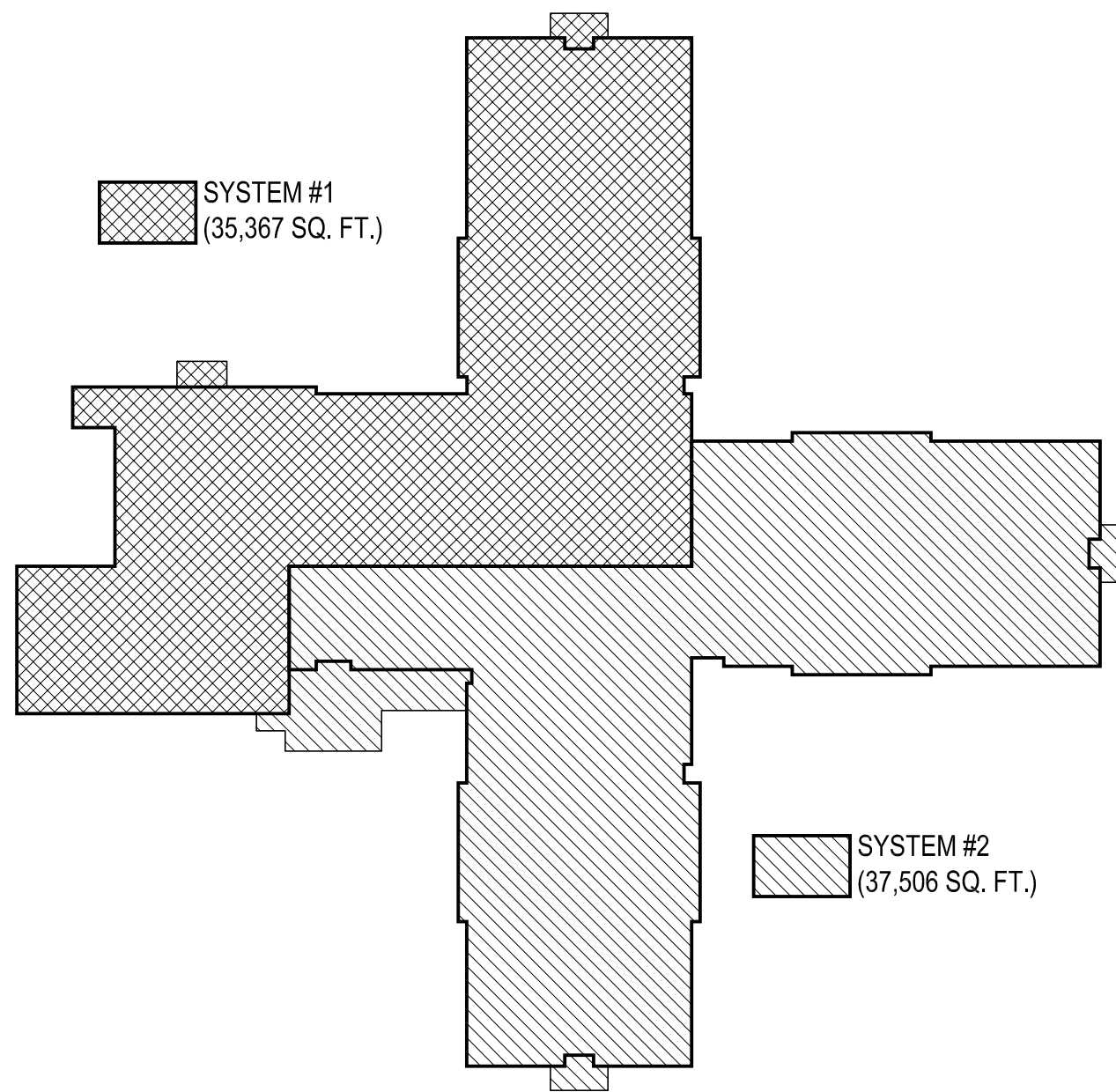


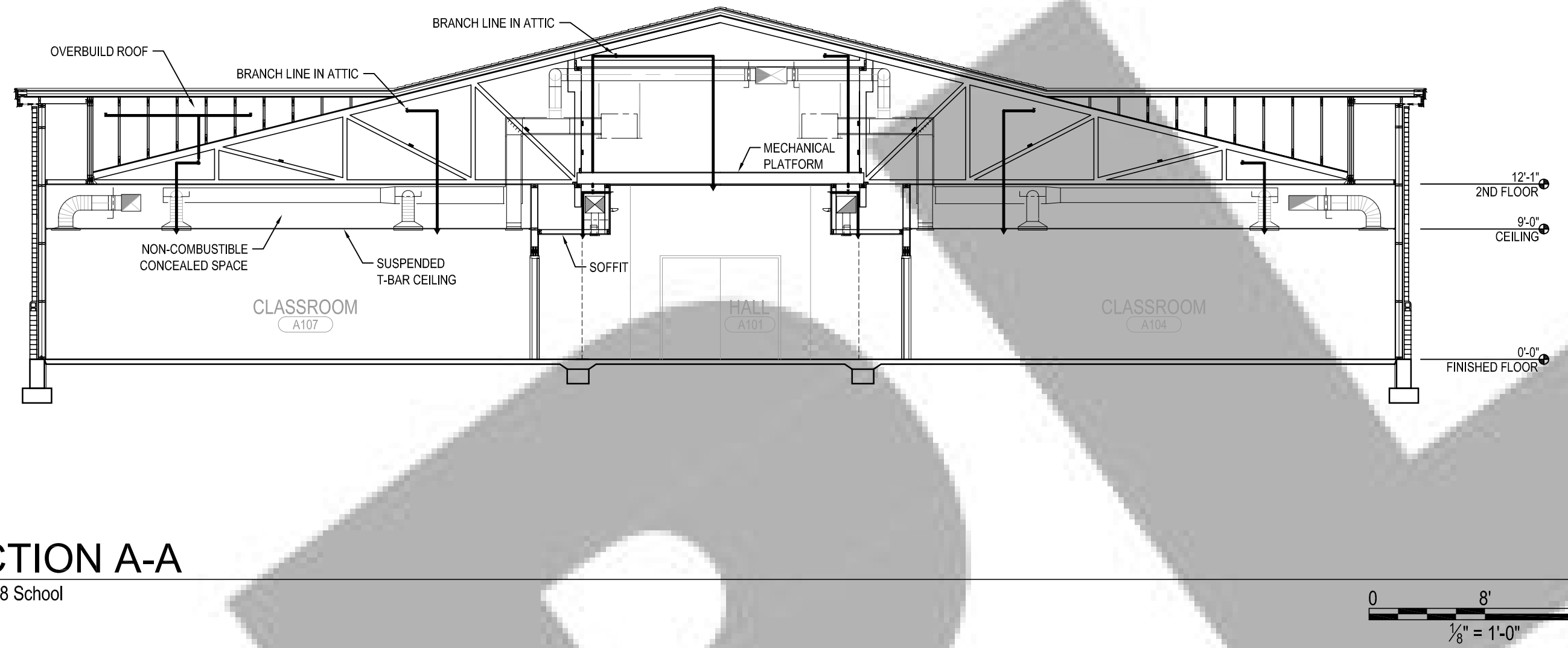
SPRINKLER SCHEDULE & LEGEND (ENTIRE PROJECT)										
SYMBOL	SN	SPRINKLER DESCRIPTION	RESP.	K-FAC	ORIFICE	TEMP.	FINISH	ESD/CHECK	QTY.	
●	TY3231	CSC MODEL TY-FRB SSP	DR	5.6	1/2"	155	Chr	Recessed	229	
●	TY3237	CSC MODEL EC-11 ECSSP	DR	11.2	3/4"	155	Chr	Recessed	206	
○	TY3131	CSC MODEL TY-FRB SSU	DR	5.6	1/2"	200	Brass	N/A	760	
○	TY5137	CSC MODEL EC-11 ECSSU	DR	11.2	3/4"	200	Brass	N/A	1	
●	TY3235	CSC MODEL DS-1 DP	DR	5.6	1/2"	155	Chr	Recessed	5	
●	TY3331	CSC MODEL TY-FRB HSW	DR	5.6	1/2"	155	Chr	Recessed	12	
●	TY3335	CSC MODEL DS-1 DHSW	DR	5.6	1/2"	155	Chr	Recessed	10	
●	TY3231	CSC MODEL TY-FRB SSP	DR	5.6	1/2"	200	Brass	N/A	24	
HEAD CABINET WITH MIN. 12 SPARE HEADS & WRENCH(ES) PROVIDED									TOTAL COUNT THIS JOB	= 1247

SYMBOLS & ABBREVIATIONS LEGEND			
○	UPRIGHT SPRINKLER ON BRANCH LINE	T0E	THREAD ONE END
○	UPRIGHT SPRINKLER ON SPRING-UP	T0E	THREAD BOTH ENDS
○	PENDENT SPRINKLER ON 1" DROP	T1G	THREAD BY GROOVE
○	ROOSTER TAIL (UPRIGHT OVER PENDENT)	G0E	GROOVE ONE END
○	ADDITIONAL SPRINKLER TYPE DESIGNATION	G0E	GROOVE BOTH ENDS
○	HORIZONTAL SIDEWALL SPRINKLER	P.O.C.	POINT OF CONNECTION
○	AUTOMATIC SPRINKLER SYSTEM RISER	F.D.C.	FIRE DEPT. CONNECTION
○	PIPE RISER TO FLOOR ABOVE	DN	DOWN
○	PIPE ELEVATION CHANGE (90° UP OR DOWN)	RU	RISE UP
○	DROP DOWN ON MAIN OR BRANCH LINE	TOR	TOP OF RISER
○	PIPE CONTINUATION	BOR	BASE OF RISER
○	PIPE HANGER (# DESIGNATES HANGER TYPE)	TYP	TYPICAL
○	RIGID GROOVED COUPLING	℄	CENTER LINE
○	FLEXIBLE GROOVED COUPLING		
○	4-WAY SWAY BRACE		
○	2-WAY SWAY BRACE		
○	SECTION LINE MARKER		
○	HYDRAULIC CALCULATION NODE		
○	PIPE LINE NUMBER (FOR FABRICATION)		
○	PIPE IDENTIFIER & SIZE INFO (FOR FAB.)		



SPRINKLER SYSTEM LAYOUT

NOT TO SCALE



SECTION A-A

Sienna K-8 School

- FIRE PROTECTION SYSTEM TO BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE APPLICABLE BUILDING CODES, STATE AND LOCAL FIRE MARSHALS REQUIREMENTS, NFPA 13, 2002 EDITION.
- ALL ELECTRICAL WIRING OF FIRE PROTECTION SYSTEM AND COMPONENTS TO BE PERFORMED BY OTHER TRADE DIVISIONS.
- ALL PAINTING OF FIRE PROTECTION PIPING AND RELATED COMPONENTS TO BE PERFORMED BY OTHER TRADE DIVISIONS.
- ALL INSULATING OF FIRE PROTECTION PIPING AND RELATED COMPONENTS TO BE PERFORMED BY OTHER TRADE DIVISIONS.
- SPRINKLER PIPING TO BE HUNG AS PER NFPA 13.
- EARTHQUAKE AND SWAY BRACING TO BE AS PER NFPA 13. FOR SWAY BRACING LOADS AND CONFIGURATIONS, SEE SWAY BRACING CALCULATIONS ATTACHED TO HYDRAULIC CALCULATIONS AND SWAY BRACING DETAILS ON FIRE SPRINKLER DRAWINGS.
- LATERAL SWAY BRACES ARE REQUIRED ON ALL FEED AND CROSS MAINS, REGARDLESS OF SIZE. LATERAL SWAY BRACES ARE REQUIRED ON BRANCHLINES 2-1/2" AND LARGER. BRACES ARE NOT REQUIRED ON PIPES INDIVIDUALLY SUPPORTED BY RODS LESS THAN 6". AS PER NFPA 13 9.3.5.3.7.
- ALL WELDING TO BE DONE BY A CERTIFIED WELDER IN A FABRICATION SHOP PER NFPA STANDARDS.
- SYSTEM TO BE INSTALLED, TESTED, AND FLUSHED per NFPA 13 STANDARDS AND LOCAL REQUIREMENTS.
- UNDERGROUND AND ABOVEGROUND PIPING TO BE HYDRO-STATICALLY TESTED AT 200 PSI FOR 2 HOURS.
- ALL SPRINKLER FITTINGS SHALL MEET OR EXCEED THE REQUIREMENTS OF NFPA 13 TABLE 6.4.1.
- ALL SPRINKLER PIPING SHALL CONFORM TO NFPA 13 TABLE 6.3.1.1 STANDARDS AND LOCAL REQUIREMENTS.
- SPARE SPRINKLER CABINET AND WRENCH TO BE FURNISHED PER NFPA 13.
- DOMESTIC MATERIAL NOT REQUIRED.
- SPRINKLER HEADS ARE CENTER LINE OF CEILING TILE AS SHOWN IN DETAIL ON SHEET 1.
- PIPING: STEEL PIPING CONFORMING TO NFPA 13, ASTM A135 AND / OR ASTM A795.
- 2" AND LARGER MAIN PIPING: SCH 10 - GROOVED ENDS WITH WELDED OUTLETS.
- 2" AND LARGER BRANCH LINE PIPING: GRID BRANCH LINES SCH 10 - GROOVED ENDS WITH WELDED OUTLETS.
- BRANCH LINE PIPING, ARMOVERS, DROPS AND SPRINGS: SCH. 40 - THREADED ENDS WITH THREADED OR WELDED OUTLETS.
- IN ROOMS NOT EXCEEDING 800 SQ. FT. AND OF UNOBSTRUCTED CONSTRUCTION, SPRINKLERS SHALL BE PERMITTED TO BE LOCATED NOT MORE THAN 9' FROM ANY SINGLE WALL IN LIGHT HAZARD ONLY. STORAGE. AS PER NFPA 13 8.14.3.2.3.
- SPRINKLERS ARE NOT REQUIRED IN NON-COMBUSTIBLE SPACES. NFPA 13 8.14.1.2.1 & 2. ALL CONCEALED SPACES ENCLOSED WHOLLY OR PARTLY BY EXPOSED COMBUSTIBLE CONSTRUCTION SHALL BE PROTECTED BY SPRINKLERS.

FLOW TEST INFORMATION

STATIC:	50 PSI
RESIDUAL:	30 PSI
FLOW:	2500 GPM
SOURCE OF INFORMATION:	
TEST DATE:	11-16-07
UNDERGROUND:	8" CIRCULATING
ORIFICE:	2 1/2"

CALCULATED AREA #1 - Classroom B115

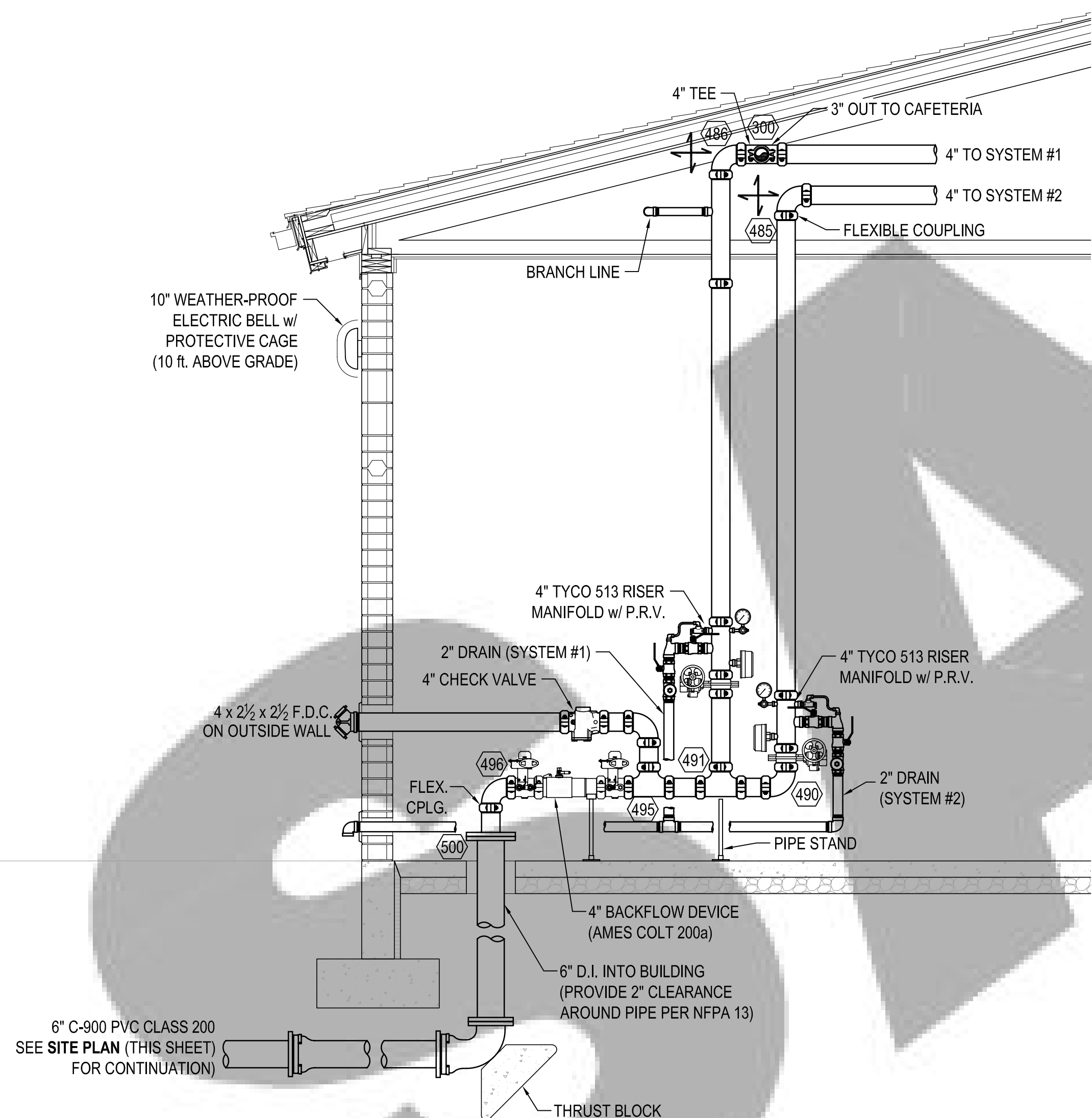
OCCUPANCY:	LIGHT HAZARD
DENSITY:	0.10 GPM/ SQ. FT.
DESIGNED AREA OF DISCHARGE:	1117 SQ. FT.
CALCULATION METHOD:	ROOM DESIGN
NUMBER OF SPRINKLERS FLOWING:	5
SPRINKLER DISCHARGE:	193.9 GPM
INSIDE/OUTSIDE HOSE ALLOWANCE:	100.0 GPM
AVAILABLE RESIDUAL PRESSURE AT INFLOW NODE (600):	49.6 PSI
RESIDUAL PRESSURE AT THE BASE OF THE RISER (500):	46.3 PSI
RESIDUAL PRESSURE AT INFLOW NODE (600):	46.7 PSI

CALCULATED AREA #2 - Attic Space

OCCUPANCY:	LIGHT HAZARD
DENSITY:	0.10 GPM/ SQ. FT.
DESIGNED AREA OF DISCHARGE:	1173 SQ. FT.
CALCULATION METHOD:	AREA / DENSITY
NUMBER OF SPRINKLERS FLOWING:	12
SPRINKLER DISCHARGE:	192.1 GPM
INSIDE/OUTSIDE HOSE ALLOWANCE:	100.0 GPM
AVAILABLE RESIDUAL PRESSURE AT INFLOW NODE (600):	49.6 PSI
RESIDUAL PRESSURE AT THE BASE OF THE RISER (500):	34.1 PSI
RESIDUAL PRESSURE AT INFLOW NODE (600):	34.6 PSI

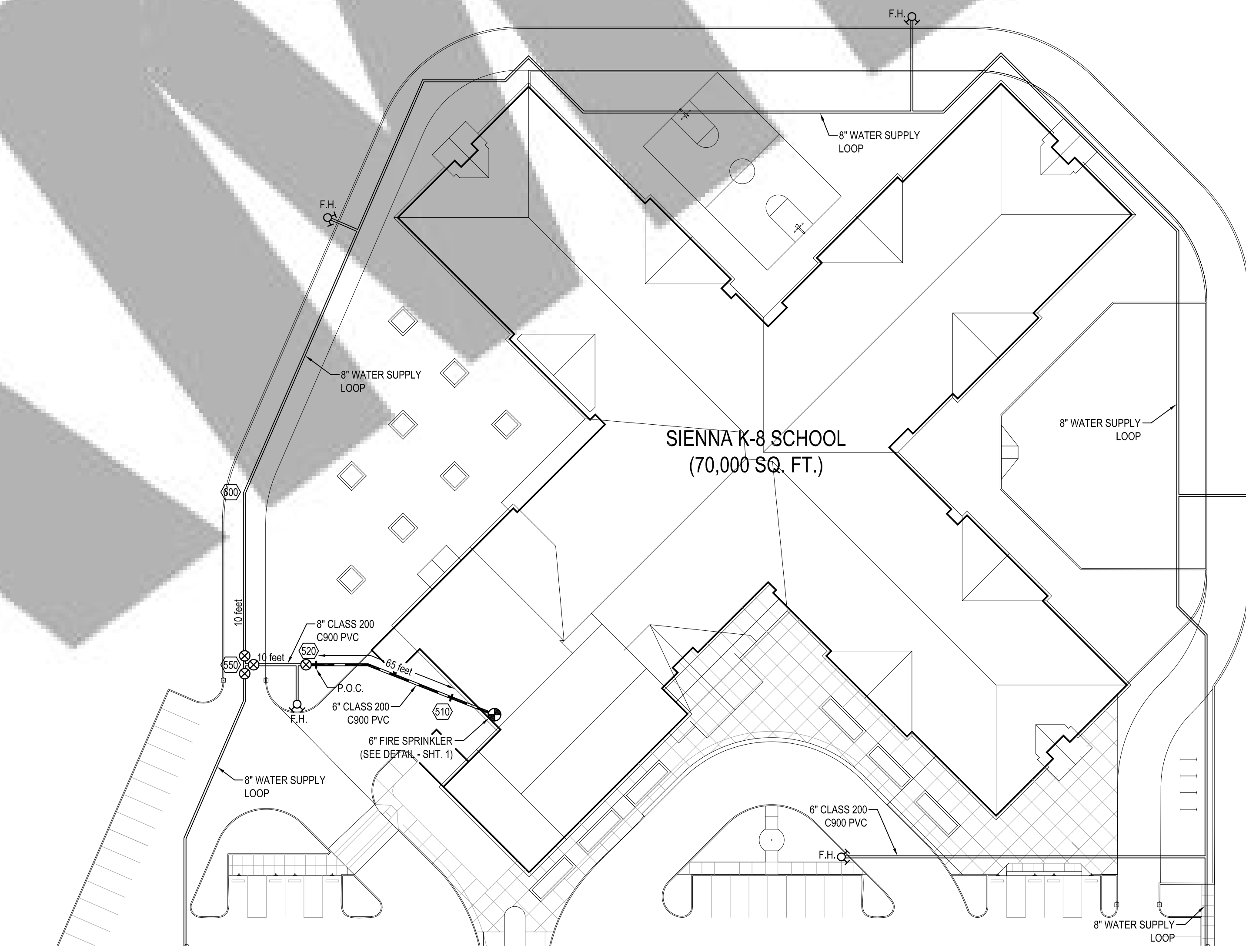
CALCULATED AREA #3 - Stage E101

OCCUPANCY:	ORD. HAZ. GRP. 2
DENSITY:	0.20 GPM/ SQ. FT.
DESIGNED AREA OF DISCHARGE:	920 SQ. FT.
CALCULATION METHOD:	AREA / DENSITY
NUMBER OF SPRINKLERS FLOWING:	13
SPRINKLER DISCHARGE:	303.6 GPM
INSIDE/OUTSIDE HOSE ALLOWANCE:	250.0 GPM
AVAILABLE RESIDUAL PRESSURE AT INFLOW NODE (600):	48.8 PSI
RESIDUAL PRESSURE AT THE BASE OF THE RISER (500):	45.1 PSI
RESIDUAL PRESSURE AT INFLOW NODE (600):	45.9 PSI



RISER DETAIL

NOT TO SCALE



SITE PLAN / UNDERGROUND PIPING PLAN

Sienna K-8 School

SCALE: 1" = 40'

REVISIONS:	
1	
2	
3	
4	

FILE NAME:
CHECKED BY:
DRAWN BY: Sam Kossob

NOTICE

CONTRACT WITH:
ADDRESS:
ADDRESS:
PHONE NUMBER:
FAX:

Sienna K-8 School

AREA 'E'
FIRE SPRINKLER PIPING PLAN
SCALE: JOB #:
B.D.#:

SHEET
FP-1
OF
8
Sienna K-8

