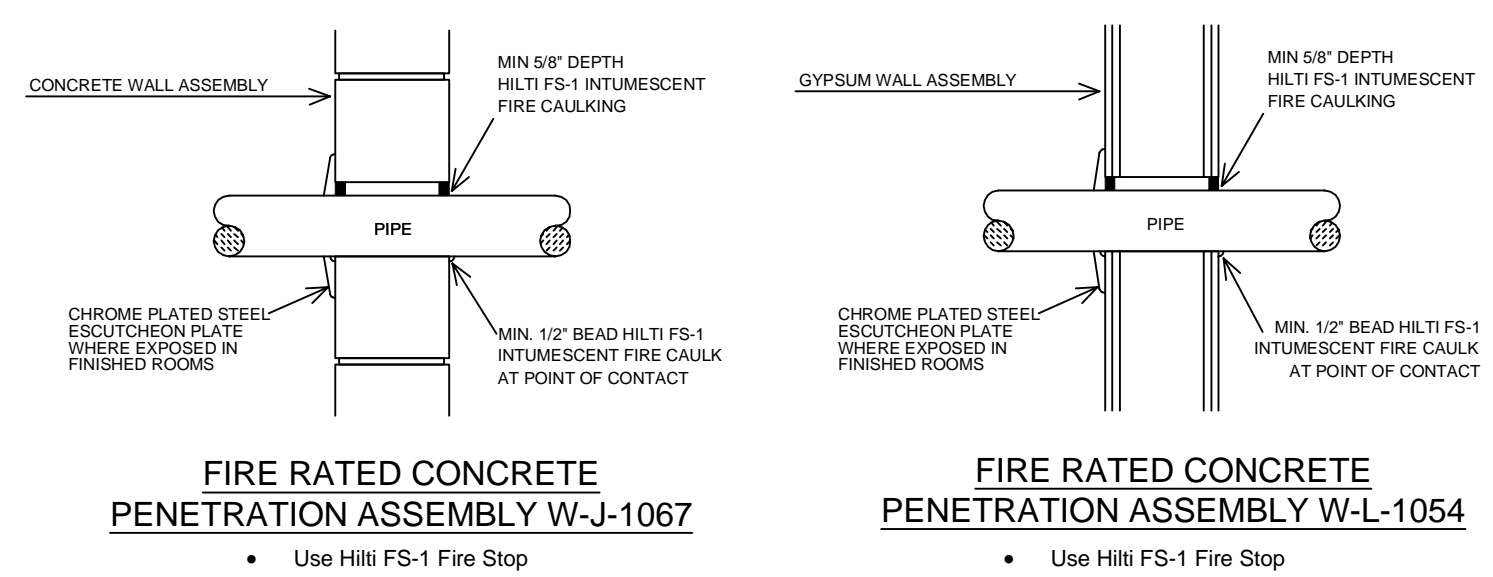


INSTALLATION DETAILS

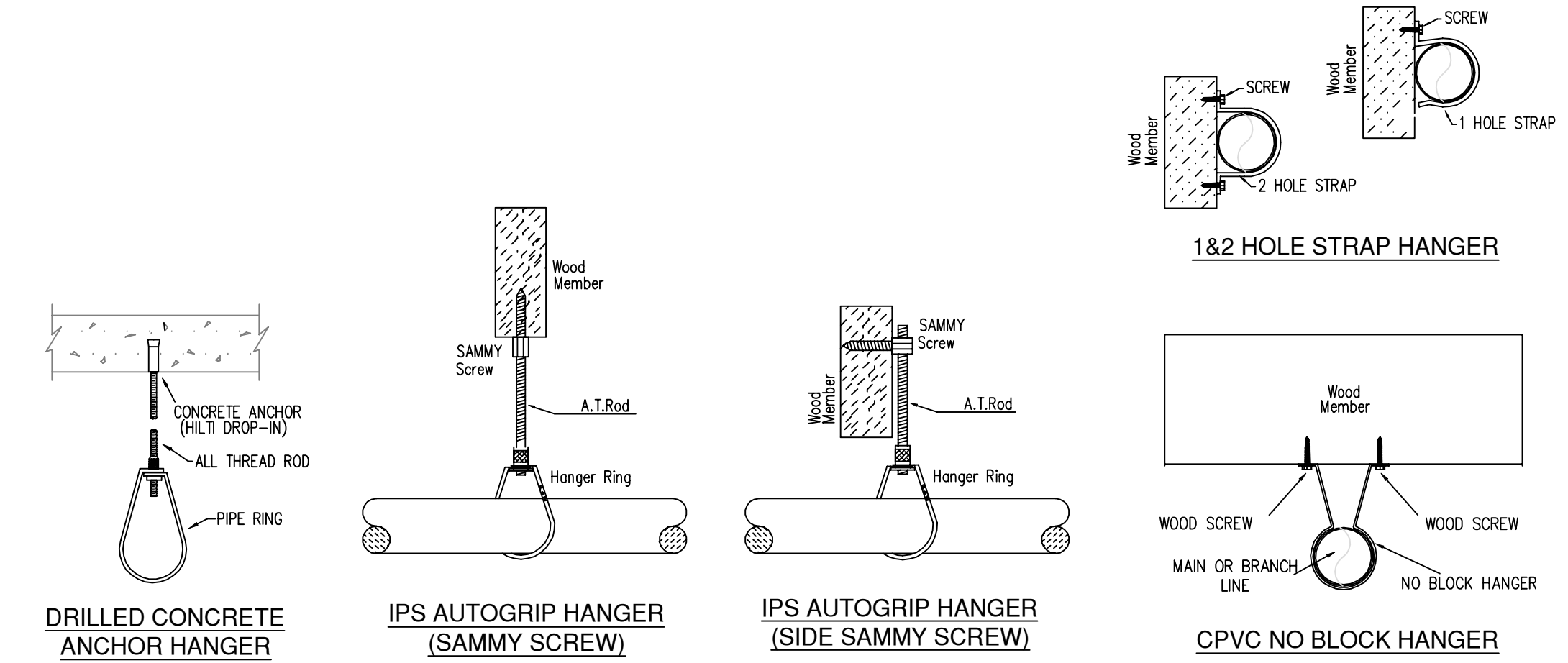


FIRE PROOFING DETAILS

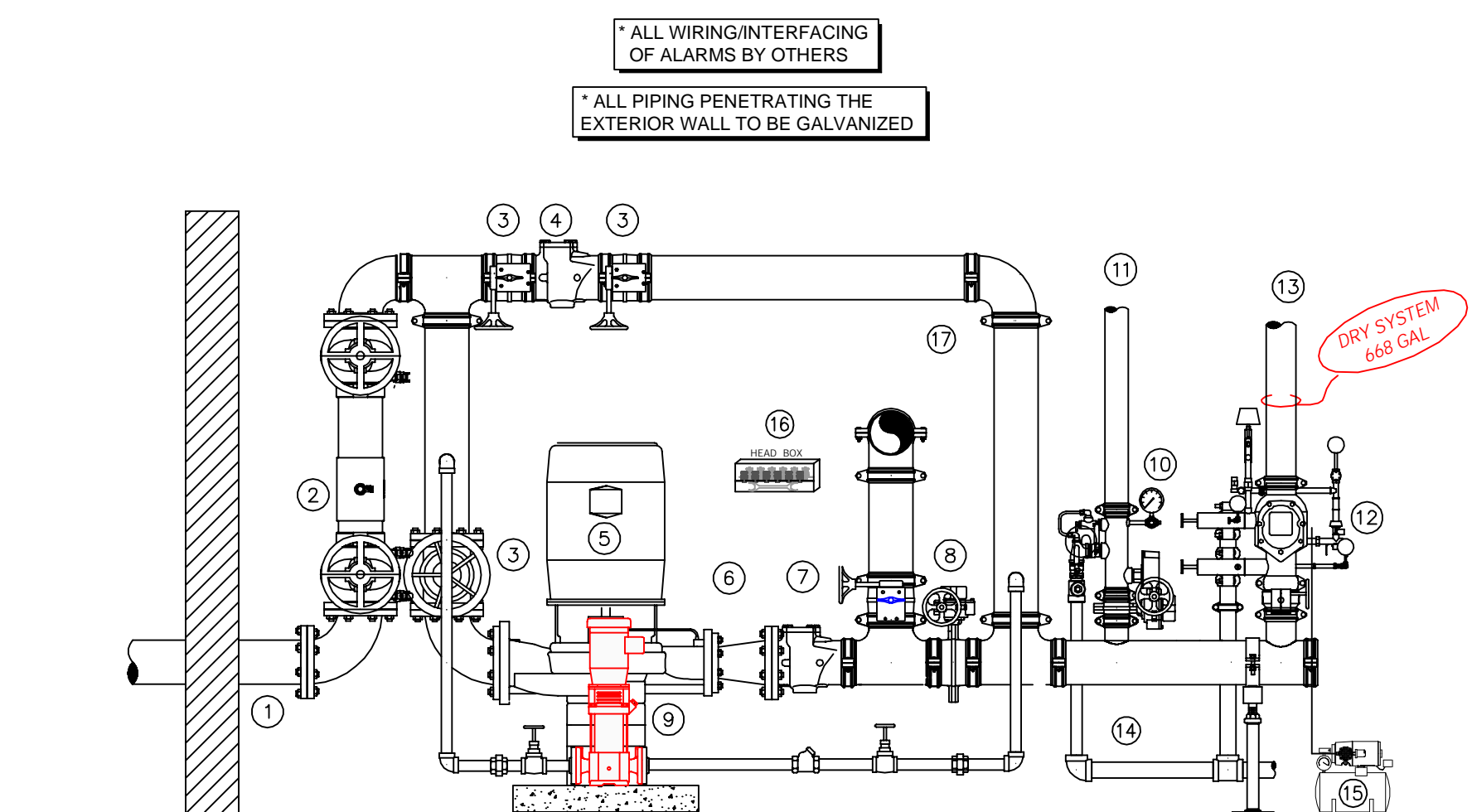
MAXIMUM DISTANCE BETWEEN HANGERS (FT.-IN.)

	NOMINAL PIPE SIZE (IN.)										
	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"
STEEL PIPE EXCEPT THREADED LIGHTWALL	NA	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0
BLAZEMASTER CPVC	5-6	6-0	6-6	7-0	8-0	9-0	10-0	NA	NA	NA	NA

NFPA 13 HANGER SPACING



HANGER DETAILS



- RISER & FIRE PUMP LEGEND**
1. 6" UNDERGROUND WATER SERVICE (BY OTHERS)
 2. 6" AMES COOL FIRE BACKFLOW W/ TAMPER
 3. 6" GATE VALVE W/ TAMPER
 4. 6" GROOVED CHECK VALVE
 5. 75PSI @ 550 GPM FIRE PUMP
 6. 4"x6" FLANGED CONCENTRIC INCREASER
 7. 6" GROOVED CHECK VALVE
 8. 6" GROOVED BUTTERFLY VALVE W/ TAMPER
 9. JOCKEY PUMP
 10. 3" GROOVED COMMERCIAL RISER MANIFOLD W/ SUPERVISED BUTTERFLY VALVE, FLOW SWITCH, TEST & DRAIN, PRESSURE RELIEF & PRESSURE GAUGE
 11. OUT TO WET SYSTEM
 12. 4" GROOVED VICTAULIC 788N DRY VALVE W/ QUICK OPENING DEVICE
 13. 4" MAIN TO DRY SYSTEM
 14. 2" MAIN DRAIN PIPED TO EXTERIOR COORDINATE EXACT LOCATIO W/ G.O. AND OWNER
 15. AIR COMPRESSOR
 16. SPARE HEAD BOX
 17. 6" OUT TO PUMP TEST HEADER

SECTION -A-
 SCALE= 1/8" : 1'-0"



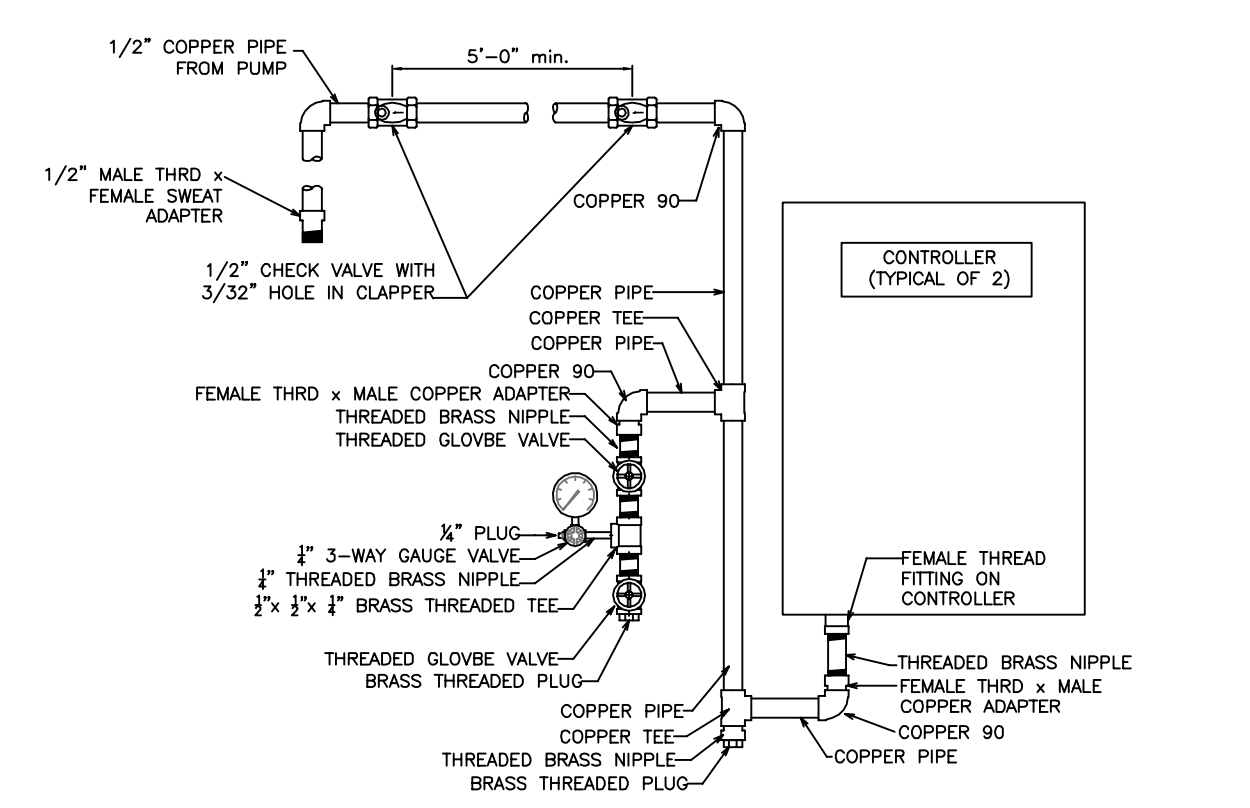
SPRINKLER HEAD LEGEND

SYN	QTY	POSITION	FINISH	TEMP	K	NPT	SN	MFG.	MODEL#	ES/UT/CHCN	HEAD BOX (2 min)
198	1	PENDENT	WHITE	155	4.90	1/2"	TY2234	TYCO	LFI1	SEMI-RECESSED	2
116	1	SIDEWALL	WHITE	155	8.00	3/4"	VM630	WIKING	WEC	SEMI-RECESSED	2
116	1	PENDENT	WHITE	155	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESSED	2
48	1	PENDENT	WHITE	155	8.00	3/4"	TY4232	TYCO	EC-8	SEMI-RECESSED	2
15	1	PENDENT	WHITE	200	5.60	1/2"	TY3231	TYCO	TY-FRB	SEMI-RECESSED	2
17	1	PENDENT	WHITE	155	11.20	3/4"	TY5237	TYCO	EC-11	SEMI-RECESSED	2
12	1	SIDEWALL	WHITE	200	5.60	1"	R5734	RELIABLE	F3QR56	SEMI-RECESSED	2
53	1	SIDEWALL	WHITE	200	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESSED	2
7	1	SIDEWALL	WHITE	200	11.20	3/4"	TY5332	TYCO	ELOS20	SEMI-RECESSED	2
158	1	SIDEWALL	WHITE	155	4.40	1/2"	TY2334	TYCO	LFI1	SEMI-RECESSED	2
23	1	UPRIGHT	BRASS	200	5.60	1/2"	TY3131	TYCO	TY-FRB	N/A	2
67	1	UPRIGHT	BRASS	200	11.20	3/4"	TY5137	TYCO	EC-11	N/A	2
36	1	UPRIGHT	BRASS	200	5.60	1/2"	TY3131	TYCO	TY-FRB	N/A	2
4	1	PENDENT	WHITE	200	5.60	1"	R5714	RELIABLE	F3QR56	SEMI-RECESSED	2
15	1	PENDENT	WHITE	175	4.90	1/2"	TY2234	TYCO	LFI1	SEMI-RECESSED	2
107	1	PENDENT	WHITE	200	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESSED	2
6	1	PENDENT	WHITE	200	8.00	3/4"	TY4232	TYCO	EC-8	SEMI-RECESSED	2
41	1	PENDENT	WHITE	200	11.20	3/4"	TY5237	TYCO	EC-11	SEMI-RECESSED	2
66	1	SPRIG'D UPRIGHT	BRASS	212	5.60	1/2"	RA5626	RELIABLE	AH56	N/A	2
56	1	UPRIGHT	BRASS	212	5.60	1/2"	RA5626	RELIABLE	AH56	N/A	2
103	1	SPRIG'D UPRIGHT	BRASS	200	8.00	3/4"	RA5622	RELIABLE	DB80-6	N/A	2
14	1	UPRIGHT	BRASS	200	5.60	1/2"	RA5625	RELIABLE	D556	N/A	2
4	1	SPRIG'D UPRIGHT	BRASS	200	5.60	1/2"	TY3131	TYCO	TY-FRB	N/A	2
10	1	SPRIG'D UPRIGHT	BRASS	200	8.00	3/4"	RA5692	RELIABLE	DB80-27	N/A	2
1141 TOTAL SPRINKLERS											

SPRINKLER HEAD LEGEND

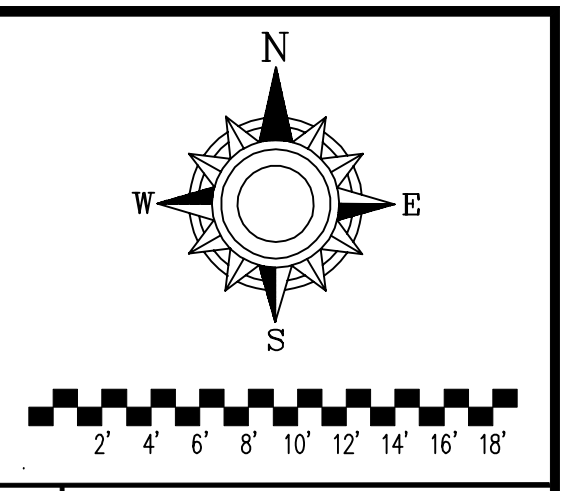
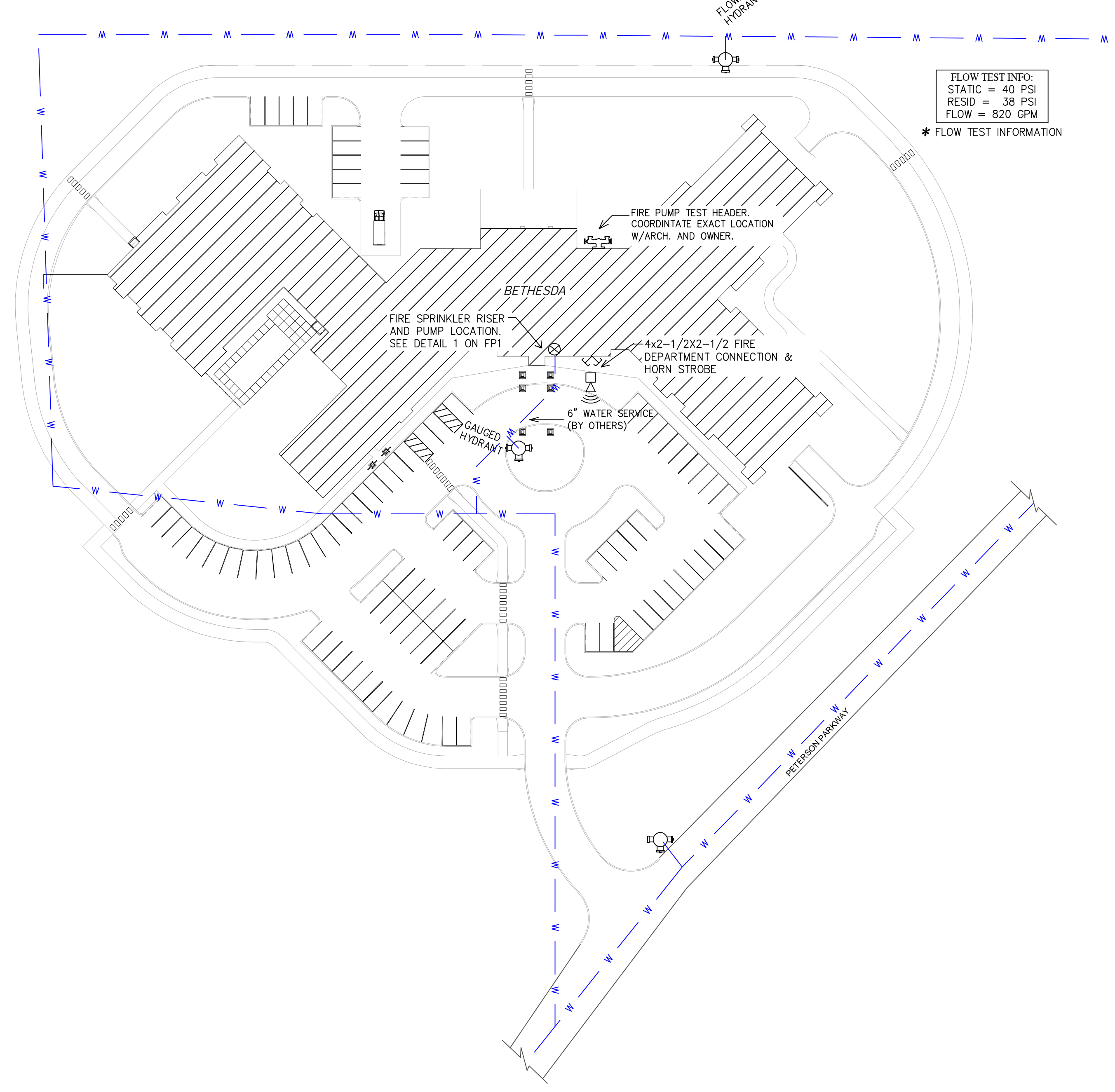
PIPE LEGEND

---	BLACK STEEL SPRINKLER PIPING
---	CPVC BLAZEMASTER SPRINKLER PIPING



SCOPE OF WORK:
 TO INSTALL NEW WET SPRINKLER SYSTEM AND NEW DRY SYSTEM IN THE NEW BETHESDA SENIOR LIVING BUILDING AS SHOWN ON THESE SHOP DRAWINGS. ALL PIPING IN PARKING GARAGE TO BE STEEL AND ALL PIPING IN OCCUPIED SPACES TO BE CONCEALED BLAZEMASTER CPVC PIPING WITH SEMI-RECESSED WHITE SPRINKLER HEADS. FDC WILL BE LOCATED ON THE SOUTH WALL ADJACENT TO THE MAIN SPRINKLER ENTRANCE.

- GENERAL NOTES**
- MINNESOTA BUILDING CODE (2015) (BASED ON IBC (2012) W/STATE AMENDMENTS)
 MINNESOTA STATE FIRE CODE (2015)
 - OCCUPANCY: APARTMENT OCCUPANCY TYPE-I-1, COMMONS OCCUPANCY TYPE-A-3, PARKING-S-2
 - TYPE OF CONSTRUCTION: V-A (1HR RATED PROTECTED, COMBUSTIBLE CONSTRUCTION)
 - SPRINKLERED AREAS (APPROXIMATE - SEE ARCHITECTURAL PLANS FOR ACTUAL)
 - PARKING = 16,302 S.F.
 - 1ST FLOOR = 44,659 S.F.
 - 2ND FLOOR = 41,929 S.F.
 - ATTIC = 37,500 S.F.
 - TOTAL = 140,390 S.F.
 - INSTALLATION STANDARDS:
 SPRINKLER SYSTEM DESIGNED AND INSTALLED PER NFPA-13 (2010)
 - SPRINKLER PIPE TYPES:
 - 1" BRANCH LINES TO BE BLAZEMASTER CPVC PIPING WITH CEMENTED FITTINGS
 - 1 1/4" THROUGH 3" MAIN & BRANCH LINES TO BE BLAZEMASTER CPVC PIPING WITH CEMENTED FITTINGS
 - 1" BRANCH LINES TO BE BLK SCHEDULE 40 PIPING WITH THREADED FITTINGS
 - 1 1/4" THROUGH 3" MAIN & BRANCH LINES TO BE BLK SCHEDULE 10 PIPING WITH SHORT RADIUS GROOVED FITTINGS
 - 1" BRANCH LINES TO BE THREADED BLK SCHEDULE 40 WITH THREADED FITTINGS
 - 1 1/4" THROUGH 6" MAIN & BRANCH LINES TO BE GROOVED BLK SCHEDULE 10 WITH SHORT RADIUS GROOVED FITTINGS
 - DESIGN CRITERIA
 - OFFICES, LIVING ROOMS, UNITS AND SIMILAR AREAS DESIGNED TO LIGHT HAZARD.
 - PARKING GARAGE, STORAGE ROOMS AND SIMILAR AREAS DESIGNED TO ORDINARY HAZARD GROUP 1
 - REMOTE AREA REDUCTIONS HAVE BEEN TAKEN WHERE APPLICABLE PER NFPA 13 SEC. 11.2.3.2.3
 - NOTES:
 - ALL MATERIAL TO BE NEW AND MEET U.L. STANDARDS
 - HANGERS TO BE INSTALLED IN ACCORDANCE WITH NFPA 13 (2010) - SEE PLAN FOR HANGING REQUIREMENTS
 - DRY SYSTEM PIPES, SLOPE INSTALLATION:
 SPRINKLER MAINS TO BE 1/4" PER 10 FEET
 SPRINKLER BRANCH LINES TO BE 1/2" PER 10 FEET
 4.4.1. 668 GAL.
 - SYMBOLS USED ON DRAWINGS:
 - PIPE ELEVATION A.F.F.
 - PIPE ELEVATION BELOW B.O.D.
 - ROOM HAZARD CLASSIFICATION (ALL ROOMS ARE CONSIDERED LIGHT HAZARD UNLESS NOTED)
 - HYDRAULIC CALCULATION JUNCTION POINT
 - 9'-0" CEILING HEIGHT
 - U.S.S. UNDERSIDE OF STRUCTURE



BETHESDA
 500 PETERSON PKWY
 NEW LONDON, MN 56273

FIRE PROTECTION PLAN



General Notes

- System installed per NFPA-13 (2010 Edition) and State Fire Marshal.
- Minimum pipe size shall be 1" nominal pipe.
- All welding per NFPA-54 (2011 Edition) shall be performed by a qualified welder.
- No installation or fabrication to begin without approved shop drawings.
- Installation of piping shall be in accordance with NFPA-13 and Prior to Fabrication and Installation by Sprinkler Contractor.
- All Dimensions Shown are Center to Center.
- Provide one spare head cabinet w/ 6 bid. & one bid wrench.
- Hangers are to be U.L. Listed and P.M. Approved.
- Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

REVISIONS

#	DATE	DESCRIPTION
1	11/17/20	PR NO. 05
2	02/02/21	PR NO. 06

Contract No. **C-17-113**
 Drawing Date: 10/12/2020
 Scale: 1/8" = 1'-0"
 Drawn By: JH
 Approval By: STATE FIRE MARSHAL DIV.
 SHEET NO. 1 of 8



SYM	QTY	POSITION	FINISH	TEMP	K	NPT	SIN	MFG	MODEL#	ESCALATION	HEAD BOX (2 min)
196	PENDENT	WHITE	155	4.90	1/2"	TY2234	TYCO	LFII	SEMI-RECESSED	2	2
6	SIDEWALL	WHITE	155	8.00	3/4"	VK630	Viking	WKEC	SEMI-RECESSED	2	2
116	PENDENT	WHITE	155	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESSED	2	2
48	PENDENT	WHITE	155	8.00	3/4"	TY4232	TYCO	EC-8	SEMI-RECESSED	2	2
15	PENDENT	WHITE	200	5.60	1/2"	TY3231	TYCO	TY-FRB	SEMI-RECESSED	2	2
36	PENDENT	WHITE	155	11.20	3/4"	TY5237	TYCO	EC-11	SEMI-RECESSED	2	2
11	SIDEWALL	WHITE	200	8.40	1"	R5714	RELIABLE	F30R56	SEMI-RECESSED	2	2
53	SIDEWALL	WHITE	200	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESSED	2	2
7	SIDEWALL	WHITE	200	11.20	3/4"	TY5332	TYCO	ELOW20	SEMI-RECESSED	2	2
164	SIDEWALL	WHITE	155	4.40	1/2"	TY2334	TYCO	LFII	SEMI-RECESSED	2	2
23	UPRIGHT	BRASS	200	5.60	1/2"	TY3131	TYCO	TY-FRB	N/A	2	2
67	UPRIGHT	BRASS	200	11.20	3/4"	TY5137	TYCO	EC-11	N/A	2	2
36	UPRIGHT	BRASS	200	5.60	1/2"	TY3131	TYCO	TY-FRB	N/A	2	2
4	PENDENT	WHITE	200	5.60	1"	R5714	RELIABLE	F30R56	SEMI-RECESSED	2	2
15	PENDENT	WHITE	175	4.90	1/2"	TY2234	TYCO	LFII	SEMI-RECESSED	2	2
67	PENDENT	WHITE	200	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESSED	2	2
5	PENDENT	WHITE	200	8.00	3/4"	TY4232	TYCO	EC-8	SEMI-RECESSED	2	2
22	PENDENT	WHITE	200	11.20	3/4"	TY5237	TYCO	EC-11	SEMI-RECESSED	2	2
66	SPRUCO UPRIGHT	BRASS	212	5.60	1/2"	RA5626	RELIABLE	AH56	N/A	2	2
103	SPRUCO UPRIGHT	BRASS	200	8.00	3/4"	RA5622	RELIABLE	DD80-6	N/A	2	2
14	UPRIGHT	BRASS	200	5.60	1/2"	RA5625	RELIABLE	DS56	N/A	2	2
4	SPRUCO UPRIGHT	BRASS	200	5.60	1/2"	TY313	TYCO	TY-FRB	N/A	2	2
10	SPRUCO UPRIGHT	BRASS	200	8.00	3/4"	RA5692	RELIABLE	DD80-27	N/A	2	2
1144 TOTAL SPRINKLERS											

SPRINKLER HEAD LEGEND

PIPE LEGEND	
	BLACK STEEL SPRINKLER PIPING
	CPVC BLAZEMASTER SPRINKLER PIPING

Design Area #10 HAZARD: LIGHT
 Zone: 2 System Type: WET
 Location: STUDIO A253
 Flowing Outlets: 6 Remote Area: 900
 Density: 0.10 Flow 307.7 gpm @ 6.1 psi
 Calculation Safety: 33.5 ps
 Includes 100 gpm Hose allowance

Design Area #12 HAZARD: LIGHT
 Zone: 2 System Type: WET
 Location: SPA 270
 Flowing Outlets: 8 Remote Area: 900
 Density: 0.10 Flow 285.2 gpm @ 15.7 psi
 Calculation Safety: 24 ps
 Includes 100 gpm Hose allowance

NOTE: REMOTE AREA REDUCED BY 40% DUE TO THE USE OF QUICK RESPONSE SPRINKLERS AND 8'-0" CEILING HEIGHT.

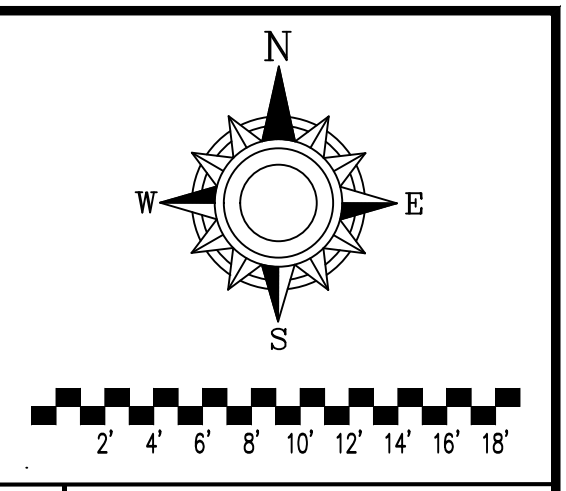
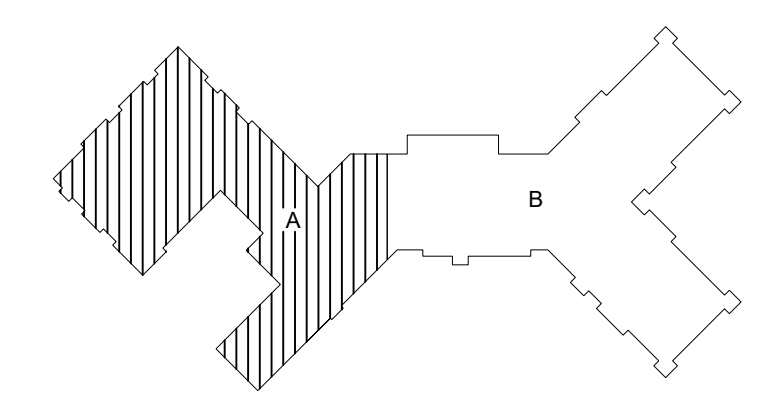
NOTE: REMOTE AREA REDUCED BY 40% DUE TO THE USE OF QUICK RESPONSE SPRINKLERS AND 9'-0" CEILING HEIGHT.

EXTENDED COVERAGE HEAD NOTES:
 LIGHT HAZARD AREAS CALCULATED TO 18'x18' U.N.O.
 ORDINARY HAZARD AREAS CALCULATED TO 14'x14' U.N.O.

SPRINKLER SPACING DETAILS

<p>TYCO LFII 4.4K</p> <p>TYPICAL RES SIDE DETAIL MAX DISTANCE OFF WALL: 7'-0" U.N.O. MAX DISTANCE BETWEEN HEAD: 14'-4" U.N.O. MAX DISTANCE FROM DECK: 6'-4" - 6'-6" MAX SPRAY DISTANCE: 16' x 16' (CALCULATED TO 16' x 16' U.N.O.)</p> <p>SYMBOLS ON PLAN</p>	<p>TYCO LFII 4.9K</p> <p>TYPICAL RES PEND DETAIL MAX DISTANCE OFF WALL: 10'-0" MAX DISTANCE BETWEEN HEAD: 20'-0" MAX DISTANCE FROM DECK: 6'-4" (CALCULATED TO 20' x 20' U.N.O.)</p> <p>SYMBOLS ON PLAN</p>	<p>TYCO EC-8C 8.0K</p> <p>TYPICAL EC-8C DETAIL MAX DISTANCE OFF WALL: 14'-0" MAX DISTANCE BETWEEN HEAD: 28'-0" MAX SPRAY DISTANCE: 28' x 10' (CALCULATED TO 28' x 8' U.N.O.)</p> <p>SYMBOL ON PLAN</p>
<p>RELIABLE DD80-6/DD80-27 8.0K</p> <p>TYPICAL DD DETAIL MAX DISTANCE OFF RIDGE: 0'-0" MIN DISTANCE BETWEEN HEAD: 4'-0" MAX DISTANCE BETWEEN HEAD: 6'-0" MAX DISTANCE FROM DECK: 0'-17" - 0'-21" MAX SPRAY DISTANCE: 63'-0" x 6'-0"</p> <p>SYMBOLS ON PLAN</p>	<p>RELIABLE AH56 5.6K</p> <p>TYPICAL AH DETAIL MIN DISTANCE BETWEEN HEAD: 6'-0" MAX DISTANCE BETWEEN HEAD PERPENDICULAR TO SLOPE: 1'-0" MAX DISTANCE BETWEEN HEAD PARALLEL TO SLOPE: 1'-0" MAX DISTANCE FROM DECK: 0'-1" - 0'-3" MAX SPRAY DISTANCE: 10'-0" x 15'-0" LONG DIMENSION OF COVERAGE AREA TO BE ALONG THE ROOF SLOPE, 6'-0" TOWARD PEAK AND 9'-0" TOWARD EAVE FROM SPRINKLER.</p> <p>SYMBOLS ON PLAN</p>	

LEVEL 2 AREA 'A'
 SCALE = 1/8" = 1'-0"



BETHESDA
500 PETERSON PKWY
NEW LONDON, MN 56273

Drawing Title: **FIRE PROTECTION PLAN**

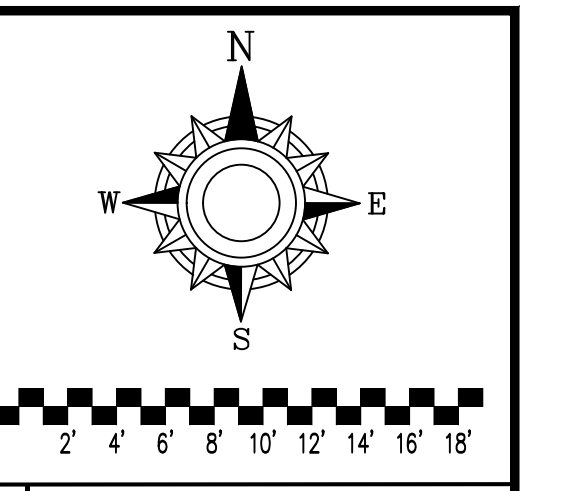
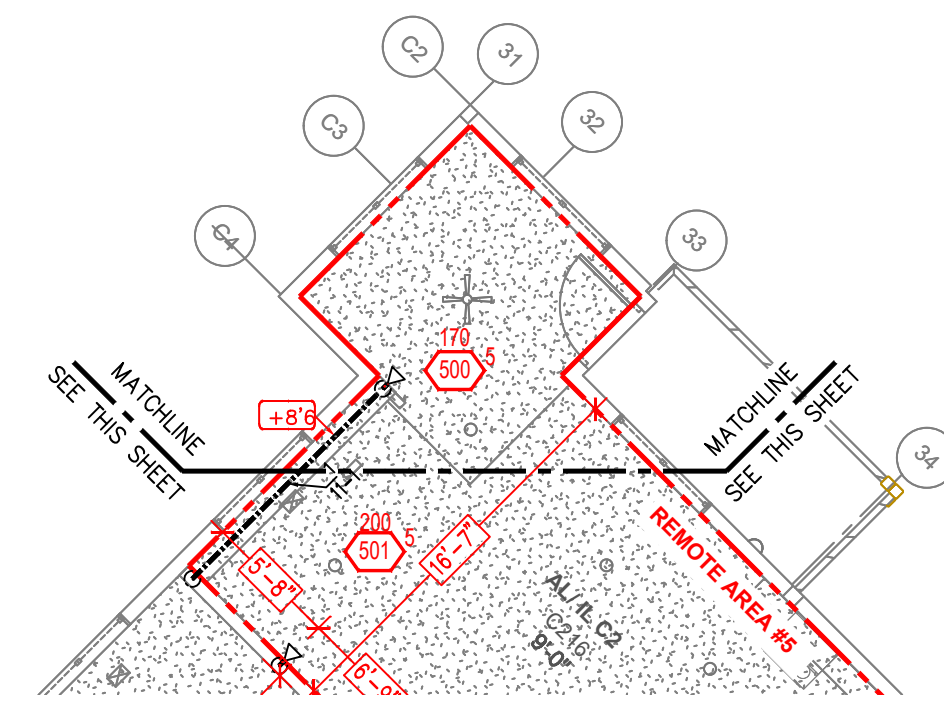
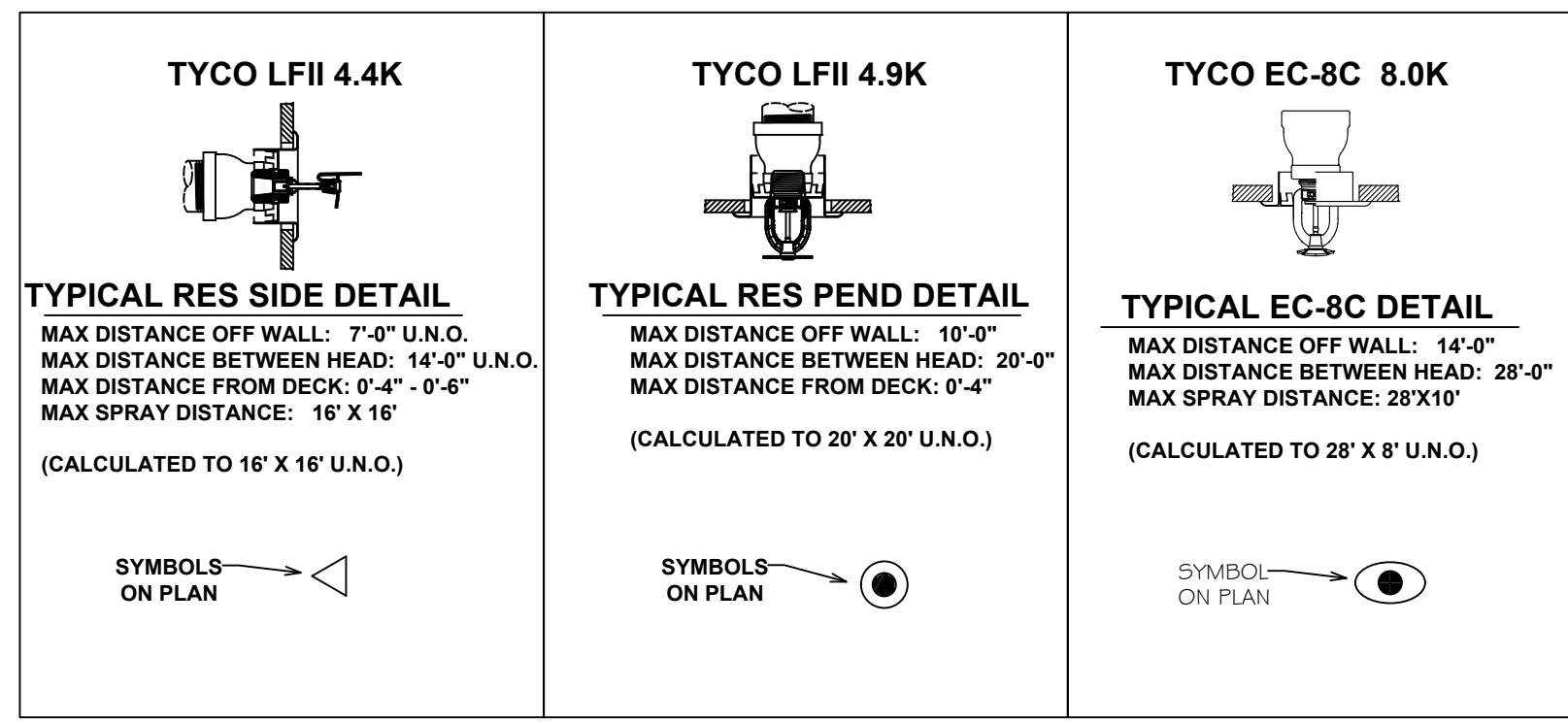
DRIVEN
 FIRE CONSULTANTS
 910 N. SYCAMORE AVENUE, STOUX FALLS, SD 57110 PHONE: (605)-444-5290

- General Notes**
- System installed per NFPA-13 (2010 Edition) and State Fire Marshal approved.
 - Minimum pipe size shall be 1" nominal pipe.
 - All 3/4"-10 & larger flow piping has welded outlets & grooved fitting.
 - No installation or fabrication to begin without approved shop drgs.
 - Installation of Sprinkler Piping shall be in accordance with NFPA 13 and NFPA 13A.
 - and limitation by Sprinkler Contractor.
 - All Dimensions Shown are Center to Center.
 - High Temperature Heads are to be Field Located Where Required.
 - High Temperature Heads are to be U.L. Listed and F.M. Approved.
 - Hangers are to be U.L. Listed and F.M. Approved.
 - Electrical wiring, alarm, detection and supervisory by owner.
 - System piping from freezing.

APPROVAL STAMPS

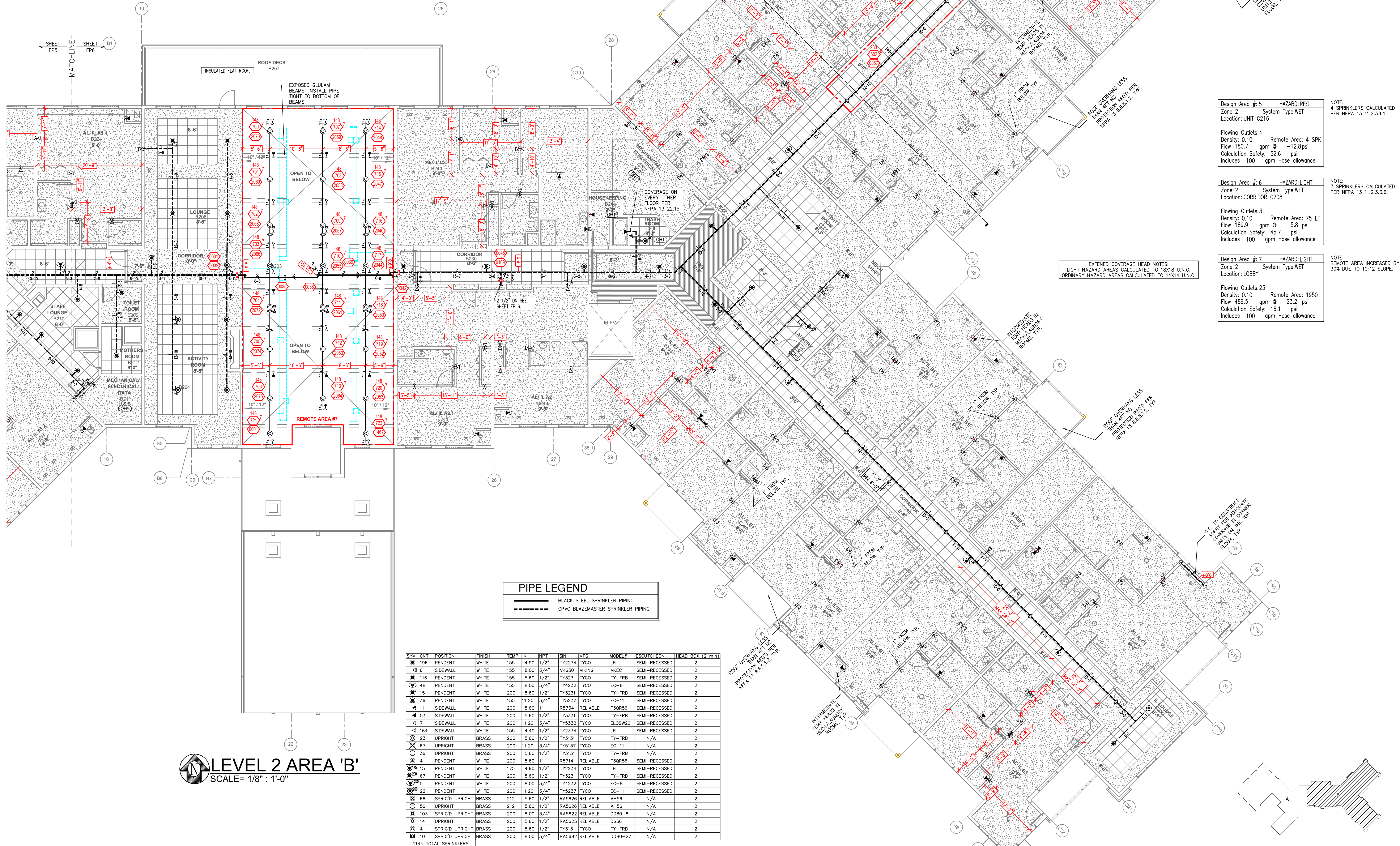
Contract No. **C-17-113**
 Drawing Date: **10/12/2020**
 Scale: **1/8" = 1'-0"**
 Drawn By: **JH**
 Approval By: **STATE FIRE MARSHAL DIV.**
 SHEET NO. **5 of 8**

SPRINKLER SPACING DETAILS



BETHESDA
 500 PETERSON PKWY
 NEW LONDON, MN 56273

Drawing Title: FIRE PROTECTION PLAN



Design Area #5	HAZARD: RES	NOTE: 4 SPRINKLERS CALCULATED PER NFPA 13 11.2.3.1.1.
Zone: 2	System Type: WET	
Location: UNIT C216		
Flowing Outlets: 4	Remote Area: 4 SPK	
Density: 0.10	Flow 180.7 gpm @ -12.8 psi	
Calculation Safety: 52.6 psi	Includes 100 gpm hose allowance	

Design Area #6	HAZARD: LIGHT	NOTE: 3 SPRINKLERS CALCULATED PER NFPA 13 11.2.3.3.6.
Zone: 2	System Type: WET	
Location: CORRIDOR C208		
Flowing Outlets: 3	Remote Area: 75 LF	
Density: 0.10	Flow 189.9 gpm @ -5.8 psi	
Calculation Safety: 45.7 psi	Includes 100 gpm hose allowance	

Design Area #7	HAZARD: LIGHT	NOTE: REMOTE AREA INCREASED BY 30% DUE TO 10:12 SLOPE.
Zone: 2	System Type: WET	
Location: LOBBY		
Flowing Outlets: 23	Remote Area: 1950	
Density: 0.10	Flow 485.5 gpm @ 23.2 psi	
Calculation Safety: 16.1 psi	Includes 100 gpm hose allowance	

EXTENDED COVERAGE HEAD NOTES:
 LIGHT HAZARD AREAS CALCULATED TO 18'X18' U.N.O.
 ORDINARY HAZARD AREAS CALCULATED TO 14'X14' U.N.O.

PIPE LEGEND

—	BLACK STEEL SPRINKLER PIPING
---	CPVC BLAZEMASTER SPRINKLER PIPING

SPRINKLER HEAD LEGEND

SYM	QTY	POSITION	FINISH	TEMP	K	INPT	SIN	MPG	MODEL#	ESCUTCHEON	HEAD BOX (2 min)
196	1	PENDANT	WHITE	155	4.90	1/2"	TY2234	TYCO	LFII	SEMI-RECESSED	2
36	1	SIDEWALL	WHITE	155	8.00	3/4"	WK630	WIKING	WKEC	SEMI-RECESSED	2
116	1	PENDANT	WHITE	155	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESSED	2
48	1	PENDANT	WHITE	155	8.00	3/4"	TY4232	TYCO	EC-8	SEMI-RECESSED	2
15	1	PENDANT	WHITE	200	5.60	1/2"	TY3231	TYCO	TY-FRB	SEMI-RECESSED	2
36	1	PENDANT	WHITE	155	11.20	3/4"	TY5237	TYCO	EC-11	SEMI-RECESSED	2
11	1	SIDEWALL	WHITE	200	5.60	1"	R5734	RELIABLE	F3QR56	SEMI-RECESSED	2
53	1	SIDEWALL	WHITE	200	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESSED	2
7	1	SIDEWALL	WHITE	200	11.20	3/4"	TY5332	TYCO	ELOS920	SEMI-RECESSED	2
164	1	SIDEWALL	WHITE	155	4.40	1/2"	TY2334	TYCO	LFII	SEMI-RECESSED	2
23	1	UPRIGHT	BRASS	200	5.60	1/2"	TY3131	TYCO	TY-FRB	N/A	2
67	1	UPRIGHT	BRASS	200	11.20	3/4"	TY5137	TYCO	EC-11	N/A	2
36	1	UPRIGHT	BRASS	200	5.60	1/2"	TY3131	TYCO	TY-FRB	N/A	2
4	1	PENDANT	WHITE	200	5.60	1"	R5714	RELIABLE	F3QR56	SEMI-RECESSED	2
15	1	PENDANT	WHITE	175	4.90	1/2"	TY2234	TYCO	LFII	SEMI-RECESSED	2
67	1	PENDANT	WHITE	200	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESSED	2
5	1	PENDANT	WHITE	200	8.00	3/4"	TY4232	TYCO	EC-8	SEMI-RECESSED	2
22	1	PENDANT	WHITE	200	11.20	3/4"	TY5237	TYCO	EC-11	SEMI-RECESSED	2
66	1	SPRIG'D UPRIGHT	BRASS	212	5.60	1/2"	RA5628	RELIABLE	AM56	N/A	2
58	1	UPRIGHT	BRASS	212	5.60	1/2"	RA5628	RELIABLE	AM56	N/A	2
103	1	SPRIG'D UPRIGHT	BRASS	250	8.00	3/4"	RA5622	RELIABLE	DOB0-6	N/A	2
14	1	UPRIGHT	BRASS	200	5.60	1/2"	RA5625	RELIABLE	DS56	N/A	2
4	1	SPRIG'D UPRIGHT	BRASS	200	5.60	1/2"	TY313	TYCO	TY-FRB	N/A	2
10	1	SPRIG'D UPRIGHT	BRASS	200	8.00	3/4"	RA5692	RELIABLE	DOB0-27	N/A	2
1144 TOTAL SPRINKLERS											

LEVEL 2 AREA 'B'
 SCALE= 1/8" = 1'-0"

General Notes

- System installed per NFPA-13 (2010 Edition) and State Fire Code.
- Minimum pipe size shall be 1" nominal pipe.
- All Sch-10 & ridge pipe shall be welded outlets & grooved.
- No installation or fabrication to begin without approved shop drawings.
- All pipe locations are to be field measured prior to fabricate.
- High Temperature Heads are to be field located where required.
- All Dimensions shown are Center to Center.
- Hangers are to be U.L. Listed and F.M. Approved.
- Electrical wiring, alarm, detection and supervisory by owner.
- System piping from freestanding.

APPROVAL STAMPS

Contract No: **C-17-113**

Drawing Date: 10/12/2020

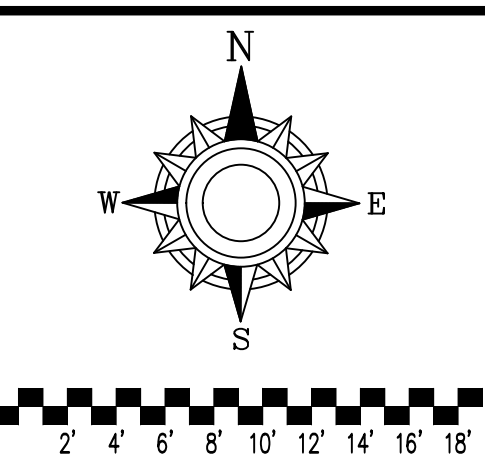
Scale: 1/8" = 1'-0"

Drawn By: JH

Approval By: STATE FIRE MARSHAL DIV.

SHEET NO: **6 of 8**

KEY MAP



BETHESDA
500 PETERSON PKWY
NEW LONDON, MN 56273

Drawing Title: **FIRE PROTECTION PLAN**



910 N. SYCAMORE AVENUE, STOUK FALLS, SD 57110 PHONE: (605) 444-9390

General Notes

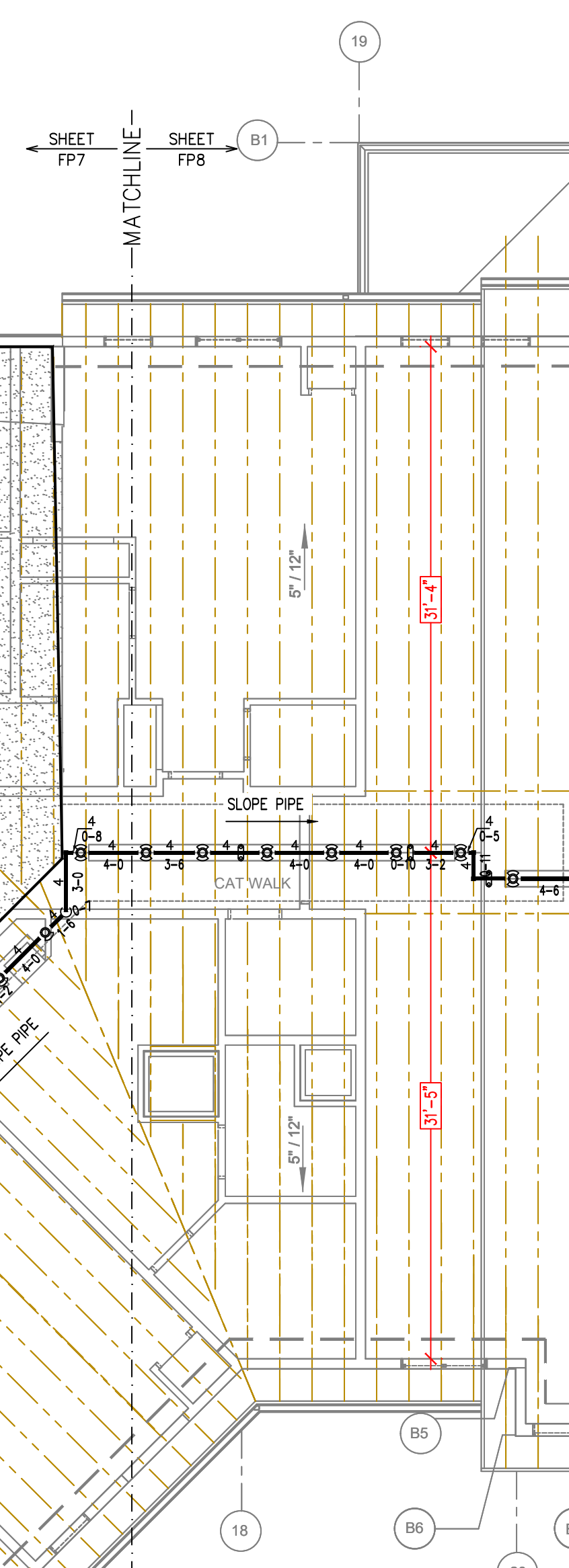
- System installed per NFPA-13 (2010 Edition) and State Fire Mar's listed.
- Minimum pipe size shall be 1" nominal pipe.
- All Sub-10 & Edge-of-Roof piping shall be welded outlets & grooved fit.
- No installation or fabrication to begin without approved shop drawings.
- Installation of Sprinkler Contractors shall be performed Prior to Fabrication and Installation.
- All Dimensions Shown are Center to Center.
- High Temperature Heads are to be Field Located Where Required.
- Hangers are to be U.L. Listed and F.M. Approved.
- Electrical wiring, alarm, detection and supervisory by owner.
- System piping shall be adequate including to prevent ice from freezing.

APPROVAL STAMPS

Contract No. **C-17-113**
 Drawing Date: **10/12/2020**
 Scale: **1/8" = 1'-0"**
 Drawn By: **JH**
 Approval By: **STATE FIRE MARSHAL DIV.**
 SHEET NO. **7 of 8**

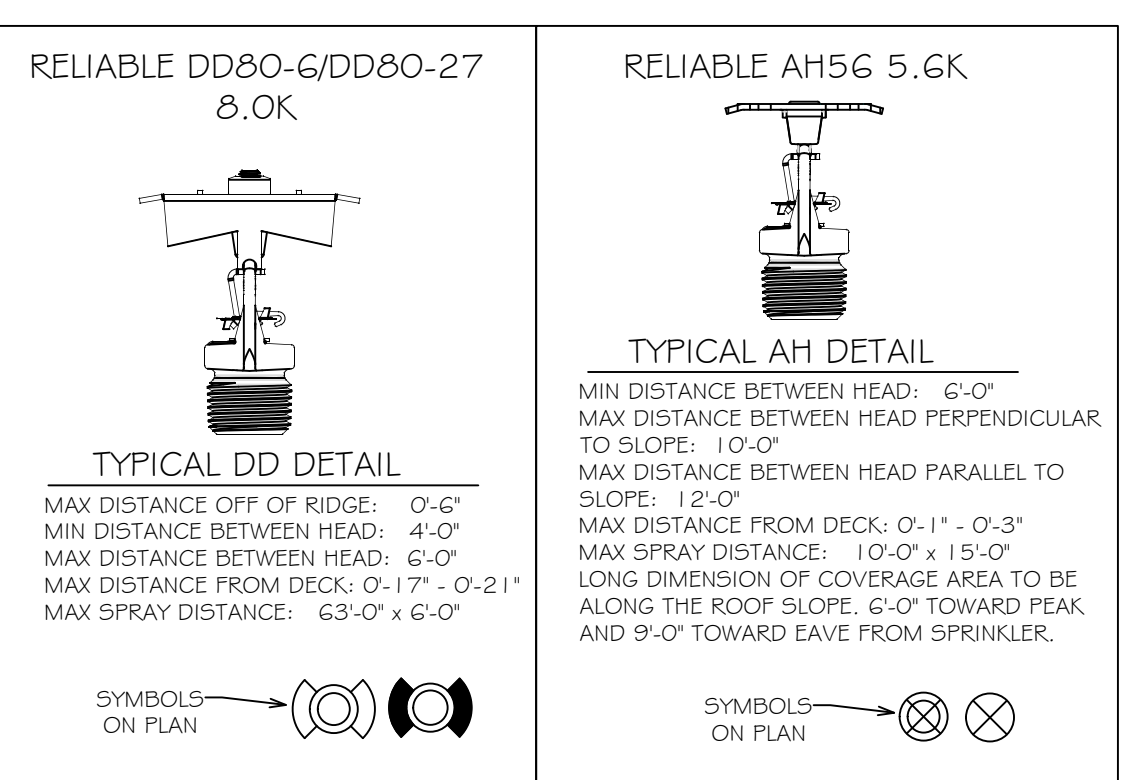
SYM	QTY	POSITION	FINISH	TEMP	K	NPT	SN	MFG.	MODEL#	ESCUTCHEON	HEAD BOX (2 min)
196	PENDENT	WHITE	155	4.90	1/2"	TY2234	TYCO	LFI	SEMI-RECESSED	2	
6	SIDEWALL	WHITE	155	8.00	3/4"	WK830	Viking	VKEC	SEMI-RECESSED	2	
116	PENDENT	WHITE	155	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESSED	2	
148	PENDENT	WHITE	155	8.00	3/4"	TY4232	TYCO	EC-8	SEMI-RECESSED	2	
15	PENDENT	WHITE	200	5.60	1/2"	TY3231	TYCO	TY-FRB	SEMI-RECESSED	2	
36	PENDENT	WHITE	155	11.20	3/4"	TY5237	TYCO	EC-11	SEMI-RECESSED	2	
11	SIDEWALL	WHITE	200	5.60	1"	R5734	RELIABLE	F3QR56	SEMI-RECESSED	2	
53	SIDEWALL	WHITE	200	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESSED	2	
7	SIDEWALL	WHITE	200	11.20	3/4"	TY3332	TYCO	ELDSW20	SEMI-RECESSED	2	
164	SIDEWALL	WHITE	155	4.40	1/2"	TY2334	TYCO	LFI	SEMI-RECESSED	2	
23	UPRIGHT	BRASS	200	5.60	1/2"	TY3131	TYCO	TY-FRB	N/A	2	
67	UPRIGHT	BRASS	200	11.20	3/4"	TY5137	TYCO	EC-11	N/A	2	
36	UPRIGHT	BRASS	200	5.60	1/2"	TY3131	TYCO	TY-FRB	N/A	2	
4	PENDENT	WHITE	200	5.60	1"	R5714	RELIABLE	F3QR56	SEMI-RECESSED	2	
15	PENDENT	WHITE	175	4.90	1/2"	TY2234	TYCO	LFI	SEMI-RECESSED	2	
67	PENDENT	WHITE	200	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESSED	2	
5	PENDENT	WHITE	200	8.00	3/4"	TY4232	TYCO	EC-8	SEMI-RECESSED	2	
22	PENDENT	WHITE	200	11.20	3/4"	TY5237	TYCO	EC-11	SEMI-RECESSED	2	
66	SPRIG'D UPRIGHT	BRASS	212	5.60	1/2"	RA5626	RELIABLE	AH56	N/A	2	
56	UPRIGHT	BRASS	212	5.60	1/2"	RA5626	RELIABLE	AH56	N/A	2	
103	SPRIG'D UPRIGHT	BRASS	200	8.00	3/4"	RA5622	RELIABLE	DD80-8	N/A	2	
14	UPRIGHT	BRASS	200	5.60	1/2"	RA5625	RELIABLE	DS56	N/A	2	
4	SPRIG'D UPRIGHT	BRASS	200	5.60	1/2"	TY313	TYCO	TY-FRB	N/A	2	
10	SPRIG'D UPRIGHT	BRASS	200	8.00	3/4"	RA5682	RELIABLE	DD80-27	N/A	2	
1144 TOTAL SPRINKLERS											

SPRINKLER HEAD LEGEND



ATTIC AREA 'A'
 SCALE: 1/8" = 1'-0"

SPRINKLER SPACING DETAILS



CALC PLACARD

Design Area #: 1 HAZARD: LIGHT
 Zone: 1 System Type: DRY
 Location: SOUTH ATTIC HIP

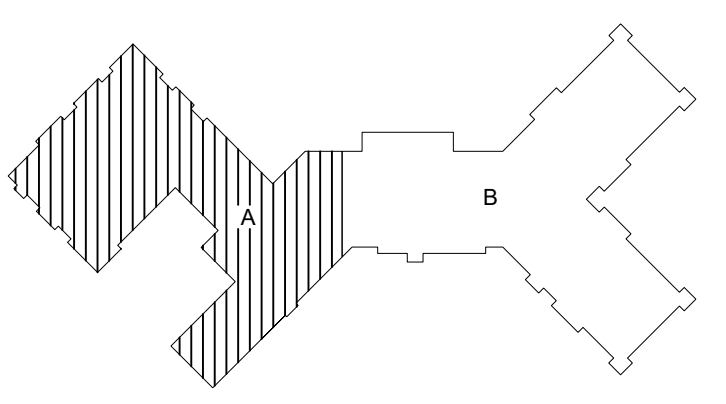
Flowing Outlets: 15
 Density: 0.10 Remote Area: 1950
 Flow 391 gpm @ 6.7 psi
 Calculation Safety: 32.8 psi
 Includes 100 gpm Hose allowance

NOTES: CALCULATED ALL AH SPRINKLERS IN 1950 S.F. AREA PER MANUFACTURE OUT SHEET.

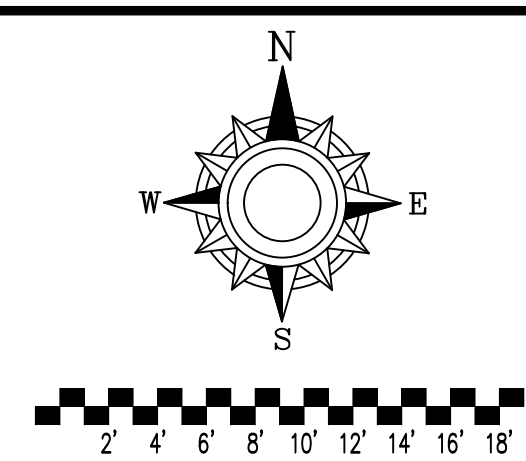
Design Area #: 4 HAZARD: LIGHT
 Zone: 1 System Type: DRY
 Location: SOUTH ATTIC RIDGE

Flowing Outlets: 8
 Density: 0.10 Remote Area:
 Flow 406.2 gpm @ 31 psi
 Calculation Safety: 8.4 psi
 Includes 100 gpm Hose allowance

NOTES: CALCULATED 7 MOST DEMANDING DD SPRINKLERS AND 2 AH SPRINKLERS PER MANUFACTURE OUT SHEET.



KEY MAP



BETHESDA
500 PETERSON PKWY
NEW LONDON, MN 56273



General Notes

- System installed per NFPA-13 (2010 Edition) and State Fire Marshals approval.
- Minimum pipe size shall be 1" nominal pipe.
- All 50#-10 & ridge flow piping has welded outlets & grooved fitting.
- No installation or fabrication to begin without approved shop drawings.
- All pipe locations are to be field measured prior to fabrication.
- All dimensions shown are center to center.
- High Temperature Heads are to be field located where required.
- Heads are to be U.L. Listed and F.M. Approved.
- Electrical wiring, alarm, detection and supervisory by owner.
- System piping from freezing.

APPROVAL STAMPS

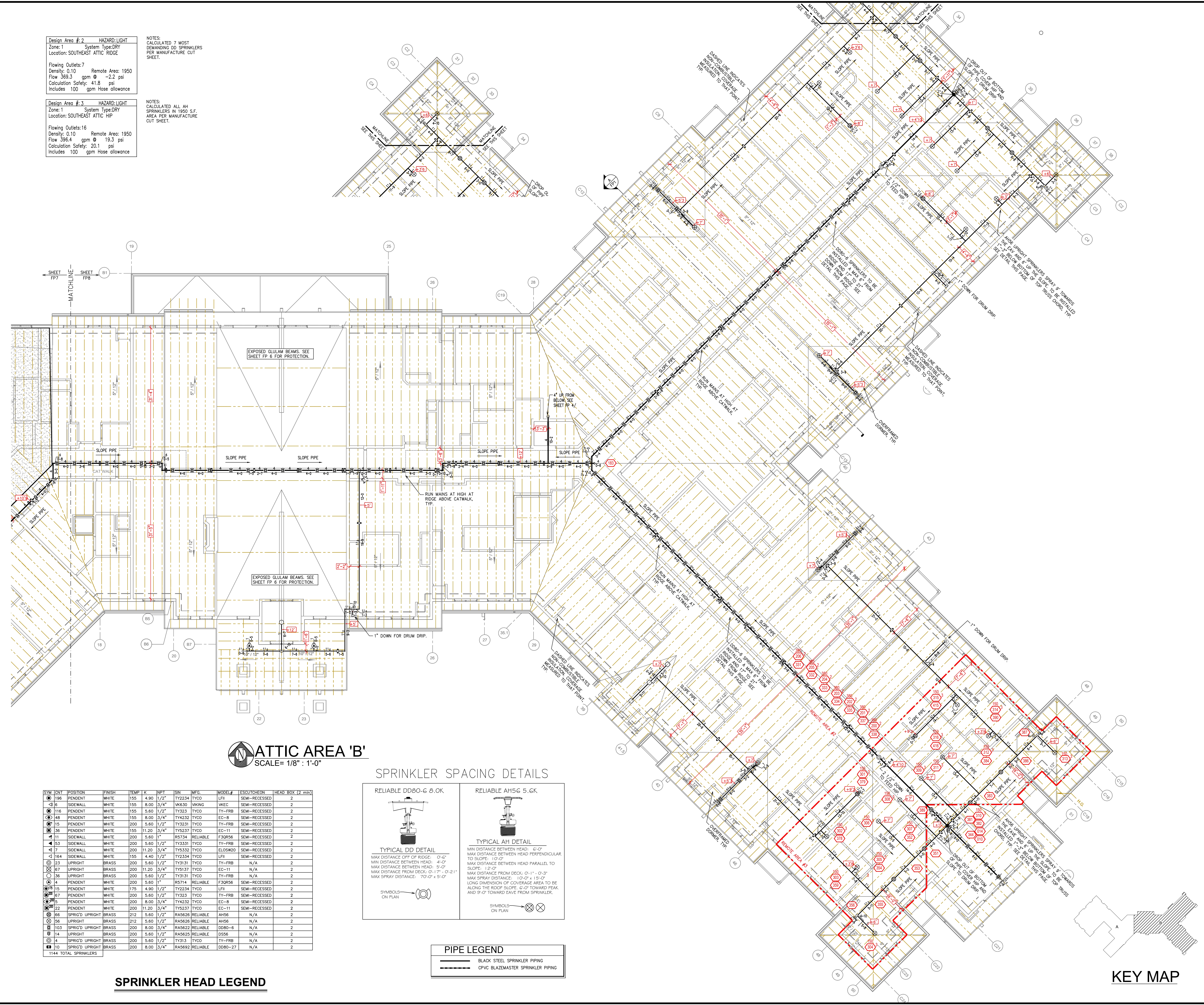
Contract No. **C-17-113**
 Drawing Date: 10/12/2020
 Scale: 1/8" = 1'-0"
 Drawn By: JH
 Approval By: STATE FIRE MARSHAL DIV.
 SHEET NO. **8 of 8**

Design Area #2 HAZARD-LIGHT
 Zone: 1 System Type: DRY
 Location: SOUTHEAST ATTIC RIDGE
 Flowing Outlets: 7 Remote Area: 1950
 Density: 0.10 Flow: 369.3 gpm @ -2.2 psi
 Calculation Safety: 41.8 psi
 Includes 100 gpm Hose allowance

NOTES:
 CALCULATED 7 MOST DEMANDING DD SPRINKLERS PER MANUFACTURE CUT SHEET.

Design Area #3 HAZARD-LIGHT
 Zone: 1 System Type: DRY
 Location: SOUTHEAST ATTIC HIP
 Flowing Outlets: 16 Remote Area: 1950
 Density: 0.10 Flow: 396.4 gpm @ 19.3 psi
 Calculation Safety: 20.1 psi
 Includes 100 gpm Hose allowance

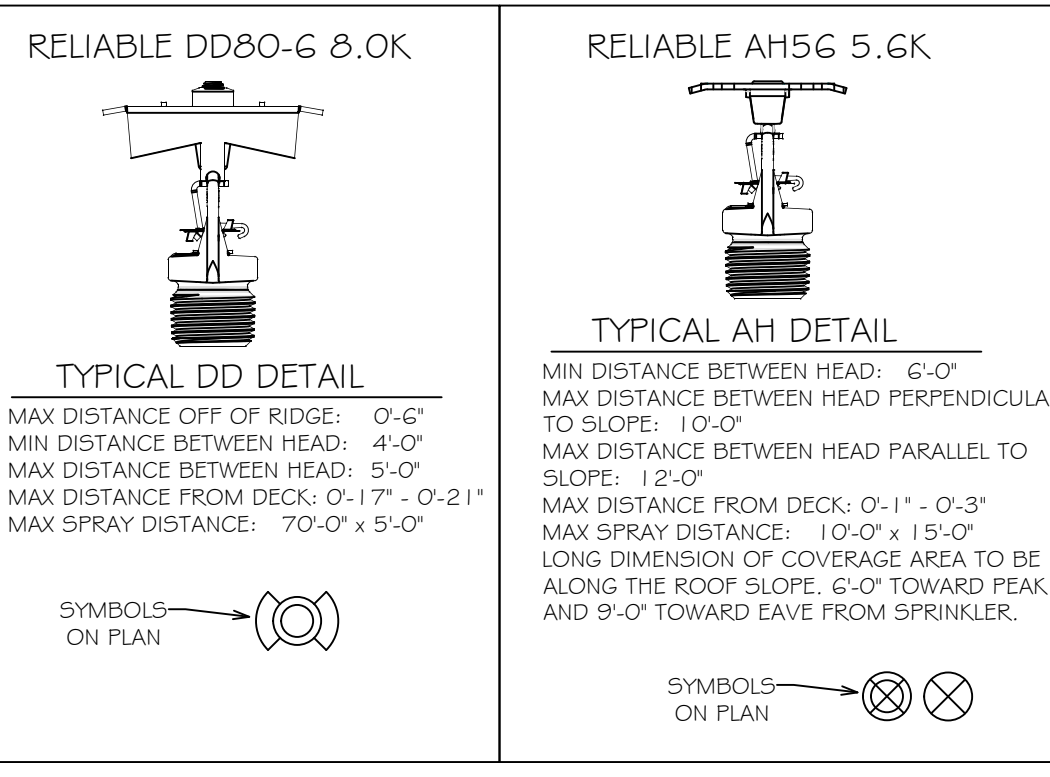
NOTES:
 CALCULATED ALL AH SPRINKLERS IN 1950 S.F. AREA PER MANUFACTURE CUT SHEET.



ATTIC AREA 'B'
 SCALE = 1/8" = 1'-0"

SPRINKLER SPACING DETAILS

SYM	QTY	POSITION	FINISH	TRIP	K	NPY	SN	MPG	MODEL#	ESQUICHEON	HEAD BOX (2 min)
196	PENDENT	WHITE	155	4.90	1/2"	TY2234	TYCO	LFI	SEMI-RECESSED	2	
6	SIDEWALL	WHITE	155	8.00	3/4"	WK650	VIKING	WKEC	SEMI-RECESSED	2	
116	PENDENT	WHITE	155	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESSED	2	
48	PENDENT	WHITE	155	8.00	3/4"	TY4232	TYCO	EC-8	SEMI-RECESSED	2	
15	PENDENT	WHITE	200	5.60	1/2"	TY3231	TYCO	TY-FRB	SEMI-RECESSED	2	
36	PENDENT	WHITE	155	11.20	3/4"	TY5237	TYCO	EC-11	SEMI-RECESSED	2	
11	SIDEWALL	WHITE	200	5.60	1/2"	R5734	RELIABLE	F3QR56	SEMI-RECESSED	2	
53	SIDEWALL	WHITE	200	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESSED	2	
7	SIDEWALL	WHITE	200	11.20	3/4"	TY5332	TYCO	ELOS20	SEMI-RECESSED	2	
164	SIDEWALL	WHITE	155	4.40	1/2"	TY2334	TYCO	LFI	SEMI-RECESSED	2	
23	UPRIGHT	BRASS	200	5.60	1/2"	TY3131	TYCO	TY-FRB	N/A	2	
67	UPRIGHT	BRASS	200	11.20	3/4"	TY5137	TYCO	EC-11	N/A	2	
36	UPRIGHT	BRASS	200	5.60	1/2"	TY3131	TYCO	TY-FRB	N/A	2	
4	PENDENT	WHITE	200	5.60	1/2"	R5714	RELIABLE	F3QR56	SEMI-RECESSED	2	
15	PENDENT	WHITE	175	4.90	1/2"	TY2234	TYCO	LFI	SEMI-RECESSED	2	
67	PENDENT	WHITE	200	5.60	1/2"	TY323	TYCO	TY-FRB	SEMI-RECESSED	2	
48	PENDENT	WHITE	200	8.00	3/4"	TY4232	TYCO	EC-8	SEMI-RECESSED	2	
22	PENDENT	WHITE	200	11.20	3/4"	TY5237	TYCO	EC-11	SEMI-RECESSED	2	
66	SPRIG'D UPRIGHT	BRASS	212	5.60	1/2"	RA5626	RELIABLE	AH56	N/A	2	
56	UPRIGHT	BRASS	212	5.60	1/2"	RA5626	RELIABLE	AH56	N/A	2	
103	SPRIG'D UPRIGHT	BRASS	200	8.00	3/4"	RA5622	RELIABLE	DD80-6	N/A	2	
14	UPRIGHT	BRASS	200	5.60	1/2"	RA5625	RELIABLE	OS56	N/A	2	
4	SPRIG'D UPRIGHT	BRASS	200	5.60	1/2"	TY313	TYCO	TY-FRB	N/A	2	
10	SPRIG'D UPRIGHT	BRASS	200	8.00	3/4"	RA5692	RELIABLE	DD80-27	N/A	2	
1144 TOTAL SPRINKLERS											



PIPE LEGEND

- BLACK STEEL SPRINKLER PIPING
- CPVC BLAZEMASTER SPRINKLER PIPING

SPRINKLER HEAD LEGEND

KEY MAP