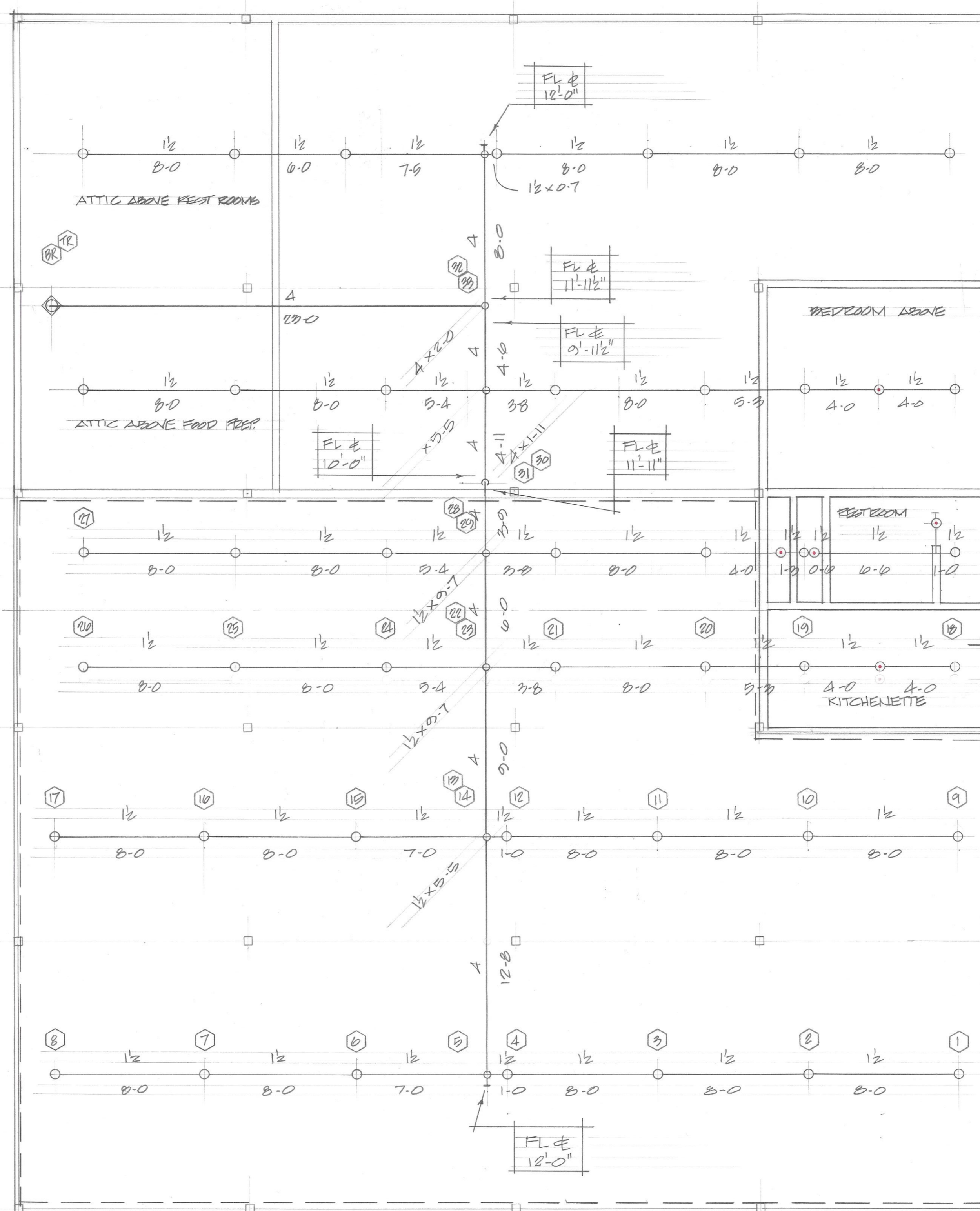


LOWER LEVEL BARN
SCALE 1/4" = 1'-0"



UPPER LEVEL BARN
SCALE 1/4" = 1'-0"

NODES/HEADS #18 + #19 NOT USED IN HYDRAULIC CALCULATIONS

REMOTE AREA #1 DRY SYSTEM
80/10050 + 220GPM OUTSIDE HOSE



HYDRAULIC DESIGN DATA			
Calculation #	1	2	3
Hazard Class			
System Type			
Density (GPM)			
Calculated Area			
Area per Sprinkler			
Demand (GPM@)			
Pressure (Psi)			
Time			
Test By			
Location			
Firepump	GPM@	Psi	Date
Flow Test Info			
Orifice Size	No of Outlet	Pilot Press (Psi)	Static (Psi)
1			
2			
3			
Flow (GPM)			
Residual (Psi)			
Flow (GPM)			
Residual (Psi)			
Flow (GPM)			
Residual (Psi)			
Flow (GPM)			
Residual (Psi)			

CONTRACTOR: WESTERN FIRE PROTECTION
ADDRESS: 8320 South 89th West Ave. Tulsa, OK

REVISION	
DATE	DESCRIPTION

IMPORTANT
TO PREVENT FREEZING OF WATER IN WET PIPE SPRINKLER PIPING, OWNERS TO PROVIDE SUFFICIENT HEAT THROUGHOUT AREAS WHERE SPRINKLER PIPES ARE INSTALLED, UNLESS AN ANTI-FREEZE SYSTEM.

SPRINKLER SCHEDULE & LEGEND				
SYMBOL	SPRINKLER DESCRIPTION	ORIFICE (")	TEMP.	FINISH

SYMBOL LEGEND	
SYMBOL	SYMBOL DESCRIPTION



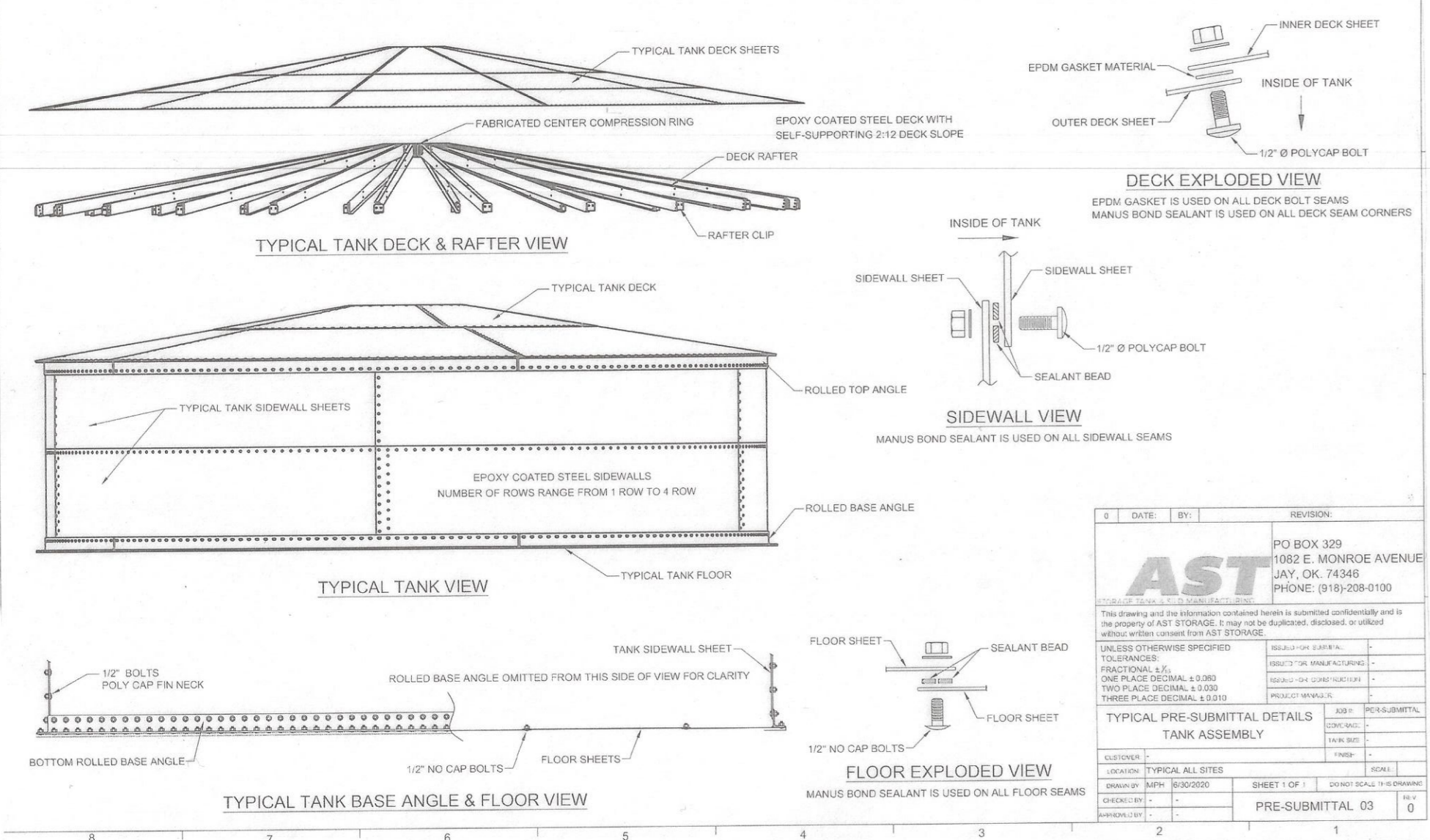
WILL ROGERS HISTORICAL BIRTHPLACE - BARN AREA
2801 EAST 280 ROAD COLOGAN, OKLAHOMA

WESTERN Fire Protection, Inc.
8320 S. 89th W. Ave.
PHONE (918) 227-3893 FAX (918) 227-7234

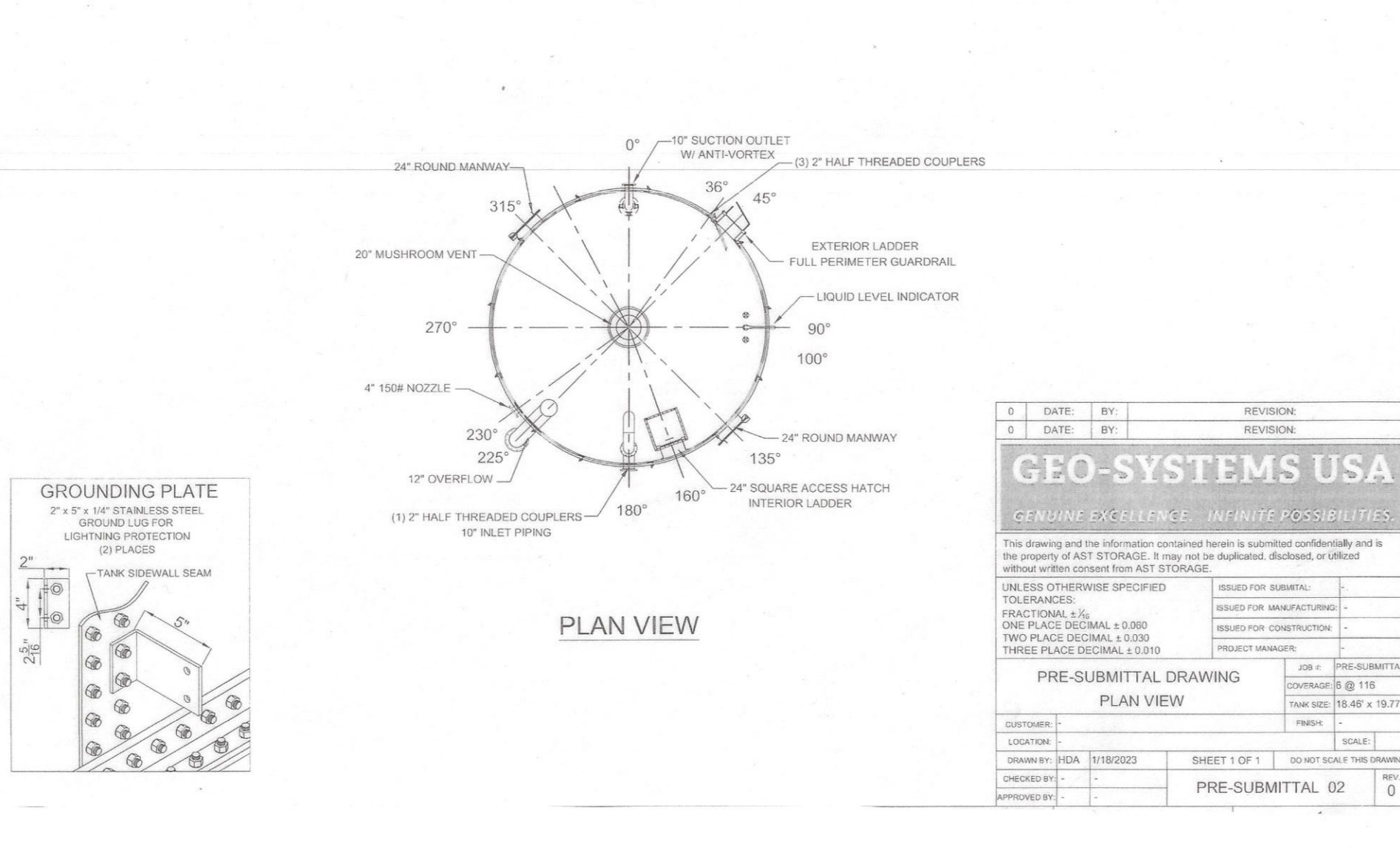
NORTH

DESIGNER: E. ROBERTS
SCALE: 1/4" = 1'-0"
CHECK BY: _____
FILE NUMBER: _____
APPROVAL: _____
DATE: 02-02-24
DRAWING NO. FP-3

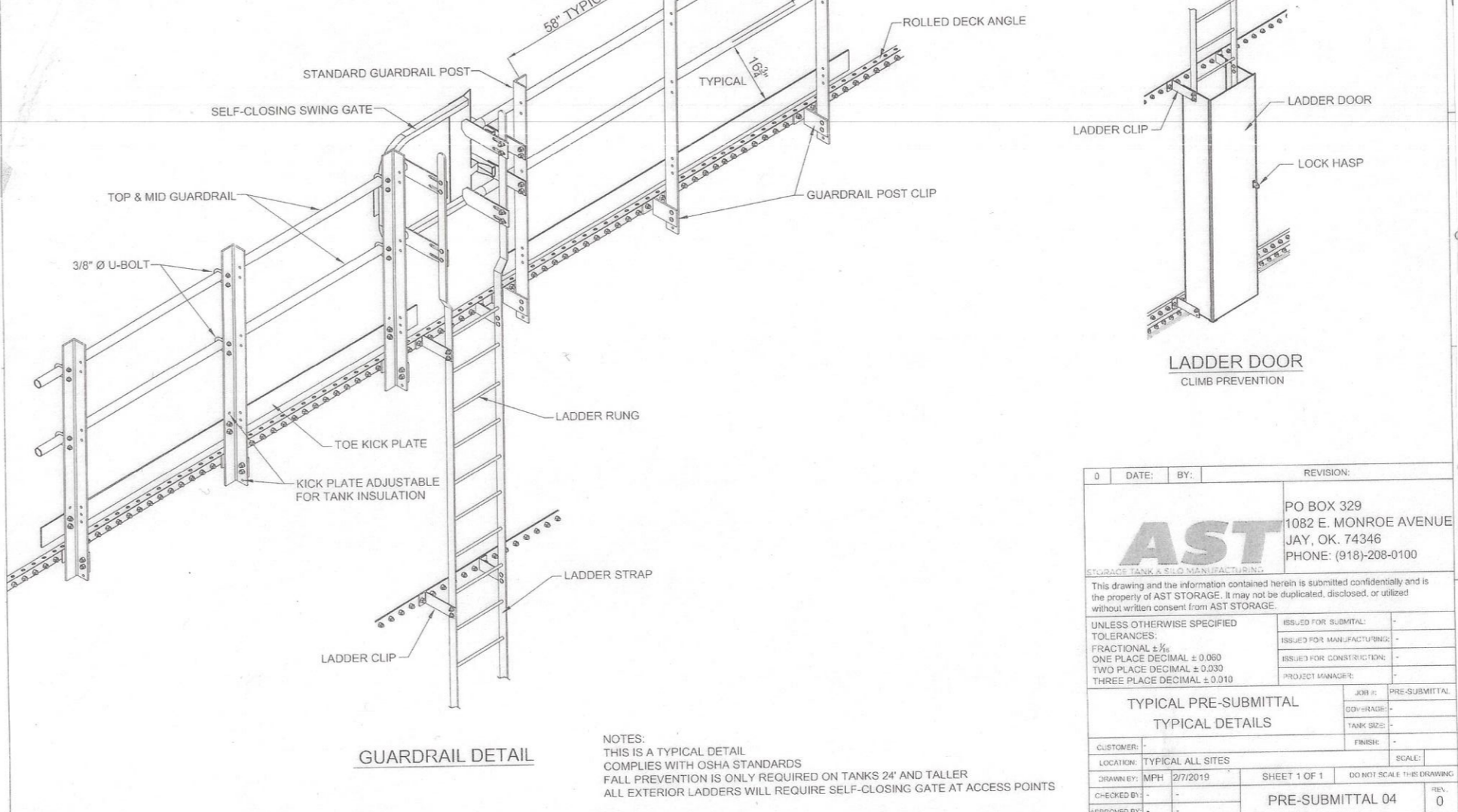
PRELIMINARY DESIGN NOT APPROVED FOR CONSTRUCTION



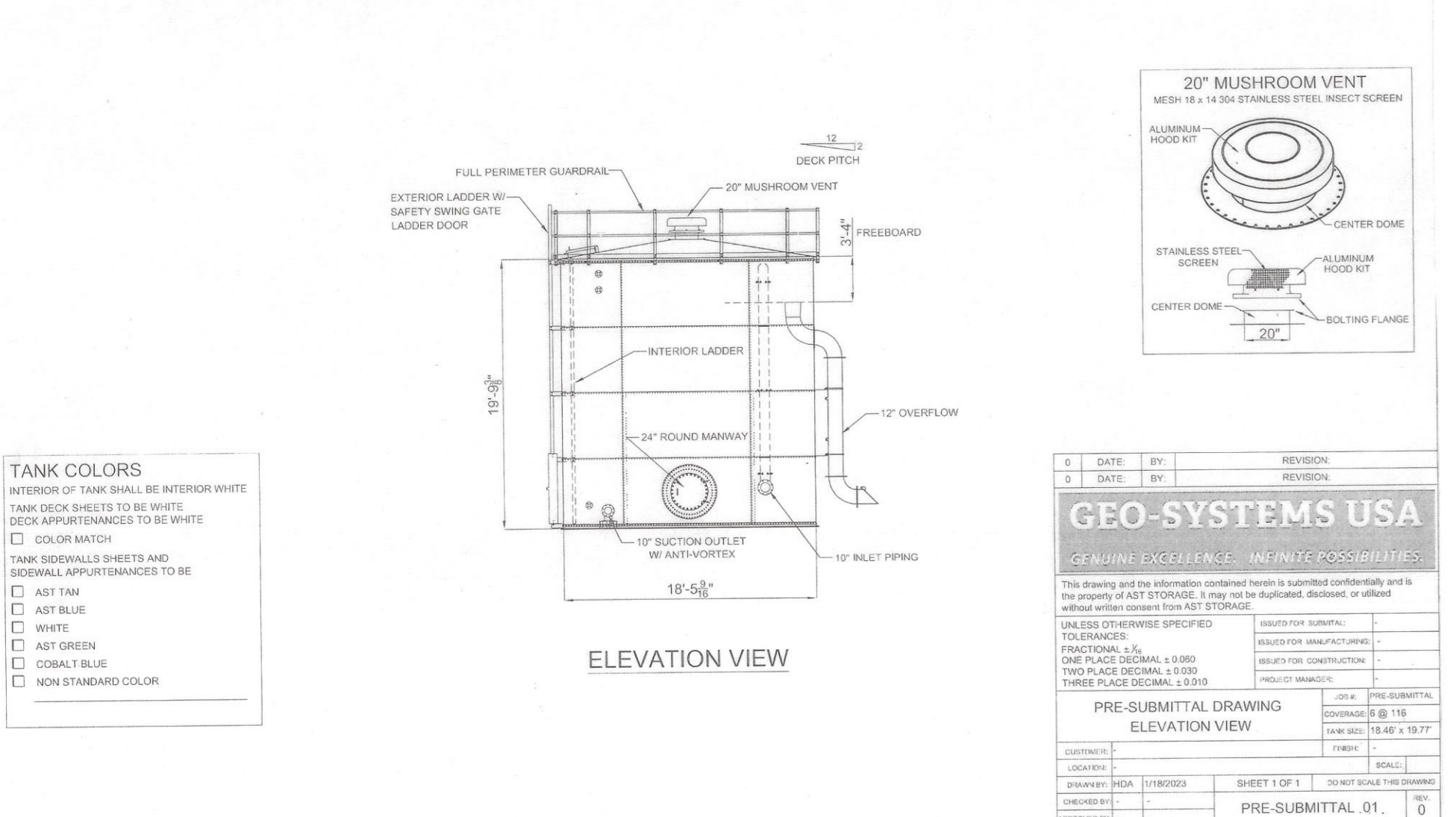
PRELIMINARY DESIGN NOT APPROVED FOR CONSTRUCTION



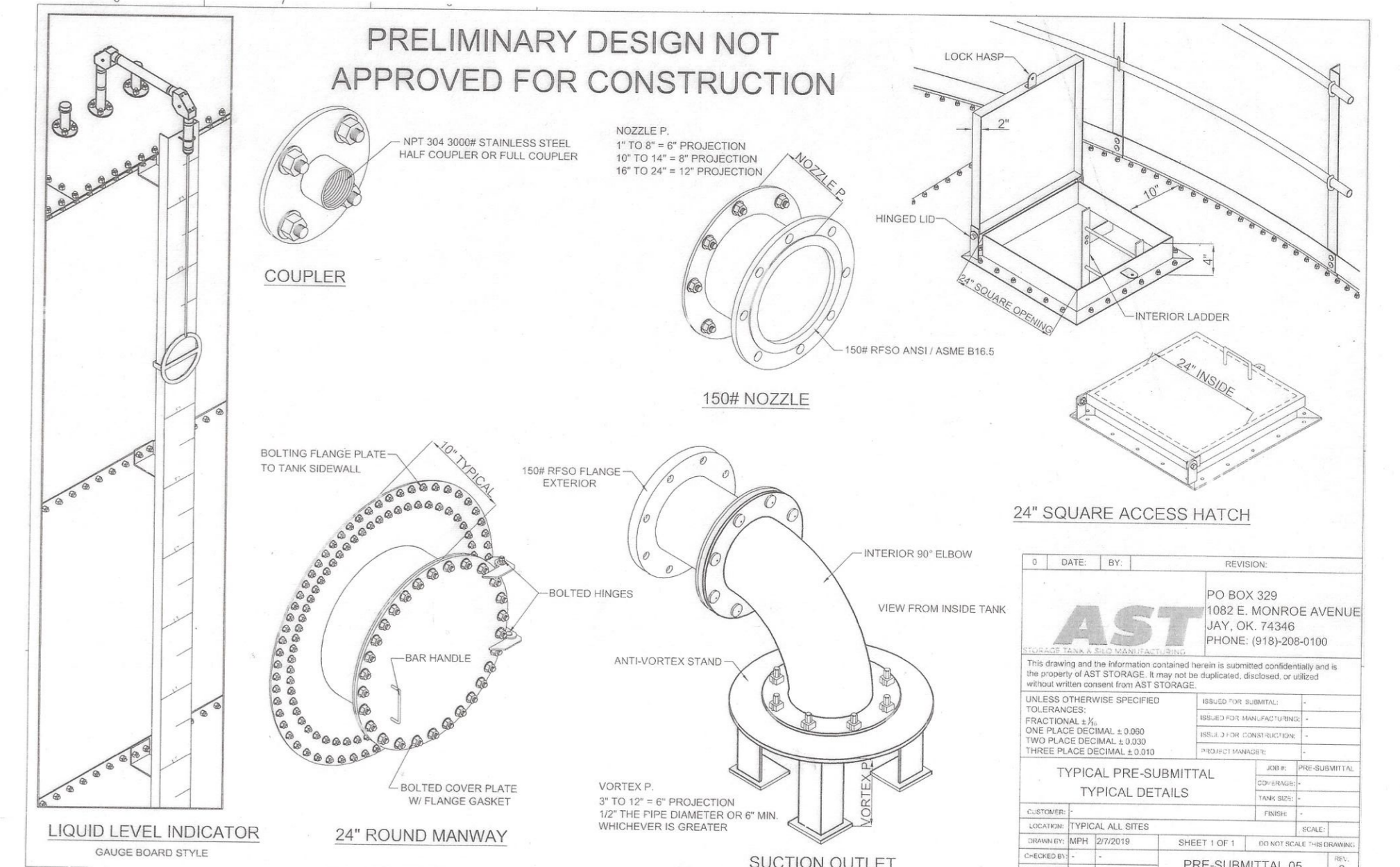
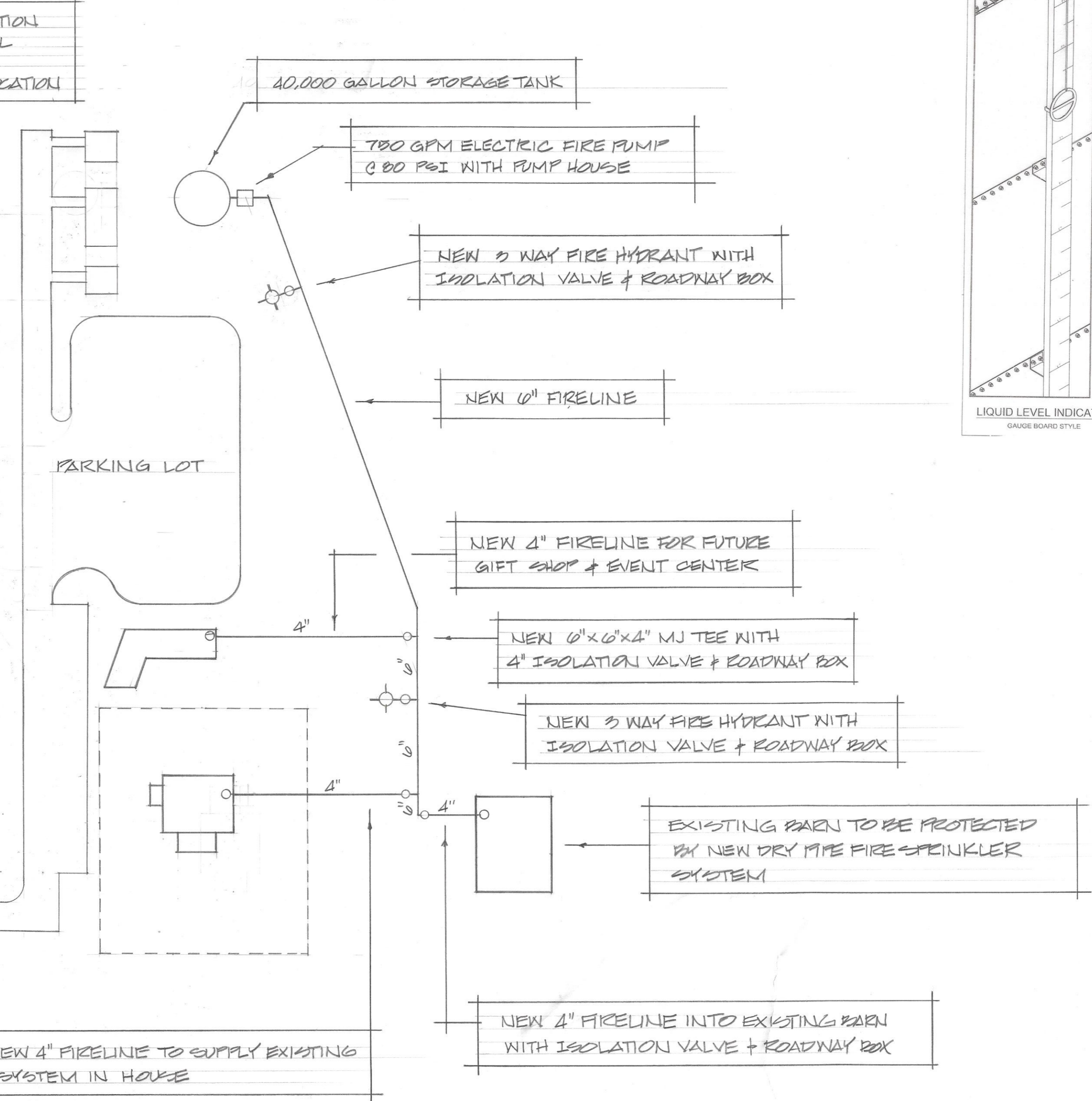
PRELIMINARY DESIGN NOT APPROVED FOR CONSTRUCTION



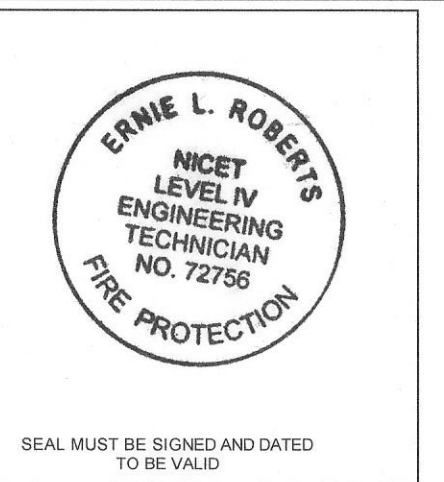
PRELIMINARY DESIGN NOT APPROVED FOR CONSTRUCTION



ALL LINE FOR FIRE PROTECTION WATER STORAGE TANK SHALL COME FROM EXISTING 1/2" WATER LINE. VERIFY SIZE/LOCATION



FIRE PROTECTION SITE PLAN SCALE 1" = 60'-0"



HYDRAULIC DESIGN DATA									
CALCULATION # 1		CALCULATION # 2		CALCULATION # 3		CALCULATION # 4		CALCULATION # 5	
Hazard Class									
System Type									
Density		GPM		GPM		GPM		GPM	
Calculated Area									
Area per Sprinkler									
Demand		GPM@	Psi	GPM@	Psi	GPM@	Psi	GPM@	Psi
FLOW TEST INFO:		Firepump:	GPM@	Psi	Date:	Time:	Test By:		
Orifice Size	No. of Outlet	Pitot Press	Psi	Static	Psi	Residual	Psi	Flow	GPM
1									
2									
3									
U/G Pipe: @									
SAFETY (PSI)									

CONTRACTOR: WESTERN FIRE PROTECTION	
ADDRESS: 8320 South 89th West Ave. Tulsa, OK	
REVISION	
DATE	DESCRIPTION

SPRINKLER SCHEDULE & LEGEND					
SYMBOL	SPRINKLER DESCRIPTION	ORIFICE	TEMP.	FINISH	QTY.

SYMBOL LEGEND	
SYMBOL	SYMBOL DESCRIPTION



WILL ROGERS BIRTHPLACE RAUNCH
9501 E. 900 RD. COLOGAH, OKLAHOMA

WESTERN
Fire Protection, Inc.

8320 S. 89th W. Ave.
PHONE: (918) 227-3893 FAX: (918) 227-7234

NORTH

DESIGNER: E. ROBERTS
SCALE: NOTED

CHECK BY: _____
FILE NUMBER: _____
APPROVAL: _____
DATE: 08-20-2014
DRAWING NO. FP1

IMPORTANT
TO PREVENT FREEZING OF WATER IN WET PIPE SPRINKLER PIPING, OWNERS TO PROVIDE SUFFICIENT HEAT THROUGHOUT AREAS WHERE SPRINKLER PIPES ARE INSTALLED, UNLESS AN ANTI-FREEZE SYSTEM.

HYDRAULIC CALCULATIONS

FOR

WILL ROGERS HISTORICAL BIRTHPLACE HOME
9501 East 380 Road
Oologah, Oklahoma

DATE: 03/25/2024

-DESIGN DATA-

OCCUPANCY CLASSIFICATION: Light Hazard

DENSITY: .10 gpm/sq. ft.

AREA OF APPLICATION: 900 sq. ft.

COVERAGE PER SPRINKLER: 130 sq. ft.

NUMBER OF SPRINKLERS CALCULATED: 7 sprinklers

TOTAL SPRINKLER WATER FLOW REQUIRED: 108.5 gpm

TOTAL WATER REQUIRED (including hose): 358.5 gpm

FLOW AND PRESSURE (@ BOR): 108.5 gpm @ 19.9 psi

SPRINKLER ORIFICE SIZE: 1/2 inch

NAME OF CONTRACTOR: Western Fire Protection, Inc.

DESIGN/LAYOUT BY: Ernie L. Roberts NICET 72756

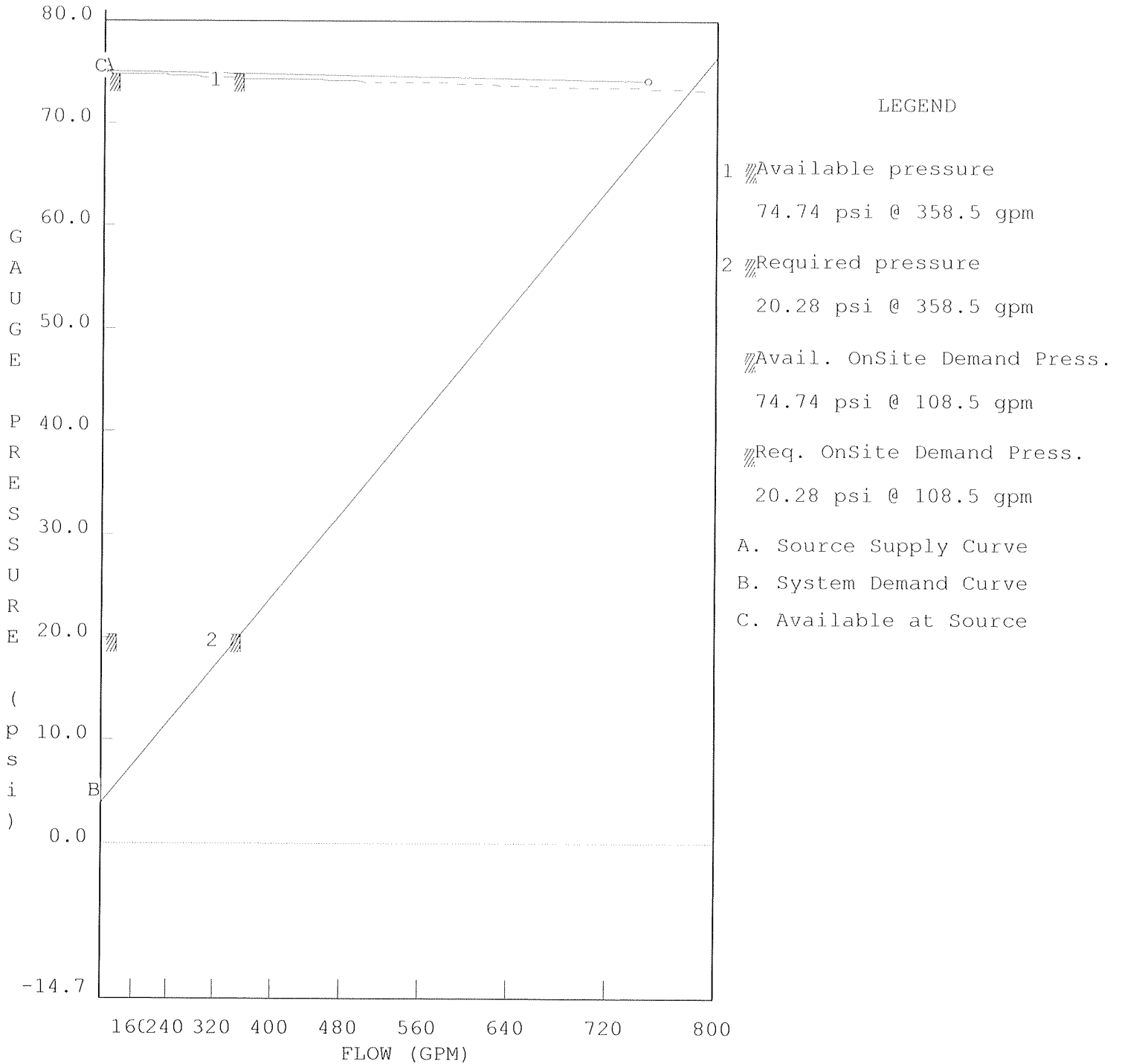
AUTHORITY HAVING JURISDICTION: Oklahoma State Fire Marshal

CONTRACTOR CERTIFICATION NUMBER: OK 0311

CALCULATIONS BY HASS COMPUTER PROGRAM (LICENSE # 64623248)
HRS SYSTEMS, INC.

WATER SUPPLY ANALYSIS

Static: 75.00 psi Resid: 74.00 psi Flow: 750.0 gpm



Note: (1) Dashed Lines indicate extrapolated values from Test Results

(2) On Site pressures are based on hose stream deduction at the source

DATE: 3/25/2024S SYSTEMS\HASS2020\ENGLISH\WILL ROGERS BIRTHPLACE HOME.SDF
 JOB TITLE: Will Rogers Historical Birthplace Home

NFPA WATER SUPPLY DATA

SOURCE NODE TAG	STATIC PRESS. (PSI)	RESID. PRESS. (PSI)	FLOW @ (GPM)	AVAIL. PRESS. (PSI)	TOTAL @ DEMAND (GPM)	REQ'D PRESS. (PSI)
18	75.0	74.0	750.0	74.7	358.5	20.3

AGGREGATE FLOW ANALYSIS:

TOTAL FLOW AT SOURCE	358.5 GPM
TOTAL HOSE STREAM ALLOWANCE AT SOURCE	250.0 GPM
OTHER HOSE STREAM ALLOWANCES	0.0 GPM
TOTAL DISCHARGE FROM ACTIVE SPRINKLERS	108.5 GPM

NODE ANALYSIS DATA

NODE TAG	ELEVATION (FT)	NODE TYPE	PRESSURE (PSI)	DISCHARGE (GPM)
1	8.8	K= 5.60	7.0	14.8
2	8.8	K= 5.60	7.5	15.4
3	8.8	- - - -	8.6	- - -
4	8.2	- - - -	10.4	- - -
5	8.8	K= 5.60	7.0	14.8
6	8.8	K= 5.60	7.5	15.4
7	8.8	- - - -	9.2	- - -
8	8.2	- - - -	11.0	- - -
9	8.8	K= 5.60	7.9	15.7
10	8.8	- - - -	8.1	- - -
11	8.8	K= 5.60	7.5	15.4
12	8.8	K= 5.60	9.3	17.0
13	8.8	- - - -	10.7	- - -
14	8.2	- - - -	12.2	- - -
15	8.2	- - - -	14.8	- - -
TR	8.2	- - - -	15.4	- - -
BR	0.0	- - - -	19.9	- - -
18	0.0	SOURCE	20.3	108.5

DATE: 3/25/2024S SYSTEMS\HASS2020\ENGLISH\WILL ROGERS BIRTHPLACE HOME.SDF
 JOB TITLE: Will Rogers Historical Birthplace Home

NFPA PIPE DATA 5

Pipe Tag	K-fac	Add Fl	Add Fl To	Fit:	L	C	(Pt)
Frm Node	El (ft)	PT	(q)	Node/	Nom ID	Eq.Ln.	(Pe)
To Node	El (ft)	PT	Tot.(Q)	Disch	Act ID	(ft.)	(Pf)
						F	
						T	Pf/ft.
Pipe: 1		5.60	14.8	Disch			0.5
2	8.8	7.5	0.0		1.000	----	-0.0
1	8.8	7.0	14.8		1.097		0.5
Pipe: 2		5.60	15.4	Disch			1.1
3	8.8	8.6	14.8		1.000	E: 2.5	-0.0
2	8.8	7.5	30.2		1.097		1.1
Pipe: 3		0.0	0.0				1.8
4	8.2	10.4	30.2	2	1.000	T: 6.2	0.3
3	8.8	8.6	30.2		1.097		1.5
Pipe: 4		0.0	0.0				0.6
8	8.2	11.0	30.2	3	1.250	----	-0.0
4	8.2	10.4	30.2		1.380		0.6
Pipe: 5		5.60	14.8	Disch			0.5
6	8.8	7.5	0.0		1.000	----	-0.0
5	8.8	7.0	14.8		1.097		0.5
Pipe: 6		5.60	15.4	Disch			1.7
7	8.8	9.2	14.8		1.000	E: 2.5	-0.0
6	8.8	7.5	30.2		1.097		1.7
Pipe: 7		0.0	0.0				1.8
8	8.2	11.0	30.2	6	1.000	T: 6.2	0.3
7	8.8	9.2	30.2		1.097		1.5
Pipe: 8		0.0	30.2	7			1.1
14	8.2	12.2	30.2	4	1.500	----	-0.0
8	8.2	11.0	60.4		1.610		1.1
Pipe: 9		5.60	15.7	Disch			0.3
10	8.8	8.1	0.0		1.000	----	-0.0
9	8.8	7.9	15.7		1.097		0.3
Pipe: 10		5.60	15.4	Disch			0.6
10	8.8	8.1	0.0		1.000	T: 6.2	-0.0
11	8.8	7.5	15.4		1.097		0.6
Pipe: 11		0.0	0.0				1.1
12	8.8	9.3	31.1		1.000	----	-0.0
10	8.8	8.1	31.1		1.097		1.1
Pipe: 12		5.60	17.0	Disch			1.5
13	8.8	10.7	31.1	10	1.250	E: 3.0	-0.0
12	8.8	9.3	48.1		1.380		1.5

DATE: 3/25/2024S SYSTEMS\HASS2020\ENGLISH\WILL ROGERS BIRTHPLACE HOME.SDF
 JOB TITLE: Will Rogers Historical Birthplace Home

Pipe Tag	K-fac	Add Fl	Add Fl To	Fit:	L	C	(Pt)		
Frm Node	El (ft)	PT	(q)	Node/	Nom ID	Eq.Ln.	(Pe)		
To Node	El (ft)	PT	Tot.(Q)	Disch	Act ID	(ft.)	(Pf)		
						F			
						T	Pf/ft.		
Pipe: 13	0.0	0.0				0.67	120	1.4	
14	8.2	12.2	48.1	12	1.250	T: 6.0	6.00	0.3	
13	8.8	10.7	48.1		1.380		6.67	0.174	1.2
Pipe: 14	0.0	48.1		13			17.75	120	2.7
15	8.2	14.8	60.4	8	2.000	T:12.3	12.31		-0.0
14	8.2	12.2	108.5		2.157		30.06	0.089	2.7
Pipe: 15	0.0	0.0					8.00	120	0.5
TR	8.2	15.4	108.5	14	2.500	E: 8.2	8.24		-0.0
15	8.2	14.8	108.5		2.635		16.24	0.033	0.5
Pipe: 16	0.0	0.0				E2C2GA	8.16	120	4.5
BR	0.0	19.9	108.5	15	3.000		72.57		3.5
TR	8.2	15.4	108.5		3.260		80.73	0.012	1.0
Pipe: 17	Source	0.0				4E:93.6	1000.00	140	0.4
18	0.0	20.3	108.5	TR	6.000	T:50.2	148.83		-0.0
BR	0.0	19.9	108.5		6.357	G: 5.0	1148.83	0.000	0.4

NOTES (HASS):

- (1) Calculations were performed by the HASS 2023 D computer program in accordance with NFPA (2020) under license no. 64623248 granted by HRS Systems, Inc. 208 Southside Square Petersburg, TN 37144 (931) 659-9760
- (2) The system has been calculated to provide an average imbalance at each node of 0.005 gpm and a maximum imbalance at any node of 0.090 gpm.
- (3) Total pressure at each node is used in balancing the system. Maximum water velocity is 10.6 ft/sec at pipe 11.
- (4) Items listed in bold print on the cover sheet are automatically transferred from the calculation report.
- (5) Fullflow calculations are not done for systems with variable speed pumps.

(6) PIPE FITTINGS TABLE

HASS Pipe Table Name: standard

PAGE: A MATERIAL: S40 HWC: 120

Diameter (in)	Equivalent Fitting Lengths in Feet								
	E Ell	T Tee	L LngEll	C ChkVlv	B BfyVlv	G GatVlv	A AlmChk	D DPVlv	N NTee

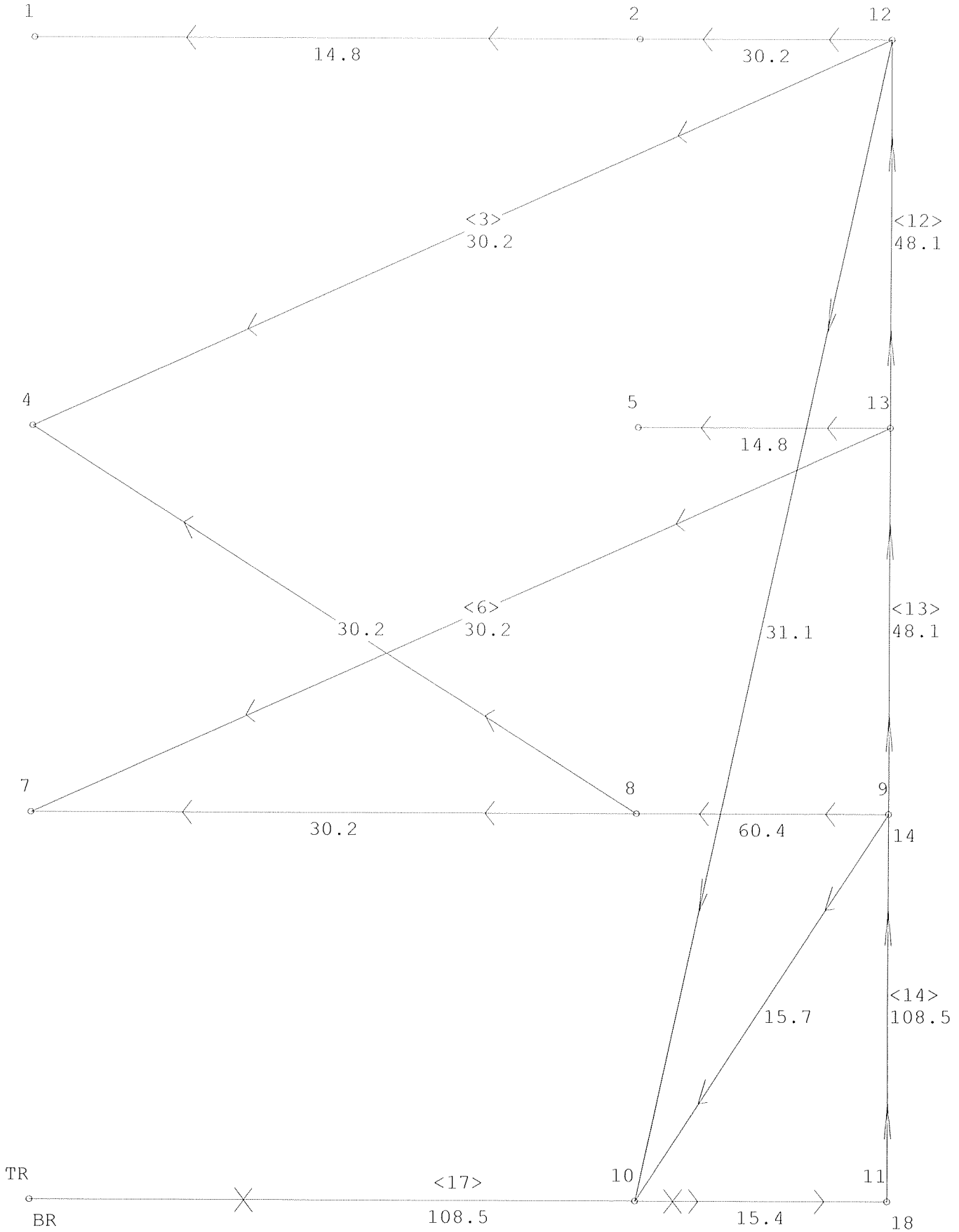
	F								
	F45Ell								
1.380	3.00	6.00	2.00	7.00	6.00	1.00	10.00	10.00	6.00
	1.50								
1.610	4.00	8.00	2.00	9.00	6.00	1.00	10.00	10.00	8.00
	2.00								

PAGE: * MATERIAL: Custom

Diameter (in)	Equivalent Fitting Lengths in Feet								
	E Ell	T Tee	L LngEll	C ChkVlv	B BfyVlv	G GatVlv	A AlmChk	D DPVlv	N NP Tee

	F								
	F45Ell								
1.097	2.49	6.22	2.49	6.22	7.46	1.24	12.43	2.49	6.22
	1.24								
2.157	6.15	12.31	3.69	13.54	7.38	1.23	12.31	12.31	12.31
	3.08								
2.635	8.24	16.47	5.49	19.22	9.61	1.37	13.73	13.73	16.47
	4.12								
3.260	9.41	20.16	6.72	21.50	13.44	1.34	17.47	17.47	20.16
	4.70								
6.357	17.60	37.72	11.32	40.23	12.57	3.77	35.21	35.21	37.72
	8.80								

SPRINKLER SYSTEM DIAGRAM WITH FLOWPLOT



HYDRAULIC CALCULATIONS

FOR

WILL ROGERS HISTORIC BIRTHPLACE - BARN DRY SYSTEM
9501 East 380 Road
Oologah, Oklahoma

DATE: 04/03/24

-DESIGN DATA-

OCCUPANCY CLASSIFICATION: Ordinary Hazard group 2

DENSITY: .20 gpm/sq. ft.

AREA OF APPLICATION: 2100 sq. ft.

COVERAGE PER SPRINKLER: 100 sq. ft.

NUMBER OF SPRINKLERS CALCULATED: 21 sprinklers

TOTAL SPRINKLER WATER FLOW REQUIRED: 490.8 gpm

TOTAL WATER REQUIRED (including hose): 740.8 gpm

FLOW AND PRESSURE (@ BOR): 490.8 gpm @ 48.5 psi

SPRINKLER ORIFICE SIZE: 1/2 inch

NAME OF CONTRACTOR: WESTERN FIRE PROTECTION, INC.

DESIGN/LAYOUT BY: Ernie L. Roberts NICET LEVEL IV 72756

AUTHORITY HAVING JURISDICTION: OSFM

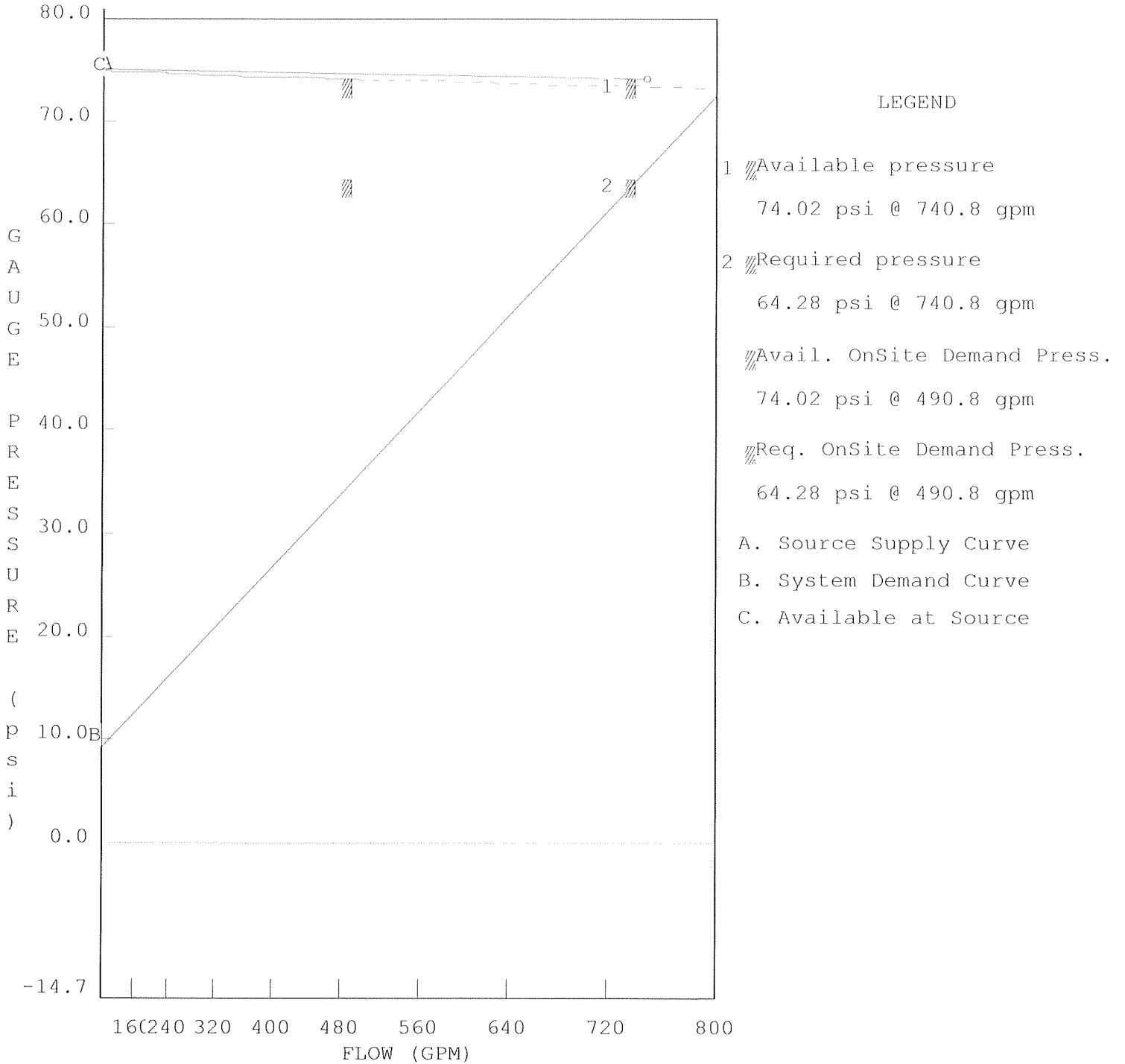
CONTRACTOR CERTIFICATION NUMBER: OK 0311

CALCULATIONS BY HASS COMPUTER PROGRAM (LICENSE # 64623248)
HRS SYSTEMS, INC.

DATE: 4/3/2024 \ATA\LOCAL\HRS SYSTEMS\HASS2020\ENGLISH\WILL ROGERS BARN.SDF
 JOB TITLE: Will Rogers Historic Birthplace Barn .20/1950 + 250

WATER SUPPLY ANALYSIS

Static: 75.00 psi Resid: 74.00 psi Flow: 750.0 gpm



Note: (1) Dashed Lines indicate extrapolated values from Test Results

(2) On Site pressures are based on hose stream deduction at the source

SPRINKLER SYSTEM HYDRAULIC ANALYSIS

DATE: 4/3/2024ATA\LOCAL\HRS SYSTEMS\HASS2020\ENGLISH\WILL ROGERS BARN.SDF
 JOB TITLE: Will Rogers Historic Birthplace Barn .20/1950 + 250

NFPA WATER SUPPLY DATA

SOURCE NODE TAG	STATIC PRESS. (PSI)	RESID. PRESS. (PSI)	FLOW @ (GPM)	AVAIL. PRESS. (PSI)	TOTAL @ DEMAND (GPM)	REQ'D PRESS. (PSI)
37	75.0	74.0	750.0	74.0	740.8	64.3

AGGREGATE FLOW ANALYSIS:

TOTAL FLOW AT SOURCE	740.8 GPM
TOTAL HOSE STREAM ALLOWANCE AT SOURCE	250.0 GPM
OTHER HOSE STREAM ALLOWANCES	0.0 GPM
TOTAL DISCHARGE FROM ACTIVE SPRINKLERS	490.8 GPM

NODE ANALYSIS DATA

NODE TAG	ELEVATION (FT)	NODE TYPE	PRESSURE (PSI)	DISCHARGE (GPM)
1	12.0	K= 5.60	22.5	26.6
2	12.0	K= 5.60	22.8	26.7
3	12.0	K= 5.60	23.9	27.4
4	12.0	K= 5.60	26.3	28.7
5	12.0	- - - -	29.8	- - -
6	12.0	K= 5.60	25.8	28.4
7	12.0	K= 5.60	24.6	27.8
8	12.0	K= 5.60	24.2	27.6
9	17.4	K= 5.60	13.1	20.2
10	17.4	K= 5.60	13.3	20.4
11	17.4	K= 5.60	13.9	20.9
12	17.4	K= 5.60	15.4	22.0
13	17.4	- - - -	17.5	- - -
14	12.0	- - - -	30.0	- - -
15	17.4	K= 5.60	15.0	21.7
16	17.4	K= 5.60	14.3	21.2
17	17.4	K= 5.60	14.1	21.0
18	21.6	K= 5.60	11.8	19.2
19	21.6	K= 5.60	11.9	19.3
20	21.6	K= 5.60	12.3	19.7
21	21.6	K= 5.60	13.6	20.7
22	21.6	- - - -	16.3	- - -
23	12.0	- - - -	30.3	- - -
24	21.6	K= 5.60	15.3	21.9
25	21.6	- - - -	15.1	- - -
26	21.6	K= 5.60	14.8	21.6
27	21.6	K= 5.60	24.8	27.9
28	21.6	- - - -	25.9	- - -
29	12.0	- - - -	30.7	- - -
30	11.9	- - - -	31.7	- - -
31	10.0	- - - -	33.4	- - -
32	9.9	- - - -	34.8	- - -
33	11.9	- - - -	34.8	- - -
TR	9.8	- - - -	38.1	- - -
BR	0.0	- - - -	48.5	- - -

SPRINKLER SYSTEM HYDRAULIC ANALYSIS

DATE: 4/3/2024ATA\LOCAL\HRS SYSTEMS\HASS2020\ENGLISH\WILL ROGERS BARN.SDF
 JOB TITLE: Will Rogers Historic Birthplace Barn .20/1950 + 250

NODE ANALYSIS DATA

NODE TAG	ELEVATION (FT)	NODE TYPE	PRESSURE (PSI)	DISCHARGE (GPM)
36	0.0	- - - -	58.6	- - -
37	0.0	SOURCE	64.3	490.8

DATE: 4/3/2024ATA\LOCAL\HRS SYSTEMS\HASS2020\ENGLISH\WILL ROGERS BARN.SDF
 JOB TITLE: Will Rogers Historic Birthplace Barn .20/1950 + 250

NFPA PIPE DATA 5

Pipe Tag	K-fac	Add Fl	Add Fl To	Fit:	L	C	(Pt)		
Frm Node	El (ft)	PT	(q)	Node/	Nom ID	Eq.Ln.	(Pe)		
To Node	El (ft)	PT	Tot.(Q)	Disch	Act ID	(ft.)	(Pf)		
						F			
						T	Pf/ft.		
Pipe: 1		5.60	26.6	Disch		8.00	100	0.3	
2	12.0	22.8	0.0		1.500	----	0.00	-0.0	
1	12.0	22.5	26.6		1.610		8.00	0.038	0.3
Pipe: 2		5.60	26.7	Disch		8.00	100	1.1	
3	12.0	23.9	26.6		1.500	----	0.00	-0.0	
2	12.0	22.8	53.3		1.610		8.00	0.139	1.1
Pipe: 3		5.60	27.4	Disch		8.00	100	2.4	
4	12.0	26.3	53.3	2	1.500	----	0.00	-0.0	
3	12.0	23.9	80.7		1.610		8.00	0.299	2.4
Pipe: 4		5.60	28.7	Disch		1.00	100	3.5	
5	12.0	29.8	80.7	3	1.500	T: 5.7	5.71	-0.0	
4	12.0	26.3	109.4		1.610		6.71	0.525	3.5
Pipe: 5		5.60	28.4	Disch		7.00	100	4.1	
5	12.0	29.8	55.3	7	1.500	T: 5.7	5.71	-0.0	
6	12.0	25.8	83.8		1.610		12.71	0.320	4.1
Pipe: 6		5.60	27.8	Disch		8.00	100	1.2	
6	12.0	25.8	27.6	8	1.500	----	0.00	-0.0	
7	12.0	24.6	55.3		1.610		8.00	0.149	1.2
Pipe: 7		5.60	27.6	Disch		8.00	100	0.3	
7	12.0	24.6	0.0		1.500	----	0.00	-0.0	
8	12.0	24.2	27.6		1.610		8.00	0.041	0.3
Pipe: 8		0.0	83.8	6			12.67	100	0.2
14	12.0	30.0	109.4	4	4.000	----	0.00	-0.0	
5	12.0	29.8	193.2		4.260		12.67	0.013	0.2
Pipe: 9		5.60	20.2	Disch		8.00	100	0.2	
10	17.4	13.3	0.0		1.500	----	0.00	-0.0	
9	17.4	13.1	20.2		1.610		8.00	0.023	0.2
Pipe: 10		5.60	20.4	Disch		8.00	100	0.7	
11	17.4	13.9	20.2		1.500	----	0.00	-0.0	
10	17.4	13.3	40.6		1.610		8.00	0.084	0.7
Pipe: 11		5.60	20.9	Disch		8.00	100	1.4	
12	17.4	15.4	40.6	10	1.500	----	0.00	-0.0	
11	17.4	13.9	61.5		1.610		8.00	0.181	1.4
Pipe: 12		5.60	22.0	Disch		1.00	100	2.1	
13	17.4	17.5	61.5	11	1.500	T: 5.7	5.71	-0.0	
12	17.4	15.4	83.5		1.610		6.71	0.318	2.1

SPRINKLER SYSTEM HYDRAULIC ANALYSIS

DATE: 4/3/2024ATA\LOCAL\HRS SYSTEMS\HASS2020\ENGLISH\WILL ROGERS BARN.SDF
 JOB TITLE: Will Rogers Historic Birthplace Barn .20/1950 + 250

Pipe Tag	K-fac	Add Fl	Add Fl To	Fit:	L	C	(Pt)		
Frm Node	El (ft)	PT	(q)	Node/	Nom ID	Eq.Ln.	(Pe)		
To Node	El (ft)	PT	Tot.(Q)	Disch	Act ID	(ft.)	(Pf)		
						F			
						T	Pf/ft.		
Pipe: 13	0.0	63.9	15			5.42	100	12.5	
14	12.0	30.0	83.5	12	1.500	T: 5.7	5.71	2.3	
13	17.4	17.5	147.4		1.610		11.13	0.911	10.1
Pipe: 14	5.60	21.7	Disch			7.00	100	2.5	
13	17.4	17.5	42.2	16	1.500	T: 5.7	5.71	-0.0	
15	17.4	15.0	63.9		1.610		12.71	0.194	2.5
Pipe: 15	5.60	21.2	Disch			8.00	100	0.7	
15	17.4	15.0	21.0	17	1.500	----	0.00	-0.0	
16	17.4	14.3	42.2		1.610		8.00	0.090	0.7
Pipe: 16	5.60	21.0	Disch			8.00	100	0.2	
16	17.4	14.3	0.0		1.500	----	0.00	-0.0	
17	17.4	14.1	21.0		1.610		8.00	0.025	0.2
Pipe: 17	0.0	147.4	13			9.00	100	0.3	
23	12.0	30.3	193.2	5	4.000	----	0.00	-0.0	
14	12.0	30.0	340.6		4.260		9.00	0.038	0.3
Pipe: 18	5.60	19.2	Disch			8.00	100	0.2	
19	21.6	11.9	0.0		1.500	----	0.00	-0.0	
18	21.6	11.8	19.2		1.610		8.00	0.021	0.2
Pipe: 19	5.60	19.3	Disch			5.25	100	0.4	
20	21.6	12.3	19.2		1.500	----	0.00	-0.0	
19	21.6	11.9	38.5		1.610		5.25	0.076	0.4
Pipe: 20	5.60	19.7	Disch			8.00	100	1.3	
21	21.6	13.6	38.5	19	1.500	----	0.00	-0.0	
20	21.6	12.3	58.2		1.610		8.00	0.163	1.3
Pipe: 21	5.60	20.7	Disch			3.67	100	2.7	
22	21.6	16.3	58.2	20	1.500	T: 5.7	5.71	-0.0	
21	21.6	13.6	78.9		1.610		9.38	0.286	2.7
Pipe: 22	0.0	43.5	24			9.58	100	14.0	
23	12.0	30.3	78.9	21	1.500	T: 5.7	5.71	4.2	
22	21.6	16.3	122.3		1.610		15.29	0.645	9.9
Pipe: 23	5.60	21.9	Disch			5.33	100	1.1	
22	21.6	16.3	21.6	25	1.500	T: 5.7	5.71	-0.0	
24	21.6	15.3	43.5		1.610		11.04	0.095	1.1
Pipe: 24	0.0	0.0				8.00	100	0.2	
24	21.6	15.3	21.6	26	1.500	----	0.00	-0.0	
25	21.6	15.1	21.6		1.610		8.00	0.026	0.2
Pipe: 25	5.60	21.6	Disch			8.00	100	0.2	
25	21.6	15.1	0.0		1.500	----	0.00	-0.0	
26	21.6	14.8	21.6		1.610		8.00	0.026	0.2

SPRINKLER SYSTEM HYDRAULIC ANALYSIS

DATE: 4/3/2024ATA\LOCAL\HRS SYSTEMS\HASS2020\ENGLISH\WILL ROGERS BARN.SDF
 JOB TITLE: Will Rogers Historic Birthplace Barn .20/1950 + 250

Pipe Tag	K-fac	Add Fl	Add Fl To	Fit:	L	C	(Pt)		
Frm Node	El (ft)	PT	(q)	Node/	Nom ID	Eq.Ln.	(Pe)		
To Node	El (ft)	PT	Tot.(Q)	Disch	Act ID	(ft.)	(Pf)		
						F			
						T	Pf/ft.		
Pipe: 26	0.0	122.3	22			6.00	100	0.4	
29	12.0	30.7	340.6	14	4.000	----	0.00	-0.0	
23	12.0	30.3	462.9		4.260	6.00	0.066	0.4	
Pipe: 27	5.60	27.9	Disch			21.33	100	1.1	
28	21.6	25.9	0.0		1.500	T: 5.7	5.71	-0.0	
27	21.6	24.8	27.9		1.610	27.04	0.042	1.1	
Pipe: 28	0.0	0.0				9.58	100	4.8	
29	12.0	30.7	27.9		1.500	T: 5.7	5.71	4.2	
28	21.6	25.9	27.9		1.610	15.29	0.042	0.6	
Pipe: 29	0.0	27.9	28			3.75	100	1.0	
30	11.9	31.7	462.9	23	4.000	E: 9.4	9.40	0.0	
29	12.0	30.7	490.8		4.260	13.15	0.074	1.0	
Pipe: 30	0.0	0.0				1.91	100	1.7	
31	10.0	33.4	490.8	29	4.000	E: 9.4	9.40	0.8	
30	11.9	31.7	490.8		4.260	11.31	0.074	0.8	
Pipe: 31	0.0	0.0				9.42	100	1.4	
32	9.9	34.8	490.8	30	4.000	E: 9.4	9.40	0.0	
31	10.0	33.4	490.8		4.260	18.82	0.074	1.4	
Pipe: 32	0.0	0.0				2.00	100	-0.0	
33	11.9	34.8	490.8	31	4.000	E: 9.4	9.40	-0.9	
32	9.9	34.8	490.8		4.260	11.40	0.074	0.8	
Pipe: 33	0.0	0.0				23.00	100	3.3	
TR	9.8	38.1	490.8	32	4.000	E: 9.4	9.40	0.9	
33	11.9	34.8	490.8		4.260	32.40	0.074	2.4	
Pipe: 34	0.0	0.0				9.83	100	10.4	
BR	0.0	48.5	490.8	33	4.000	E2C2GD	73.29	4.3	
TR	9.8	38.1	490.8		4.260	83.12	0.074	6.1	
Pipe: 35	0.0	0.0				E:17.5	200.00	140	10.1
36	0.0	58.6	490.8	TR	4.000	T:35.0	56.04	-0.0	
BR	0.0	48.5	490.8		4.260	G: 3.5	256.04	0.040	10.1
Pipe:	36	Source	0.0			2E:46.8	900.00	140	5.6
37	0.0	64.3	490.8	BR	6.000	T:50.2	102.01		-0.0
36	0.0	58.6	490.8		6.357	G: 5.0	1002.01	0.006	5.6

DATE: 4/3/2024ATA\LOCAL\HRS SYSTEMS\HASS2020\ENGLISH\WILL ROGERS BARN.SDF
JOB TITLE: Will Rogers Historic Birthplace Barn .20/1950 + 250

SPRINKLER SYSTEM DIAGRAM WITH FLOWPLOT

