Subcatchment 3S: Subcatchment 3

Runoff = 4.96 cfs @ 12.15 hrs, Volume= 0.454 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50"

Area (ac)	CN	Description
0.780	74	Open Space HSG C
0.640	98	Impervious
1.420	85	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	15	0.0278	0.1		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.4	26	0.0278	1.2		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
3.0	26	0.0278	0.1		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
0.1	5	0.0278	0.8		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
2.2	18	0.0278	0.1		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
3.1	480	0.0164	2.6		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	35	0.0111	5.6	4.44	**Circular Channel (pipe),** Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0
10.8	605	Total			

Subcatchment 4S: Subcatchment 4

Runoff = 1.84 cfs @ 12.02 hrs, Volume= 0.153 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50"

Area (ac)	CN	Description
0.350	98	Impervious (Roof)

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

Reach 1R: Reach 1

Inflow = 8.30 cfs @ 12.13 hrs, Volume= 0.833 af
Outflow = 8.00 cfs @ 12.17 hrs, Volume= 0.833 af, Atten= 4%, Lag= 2.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Max. Velocity= 5.3 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 1.7 fps, Avg. Travel Time= 2.6 min

Peak Depth= 0.89'
Capacity at bank full= 30.69 cfs
Inlet Invert= 33.02', Outlet Invert= 31.97'
30.0" Diameter Pipe n= 0.011 Length= 262.0' Slope= 0.0040 '/'

Reach 10R: Reach 10

Inflow = 1.88 cfs @ 12.13 hrs, Volume= 0.162 af
Outflow = 1.88 cfs @ 12.13 hrs, Volume= 0.162 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs / 2
Max. Velocity= 9.4 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.3 fps, Avg. Travel Time= 0.1 min

Peak Depth= 0.33'
Capacity at bank full= 5.79 cfs
Inlet Invert= 37.30', Outlet Invert= 36.55'
10.0" Diameter Pipe n= 0.011 Length= 15.0' Slope= 0.0500 '/'

Reach 20R: Reach 20

Inflow = 0.70 cfs @ 12.18 hrs, Volume= 0.064 af
Outflow = 0.66 cfs @ 12.24 hrs, Volume= 0.064 af, Atten= 6%, Lag= 3.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Max. Velocity= 3.5 fps, Min. Travel Time= 2.0 min
Avg. Velocity = 1.3 fps, Avg. Travel Time= 5.6 min

Peak Depth= 0.33'
Capacity at bank full= 2.14 cfs
Inlet Invert= 42.69', Outlet Invert= 39.80'
10.0" Diameter Pipe n= 0.011 Length= 425.0' Slope= 0.0068 '/'

Reach 30R: Reach 30

Inflow = 2.40 cfs @ 12.15 hrs, Volume= 0.226 af
Outflow = 2.12 cfs @ 12.17 hrs, Volume= 0.226 af, Atten= 12%, Lag= 1.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs / 2
Max. Velocity= 4.4 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.7 fps, Avg. Travel Time= 0.1 min

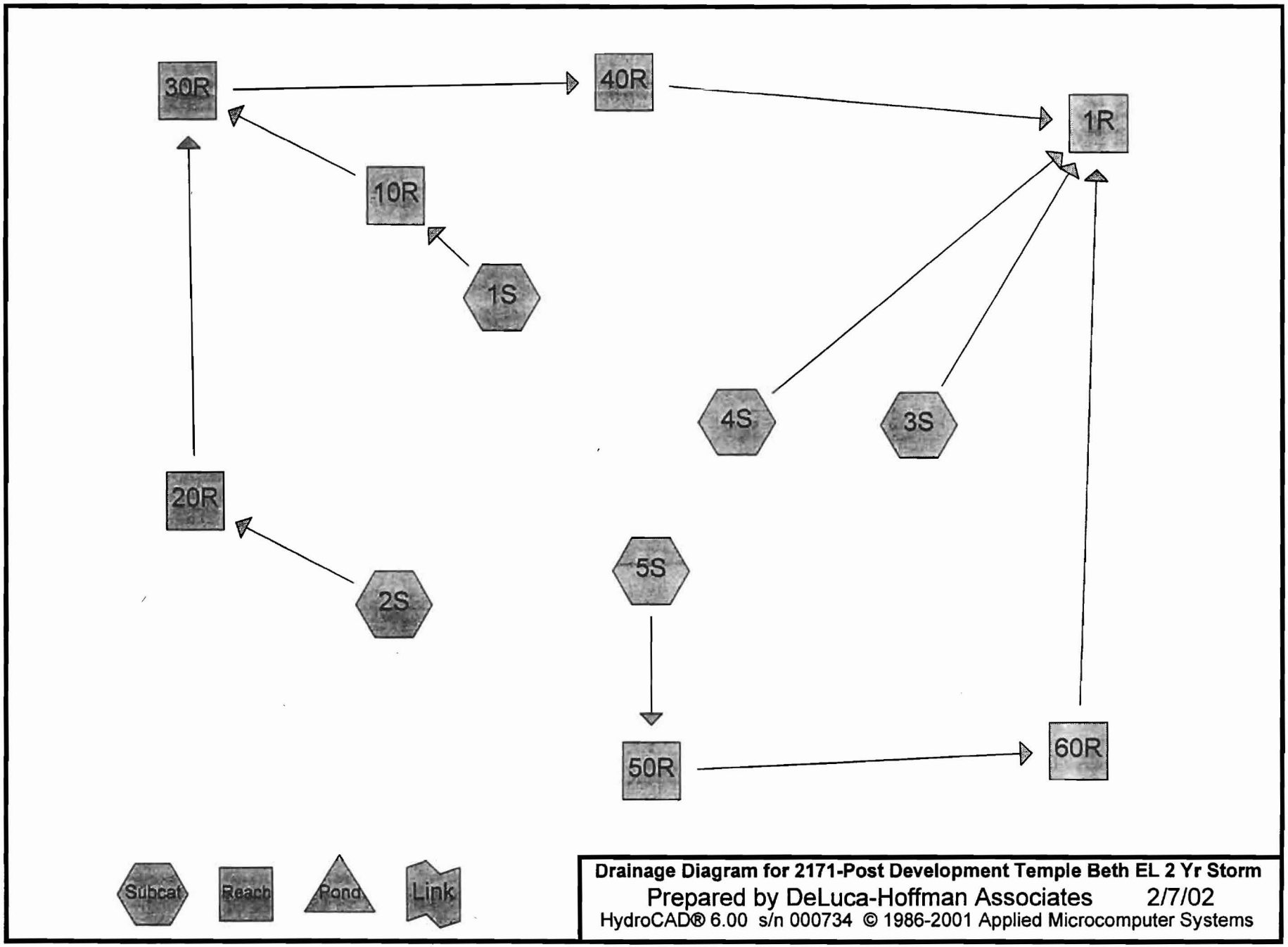
Peak Depth= 0.83'
Capacity at bank full= 2.11 cfs
Inlet Invert= 35.84', Outlet Invert= 35.74'
10.0" Diameter Pipe n= 0.011 Length= 15.0' Slope= 0.0067 '/'

Reach 40R: Reach 40

Inflow	=	2.12 cfs @	12.17 hrs, Volume=	0.226 af
Outflow	=	2.10 cfs @	12.23 hrs, Volume=	0.226 af, Atten= 1%, Lag= 3.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs / 2
Max. Velocity= 5.6 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 2.0 fps, Avg. Travel Time= 1.2 min

Peak Depth= 0.43'
Capacity at bank full= 8.21 cfs
Inlet Invert= 35.30', Outlet Invert= 33.68'
15.0" Diameter Pipe n= 0.011 Length= 140.0' Slope= 0.0116 '/'



Drainage Diagram for 2171-Post Development Temple Beth EL 2 Yr Storm

Prepared by DeLuca-Hoffman Associates 2/7/02

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Time span=0.00-30.00 hrs, dt=0.10 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Type III 24-hr Rainfall=3.00"
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subcatchment 1
Tc=8.6 min CN=87 Area=0.470 ac Runoff= 0.83 cfs 0.068 af

Subcatchment 2S: Subcatchment 2
Tc=3.2 min CN=84 Area=0.140 ac Runoff= 0.23 cfs 0.018 af

Subcatchment 3S: Subcatchment 3
Tc=8.5 min CN=86 Area=1.200 ac Runoff= 2.03 cfs 0.166 af

Subcatchment 4S: Subcatchment 4
Tc=2.0 min CN=98 Area=0.610 ac Runoff= 1.73 cfs 0.141 af

Subcatchment 5S: Subcatchment 5
Tc=4.0 min CN=81 Area=0.060 ac Runoff= 0.09 cfs 0.007 af

Reach 1R: Reach 1 Inflow= 4.31 cfs 0.399 af
Length= 262.0' Max Vel= 4.4 fps Capacity= 30.69 cfs Outflow= 4.15 cfs 0.399 af

Reach 10R: Reach 10 Inflow= 0.83 cfs 0.068 af
Length= 15.0' Max Vel= 7.5 fps Capacity= 5.79 cfs Outflow= 0.83 cfs 0.068 af

Reach 20R: Reach 20 Inflow= 0.23 cfs 0.018 af
Length= 425.0' Max Vel= 2.5 fps Capacity= 2.14 cfs Outflow= 0.20 cfs 0.018 af

Reach 30R: Reach 30 Inflow= 1.02 cfs 0.086 af
Length= 15.0' Max Vel= 3.8 fps Capacity= 2.11 cfs Outflow= 1.02 cfs 0.086 af

Reach 40R: Reach 40 Inflow= 1.02 cfs 0.086 af
Length= 140.0' Max Vel= 4.5 fps Capacity= 8.21 cfs Outflow= 0.98 cfs 0.086 af

Reach 50R: Reach 50 Inflow= 0.09 cfs 0.007 af
Length= 70.0' Max Vel= 3.1 fps Capacity= 7.29 cfs Outflow= 0.08 cfs 0.007 af

Reach 60R: Reach 60 Inflow= 0.08 cfs 0.007 af
Length= 300.0' Max Vel= 1.6 fps Capacity= 0.93 cfs Outflow= 0.07 cfs 0.007 af

Runoff Area = 2.480 ac Volume = 0.399 af Average Depth = 1.93"

Subcatchment 1S: Subcatchment 1

Runoff = 0.83 cfs @ 12.12 hrs, Volume= 0.068 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=3.00"

Area (ac)	CN	Description
0.210	74	Open Space HSG C
0.260	98	Impervious
0.470	87	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.7	23	0.0130	0.1		**Sheet Flow, Overland FLow** Grass: Short n= 0.150 P2= 3.00"
4.0	45	0.0400	0.2		**Sheet Flow, Overland Flow** Grass: Short n= 0.150 P2= 3.00"
0.9	135	0.0137	2.4		**Shallow Concentrated Flow, Curb Flow** Paved Kv= 20.3 fps
8.6	203	Total			

Subcatchment 2S: Subcatchment 2

Runoff = 0.23 cfs @ 12.06 hrs, Volume= 0.018 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=3.00"

Area (ac)	CN	Description
0.080	74	Open Space HSG C
0.060	98	Impervious
0.140	84	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.9	40	0.0750	0.2		**Sheet Flow, Overland Flow** Grass: Short n= 0.150 P2= 3.00"
0.3	35	0.0100	2.0		**Shallow Concentrated Flow, Curb Flow** Paved Kv= 20.3 fps
3.2	75	Total			

Subcatchment 3S: Subcatchment 3

Runoff = 2.03 cfs @ 12.12 hrs, Volume= 0.166 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=3.00"

Area (ac)	CN	Description
0.580	74	Open Space HSG C
0.020	89	Woodchips (Gravel) HSG C
0.600	98	Impervious
1.200	86	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	26	0.0278	0.1		**Sheet Flow, Overland Flow** Grass: Short n= 0.150 P2= 3.00"
0.1	5	0.0278	0.8		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
2.2	18	0.0278	0.1		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
3.1	480	0.0164	2.6		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	35	0.0111	5.6	4.44	**Circular Channel (pipe), Storm Drain** Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0
8.5	564	Total			

Subcatchment 4S: Subcatchment 4

Runoff = 1.73 cfs @ 12.02 hrs, Volume= 0.141 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=3.00"

Area (ac)	CN	Description
0.610	98	Impervious (Roof)

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

Subcatchment 5S: Subcatchment 5

Runoff = 0.09 cfs @ 12.08 hrs, Volume= 0.007 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=3.00"

Area (ac)	CN	Description
0.040	74	Open Space HSG C
0.010	89	Gravel (Woodchips) HSG C
0.010	98	Impervious
0.060	81	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.9	55	0.0670	0.2		**Sheet Flow, Overland Flow** Grass: Short n= 0.150 P2= 3.00"
0.1	55	0.0300	9.3	7.29	**Circular Channel (pipe), Storm Drain** Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0
4.0	110	Total			

Reach 1R: Reach 1

Inflow = 4.31 cfs @ 12.10 hrs, Volume= 0.399 af
Outflow = 4.15 cfs @ 12.12 hrs, Volume= 0.399 af, Atten= 4%, Lag= 1.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Max. Velocity= 4.4 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 1.4 fps, Avg. Travel Time= 3.1 min

Peak Depth= 0.63'
Capacity at bank full= 30.69 cfs
Inlet Invert= 33.02', Outlet Invert= 31.97'
30.0" Diameter Pipe n= 0.011 Length= 262.0' Slope= 0.0040 '/'

Reach 10R: Reach 10

Inflow = 0.83 cfs @ 12.12 hrs, Volume= 0.068 af
Outflow = 0.83 cfs @ 12.12 hrs, Volume= 0.068 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs / 2
Max. Velocity= 7.5 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 2.7 fps, Avg. Travel Time= 0.1 min

Peak Depth= 0.21'
Capacity at bank full= 5.79 cfs
Inlet Invert= 37.30', Outlet Invert= 36.55'
10.0" Diameter Pipe n= 0.011 Length= 15.0' Slope= 0.0500 '/'

Reach 20R: Reach 20

Inflow = 0.23 cfs @ 12.06 hrs, Volume= 0.018 af
Outflow = 0.20 cfs @ 12.15 hrs, Volume= 0.018 af, Atten= 12%, Lag= 5.1 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Max. Velocity= 2.5 fps, Min. Travel Time= 2.8 min
Avg. Velocity = 0.9 fps, Avg. Travel Time= 7.8 min

Peak Depth= 0.18'
Capacity at bank full= 2.14 cfs
Inlet Invert= 42.69', Outlet Invert= 39.80'
10.0" Diameter Pipe n= 0.011 Length= 425.0' Slope= 0.0068 '/'

Reach 30R: Reach 30

Inflow = 1.02 cfs @ 12.13 hrs, Volume= 0.086 af
Outflow = 1.02 cfs @ 12.13 hrs, Volume= 0.086 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs / 2
Max. Velocity= 3.8 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.4 fps, Avg. Travel Time= 0.2 min

Peak Depth= 0.41'
Capacity at bank full= 2.11 cfs
Inlet Invert= 35.84', Outlet Invert= 35.74'
10.0" Diameter Pipe n= 0.011 Length= 15.0' Slope= 0.0067 '/'

Reach 40R: Reach 40

Inflow = 1.02 cfs @ 12.13 hrs, Volume= 0.086 af
Outflow = 0.98 cfs @ 12.14 hrs, Volume= 0.086 af, Atten= 4%, Lag= 0.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs / 2
Max. Velocity= 4.5 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.6 fps, Avg. Travel Time= 1.4 min

Peak Depth= 0.30'
Capacity at bank full= 8.21 cfs
Inlet Invert= 35.30', Outlet Invert= 33.68'
15.0" Diameter Pipe n= 0.011 Length= 140.0' Slope= 0.0116 '/'

Reach 50R: Reach 50

Inflow = 0.09 cfs @ 12.08 hrs, Volume= 0.007 af
Outflow = 0.08 cfs @ 12.09 hrs, Volume= 0.007 af, Atten= 1%, Lag= 0.5 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Max. Velocity= 3.1 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.2 fps, Avg. Travel Time= 1.0 min

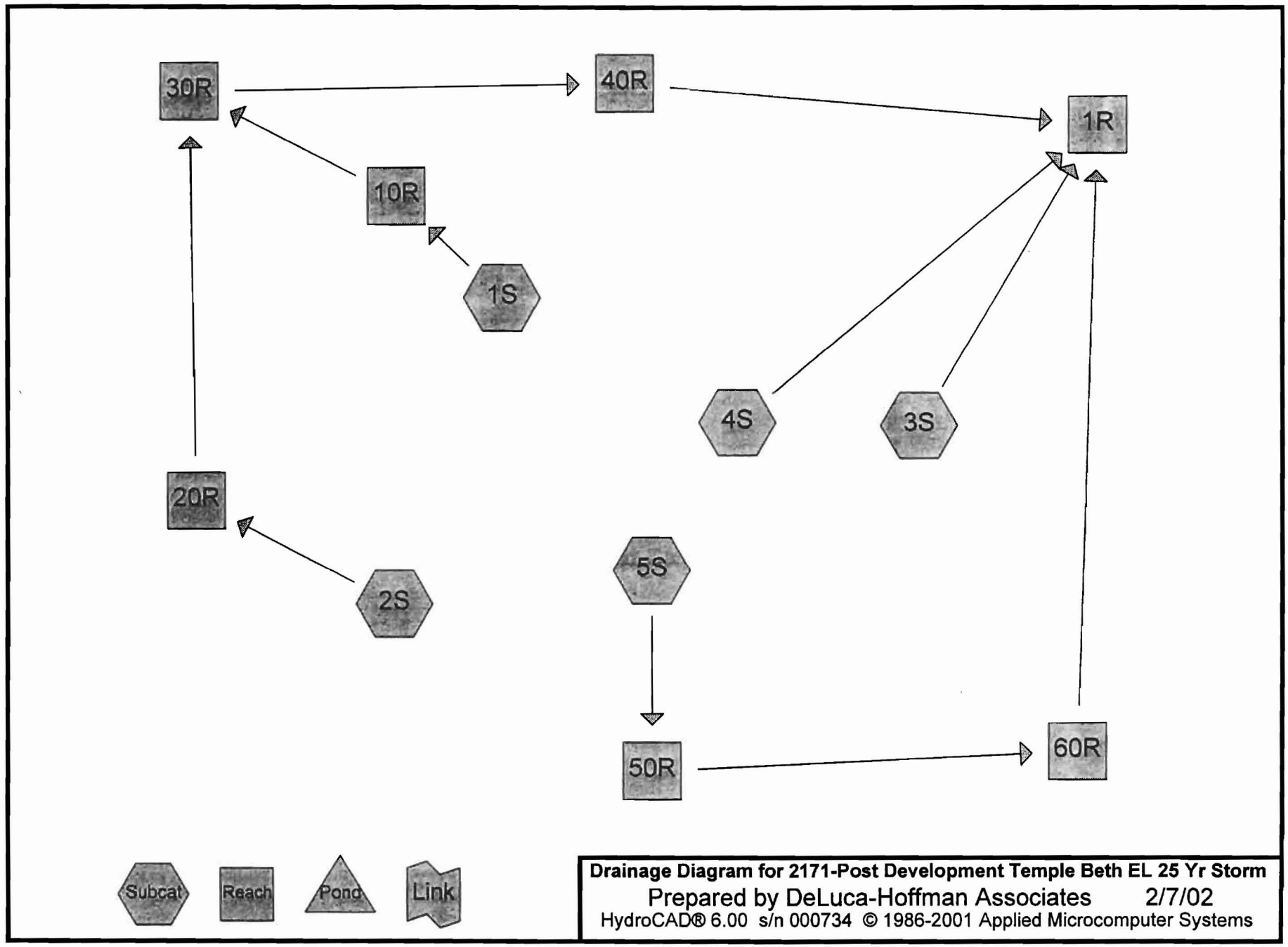
Peak Depth= 0.08'
Capacity at bank full= 7.29 cfs
Inlet Invert= 41.24', Outlet Invert= 39.14'
12.0" Diameter Pipe n= 0.011 Length= 70.0' Slope= 0.0300 '/'

Reach 60R: Reach 60

Inflow = 0.08 cfs @ 12.09 hrs, Volume= 0.007 af
Outflow = 0.07 cfs @ 12.19 hrs, Volume= 0.007 af, Atten= 14%, Lag= 6.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Max. Velocity= 1.6 fps, Min. Travel Time= 3.1 min
Avg. Velocity = 0.6 fps, Avg. Travel Time= 8.3 min

Peak Depth= 0.13'
Capacity at bank full= 0.93 cfs
Inlet Invert= 36.71', Outlet Invert= 35.21'
8.0" Diameter Pipe n= 0.012 Length= 300.0' Slope= 0.0050 '/'



Drainage Diagram for 2171-Post Development Temple Beth EL 25 Yr Storm

Prepared by DeLuca-Hoffman Associates 2/7/02

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Time span=0.00-30.00 hrs, dt=0.10 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Type III 24-hr Rainfall=5.50"
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Subcatchment 1
Tc=8.6 min CN=87 Area=0.470 ac Runoff= 1.89 cfs 0.158 af

Subcatchment 2S: Subcatchment 2
Tc=3.2 min CN=84 Area=0.140 ac Runoff= 0.54 cfs 0.044 af

Subcatchment 3S: Subcatchment 3
Tc=8.5 min CN=86 Area=1.200 ac Runoff= 4.74 cfs 0.394 af

Subcatchment 4S: Subcatchment 4
Tc=2.0 min CN=98 Area=0.610 ac Runoff= 3.21 cfs 0.268 af

Subcatchment 5S: Subcatchment 5
Tc=4.0 min CN=81 Area=0.060 ac Runoff= 0.22 cfs 0.017 af

Reach 1R: Reach 1 Inflow= 9.32 cfs 0.880 af
Length= 262.0' Max Vel= 5.5 fps Capacity= 30.69 cfs Outflow= 9.09 cfs 0.880 af

Reach 10R: Reach 10 Inflow= 1.89 cfs 0.158 af
Length= 15.0' Max Vel= 9.5 fps Capacity= 5.79 cfs Outflow= 1.89 cfs 0.158 af

Reach 20R: Reach 20 Inflow= 0.54 cfs 0.044 af
Length= 425.0' Max Vel= 3.3 fps Capacity= 2.14 cfs Outflow= 0.50 cfs 0.044 af

Reach 30R: Reach 30 Inflow= 2.39 cfs 0.202 af
Length= 15.0' Max Vel= 4.3 fps Capacity= 2.11 cfs Outflow= 2.33 cfs 0.202 af

Reach 40R: Reach 40 Inflow= 2.33 cfs 0.202 af
Length= 140.0' Max Vel= 5.7 fps Capacity= 8.21 cfs Outflow= 2.28 cfs 0.202 af

Reach 50R: Reach 50 Inflow= 0.22 cfs 0.017 af
Length= 70.0' Max Vel= 4.2 fps Capacity= 7.29 cfs Outflow= 0.22 cfs 0.017 af

Reach 60R: Reach 60 Inflow= 0.22 cfs 0.017 af
Length= 300.0' Max Vel= 2.1 fps Capacity= 0.93 cfs Outflow= 0.19 cfs 0.017 af

Runoff Area = 2.480 ac Volume = 0.880 af Average Depth = 4.26"

Subcatchment 1S: Subcatchment 1

Runoff = 1.89 cfs @ 12.12 hrs, Volume= 0.158 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50"

Area (ac)	CN	Description
0.210	74	Open Space HSG C
0.260	98	Impervious
0.470	87	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.7	23	0.0130	0.1		**Sheet Flow, Overland FLow** Grass: Short n= 0.150 P2= 3.00"
4.0	45	0.0400	0.2		**Sheet Flow, Overland Flow** Grass: Short n= 0.150 P2= 3.00"
0.9	135	0.0137	2.4		**Shallow Concentrated Flow, Curb Flow** Paved Kv= 20.3 fps
8.6	203	Total			

Subcatchment 2S: Subcatchment 2

Runoff = 0.54 cfs @ 12.05 hrs, Volume= 0.044 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50"

Area (ac)	CN	Description
0.080	74	Open Space HSG C
0.060	98	Impervious
0.140	84	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.9	40	0.0750	0.2		**Sheet Flow, Overland Flow** Grass: Short n= 0.150 P2= 3.00"
0.3	35	0.0100	2.0		**Shallow Concentrated Flow, Curb Flow** Paved Kv= 20.3 fps
3.2	75	Total			

Subcatchment 3S: Subcatchment 3

Runoff = 4.74 cfs @ 12.12 hrs, Volume= 0.394 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50"

Area (ac)	CN	Description
0.580	74	Open Space HSG C
0.020	89	Woodchips (Gravel) HSG C
0.600	98	Impervious
1.200	86	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	26	0.0278	0.1		**Sheet Flow, Overland Flow** Grass: Short n= 0.150 P2= 3.00"
0.1	5	0.0278	0.8		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.00"
2.2	18	0.0278	0.1		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.00"
3.1	480	0.0164	2.6		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.1	35	0.0111	5.6	4.44	**Circular Channel (pipe), Storm Drain** Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0
8.5	564	Total			

Subcatchment 4S: Subcatchment 4

Runoff = 3.21 cfs @ 12.02 hrs, Volume= 0.268 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50"

Area (ac)	CN	Description
0.610	98	Impervious (Roof)

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

Subcatchment 5S: Subcatchment 5

Runoff = 0.22 cfs @ 12.08 hrs, Volume= 0.017 af

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type III 24-hr Rainfall=5.50"

Area (ac)	CN	Description
0.040	74	Open Space HSG C
0.010	89	Gravel (Woodchips) HSG C
0.010	98	Impervious
0.060	81	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.9	55	0.0670	0.2		**Sheet Flow, Overland Flow** Grass: Short n= 0.150 P2= 3.00"
0.1	55	0.0300	9.3	7.29	**Circular Channel (pipe), Storm Drain** Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0
4.0	110	Total			

Reach 1R: Reach 1

Inflow = 9.32 cfs @ 12.10 hrs, Volume= 0.880 af
Outflow = 9.09 cfs @ 12.12 hrs, Volume= 0.880 af, Atten= 2%, Lag= 1.2 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Max. Velocity= 5.5 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 1.8 fps, Avg. Travel Time= 2.5 min

Peak Depth= 0.95'
Capacity at bank full= 30.69 cfs
Inlet Invert= 33.02', Outlet Invert= 31.97'
30.0" Diameter Pipe n= 0.011 Length= 262.0' Slope= 0.0040 '/'

Reach 10R: Reach 10

Inflow = 1.89 cfs @ 12.12 hrs, Volume= 0.158 af
Outflow = 1.89 cfs @ 12.12 hrs, Volume= 0.158 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs / 2
Max. Velocity= 9.5 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.3 fps, Avg. Travel Time= 0.1 min

Peak Depth= 0.33'
Capacity at bank full= 5.79 cfs
Inlet Invert= 37.30', Outlet Invert= 36.55'
10.0" Diameter Pipe n= 0.011 Length= 15.0' Slope= 0.0500 '/'

Reach 20R: Reach 20

Inflow = 0.54 cfs @ 12.05 hrs, Volume= 0.044 af
Outflow = 0.50 cfs @ 12.12 hrs, Volume= 0.044 af, Atten= 8%, Lag= 3.8 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Max. Velocity= 3.3 fps, Min. Travel Time= 2.2 min
Avg. Velocity = 1.1 fps, Avg. Travel Time= 6.4 min

Peak Depth= 0.29'
Capacity at bank full= 2.14 cfs
Inlet Invert= 42.69', Outlet Invert= 39.80'
10.0" Diameter Pipe n= 0.011 Length= 425.0' Slope= 0.0068 '/'

Reach 30R: Reach 30

Inflow = 2.39 cfs @ 12.12 hrs, Volume= 0.202 af
Outflow = 2.33 cfs @ 12.16 hrs, Volume= 0.202 af, Atten= 2%, Lag= 2.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs / 2
Max. Velocity= 4.3 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 1.7 fps, Avg. Travel Time= 0.1 min

Peak Depth= 0.83'
Capacity at bank full= 2.11 cfs
Inlet Invert= 35.84', Outlet Invert= 35.74'
10.0" Diameter Pipe n= 0.011 Length= 15.0' Slope= 0.0067 '/'

Reach 40R: Reach 40

Inflow = 2.33 cfs @ 12.16 hrs, Volume= 0.202 af
Outflow = 2.28 cfs @ 12.17 hrs, Volume= 0.202 af, Atten= 2%, Lag= 0.3 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs / 2
Max. Velocity= 5.7 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 2.0 fps, Avg. Travel Time= 1.2 min

Peak Depth= 0.45'
Capacity at bank full= 8.21 cfs
Inlet Invert= 35.30', Outlet Invert= 33.68'
15.0" Diameter Pipe n= 0.011 Length= 140.0' Slope= 0.0116 '/'

Reach 50R: Reach 50

Inflow = 0.22 cfs @ 12.08 hrs, Volume= 0.017 af
Outflow = 0.22 cfs @ 12.08 hrs, Volume= 0.017 af, Atten= 1%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Max. Velocity= 4.2 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.5 fps, Avg. Travel Time= 0.8 min

Peak Depth= 0.12'
Capacity at bank full= 7.29 cfs
Inlet Invert= 41.24', Outlet Invert= 39.14'
12.0" Diameter Pipe n= 0.011 Length= 70.0' Slope= 0.0300 '/'

Reach 60R: Reach 60

Inflow = 0.22 cfs @ 12.08 hrs, Volume= 0.017 af
Outflow = 0.19 cfs @ 12.15 hrs, Volume= 0.017 af, Atten= 13%, Lag= 3.9 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Max. Velocity= 2.1 fps, Min. Travel Time= 2.3 min
Avg. Velocity = 0.7 fps, Avg. Travel Time= 6.7 min

Peak Depth= 0.22'
Capacity at bank full= 0.93 cfs
Inlet Invert= 36.71', Outlet Invert= 35.21'
8.0" Diameter Pipe n= 0.012 Length= 300.0' Slope= 0.0050 '/'

SECTION 10

TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL

10.0 Overview

See attached plan set sheet L-3 Site Grading and Utilities Plan and sheet L-2 Site Layout and Materials Plan for location of temporary and permanent erosion and sediment control facilities.

10.1 Erosion/Sedimentation Control Devices

The following erosion and sediment control devices will be implemented by the Contractor as part of the site development. These devices shall be installed as indicated on the plans or as described within this report. For further reference, see the Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices.

1. Siltation fence shall be installed downslope of any disturbed area(s) to trap runoff-borne sediments until the site is revegetated. The silt fence shall be installed per the detail provided in the plan set and inspected immediately after each rainfall and at least daily during prolonged rainfall. Repairs shall be made immediately by the Contractor if there are any signs of erosion or sedimentation below the fence line. Proper placement of stakes and keying the bottom of the fabric into the ground is critical to the effectiveness of the fence. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind the fence, the barrier shall be replaced with a stone check dam.

2. Straw or hay mulch including hydroseeding is intended to provide cover for denuded or seeded areas until revegetation is established. Mulch placed on slopes of less than 10 percent shall be anchored by applying water; mulch placed on slopes steeper than 10 percent shall be covered with a fabric netting and anchored with staples in accordance with the manufacturer's recommendations. Mulch application rates are provided in Attachment A of this section. Hay mulch shall be available on site at all times in order to provide immediate temporary stabilization when necessary. Where necessary, a temporary stone channel pipe sluice shall be used to convey runoff down the slope.

3. Stone check dams and hay bale barriers are intended to reduce runoff velocities and protect denuded soil surfaces from concentrated flows. Installation details and stone sizes are provided in the construction plan set on the erosion control detail sheets.

4. A construction entrance will be constructed at access points onto the site to prevent tracking of soil onto adjacent local roads.

5. Stone sediment traps or a premanufactured SiltSack™ will be installed at catch basin inlets to prevent silt from entering the combined sewer system. Installation details are provided in the plan set on the erosion control detail sheets.

8. During grubbing operations stone check dams or hay bale barriers will be installed at any evident concentrated flow discharge points.

9. Silt fencing with a maximum stake spacing of 6 feet should be used, unless the fence is supported by wire fence reinforcement of minimum 14 gauge and with a maximum mesh spacing of 6 inches, in which case stakes may be spaced a maximum of 10 feet apart. The bottom of the fence should be properly anchored a minimum of 6" per the plan detail and backfilled. Any silt fence identified by the owner or reviewing agencies as not being properly installed during construction shall be immediately repaired in accordance with the installation details.

10. Storm drain catch basin inlet protection shall be provided through the use of stone sediment barriers or a premanufactured SiltSack™ as distributed by A. H. Harris Company, Portland, Maine. Stone sediment barrier installation details are provided in the plan set. The barriers shall be inspected after each rainfall and repairs made as necessary. Sediment shall be removed and the barrier restored to its original dimensions when the sediment has accumulated to ½ the design depth of the barrier. Sediment shall be removed from SiltSacks™ as necessary. Inlet protection shall be removed when the tributary drainage area has been stabilized.

11. Disturbed slopes over 4:1 shall receive erosion control mesh.

12. Temporary subgrade inlets into selected catch basins may be used by the contractor to improve runoff collection within exposed areas during construction and provide sediment trapping prior to discharge into the basins. Installation details are provided in the plan set.

10.3 Timing and Sequence of Erosion/Sedimentation Control Measures

The following construction sequence shall be required to insure the effectiveness of the erosion and sedimentation control measures are optimized.

Note: For all grading related activities, the Contractor shall exercise extreme caution not to overexpose the site by limiting the disturbed area.

1. Install crushed stone-stabilized construction entrance as shown on the Erosion and Sedimentation Control Plan at the access drive.
2. Install siltation fence.
3. Construct diversion, drainage channels, and culvert crossings to direct flow to the basins.
5. Install stone and hay bale check dams at any concentrated flow discharge points.
6. Clear and grub foundation areas.
7. Install storm drain, underground electric, foundations and other utility work.
8. Bring site to subgrade including extension of embankments and temporary slope stabilization.
9. Construct other site improvements and utilities.

10. Install pavement as detailed on the site plans.
11. Loam, lime, fertilize, seed, and mulch all disturbed and denuded areas.
12. Remove accumulated sediment from silt barriers.
13. Review stability of the site. If a 75% catch of grass is achieved, remove temporary erosion control devices.

Soil will be considered disturbed if it does not have an established stand of vegetation covering at least 75% of the soil surface or has not been mulched with hay applied at a rate of 230 lb./1000 sq. ft.

SECTION 11

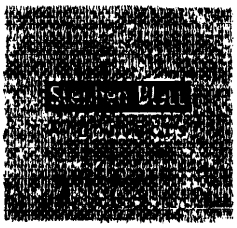
LANDSCAPE PLAN

11.0 Overview

The current site consists of the existing Temple Beth EL facility, lawn areas, and bush and tree areas. It is the intention of the owner to maintain the landscaped environment around the proposed building.

To attain this goal, the owner or owner's representative will be working with the site contractor to minimize impact to the surrounding landscaping.

In areas where impact to the existing vegetation cannot be avoided, replacement trees and bushes that compliment the existing surroundings will be installed.



FAX TRANSMITTAL

TO: **Gayle**
City of Portland
Inspector of Buildings
389 Congress St.
Portland, ME 04101

FAX #: **874-8716**

FROM: **David Matero**

DATE: **June 11, 2002**

PROJECT: **Temple Beth El**

RE: **Building Inspection Application**

PAGES: **5 (including cover)**

Special Comments or Instructions:

Gayle,

As requested, the following enclosures are signed and sealed applications for a building permit for Temple Beth El.

Originals shall follow in the mail.

Please feel free to contact me at 761-5911 if you have any questions.

Sincerely,

David Matero

10 Danforth Street
Post Office Box
583 DTS
Portland, Maine
04112-0583
Voice:
207.761.5911
Fax
207.761.2105

DEPT. CIT

JUN 12

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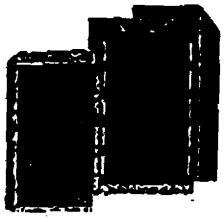
If you do not receive all pages please contact us A.S.A.P. (207) 761-5911

Zoning



CITY OF PORTLAND
BUILDING CODE CERTIFICATE
389 Congress St., Rm 315
Portland, ME 04101

TO: Inspector of Buildings City of Portland, Maine
Department of Planning & Urban Development
Division of Housing & Community Service

FROM: Stephen Blatt Architects

RE: Certificate of Design

DATE: June 6, 2002

These plans and/or specifications covering construction work on:

Temple Beth-El - Phase 1

Located at 400 Deering Ave. Portland, ME

Have been designed and drawn up by the undersigned, a Maine registered architect/engineer according to the BOCA National Building Code/1999 Fourteenth Edition, and local amendments.

(SEAL)

REGISTERED ARCHITECT
STEPHEN J. BLATT
No. 858
STATE OF MAINE

Signature

Title President

Firm Stephen Blatt Architects

Address 10 Danforth St. Portland, ME 04101

As per Maine State Law:

$50,000.00 or more in new construction, repair, expansion, addition, or modification for Building or Structures, shall be prepared by a registered design Professional.

PSH 6/20/2

CITY OF PORTLAND MAINE

389 Congress St., Rm 315
Portland, ME 04101
Tel. – 207-874-8704
Fax – 207-874-8716

TO: Inspector of Buildings City of Portland, Maine
Planning & Urban Development
Division of Housing & Community Services

FROM DESIGNER: Stephen Blatt Architects

10 Danforth St. Portland, ME 04102

DATE: 6/10/2002

Job Name: Temple Beth-El Phase 1

Address of Construction: 400 Deering Ave. Portland, ME

THE BOCA NATIONAL BUILDING CODE/1999 FourteenthEDITION

Construction project was designed according to the building code criteria listed below:

Building Code and Year BOCA 1999 Use Group Classification(s) A-4

Type of Construction 2C Bldg. Height 20'00" Max Bldg. Sq. Footage 21,652

Seismic Zone B Group Class 2

Roof Snow Load Per Sq. Ft. 39 Deed Load Per Sq. Ft. 20

Basic Wind Speed (mph) 85 Effective Velocity Pressure Per Sq. Ft. 20

Floor Live Load Per Sq. Ft. Lobby/Corridor = 100, Platform=100, Fixed Assembly=60
Office=50, Classroom= 40

Structure has full sprinkler system? Yes X No Alarm System? Yes X No
Sprinkler & Alarm systems must be installed according to BOCA and NFPA Standards with approval from the Portland Fire Department.

Is structure being considered unlimited area building: Yes No X

If mixed use, what subsection of 313 is being considered N/A

List Occupant loading for each room or space, designed into this Project.

See Occupant Loading Attachment

(Designers Stamp & Signature)

REGISTERED ARCHITECT STEPHEN BLATT No. 858 STATE OF MAINE

PSH 6/07/2K

CITY OF PORTLAND
ACCESSIBILITY CERTIFICATE

Designer: Stephen Blatt

Address of Project 400 Deering Ave. Portland, ME

Nature of Project New classroom wing and platform addition.

Renovations to existing kitchen, school, and administration.

Date 6/10/2002

The technical submissions covering the proposed construction work as described above have been have been designed in compliance with applicable referenced standards found in the Maine Human Rights Law and Federal Americans with Disability Act.

(SEAL)

Signature

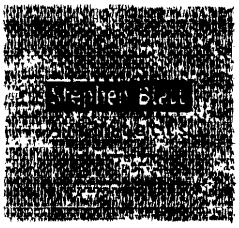
Title President

Firm Stephen Blatt Architects

Address 10 Danforth St.

Portland, ME 04101

Telephone (207) 761-5911



Occupant Loading

New Room	Occupant Load
Classroom #1A	23
Classroom #1B	20
Classroom #1 (with curtain open)	45
Classroom #2	27
Classroom #3	33
Classroom #4A	38
Classroom #4B	38
Classroom #4 (with curtain open)	212
Art Room (Multi-use)	38
Staff Lounge	6
Offices	1 Occupant per office
Conference	6
Platform	86

Existing Room	Occupant Load
Sanctuary	260 fixed seats
Social Hall	384
Platform	40
Offices	1 Occupant for office

10 Danforth Street

Post Office Box
583

Portland, Maine
04112-0583

Voice:
207.761.5911

Fax:
207.761.2105

email:
sba@sbarchitects.com

DeLUCA-HOFFMAN ASSOCIATES, INC.
CONSULTING ENGINEERS

778 MAIN STREET
SUITE 8
SOUTH PORTLAND, MAINE 04106
TEL. 207 775 1121
FAX 207 879 0896

- ROADWAY DESIGN
- ENVIRONMENTAL ENGINEERING
- TRAFFIC STUDIES AND MANAGEMENT
- PERMITTING
- AIRPORT ENGINEERING
- SITE PLANNING
- CONSTRUCTION ADMINISTRATION

February 7, 2002

Ms. Sarah Hopkins
Portland Planning Authority
City of Portland
4th Floor City Hall
Congress Street
Portland, Maine 04101

RE: Application for Major site plan review
Temple Beth El – Deering Avenue

Dear Sarah:

DeLuca-Hoffman Associates, Inc has been retained by Stephen Blatt Architects on behalf of the Temple Beth El to assist in the preparation of design plans and a Site plan Application. The Temple is proposing an expansion of the existing facility off Deering Avenue in Portland. The expansion will consist of multiple building additions that will provide larger worship facilities and also new classroom space for the Levey Day School. The project will also involve site work to provide ten (10) new parking spaces and a reconstructed drop-off driveway off Wadsworth Street. Grounds improvements include some landscaping enhancements around the Temple.

DeLuca-Hoffman Associates, Inc is requesting placement on the next available planning Board Workshop agenda in order to present the project to the Planning Board.

Enclosed with this package are nine copies of an application submission and preliminary plans for the project. An application fee of $500.00 is also enclosed. Stephen Blatt Architects is currently preparing preliminary building plans and expects to provide elevations as soon as possible.

We look forward to the staff review and Planning Board consideration for the project. If you have any questions please call.

Sincerely,

DeLuca-Hoffman Associates, Inc

Stephen Bushey, PE
Senior Engineer

Srb/ked/JN2171/Hopkins02-07-02application

Enclosure – nine copies of application materials

CITY OF PORTLAND, MAINE
DEVELOPMENT REVIEW APPLICATION
PLANNING DEPARTMENT PROCESSING FORM
Insp Copy

2002-0034
Application I. D. Number

2/8/02
Application Date

Temple Beth-el
Applicant

400 Deering Ave, Portland, ME 04103
Applicant's Mailing Address

Temple Beth El Expansion / Renovatio
Project Name/Description

Stephen Blatt Architects
Consultant/Agent

400 - 400 Deering Ave, Portland, Maine
Address of Proposed Site

Agent Ph: **Agent Fax:**
Applicant or Agent Daytime Telephone, Fax

119 I001001
Assessor's Reference: Chart-Block-Lot

Proposed Development (check all that apply): ☐ New Building ☑ Building Addition ☐ Change Of Use ☐ Residential ☐ Office ☐ Retail ☐ Manufacturing ☐ Warehouse/Distribution ☑ Parking Lot ☑ Other (specify) **Building & Parking Spaces**

11,000 sq. ft.	**74,272 sq. ft.**	**R5**
Proposed Building square Feet or # of Units	Acreage of Site	Zoning

Check Review Required:

☑ Site Plan (major/minor)
☐ Subdivision # of lots
☐ PAD Review
☐ 14-403 Streets Review
☐ Flood Hazard
☐ Shoreland
☐ HistoricPreservation
☐ DEP Local Certification
☐ Zoning Conditional Use (ZBA/PB)
☐ Zoning Variance
☐ Other

Fees Paid: Site Plan **$500.00** Subdivision _____ Engineer Review _____ Date **2/8/02**

Insp Approval Status:

Reviewer _____

☐ **Approved**
☐ **Approved w/Conditions** See Attached
☐ **Denied**

Approval Date _____ Approval Expiration _____ Extension to _____ ☐ Additional Sheets Attached

☐ Condition Compliance _____ (signature) _____ (date)

Performance Guarantee ☐ **Required*** ☐ **Not Required**

* No building permit may be issued until a performance guarantee has been submitted as indicated below

☐ Performance Guarantee Accepted — date _____ amount _____ expiration date _____

☐ Inspection Fee Paid — date _____ amount _____

☐ Building Permit Issue — date _____

☐ Performance Guarantee Reduced — date _____ remaining balance _____ signature _____

☐ Temporary Certificate of Occupancy — date _____ ☐ Conditions (See Attached) expiration date _____

☐ Final Inspection — date _____ signature _____

☐ Certificate Of Occupancy — date _____

☐ Performance Guarantee Released — date _____ signature _____

☐ Defect Guarantee Submitted — submitted date _____ amount _____ expiration date _____

☐ Defect Guarantee Released — date _____ signature _____

City of Portland

Application for Major Site Plan Review

Temple Beth EL Synagogue Expansion/Renovation Project

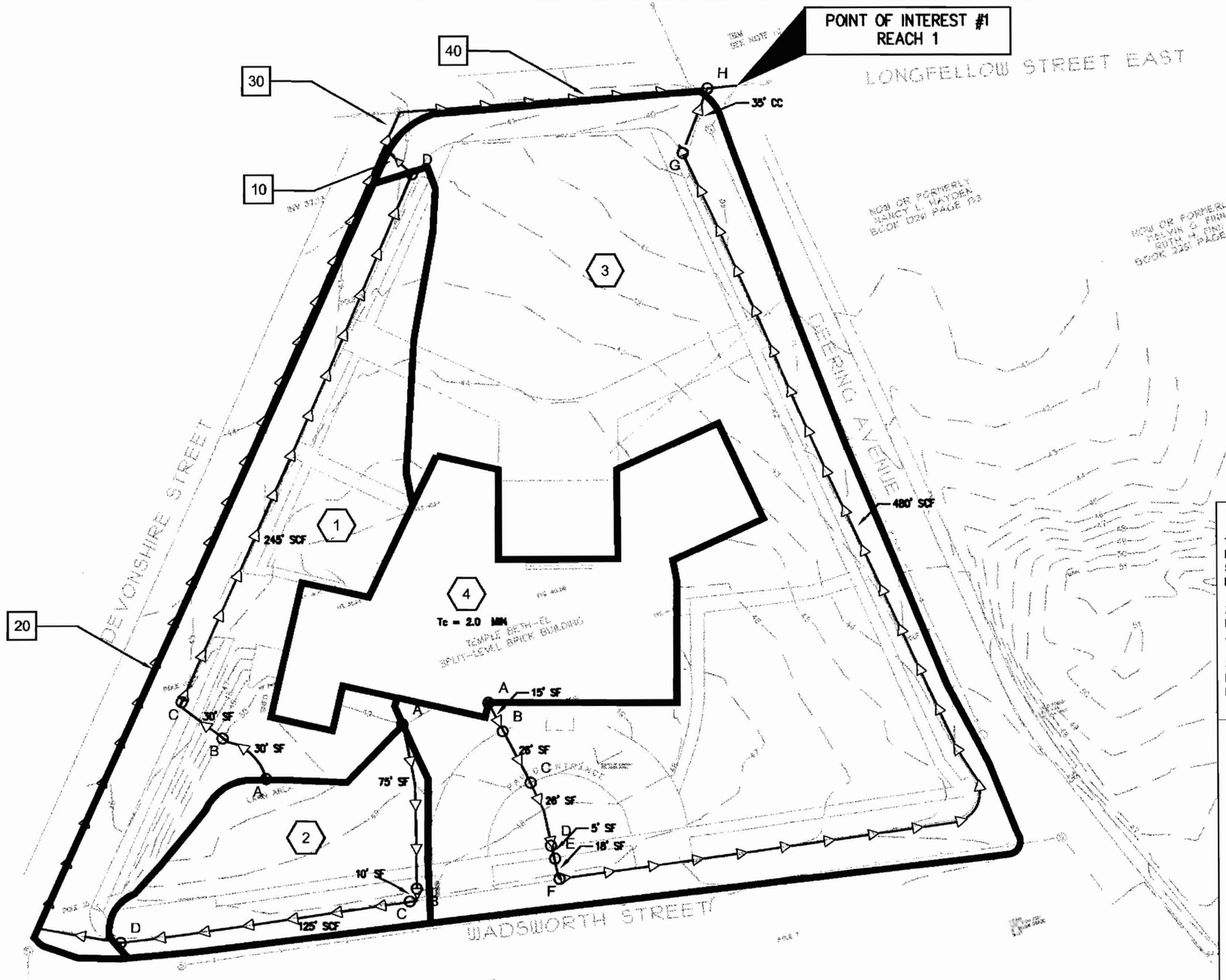
Prepared for:

Temple Beth EL
c/o Stephen Blatt Architects
400 Deering Avenue
Portland, Maine 04103

Prepared by:

DeLuca-Hoffman Associates, Inc.
778 Main Street, Suite 8
South Portland, Maine 04106
(207) 775-1121
dhai@delucahoffman.com

FEBRUARY 2002



NOTES:

1. THIS PLAN HAS BEEN PREPARED BY DELUCA-HOFFMAN ASSOCIATES, INC. BASED ON THE FOLLOWING SOURCES:
STANDARD BOUNDARY SURVEY FOR TEMPLE BETH EL PROVIDED BY BOUNDARY POINTS PROFESSIONAL LAND SURVEYING JULY 2001.

2. SITE PLAN BASED ON:
PLAN OF PROPERTY MADE FOR TEMPLE BETH EL BY CARROLL ASSOCIATES JANUARY 2002.

3. ALL SOILS WITHIN THE PROJECT WATERSHED CLASSIFIED AS HSG C SOILS DETERMINED FROM BY THE USDA MEDIUM INTENSITY SOIL SURVEY MAPS FOR THE PROJECT AREA.

WATERSHED LEGEND

	WATERSHED BOUNDARY
A — B	WATERSHED FLOW PATH
1	SUBCATCHMENT NUMBER
1	REACH NUMBER
SF	SHEET FLOW
SCF	SHALLOW CONCENTRATED FLOW
CF	CIRCULAR CHANNEL

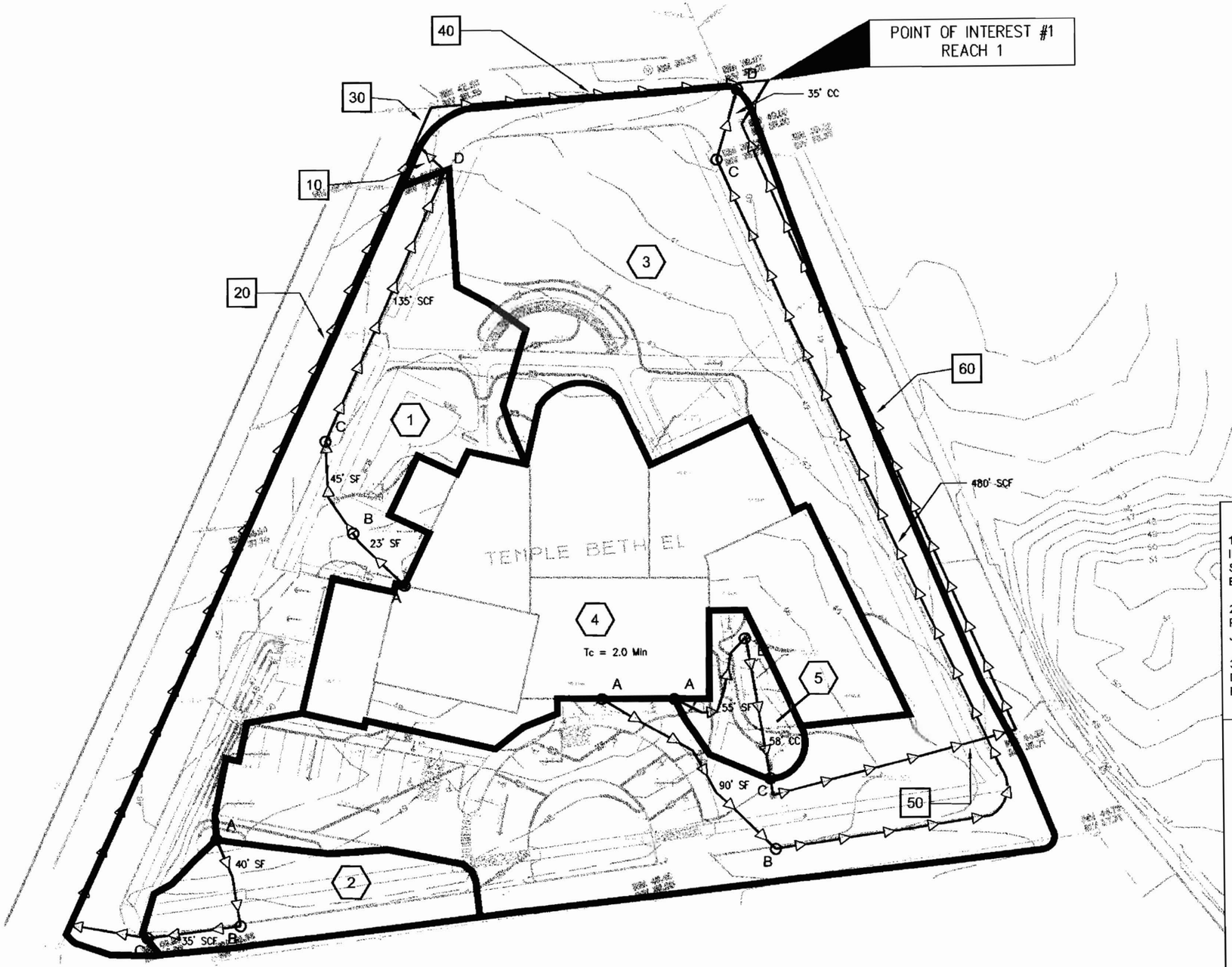
DeLuca-Hoffman Associates, Inc.
778 MAIN STREET, SUITE 8
SOUTH PORTLAND, ME 04106
(207) 775-1121
DHAI@DELUCAHOFFMAN.COM

DRAWN:	TDD	DATE:	FEB. 2002
DESIGNED:	TDD	SCALE:	1" = 50'
CHECKED:	SRB	JOB NO.	2171
FILE NAME:	2171-SITE PLAN		

TEMPLE BETH EL RELOCATION/RENOVATION PROJECT

PREDEVELOPMENT WATERSHED

PLATE 1



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WATERSHED LEGEND

	WATERSHED BOUNDARY
A → B	WATERSHED FLOW PATH
1	SUBCATCHMENT NUMBER
1	REACH NUMBER
SF	SHEET FLOW
SCF	SHALLOW CONCENTRATED FLOW
CF	CIRCULAR CHANNEL

DH
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DRAWN:	TDD	DATE:	FEB. 2002
DESIGNED:	TDD	SCALE:	1" = 50'
CHECKED:	SRB	JOB NO.	2171
FILE NAME:	2171-TEMPLE BETH EL		

TEMPLE BETH EL EXPANSION/RENOVATION PROJECT

POSTDEVELOPMENT WATERSHED

PLATE 2