SITE IRRIGATION HYDRAULIC CALCULATIONS

Run Set: 1-1

Water Source 1
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0.003 (psi)
Meter Loss: 0.499 (psi)

Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0.003 (psi)
Meter Loss: 0.499 (psi)
Backflow Loss: 3 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 1-1 @ 20.45 (GPM)
Mainline Loss: 0.22 (psi)
Valve Loss: 3.89 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 1.54 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 30 (psi)

Total Design Pressure: 39.15 (psi)
Residual Pressure: 25.85 (psi)

Run Set: 1-2

Water Source 1
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0.002 (psi)
Meter Loss: 0.39 (psi)

Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0.002 (psi)
Meter Loss: 0.39 (psi)
Backflow Loss: 3 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 1-2 @ 16.67 (GPM)
Mainline Loss: 0.18 (psi)
Valve Loss: 3.25 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 1.14 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 30 (psi)

Total Design Pressure: 37.97 (psi)
Residual Pressure: 27.03 (psi)

Run Set: 1-3

Water Source 1
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0.001 (psi)
Meter Loss: 0.343 (psi)

Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0.001 (psi)
Meter Loss: 0.343 (psi)
Backflow Loss: 3 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 1-3 @ 15.1 (GPM)
Mainline Loss: 0.3 (psi)
Valve Loss: 2.94 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 0.95 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 30 (psi)

Total Design Pressure: 37.54 (psi)
Residual Pressure: 27.46 (psi)

Run Set: 1-4

Water Source 1
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0.001 (psi)
Meter Loss: 0.34 (psi)

Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0.001 (psi)
Meter Loss: 0.34 (psi)
Backflow Loss: 3 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 1-4 @ 15 (GPM)
Mainline Loss: 0.29 (psi)
Valve Loss: 2.93 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 1.02 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 30 (psi)

Total Design Pressure: 37.58 (psi)
Residual Pressure: 27.42 (psi)

Run Set: 1-5

Water Source 1
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0.004 (psi)
Meter Loss: 0.615 (psi)

Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0.004 (psi)
Meter Loss: 0.615 (psi)
Backflow Loss: 3 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 1-5 @ 24.5 (GPM)
Mainline Loss: 0.72 (psi)
Valve Loss: 3.77 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 1.32 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 30 (psi)

Total Design Pressure: 39.43 (psi)
Residual Pressure: 25.57 (psi)

Run Set: 1-6

Water Source 1
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0.005 (psi)
Meter Loss: 0.743 (psi)

Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0.005 (psi)
Meter Loss: 0.743 (psi)
Backflow Loss: 3 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 1-6 @ 28.57 (GPM)
Mainline Loss: 0.65 (psi)
Valve Loss: 3.64 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 0.74 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 30 (psi)

Total Design Pressure: 38.78 (psi)
Residual Pressure: 26.22 (psi)

Run Set: 1-7

Water Source 1
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0.01 (psi)
Meter Loss: 1.456 (psi)

Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0.01 (psi)
Meter Loss: 1.456 (psi)
Backflow Loss: 3.044 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 1-7 @ 43.56 (GPM)
Mainline Loss: 1.99 (psi)
Valve Loss: 4.18 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 1.05 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 30 (psi)

Total Design Pressure: 41.73 (psi)
Residual Pressure: 23.27 (psi)

Run Set: 1-8

Water Source 1
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0.009 (psi)
Meter Loss: 1.3 (psi)

Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0.009 (psi)
Meter Loss: 1.3 (psi)
Backflow Loss: 3.019 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 1-8 @ 41.56 (GPM)
Mainline Loss: 2.25 (psi)
Valve Loss: 3.99 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 1.36 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 30 (psi)

Total Design Pressure: 41.92 (psi)
Residual Pressure: 23.08 (psi)

Run Set: 1-9

Water Source 1
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0.009 (psi)
Meter Loss: 1.269 (psi)

Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0.009 (psi)
Meter Loss: 1.269 (psi)
Backflow Loss: 3.009 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 1-9 @ 40.69 (GPM)
Mainline Loss: 2.39 (psi)
Valve Loss: 3.91 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 0.9 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 30 (psi)

Total Design Pressure: 41.48 (psi)
Residual Pressure: 23.52 (psi)

Run Set: 1-10

Water Source 1
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0.001 (psi)
Meter Loss: 0.288 (psi)

Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0.001 (psi)
Meter Loss: 0.288 (psi)
Backflow Loss: 3 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 1-10 @ 12.9 (GPM)
Mainline Loss: 0.28 (psi)
Valve Loss: 2.12 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 1.4 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 30 (psi)

Total Design Pressure: 37.08 (psi)
Residual Pressure: 27.92 (psi)

Run Set: 1-11

Water Source 1
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0.003 (psi)
Meter Loss: 0.573 (psi)

Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0.003 (psi)
Meter Loss: 0.573 (psi)
Backflow Loss: 3 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 1-11 @ 22.76 (GPM)
Mainline Loss: 0.86 (psi)
Valve Loss: 3.82 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 1.31 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 30 (psi)

Total Design Pressure: 39.57 (psi)
Residual Pressure: 25.43 (psi)

Run Set: 1-12

Water Source 1
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0.002 (psi)
Meter Loss: 0.412 (psi)

Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0.002 (psi)
Meter Loss: 0.412 (psi)
Backflow Loss: 3 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 1-12 @ 17.59 (GPM)
Mainline Loss: 0.54 (psi)
Valve Loss: 3.43 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 0.99 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 30 (psi)

Total Design Pressure: 38.24 (psi)
Residual Pressure: 26.76 (psi)

Run Set: 1-13

Water Source 1
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0 (psi)
Meter Loss: 0.179 (psi)

Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0 (psi)
Meter Loss: 0.179 (psi)
Backflow Loss: 3 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 1-13 @ 8.47 (GPM)
Mainline Loss: 0.14 (psi)
Valve Loss: 1.77 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 0.26 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 30 (psi)

Total Design Pressure: 35.25 (psi)
Residual Pressure: 29.75 (psi)

Run Set: 1-14

Water Source 1
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0 (psi)
Meter Loss: 0.151 (psi)

Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0 (psi)
Meter Loss: 0.151 (psi)
Backflow Loss: 3 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 1-14 @ 7.07 (GPM)
Mainline Loss: 0.1 (psi)
Valve Loss: 1.74 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 0.26 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 30 (psi)

Total Design Pressure: 35.25 (psi)
Residual Pressure: 29.75 (psi)

Run Set: 1-15

Water Source 1
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0.007 (psi)
Meter Loss: 0.994 (psi)

Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0.007 (psi)
Meter Loss: 0.994 (psi)
Backflow Loss: 3 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 1-15 @ 36.42 (GPM)
Mainline Loss: 1.97 (psi)
Valve Loss: 3.5 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 1.85 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 40 (psi)

Total Design Pressure: 51.32 (psi)
Residual Pressure: 13.68 (psi)

Run Set: 1-16

Water Source 1
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0.005 (psi)
Meter Loss: 0.806 (psi)

Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0.005 (psi)
Meter Loss: 0.806 (psi)
Backflow Loss: 3 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 1-16 @ 30.41 (GPM)
Mainline Loss: 1.32 (psi)
Valve Loss: 3.6 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 1.3 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 30 (psi)

Total Design Pressure: 40.02 (psi)
Residual Pressure: 24.98 (psi)

Run Set: 1-17

Water Source 1
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0 (psi)
Meter Loss: 0.118 (psi)

Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0 (psi)
Meter Loss: 0.118 (psi)
Backflow Loss: 3 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 1-17 @ 5.6 (GPM)
Mainline Loss: 0.05 (psi)
Valve Loss: 1.71 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 0.48 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 30 (psi)

Total Design Pressure: 35.36 (psi)
Residual Pressure: 29.64 (psi)

Run Set: 1-18

Water Source 1
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0.001 (psi)
Meter Loss: 0.254 (psi)

Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0.001 (psi)
Meter Loss: 0.254 (psi)
Backflow Loss: 3 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 1-18 @ 11.2 (GPM)
Mainline Loss: 0.19 (psi)
Valve Loss: 1.93 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 1.6 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 30 (psi)

Total Design Pressure: 36.97 (psi)
Residual Pressure: 28.03 (psi)

Run Set: 1-19

Water Source 1
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0.001 (psi)
Meter Loss: 0.332 (psi)

Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0.001 (psi)
Meter Loss: 0.332 (psi)
Backflow Loss: 3 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 1-19 @ 14.6 (GPM)
Mainline Loss: 0.3 (psi)
Valve Loss: 2.85 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 1.37 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 30 (psi)

Total Design Pressure: 37.84 (psi)
Residual Pressure: 27.16 (psi)

NEIGHBORHOOD HYDRAULIC CALCULATIONS

Run Set: 2-1

Water Source 2
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0.004 (psi)
Meter Loss: 0.619 (psi)

Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0.004 (psi)
Meter Loss: 0.619 (psi)
Backflow Loss: 3 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 2-1 @ 24.64 (GPM)
Mainline Loss: 1.34 (psi)
Valve Loss: 3.76 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 0.98 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 30 (psi)

Total Design Pressure: 39.7 (psi)
Residual Pressure: 25.3 (psi)

Run Set: 2-2

Water Source 2
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0.003 (psi)
Meter Loss: 0.587 (psi)

Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0.003 (psi)
Meter Loss: 0.587 (psi)
Backflow Loss: 3 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 2-2 @ 23.37 (GPM)
Mainline Loss: 0.44 (psi)
Valve Loss: 3.8 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 0.86 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 30 (psi)

Total Design Pressure: 38.69 (psi)
Residual Pressure: 26.31 (psi)

Run Set: 2-3

Water Source 2
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0.003 (psi)
Meter Loss: 0.546 (psi)

Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0.003 (psi)
Meter Loss: 0.546 (psi)
Backflow Loss: 3 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 2-3 @ 21.91 (GPM)
Mainline Loss: 0.41 (psi)
Valve Loss: 3.84 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 0.84 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 30 (psi)

Total Design Pressure: 38.64 (psi)
Residual Pressure: 26.36 (psi)

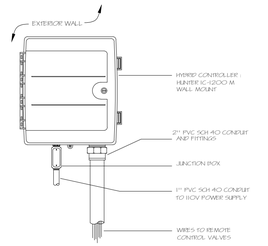
Run Set: 2-4

Water Source 2
Description: New Water Source
Type: Meter
Static Pressure: 65 (psi)
Service Line: 0.003 (psi)
Meter Loss: 0.501 (psi)

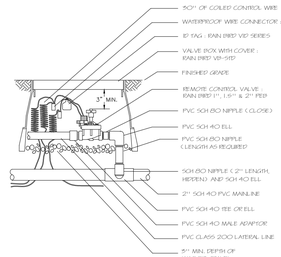
Mean System
Static Pressure: 65 (psi)
Service Line Loss: 0.003 (psi)
Meter Loss: 0.501 (psi)
Backflow Loss: 3 (psi)
Master Valve Loss: 0 (psi)
Filter Loss: 0 (psi)

Zone 2-4 @ 20.53 (GPM)
Mainline Loss: 0.76 (psi)
Valve Loss: 3.88 (psi)
Filter Loss: 0 (psi)
Lateral Loss: 0.77 (psi)
Elevation: 0 (psi)
Sprinkler Requirement: 30 (psi)

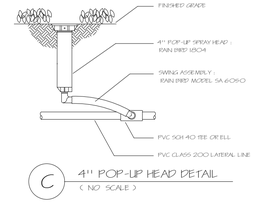
Total Design Pressure: 38.91 (psi)
Residual Pressure: 26.09 (psi)



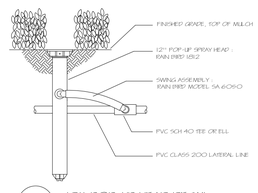
A CONTROLLER MOUNTING DETAIL
(NO SCALE)



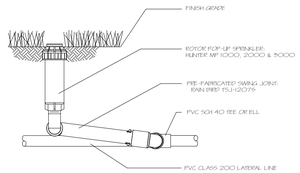
B CONTROL VALVE DETAIL
(NO SCALE)



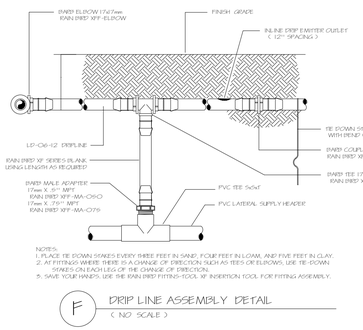
C 4" POP-UP HEAD DETAIL
(NO SCALE)



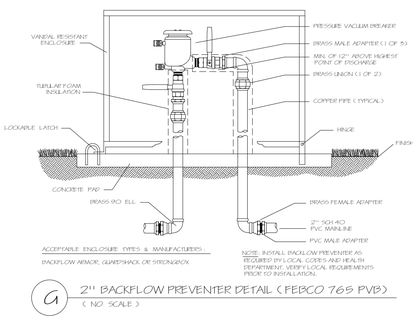
D 12" POP-UP HEAD DETAIL
(NO SCALE)



E HUNTER MP POP-UP TURF ROTOR DETAIL
(NO SCALE)



F DRIP LINE ASSEMBLY DETAIL
(NO SCALE)



G 2" BACKFLOW PREVENTER DETAIL (FEBCO 765 PVB)
(NO SCALE)

INTEGRATED LANDSCAPE ARCHITECTURE, LLC
765 ROLLING OAKS DRIVE
DRIFTWOOD, TEXAS 78619
E-MAIL : INFO@LANDARCHTX.COM
PHONE : 713-973-7851

6/03/19
STATE OF TEXAS
LESLIE W SHOUR
1531
REGISTERED LANDSCAPE ARCHITECT

ISSUES AND REVISIONS

NO.	DATE	DESCRIPTION
	6/03/19	ISSUE FOR PERMIT

IVY KIDS EARLY LEARNING CENTER

CROSS CREEK RANCH - LOT COM21
6407 CROSS CREEK BEND LANE
FULSHEAR, TEXAS 77441

Irrigation Details

L3.0