS AND ELECTRIC SERVICE.
20. WATER MAIN LOCATION AS SHOWN IS APPROXIMATE – CONTRACTOR SHALL VERIFY LOCATION PRIOR TO CONSTRUCTION. REPORT ANY DESCREPENCIES TO ENGINEER AND OWNER.
21. CONTRACTOR CAN INSTALL RISERS ON STORM LATERALS FROM BIOFILTERS AS LONG AS MINIMUM SLOPE IS GREATER THAN 1.5%.

PROPOSED STORM SEWER PIPE SCHEDULE

PIPE LABEL	FROM	TO	LENGTH (FT)	INVERT ELEVATION (FT)	DISCHARGE ELEVATION (FT)	SLOPE (%)	PIPE SIZE (IN)
P-1	STAND PIPE NO.1	MH NO.1	182.0	869.85	868.66	0.65%	10
P-1-1	ROOF DRIAN	P-1	16.0	870.50	869.43	6.69%	8
P-2	INL NO.1	MH NO.1	102.0	870.71	869.50	1.19%	10
P-2-1	STAND PIPE NO.2	P-2	23.0	871.01	870.49	2.26%	8
P-2-2	STAND PIPE NO.3	P-2	17.0	871.07	869.92	6.76%	8
P-3	STAND PIPE NO.4	MH NO.1	66.0	871.63	869.67	2.97%	8
P-4	MH NO.1	EXISTING STM CB-3	120.0	868.56	866.00	2.13%	12

PROPOSED STORM SEWER STRUCTURES SCHEDULE

LABEL	INVERT ELEV. (FT)	RIM ELEV. (FT)	COVER (FT)	STRUCTURE DESCRIPTION	COVER
INL NO.1	870.71	874.04	2.50	2' x 3' INLET	DROP IN GRATE
MH NO.1-NE	869.67	874.48	4.15	36" DIA STM STRUCTURE	DROP IN GRATE
MH NO.1-SE	868.56	874.48	4.92		
MH NO.1-SW	868.66	874.48	4.99		
MH NO.1-NW	869.50	874.48	4.15		
STAND PIPE NO.1	869.85	872.93		24" NYLOPLAST STAND PIPE OR APPROVED EQUIVALENT	DROP IN GRATE
STAND PIPE NO.2	871.01	873.93		24" NYLOPLAST STAND PIPE OR APPROVED EQUIVALENT	DROP IN GRATE
STAND PIPE NO.3	871.07	873.99		24" NYLOPLAST STAND PIPE OR APPROVED EQUIVALENT	DROP IN GRATE
STAND PIPE NO.4	871.07	874.55		24" NYLOPLAST STAND PIPE OR APPROVED EQUIVALENT	DROP IN GRATE
STM CLEAN OUT NO.1				SEE SHEET C8.0 FOR LOCATION WITHIN BIOFILTER A. C8.0 FOR DETAIL	

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Approved:	PMP	10-13-2017
Submitted:		10-13-2017

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UTILITY PLAN

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JSD PROJECT NO: 16-7567

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LEGEND

— · — · —	PROPERTY LINE
— — — (red)	500' RADIUS FROM HYDRANT
(blue dotted)	20' WIDE FIRE LANE
———	EDGE OF PAVEMENT
═══	STANDARD CURB AND GUTTER
▨▨▨	REJECT CURB AND GUTTER
(stippled)	CONCRETE PAVEMENT

City of Madison Fire Department

314 W Dayton Street, Madison, WI 53703-2506
Phone: 608-266-4420 • Fax: 608-267-1100 • E-mail: fire@cityofmadison.com

Project Address: East Towne Mall, Madison, WI 53704

Contact Name & Phone #:

FIRE APPARATUS ACCESS AND FIRE HYDRANT WORKSHEET

Question	Yes	No	N/A
1. Is the building completely protected by an NFPA 13 or 13R automatic fire sprinkler system?	☒	☐	☐
If non-sprinklered, fire lines extend to within 150-feet of all portions of the exterior wall?	☐	☐	☒
If sprinklered, fire lanes are within 250-feet of all portions of the exterior wall?	☒	☐	☐
2. Is the fire lane constructed of concrete or asphalt, designed to support a minimum load of 85,000 lbs?	☒	☐	☐
a) Is the fire lane a minimum unobstructed width of at least 20-feet?	☒	☐	☐
b) Is the fire lane unobstructed with a vertical clearance of at least 13½-feet?	☒	☐	☐
c) Is the minimum inside turning radius of the fire lane at least 28-feet?	☒	☐	☐
d) Is the grade of the fire lane not more than a slope of 8%?	☒	☐	☐
e) Is the fire lane posted as fire lane? (Provide detail of signage.)	☐	☒	☐
f) Is a roll-able curb used as part of the fire lane? (Provide detail of curb.)	☐	☒	☐
g) Is part of a sidewalk used as part of the required fire lane? (Must support +85,000 lbs.)	☐	☒	☐
3. Is the fire lane obstructed by security gates or barricades? If yes:	☐	☒	☐
a) Is the gate a minimum of 20-feet clear opening?	☐	☐	☒
b) Is an approved means of emergency operations installed, key vault, padlock or key switch?	☐	☐	☒
4. Is the Fire lane dead-ended with a length greater than 150-feet?	☐	☐	☒
If yes, does the area for turning around fire apparatus comply with IFC D103?	☐	☐	☒
5. Is any portion of the building to be used for high-piled storage in accordance with IFC Chapter 3206.6 If yes, see IFC 3206.6 for further requirements.	☐	☒	☐
6. Is any part of the building greater than 30-feet above the grade plane? If yes, answer the following questions:	☐	☒	☐
a) Is the aerial apparatus fire lane parallel to one entire side of the building and covering at least 25% of the perimeter?	☐	☐	☒
b) Is the near edge of the aerial apparatus fire lane between 15' and 30' from the building?	☐	☐	☒
c) Are there any overhead power or utility lines located across the aerial apparatus fire lane?	☐	☐	☒
d) Are there any tree canopies expected to grow across the aerial fire lane? (Based on mature canopy width of tree species)	☐	☐	☒
e) Does the aerial apparatus fire lane have a minimum unobstructed width of 26-feet?	☐	☐	☒
f) Is the space between the aerial lane and the building free of trees exceeding 20' in heights?	☐	☐	☒
7. Are all portions of the required fire lanes within 500-feet of at least (2) hydrants? *Note: Distances shall be measured along the path of the hose lay as it comes off the fire apparatus.*	☒	☐	☐
a) Is the fire lane at least 26' wide for at least 20-feet on each side of the hydrants?	☒	☐	☐
b) Is there at least 40' between a hydrant and the building?	☒	☐	☐
c) Are the hydrant(s) setback no less than 5-feet nor more than 10-feet from the curb or edge of the street or fire lane?	☐	☒	☐
d) Are hydrants located in parking lot islands a minimum of 1½-feet from the hydrant to the curb?	☐	☒	☐
e) Are there no obstructions, including but not limited to: power poles, trees, bushes, fences, posts located, or grade changes exceeding 1½-feet, within 5-feet of a fire hydrant?	☒	☐	☐

Note: Hydrants shall be installed and in-service prior to combustible construction on the project site.

Attach an additional sheet if further explanation is required for any answers.

This worksheet is based on **MGO 34.503** and **IFC 2015 Edition Chapter 5 and Appendix D**; please see the codes for further information.

Revised 1/21/2016

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Submitted:		10-13-2017

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FIRE ACCESS EXHIBIT

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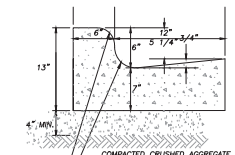
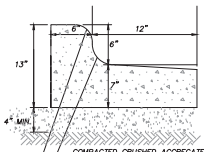


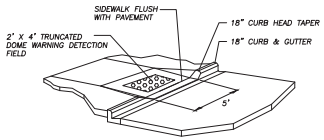
1 18" STANDARD CURB AND GUTTER

N.T.S.



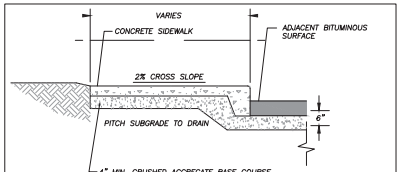
2 18" REJECT CURB AND GUTTER

N.T.S.



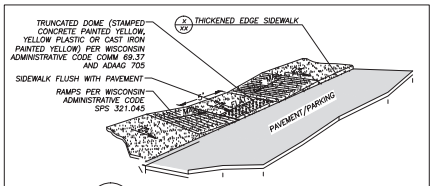
3 CONCRETE ADA RAMP

N.T.S.



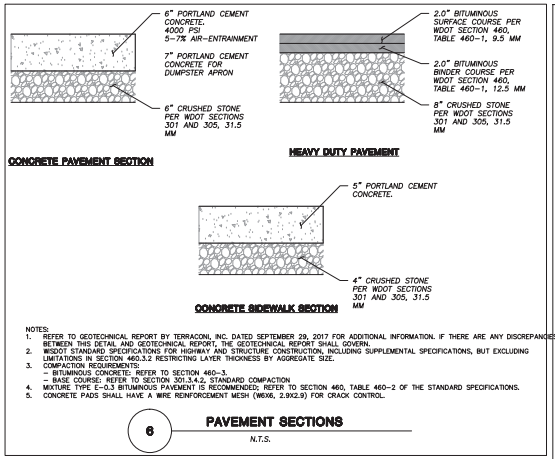
4 THICKENED EDGE SIDEWALK

N.T.S.



5 ACCESSIBLE WALK CROSS SECTION

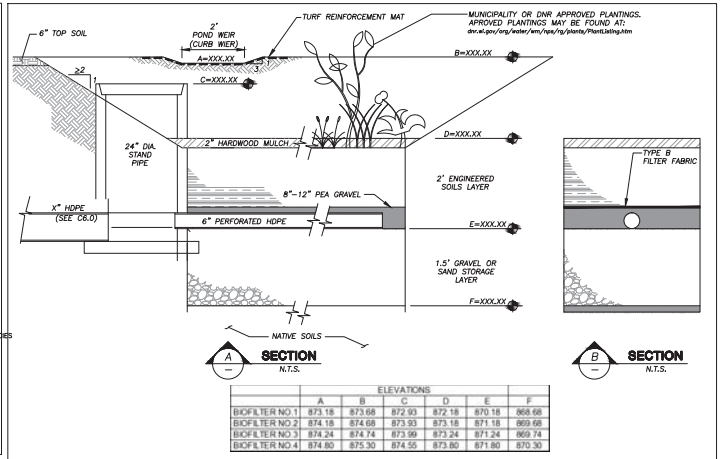
N.T.S.



NOTES:
1. REFER TO GEOTECHNICAL REPORT BY TERRACONI, INC. DATED SEPTEMBER 29, 2017 FOR ADDITIONAL INFORMATION. IF THERE ARE ANY DISCREPANCIES BETWEEN THIS DETAIL AND GEOTECHNICAL REPORT, THE GEOTECHNICAL REPORT SHALL GOVERN.
2. WISDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, INCLUDING SUPPLEMENTAL SPECIFICATIONS, BUT EXCLUDING LIMITATIONS IN SECTION 460.3.2 RESTRICTING LAYER THICKNESS BY AGGREGATE SIZE.
3. COMPACTION REQUIREMENTS:
   - BITUMINOUS CONCRETE: REFER TO SECTION 460-3.
   - BASE COURSE: REFER TO SECTION 301.3.4.2, STANDARD COMPACTION
4. MIXTURE TYPE E-0.3 BITUMINOUS PAVEMENT IS RECOMMENDED; REFER TO SECTION 460, TABLE 460-2 OF THE STANDARD SPECIFICATIONS.
5. CONCRETE PADS SHALL HAVE A WIRE REINFORCEMENT MESH (W6X6, 2.9X2.9) FOR CRACK CONTROL.

6 PAVEMENT SECTIONS

N.T.S.



A — SECTION N.T.S.

B — SECTION N.T.S.

	ELEVATIONS					
	A	B	C	D	E	F
BIOFILTER NO.1	873.18	873.68	872.93	872.18	870.18	868.68
BIOFILTER NO.2	874.18	874.68	873.93	873.18	871.18	869.68
BIOFILTER NO.3	874.24	874.74	873.99	873.24	871.24	869.74
BIOFILTER NO.4	874.80	875.30	874.55	873.80	871.80	870.30

GENERAL NOTES:

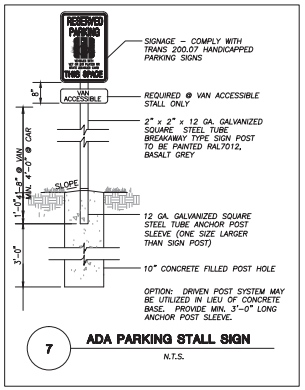
1. ALL CONSTRUCTION PRACTICES SHALL MEET THE SPECIFICATIONS OF THE WDNR TECHNICAL STANDARD 1004 – BIORETENTION FOR INFILTRATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A COPY OF THIS STANDARD AND CONSTRUCT THE BIORETENTION DEVICE IN ACCORDANCE WITH THE REQUIREMENTS OUTLINED THEREIN.
2. CONTRACTOR SHALL INSTALL 24" OF ENGINEERED SOIL CONSISTING OF: 40% ASTM C33 SAND, 30% CERTIFIED COMPOST (SEE GENERAL NOTE 3), AND 30% TOPSOIL.
3. CERTIFIED COMPOST SHALL CONSIST OF: >40% ORGANIC MATTER, <60% ASH CONTENT, pH OF 6-8, AND MOISTURE CONTENT OF 35-50% BY WEIGHT.
4. FILTER FABRIC SHALL BE PLACED ABOVE THE PERFORATED PIPE, BETWEEN THE PEA GRAVEL AND THE ENGINEERED SOIL.
5. ANNUAL RYE GRASS SHALL BE SEEDED AT 40 LB/ACRE WITH THE SEED MIX IN THE AREAS SURROUNDING THE BASIN, ON SIDE SLOPES, AND OVER ANY LAND THAT DISCHARGES INTO THE BASIN FOR EROSION CONTROL WHEN BASIN IS BROUGHT ON-LINE. ROOTSTOP AND PLUGS ARE REQUIRED TO ESTABLISH VEGETATION AT THE INVERT OF THE BASIN.
6. RUNOFF MUST INFILTRATE WITHIN 48-HOURS. BASINS UNABLE TO MAINTAIN THESE RATES MUST BE DEEP TILLED, REGRADED, AND IF NECESSARY REPLANTED TO RESTORE ORIGINAL INFILTRATION RATES.
7. ALL WORK TO BE CONDUCTED IN CONFORMANCE WITH APPLICABLE LOCAL, REGIONAL, AND STATE STORMWATER STANDARDS FOR THE PROJECT SITE AS APPROVED BY THE REGULATORY ENGINEER.
8. OWNER OR CONTRACTOR MUST CONSULT LANDSCAPE ARCHITECT OR ECOLOGICAL PLANTING AGENCY FOR APPROPRIATE PLANTS AND PLANTING CONFIGURATIONS.

INFILTRATION DEVICES ARE DESIGNED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR), COUNTY, MUNICIPALITY, AND ENGINEERING STANDARD OF CARE. ALL DESIGNATED INFILTRATION AREAS (e.g. RAIN GARDENS, INFILTRATION BASINS, BIORETENTION DEVICES) SHALL BE FENCED PRIOR TO CONSTRUCTION AND REMAIN UNDISTURBED AND PROTECTED DURING THE CONSTRUCTION OF PROPOSED SITE IMPROVEMENTS. PROPOSED BIORETENTION DEVICES SHALL NOT BE CONSTRUCTED UNTIL THE DEVICE'S CONTRIBUTING WATERSHED AREA MEETS ESTABLISHED VEGETATION REQUIREMENTS SET FORTH WITHIN THE RESPECTIVE WDNR TECHNICAL STANDARDS. IF THE LOCATION OF THE INFILTRATION AREA CONFLICTS WITH CONSTRUCTION STAGING AND/OR CONSTRUCTION TRAFFIC AND IS DISTURBED, COMPACTION MITIGATION WILL BE REQUIRED AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR IS REQUIRED TO PROVIDE QUALIFIED STAFF FOR INSPECTION AND OBSERVATION OF THE CONSTRUCTION ACTIVITIES RELATING TO ALL JOB SITE REGULATORY COMPLIANCE INCLUDING THE PROTECTION AND CONSTRUCTION OF ALL STORMWATER MANAGEMENT FEATURES. ANY OBSERVATION OF PLAN OR SITE DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

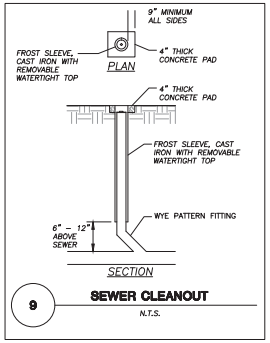
8 BIORETENTION DEVICE

N.T.S.



7 ADA PARKING STALL SIGN

N.T.S.



9 SEWER CLEANOUT

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PROJECT:
PORTILLO'S, EAST TOWNE MALL

PROJECT LOCATION:
CITY OF MADISON, WI
DANE COUNTY

PLAN MODIFICATIONS:

#	Date:	Description:
1	11-08-17	Land Use - UDC Initial/Final
2		
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13		
14		
15		

Design/Drawn:	JLF / TKG	10-13-2017
Approved:	PMP	10-13-2017
Submitted:		10-13-2017

SHEET TITLE:
DETAILS

SHEET NUMBER:
C8.0

JSD PROJECT NO.: 16-7567

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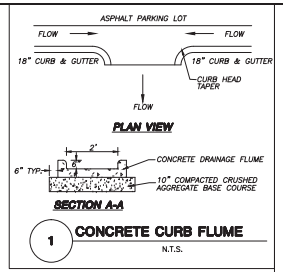
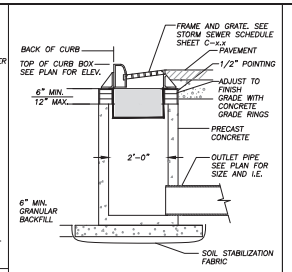


1 **CONCRETE CURB FLUME**

N.T.S.



2 **STORM INLET**

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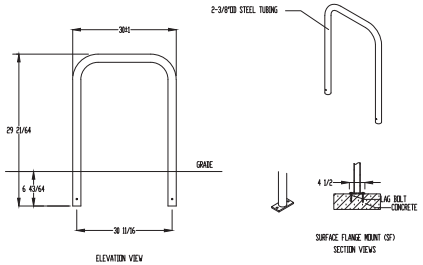
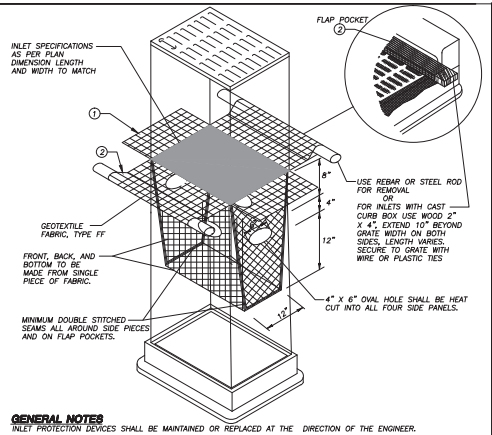


3 **INVERTED-U BIKE RACK**

N.T.S.



GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

(1) FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

(2) FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

4 **INLET PROTECTION, TYPE D**

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Design/Drawn:	JLF / TKG	10-13-2017
Approved:	PMP	10-13-2017
Submitted:		10-13-2017

SHEET TITLE:
DETAILS

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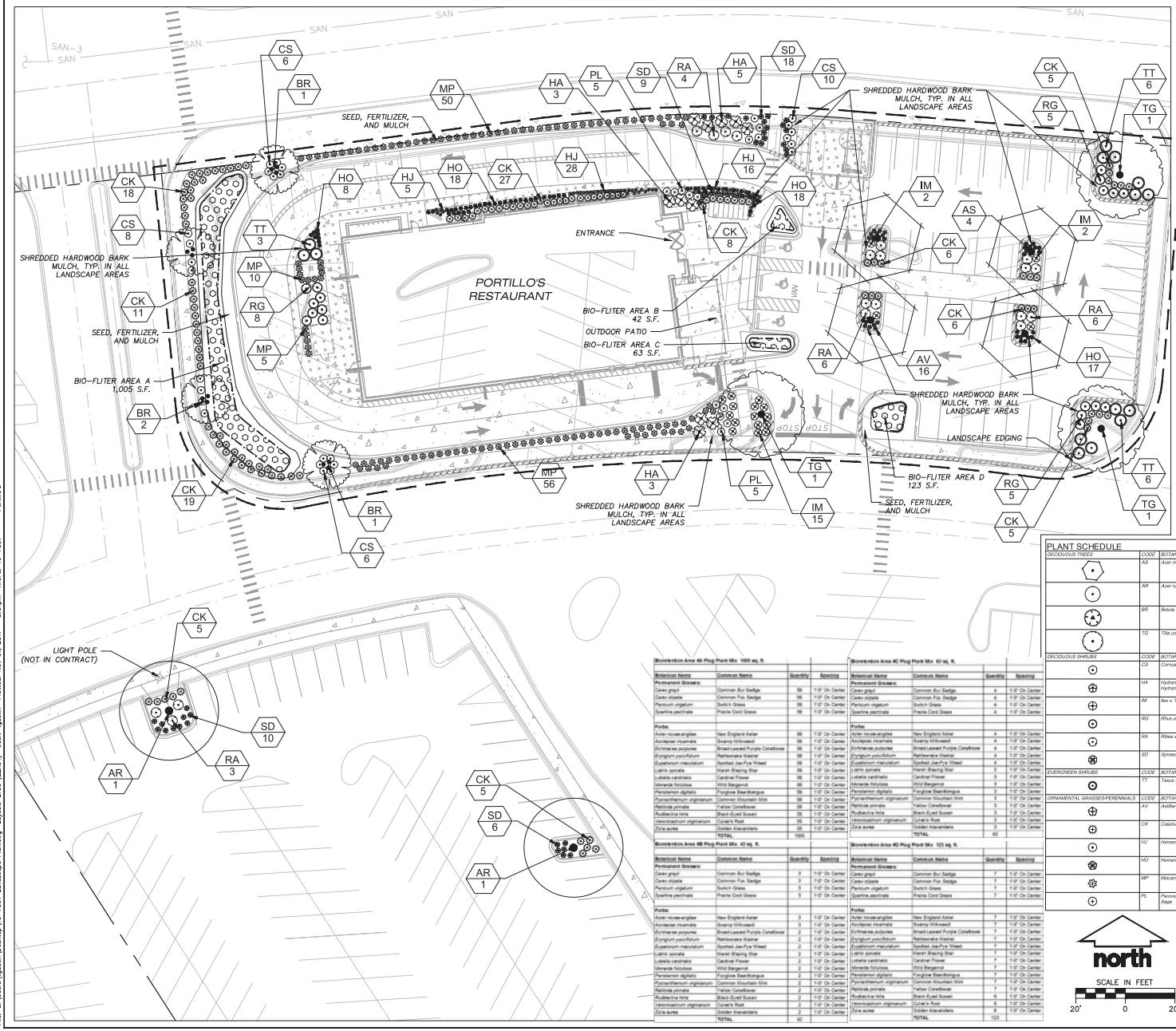

LEGEND (LANDSCAPE PLAN)

- PROPERTY LINE
- RIGHT-OF-WAY
- BUILDING OUTLINE
- EDGE OF PAVEMENT
- LIMITS OF DISTURBANCE
- STANDARD CURB AND GUTTER
- REJECT CURB AND GUTTER
- MOUNTABLE CURB
- ASPHALT PAVEMENT
- HEAVY DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- INFILTRATION BASIN PLUG MIX
- STORMWATER MANAGEMENT AREA
- ADA PARKING BOLLARDS/SIGNS

GENERAL NOTES:

1. REFER TO THE EXISTING CONDITIONS SURVEY FOR EXISTING CONDITIONS NOTES AND LEGEND.
2. ALL WORK IN THE ROW SHALL BE IN ACCORDANCE WITH THE MUNICIPAL STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
3. JSD SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER/CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY ANY OR ALL REGULATORY AGENCIES.
4. DRAWING FOR REVIEW – NOT FOR CONSTRUCTION UNLESS OTHERWISE NOTED IN THE TITLE BLOCK.
5. THE LANDSCAPE CONTRACTOR SHALL COORDINATE ALL FINE GRADING AND TOPSOILING WITH GENERAL CONTRACTOR
6. REFER TO SHEET L2.0 FOR ADDITIONAL DETAILS, NOTES AND SPECIFICATION INFORMATION INCLUDING MATERIALS, GUARANTEE AND EXECUTION RELATED TO LANDSCAPE PLAN

PLANT SCHEDULE

DECIDUOUS TREES	CODE	BOTANICAL NAME / COMMON NAME	ROOT CONDITION	SIZE AT PLANTING	QTY
	AS	Acer nigrum 'Slate Street' / Mystic Maple	B & B	2.5"Cal	4
	AR	Acer rubrum / Red Maple	B & B	2.5"Cal	2
	BR	Betula nigra / River Birch	B & B	1.5"Cal	4
	TG	Tilia cordata 'Greenspire' / Greenspire Littleleaf Linden	B & B	2.5"Cal	3

DECIDUOUS SHRUBS	CODE	BOTANICAL NAME / COMMON NAME	CONT	SIZE AT PLANTING	QTY
	CS	Cornus sericea 'Kelseyi' / Kelseyi Dogwood	3 gal	Min. 12"-18"	30
	HA	Hydrangea arborescens 'Annabelle' / Annabelle Smooth Hydrangea	3 gal	Min. 12"-24"	11
	IM	Ilex x 'Mondo' / Little Rascal Holly	3 gal	Min. 12"-18"	19
	RG	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac	3 gal	Min. 12"-18"	18
	RA	Ribes alpinum 'Green Mound' / Green Mound Alpine Currant	3 gal	Min. 12"-24"	19
	SD	Spiraea japonica 'Yan' / 'Double Play Gold' Spirea	3 gal	Min. 12"-24"	43

EVERGREEN SHRUBS	CODE	BOTANICAL NAME / COMMON NAME	CONT	SIZE AT PLANTING	QTY
	TT	Taxus x media 'Tauntoni' / Tauton Yew	3 gal	Min. 12"-24"	15

ORNAMENTAL GRASSES/PERENNIALS	CODE	BOTANICAL NAME / COMMON NAME	CONT	SIZE AT PLANTING	QTY
	AV	Astilbe chinensis 'Visions in Red' / Chinese Astilbe	1 Gal	Min. 12"	16
	CK	Calamagrostis x acutiflora 'Karl Foerster' / Feather Reed Grass	1 gal	Min. 12"	116
	HJ	Hemerocallis x 'Little Jazz' / Red Daylily	1 Gal	10-12" Ht.	49
	HO	Hemerocallis x 'Stella de Oro' / Stella de Oro Daylily	1 gal	Min. 12"	74
	MP	Miscanthus sinensis 'Purpurescens' / Flame Grass	1 Gal	Min. 12"-18"	121
	PL	Perovskia atriplicifolia 'Little Spire' TM / Little Spire Russian Sage	3 gal	Min. 12"-24"	10

Bioretention Area #A Plug Plant Mix 1005 sq. ft.

Botanical Name	Common Name	Quantity	Spacing
Permanent Grasses:			
Carex grayi	Common Bur Sedge	58	1'-0" On Center
Carex stipata	Common Fox Sedge	58	1'-0" On Center
Panicum virgatum	Switch Grass	58	1'-0" On Center
Spartina pectinata	Prairie Cord Grass	58	1'-0" On Center
Forbs:			
Aster novae-angliae	New England Aster	58	1'-0" On Center
Asclepias incarnata	Swamp Milkweed	58	1'-0" On Center
Echinacea purpurea	Broad-Leaved Purple Coneflower	58	1'-0" On Center
Eryngium yuccifolium	Rattlesnake Master	58	1'-0" On Center
Eupatorium maculatum	Spotted Joe-Pye Weed	58	1'-0" On Center
Liatris spicata	Marsh Blazing Star	58	1'-0" On Center
Lobelia cardinalis	Cardinal Flower	58	1'-0" On Center
Monarda fistulosa	Wild Bergamot	58	1'-0" On Center
Penstemon digitalis	Foxglove Beardtongue	58	1'-0" On Center
Pycnanthemum virginianum	Common Mountain Mint	58	1'-0" On Center
Rudbeckia pinnata	Yellow Coneflower	58	1'-0" On Center
Rudbeckia hirta	Black-Eyed Susan	58	1'-0" On Center
Veronicastrum virginianum	Culver's Root	58	1'-0" On Center
Zizia aurea	Golden Alexanders	58	1'-0" On Center
	TOTAL	1005	

Bioretention Area #B Plug Plant Mix 42 sq. ft.

Botanical Name	Common Name	Quantity	Spacing
Permanent Grasses:			
Carex grayi	Common Bur Sedge	3	1'-0" On Center
Carex stipata	Common Fox Sedge	3	1'-0" On Center
Panicum virgatum	Switch Grass	3	1'-0" On Center
Spartina pectinata	Prairie Cord Grass	3	1'-0" On Center
Forbs:			
Aster novae-angliae	New England Aster	3	1'-0" On Center
Asclepias incarnata	Swamp Milkweed	3	1'-0" On Center
Echinacea purpurea	Broad-Leaved Purple Coneflower	2	1'-0" On Center
Eryngium yuccifolium	Rattlesnake Master	2	1'-0" On Center
Eupatorium maculatum	Spotted Joe-Pye Weed	2	1'-0" On Center
Liatris spicata	Marsh Blazing Star	2	1'-0" On Center
Lobelia cardinalis	Cardinal Flower	2	1'-0" On Center
Monarda fistulosa	Wild Bergamot	2	1'-0" On Center
Penstemon digitalis	Foxglove Beardtongue	2	1'-0" On Center
Pycnanthemum virginianum	Common Mountain Mint	2	1'-0" On Center
Rudbeckia pinnata	Yellow Coneflower	2	1'-0" On Center
Rudbeckia hirta	Black-Eyed Susan	2	1'-0" On Center
Veronicastrum virginianum	Culver's Root	2	1'-0" On Center
Zizia aurea	Golden Alexanders	2	1'-0" On Center
	TOTAL	42	

Bioretention Area #C Plug Plant Mix 63 sq. ft.

Botanical Name	Common Name	Quantity	Spacing
Permanent Grasses:			
Carex grayi	Common Bur Sedge	4	1'-0" On Center
Carex stipata	Common Fox Sedge	4	1'-0" On Center
Panicum virgatum	Switch Grass	4	1'-0" On Center
Spartina pectinata	Prairie Cord Grass	4	1'-0" On Center
Forbs:			
Aster novae-angliae	New England Aster	4	1'-0" On Center
Asclepias incarnata	Swamp Milkweed	4	1'-0" On Center
Echinacea purpurea	Broad-Leaved Purple Coneflower	4	1'-0" On Center
Eryngium yuccifolium	Rattlesnake Master	4	1'-0" On Center
Eupatorium maculatum	Spotted Joe-Pye Weed	4	1'-0" On Center
Liatris spicata	Marsh Blazing Star	3	1'-0" On Center
Lobelia cardinalis	Cardinal Flower	3	1'-0" On Center
Monarda fistulosa	Wild Bergamot	3	1'-0" On Center
Penstemon digitalis	Foxglove Beardtongue	3	1'-0" On Center
Pycnanthemum virginianum	Common Mountain Mint	3	1'-0" On Center
Rudbeckia pinnata	Yellow Coneflower	3	1'-0" On Center
Rudbeckia hirta	Black-Eyed Susan	3	1'-0" On Center
Veronicastrum virginianum	Culver's Root	3	1'-0" On Center
Zizia aurea	Golden Alexanders	3	1'-0" On Center
	TOTAL	63	

Bioretention Area #D Plug Plant Mix 123 sq. ft.

Botanical Name	Common Name	Quantity	Spacing
Permanent Grasses:			
Carex grayi	Common Bur Sedge	7	1'-0" On Center
Carex stipata	Common Fox Sedge	7	1'-0" On Center
Panicum virgatum	Switch Grass	7	1'-0" On Center
Spartina pectinata	Prairie Cord Grass	7	1'-0" On Center
Forbs:			
Aster novae-angliae	New England Aster	7	1'-0" On Center
Asclepias incarnata	Swamp Milkweed	7	1'-0" On Center
Echinacea purpurea	Broad-Leaved Purple Coneflower	7	1'-0" On Center
Eryngium yuccifolium	Rattlesnake Master	7	1'-0" On Center
Eupatorium maculatum	Spotted Joe-Pye Weed	7	1'-0" On Center
Liatris spicata	Marsh Blazing Star	7	1'-0" On Center
Lobelia cardinalis	Cardinal Flower	7	1'-0" On Center
Monarda fistulosa	Wild Bergamot	7	1'-0" On Center
Penstemon digitalis	Foxglove Beardtongue	7	1'-0" On Center
Pycnanthemum virginianum	Common Mountain Mint	7	1'-0" On Center
Rudbeckia pinnata	Yellow Coneflower	7	1'-0" On Center
Rudbeckia hirta	Black-Eyed Susan	6	1'-0" On Center
Veronicastrum virginianum	Culver's Root	6	1'-0" On Center
Zizia aurea	Golden Alexanders	6	1'-0" On Center
	TOTAL	123	

north

SCALE IN FEET

20' 0 20'

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Design/Drawn:	JLF / TKG	09-19-2017
Approved:	MAS	09-19-2017
Submitted:		09-19-2017

SHEET TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
L1.0

JSD PROJECT NO. 16-7567

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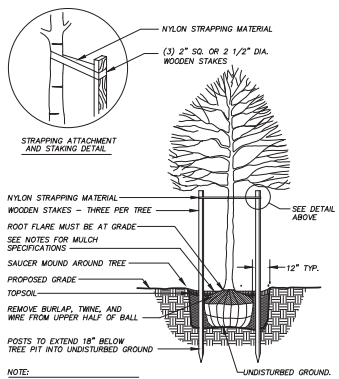
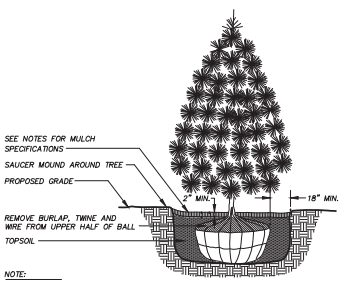


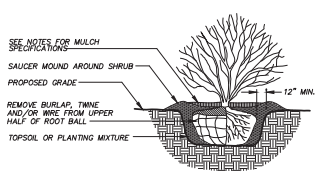
NOTE:
1. ROOT FLARE TO BE EXPOSED.
2. DIG HOLE NO DEEPER THAN BASE OF ROOT BALL TO FLARE.
3. ROOT BALL TO BE SET ON UNDISTURBED GROUND.

1 / L2.0 DECIDUOUS TREE PLANTING DETAIL
N.T.S.



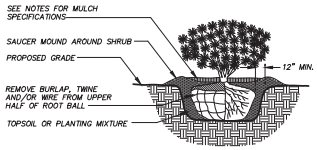
NOTE:
1. ROOT FLARE TO BE AT GRADE.
2. DIG HOLE NO DEEPER THAN BASE OF ROOT BALL TO FLARE.

2 / L2.0 EVERGREEN TREE PLANTING DETAIL
N.T.S.



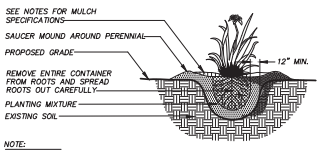
NOTE:
1. ROOT FLARE TO BE EXPOSED.
2. DIG HOLE NO DEEPER THAN BASE OF ROOT BALL TO FLARE.

3 / L2.0 DECIDUOUS SHRUB PLANTING DETAIL
N.T.S.



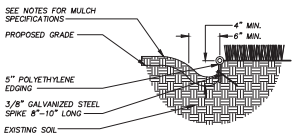
NOTE:
1. ROOT FLARE TO BE EXPOSED.
2. DIG HOLE NO DEEPER THAN BASE OF ROOT BALL TO FLARE.

4 / L2.0 EVERGREEN SHRUB PLANTING DETAIL
N.T.S.



NOTE:
1. ROOT FLARE TO BE EXPOSED

5 / L2.0 PERENNIAL/ORNAMENTAL GRASS PLANTING DETAIL
N.T.S.



6 / L2.0 LANDSCAPE EDGING DETAIL
N.T.S.

Madison

CITY OF MADISON LANDSCAPE WORKSHEET

Section 28.142 Madison General Ordinance

Project Location / Address: EAST TOWNE MALL, MADISON, WI 53704
Name of Project: PORTILLO'S - EAST TOWNE MALL
Owner / Contact: CBL & ASSOCIATES PROPERTIES, INC. - JUSTIN LONG
Contact Phone: (608) 848-5060 Contact Email: JUSTIN.FRAHM@JSDINC.COM

**** Landscape plans for zoning lots greater than ten thousand (10,000) square feet in size MUST be prepared by a registered landscape architect. ****

Applicability

The following standards apply to all exterior construction and development activity, including the expansion of existing buildings, structures and parking lots, except the construction of detached single-family and two-family dwellings and their accessory structures. The entire development site must be brought up to compliance with this section unless **all** of the following conditions apply, in which case only the affected areas need to be brought up to compliance:

(a) The area of site disturbance is less than ten percent (10%) of the entire development site during any ten-(10) year period.
(b) Gross floor area is only increased by ten percent (10%) during any ten-(10) year period.
(c) No demolition of a principal building is involved.
(d) Any displaced landscaping elements must be replaced on the site and shown on a revised landscaping plan.

Landscape Calculations and Distribution

Required landscaped areas shall be calculated based upon the total developed area of the property. Developed area is defined as that area within a single contiguous boundary which is made up of structures, parking, driveways and docking/loading facilities, but excluding the area of any building footprint at grade, land designed for open space uses such as athletic fields, and undeveloped land area on the same zoning lot. There are three methods for calculating landscape points depending on the size of the lot and Zoning District.

(a) For all lots except those described in (b) and (c) below, five (5) landscape points shall be provided for each three hundred (300) square feet of developed area.

Total square footage of developed area 34,634
Total landscape points required 578

(b) **For lots larger than five (5) acres**, points shall be provided at five (5) points per thirty hundred (3000) square feet for the first five (5) developed acres, and one (1) point per one hundred (100) square feet for all additional acres.

Total square footage of developed area _____
Five (5) acres = 217,800 square feet
First five (5) developed acres = 3,630 points
Remainder of developed area _____
Total landscape points required _____

(c) **For the Industrial – Limited (IL) and Industrial – General (IG) districts**, one (1) point shall be provided per one hundred (100) square feet of developed area.

Total square footage of developed area _____
Total landscape points required _____

10/2013 1

Tabulation of Points and Credits

Use the table to indicate the quantity and points for all existing and proposed landscape elements.

Plant Type/ Element	Minimum Size at Installation	Points	Credits/ Existing Landscaping		New/ Proposed Landscaping	
			Quantity	Points Achieved	Quantity	Points Achieved
Overstory deciduous tree	2½ inch caliper measured diameter at breast height (dbh)	35			9	315
Tall evergreen tree (i.e. pine, spruce)	5-6 feet tall	35				
Ornamental tree	1 1/2 inch caliper	15			4	60
Upright evergreen shrub (i.e. arborvitae)	3-4 feet tall	10				
Shrub, deciduous	#3 gallon container size, Min. 12"-24"	3			140	420
Shrub, evergreen	#3 gallon container size, Min. 12"-24"	4			15	60
Ornamental grasses/ perennials	#1 gallon container size, Min. 8"-18"	2			386	772
Ornamental/ decorative fencing or wall	n/a	4 per 10 lineal ft.				
Existing significant specimen tree	Minimum size: 2 ½ inch caliper dbh. *Trees must be within developed area and cannot comprise more than 30% of total required points.	14 per caliper inch dbh. Maximum points per tree: 200				
Landscape furniture for public seating and/or transit connections	* Furniture must be within developed area, publicly accessible, and cannot comprise more than 5% of total required points.	5 points per "seat"				
Sub Totals						1,627

Total Number of Points Provided 1,627

* As determined by ANSI, ANLA- American standards for nursery stock. For each size, minimum plant sizes shall conform to the specifications as stated in the current American Standard for Nursery Stock.

GENERAL NOTES

1. GENERAL: ALL WORK IN THE R–O–W AND PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH LOCAL MUNICIPAL REQUIREMENTS. JSD SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER/CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY ANY OR ALL REGULATORY AGENCIES. LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE DONE TO UTILITIES. CONTRACTOR MUST CALL 1–800–382–5544 FOR UTILITY LOCATIONS AT LEAST THREE DAYS PRIOR TO DIGGING. HAND DIG AND INSTALL ALL PLANTS THAT ARE NEAR EXISTING UTILITIES. PROTECT PREVIOUSLY INSTALLED WORK OF OTHER TRADES. CONTRACTOR IS RESPONSIBLE FOR STAKING THE PLANT MATERIALS FOR REVIEW BY OWNER PRIOR TO DIGGING AND PLACEMENT AND SHALL COORDINATE ALL FINE GRADING AND RESTORATION WITH THE GRADING CONTRACTOR.
2. DELIVERY AND HANDLING: DO NOT DELIVER MORE PLANT MATERIALS THAN CAN BE PLANTED IN ONE DAY, UNLESS ADEQUATE, APPROPRIATE AND SECURE STORAGE IS PROVIDED AND APPROVED BY OWNER'S REPRESENTATIVE. AT ALL TIMES, PROTECT ALL PLANT MATERIALS FROM WIND AND DIRECT SUN. DELIVER PLANTS WITH LEGIBLE IDENTIFICATION LABELS. PROTECT PLANTS DURING DELIVERY AND DO NOT PRUNE PRIOR TO DELIVERY. ALL TREES AND SHRUBS SHALL BE PLANTED ON THE DAY OF DELIVERY; IF THIS IS NOT POSSIBLE, PROTECT THE PLANT MATERIALS NOT PLANTED BY STORING THEM IN A SHADED, SECURE AREA, PROTECTING THE ROOT MASS WITH WET SOIL, MULCH, HAY OR OTHER SUITABLE MEDIUM. CONTRACTOR TO KEEP ALL PLANT MATERIALS ADEQUATELY WATERED TO PREVENT ROOT DESICCATION. DO NOT REMOVE CONTAINER GROWN STOCK FROM CONTAINERS BEFORE TIME OF PLANTING. DO NOT PICK UP CONTAINER OR BALLED PLANTS BY STEM OR ROOTS. ALL PLANTS SHALL BE LIFTED AND HANDLED FROM THE BOTTOM OF THE CONTAINER OR BALL. PERFORM ACTUAL PLANTING ONLY WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE IN ACCORDANCE WITH LOCALLY ACCEPTED BEST HORTICULTURAL PRACTICES.
3. MATERIALS – PLANTS: ALL PLANTS SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.1–2004. PLANTS SHALL BE TRUE TO SPECIES AND VARIETY SPECIFIED AND NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST 2 YEARS. PLANTS SHALL BE FRESHLY DUG (DURING THE MOST RECENT FAVORABLE HARVEST SEASON). PLANTS SHALL BE SO TRAINED IN DEVELOPMENT AND APPEARANCE AS TO BE UNQUESTIONABLY SUPERIOR IN FORM, COMPACTNESS, AND SYMMETRY. PLANTS SHALL BE SOUND, HEALTHY, VIGOROUS, WELL BRANCHED AND DENSELY FOLIATED WHEN IN LEAF, AND FREE OF DISEASE AND INSECTS (ADULT EGGS, PUPAE OR LARVAE). THEY SHALL HAVE HEALTHY, WELL–DEVELOPED ROOT SYSTEMS AND SHALL BE FREE FROM PHYSICAL DAMAGE OR OTHER CONDITIONS THAT WOULD PREVENT THRIVING GROWTH. PLANTS SHALL BE OF THE HIGHEST QUALITY, POSSESS TYPICAL GROWTH HABITS AND FORM FOR THEIR SPECIES AND BE FREE OF INJURY. PARKWAY TREES AND PARKING LOT TREES SHALL HAVE A MINIMUM BRANCHING HEIGHT OF SIX (6) FEET ABOVE THE GROUND TO ALLOW ADEQUATE VISUAL AND PHYSICAL CLEARANCE.
4. PRUNING: THE CONTRACTOR SHALL PRUNE ALL TREES AND REPAIR ANY INJURIES THAT OCCURRED DURING THE PLANTING PROCESS. DOUBLE LEADERS, DEAD BRANCHES, AND LIMBS DAMAGED OR BROKEN DURING THE PLANTING PROCESS SHALL BE PRUNED. THIS SHALL BE THE ONLY PRUNING ALLOWED AT PLANTING. PRUNING SHALL CONFORM TO AMERICAN STANDARD FOR TREE CARE OPERATIONS, ANSI A300. PRUNE TREES IN ACCORDANCE WITH NAA GUIDELINES. DO NOT TOP TREES. PRUNE SHRUBS ACCORDING TO STANDARD HORTICULTURAL PRACTICES. ON CUTS OVER 3/4" IN DIAMETER AND BRUISES OR SCARS ON BARK, TRACE THE INJURED CAMBIUM LAYER BACK TO LIVING TISSUE AND REMOVE. SMOOTH AND SHAPE WOUNDS SO AS NOT TO RETAIN WATER. TREAT THE AREA WITH AN APPROVED INCONSPICUOUS LATEX BASED ANTISEPTIC TREE PAINT, IF PRUNING OCCURS "IN SEASON". DO NOT PRUNE ANY OAK TREES DURING THE MONTHS FROM APRIL TO OCTOBER.
5. CLEANUP: DISPOSED OF EXCESS SOIL. REMOVE ALL CUTTINGS AND WASTE MATERIALS. SOIL, BRANCHES, BINDING AND WRAPPING MATERIALS, REJECTED PLANTS, OR OTHER DEBRIS RESULTING FROM ANY PLANTING SHALL BE PROMPTLY CLEANED UP AND REMOVED. THE WORK AREA SHALL BE KEPT SAFE AND NEAT AT ALL TIMES. UNDER NO CONDITION SHALL THE ACCUMULATION OF SOIL, BRANCHES OR OTHER DEBRIS BE ALLOWED UPON A PUBLIC PROPERTY IN SUCH A MANNER AS TO RESULT IN A PUBLIC SAFETY HAZARD. LIKEWISE, UNDER NO CIRCUMSTANCES SHALL ANY DEBRIS OR INCIDENTAL MATERIALS BE ALLOWED UPON ADJACENT PRIVATE PROPERTY.

LANDSCAPE MATERIAL NOTES

1. MATERIALS – SOIL: PLANTING SOIL SHALL MEET THESE REQUIREMENTS:
   A. PLANTING AREAS = 24"
   B. TREE PITS = SEE DETAILS
2. PLANTING SOIL TO BE A MINIMUM 24" DEPTH, UNLESS OTHERWISE SPECIFIED AS ABOVE OR ON DETAILS. TOPSOIL TO BE CLEAN, FRIABLE LOAM FROM A LOCAL SOURCE, FREE FROM STONES OR DEBRIS OVER 3/4" IN DIAMETER, AND FREE FROM TOXINS. TOPSOIL SHALL HAVE A pH VALUE BETWEEN 6 AND 7. TOPSOIL AND PLANTING SOIL SHALL BE TESTED TO CONFORM TO THESE SPECIFICATIONS AND SHALL BE AMENDED TO MEET THESE SPECIFICATIONS. PROVIDE TEST RESULTS TO OWNER'S REPRESENTATIVE PRIOR TO PLACEMENTDO NOT PLACE FROZEN OR MUDDY TOPSOIL. APPLY SOIL AMENDMENTS TO ALL LANDSCAPE AREAS PER SOIL TEST.
3. MATERIALS – SHREDDED HARDWOOD BARK MULCH: ALL PLANTING AREAS LABELED ON PLAN SHALL RECEIVE CERTIFIED WEED FREE SHREDDED HARDWOOD BARK MULCH OVER ALL PLANTING AREAS. SHREDDED HARDWOOD BARK MULCH SIZE & COLOR TO BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. FERTILIZER SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, COUNTY AND STATE OF WISCONSIN REQUIREMENTS. SHREDDED HARDWOOD BARK MULCH AREAS SHALL NOT RECEIVE WOVEN WEED BARRIER FABRIC.
4. MATERIALS – TREE & SHRUB RINGS: ALL TREES AND/OR SHRUBS PLANTED IN SEEDED LAWN AREAS TO BE INSTALLED WITH A MINIMUM 5' DIAMETER SHREDDED HARDWOOD BARK MULCH TREE RING SPREAD TO A CONSISTENT DEPTH OF 4 INCHES. ALL TREE RINGS SHOULD BE INSTALLED WITH A 5" DEPTH SHOVEL CUT EDGE, ANGLED 45 DEGREES INTO SOIL AT A 5' DIAMETER ABOUT THE CENTER OF THE TREE PLANTING. A PRE–EMERGENT GRANULAR HERBICIDE WEED–PREVENTER SHOULD BE MIXED WITH MULCH USED TO INSTALL TREE RING AS WELL AS TOPICALLY APPLIED TO FINISHED INSTALLATION OF TREE RING.
5. MATERIALS – SEED: DISTURBED LAWN AREAS LABELED ON PLAN AS SUCH, SHALL BE SPREAD BY HAND BROADCAST METHOD OR APPROPRIATE SPREADER EQUIPMENT WITH EARTH CARPET'S "MADISON PARKS" OR EQUIVALENT AS APPROVED BY THE OWNER'S REPRESENTATIVE, INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. IN ADDITION TO LAWN SEED, ANNUAL RYE SHALL BE APPLIED TO ALL DISTURBED AREAS AT A RATE OF 1 1/2 LBS PER 1000 SQUARE FEET. FERTILIZE AND MULCH PER MANUFACTURER'S RECOMMENDATIONS.
6. MATERIALS – BIORETENTION BASIN/PRAIRIE SEED MIX: AREAS SPECIFIED ON PLAN TO BE BROADCAST SEEDED WITH "DIVERSE PRAIRIE FOR MEDIUM SOILS" SEED MIX, AS PROVIDED BY PRAIRIE NURSERY, P.O. BOX 306, WESTFIELD, WISCONSIN, 53964, TEL. 608–296–3679 (OR APPROVED EQUIVALENT). INSTALL SEED WITH SUPPLEMENTAL MATERIALS AND AMENDMENTS AS RECOMMENDED BY SEED SUPPLIER AND AT RATES AND OPTIMUM TIMES OF THE YEAR AS RECOMMENDED BY THE SEED SUPPLIER TO ENSURE SUCCESSFUL GERMINATION AND SEED/ROOT ZONE GROWTH DEVELOPMENT. REFER TO PRODUCT SPECIFICATIONS AND MANUFACTURERS RECOMMENDATIONS FOR INSTALLATION.
7. MATERIALS – BIORETENTION BASIN PLUG PLANTINGS: PLUG PLANTINGS TO BE INSTALLED 1'–6" ON CENTER, MIXING SPECIES INTEGRALLY IN FLATS OF 20 AT A TIME. REFER TO WDNR TECHNICAL STANDARDS FOR ROOTSTOCK AND PLUG PLANTINGS FOR BIORETENTION BASINS.

CONTRACTOR AND OWNER RESPONSIBILITY NOTES

1. GUARANTEE: THE CONTRACTOR SHALL GUARANTEE ALL PLANTS THROUGH ONE (1) YEAR AFTER ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PLANTS SHALL BE ALIVE AND IN HEALTHY AND FLOURISHING CONDITION AT THE END OF THE GUARANTEE PERIOD. THE CONTRACTOR SHALL REPLACE (AT NO COST TO OWNER) ANY PLANTS THAT ARE DEAD OR NOT IN A VIGOROUS THRIVING CONDITION. REPLACEMENT PLANTS SHALL BE OF THE SAME KIND AND SIZE AS ORIGINALLY SPECIFIED UNLESS OTHERWISE DIRECTED BY OWNER'S REPRESENTATIVE. RESTORE BEDS AS NECESSARY FOLLOWING PLANT REPLACEMENT, INCLUDING BUT NOT LIMITED TO BEDDING, EDGING, MULCH, ETC. REPLACE PLANTS DAMAGED AT TIME OF PLANTING. REPAIR AREAS DISTURBED IN ANY WAY DURING PLANT REPLACEMENT AT NO COST TO OWNER. CONTRACTOR SHALL PROVIDE A TWO (2)–YEAR STRAIGHTENING GUARANTEE FOR ALL TREES.
2. CONTRACTOR IS RESPONSIBLE FOR STAKING THE PLANT MATERIALS FOR REVIEW BY OWNER'S REPRESENTATIVE PRIOR TO DIGGING AND PLACEMENT AND SHALL COORDINATE ALL FINE GRADING AND RESTORATION WITH THE GRADING CONTRACTOR.
3. MAINTENANCE: (CONTRACTOR) FOR ALL PLANTINGS, AND SEEDED LAWN AREAS: THE CONTRACTOR SHALL MAINTAIN ALL PLANTINGS AND LAWN AREAS FOR A MINIMUM TIME PERIOD OF 60 DAYS, UNTIL FINAL ACCEPTANCE BY OWNER'S REPRESENTATIVE. THE CONTRACTOR IS RESPONSIBLE FOR ADEQUATELY WATERING PLANTS AND LAWN/TURFGRASS DURING THIS 60 DAY ESTABLISHMENT PERIOD. CONTRACTOR IS RESPONSIBLE FOR THE ESTABLISHMENT OF HEALTHY VIGOROUS PLANT MATERIALS AND LAWN/TURFGRASS GROWTH. CONTRACTOR IS ALSO RESPONSIBLE FOR ANY PRUNING OF PLANT MATERIALS, AND SHAPING AND/OR REPLACEMENT OR SUPPLEMENT OF DEFICIENT SHREDDED HARDWOOD BARK MULCH DURING THIS PERIOD. LONG TERM PLANT MATERIALS AND LAWN/TURFGRASS MAINTENANCE AND ANY PROGRAM FOR SUCH IS THE RESPONSIBILITY OF THE OWNER. ALL PLANTINGS AND LAWN/TURFGRASS AREAS SHALL BE MAINTAINED IN A MANICURED CONDITION UNTIL THE TIME WHEN THE OWNER'S ACCEPTANCE IS GIVEN.
4. MAINTENANCE: (OWNER) THE OWNER IS RESPONSIBLE FOR THE CONTINUED MAINTENANCE, REPAIR AND REPLACEMENT OF ALL LANDSCAPING MATERIALS AND WEED BARRIER FABRIC AS NECESSARY FOLLOWING THE ONE (1) YEAR CONTRACTOR GUARANTEE PERIOD.

DIGGERS HOTLINE
Toll Free (800) 242-8511

JSD Professional Services, Inc.
Engineers • Surveyors • Planners
CREATE THE VISION TELL THE STORY
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KENOSHA | APPLETON | WAUSAU
MADISON REGIONAL OFFICE
161 HORIZON DRIVE, SUITE 101
VERONA, WISCONSIN 53593
P. 608.848.5060

CLIENT:
CBL & ASSOCIATES PROPERTIES

CLIENT ADDRESS:
2030 HAMILTON PLACE BLVD., STE. 500, CHATANOOGA, TN 37421

PROJECT:
PORTILLO'S, EAST TOWNE MALL

PROJECT LOCATION:
CITY OF MADISON, WI
DANE COUNTY

PLAN MODIFICATIONS:

#	Date	Description
1	11.08.17	Land Use - UDC Initial/Final
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

Design/Drawn:	JLF / TKG	09-19-2017
Approved:	MAS	09-19-2017
Submitted:		09-19-2017

SHEET TITLE:
LANDSCAPE DETAILS, NOTES, AND SPECIFICATIONS

SHEET NUMBER:
L2.0

JSD PROJECT NO. 16-7567

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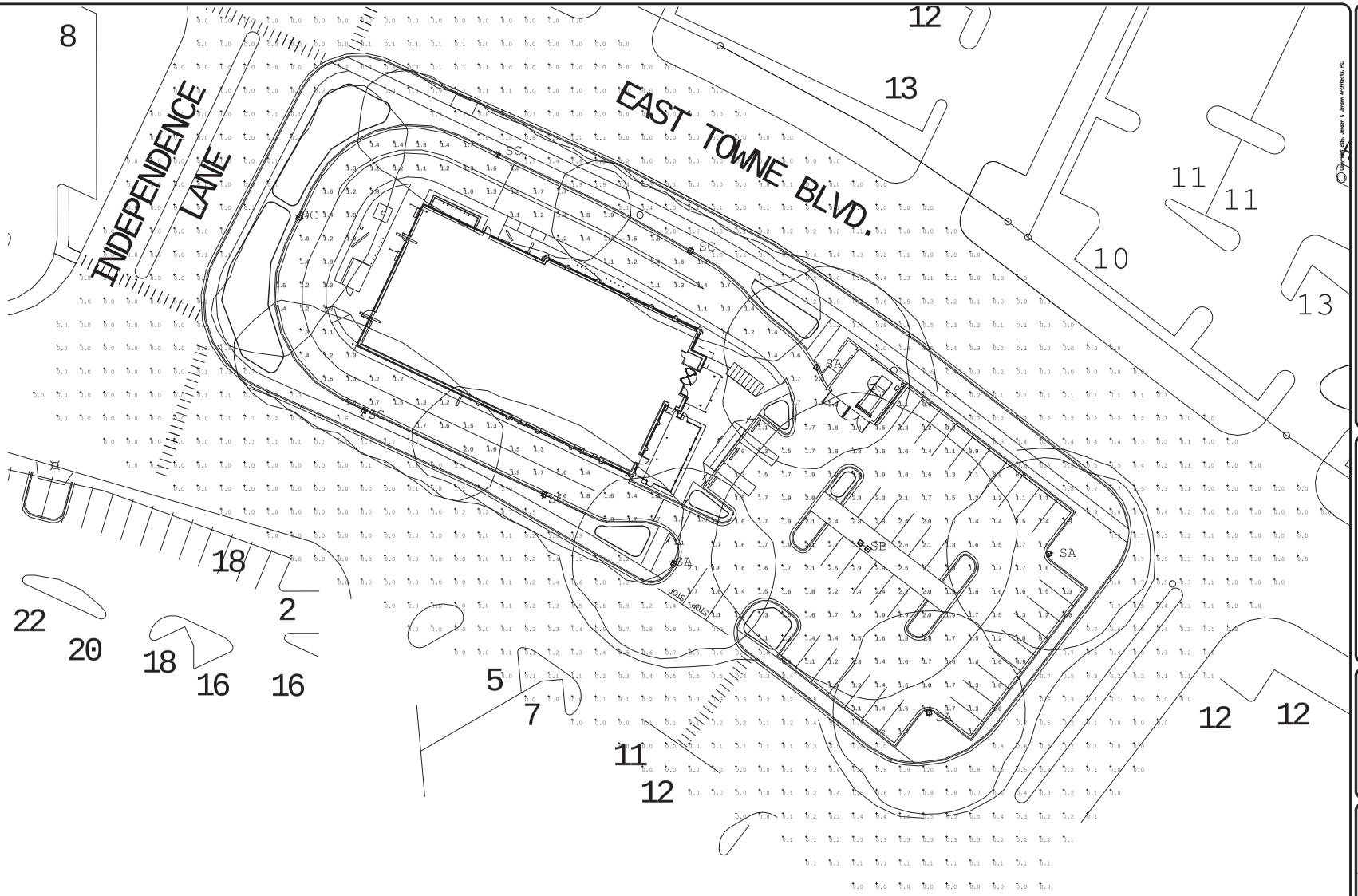
File: C:\Users\jgustin\Desktop\16-7567 Landscape Plan.dwg Layout: L200 (22X34) User: jgustin Plotted: Nov 01, 2017 – 5:29pm Xref's: 16-7567 Portillo's



Luminaire Schedule						
Qty	Label	Arrangement	LLF	Description	Filename	Lum. Watts
4	SA	SINGLE	0.85	Quattro Ltg. 1 / CAR100-L5-140LEDF4.1-BZTX-QM609 on a ALP Pole SNS-30-50-7-AB-BC-D19 30' Pole on a 0.0' Base	ITL68315-140L5.IES	138.3
1	SB	BACK-BACK	0.85	Quattro Ltg. 2 / CAR100-L5-140LEDF4.1-BZTX-QM609 on a ALP Pole SNS-30-50-7-AB-BC-D2180 30' Pole on a 0.0' Base	ITL68315-140L5.IES	138.3
5	SC	SINGLE	0.85	Quattro Ltg. 1 / CAR100-L3-140LEDF4.1-BZTX-QM609 on a ALP Pole SNS-30-50-7-AB-BC-D19 30' Pole on a 0.0' Base	ITL69760-140L3.IES	136

Please contact andyvictores@gmail.com for pricing.

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Boundry area at 4,0' above grade	Illuminance	Fc	0.24	2.6	0.0	N.A.	N.A.
Drive Thru Area	Illuminance	Fc	1.44	2.1	1.0	1.44	2.10
Parking Area	Illuminance	Fc	1.64	3.2	0.8	2.05	4.00

EXPIRES 07/31/18
SIGNED 11/08/17

THE W-T GROUP, LLC
Mechanical / Plumbing / Electrical Division
The W-T Group, LLC | Mechanical/Plumbing/Electrical Division
2675 Pratum Avenue | Hoffman Estates, IL 60192
Mob: 224-293-6333 | Fax: 224-293-6444
IL License No.: 154.007570-D015
Exp: 04 / 30 / 2019

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ISSUED TO UDC 11-08-2017

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Office (630) 573-1770 Fax (630) 573-1773
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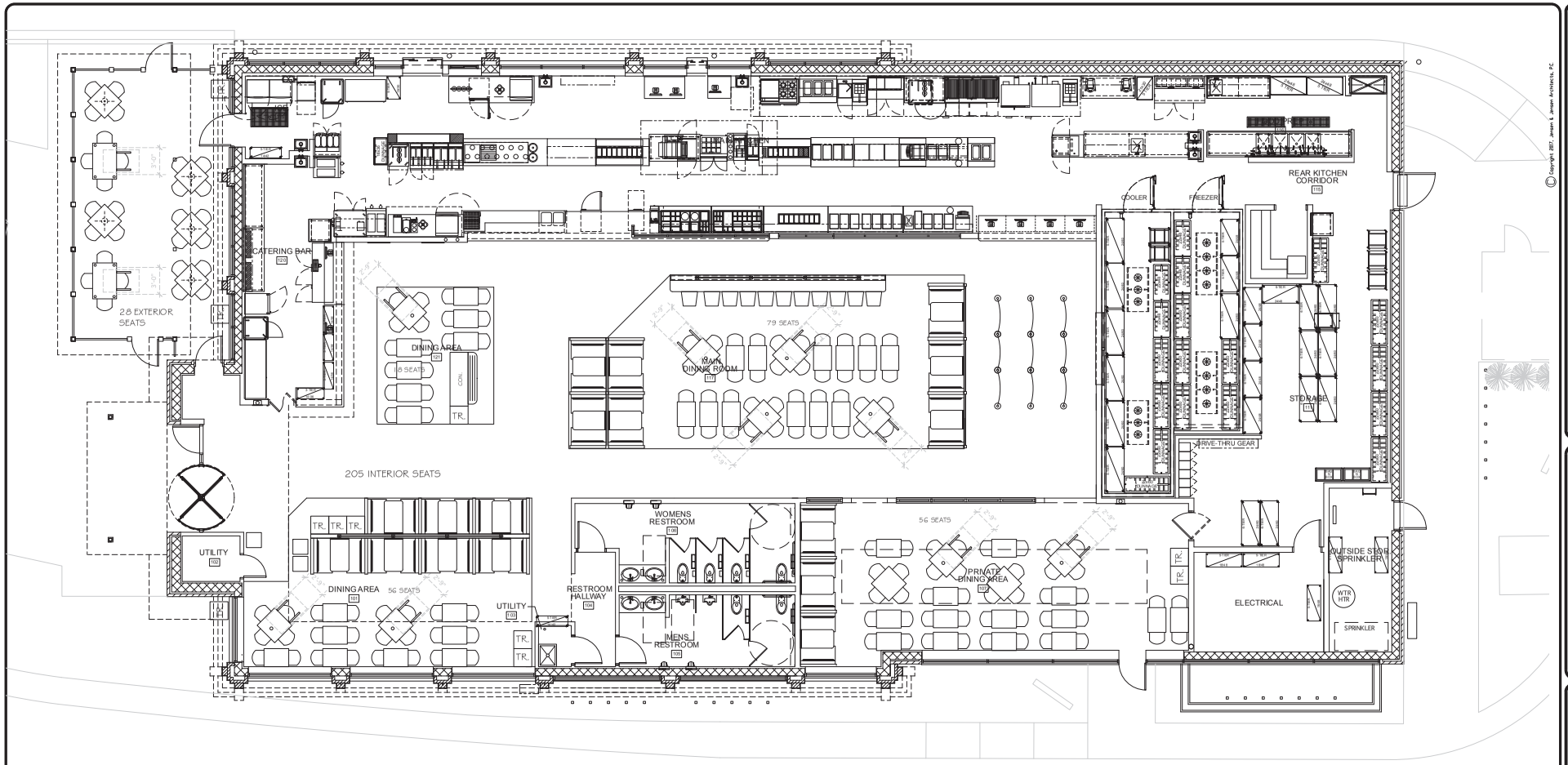
NEW PORTILLO'S RESTAURANT FOR
Portillo's Hot Dogs, LLC
4505 EAST TOWNE BLVD.
Madison, WI

SITE PHOTOMETRIC PLAN

no.	date	description
REVISIONS		

Drwn: Chkd:
date: 10.04.17
filename:
sheet: SPH1.1
job no.: 3187



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PORTILLO'S - MADISON, WI / NEW KITCHEN CONCEPT

ISSUED TO UDC 11-08-2017

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NEW PORTILLO'S RESTAURANT FOR
Portillo's Hot Dogs, LLC
4505 EAST TOWNE BLVD.
Madison, WI 53704

CONCEPT SEATING PLAN

no.	date	description

REVISIONS

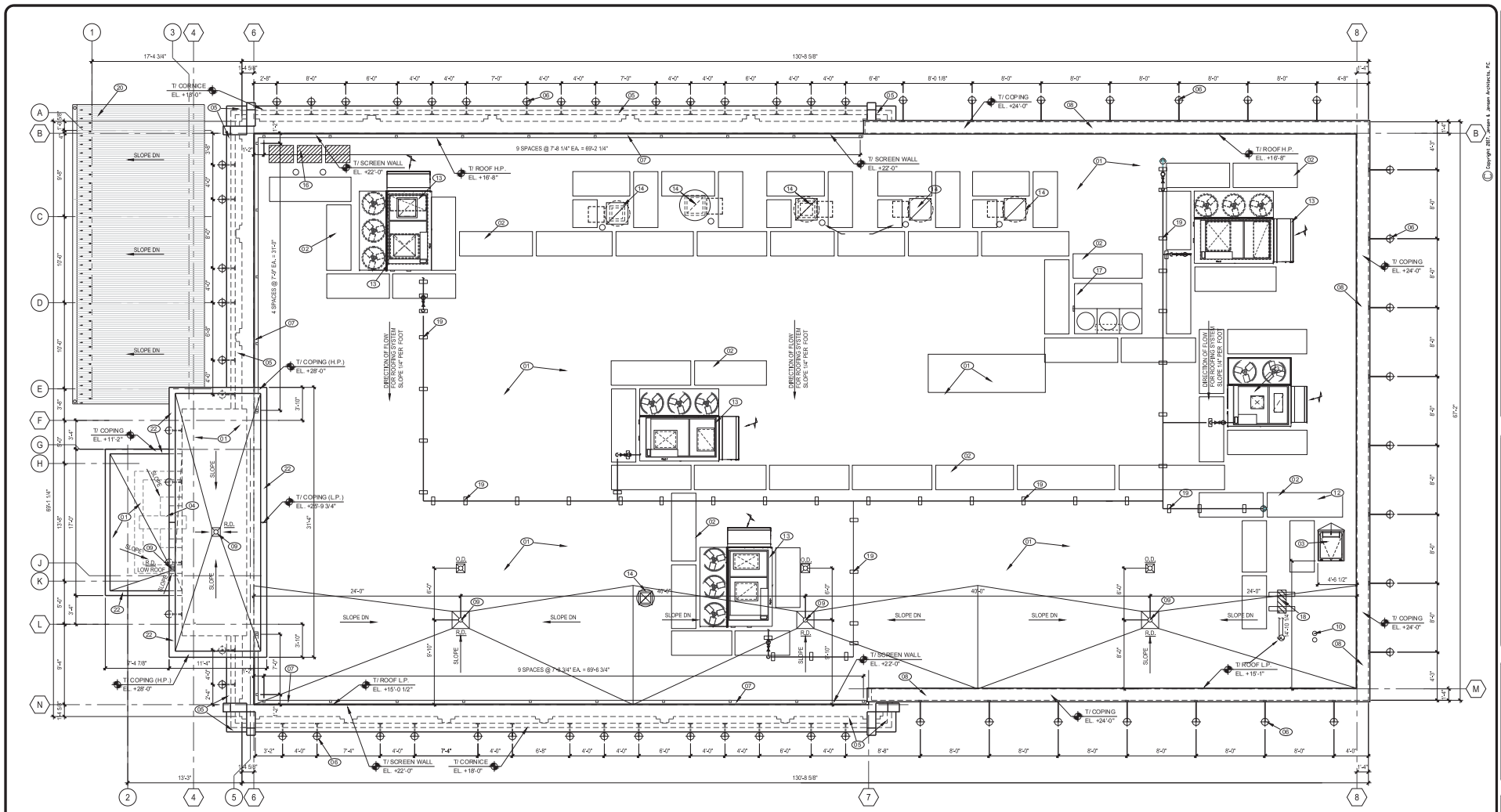
Drwn: Chkd:

date 10.04.17

filename

sheet A-1.0A

job no. 3137



1 ROOF PLAN

Scale: 3/16" = 1'-0"

NORTH

KEYNOTES

01 60 MIL. FULLY ADHERED WHITE TPO OVER 5.2" OF RIGID INSULATION (MIN. R-30) INSTALLED PER MANUFACTURERS RECOMMENDATIONS. ALL ROOFING COMPONENTS PER MANUFACTURERS COMPLETE SYSTEM.

02 WALKWAY PADS PROVIDED BY ROOF MEMBRANE MANUFACTURER AND WELDED TO ROOF MEMBRANE.

03 BILCO 36" x 30" ROOF HATCH. RE: 1/A-3.1

04 ARCHITECTURAL FEATURE FURN. & INSTALLED BY SIGN CONTR.

05 BUILT UP PRE-FIN METAL CLAD STEPPED CORNICE AND PIERS. SEE DETAIL DRAWINGS A5.0

06 GOOSE NECK LIGHT FIXTURES - SEE ELECTRICAL DRAWINGS AND EXTERIOR ELEVATIONS.

07 SCREEN WALL - REFER TO A-SERIES AND S-SERIES SHEETS FOR DETAILS.

08 CAST STONE COPING. REFER TO BUILDING ELEVATIONS FOR COLOR. A5 SERIES DRAWINGS FOR DETAILS.

09 ROOF DRAINS. SEE P-SERIES SHEETS FOR SIZE AND PIPING. RE: 6/A-3.1

10 WATER HEATER INTAKE AND EXHAUST PIPING - SEE P-SERIES SHEETS. RE: 4/A-3.1

11 ROOF HYDRANT - SEE P-SERIES SHEETS.

12 VENT THRU ROOF - SEE P-SERIES SHEETS FOR SIZE AND LOCATIONS. SEE DTL. 2/A-3.1

13 ROOF TOP UNITS - SEE HVAC DRAWINGS, & DTLS. 5/A-3.1 & 8/A-3.1

14 EXHAUST FANS - SEE HVAC DRAWINGS, & DTLS. 5/A-3.1 & 8/A-3.1

15 SIGNAGE - FURNISHED AND INSTALLED BY SIGN CONTRACTOR.

16 ROOF MOUNTED EQUIPMENT RAILS BY OTHERS FOR ICE MACHINE. INSTALLED BY G.C. SEE SHEETS M-1.0 AND KITCHEN EQUIPMENT DRAWINGS.

17 ROOF MOUNTED EQUIPMENT RAILS FURNISHED BY REFRIGERATION CONTRACTOR AND INSTALLED BY G.C. SEE SHEETS M-1.0 AND KITCHEN EQUIPMENT DRAWINGS.

18 ROOF MOUNTED EQUIPMENT RAILS FURNISHED AND INSTALLED BY HVAC CONTRACTOR. SEE SHEET M-1.0.

19 GAS PIPING ON SUPPORTS. PAINT ALL EXTERIOR GAS PIPE ON ROOF WITH WEATHER RESISTANT YELLOW PAINT. SEE M-SERIES SHEETS FOR SIZE AND DETAILS. RE: 7/A-3.1

20 CORRUGATED GALVALUME METAL ROOF. SEE EXTERIOR BUILDING ELEVATIONS FOR FINISHES.

21 PRE-FINISHED METAL GUTTER/DOWNSPOUT. SEE DRAWING A3.0 AND EXTERIOR BUILDING ELEVATIONS FOR FINISHES.

22 PRE-FINISHED METAL COPING. SEE DETAIL DRAWINGS A5.0

23 SNOW CLEATS FOR CORRUGATED ROOF SYSTEM BY "SNO-GEM" COLOR TO MATCH ROOF. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. CONTACT RICK AT (815) 477-4367.

ISSUED TO UDC 11-08-2017

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NEW PORTILLO'S RESTAURANT FOR
Portillo's Hot Dogs, LLC
4505 EAST TOWNE BLVD.
Madison, WI 53704

ROOF PLAN

no.	date	description

REVISIONS

Drwn: WJB Chkd: JJB

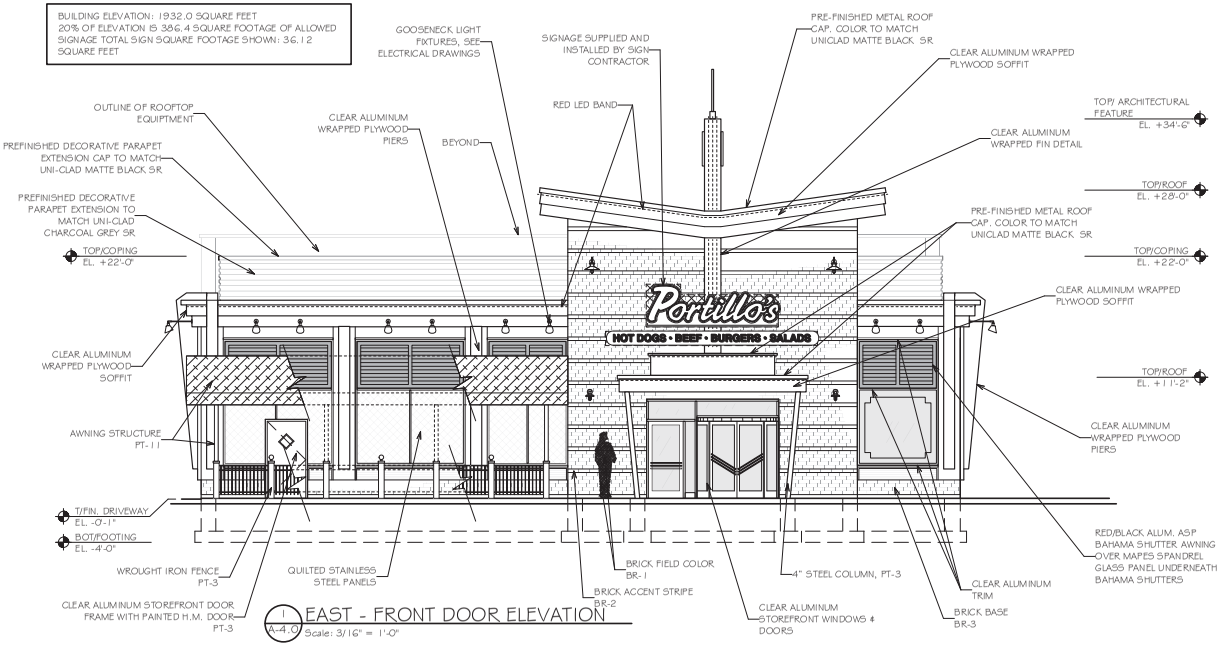
date 10.04.17

filename 3137.16-A3.0.dwg

sheet A3.0

job no. 3137

BUILDING ELEVATION: 1932.0 SQUARE FEET
20% OF ELEVATION IS 386.4 SQUARE FOOTAGE OF ALLOWED SIGNAGE TOTAL SIGN SQUARE FOOTAGE SHOWN: 36.12 SQUARE FEET



1 A-4.0 EAST - FRONT DOOR ELEVATION
Scale: 3/16" = 1'-0"

BR-1
SIOUX CITY BRICK - CINNAMON IRONSPOT SMOOTH

BR-2
SIOUX CITY BRICK - BROWN SMOOTH

BR-3
SIOUX CITY BRICK - EBONITE SMOOTH

* ALL BRICKS ARE 12" UTILITY (3 5/8 x 3 5/8 x 11 5/8)

PT-3
SHERWIN WILLIAMS #SW6991, BLACK MAGIC

PT-9
SHERWIN WILLIAMS #6179, ARTICHOKE

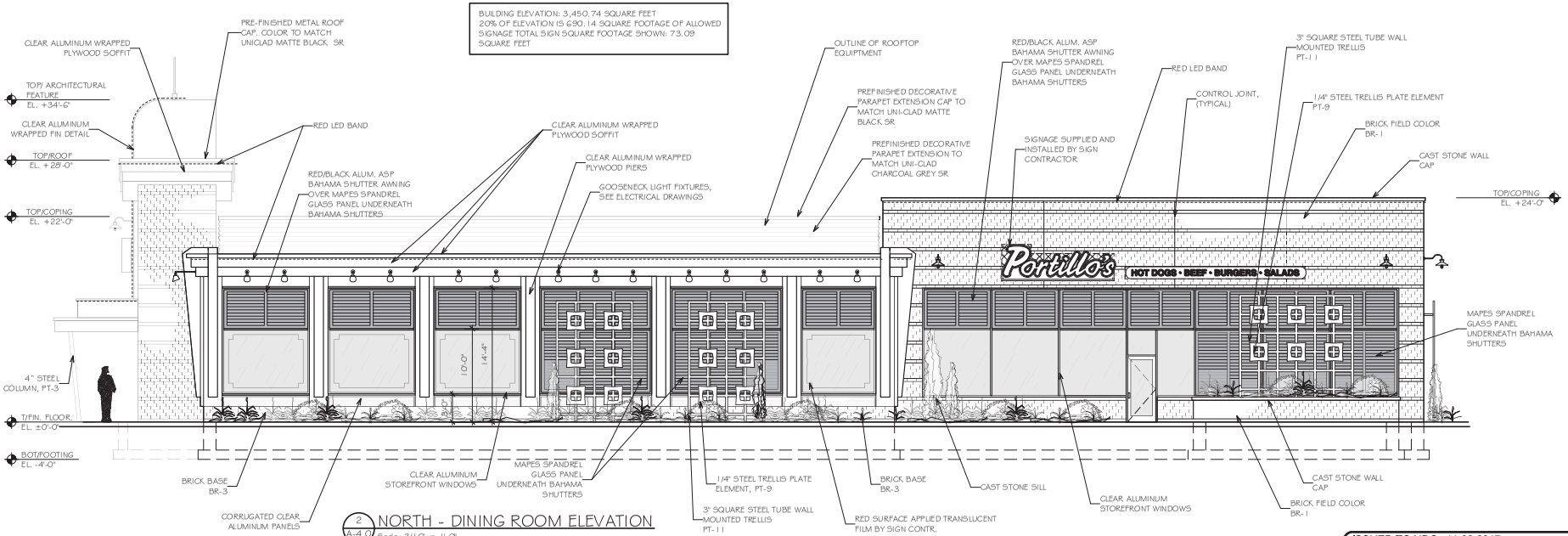
PT-11
SHERWIN WILLIAMS #6461, ISLE OF PINE

* BUILDING SIGNAGE IS TO BE SUBMITTED AND APPROVED UNDER SEPARATE SIGN PERMIT DRAWINGS.

* GHOST SIGNAGE IS TO BE SUBMITTED AND REVIEWED AS PART OF THE ARCHITECTURAL REVIEW APPROVAL PROCESS.

0 5 10 15 20 25 FT

BUILDING ELEVATION: 3,450.74 SQUARE FEET
20% OF ELEVATION IS 690.14 SQUARE FOOTAGE OF ALLOWED SIGNAGE TOTAL SIGN SQUARE FOOTAGE SHOWN: 73.09 SQUARE FEET



2 A-4.0 NORTH - DINING ROOM ELEVATION
Scale: 3/16" = 1'-0"

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NEW PORTILLO'S RESTAURANT FOR
Portillo's Hot Dogs, LLC
4505 EAST TOWNE BLVD.
Madison, WI 53704

CONCEPT ELEVATIONS

no.	date	description

REVISIONS

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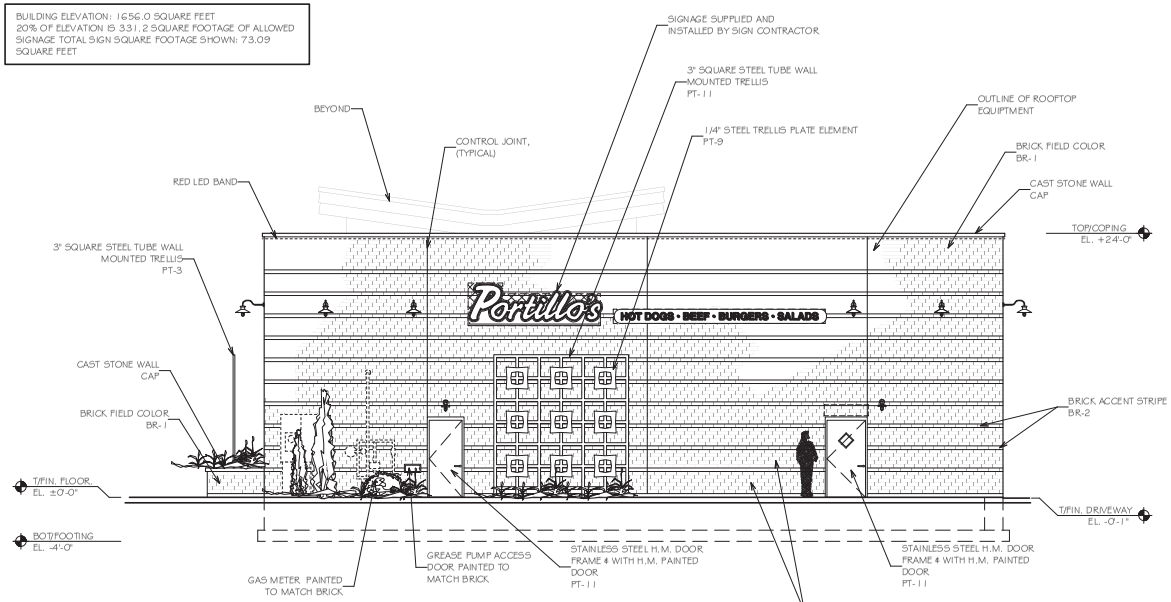
date 10.04.17

filename

sheet A-4.0

job no. 3137

BUILDING ELEVATION: 1656.0 SQUARE FEET
20% OF ELEVATION IS 331.2 SQUARE FOOTAGE OF ALLOWED SIGNAGE TOTAL SIGN SQUARE FOOTAGE SHOWN: 73.09 SQUARE FEET



1 A-4.1 WEST - REAR ROOM ELEVATION
Scale: 3/16" = 1'-0"

BR-1
SIOUX CITY BRICK - CINNAMON IRONSPOT SMOOTH

BR-2
SIOUX CITY BRICK - BROWN SMOOTH

BR-3
SIOUX CITY BRICK - EBONITE SMOOTH

* ALL BRICKS ARE 12" UTILITY (3 5/8 x 3 5/8 x 11 5/8)

PT-3
SHERWIN WILLIAMS #SW6991, BLACK MAGIC

PT-9
SHERWIN WILLIAMS #6179, ARTICHOKE

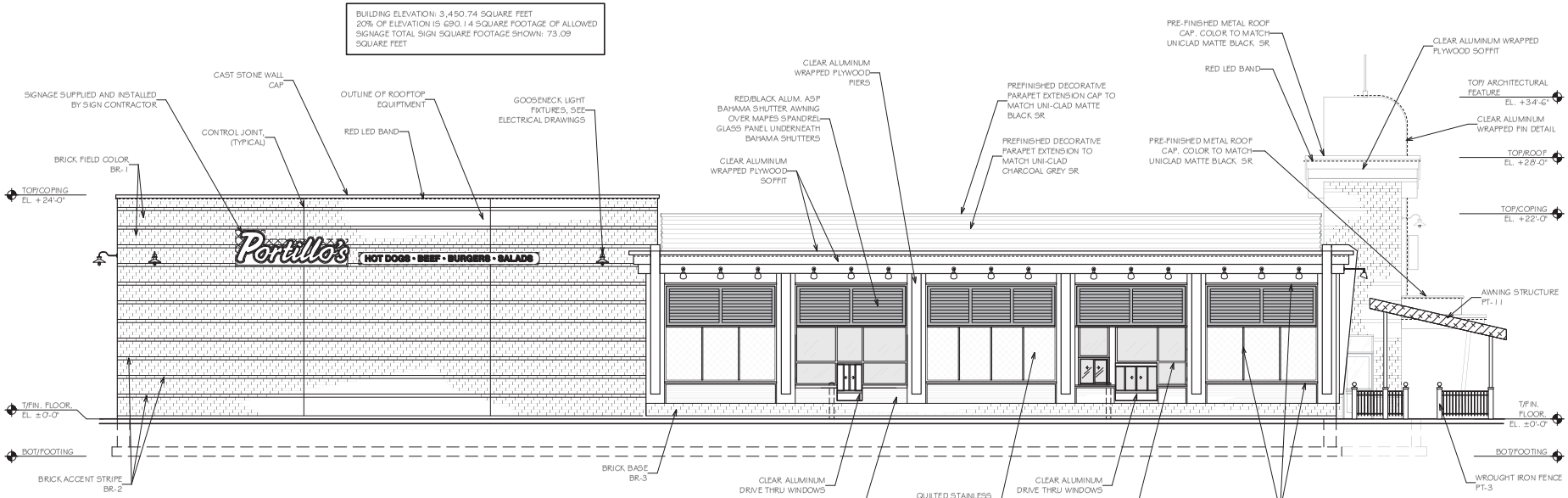
PT-11
SHERWIN WILLIAMS #6461, ISLE OF PINE

* BUILDING SIGNAGE IS TO BE SUBMITTED AND APPROVED UNDER SEPARATE SIGN PERMIT DRAWINGS.

* GHOST SIGNAGE IS TO BE SUBMITTED AND REVIEWED AS PART OF THE ARCHITECTURAL REVIEW APPROVAL PROCESS.

0 5 10 15 20 25 FT

BUILDING ELEVATION: 3,450.74 SQUARE FEET
20% OF ELEVATION IS 690.14 SQUARE FOOTAGE OF ALLOWED SIGNAGE TOTAL SIGN SQUARE FOOTAGE SHOWN: 73.09 SQUARE FEET



2 A-4.1 SOUTH - DRIVE THRU ELEVATION
Scale: 3/16" = 1'-0"

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REVISIONS		

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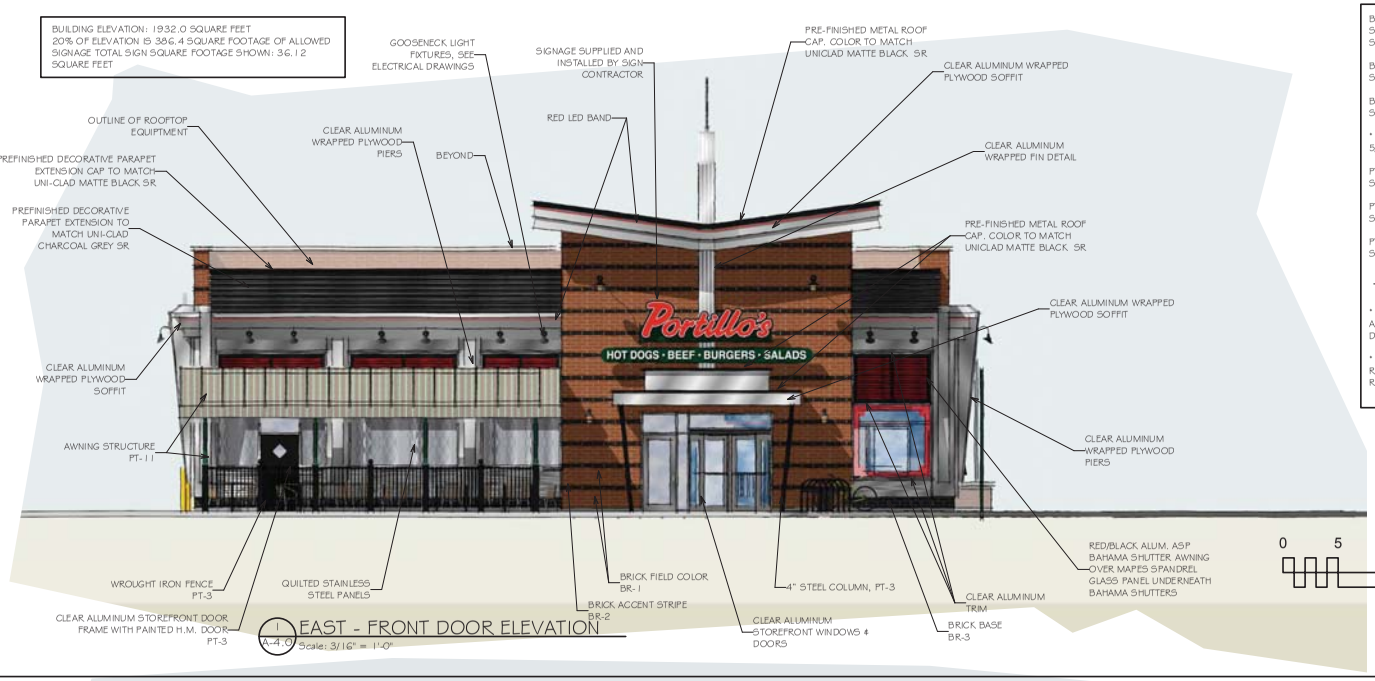
filename
sheet A-4.1
job no. 3137

BUILDING ELEVATION: 1932.0 SQUARE FEET
20% OF ELEVATION IS 386.4 SQUARE FOOTAGE OF ALLOWED SIGNAGE TOTAL SIGN SQUARE FOOTAGE SHOWN: 36.12 SQUARE FEET



1 A-4.0 EAST - FRONT DOOR ELEVATION
Scale: 3/16" = 1'-0"

BR-1
SIOUX CITY BRICK - CINNAMON IRONSPOT SMOOTH

BR-2
SIOUX CITY BRICK - BROWN SMOOTH

BR-3
SIOUX CITY BRICK - EBONITE SMOOTH

* ALL BRICKS ARE 12" UTILITY (3 5/8 x 3 5/8 x 11 5/8)

PT-3
SHERWIN WILLIAMS #SW6991, BLACK MAGIC

PT-9
SHERWIN WILLIAMS #6179, ARTICHOKE

PT-11
SHERWIN WILLIAMS #6461, ISLE OF PINE

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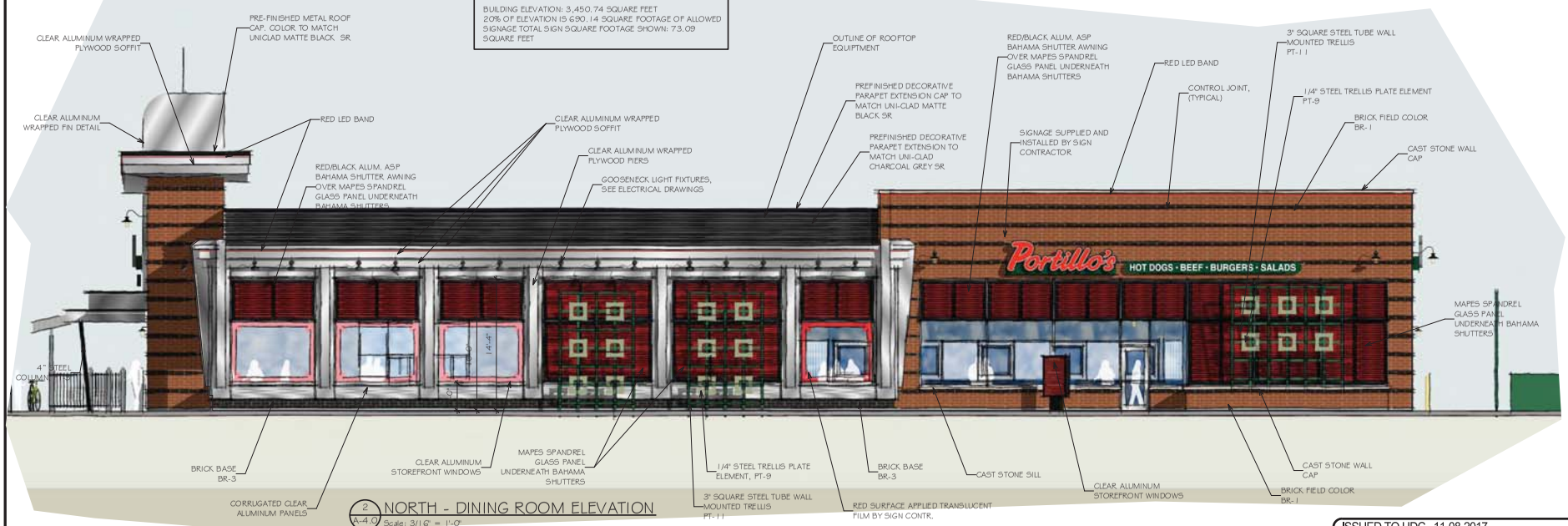
* GHOST SIGNAGE IS TO BE SUBMITTED AND REVIEWED AS PART OF THE ARCHITECTURAL REVIEW APPROVAL PROCESS.

BUILDING ELEVATION: 3,450.74 SQUARE FEET
20% OF ELEVATION IS 690.14 SQUARE FOOTAGE OF ALLOWED SIGNAGE TOTAL SIGN SQUARE FOOTAGE SHOWN: 73.09 SQUARE FEET



2 A-4.0 NORTH - DINING ROOM ELEVATION
Scale: 3/16" = 1'-0"

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COLOR CONCEPT ELEVATIONS

no.	date	description

REVISIONS

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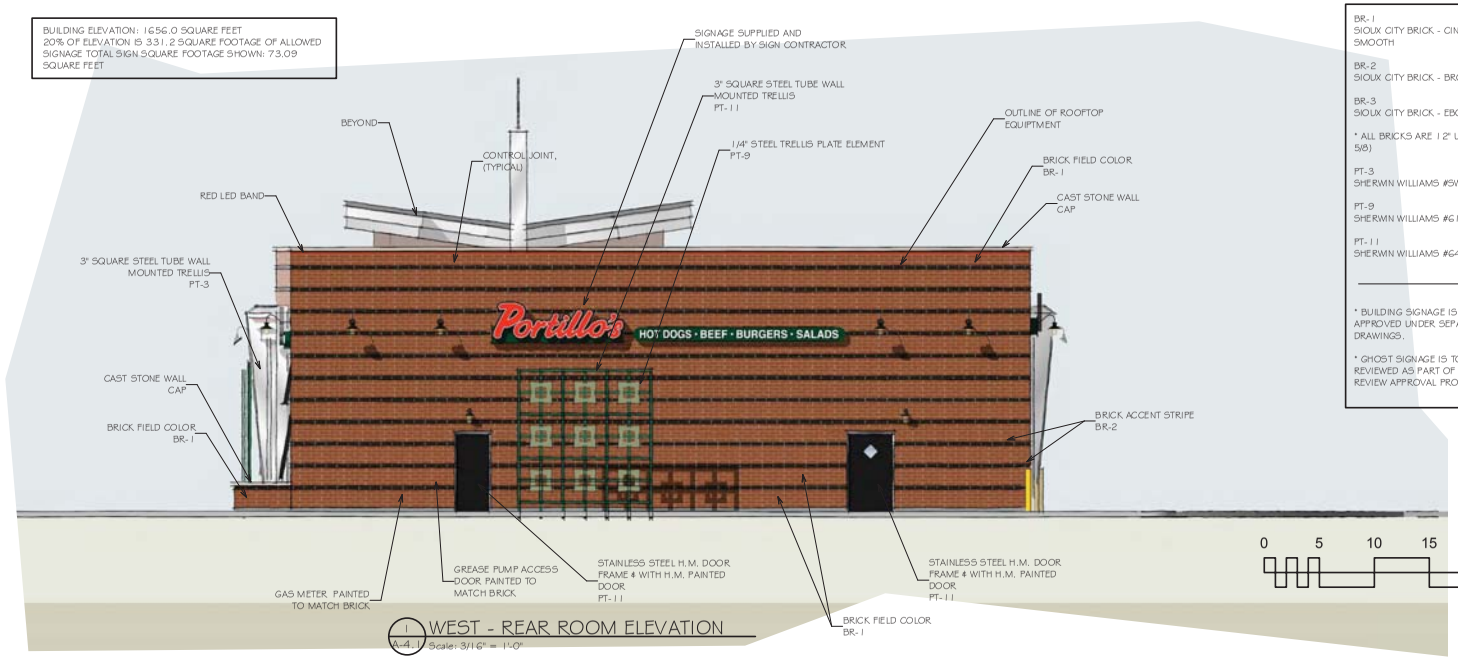
filename
sheet A-4.0a
job no. 3137



1 A-4.1 WEST - REAR ROOM ELEVATION
Scale: 3/16" = 1'-0"

BR-1
SIOUX CITY BRICK - CINNAMON IRONSPOT SMOOTH

BR-2
SIOUX CITY BRICK - BROWN SMOOTH

BR-3
SIOUX CITY BRICK - EBONITE SMOOTH

* ALL BRICKS ARE 12" UTILITY (3 5/8 x 3 5/8 x 11 5/8)

PT-3
SHERWIN WILLIAMS #SW6991, BLACK MAGIC

PT-9
SHERWIN WILLIAMS #6179, ARTICHOKE

PT-11
SHERWIN WILLIAMS #6461, ISLE OF PINE

* BUILDING SIGNAGE IS TO BE SUBMITTED AND APPROVED UNDER SEPARATE SIGN PERMIT DRAWINGS.

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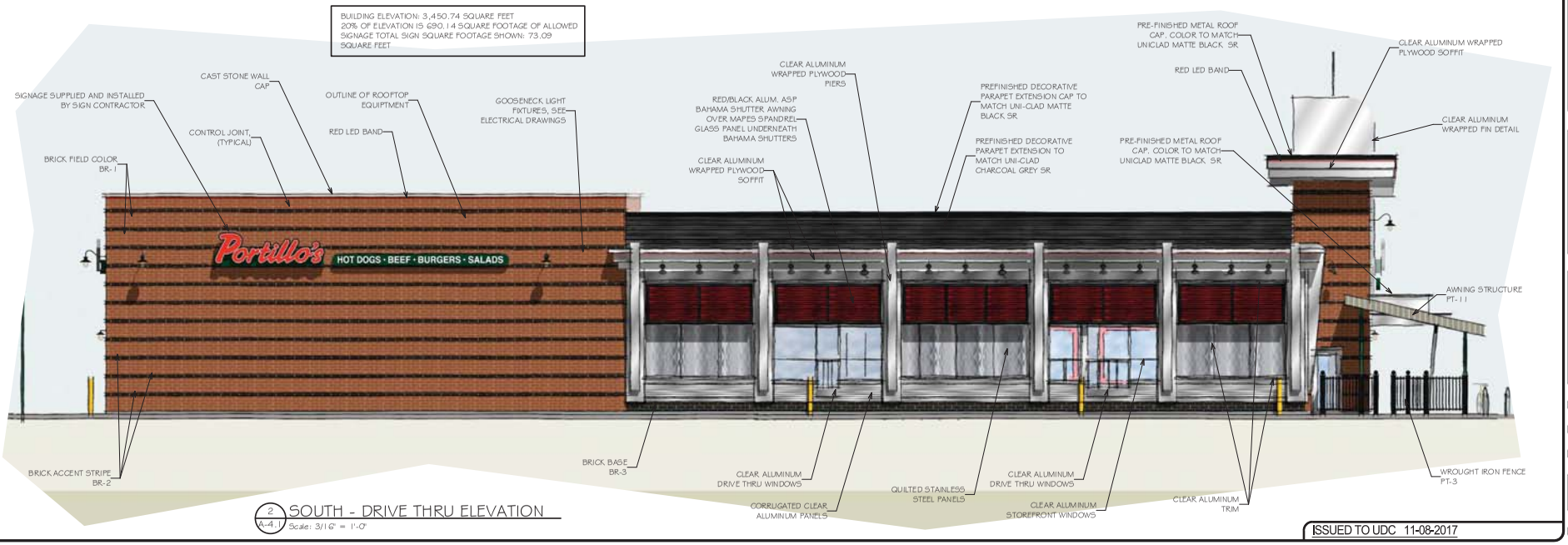

2 A-4.1 SOUTH - DRIVE THRU ELEVATION
Scale: 3/16" = 1'-0"

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filename
sheet A-4.1a
job no. 3157

PAC-CLAD
"MATTE BLACK"

METAL SHUTTER

PAC-CLAD
"CARDINAL RED"

METAL SHUTTER

(PT-3)
SW6991 "BLACK MAGIC"

WROUGHT IRON

(PT-9)
SW6979 "ARTICHOKE"

ACCENT PAINT

(PT-11)
SW6979 "ARTICHOKE"

ACCENT PAINT

MADISON, WI

EXTERIOR FINISHES

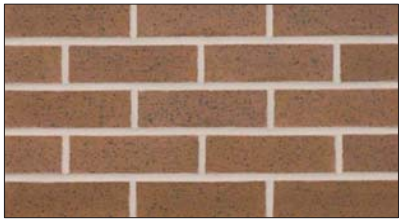
UNI-CLAD
MATTE BLACK SR
ALUM. BREAK METAL

UNI-CLAD
CHARCOAL GREY SR
ALUM. BREAK METAL

BLACK POWDER COATED
BLACK ALUMINUM TABLE BASE

ALUMINUM FRAME WITH
PVC WRAP CHAIR

RESIN TABLE TOP



BR-1
SIOUX CITY BRICK - CINNAMON
IRONSPOT SMOOTH

BR-2
SIOUX CITY BRICK - BROWN
SMOOTH

BR-3
SIOUX CITY BRICK - EBONITE
SMOOTH

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sheet MAT-1

job no. 3137

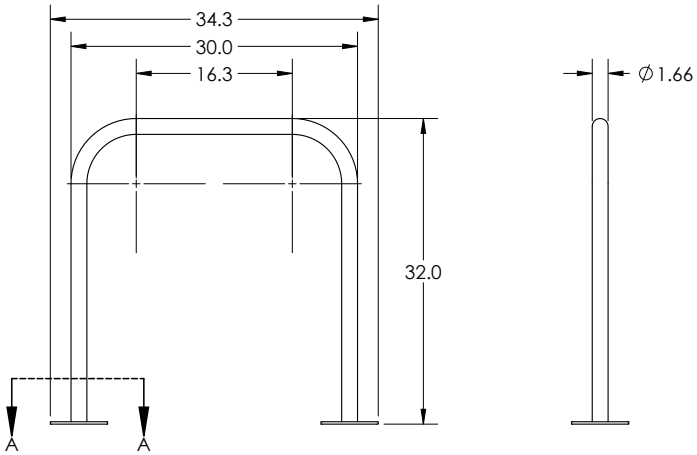
CYCLE RACKS

SARIS

BIKE DOCK

The bike dock is a simple and intuitive design that provides space efficient, high security bike parking. The bike dock accomodates two bikes, supporting them at two points and allowing for u-lock compatibility of both the wheel and bike frame.

6903



6903 Shown

Specifications - 1.66'' electrowelded steel tubing, 12 gauge							
Model #	# Bikes	Type of mount	weight	length	width	height	Space Requirement
6902	2	below grade	17 lbs.	30"	1.66"	32"	68" x 110"
6903	2	flange mount	19 lbs.	34.3"	6"	32"	68" x 110"

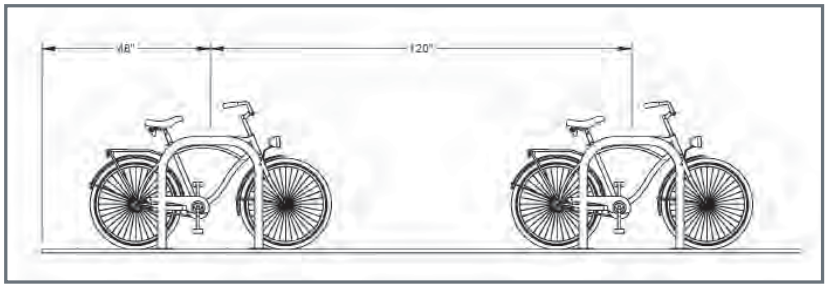
Specifications - 2 3/8'' schedule 40 steel pipe, 9 gauge							
Model #	# Bikes	Type of mount	weight	length	width	height	Space Requirement
2112	2	below grade	31 lbs.	30"	2.4"	32"	68" x 110"
2113	2	flange mount	30 lbs.	33.6"	6"	32"	68" x 110"

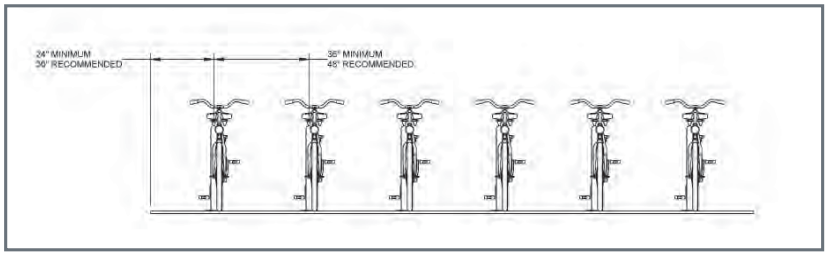
Specifications - 2'' X 2'' X 3/16'' square tubing, 7 gauge							
Model #	# Bikes	Type of mount	weight	length	width	height	Space Requirement
2212	2	below grade	38 lbs.	30"	2"	32"	68" x 110"
2213	2	flange mount	34 lbs.	34"	6"	32"	68" x 110"

Note: Saris Parking Systems representatives can assist with custom layout and spacing to meet your room dimensions and desired bike capacity.

Bike Dock

Recommended Spacing





Product Details

- 1.66", 12 gauge schedule 40 pipe -- most affordable solution
- 2 3/8", 9 gauge schedule 40 pipe -- larger diameter pipe leaves less space between the lock and rack, which provides better security
- 2" square, 7 gauge schedule 40 pipe -- square tubing resists efforts from thieves using pipe cutters
- Offers 2 points of contact for bike stability
- Meets APBP guidelines

Product Information

Saris Bike Dock as manufactured by Saris

# of Bikes

2 bikes per rack

Materials

1.66", 12 gauge
2 3/8" 9 gauge
2" Square, 7 gauge

Finish

Powder Coat
Galvanized
Stainless Steel
Thermoplastic

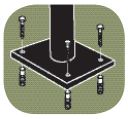
Hardware

Flange Mount recommended anchor:
Temporary Mount: #6263
Permanent Mount: #6260

Spacing

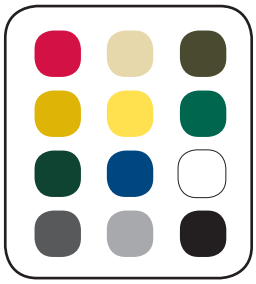
48" recommended between perpendicular racks
120" recommended between racks (center to center)

Anchors must be purchased separately



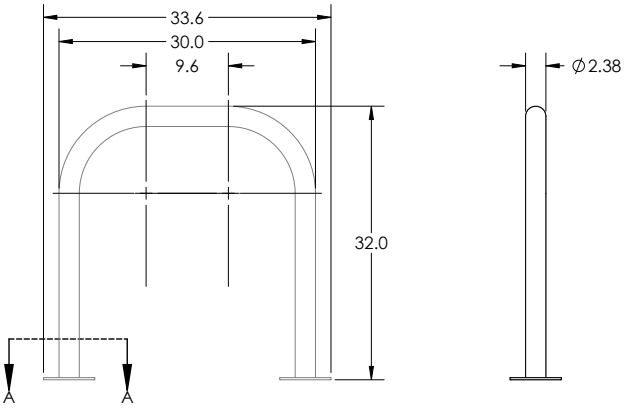
Flange Mount

Below Grade Mount



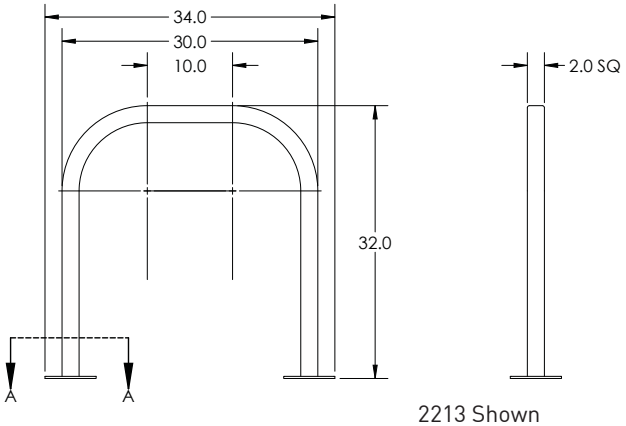
Standard Colors

2113



2113 Shown

2213



2213 Shown

Downloadable product resources available online:

CAD Files | SketchUp Files | Written Specs | Photos

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CONCEPT PERSPECTIVE

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COLOR CONCEPT
PERSPECTIVE

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PERSPECTIVE

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