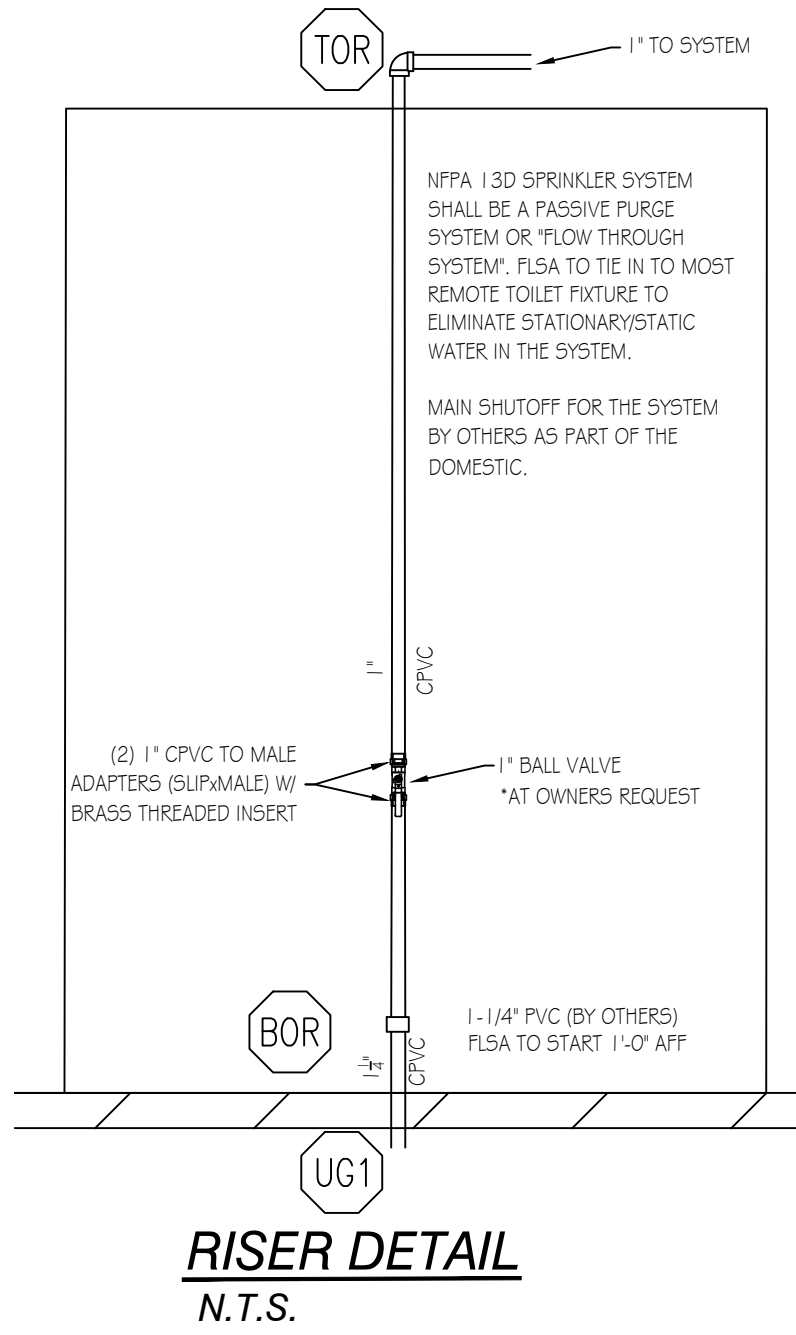
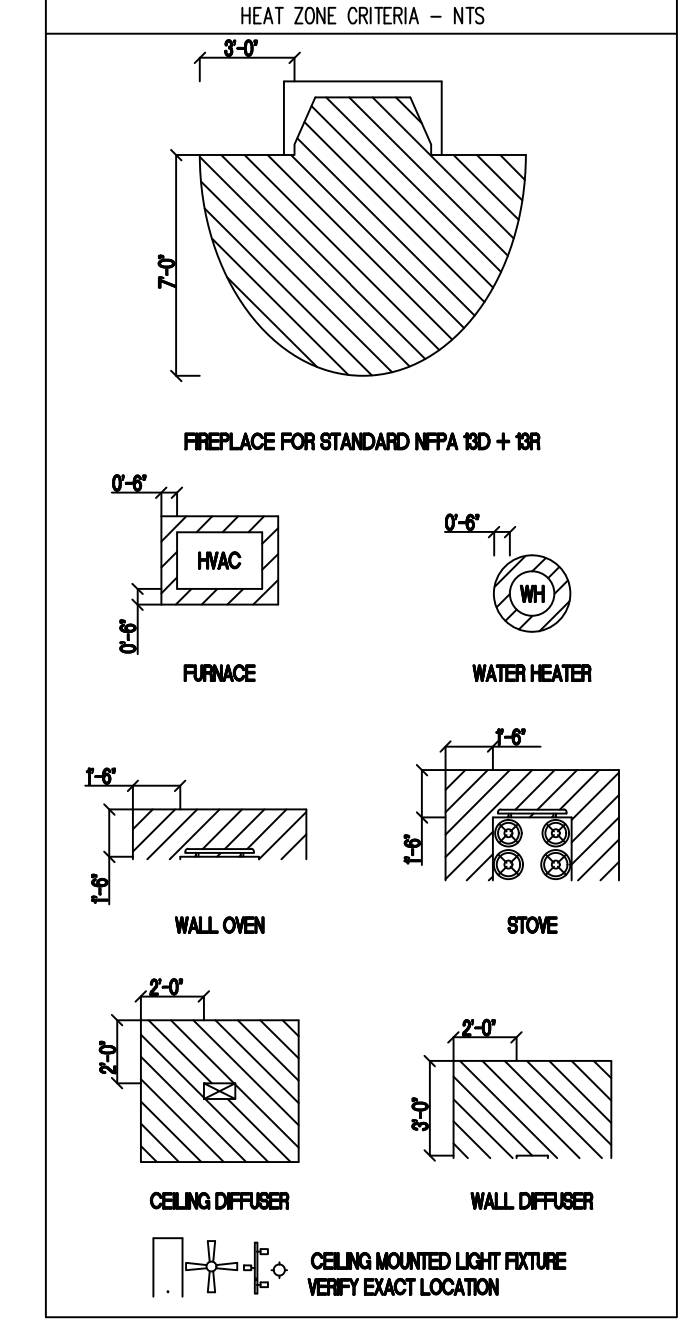
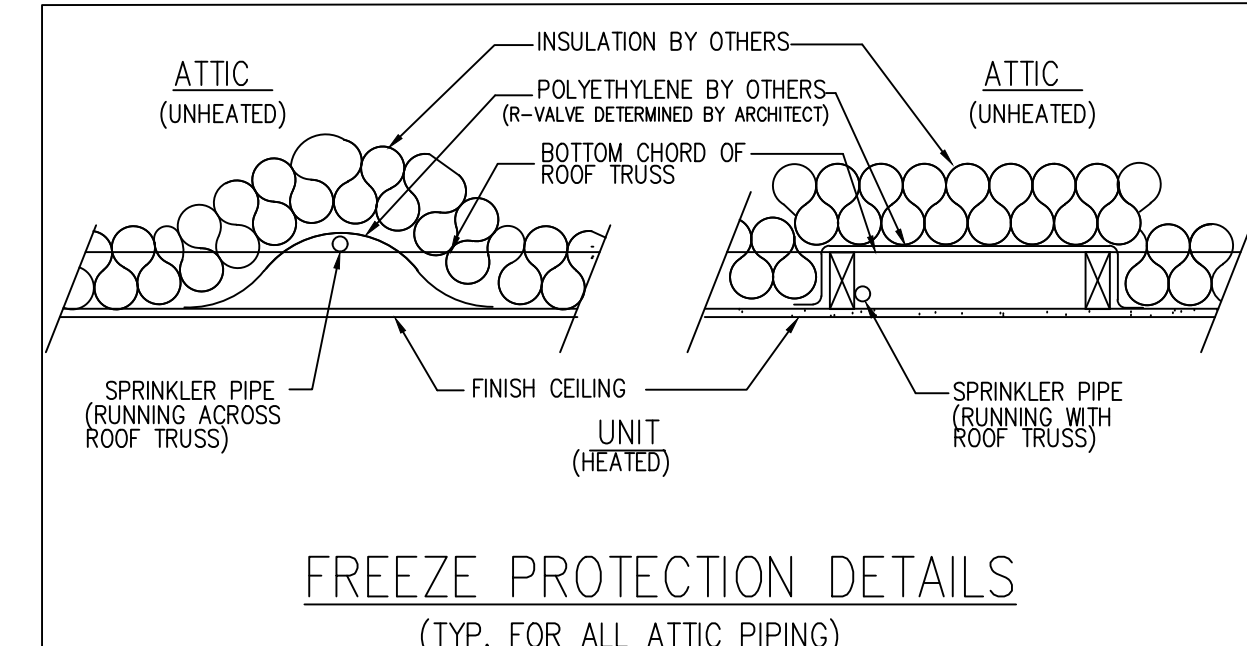
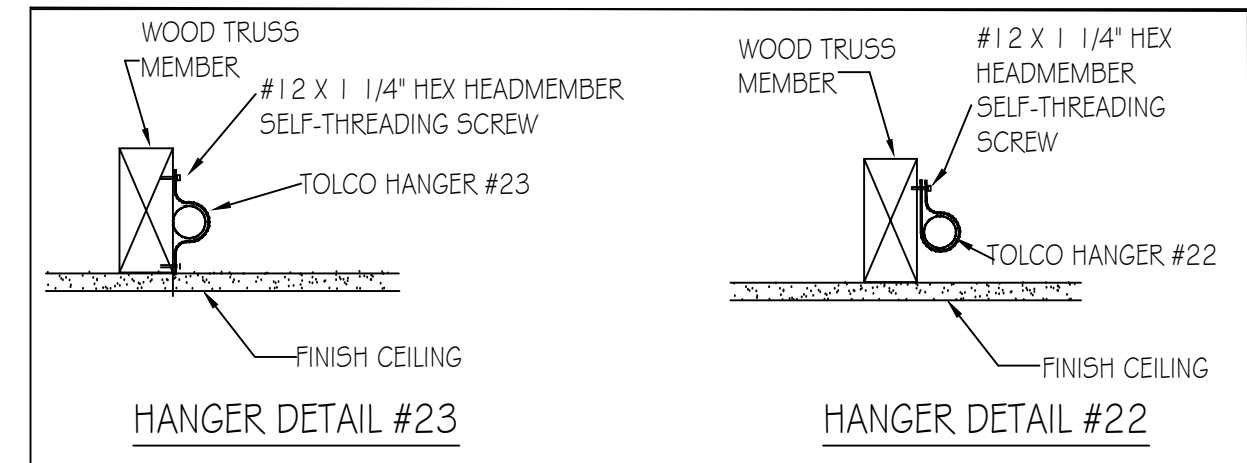
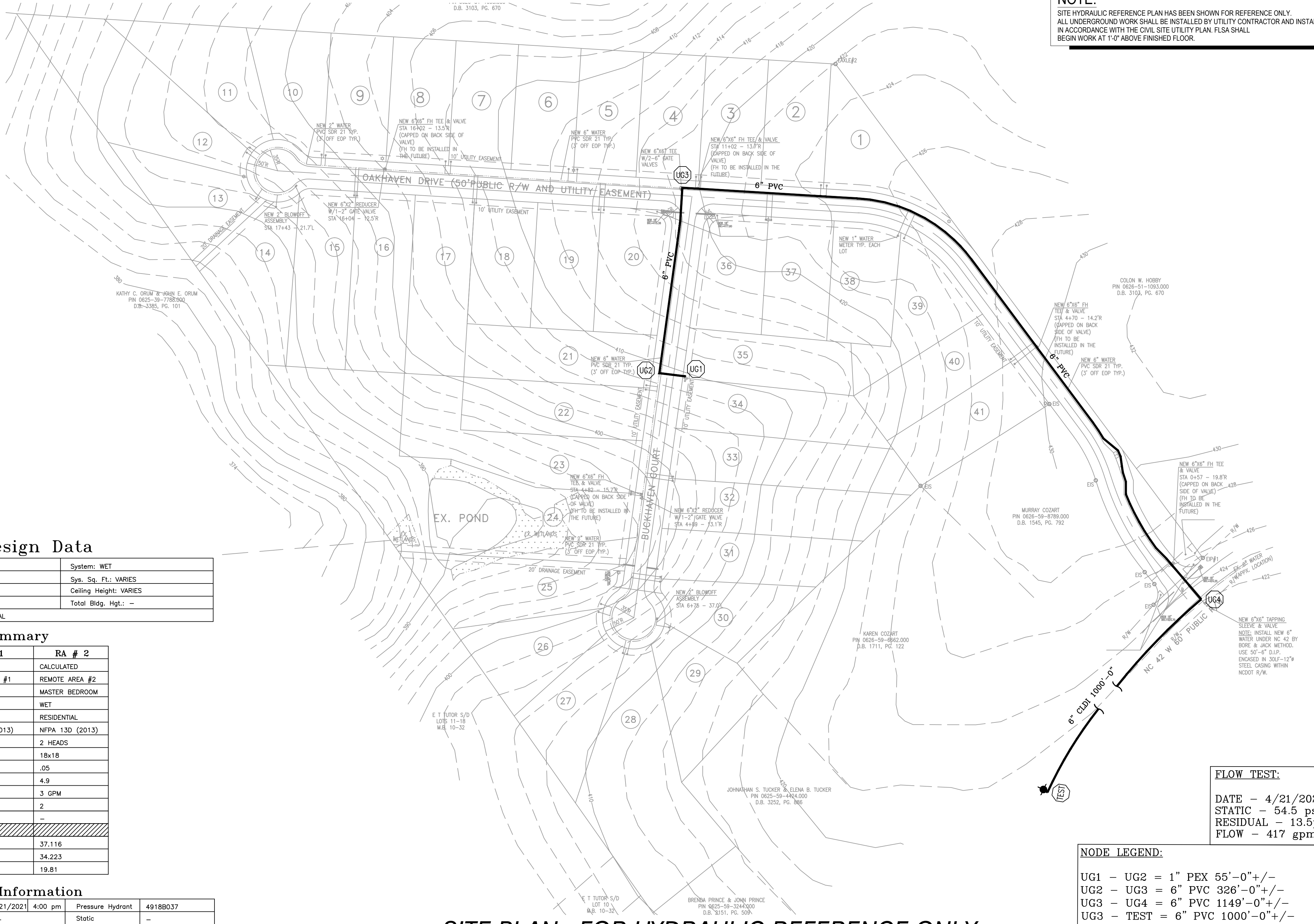


GENERAL NOTES

- THIS WET PIPE FIRE SPRINKLER SYSTEM IS DESIGNED AS LIGHT HAZARD/RESIDENTIAL OCCUPANCY WITH A DESIGN DENSITY OF .05 GPM/2 SPRINKLERS MAX IN ACCORDANCE WITH 13D (2013 EDITION) AND NFPA 13-11.3.1.1.
- HYDRAULIC CALCULATIONS ARE BASED UPON FLOW DATA PERFORMED BY FLSA ON 04/21/2021 AT 4:00PM. HYDRAULIC CALCULATIONS TO BE BASED ON NFPA 13D (2013 EDITION).
- FIRE SPRINKLER OVERHEAD PIPE AND FITTINGS ARE TO BE CPVC PIPE LISTED FOR FIRE PROTECTION USED UNLESS NOTED OTHERWISE.
- ALL HANGERS TO BE U.L. LISTED FOR FIRE PROTECTION SERVICES. HANGERS SHALL BE INSTALLED IN ACCORDANCE WITH THEIR LISTING. SPACING AND LOCATION TO COMPLY WITH NFPA 13.
- ALL EQUIPMENT TO BE U.L. LISTED FOR FIRE PROTECTION SERVICES AND LISTED IN ACCORDANCE WITH ITS LISTING.
- IN AREAS WHERE WET-TYPE SPRINKLER SYSTEM PIPING HAS BEEN INSTALLED, IT IS THE OWNERS' RESPONSIBILITY TO PROVIDE ADEQUATE HEAT. (AMBIENT TEMPERATURE OF A MINIMUM 40°F)
- ALL DRAINAGE TO COMPLY WITH NFPA 13D AND CONTRACT DOCUMENTS.
- [X'-X'] DENOTES CENTERLINE OF PIPE AFF.
- ALL SPRINKLER HEADS SHALL BE LISTED RESIDENTIAL SPRINKLER HEADS IN ACCORDANCE WITH 7.5.1 OF NFPA 13D.
- FLSA POINT OF CONNECTION IS AT 1'-0" AFF.
- UNDERGROUND PIPING TO BE FLUSHED PRIOR TO SPRINKLER PIPE CONNECTION. FLUSHING IS TO BE COMPLETED BY OTHERS.
- PIPING TO SPRINKLER HEADS 1" CPVC UNLESS OTHERWISE NOTED.

NOTE:
SITE HYDRAULIC REFERENCE PLAN HAS BEEN SHOWN FOR REFERENCE ONLY. ALL UNDERGROUND WORK SHALL BE INSTALLED BY UTILITY CONTRACTOR AND INSTALLED IN ACCORDANCE WITH THE CIVIL SITE UTILITY PLAN. FLSA SHALL BEGIN WORK AT 1'-0" ABOVE FINISHED FLOOR.



Sprinkler Design Data

Project Name: OAKHAVEN LOT 35	System: WET
Project Street Address: 49 BUCKHAVEN DRIVE	Sys. Sq. Ft.: VARIES
Suite: -	Floor#: 2
Designed By: R. COLLINS	Phone: (919) 872-3250
Occupancy: RESIDENTIAL	Hazard: LIGHT/RESIDENTIAL
	Ceiling Height: VARIES
	Total Bldg. Hgt.: -

Design Summary

	RA # 1	RA # 2
Design Method	CALCULATED	CALCULATED
Design Area #	REMOTE AREA #1	REMOTE AREA #2
Location	BEDROOM #2	MASTER BEDROOM
Type of System	WET	WET
Hazard Class	RESIDENTIAL	RESIDENTIAL
Criteria Form	NFPA 13D (2013)	NFPA 13D (2013)
Design Area	2 HEADS	2 HEADS
Sprinkler Spacing	16x16	18x18
Density	.05	.05
K-factor	4.9	4.9
Domestic Flow	3 GPM	3 GPM
# Design Sprinklers	2	2
Special Application Spk.	-	-
Requirement @ TEST		
G.P.M. Req'd	29.000	37.116
P.S.I. Req'd	29.526	34.223
Safety Factor @ TEST	24.68	19.81

Water Supply Information

Tested by	-	Date/Time	4/21/2021 4:00 pm	Pressure Hydrant	49188037
Hydrant Elevation	-	Flow Hydrant	-	Static	-
Static (PSI)	54.5	Residual (PSI)	13.5	Flow (GPM)	417

Copy of Water Test Data Included with Calculation is required

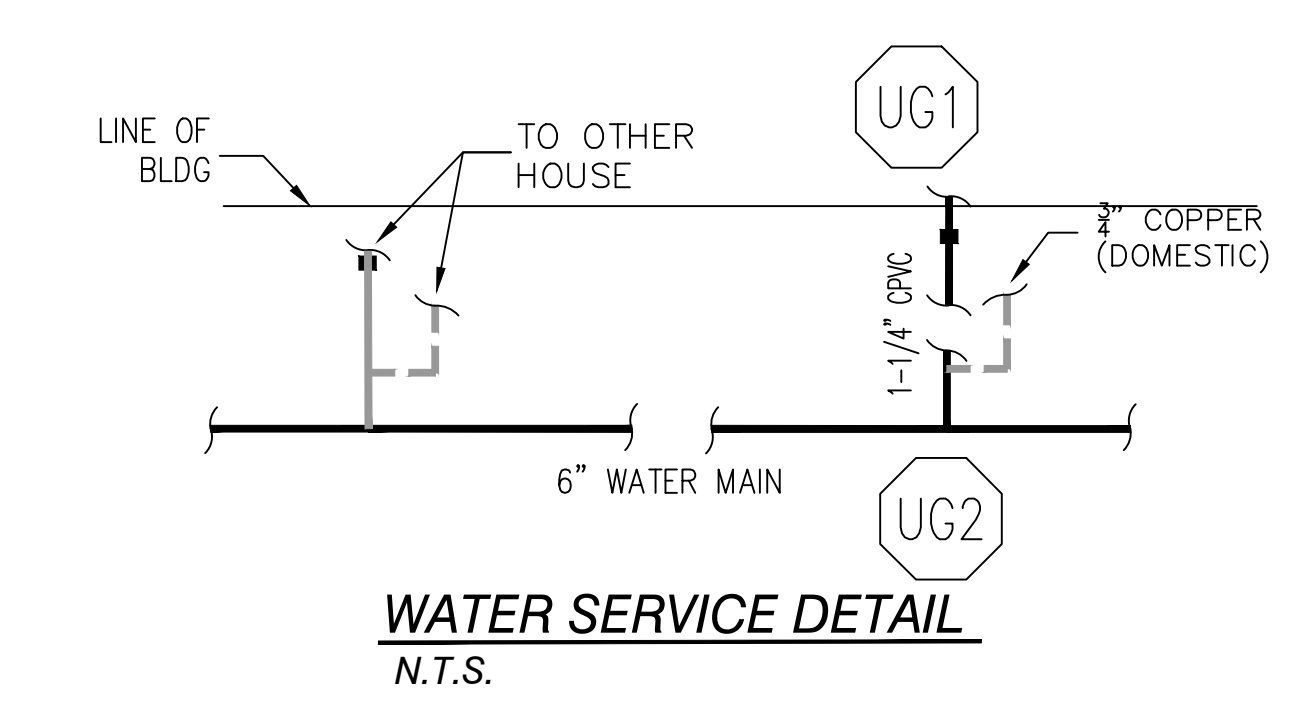


TABLE A - CPVC STANDARD SUPPORT SPACING

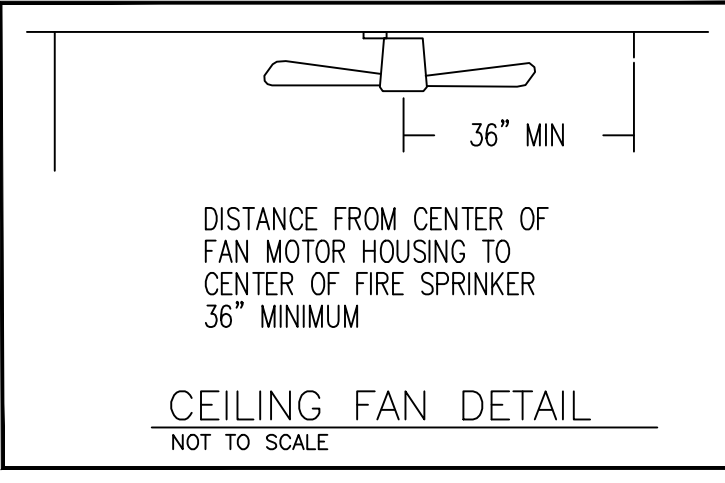
NOMINAL SIZE, INCHES	MAX SUPPORT SPACING, FEET
3/4"	5'-0"
1"	6'-0"
1 1/2"	6'-0"
2"	7'-0"
2 1/2"	8'-0"
3"	10'-0"

TABLE B - MAX SUPPORT SPACING DISTANCE IN LINE SPRINKLER HEAD DROP TEE

NOMINAL PIPE SIZE, LESS THAN 100 PSI	LESS THAN 100 PSI	MORE THAN 100 PSI
3/4"	4'-0"	3'-0"
1"	5'-0"	4'-0"
1 1/2"	6'-0"	5'-0"
1 1/2" - 3"	7'-0"	7'-0"

TABLE C - MAX SUPPORT SPACING DISTANCE END SPRINKLER HEAD DROP ELBOW

NOMINAL PIPE SIZE, LESS THAN 100 PSI	LESS THAN 100 PSI	MORE THAN 100 PSI
3/4"	4'-0"	3'-0"
1"	5'-0"	4'-0"
1 1/2"	6'-0"	5'-0"
1 1/2" - 3"	7'-0"	7'-0"



FLOW TEST:
DATE - 4/21/2021
STATIC - 54.5 psi
RESIDUAL - 13.5psi
FLOW - 417 gpm

NODE LEGEND:
UG1 - UG2 = 1" PEX 55'-0"+/-
UG2 - UG3 = 6" PVC 326'-0"+/-
UG3 - UG4 = 6" PVC 1149'-0"+/-
UG3 - TEST = 6" PVC 1000'-0"+/-

SITE PLAN - FOR HYDRAULIC REFERENCE ONLY

SCOPE OF WORK

- FLSA TO BEGIN WORK AT 1'-0" AFF
 - FLSA TO INSTALL AUTOMATIC SPRINKLER SYSTEM UNDER NFPA 13D (2013) TO PROTECT NEW RESIDENTIAL HOME
 - FLSA TO TIE NEW SPRINKLER SYSTEM INTO MOST REMOTE TOILET PLUMBING FOR A PASSIVE PURGE SYSTEM.
 - ALL PIPING TO BE CPVC.
 - ALL UNDERGROUND AND RUN-IN BY OTHERS
- THIS FIRE SPRINKLER PLANNING AND DESIGN DRAWING HAS BEEN PREPARED BY FIRE & LIFE SAFETY AMERICA, INC. AS A LICENSED FIRE SPRINKLER CONTRACTOR UNDER ARTICLE 2 OF CHAPTER 87 OR THE GENERAL STATUTES FOR THE STATE OF NORTH CAROLINA.
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SYSTEM DESIGN CRITERIA

TYPE SYSTEM: WET DRY DELUGE NFPA STANDARD: #13 #13D #13R #14 #20 #22

OCCUPANCY: RESIDENTIAL PREACTION ANTI-FREEZE

HAZARD: LIGHT #24 #21 #23C #15 #16 #409

MAXIMUM SPACING: VARIES LOCAL HOSE THREADS: N.S.T. SLEEVES REQUIRED: NO

SPRINKLERS ARE REQUIRED TO BE LOCATED IN THE CENTER OF THE CEILING TILES.

PIPE TYPES AND FITTING TYPES

LINE PIPING: CPVC LINE FITTINGS: CPVC

MAIN PIPING: CPVC MAIN FITTINGS: CPVC

APPROVING AGENCIES

APPROVING AUTHORITY: HARNETT COUNTY

UNDERWRITER: N/A

GENERAL CONTRACTOR: WATERMARK HOMES

ADDRESS: 1303 FT BRAGG ROAD SUITE 201

CITY & STATE: FAYETTEVILLE, NC 28305

PHONE NO.: (910) 483-2229

FAX NO.:

LEGEND

Symbol	Description
○	Hydraulic Reference Point
○	Elev. Below Top of Steel
○	Elev. Above Finished Floor
○	Elev. Top of Steel
○	Ceiling Height
○	Denotes Hanger Location
○	Denotes Seismic Support
○	Room name or use
○	Sleeve Location
○	FLSA Start Point

SPRINKLER SUMMARY

SYM	TYPE	FINISH	TEMP	ORIE.	K*	NPT	MANUF.	SIN#	ESCUTCHEON	QTY
○	RES. PENDENT	WHITE	200°	1/2"	4.9	1/2"	VIKING	VK494	CONCEALED	21

TOTAL SPRINKLERS THIS PROJECT: 21

REVISIONS

#	DATE	DESCRIPTION	BY
1	12/21/2021	SUBMITTAL TO AHJ	RCC

1721 Round Rock Drive
Raleigh, NC 27615
PHONE (919) 872-3250
FAX (919) 877-8776

JONATHAN STERLA
LEVEL III AUTOMATIC SPRINKLER SYSTEMS
#111897

NORTH CAROLINA STATE LICENSE #29733

1721 Round Rock Drive
Raleigh, NC 27615
PHONE (919) 872-3250
FAX (919) 877-8776

FLSA
PROTECTING AMERICA

HYD. SITE PLAN, GENERAL NOTES & DETAILS

OAKHAVEN LOT 35
49 BUCKHAVEN DR.
HOLLY SPRINGS, NC 27540

DRAWING #: FP1
OF 2

NOTES:

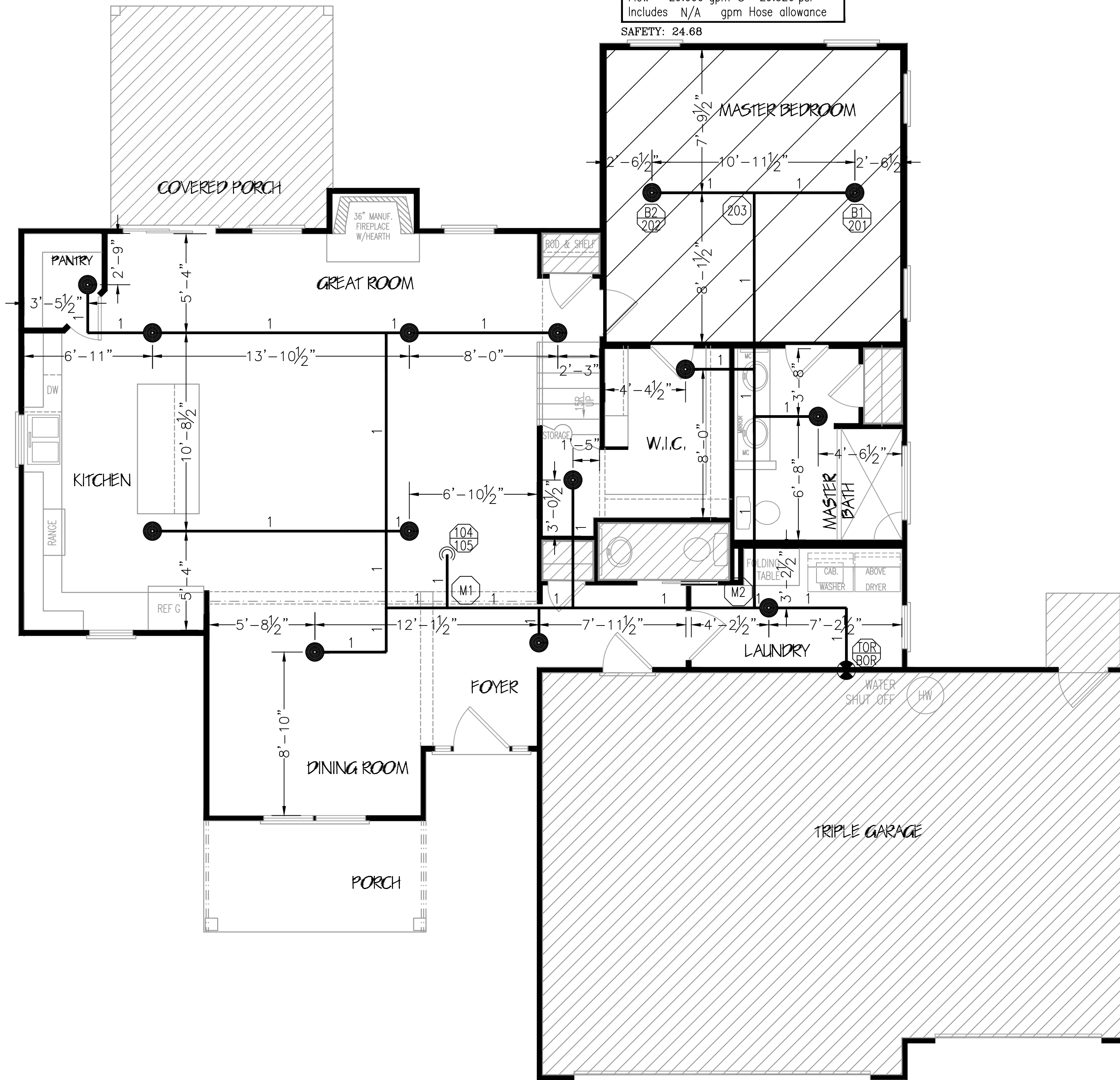
- PORCHES AND GARAGES ARE OMITTED PER NFPA 13D (2013) 8.3.4
- CLOSETS 24 SQ. FT. OR LESS IN AREA ARE UNSPRINKLERED PER NFPA 13D (2013) 8.3.3; WALLS AND CEILING TO BE SURFACED WITH NONCOMBUSTIBLE OR LIMITED COMBUSTIBLE MATERIAL AS DEFINED BY NFPA 220
- BATHROOMS 55 SQ. FT. OR LESS IN AREA ARE UNSPRINKLERED PER NFPA 13D (2013) 8.3.2

SPRINKLER LEGEND

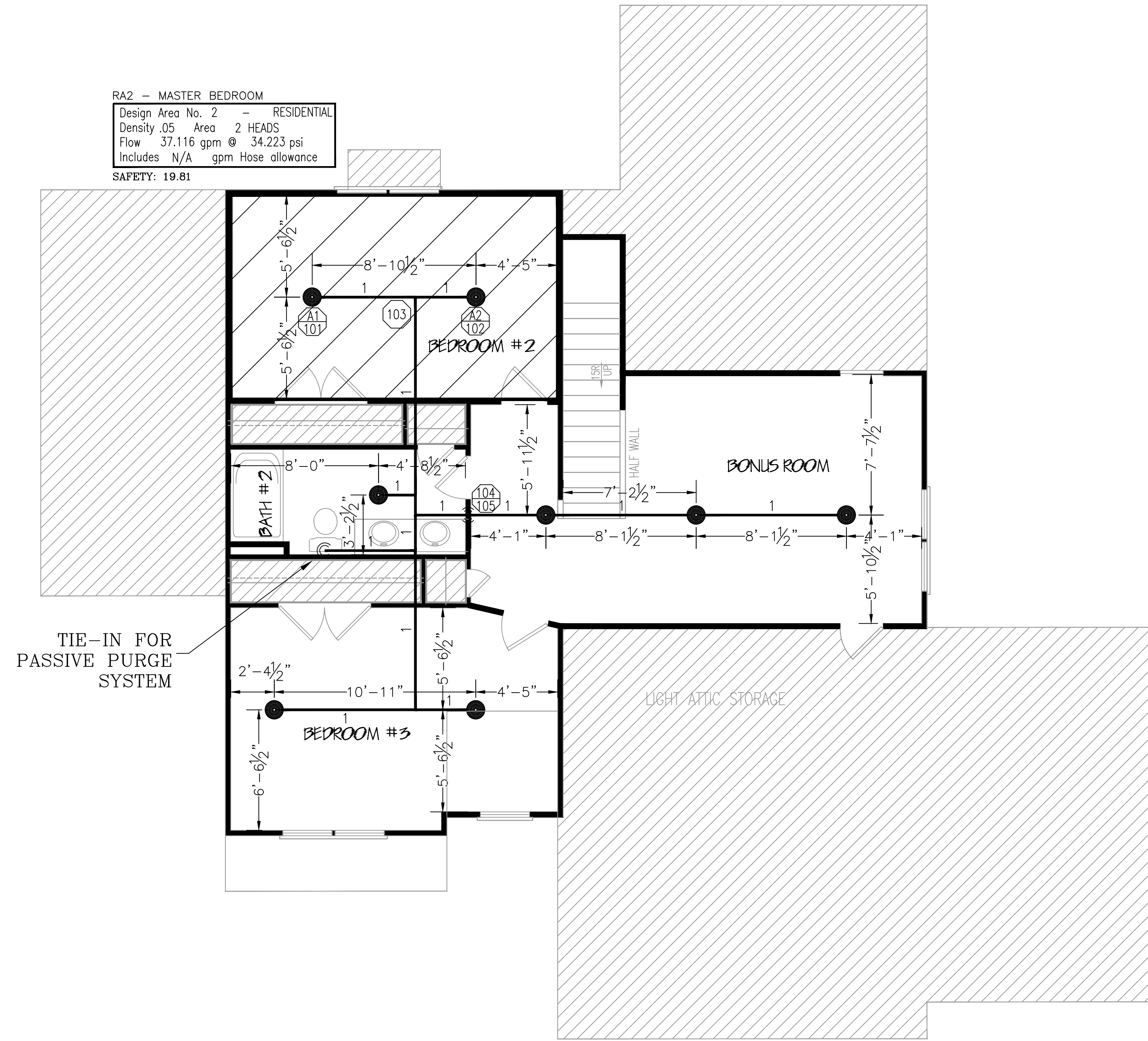
- NO HEADS REQUIRED
- REMOTE AREA

RA1 - BEDROOM #2
 Design Area No. 1 - RESIDENTIAL
 Density .05 Area 2 HEADS
 Flow 29,000 gpm @ 29.526 psi
 Includes N/A gpm Hose allowance
 SAFETY: 24.68

RA2 - MASTER BEDROOM
 Design Area No. 2 - RESIDENTIAL
 Density .05 Area 2 HEADS
 Flow 37,116 gpm @ 34.223 psi
 Includes N/A gpm Hose allowance
 SAFETY: 19.81



LEVEL 1 - SPRINKLER PLAN
 1/4" = 1' - 0"



LEVEL 2 - SPRINKLER PLAN
 1/4" = 1' - 0"

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JONATHAN STEBILA
 LEVEL III AUTOMATIC SPRINKLER SYSTEMS
 #111897
 NORTH CAROLINA STATE LICENSE #29733

SYSTEM DESIGN CRITERIA		APPROVING AGENCIES		GENERAL NOTES		LEGEND		SPRINKLER SUMMARY		REVISIONS		JOB #:											
TYPE SYSTEM: <input checked="" type="checkbox"/> WET <input type="checkbox"/> DRY <input type="checkbox"/> DELUGE <input type="checkbox"/> NFPA STANDARD: <input type="checkbox"/> #13 <input checked="" type="checkbox"/> #13D <input type="checkbox"/> #13R <input type="checkbox"/> #14 <input type="checkbox"/> #20 <input type="checkbox"/> #22	<input type="checkbox"/> PREACTION <input type="checkbox"/> ANTI-FREEZE	HAZARD: LIGHT	HAZARD: LIGHT	APPROVING AUTHORITY: HARNETT COUNTY	UNDERWRITER: N/A	1. Freeze Protection: The owner is responsible for maintaining a min. of 40° F temperature for all wet systems and portions of other systems containing water.	Symbol Description	SYM	TYPE	FINISH	TEMP	ORIF.	K"	NPT	MANUF.	SIN#	ESCUTCHEON	QTY	DATE	DESCRIPTION	BY	22NC1557	
OCCUPANCY: RESIDENTIAL	HAZARD: LIGHT	HAZARD: LIGHT	HAZARD: LIGHT	GENERAL CONTRACTOR: WATERMARK HOMES	ADDRESS: 1303 FT BRAGG ROAD SUITE 201	2. M.L.C. Protection: The owner is responsible for all detection testing/prevention.	• 18" BTS Elev. Below Top of Steel	RES. PENDENT	WHITE	200°	1/2"	4.9	1/2"	VIKING	VK494	CONCEALED	20	12/21/2021	SUBMITTAL TO AHJ	RCC	1721 Round Rock Drive Raleigh, NC 27715 PHONE (919) 872-3250 FAX (919) 877-0776	LEVEL 1 & 2 FIRE PROTECTION PLANS	
MAXIMUM SPACING: VARIES	LOCAL HOSE THREADS: N.S.T.	LOCAL HOSE THREADS: N.S.T.	LOCAL HOSE THREADS: N.S.T.	CITY & STATE: FAYETTEVILLE, NC 28305	PHONE NO.: (910) 483-2229	3. Design is subject to minor deviations arising from field conditions and/or trade coordination. Such deviations shall not affect code compliance or scope of work and shall not require resubmittal except in "as-built" if required by contract documents.	12'-0 AFF Elev. Above Finished Floor														FLSA	DRAWING #:	
PIPE ID REQUIRED: NO	SLEEVES REQUIRED: NO	SLEEVES REQUIRED: NO	SLEEVES REQUIRED: NO	PHONE NO.: (910) 483-2229	FAX NO.:	4. Underground provider to ensure lead-in is plumbed, 2-holed, rodded, flushed, thrust blocked and a fully executed underground test certificate required per NFPA to be provided to FLSA prior to connection. FLSA is not responsible for damage to its system or components due to debris entering the system from underground water lines provided "by others".	+ TOS 12'-0 Elev. of Top of Steel														OAKHAVEN LOT 35	DRAWN BY: R. COLLINS	
PIPE TYPES AND FITTING TYPES	PIPE TYPES AND FITTING TYPES	PIPE TYPES AND FITTING TYPES	PIPE TYPES AND FITTING TYPES			5. This drawing is property of Fire and Life Safety America and is not to be duplicated and/or distributed without written authorization from FLSA.	⊖ Ceiling Height														HOLLY SPRINGS, NC 27540	SCALE: AS NOTED	
LINE PIPING: CPVC	LINE FITTINGS: CPVC	LINE PIPING: CPVC	LINE FITTINGS: CPVC			6. Hydrostatic testing will only be performed with water or air depending on adequate temperature. Any other form of testing is excluded.	Denotes Hanger Location															FP2	
MAIN PIPING: CPVC	MAIN FITTINGS: CPVC	MAIN PIPING: CPVC	MAIN FITTINGS: CPVC				Denotes Seismic Support															OF 2	
							Room name or use																
							Sleeve Location																
							FLSA Start Point																
								TOTAL SPRINKLERS THIS PROJECT		20		TOTAL SPRINKLERS THIS DRAWING		20									