

GENERAL NOTES

- Project Scope to install a New Underground Fire Main and Wet Type Overhead Fire Sprinkler System per contract documents, local code requirements and FireTech scope letter for the Renovated "BETA CHI/KAPPA SIGMA" House located at 1101 White Columns Drive. FireTech to start at the existing 8" Water Main located in El Bosa Nova Lane.
- Excavation has been INCLUDED by FireTech in the base price. All Underground installation is assumed to be at standard bury depth. Any unforeseen obstructions encountered during excavation shall constitute an extra to the contract. Necessary haul off of unused spoils shall be by others.
- Sprinklers located within Lay-in Ceiling Tiles are NOT centered. Locations of sprinklers shown are due to soffits and spacing requirements and cannot be altered.
- All PAINTING or PIPE MARKING by others.
- All work to be performed during normal working hours.
- All required electrical devices are provided by FireTech and wired by others.
- Necessary heat provided by others.

SYSTEM DESIGN

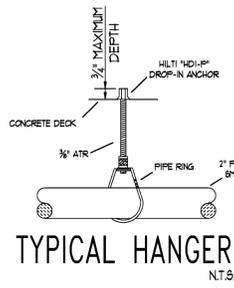
- New Underground Fire Service design, materials, installation and testing to be performed per NFPA 13 (1999 Edition), local code requirements and project scope.
- Wet Type Fire Sprinkler Systems are designed, installed and tested per NFPA 13R (1999 Edition) throughout the Residential Facilities.
 - (a) Residential Areas designed per NFPA 13R (1999 Edition) with maximum spacing per sprinkler listing. All Restrooms below 55 square feet are not sprinklered per NFPA 13R (1999 Edition, Section 2-6, Exception #1) and shall be constructed of non-combustible material with a 15 minute thermal barrier rating including walls and ceilings beyond fixtures. All Clothes Closets below 24 square feet are not sprinklered per NFPA 13R (1999 Edition, Section 2-6, Exception #2).

MATERIAL

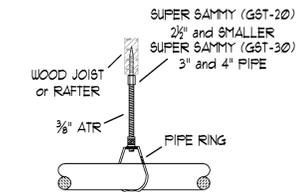
- Underground Pipe below footings and foundations shall be Ductile Iron Class 52 Slip-Joint pipe. All other Underground Pipe to be DR18, Class 150 PVC Pipe complete with tracer wire. Underground Fittings shall be Mechanical Joint type with Mega-Lug Accessories. All nuts, bolts, rods and accessories to be provided with bitumastic coating.
- All Aboveground Pipe prior to the Backflow Preventer shall be Schedule 10 Galvanized Steel Pipe with Grooved-Type Fittings. (or approved equal)
- All Interior Pipe, with Grooved Ends shall be Schedule 10 Black Steel Pipe with Grooved-Style Fittings and Mechanical Tee or Welded Outlets. (or approved equal)
- All Interior Pipe, with Threaded Ends shall be Threadable Thinwall Steel Pipe with Cast Iron Screw-Type Fittings. (or approved equal)
- All other Aboveground Pipe shall be CPVC pipe with CPVC fittings.

HANGERS

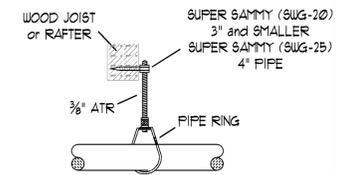
- All hanger material and installation shall conform to Specifications, NFPA #13 and Local Code Requirements.
- All Seismic Protection material and installation shall conform to Specifications, NFPA #13, Local Code and Manufacturers Requirements.



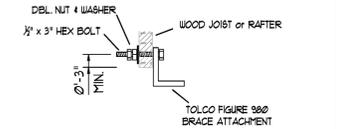
NOTE:
FINAL HANGER ON BRANCH LINES SHALL BE SURGE RESTRAINED



OPTIONAL HANGER N.T.S.



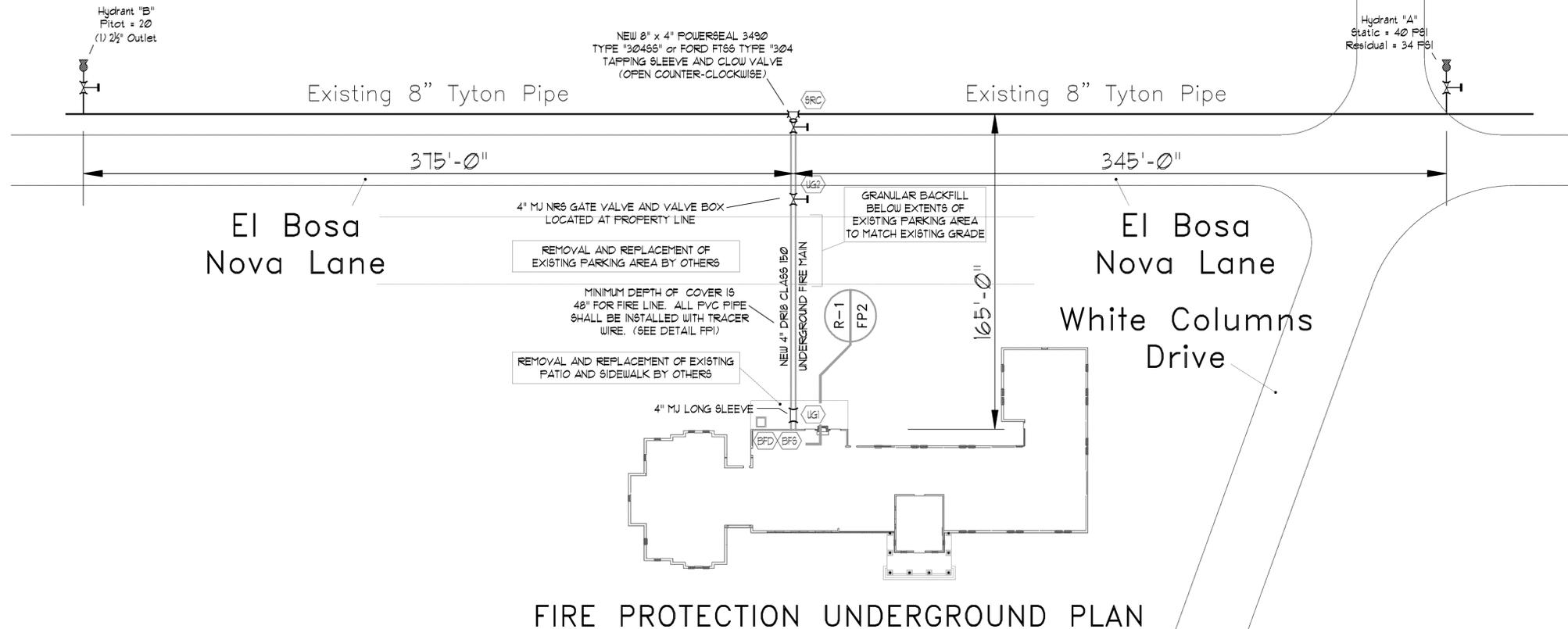
OPTIONAL HANGER N.T.S.



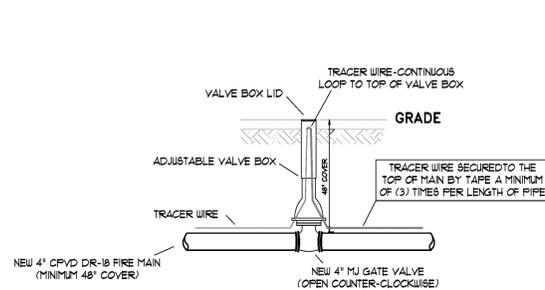
TYPICAL SEISMIC CONNECTION N.T.S.

SYMBOL LEGEND

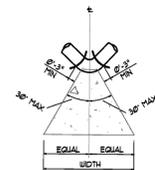
- FIRELOCK RIGID COUPLING
- VICTALIC #15 FLEXIBLE COUPLING
- HEAD GUARD



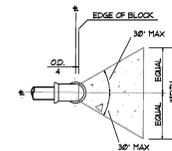
FIRE PROTECTION UNDERGROUND PLAN Scale 1/32" = 1'-0"



TRACER WIRE DETAIL N.T.S.



THRUST BLOCK (Plan View) N.T.S.



THRUST BLOCK (Elevation) N.T.S.

THRUST BLOCK NOTES and DIMENSIONS

Bearing areas are based on 225 PSI Test Pressure and a Soil Resistance of 3000 PSF. If back fill has less than 3000 PSF resistance soil pockets are encountered, the contractor shall increase the bearing area shown to prevent movement under test or operating pressures.

PIPE SIZE	MINIMUM BEARING AREA (SQ. FT.) = WIDTH x DEPTH	HYDRANT, TEE CAP, VALVE, PLUG
6"	90" BEND 45" BEND 22 1/2" BEND 11 1/4" BEND	5
8"	11 6 3 2	8
10"	25 14 1 4	10

SYMBOL LEGEND		APPROVALS	
○	CENTERLINE ABOVE FINISH FLOOR	PERMIT #:	BACKFLOW #:
□	DIMENSION BELOW DECK	OWNER: OUT	IN
—	HORIZONTAL BRACE	REVISIONS	
×	LONGITUDINAL BRACE	NO. DATE BY DESCRIPTION	
+	4-WAY BRACE	PROJECT: BETA CHI/KAPPA SIGMA HOUSE	
	RISER BRACE	PROJECT ADDRESS: 1101 White Columns Drive Rolla, MO 65401	
DRAWN BY: W. Woodward		DESCRIPTION: Underground Fire Protection Plan and Details	
CHECKED BY: M. Shelton		CONTRACT WITH: Conway Contracting Incorporated	
DATE: 4/30/10		WATER SUPPLY INFORMATION	
CONTRACT NO: 1301-10		STATIC PRESSURE: 40 TEST BY: FireTech, LLC	
DRAWING NO: FFI of 4		RESIDUAL PRESSURE: 34 TEST DATE: 4/23/10	
		FLOW: 750 GPM	
		TEST LOCATION: Project Site	

FireTech, LLC
1353 Baur Boulevard St. Louis, MO 63132 Phone 314.292.6250 Fax 314.292.6255

REGISTERED • 1353 BAUR BOULEVARD
OLIVETTE, MO 63132

RONALD DIRSA
PE-017945

The design professional's seal is affixed to the submittal documents and applies only to the information herein and does not constitute an endorsement of the products or services of the design professional. The design professional declines any and all responsibility for such plans, drawings and/or non-completed field modifications.

Graphic Scale: 1/32" = 1'-0"



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SYSTEM DESIGN

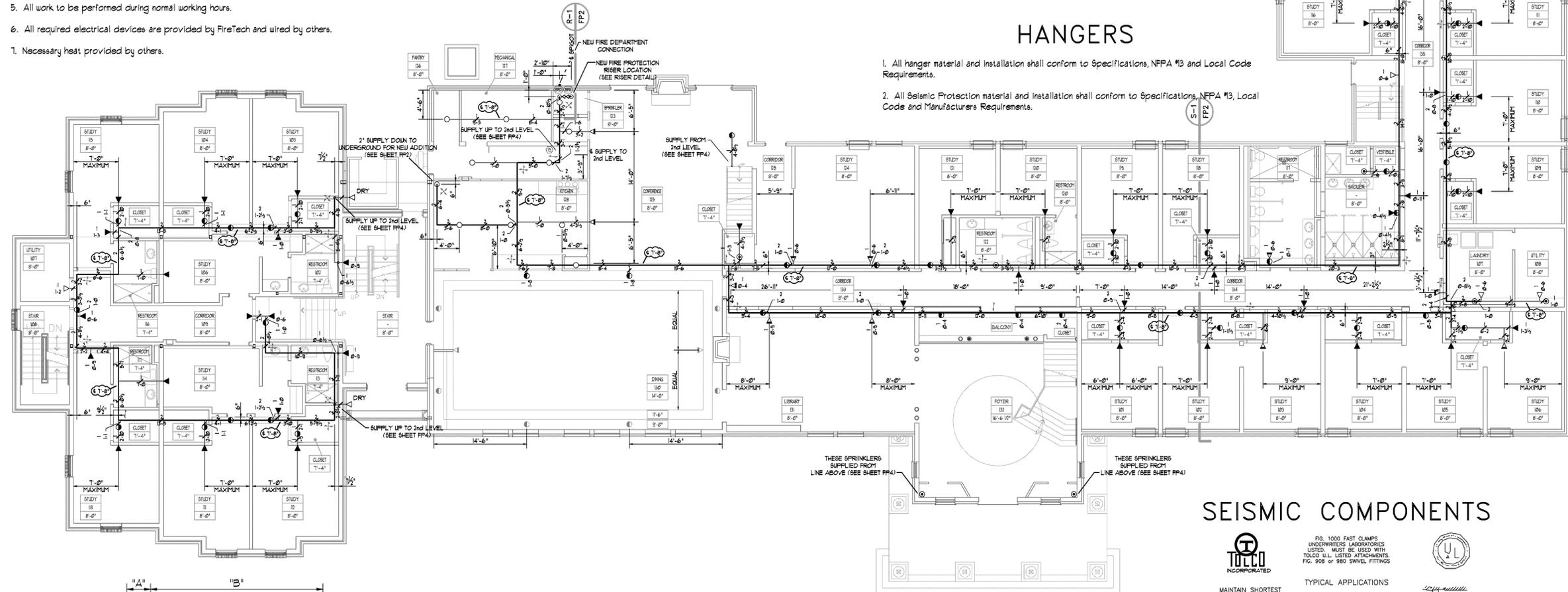
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MATERIAL

- Underground Pipe below footings and foundations shall be Ductile Iron Class B2 Slip-Joint pipe. All other Underground Pipe to be DR18, Class 150 PVC Pipe complete with tracer wire. Underground Fittings shall be Mechanical Joint type with Mega-Lug Accessories. All nuts, bolts, rods and accessories to be provided with bitumastic coating.
- All Aboveground Pipe prior to the Backflow Preventer shall be Schedule 10 Galvanized Steel Pipe with Grooved-Type Fittings. (or approved equal)
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- All other Aboveground Pipe shall be CPVC pipe with CPVC fittings.

HANGERS

- All hanger material and installation shall conform to Specifications, NFPA #3 and Local Code Requirements.
- All Seismic Protection material and installation shall conform to Specifications, NFPA #3, Local Code and Manufacturers Requirements.



1st LEVEL FIRE PROTECTION PLAN

Scale 1/8" = 1'-0"

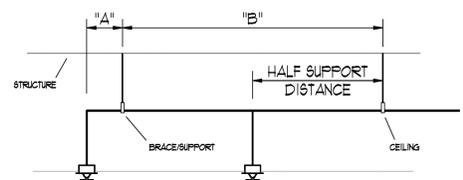


TABLE "A" MAXIMUM SUPPORT SPACING DISTANCE END OF LINE SPRINKLER HEAD DROP ELBOW

PIPE SIZE NOMINAL INCHES	LINE PRESSURE < 100 PSI	LINE PRESSURE > 100 PSI
3/4"	9"	6"
1"	12"	9"
1 1/2"	16"	12"
1 1/2" thru 3"	24"	12"

TABLE "B" MAXIMUM SUPPORT SPACING DISTANCE INLINE SPRINKLER HEAD DROP TEE

PIPE SIZE NOMINAL INCHES	LINE PRESSURE < 100 PSI	LINE PRESSURE > 100 PSI
3/4"	4'-0"	3'-0"
1"	5'-0"	4'-0"
1 1/2"	6'-0"	5'-0"
1 1/2" thru 3"	7'-0"	7'-0"

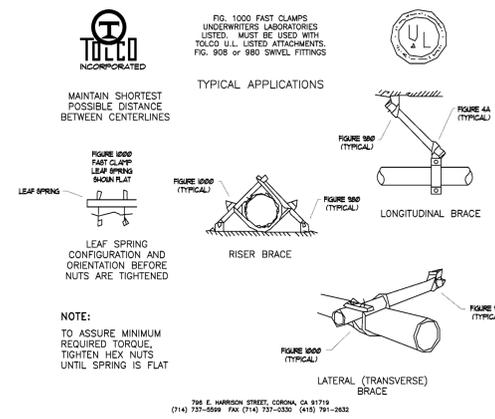
MAXIMUM DISTANCE FOR CPVC HANGERS

NOMINAL PIPE SIZE						
3/4"	1"	1 1/2"	2"	2 1/2"	3"	3 1/2"
5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"	10'-0"

CPVC HANGER SUPPORT SPACING GUIDELINES

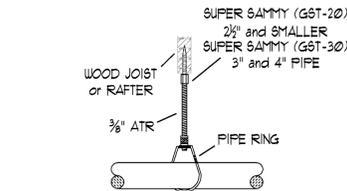
NOTE:
EXTEND BRANCH LINE WITH NIPPLE AND CAP WITH ADDITIONAL HANGER IF NECESSARY

SEISMIC COMPONENTS

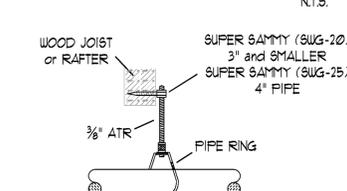


TYPICAL HANGER

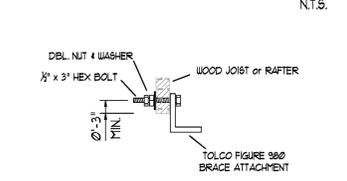
NT.S.
NOTE:
FINAL HANGER ON BRANCH LINES SHALL BE SURGE RESTRAINED



OPTIONAL HANGER



OPTIONAL HANGER



TYPICAL SEISMIC CONNECTION

SYMBOL LEGEND

- FIRELOCK RIGID COUPLING
- VICTALIC #18 FLEXIBLE COUPLING
- HEAD GUARD

SYMBOL	THREAD	K-FACTOR	MAKE	SIN	MODEL	FINISH	TEMP	QUANTITY
⊙	1/2" NPT	5.6 K	Viking	VK302	MGR-Pendant	White/Recessed	155	7
⊙	1/2" NPT	3.1 K	Viking	VK435	Freedom-Res. Pendant	White/Recessed	155	53
⊙	3/4" NPT	8.0 K	Viking	VK350	MGR-Upright	Brass	155	10
▽	1/2" NPT	4.0 K	Viking	VK453	Freedom-Res. SideWall	White/Recessed	155	44
▽	1/2" NPT	5.6 K	Viking	VK460	Freedom-Res. SideWall	White/Recessed	155	12
▽	3/4" NPT	8.0 K	Viking	VK360	QR-SideWall	White/Recessed	155	4
▽ DRY	1" NPT	5.6 K	Viking	VK182	QR-Dry SideWall	White/Recessed	155	2
TOTAL SPRINKLERS ON THIS SHEET								132
TOTAL SPRINKLERS ON THIS CONTRACT								296

SYMBOL	DESCRIPTION
⊕	CENTERLINE ABOVE FINISH FLOOR
⊖	4-WAY BRACE
⊕	DIMENSION BELOW DECK
⊖	LONGITUDINAL BRACE
⊕	HORIZONTAL BRACE
⊖	RISER BRACE

FireTech, LLC

1353 Baur Boulevard St. Louis, MO 63132 Phone 314.292.6250 Fax 314.292.6255

PROJECT: BETA CHI/KAPPA SIGMA HOUSE
 DESCRIPTION: 1st Level Fire Protection Plan
 CONTRACT WITH: Conway Contracting Incorporated
 WATER SUPPLY INFORMATION

STATIC PRESSURE: 40 TEST DATE: 4/23/10
 RESIDUAL PRESSURE: 34
 FLOW: 750 GPM TEST LOCATION: Project Site

SCALE: 1/8" = 1'-0"
 DRAWN BY: W. Woodward
 CHECKED BY: M. Shelton
 DATE: 4/23/10
 CONTRACT NO: 1301-10
 DRAWING NO: FP3 OF 4

REGISTERED 1353 BAUR BOULEVARD
OLIVETTE MO 63132

RONALD DIRSA
PE-017945
The design professional's seal is affixed to the printed documents and applies only to the documents identified and based on the sheet(s). Any design shown for this project was prepared under the seal and is the considered prepared by the design professional. The design professional declines any and all responsibility for such plans, drawings and/or non-completed full notification.

