



Submittal

Job: 17-011
17-011 B&B Theaters NLV7
3201 SW Fascination Dr
Lee's Summit, MO 64081

Spec Section No: 029000
Submittal No: 2
Revision No: 0
Sent Date: 9/30/2017
Due Date: 10/6/2017

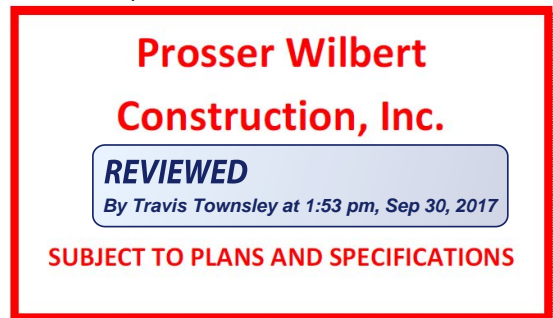
Spec Section Title:

Submittal Title: Irrigation Shop Drawings

Contractor:

Prosser Wilbert Construction, Inc

Contractor's Stamp



Hollis & Miller Group, Inc, The

Architect's Stamp

2 EXCEPTIONS NOTED

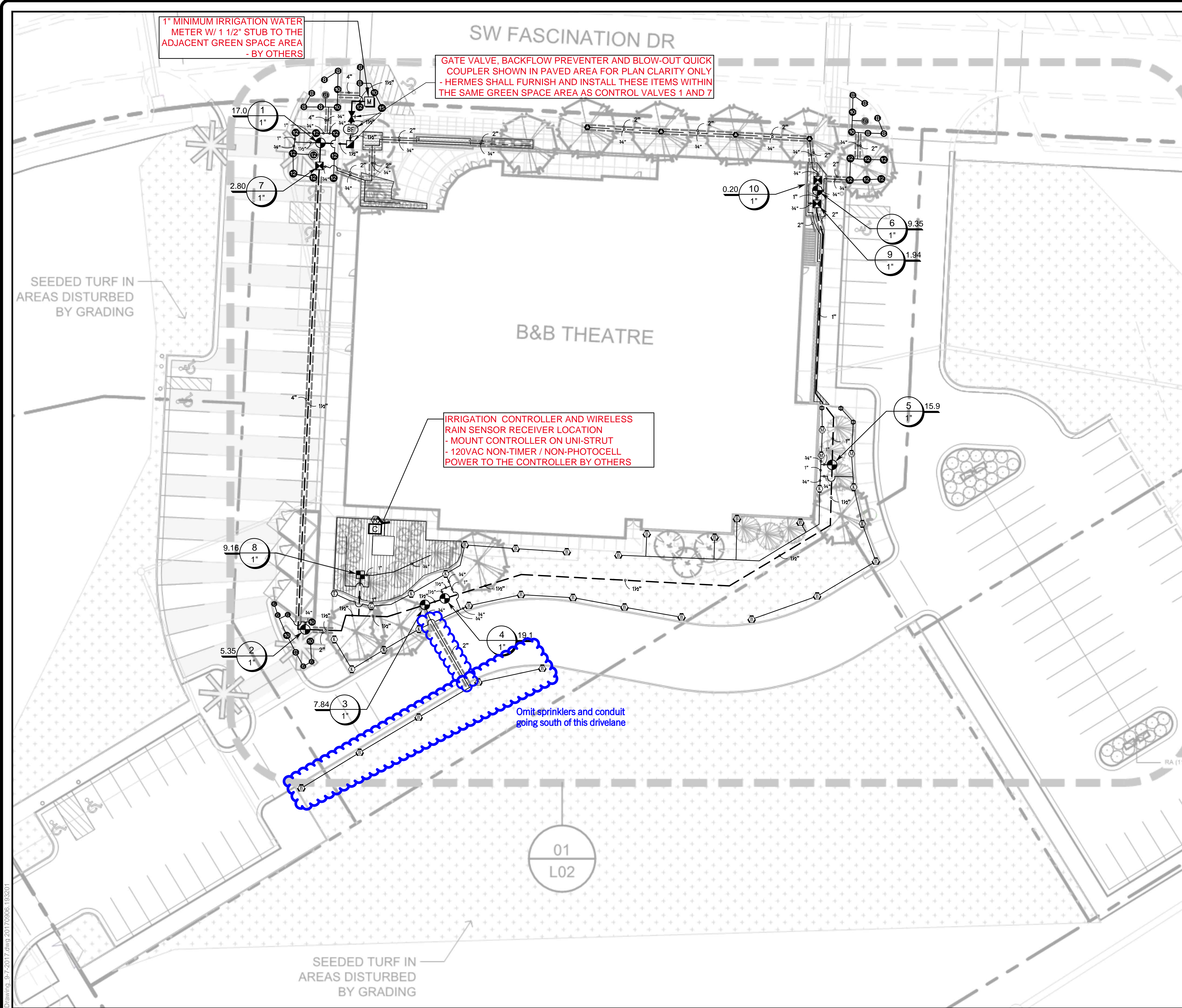
1. NO EXCEPTION TAKEN 3. REVISE AND RESUBMIT 5. FOR RECORD ONLY
2. EXCEPTIONS NOTED 4. NOT ACCEPTED 6. NOT REVIEWED

Reviewing is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Contractor is responsible for dimensions to be confirmed and correlated at the site; for information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction, and for coordination of the Work of all trades. Review does not authorize changes to Contract sum unless stated in separate letter or Change Order.

Engineer's Stamp

hollis + miller architects

DATE: 10/25/2017 BY: windmeyer



- NOTES:
1. SYSTEM LAYOUT IS DIAGRAMMATIC. PIPE AND EQUIPMENT IS SHOWN UNDER HARD SURFACES FOR PLAN CLARITY ONLY. INSTALL ALL SYSTEM COMPONENTS IN GREEN AREAS WHENEVER POSSIBLE.
- IN THE EVENT THAT PIPE IS REQUIRED TO BE INSTALLED UN-SLEEVED DUE TO PHYSICAL SITE LAYOUT ISSUES: INSTALL UN-JOINTED RUNS OF POLY PIPE FROM GREEN AREA TO GREEN AREA. DO NOT INSTALL ANY UN-SLEEVED PIPE JOINTS BELOW HARD SURFACES.
 2. ASSUMES A 1" MINIMUM SIZE IRRIGATION WATER METER BY OTHERS. 1 1/2" MINIMUM SIZE STUB FROM METER TO ADJACENT GREEN SPACE AREA PROVIDED - BY OTHERS.
 3. 19.15GPM @ 65PSI MINIMUM REQUIRED AT THE 1 1/2" GREEN SPACE AREA STUB-OUT.
 4. DOES NOT INCLUDE A BOOSTER PUMP (MAY BE REQUIRED IF THE FLOW AND PRESSURE IS LESS THAN THE MINIMUM REQUIRED AS PER NOTE #3).
 5. ASSUMES AN EXTERIOR, WALL MOUNTED CONTROLLER.
 6. 120VAC NON-TIMER/ NON-PHOTOCELL POWER TO CONTROLLER LOCATION BY OTHERS.
 7. 1" MINIMUM CONDUIT WITH SWEEP ELLS FROM GREEN SPACE AREA TO DESIRED INTERIOR CONTROLLER LOCATION PROVIDED BY OTHERS IF THE CONTROLLER IS DESIRED TO BE INSTALLED INSIDE THE BUILDING.
 8. DO NOT INSTALL AUTOMATIC DRAIN VALVES - SYSTEM REQUIRES WINTERIZATION BY COMPRESSED AIR BLOWOUT ONLY.

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CRITICAL ANALYSIS

Generated:	2017-09-06 19:27
P.O.C. NUMBER: 01	
Water Source Information:	1" MINIMUM SIZE IRRIGATION WATER METER - BY OTHERS
FLOW AVAILABLE	
Water Meter Size:	1"
Flow Available:	19.41 gpm
PRESSURE AVAILABLE	
Static Pressure at POC:	65.00 psi
Elevation Change:	5.00 ft
Service Line Size:	1"
Length of Service Line:	5.00 ft
Pressure Available:	62.00 psi
DESIGN ANALYSIS	
Maximum Station Flow:	19.15 gpm
Flow Available at POC:	19.41 gpm
Residual Flow Available:	0.27 gpm
Critical Station:	4
Design Pressure:	40.00 psi
Friction Loss:	1.57 psi
Fittings Loss:	0.16 psi
Elevation Loss:	0.00 psi
Loss through Valve:	5.99 psi
Pressure Req. at Critical Station:	47.72 psi
Loss for Fittings:	0.23 psi
Loss for Main Line:	2.35 psi
Loss for POC to Valve Elevation:	0.00 psi
Loss for Backflow:	7.17 psi
Loss for Water Meter:	2.03 psi
Critical Station Pressure at POC:	59.50 psi
Pressure Available:	62.00 psi
Residual Pressure Available:	2.50 psi

IRRIGATION SCHEDULE

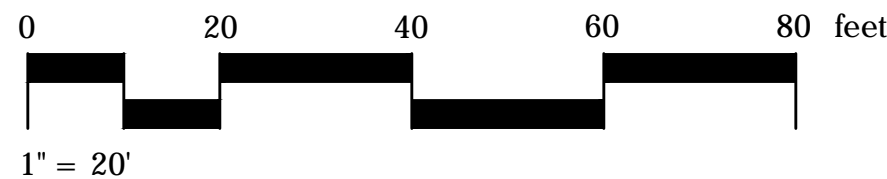
SYMBOL	MANUFACTURER/MODEL	QTY	ARC	PSI
⊗	RAIN BIRD 1804-PRS 8 SERIES MPR	2	360	30
⊗	RAIN BIRD 1804-PRS 12 SERIES MPR	1	360	30
⊗	RAIN BIRD 1804-PRS VAN SERIES	5	ADJ	30
⊗	RAIN BIRD 1804-PRS HE-VAN SERIES	13	ADJ	30
⊗	RAIN BIRD 1804-PRS HE-VAN SERIES	8	ADJ	30
⊗	RAIN BIRD 1804-PRS HE-VAN SERIES	15	ADJ	30
⊗	RAIN BIRD 1804-PRS HE-VAN SERIES	1	ADJ	30
⊗	HUNTER MP1000 PROS-04-PRS40-CV	3	90-210	40
⊗	HUNTER MP2000 PROS-04-PRS40-CV	1	210-270	40
⊗	HUNTER MP2000 PROS-04-PRS40-CV	9	90-210	40
⊗	HUNTER MP3000 PROS-04-PRS40-CV	21	90-210	40
⊗	HUNTER MP800SR PROS-04-PRS40-CV	3	ADJ	40
⊗	HUNTER MP CORNER PROS-04-PRS40-CV	1	ADJ	40

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
⊗	RAIN BIRD XCZ-100-PRF 1" MEDIUM FLOW DRIP CONTROL KIT. 1" DV VALVE. 1" PRESSURE REGULATING FILTER. 40PSI PRESSURE REGULATOR. 3GPM - 15GPM.	1
⊗	RAIN BIRD XCZ-LF-100-PRF 1" LOW FLOW DRIP CONTROL KIT. 1" LOW FLOW VALVE. 3/4" PRESSURE REGULATING RBY FILTER. AND 30PSI PRESSURE REGULATOR. 0.2GPM-5GPM.	3
⊗	TREE DRIP RING RAIN BIRD XFD-09-18 (18) ON-SURFACE PRESSURE COMPENSATING LANDSCAPE DRIPLINE. 0.9GPH EMITTERS AT 18.0" O.C. UV RESISTANT. - CREATE A 2" DIAMETER AND A 6" DIAMETER TREE DRIP RING AT EACH TREE WHERE SHOWN.	4
⊗	AREA TO RECEIVE DRIPLINE RAIN BIRD XFD-09-18 (18) XFD ON-SURFACE PRESSURE COMPENSATING LANDSCAPE DRIPLINE. 0.9GPH EMITTERS AT 18.0" O.C. DRIPLINE LATERALS SPACED AT 18.0" APART. WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. UV RESISTANT. SPECIFY XF INSERT FITTINGS.	1,931 S.F.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
⊗	RAIN BIRD PGA GLOBE 1" 1", 1-1/2", 2" ELECTRIC REMOTE CONTROL VALVE, GLOBE.	6
⊗	RAIN BIRD 3-RC 3/4" 3/4" BRASS QUICK-COUPLING VALVE, WITH CORROSION-RESISTANT STAINLESS STEEL SPRING, THERMOPLASTIC RUBBER COVER, AND 1-PIECE BODY.	1
⊗	MATCO-NORCA 514TX BRASS GATE VALVE, FULL PORT, WITH SOLID WEDGE. IPS. CROSS HANDLE. SAME SIZE AS MAINLINE PIPE.	1
⊗	FEBCO 850 1" DOUBLE CHECK BACKFLOW PREVENTER	1
⊗	RAIN BIRD ESP81XME 12 STATION CAPABLE COMMERCIAL CONTROLLER. MOUNTED ON A PLASTIC WALL MOUNT. WITHOUT FLOW SENSOR. - INSTALL ON UNI-STRUT	1
⊗	RAIN BIRD WR2-RC WIRELESS RAIN SENSOR COMBO, INCLUDES 1 RECEIVER AND 1 RAIN SENSOR TRANSMITTER.	1
⊗	WATER METER 1" 1" MINIMUM SIZE IRRIGATION WATER METER - BY OTHERS	1
⊗	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21 3/4"	1,129 L.F.
⊗	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21 1"	35.0 L.F.
⊗	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21 1 1/2"	19.2 L.F.
⊗	IRRIGATION LATERAL LINE: BLU-LOCK AND PVC CLASS 200 3/4"	345.8 L.F.
⊗	IRRIGATION LATERAL LINE: BLU-LOCK AND PVC CLASS 200 1"	3.7 L.F.
⊗	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21 1"	138.9 L.F.
⊗	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21 1 1/2"	502.7 L.F.
⊗	PIPE SLEEVE: PVC SCHEDULE 40 2" TYPICAL PIPE SLEEVE FOR IRRIGATION PIPE AND WIRE. PIPE SLEEVE SIZE SHALL ALLOW FOR IRRIGATION PIPING AND THEIR RELATED COUPLINGS TO EASILY SLIDE THROUGH SLEEVING MATERIAL. EXTEND SLEEVES 18 INCHES BEYOND EDGES OF PAVING OR CONSTRUCTION.	213.1 L.F.
⊗	PIPE SLEEVE: PVC SCHEDULE 40 4" TYPICAL PIPE SLEEVE FOR IRRIGATION PIPE AND WIRE. PIPE SLEEVE SIZE SHALL ALLOW FOR IRRIGATION PIPING AND THEIR RELATED COUPLINGS TO EASILY SLIDE THROUGH SLEEVING MATERIAL. EXTEND SLEEVES 18 INCHES BEYOND EDGES OF PAVING OR CONSTRUCTION.	202.7 L.F.

VALVE SCHEDULE

NUMBER	MODEL	SIZE	TYPE	GPM	HEADS	PIPE	WIRE	DESIGN PSI	FRICTION LOSS	VALVE LOSS	PSI	PSI @ POC	PRECIP
1	RAIN BIRD PGA GLOBE	1"	TURF SPRAY	16.97	22	204.4	272.2	30	1.17	5.97	37.14	46.06	1.94 in/h
2	RAIN BIRD PGA GLOBE	1"	TURF SPRAY	5.35	9	66.2	65.9	30	0.34	5.53	35.87	41.42	1.88 in/h
3	RAIN BIRD PGA GLOBE	1"	TURF ROTARY	7.84	5	155.0	67.1	40	1.78	5.73	47.51	54.49	0.20 in/h
4	RAIN BIRD PGA GLOBE	1"	TURF ROTARY	19.15	16	300.9	75.8	40	1.73	5.99	47.72	59.50	0.42 in/h
5	RAIN BIRD PGA GLOBE	1"	TURF ROTARY	15.88	17	330.3	270.5	40	1.97	5.96	47.93	59.32	0.32 in/h
6	RAIN BIRD PGA GLOBE	1"	TURF SPRAY	9.35	14	126.6	388.0	30	1.40	5.85	37.25	47.18	2.07 in/h
7	RAIN BIRD XCZ-LF-100-PRF	1"	AREA FOR DRIPLINE	2.80		134.1	262.6	30	0.23	7.94	38.17	43.38	0.69 in/h
8	RAIN BIRD XCZ-100-PRF	1"	AREA FOR DRIPLINE	9.16		66.3	38.7	30	0.79	7.76	38.56	46.48	0.69 in/h
9	RAIN BIRD XCZ-LF-100-PRF	1"	AREA FOR DRIPLINE	1.94		37.9	382.5	30	0.03	7.25	37.29	42.63	0.69 in/h
10	RAIN BIRD XCZ-LF-100-PRF	1"	DRIP EMITTER	0.20	4	111.3	392.3	30		4.60	34.60	39.81	1.52 in/h
	Common Wire						641.6						



IRRIGATION PLAN - SHOP DRAWING

Landscaping • Sprinkler Systems
Maintenance • Nursery
12431 SANTA FE DRIVE
LENEXA, KANSAS 66215
(913) 888-2400



B&B NEW LONGVIEW 7 THEATRES
IRRIGATION PLAN - SHOP DRAWING
SW FASCINATION DRIVE
LEES SUMMIT, MISSOURI

PROJECT NO.
DATE
2-13-2017
DESIGNED BY
BRG
REVISED
8-22-2017
8-30-2017
9-7-2017

SHEET
IR-1