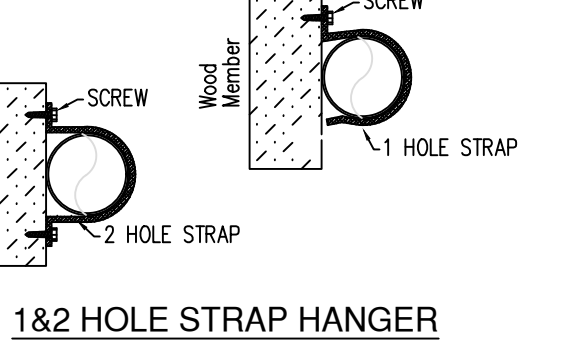
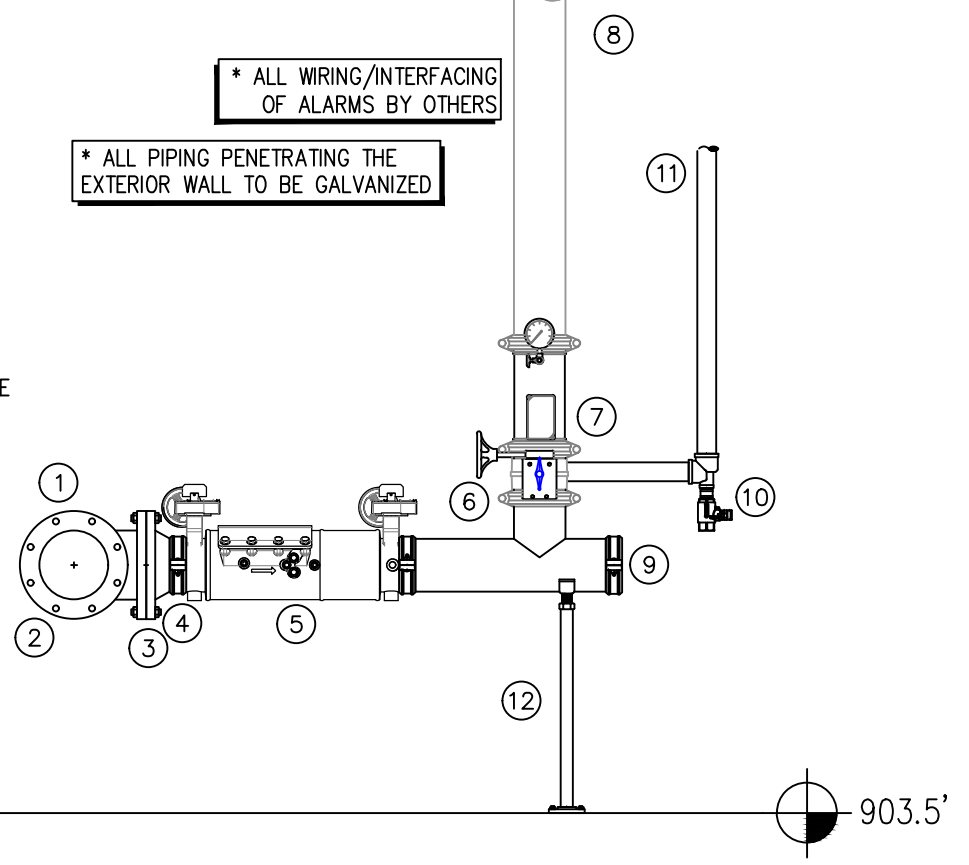


HANGER DETAILS



RISER LEGEND

- 8" UNDERGROUND COMBINED WATER SERVICE (BY OTHERS)
- FLUSHING & TESTING OF THE UNDERGROUND SHALL BE COMPLETED PRIOR TO THE SPRINKLER SYSTEM HOOKUP. UNDERGROUND PAPERS ARE TO BE SUPPLIED TO THE "TIP" CONTRACTOR BY THE G.C.
- 8" FLANGED TEE (BY OTHERS)
- 8" FLANGE GROOVE ADAPTER
- 8" X 6" GROOVED CONCENTRIC REDUCER
- 6" AIES 1200 BACKFLOW CHECK w/ TAMPER
- 4" GROOVED BUTTERFLY VALVE w/ TAMPER (N.O.)
- 4" GROOVED COMMERCIAL RISER MANIFOLD w/ FLOW SWITCH, PRESSURE GAUGE, & TEST AND DRAIN
- 4" TO SPRINKLER SYSTEM
- 6" END CAP
- LOW POINT DRAIN
- PIPE DRAIN TO APPROVED LOCATION, COORDINATE ON SITE
- PIPE STAND



-A- VALVE ASSEMBLY DETAIL

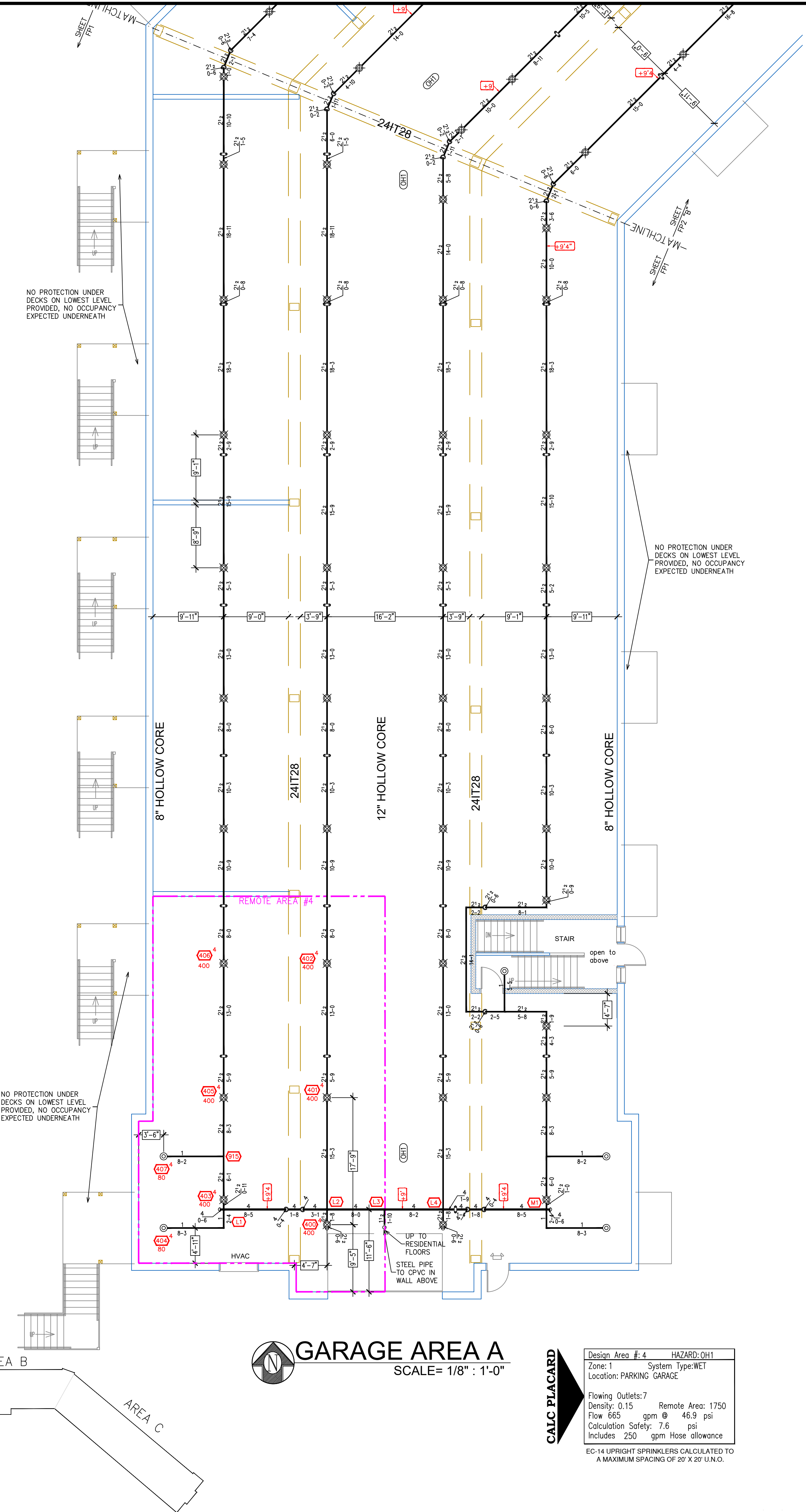
SCALE: 1/2" = 1'-0"

SCOPE OF WORK:
TO INSTALL NEW SPRINKLER SYSTEM IN THE NEW CROSSROAD POINTE APARTMENT BUILDING AS SHOWN ON 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 WALL ADJACENT TO THE MAIN ENTRANCE.



GENERAL NOTES

- INTERNATIONAL BUILDING CODE (2012)
 - OCCUPANCY: R-2 APARTMENT HOUSE; S-2 LOW HAZARD UNDER GROUND PRIVATE PARKING GARAGE
 - TYPE OF CONSTRUCTION: V-A (1HR RATED PROTECTED, COMBUSTIBLE CONSTRUCTION)
 - SPRINKLERED AREAS (APPROXIMATE - SEE ARCHITECTURAL PLANS FOR ACTUAL)
 - PARKING GARAGE = 45,921 S.F.
 - 1ST FLOOR = 44,337 S.F.
 - 2ND FLOOR = 43,952 S.F.
 - 3RD FLOOR = 43,965 S.F.
 - ATTIC = 51,786 S.F.
 - TOTAL = 229,961 S.F.
- INSTALLATION STANDARDS: SPRINKLER SYSTEM DESIGNED AND INSTALLED PER NFPA-13 (2010)
 - SPRINKLER PIPE TYPES:
 - WET
 - 1" BRANCH LINES TO BE BLAZEMASTER CPVC PIPING WITH CEMENTED FITTINGS
 - 1 1/2" THROUGH 1" MAIN & BRANCH LINES TO BE BLAZEMASTER CPVC PIPING WITH CEMENTED FITTINGS
 - 1" BRANCH LINES TO BE BLK SCHEDULE 30 PIPING WITH THREADED FITTINGS
 - 1 1/2" THROUGH 4" MAIN & BRANCH LINES TO BE BLK SCHEDULE 7 PIPING WITH GROOVED FITTINGS
 - 1" BRANCH LINES TO BE THREADED BLK SCHEDULE 40 WITH THREADED FITTINGS
 - 1 1/2" THROUGH 4" MAIN & BRANCH LINES TO BE GROOVED BLK SCHEDULE 10 WITH GROOVED FITTINGS
 - MAINS & BRANCH LINES TO BE ROLL-GROOVED BLK SCHEDULE 10
- DESIGN CRITERIA
 - PARKING GARAGE IS DESIGNED TO ORDINARY HAZARD GROUP 1.
 - 1ST FLOOR AND UP IS DESIGNED TO LIGHT HAZARD.
 - ALL CLOSET ARE PROTECTED PER NFPA 13 (2010).
 - ALL BATHROOMS 55 S.F. OR UNDER ARE OMITTED PER NFPA 8.15.8.1.1
 - 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 PIPE SLOPE INSTALLATION: SPRINKLER MAINS TO BE 1/4" PER 10 FEET; SPRINKLER BRANCH LINES TO BE 1/2" PER 10 FEET
 - DRY SYSTEM CAPACITY: 4.4.1. 350 GAL.
- SYMBOLS USED ON DRAWINGS:
 - 6.3.5 PIPE ELEVATION A.F.F.
 - 6.1.2 PIPE ELEVATION BELOW B.O.D.
 - ROOM HAZARD CLASSIFICATION (ALL ROOMS ARE CONSIDERED LIGHT HAZARD UNLESS NOTED)
 - HYDRAULIC CALCULATION JUNCTION POINT
 - 90° CEILING HEIGHT
- SCOPE OF WORK:
 - TO INSTALL NEW FIRE SUPPRESSION SYSTEM IN NEW CROSSROADS POINTE BUILDING INCLUDING:
 - 1 WET ZONE AND 1 DRY ZONE. ZONE 1 WILL PROTECT THE PARKING GARAGE AND FLOORS 1,2, AND 3. ZONE 2 WILL PROTECT THE DRY ATTIC SPACE.
 - ALL AREAS OF THE BUILDING TO BE INSTALLED AND COVERED IN ACCORDANCE WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PER NFPA 13 (2010)



GARAGE AREA A

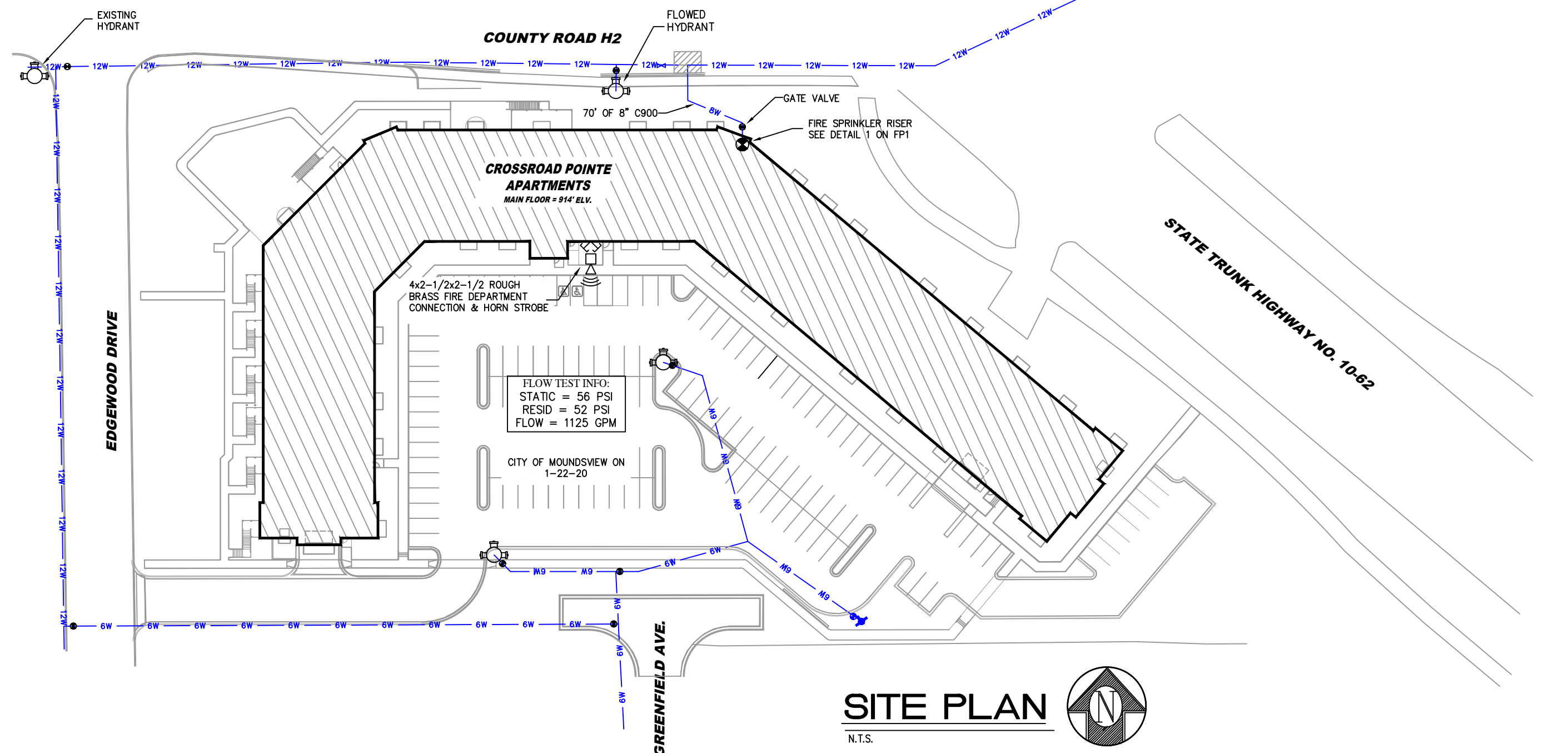
SCALE= 1/8" : 1'-0"

CALC PLACARD

Design Area #4 HAZARD:OH1
Zone: 1 System Type:WET
Location: PARKING GARAGE
Flowing Outlets:7
Density: 0.15 Remote Area: 1750
Flow 665 gpm @ 46.9 psi
Calculation Safety: 7.6 psi
Includes 250 gpm Hose allowance
EG-14 UPRIGHT SPRINKLERS CALCULATED TO A MAXIMUM SPACING OF 20' X 20' U.O.

SPRINKLER LEGEND

SYM	CONT	POSITION	FINISH	TEMP	K	NPT	SIN	MFG.	MODEL#	ESCU/TECHN
168	UPR	BRASS	200	14.00	3/4"		TY6137	Typo	EG-14	N/A
81	SIDE	WHITE	200	5.60	1"		TY2255	Typo	DS-1	SEMI-RECESSED
168	PEND	WHITE	200	5.60	1/2"		TY323	Typo	TY-FRB	SEMI-RECESSED
6.35	PEND	WHITE	155	4.90	1/2"		TY2234	Typo	LFII	SEMI-RECESSED
75	PEND	WHITE	155	5.60	1/2"		RA5814	RELIABL	LT56	SEMI-RECESSED
9	SIDE	CHROME	155	8.00	3/4"		W630	WVING	WKEC	SEMI-RECESSED
39	PEND	WHITE	155	5.60	1/2"		TY323	Typo	TY-FRB	SEMI-RECESSED
87	SIDE	WHITE	200	5.60	1/2"		TY3331	Typo	TY-FRB	SEMI-RECESSED
1.376	SIDE	WHITE	155	4.40	1/2"		TY2234	Typo	LFII	SEMI-RECESSED
41	SIDE	CHROME	200	5.60	1"		RA1664	RELIABL	DH56D	SEMI-RECESSED
197	UPR	BRASS	200	5.60	1/2"		TY313	Typo	TY-FRB	N/A
4	UPR	BRASS	200	5.60	1/2"		RA5626	Reliab	AH	N/A
119	UPR	BRASS	200	5.60	1/2"		RA5695	Reliab	GP56	N/A
15	UPR	BRASS	200	5.60	1/2"		TY313	Typo	TY-FRB	N/A
117	UPR	BRASS	200	8.00	3/4"		RA5622	Reliab	DD80-6	N/A
18	UPR	BRASS	200	5.60	1/2"		RA5626	Reliab	AH	N/A
2159		TOTAL								



SITE PLAN

N.T.S.

General Notes

- System installed per NFPA-13 (2010 Edition) and State Fire Marshal.
- All equipment for this system shall be U.L. listed.
- Minimum pipe size shall be 1" nominal pipe.
- All Sch-10 & Body Flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-82).
- No installation or fabrication to begin without approved shop dwgs.
- All Pipe Locations are to be Field Measured Prior to Fabrication and Installation by Sprinkler Contractor.
- All Dimensions Shown are Center to Center.
- High Temperature Heads are to be Field Located Where Required.
- Provide one spare head cabinet w/ 6 hds. & one hd wrench.
- Hangers are to be U.L. Listed and P.M. Approved.
- Electrical wiring, alarm, detection and supervisory by owner.
- Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

APPROVAL STAMPS

DRIVEN
FIRE CONSULTANTS
910 N. SYCAMORE AVENUE; SIOUX FALLS, SD 57110 PHONE: (605)-444-9290

Drawing Title: **FIRE PROTECTION PLAN**

Contract No. **C-19-117**

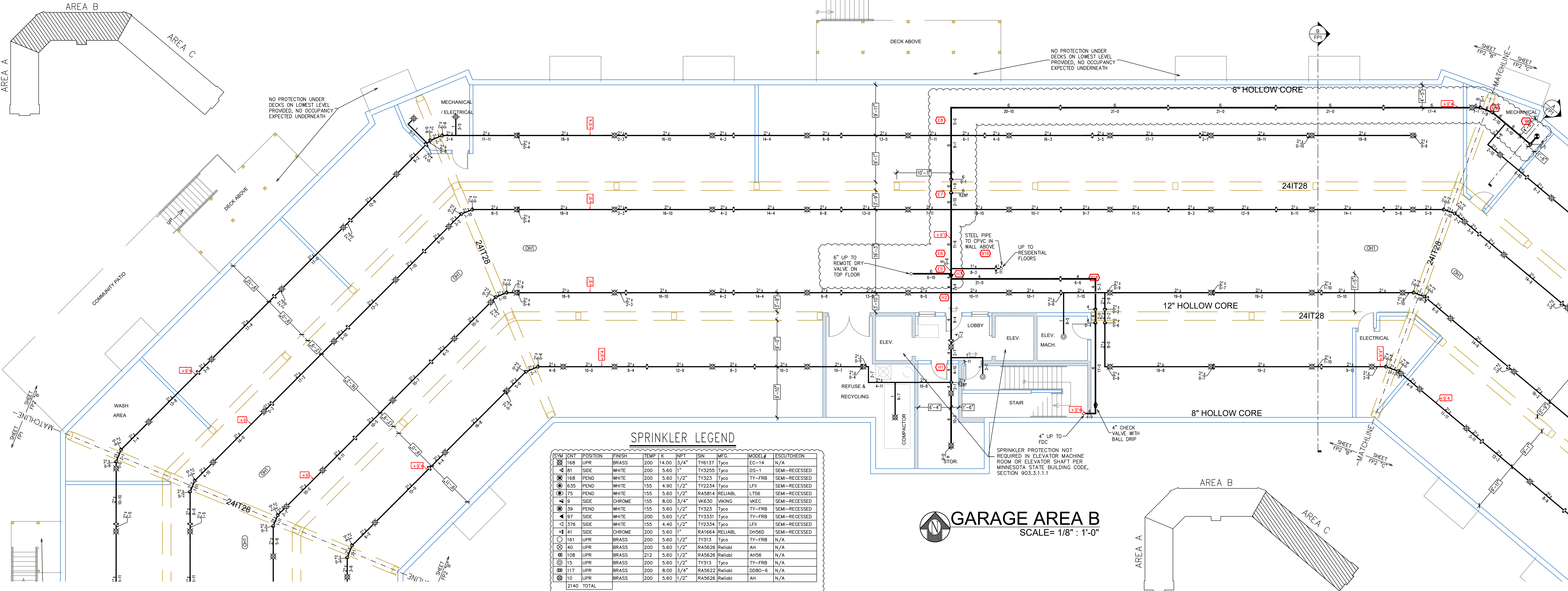
Drawing Date: **06/25/2020**

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

Drawn By:

Approval By: **STATE FIRE MARSHAL DIV.**

SHEET NO. **1 of 10**



SPRINKLER LEGEND

SYM	CONT	POSITION	FINISH	TEMP	K	RT	SN	MFG.	MODEL#	ES/OUTLINE
⊠	81	SIDE	WHITE	200	14.00	3/4"	TY6137	TYCO	ES-14	N/A
⊠	168	PEND	WHITE	200	5.60	1/2"	TY3255	TYCO	TY-FRB	SEMI-RECESSED
⊠	835	PEND	WHITE	155	4.90	1/2"	TY2234	TYCO	LFI	SEMI-RECESSED
⊠	75	PEND	WHITE	155	5.60	1/2"	RA5814	RELIABL	LT56	SEMI-RECESSED
⊠	9	SIDE	CHROME	155	8.00	3/4"	WK630	WIRING	WKEC	SEMI-RECESSED
⊠	39	PEND	WHITE	155	5.60	1/2"	TY3233	TYCO	TY-FRB	SEMI-RECESSED
⊠	97	SIDE	WHITE	200	5.60	1/2"	TY3331	TYCO	TY-FRB	SEMI-RECESSED
⊠	376	SIDE	WHITE	155	4.40	1/2"	TY2334	TYCO	LFI	SEMI-RECESSED
⊠	41	SIDE	CHROME	200	5.60	1"	RA1664	RELIABL	DH56D	SEMI-RECESSED
⊠	181	UPR	BRASS	200	5.60	1/2"	TY313	TYCO	TY-FRB	N/A
⊠	10	UPR	BRASS	200	5.60	1/2"	RA5626	Reliabl	AH	N/A
⊠	108	UPR	BRASS	212	5.60	1/2"	RA5626	Reliabl	AH56	N/A
⊠	15	UPR	BRASS	200	5.60	1/2"	TY313	TYCO	TY-FRB	N/A
⊠	117	UPR	BRASS	200	8.00	3/4"	RA5622	Reliabl	DOB0-6	N/A
⊠	10	UPR	BRASS	200	5.60	1/2"	RA5626	Reliabl	AH	N/A
Z140		TOTAL								

GARAGE AREA B
SCALE= 1/8" : 1'-0"

GARAGE AREA C
SCALE= 1/8" : 1'-0"

- General Notes**
- System installed per NFPA-13 (2010 Edition) and State Fire Marshal.
 - All equipment for this system shall be U.L. listed.
 - Minimum pipe size shall be 1" nominal pipe.
 - All Sch-10 & Eddy Flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-82).
 - No installation or fabrication to begin without approved shop dwgs.
 - All Pipe Locations are to be Field Measured Prior to Fabrication and Installation by Sprinkler Contractor.
 - All Dimensions Shown are Center to Center.
 - High Temperature Heads are to be Field Located Where Required.
 - Provide one spare head cabinet w/ 6 hds. & one hd wrench.
 - Hangers are to be U.L. Listed and P.M. Approved.
 - Electrical wiring, alarm, detection and supervisory by owner.
 - Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

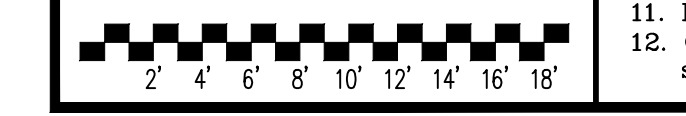
APPROVAL STAMPS

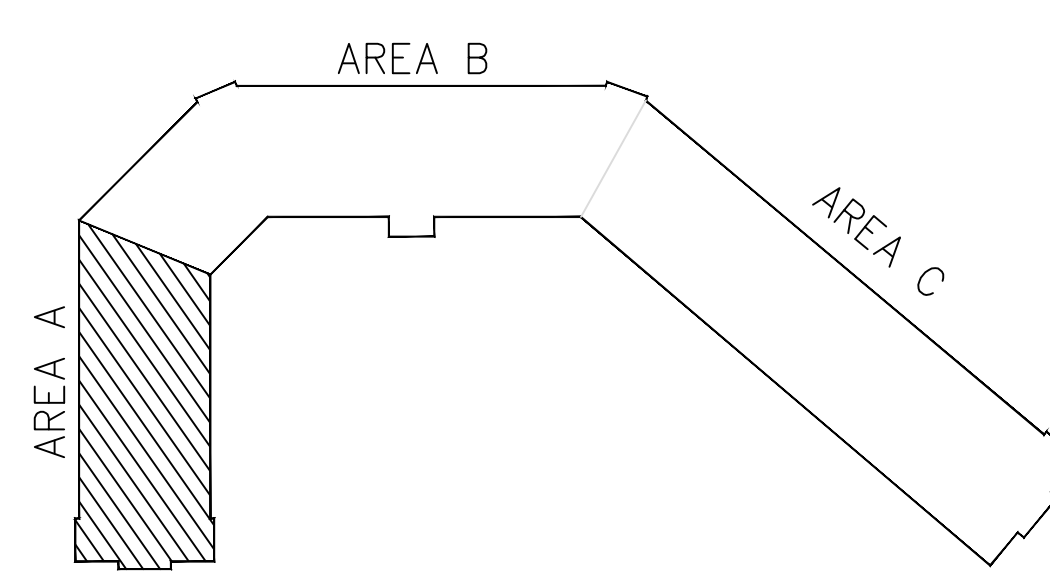
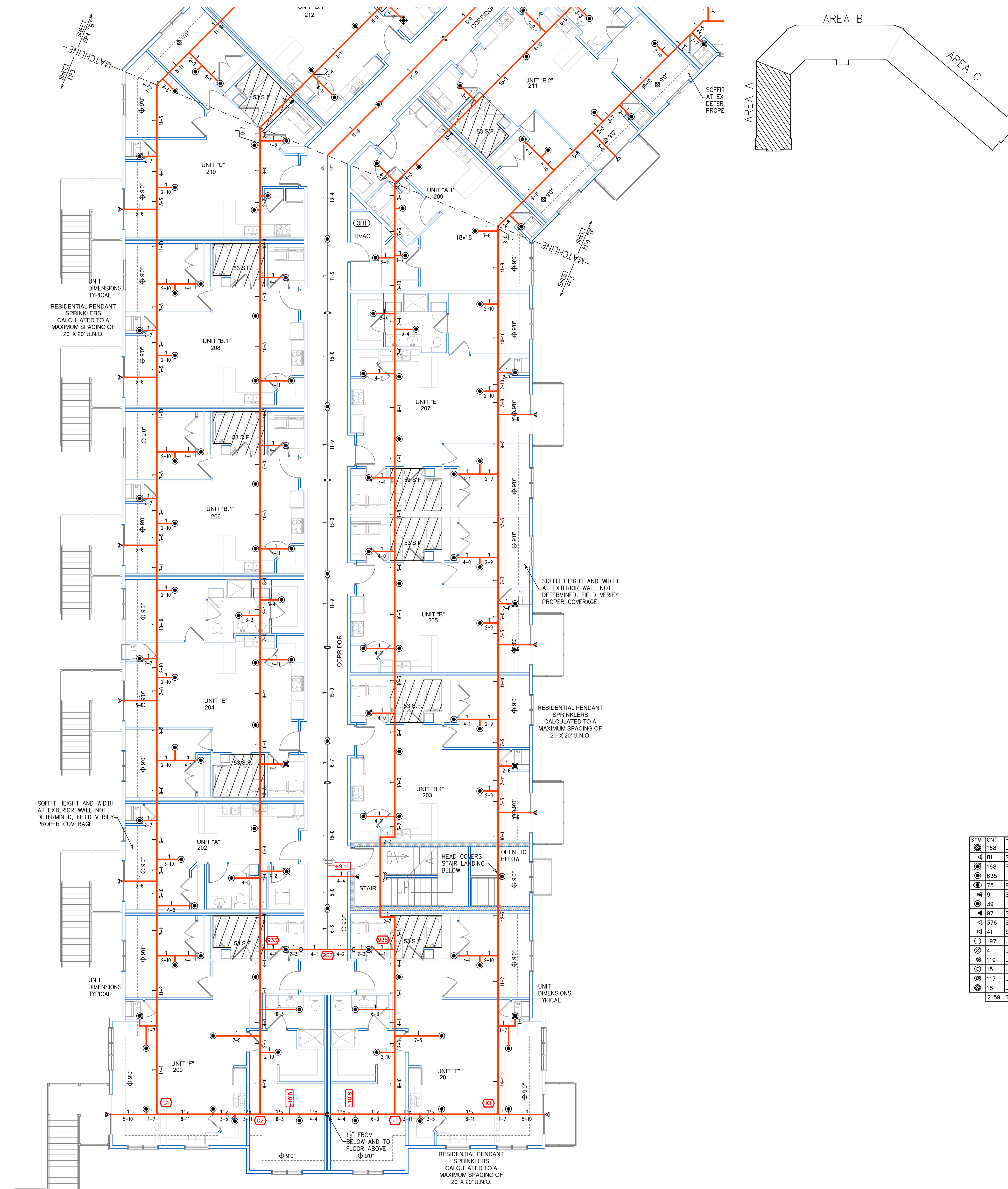


Drawing Title: **FIRE PROTECTION PLAN**

**CROSSROAD
POINTE**
MOUNDS VIEW, MN

Contract No. **C-19-117**
 Drawing Date: **06/25/2020**
 Scale: **1/8" = 1'-0"**
 Drawn By:
 Approval By: **STATE FIRE MARSHAL DIV.**
 SHEET NO. **2 of 10**





SPRINKLER LEGEND

SYM	QTY	POSITION	FINISH	TEMP	K	NPT	ISN	MFG.	MODEL #	ESCU/TYPE
⊗	168	UPR	BRASS	200	14.00	3/4"	TY8137	Tyco	EC-14	N/A
◀	81	SIDE	WHITE	200	5.60	1"	TY3255	Tyco	DS-1	SEMI-RECESSED
⊙	168	PEND	WHITE	200	5.60	1/2"	TY323	Tyco	TY-FRB	SEMI-RECESSED
⊙	635	PEND	WHITE	155	4.00	1/2"	TY2334	Tyco	LFI	SEMI-RECESSED
⊙	75	PEND	WHITE	155	5.60	1/2"	RAS814	RELIABL	L156	SEMI-RECESSED
◀	9	SIDE	CHROME	155	8.00	3/4"	WK630	WIKING	WKEC	SEMI-RECESSED
⊙	39	PEND	WHITE	155	5.60	1/2"	TY323	Tyco	TY-FRB	SEMI-RECESSED
◀	97	SIDE	WHITE	200	5.60	1/2"	TY3331	Tyco	TY-FRB	SEMI-RECESSED
◀	376	SIDE	WHITE	155	4.40	1/2"	TY2334	Tyco	LFI	SEMI-RECESSED
◀	41	SIDE	CHROME	200	5.00	1"	RA1664	RELIABL	D1560	SEMI-RECESSED
⊙	197	UPR	BRASS	200	5.60	1/2"	TY313	Tyco	TY-FRB	N/A
⊙	4	UPR	BRASS	200	5.60	1/2"	RA5626	Reliabl	AH	N/A
⊙	119	UPR	BRASS	200	5.60	1/2"	RA5695	Reliabl	GP56	N/A
⊙	15	UPR	BRASS	200	5.60	1/2"	TY313	Tyco	TY-FRB	N/A
⊙	117	UPR	BRASS	200	8.00	3/4"	RA5622	Reliabl	GD80-6	N/A
⊙	18	UPR	BRASS	200	5.60	1/2"	RA5626	Reliabl	AH	N/A
⊙	2159	TOTAL								

FIRST FLOOR AREA A
SCALE = 1/8" = 1'-0"

General Notes

- System installed per NFPA-13 (2010 Edition) and State Fire Marshal.
- All equipment for this system shall be U.L. listed.
- Minimum pipe size shall be 1" nominal pipe.
- All Sch-10 & Edge Flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-82).
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- All Pipe Locations are to be Field Measured Prior to Fabrication and Installation by Sprinkler Contractor.
- All Dimensions Shown are Center to Center.
- High Temperature Heads are to be Field Located Where Required.
- Provide one spare head cabinet w/ 6 hds. & one hd wrench.
- Hangers are to be U.L. Listed and P.M. Approved.
- Electrical wiring, alarm, detection and supervisory by owner.
- Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

APPROVAL STAMPS

Area for approval stamps, currently blank.



Drawing Title: **FIRE PROTECTION PLAN**

Contract No.: **C-19-117**

Drawing Date: **06/25/2020**

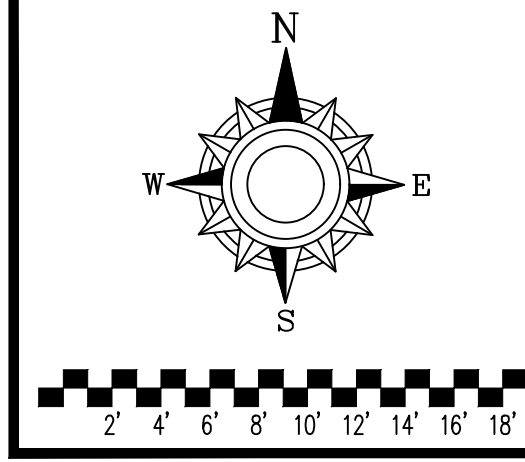
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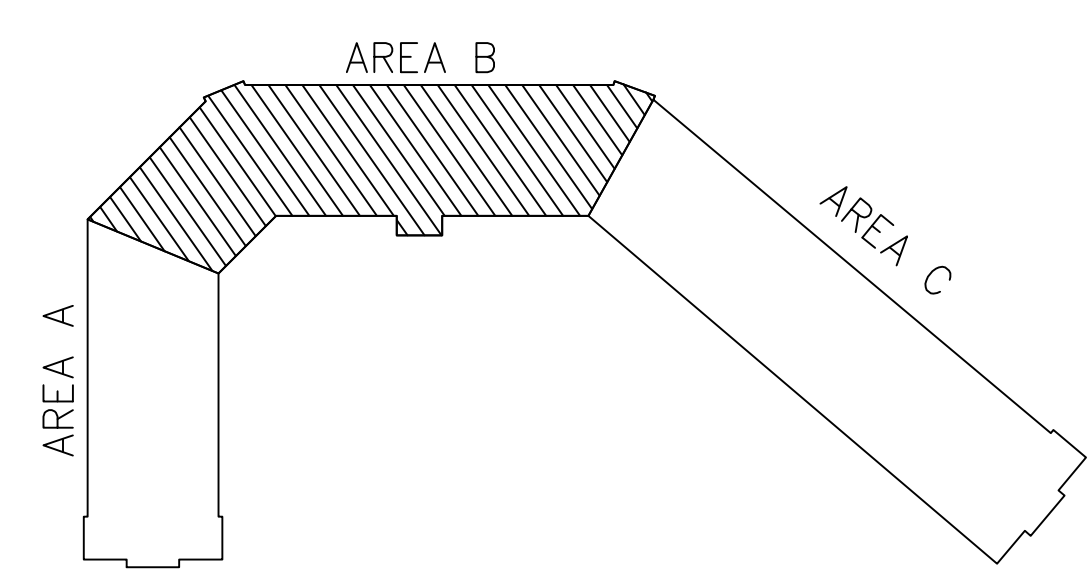
Drawn By:

Approval By: **STATE FIRE MARSHAL DIV.**

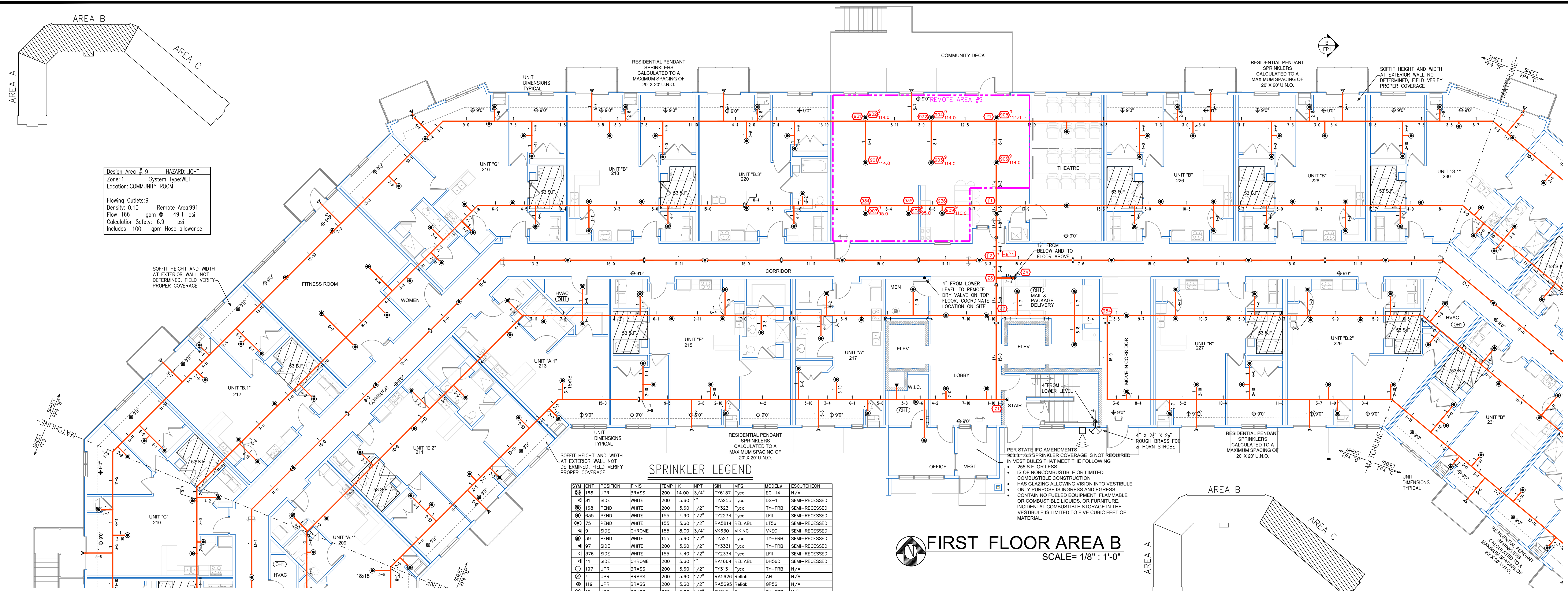
SHEET NO. **3 of 10**

CROSSROAD POINTE
MOUNDS VIEW, MN





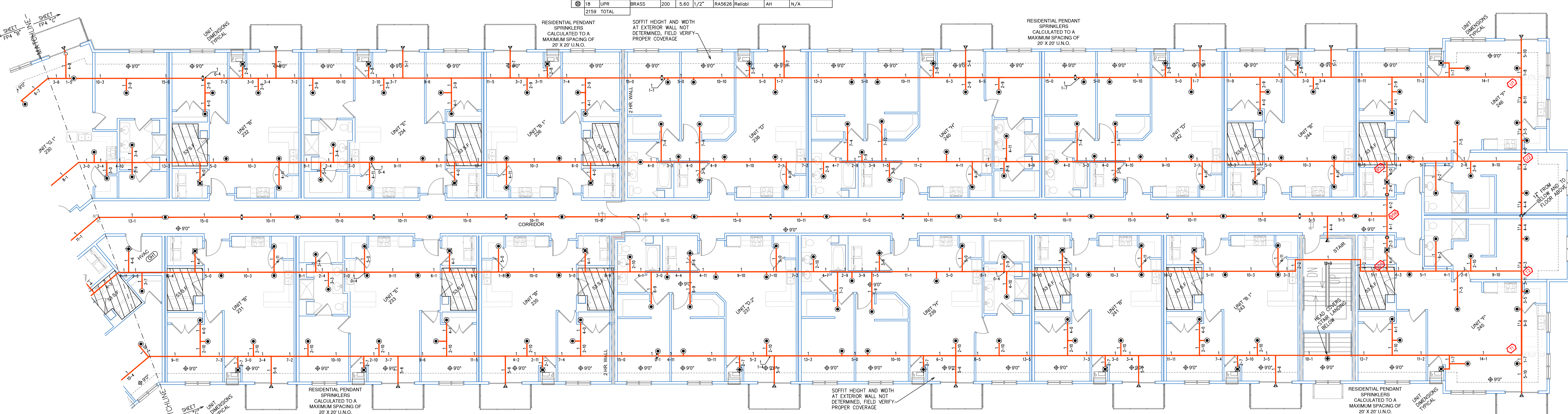
Design Area #: 9 HAZARD: LIGHT
 Zone: 1 System Type: WET
 Location: COMMUNITY ROOM
 Flowing Outlets: 9
 Density: 0.10 Remote Area: 991
 Flow: 166 gpm @ 49.1 psi
 Calculation Safety: 5.9 psi
 Includes: 100 gpm Hose Allowance



SPRINKLER LEGEND

SYM	CNT	POSITION	FINISH	TEMP	K	NPT	SN	MFG.	MODEL#	ESCUTCHEON
⊗	168	UPR	BRASS	200	14.00	3/4"	TY8137	Typco	EC-14	N/A
⊙	81	SIDE	WHITE	200	5.60	1"	TY3255	Typco	DS-1	SEMI-RECESSED
⊙	168	PEND	WHITE	200	5.60	1/2"	TY3233	Typco	TY-FRB	SEMI-RECESSED
⊙	635	PEND	WHITE	155	4.90	1/2"	TY2234	Typco	LFI	SEMI-RECESSED
⊙	75	PEND	WHITE	155	5.60	1/2"	RA5814	RELIAB	LT56	SEMI-RECESSED
⊙	9	SIDE	CHROME	155	8.00	3/4"	WK630	Viking	WKEC	SEMI-RECESSED
⊙	39	PEND	WHITE	155	5.60	1/2"	TY3233	Typco	TY-FRB	SEMI-RECESSED
⊙	37	SIDE	WHITE	200	5.60	1/2"	TY3334	Typco	TY-FRB	SEMI-RECESSED
⊙	376	SIDE	WHITE	155	4.40	1/2"	TY2334	Typco	LFI	SEMI-RECESSED
⊙	41	SIDE	CHROME	200	5.60	1"	RA1664	RELIAB	DH560	SEMI-RECESSED
⊙	197	UPR	BRASS	200	5.60	1/2"	TY313	Typco	TY-FRB	N/A
⊙	4	UPR	BRASS	200	5.60	1/2"	RA5626	Reliab	AH	N/A
⊙	119	UPR	BRASS	200	5.60	1/2"	RA5695	Reliab	GPS6	N/A
⊙	15	UPR	BRASS	200	5.60	1/2"	TY313	Typco	TY-FRB	N/A
⊙	117	UPR	BRASS	200	8.00	3/4"	RA5622	Reliab	DD80-6	N/A
⊙	18	UPR	BRASS	200	5.60	1/2"	RA5626	Reliab	AH	N/A
⊙	2159	TOTAL								

FIRST FLOOR AREA B
 SCALE = 1/8" = 1'-0"



FIRST FLOOR AREA C
 SCALE = 1/8" = 1'-0"

General Notes

- System installed per NFPA-13 (2010 Edition) and State Fire Marshal.
- All equipment for this system shall be U.L. listed.
- Minimum pipe size shall be 1" nominal pipe.
- All Sch-10 & Bddy Flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-82).
- No installation or fabrication to begin without approved shop dwgs.
- All Pipe Locations are to be Field Measured Prior to Fabrication and Installation by Sprinkler Contractor.
- All Dimensions Shown are Center to Center.
- High Temperature Heads are to be Field Located Where Required.
- Provide one spare head cabinet w/ 6 hds. & one hd wrench.
- Hangers are to be U.L. Listed and P.M. Approved.
- Electrical wiring, alarm, detection and supervisory by owner.
- Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

APPROVAL STAMPS

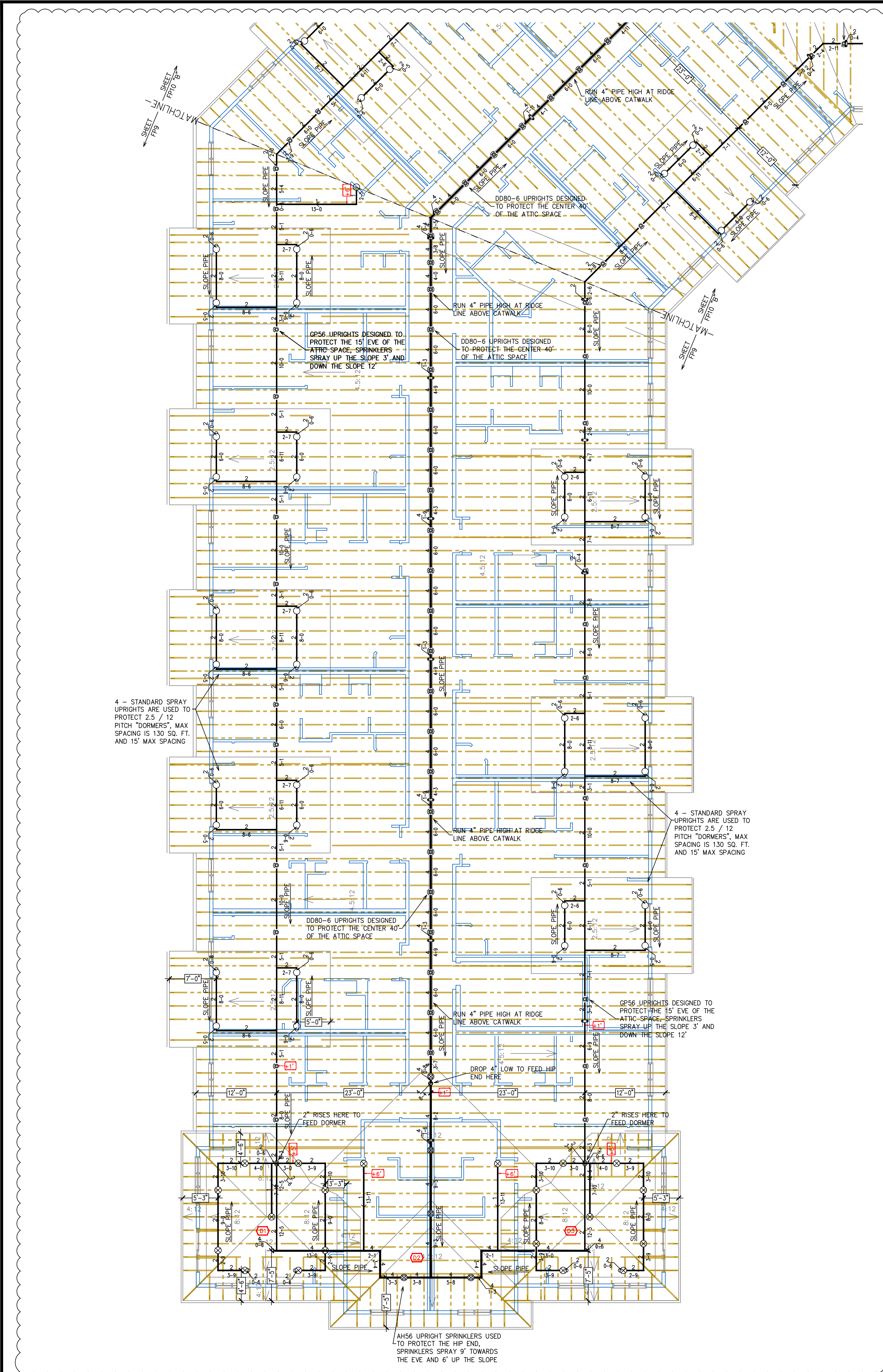
Approval stamps area for professional signatures and seals, currently blank.

DRIVING FIRE PROTECTION PLAN

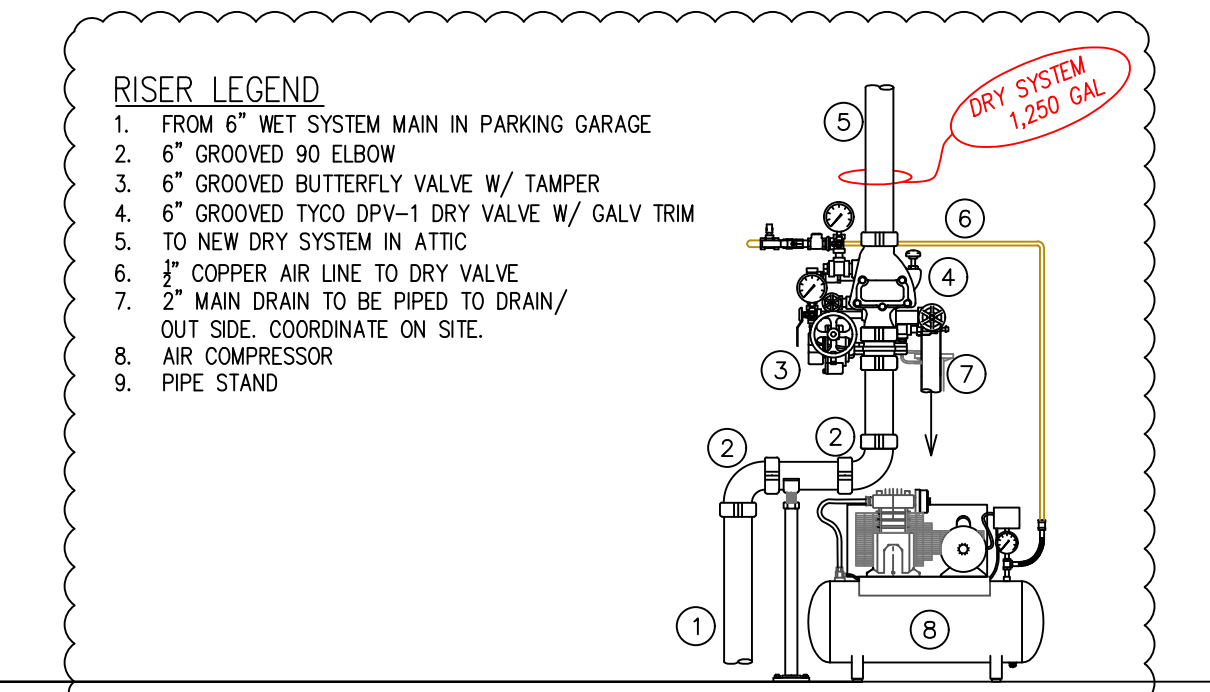
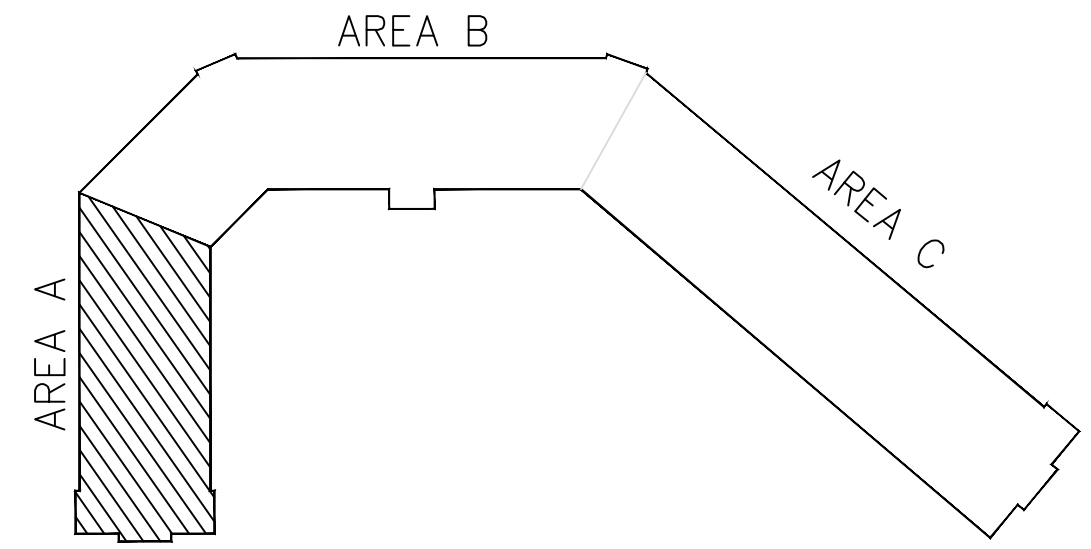


**CROSSROAD
 POINTE
 MOUNDS VIEW, MN**

Contract No: **C-19-117**
 Drawing Date: **06/25/2020**
 Scale: **1/8" = 1'-0"**
 Drawn By:
 Approval By: **STATE FIRE MARSHAL DIV.**
 SHEET NO. **4 of 10**



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



-A- REMOTE DRY VALVE DETAIL
SCALE: 1/2" = 1'-0"

SPRINKLER LEGEND

SYM	QTY	POSITION	FINISH	TEMP	K	INPT	SIN	MFG.	MODEL#	ESCUOTCHCON
⊗	168	UPR	BRASS	200	14.00	3/4"	TY6137	Tyco	EC-14	N/A
◀	81	SIDE	WHITE	200	5.60	1"	TY3255	Tyco	DS-1	SEMI-RECESSED
⊗	168	PEND	WHITE	200	5.60	1/2"	TY3231	Tyco	TY-FRB	SEMI-RECESSED
⊗	635	PEND	WHITE	155	4.90	1/2"	TY2234	Tyco	LFI	SEMI-RECESSED
⊗	75	PEND	WHITE	155	5.60	1/2"	RA5814	RELIABL	LT56	SEMI-RECESSED
◀	9	SIDE	CHROME	155	8.00	3/4"	VK630	Viking	VKEC	SEMI-RECESSED
⊗	39	PEND	WHITE	155	5.60	1/2"	TY3231	Tyco	TY-FRB	SEMI-RECESSED
◀	97	SIDE	WHITE	200	5.60	1/2"	TY3331	Tyco	TY-FRB	SEMI-RECESSED
◀	376	SIDE	WHITE	155	4.40	1/2"	TY2334	Tyco	LFI	SEMI-RECESSED
◀	41	SIDE	CHROME	200	5.60	1"	RA1664	RELIABL	DH56D	SEMI-RECESSED
⊗	161	UPR	BRASS	200	5.60	1/2"	TY313	Tyco	TY-FRB	N/A
⊗	40	UPR	BRASS	200	5.60	1/2"	RA5626	Reliabl	AH	N/A
⊗	108	UPR	BRASS	212	5.60	1/2"	RA5626	Reliabl	AH56	N/A
⊗	15	UPR	BRASS	200	5.60	1/2"	TY313	Tyco	TY-FRB	N/A
⊗	117	UPR	BRASS	200	8.00	3/4"	RA5622	Reliabl	DD80-6	N/A
⊗	10	UPR	BRASS	200	5.60	1/2"	RA5626	Reliabl	AH	N/A
	2140	TOTAL								

General Notes

1. System installed per NFPA-13 (2010 Edition) and State Fire Marshal.
2. All equipment for this system shall be U.L. listed.
3. Minimum pipe size shall be 1 nominal pipe.
4. All Sch-10 & Boley Flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-82).
5. No installation or fabrication to begin without approved shop dwgs.
6. All Pipe Locations are to be Field Measured Prior to Fabrication and Installation by Sprinkler Contractor.
7. All Dimensions Shown are Center to Center.
8. High Temperature Heads are to be Field Located Where Required.
9. Provide one spare head cabinet w/ 6 hds. & one hd wrench.
10. Hangers are to be U.L. Listed and F.M. Approved.
11. Electrical wiring, alarm, detection and supervisory by owner.
12. Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.

APPROVAL STAMPS

DRIVEN
FIRE CONSULTANTS

910 N. SYCAMORE AVENUE; SIOUX FALLS, SD 57110 PHONE: (605)-444-9290

Drawing Title: **FIRE PROTECTION PLAN**

Contract No.
C-19-117

Drawing Date: **06/25/2020**

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

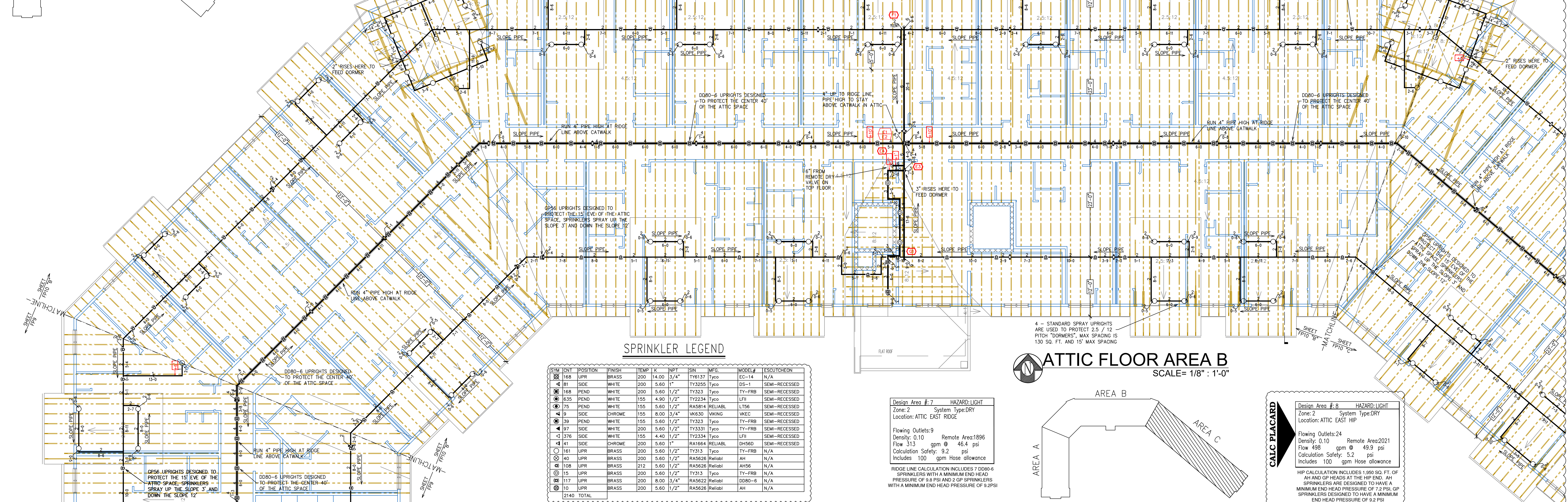
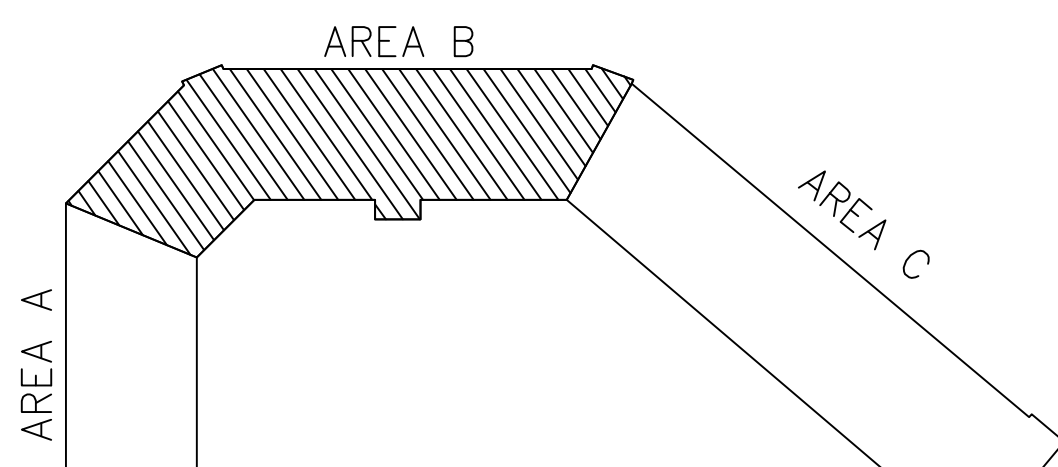
Drawn By:

Approval By: **STATE FIRE MARSHAL DIV.**

SHEET NO. **9 of 10**

CROSSROAD
POINTE

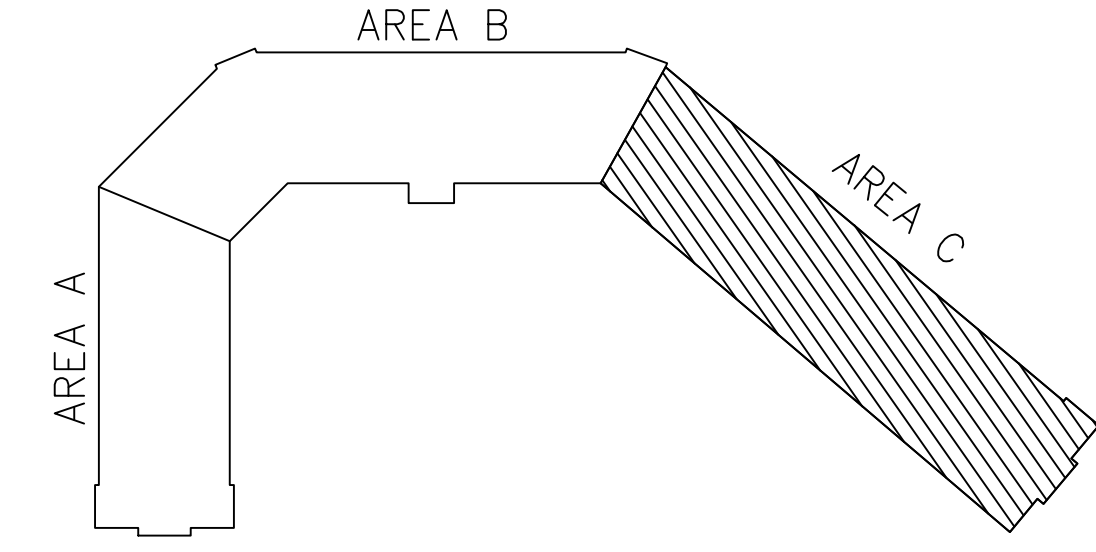
MOUNDS VIEW, MN



SPRINKLER LEGEND

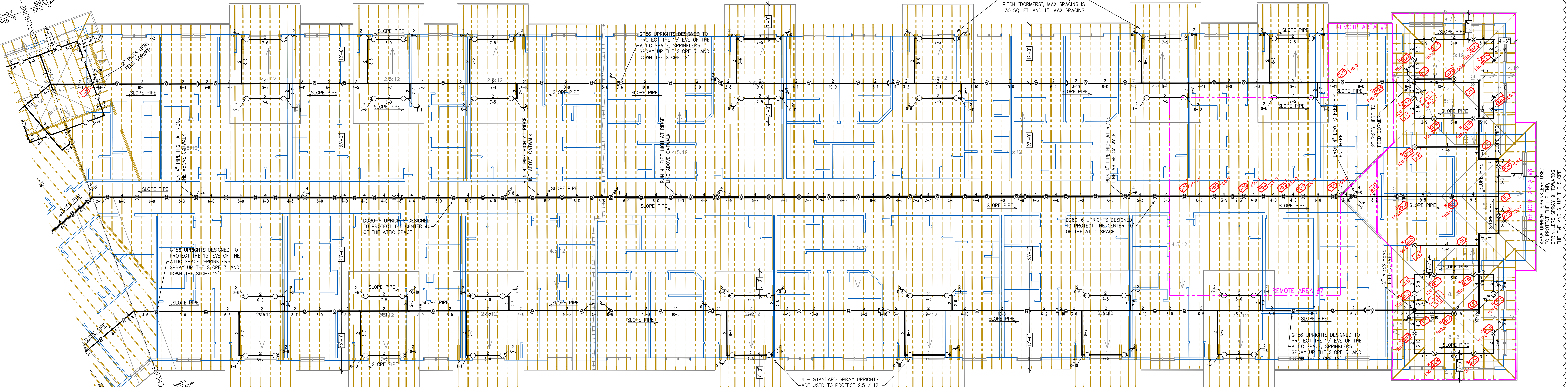
SYM	QTY	POSITION	FINISH	TEMP	K	RPT	ISM	MPG	MODEL#	ESCUTCHION
⊠	168	UPR	BRASS	200	14.00	3/4"	TY8137	Tyco	EC-14	N/A
◀	81	SIDE	WHITE	200	5.60	1"	TY3255	Tyco	DS-1	SEMI-RECESSED
⊙	168	PEND	WHITE	200	5.60	1/2"	TY3233	Tyco	TY-FRB	SEMI-RECESSED
⊙	636	PEND	WHITE	155	4.40	1/2"	TY2334	Tyco	LFI	SEMI-RECESSED
⊙	75	PEND	WHITE	155	6.00	1/2"	RAS614	RELIABL	LTS6	SEMI-RECESSED
◀	9	SIDE	CHROME	155	8.00	3/4"	WK630	WIKING	WKEC	SEMI-RECESSED
⊙	39	PEND	WHITE	155	5.60	1/2"	TY3233	Tyco	TY-FRB	SEMI-RECESSED
◀	97	SIDE	WHITE	200	5.60	1/2"	TY3331	Tyco	TY-FRB	SEMI-RECESSED
◀	376	SIDE	WHITE	155	4.40	1/2"	TY2334	Tyco	LFI	SEMI-RECESSED
◀	141	SIDE	CHROME	200	5.60	1"	RK1664	RELIABL	DW680	SEMI-RECESSED
⊙	161	UPR	BRASS	200	5.60	1/2"	TY313	Tyco	TY-FRB	N/A
⊙	40	UPR	BRASS	200	5.60	1/2"	RAS626	Reliabl	AH	N/A
⊙	108	UPR	BRASS	212	5.60	1/2"	RAS626	Reliabl	AH56	N/A
⊙	15	UPR	BRASS	200	5.60	1/2"	TY313	Tyco	TY-FRB	N/A
⊙	117	UPR	BRASS	200	8.00	3/4"	RAS622	Reliabl	DD80-6	N/A
⊙	10	UPR	BRASS	200	5.60	1/2"	RAS626	Reliabl	AH	N/A
⊙	2140	TOTAL	BRASS	200	5.60	1/2"	RAS626	Reliabl	AH	N/A

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



Design Area # 7 HAZARD: LIGHT
Zone: 2 System Type: DRY
Location: ATTIC EAST RIDGE
Flowing Outlets: 9
Density: 0.10 Remote Area 1896
Flow 313 gpm @ 46.4 psi
Calculation Safety: 9.2 psi
Includes 100 gpm hose allowance
RIDGE LINE CALCULATION INCLUDES 7 DD80-6 SPRINKLERS WITH A MINIMUM END HEAD PRESSURE OF 9.9 PSI AND 2 GP SPRINKLERS WITH A MINIMUM END HEAD PRESSURE OF 9.2 PSI

Design Area # 8 HAZARD: LIGHT
Zone: 2 System Type: DRY
Location: ATTIC EAST HIP
Flowing Outlets: 24
Density: 0.10 Remote Area 2021
Flow 498 gpm @ 49.9 psi
Calculation Safety: 5.2 psi
Includes 100 gpm hose allowance
HIP CALCULATION INCLUDES 1,960 SQ. FT. OF AH AND GP HEADS AT THE HIP END. AH SPRINKLERS ARE DESIGNED TO HAVE A MINIMUM END HEAD PRESSURE OF 7.2 PSI. GP SPRINKLERS DESIGNED TO HAVE A MINIMUM END HEAD PRESSURE OF 9.2 PSI



ATTIC FLOOR AREA C
SCALE= 1/8" = 1'-0"

APPROVAL STAMPS

General Notes

- System installed per NFPA-13 (2010 Edition) and State Fire Marshal.
- All equipment for this system shall be U.L. listed.
- Minimum pipe size shall be 1" nominal pipe.
- All Sch-40 & Boley Flow piping has welded outlets & grooved fittings all welding per NFPA-13 (3-82).
- No installation or fabrication to begin without approved shop dwgs.
- All Pipe Locations are to be Field Measured Prior to Fabrication and Installation by Sprinkler Contractor.
- All Dimensions Shown are Center to Center.
- High Temperature Heads are to be Field Located Where Required.
- Provide one spare head cabinet w/ 6 hds. & one hd wrench.
- Hangers are to be U.L. Listed and P.M. Approved.
- Electrical wiring, alarm, detection and supervisory by owner.
- Owner's responsibility to provide adequate heating to prevent wet system piping from freezing.



**CROSSROAD
POINTE**
MOUNDS VIEW, MN

Contract No. **C-19-117**
Drawing Date: **06/25/2020**
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Drawing By:
Approval By: **STATE FIRE MARSHAL DIV.**
SHEET NO. **10 of 10**