

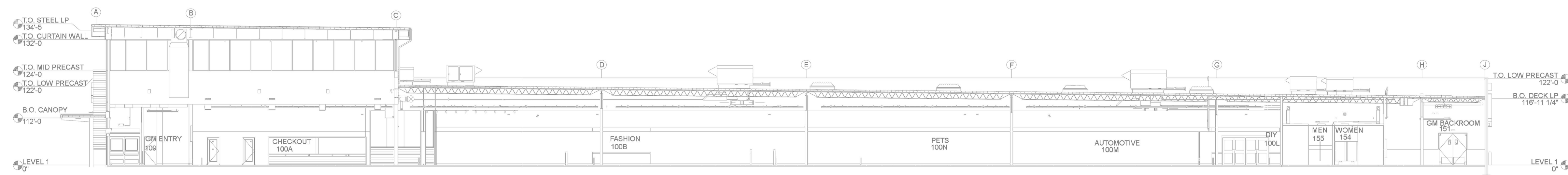
**GENERAL INFORMATION**

- 1) INDIANA BUILDING CODE (2014)  
 1.1) OCCUPANCY: MERCANTILE (M); MODERATE-HAZARD STORAGE (S-1); BUSINESS (B); ASSEMBLY (A2); ASSEMBLY (A3)  
 1.2) TYPE OF CONSTRUCTION: II-B (NON-COMBUSTIBLE CONSTRUCTION)  
 1.3) SPRINKLERED AREAS (APPROXIMATE - SEE ARCHITECTURAL PLANS FOR ACTUAL)  
 ZONE 1 WET = 46,890 S.F.  
 ZONE 2 WET = 40,320 S.F.  
 ZONE 3 WET = 36,250 S.F.  
 ZONE 4 WET = 35,870 S.F.  
 ZONE 5 DRY = 3,230 S.F.  
 TOTAL = 162,360 S.F.
- 1.4) INSTALLATION STANDARDS:  
 SPRINKLER SYSTEM DESIGNED AND INSTALLED PER NFPA-13 & NFPA-20(2010)
- 2) SPRINKLER PIPE TYPES:  
 -WET-  
 2.1) 1" ARM-OVERS TO BE BLK MEGA THREAD PIPING WITH THREADED FITTINGS  
 2.2) 1-1/4" THROUGH 6" MAIN & BRANCH LINES TO BE BLK MEGA FLOW PIPING WITH GROOVED FITTINGS  
 2.3) MAINS & BRANCH LINES TO BE ROLL-GROOVED BLK SCHEDULE 10  
 -DRY-  
 2.5) 1" ARM-OVERS TO BE THREADED GALV SCHEDULE 40 WITH GALV THREADED FITTINGS  
 2.6) 1-1/4" THROUGH 6" MAIN & BRANCH LINES TO BE GROOVED GALV PIPING WITH GALV GROOVED FITTINGS  
 2.6) MAINS & BRANCH LINES TO BE ROLL-GROOVED BLK SCHEDULE 10
- 3) DESIGN CRITERIA  
 3.1) AREAS NOT MARKED BY A HAZARD TAG WILL BE DESIGNED AS LIGHT HAZARD  
 3.2) LIGHT HAZARD AREAS DESIGNED TO DELIVER 0.10 GPM/S.F. OVER THE MOST DEMANDING 1500 S.F.  
 3.3) ORDINARY HAZARD GROUP I AREAS DESIGNED TO DELIVER 0.15 GPM/S.F. OVER THE MOST DEMANDING 1500 S.F.  
 3.4) ORDINARY HAZARD GROUP II AREAS DESIGNED TO DELIVER 0.20 GPM/S.F. OVER THE MOST DEMANDING 1500 S.F.  
 3.5) STOCK ROOMS, STORAGE AREAS AND MECHANICAL ROOMS DESIGNED TO AN OWNER PROVIDED DESIGN DENSITY OF 0.80 GPM/S.F. OVER THE MOST DEMANDING 2000 S.F.  
 3.6) GARDEN CENTER DESIGNED TO AN OWNER PROVIDED DESIGN DENSITY OF 0.19 GPM/S.F. OVER THE MOST DEMANDING 3250 S.F.  
 3.2) REMOTE AREA REDUCTIONS HAVE BEEN TAKEN WHERE APPLICABLE PER NFPA 13 SEC. 11.2.3.2.3

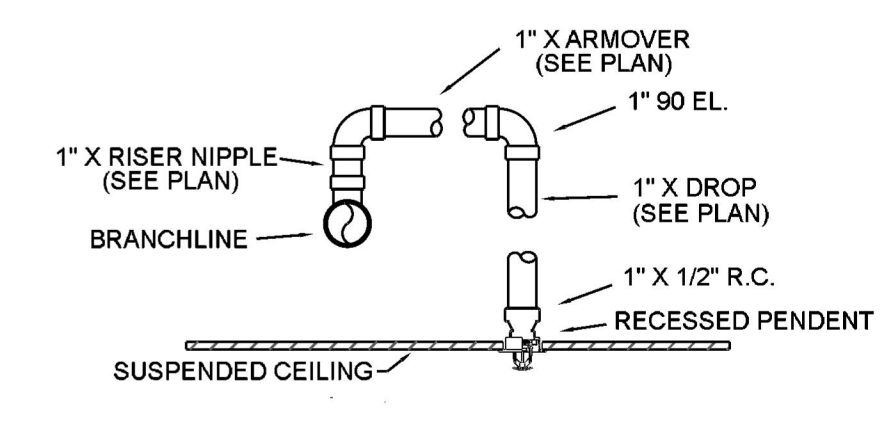
- 4) NOTES:  
 4.1) ALL MATERIAL TO BE NEW AND MEET U.L. STANDARDS  
 4.2) HANGERS TO BE INSTALLED IN ACCORDANCE WITH NFPA 13 - SEE PLAN FOR HANGING REQUIREMENTS  
 DRY SYSTEM PIPE SLOPE INSTALLATION:  
 SPRINKLER MAINS TO BE 1/4" PER 10'-0"  
 SPRINKLER BRANCH LINES TO BE 1/2" PER 10'-0"  
 DRY SYSTEM CAPACITY  
 110 GALLONS
- 5) SYMBOLS USED ON DRAWINGS:

- ★ 0'-0" FF ◊ PIPE ELEVATION A.F.F.  
 ★ 0'-0" TS ◊ PIPE ELEVATION T.O.S.
- OHM ROOM HAZARD CLASSIFICATION (ALL ROOMS ARE CONSIDERED LIGHT HAZARD UNLESS NOTED)  
 XX HYDRAULIC CALCULATION JUNCTION POINT  
 9'-0" CEILING HEIGHT  
 WET BLACK STEEL PIPE  
 DRY GALVANIZED STEEL PIPE

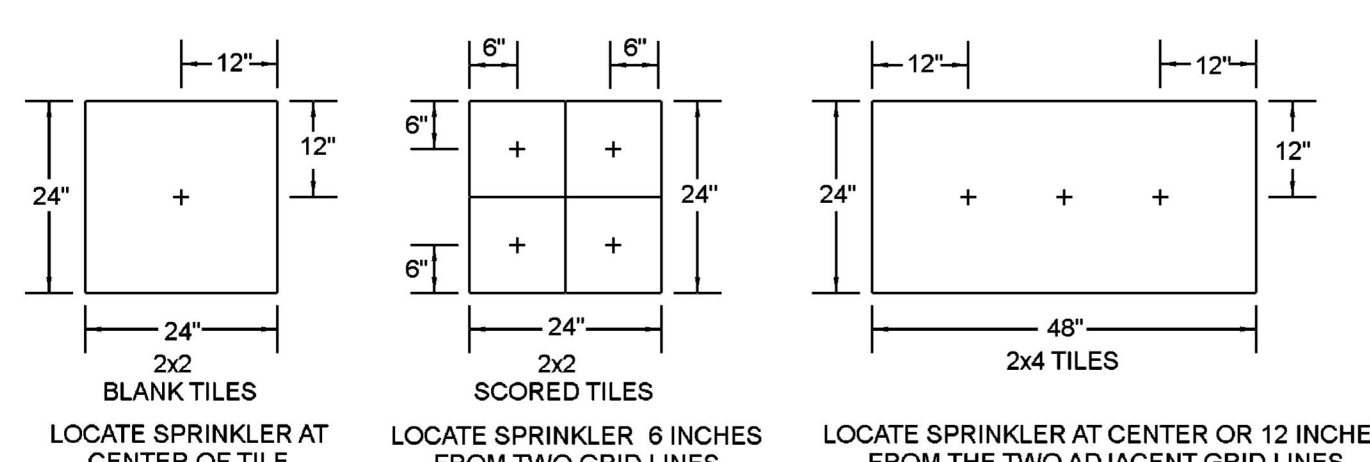
- 6) SCOPE OF WORK:  
 6.1) CONSTRUCT A FIRE PUMP HOUSE PER NFPA 20 AS INDICATED ON THE PLANS PROVIDED.  
 6.2) INSTALL WATER BASED PROTECTION THROUGHOUT THE FACILITY AS INDICATED ON THE PLANS PROVIDED.  
 6.2) ALL AREAS OF THE BUILDING TO BE INSTALLED AND COVERED IN ACCORDANCE WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PER NFPA 13



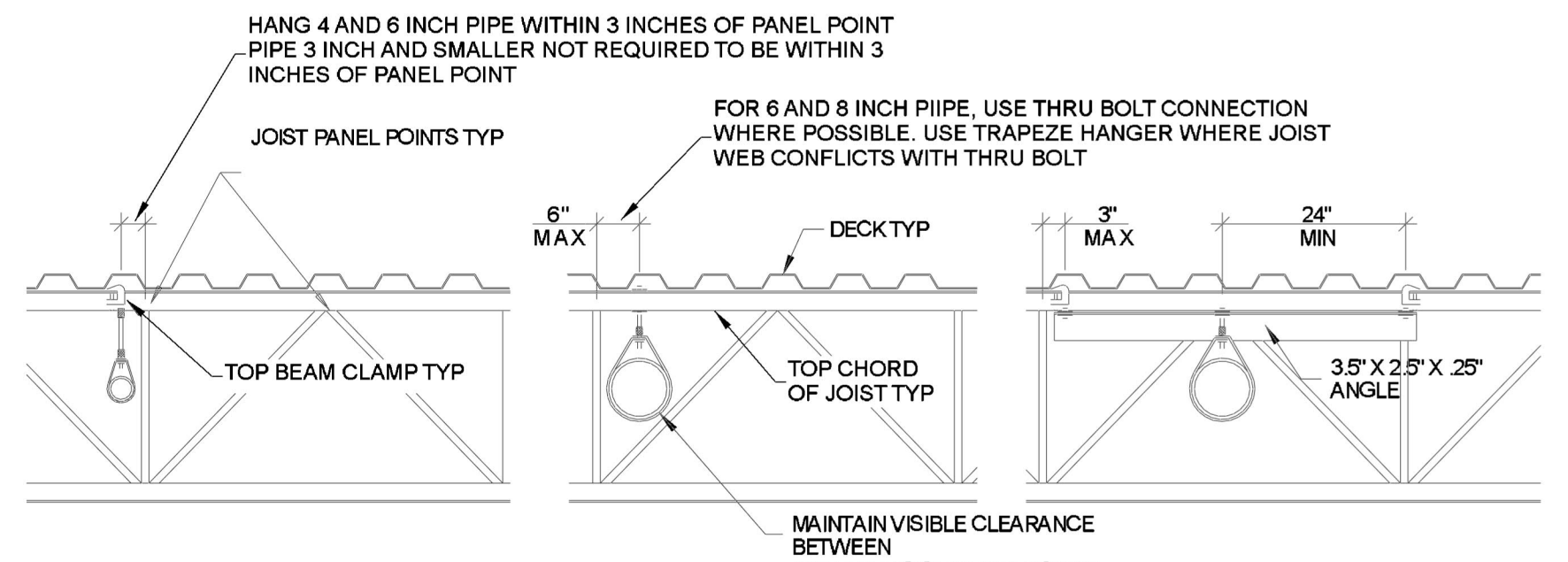
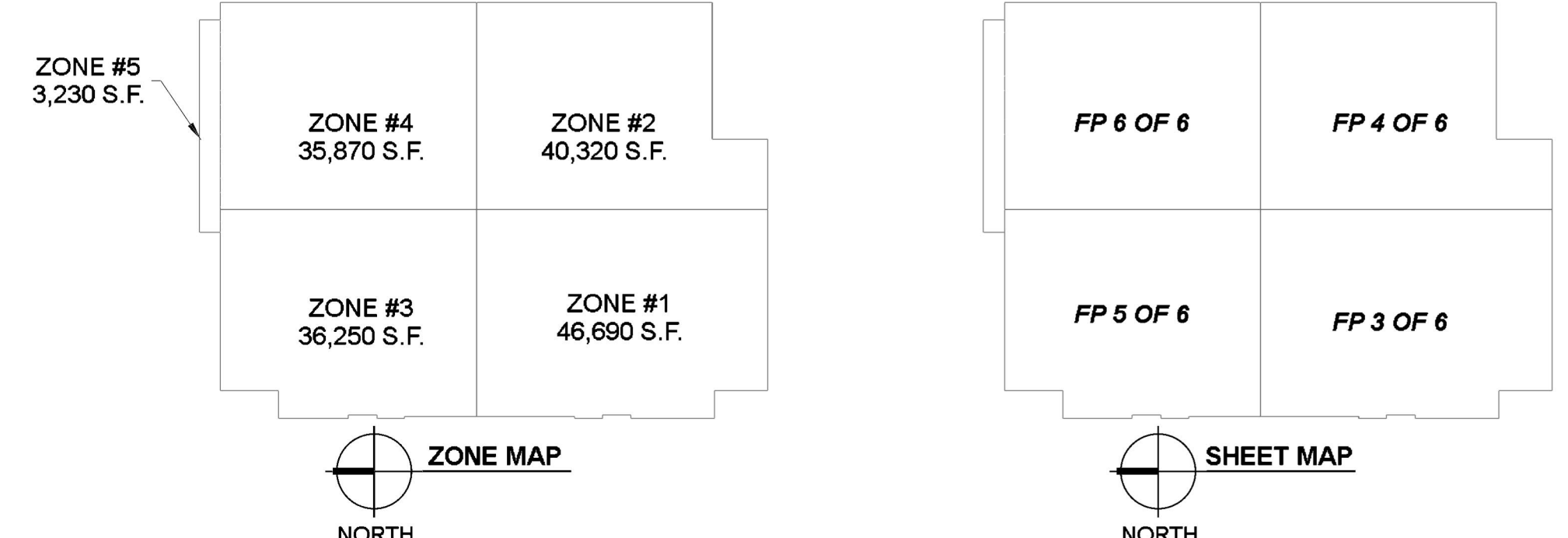
**A BUILDING SECTION**  
 SCALE: 1/16" = 1'-0"



**RETURN BEND ASSEMBLY**



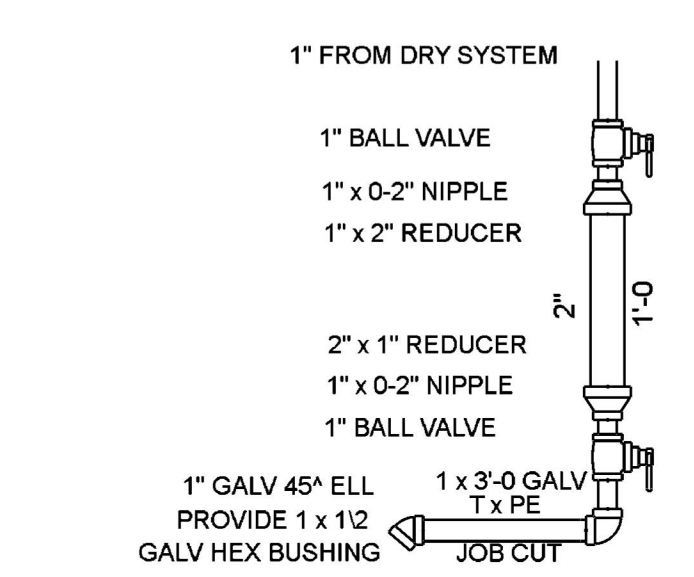
**SPRINKLER PLACEMENT DETAILS**



MAXIMUM HANGER SPACING FOR PIPING PERPENDICULAR TO JOISTS			
BEAM CLAMP NOT TRAPEZED	BEAM CLAMP NOT TRAPEZED (ROOF FRAMING PLAN SHADED AREA)	THRU-BOLT NOT TRAPEZED	BEAM CLAMP TRAPEZED
2" & 2-1/2" PIPE EVERY 10'-0" EVERY OTHER JOIST	2" & 2-1/2" PIPE EVERY 10'-0" EVERY OTHER JOIST	2" & 2-1/2" PIPE EVERY 10'-0" EVERY OTHER JOIST	2" & 2-1/2" PIPE NOT NECESSARY
3" & 4" PIPE EVERY 12'-0" EVERY JOIST	3" & 4" PIPE EVERY 12'-0" EVERY JOIST	3" & 4" PIPE EVERY 12'-0" EVERY JOIST	3" & 4" PIPE NOT NECESSARY
6" PIPE EVERY 6'-0" EVERY JOIST	6" PIPE EVERY 6'-0" EVERY JOIST	6" PIPE EVERY 12'-0" EVERY JOIST	6" PIPE NOT NECESSARY
8" PIPE NOT ALLOWED	8" PIPE NOT ALLOWED	8" PIPE EVERY 6'-0" EVERY JOIST	8" PIPE EVERY 6'-0" EVERY JOIST

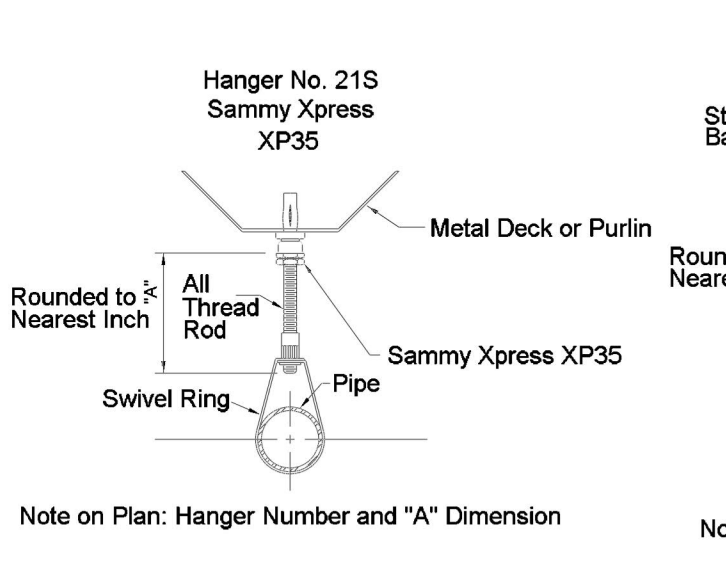
\*\*\* NO TRAPEZE HANGERS ANTICIPATED TO BE INSTALLED ON THIS PROJECT. PIPE SIZES SHOWN IN THIS SUBMITTAL DO NOT REQUIRE TRAPEZE HANGERS PER HANGER SCHEDULE PROVIDED BY DESIGN TEAM.

MAXIMUM HANGER SPACING FOR PIPES PARALLEL TO JOISTS			
2" & 2-1/2" PIPE EVERY 12'-0" NOT TRAPEZED BEAM CLAMP	3" & 4" PIPE EVERY 12'-0" NOT TRAPEZED BEAM CLAMP	6" PIPE EVERY 6'-0" NOT TRAPEZED BEAM CLAMP	8" PIPE EVERY 12'-0" TRAPEZED THRU BOLT
6" PIPE EVERY 12'-0" TRAPEZED THRU BOLT	6" PIPE EVERY 12'-0" TRAPEZED THRU BOLT	6" PIPE EVERY 12'-0" TRAPEZED THRU BOLT	6" PIPE EVERY 12'-0" TRAPEZED THRU BOLT

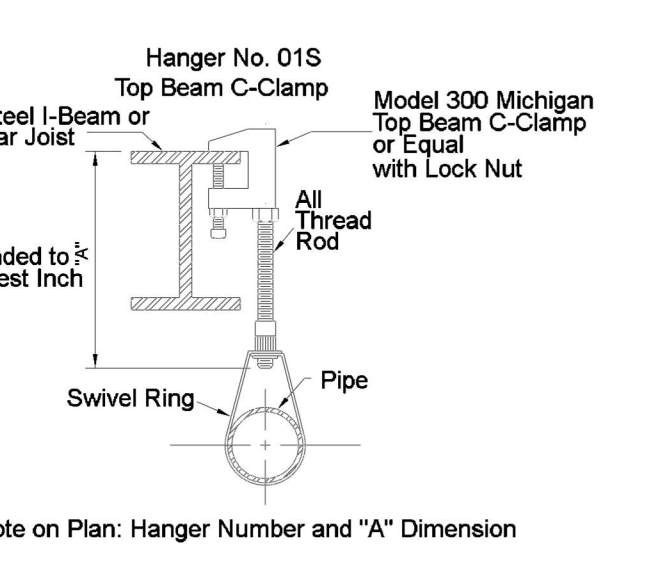


**DRUM DRIP DETAIL**

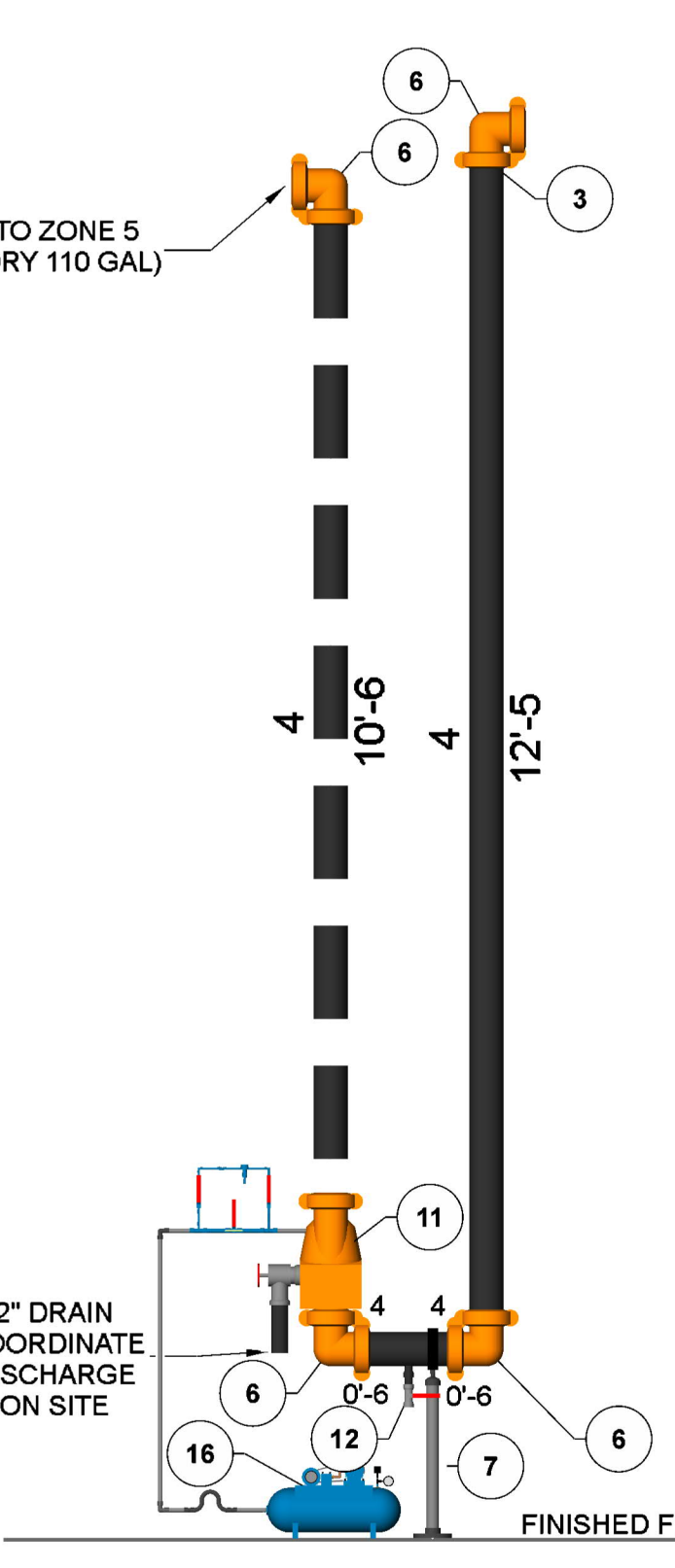
DRY SYSTEM NOT TO SCALE



Note on Plan: Hanger Number and "A" Dimension



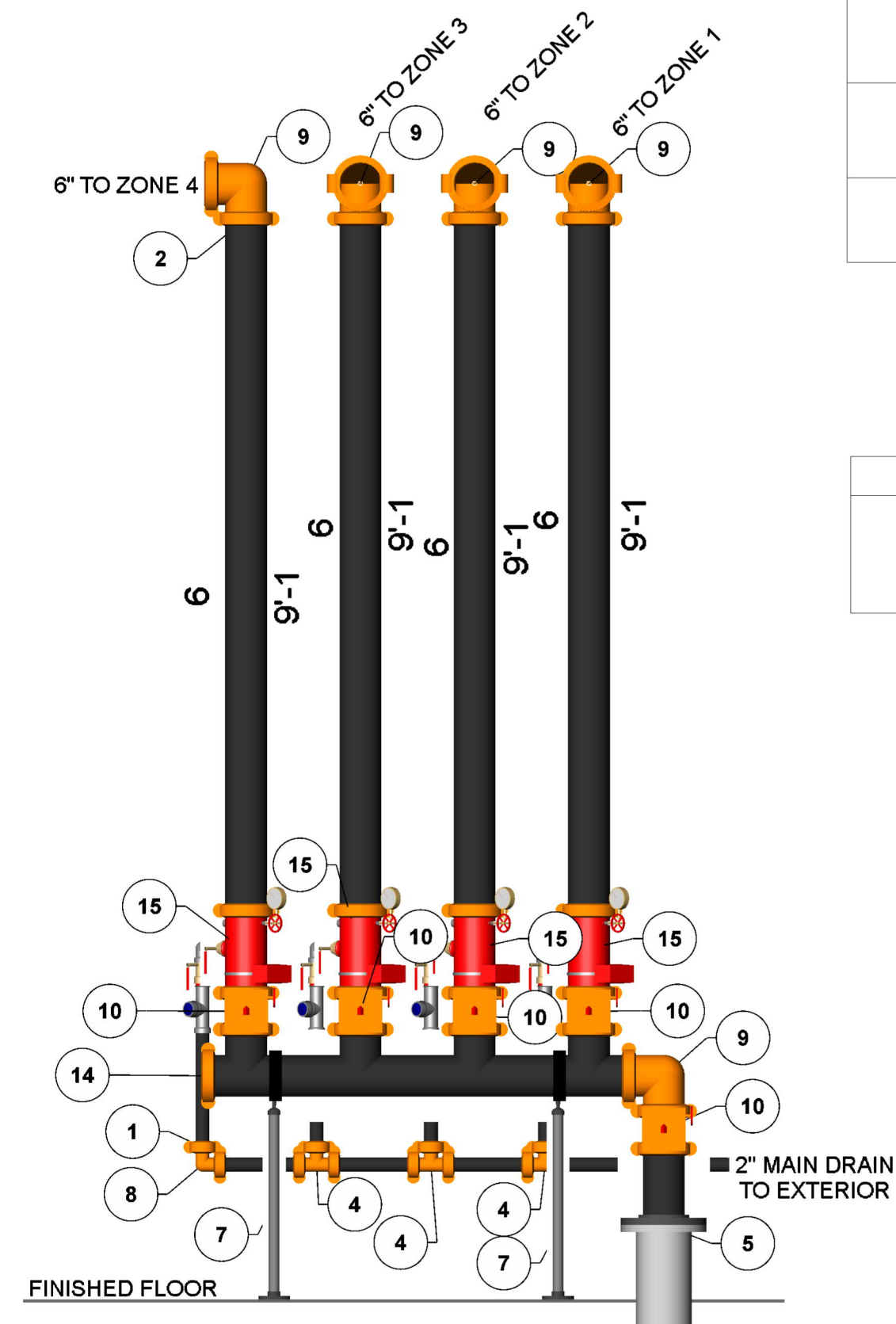
Note on Plan: Hanger Number and "A" Dimension



**DRY VALVE DETAIL**

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

Parts Legend			
Key Note	Size	Description	Quantity
1	2	Victaulic Installation Ready Coupling 009N Org	8
2	6	Victaulic Installation Ready Coupling 009N Org	19
3	4	Victaulic Installation Ready Coupling 009N Org	13
4	2	Victaulic FireLock Tee #002 Org	2
5	8	Uni-Flange	1
6	4	Victaulic FireLock 90° Elbow #001 Org	1
7	8	Pipe Stand	1
8	2	Victaulic FireLock 90° Elbow #001 Org	1
9	6	Victaulic FireLock 90° Elbow #001 Org	4
10	6	Valve, G-G Butterfly	4
11	4	Valve, G-G Dry Pipe	1
12	1	Valve, T-T Ball	1
14	6	Victaulic FireLock Cap #006 Org	1
15	6	Grv Riser Manifold	3
16	N/A	Air Compressor	1



**RISER DETAIL**

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

THIS SPRINKLER WORK IS DESIGNED IN ACCORDANCE WITH NFPA PAMPHLET 13 2010 EDITION.  
 ALARM SYSTEM BY OWNER. TO BE CENTRAL STATION PER NFPA, STATE AND LOCAL REQUIREMENTS.

SPRINKLER LEGEND TOTAL = 867											
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
⊗	Tyco	TY6137	EC-14	30	14	Upright	1/2	Standard	Brass	200°F	SPRIG
⊗	Tyco	TY6137	EC-14	384	14	Upright	1/2	Standard	Brass	200°F	N/A
⊗	Tyco	TY9128	EC-25	216	25.2	Upright	1	Standard	Brass	212°F	N/A
⊗	Tyco	TY1311	TY-FRB	3	5.8	Upright	1/2	Quick	Natural Brass	200°F	SPRIG
⊗	Tyco	TY323	TY-FRB	126	5.8	Pendent	1/2	Quick	Chrome	200°F	SEMI-RECESSED w/ DSB-2
⊗	Tyco	TY3235	DS-1	63	5.8	Pendent	1	Quick	Chrome	200°F	SEMI-RECESSED w/ DSB-2
⊗	Tyco	TY1311	TY-FRB	4	5.8	Upright	1/2	Quick	Natural Brass	200°F	N/A
⊗	Tyco	TY3331	TY-FRB	7	5.8	Sidewall	1/2	Quick	Natural Brass	200°F	N/A
⊗	Tyco	TY4111	TY-L	34	8	Upright	1/2	Standard	Natural Brass	260°F	N/A

CONTRACTOR:  
 ADDRESS:  
 REVISION  
 DATE DESCRIPTION BY  
 1 CHANGE 4" MAIN TO 6" MAIN ADK

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.



**SITE PLAN**

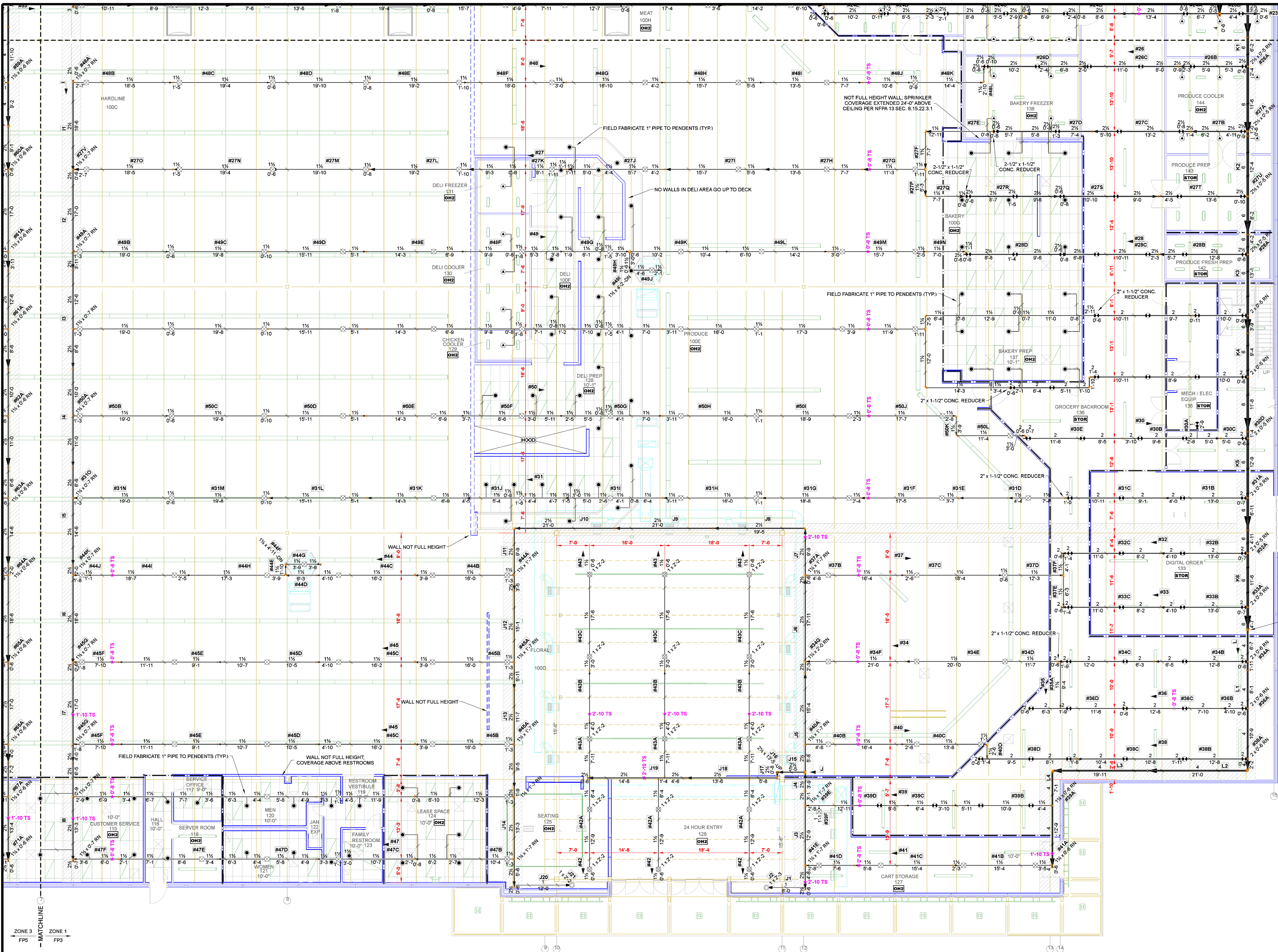
SCALE: 1" = 50'

**MEIJER STORE #328**  
 2500 CASSOPOLIS ST. ELKHART IN. 46514  
 NOTES & DETAILS

**NORTH**

DESIGNER ADK  
 SCALE SEE SHEET  
 CHECK BY JVG  
 FILE NUMBER  
 APPROVAL STATE & LOCAL  
 DATE 08/23/22  
 DRAWING NO. FP 1 OF 6





GROCERY BACKROOM	
Remote Area 4	
OCCUPANCY CLASSIFICATION	STORAGE
DENSITY (gpm/ft <sup>2</sup> )	0.60 for 2000ft <sup>2</sup> (Actual 2045ft <sup>2</sup> )
TOTAL HOSE STREAMS	500.00
TOTAL HEADS FLOWING	12
K-FACTOR	25.2
TOTAL WATER REQUIRED	2098.88
TOTAL PRESSURE REQUIRED	16.409
BASE OF RISER (gpm)	1596.88
BASE OF RISER (psi)	78.544
SAFETY MARGIN (psi)	+28.241 (63.2%)

DESIGN CRITERIA PROVIDED BY DESIGN TEAM: 0.20 GPM/S.F. OVER 1,500 S.F. WITH TYCO EC-14 UPRIGHT

OVERHEAD COVERAGE	
Remote Area 3	
OCCUPANCY CLASSIFICATION	Ordinary Group II
DENSITY (gpm/ft <sup>2</sup> )	0.20 for 1500ft <sup>2</sup> (Actual 1789ft <sup>2</sup> )
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	6
K-FACTOR	14
TOTAL WATER REQUIRED	739.64
TOTAL PRESSURE REQUIRED	-13.773
BASE OF RISER (gpm)	489.64
BASE OF RISER (psi)	82.393
SAFETY MARGIN (psi)	+63.951 (127.5%)

DESIGN CRITERIA PROVIDED BY DESIGN TEAM: 0.20 GPM/S.F. OVER 1,500 S.F. WITH TYCO EC-14 UPRIGHT

24 HOUR ENTRY 126	
Remote Area 2	
OCCUPANCY CLASSIFICATION	Ordinary Group II
DENSITY (gpm/ft <sup>2</sup> )	0.20 for 1500ft <sup>2</sup> (Actual 1635ft <sup>2</sup> )
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	6
K-FACTOR	14
TOTAL WATER REQUIRED	883.34
TOTAL PRESSURE REQUIRED	13.123
BASE OF RISER (gpm)	413.34
BASE OF RISER (psi)	109.979
SAFETY MARGIN (psi)	+37.123 (73.9%)

DESIGN CRITERIA PROVIDED BY DESIGN TEAM: 0.20 GPM/S.F. OVER 1,500 S.F. WITH TYCO EC-14 UPRIGHT

GROCERY BACKROOM	
Remote Area 1	
OCCUPANCY CLASSIFICATION	STORAGE
DENSITY (gpm/ft <sup>2</sup> )	0.60 for 2000ft <sup>2</sup> (Actual 2013ft <sup>2</sup> )
TOTAL HOSE STREAMS	500.00
TOTAL HEADS FLOWING	17
K-FACTOR	25.2
TOTAL WATER REQUIRED	2283.40
TOTAL PRESSURE REQUIRED	38.356
BASE OF RISER (gpm)	1783.40
BASE OF RISER (psi)	80.899
SAFETY MARGIN (psi)	+7.223 (16.6%)

DESIGN CRITERIA PROVIDED BY DESIGN TEAM: 0.60 GPM/S.F. OVER 2,000 S.F. WITH TYCO EC-25 UPRIGHT

**ZONE 1 FIRE SPRINKLER PLAN**  
SCALE: 1/8" = 1'-0"

SPRINKLER LEGEND TOTAL = 867											
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
⊗	Tyco	TY6137	EC-14	30	14	Upright	1/2"	Standard	Brass	200°F	SPRIG
⊗	Tyco	TY6137	EC-14	384	14	Upright	1/2"	Standard	Brass	200°F	N/A
⊗	Tyco	TY1928	EC-25	216	25.2	Upright	1/2"	Standard	Brass	212°F	N/A
⊗	Tyco	TY3131	TY-FRB	3	5.6	Upright	1/2"	Quick	Natural Brass	200°F	SPRIG
⊗	Tyco	TY323	TY-FRB	126	5.6	Pendent	1/2"	Quick	Chrome	200°F	SEMI-RECESSED w/ DSB-2
⊗	Tyco	TY3235	DS-1	63	5.6	Pendent	1/2"	Quick	Chrome	200°F	SEMI-RECESSED w/ DSB-2
⊗	Tyco	TY3131	TY-FRB	4	5.6	Upright	1/2"	Quick	Natural Brass	200°F	N/A
⊗	Tyco	TY3331	TY-FRB	7	5.6	Sidewall	1/2"	Quick	Natural Brass	200°F	N/A
⊗	Tyco	TY4111	TY-L	34	8	Upright	3/4"	Standard	Natural Brass	280°F	N/A

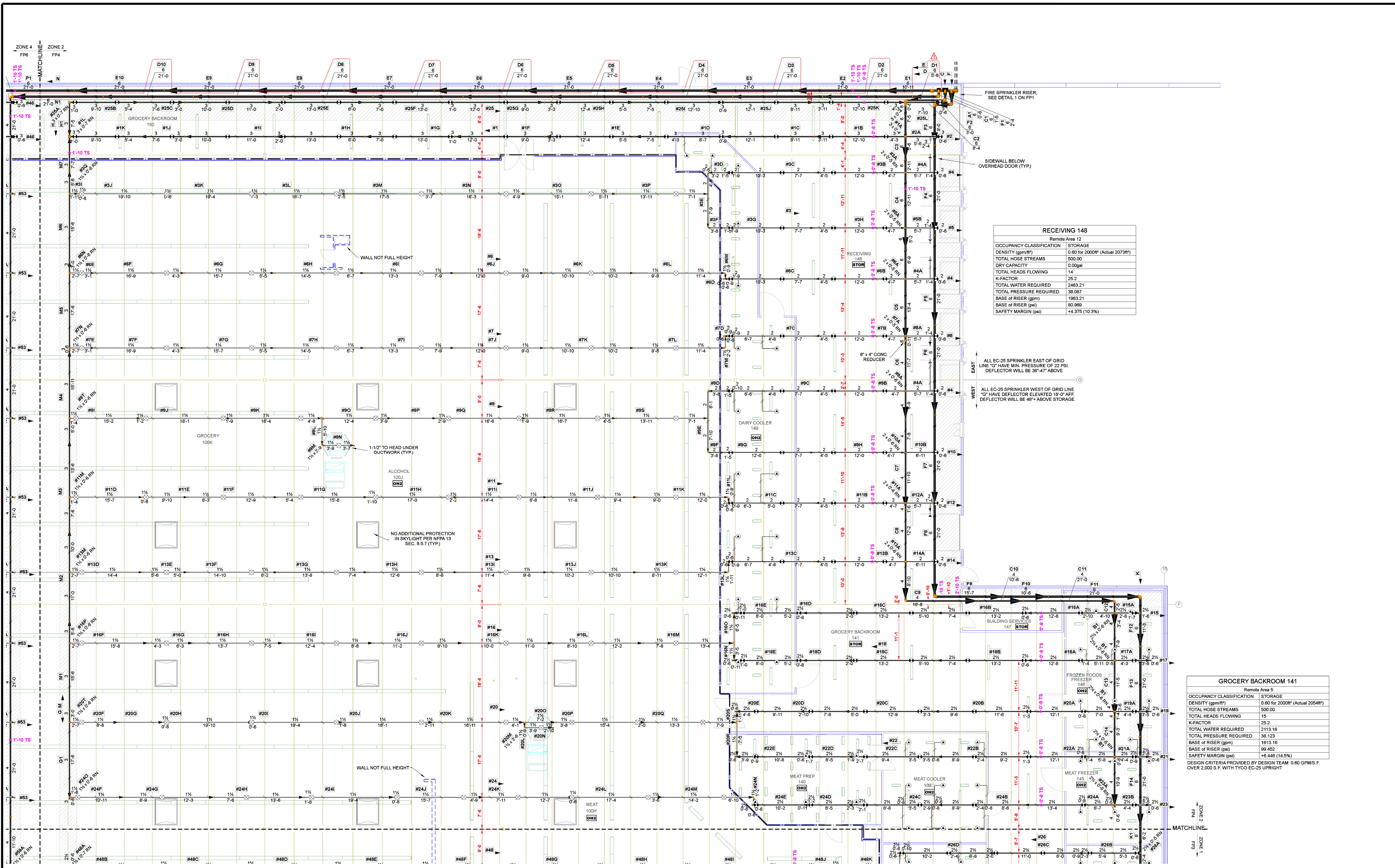
CONTRACTOR:	
ADDRESS:	
DATE:	
1	
REVISION	
DESCRIPTION	BY
CHANGE 4" MAIN TO 6" MAIN	ADK
IMPORTANT	
TO PREVENT FREEZING OF WATER IN WET PIPE SPRINKLER PIPING, OWNERS TO PROVIDE SUFFICIENT HEAT THROUGHOUT AREAS WHERE SPRINKLER PIPES ARE INSTALLED, UNLESS AN ANTI-FREEZE SYSTEM.	

**MEIJER STORE #328**  
2500 CASSOPOLIS STELKHART, ELKHART COUNTY IN 46514  
**ZONE 1 FIRE SPRINKLER PLAN**

<b>NORTH</b>	
DESIGNER	ADK
SCALE	1/8" = 1'-0"
CHECK BY	JVG
FILE NUMBER	
APPROVAL	STATE & LOCAL
DATE	08/23/22
DRAWING NO.	FP3 OF 6

THIS SPRINKLER WORK IS DESIGNED IN ACCORDANCE WITH NFPA PAMPHLET 13 2010 EDITION.  
ALARM SYSTEM BY OWNER. TO BE CENTRAL STATION PER NFPA, STATE AND LOCAL REQUIREMENTS.  
THIS SPRINKLER SYSTEM DESIGN IS BY: JARED VAN GAMMAREN NICET LEVEL III





RECEIVING 148	
Remote Area 12	
OCCUPANCY CLASSIFICATION	STORAGE
DENSITY (gpm/ft <sup>2</sup> )	0.60 for 2000ft <sup>2</sup> (Actual 2073ft <sup>2</sup> )
TOTAL HOSE STREAMS	500.00
DRY CAPACITY	0.00gal
TOTAL HEADS FLOWING	14
K-FACTOR	25.2
TOTAL WATER REQUIRED	2463.21
TOTAL PRESSURE REQUIRED	38.067
BASE OF RISER (gpm)	1963.21
BASE OF RISER (psi)	60.969
SAFETY MARGIN (psi)	+4.375 (10.3%)

GROCERY BACKROOM 141	
Remote Area 5	
OCCUPANCY CLASSIFICATION	STORAGE
DENSITY (gpm/ft <sup>2</sup> )	0.60 for 2000ft <sup>2</sup> (Actual 2054ft <sup>2</sup> )
TOTAL HOSE STREAMS	500.00
TOTAL HEADS FLOWING	15
K-FACTOR	25.2
TOTAL WATER REQUIRED	2113.16
TOTAL PRESSURE REQUIRED	38.123
BASE OF RISER (gpm)	1613.16
BASE OF RISER (psi)	99.462
SAFETY MARGIN (psi)	+8.446 (14.5%)

**ZONE 2 FIRE SPRINKLER PLAN**  
SCALE: 1/8" = 1'-0"

SPRINKLER LEGEND TOTAL = 867											
Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
⊗	Tyco	TY6137	EC-14	30	14	Upright	1/2"	Standard	Brass	200°F	SPRIG
⊗	Tyco	TY6137	EC-14	384	14	Upright	1/2"	Standard	Brass	200°F	N/A
⊗	Tyco	TY9128	EC-25	216	25.2	Upright	1"	Standard	Brass	212°F	N/A
⊗	Tyco	TY9131	TY-FRB	3	5.6	Upright	1/2"	Quick	Natural Brass	200°F	SPRIG
⊗	Tyco	TY323	TY-FRB	126	5.6	Pendent	1/2"	Quick	Chrome	200°F	SEMI-RECESSED
⊗	Tyco	TY3235	DS-1	63	5.6	Pendent	1"	Quick	Chrome	200°F	SEMI-RECESSED w/ DSB-2
⊗	Tyco	TY3131	TY-FRB	4	5.6	Upright	1/2"	Quick	Natural Brass	200°F	N/A
⊗	Tyco	TY3331	TY-FRB	7	5.6	Sidewall	1/2"	Quick	Natural Brass	200°F	N/A
⊗	Tyco	TY4111	TY-L	34	8	Upright	1/2"	Standard	Natural Brass	280°F	N/A

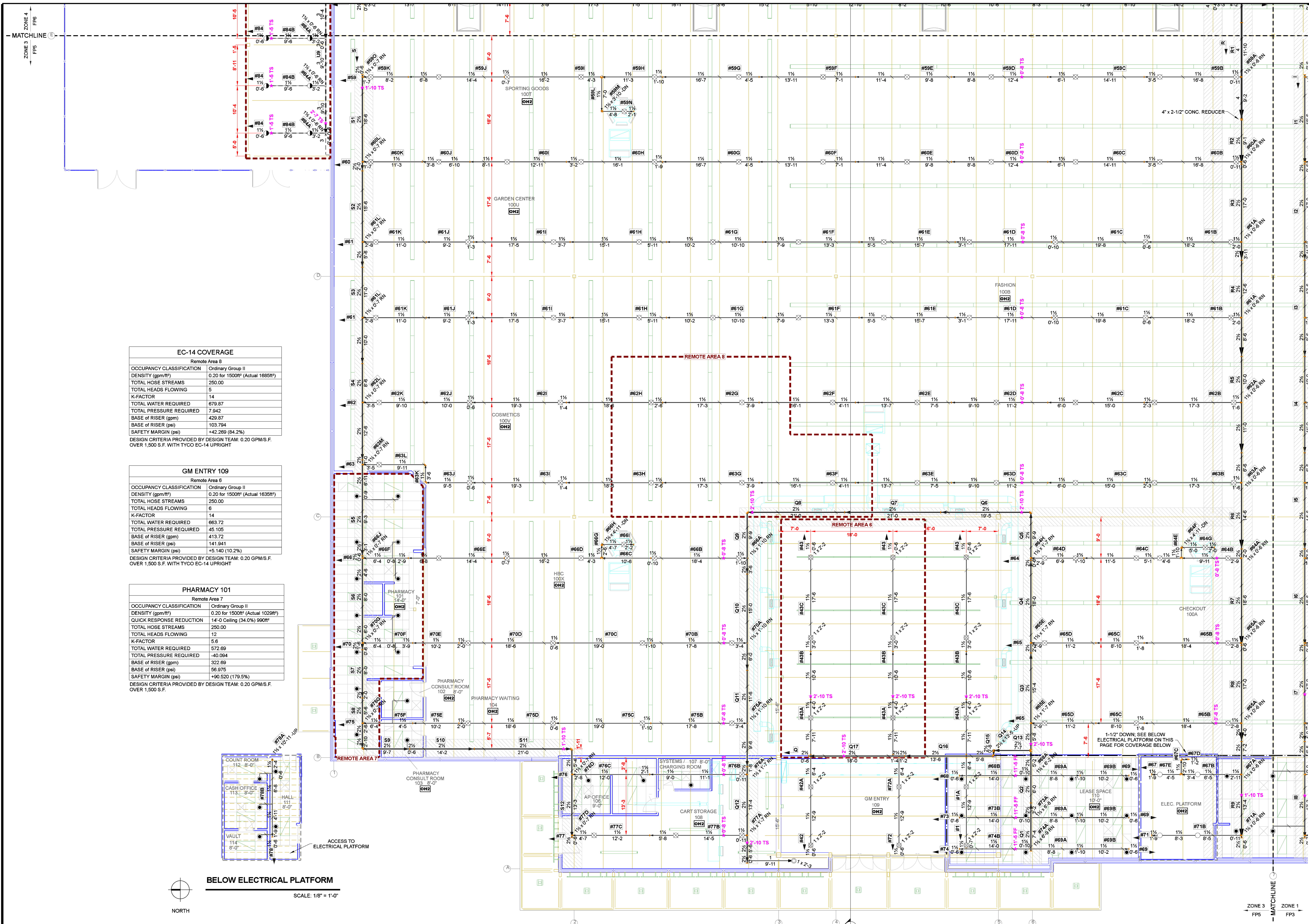
CONTRACTOR:  
ADDRESS:  
REVISION  
DATE DESCRIPTION BY  
1 CHANGE 4" MAIN TO 6" MAIN ADK  
IMPORTANT  
TO PREVENT FREEZING OF WATER IN WET PIPE SPRINKLER PIPING, OWNERS TO PROVIDE SUFFICIENT HEAT THROUGHOUT AREAS WHERE SPRINKLER PIPES ARE INSTALLED, UNLESS AN ANTI-FREEZE SYSTEM.

**MEIJER STORE #328**  
2500 CASSOPOLIS STELKHART, ELKHART COUNTY IN 46514  
**ZONE 2 FIRE SPRINKLER PLAN**

**NORTH**  
DESIGNER ADK  
SCALE 1/8" = 1'-0"  
CHECK BY JVG  
FILE NUMBER  
APPROVAL STATE & LOCAL  
DATE 08/23/22  
DRAWING NO. FP4 OF 6

THIS SPRINKLER WORK IS DESIGNED IN ACCORDANCE WITH NFPA PAMPHLET 13 2010 EDITION.  
ALARM SYSTEM BY OWNER. TO BE CENTRAL STATION PER NFPA, STATE AND LOCAL REQUIREMENTS.  
THIS SPRINKLER SYSTEM DESIGN IS BY: JARED VAN GAMMEREN NICET LEVEL III #  
FULL HEIGHT WALL  
ROOF AREAS WITH ADDED LOAD ALLOWANCES, SEE HANGER DETAILS FOR MORE INFORMATION.





**EC-14 COVERAGE**

Remote Area 8

OCCUPANCY CLASSIFICATION	Ordinary Group II
DENSITY (gpm/ft <sup>2</sup> )	0.20 for 1500ft <sup>2</sup> (Actual 1685ft <sup>2</sup> )
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	5
K-FACTOR	14
TOTAL WATER REQUIRED	679.87
TOTAL PRESSURE REQUIRED	7.942
BASE OF RISER (gpm)	429.87
BASE OF RISER (psi)	103.794
SAFETY MARGIN (psi)	+42.269 (84.2%)

DESIGN CRITERIA PROVIDED BY DESIGN TEAM: 0.20 GPM/S.F. OVER 1,500 S.F. WITH TYCO EC-14 UPRIGHT

**GM ENTRY 109**

Remote Area 6

OCCUPANCY CLASSIFICATION	Ordinary Group II
DENSITY (gpm/ft <sup>2</sup> )	0.20 for 1500ft <sup>2</sup> (Actual 1635ft <sup>2</sup> )
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	6
K-FACTOR	14
TOTAL WATER REQUIRED	663.72
TOTAL PRESSURE REQUIRED	45.105
BASE OF RISER (gpm)	413.72
BASE OF RISER (psi)	141.941
SAFETY MARGIN (psi)	+5.140 (10.2%)

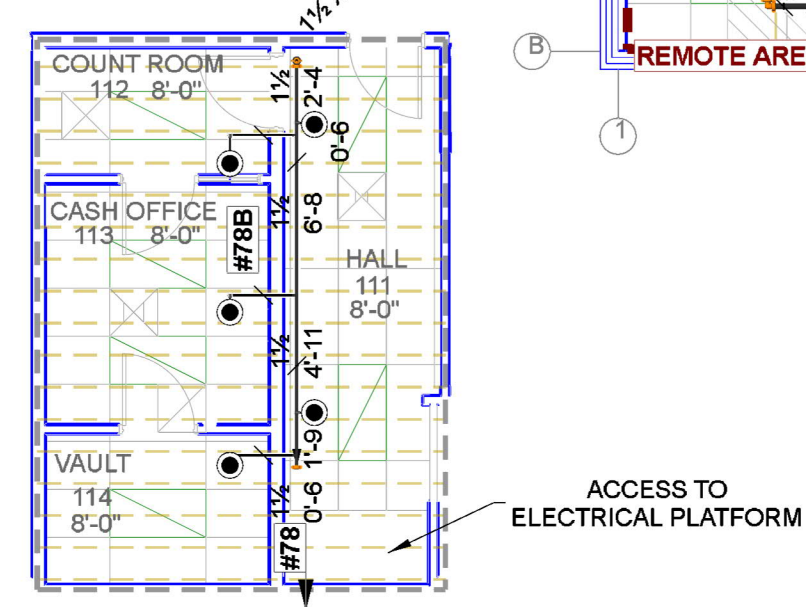
DESIGN CRITERIA PROVIDED BY DESIGN TEAM: 0.20 GPM/S.F. OVER 1,500 S.F. WITH TYCO EC-14 UPRIGHT

**PHARMACY 101**

Remote Area 7

OCCUPANCY CLASSIFICATION	Ordinary Group II
DENSITY (gpm/ft <sup>2</sup> )	0.20 for 1500ft <sup>2</sup> (Actual 1029ft <sup>2</sup> )
QUICK RESPONSE REDUCTION	14-0 Ceiling (34.0%) 990ft <sup>2</sup>
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	5.6
TOTAL WATER REQUIRED	572.69
TOTAL PRESSURE REQUIRED	-40.094
BASE OF RISER (gpm)	322.69
BASE OF RISER (psi)	56.975
SAFETY MARGIN (psi)	+90.520 (179.5%)

DESIGN CRITERIA PROVIDED BY DESIGN TEAM: 0.20 GPM/S.F. OVER 1,500 S.F.



**BELOW ELECTRICAL PLATFORM**  
SCALE: 1/8" = 1'-0"

**ZONE 3 FIRE SPRINKLER PLAN**  
SCALE: 1/8" = 1'-0"

**SPRINKLER LEGEND TOTAL = 867**

Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
⊗	Tyco	TY6137	EC-14	30	14	Upright	1/2"	Standard	Brass	200°F	SPRIG
⊗	Tyco	TY6137	EC-14	384	14	Upright	1/2"	Standard	Brass	200°F	N/A
⊗	Tyco	TY9128	EC-25	216	25	Upright	1"	Standard	Brass	212°F	N/A
⊗	Tyco	TY3131	TY-FRB	3	5.6	Upright	1/2"	Quick	Natural Brass	200°F	SPRIG
⊗	Tyco	TY323	TY-FRB	126	5.6	Pendent	1/2"	Quick	Chrome	200°F	SEMI-RECESSED
⊗	Tyco	TY3235	DS-1	63	5.6	Pendent	1"	Quick	Chrome	200°F	SEMI-RECESSED w/ DSB-2
⊗	Tyco	TY3131	TY-FRB	4	5.6	Upright	1/2"	Quick	Natural Brass	200°F	N/A
⊗	Tyco	TY3331	TY-FRB	7	5.6	Sidewall	1/2"	Quick	Natural Brass	200°F	N/A
⊗	Tyco	TY4111	TY-L	34	8	Upright	1/2"	Standard	Natural Brass	280°F	N/A

**CONTRACTOR:**

ADDRESS:

DATE: 1

REVISION: CHANGE 4" MAIN TO 6" MAIN

BY: ADK

**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.

**MEIJER STORE #328**  
2500 CASSOPOLIS STELKHART, ELKHART COUNTY IN 46514  
**ZONE 3 FIRE SPRINKLER PLAN**

**NORTH**

DESIGNER	ADK
SCALE	1/8" = 1'-0"
CHECK BY	JVG
FILE NUMBER	
APPROVAL	STATE & LOCAL
DATE	08/23/22
DRAWING NO.	FP5 OF 6

THIS SPRINKLER SYSTEM DESIGN IS BY: JARED VAN GAMMAREN NICET LEVEL III #



GM BACKROOM 151	
Remote Area 10	
OCCUPANCY CLASSIFICATION	STORAGE
DENSITY (gpm/ft <sup>2</sup> )	0.60 for 2000ft <sup>2</sup> (Actual 2212ft <sup>2</sup> )
TOTAL HOSE STREAMS	500.00
DRY CAPACITY	0.00gal
TOTAL HEADS FLOWING	14
K-FACTOR	25.2
TOTAL WATER REQUIRED	2182.56
TOTAL PRESSURE REQUIRED	30.978
BASE OF RISER (gpm)	1682.56
BASE OF RISER (psi)	88.997
SAFETY MARGIN (psi)	+13.195 (29.9%)
DESIGN CRITERIA PROVIDED BY DESIGN TEAM: 0.60 GPM/S.F. OVER 2,000 S.F. WITH TYCO EC-25 UPRIGHT ALL EC-25 SPRINKLERS FLOWING MIN. 22 PSI IN THIS CALCULATION.	

GARDEN CENTER 164	
Remote Area 11	
OCCUPANCY CLASSIFICATION	STORAGE
DENSITY (gpm/ft <sup>2</sup> )	0.19 for 3250ft <sup>2</sup> (Actual 3232ft <sup>2</sup> )
TOTAL HOSE STREAMS	500.00
DRY CAPACITY	110.45gal
TOTAL HEADS FLOWING	34
K-FACTOR	8
TOTAL WATER REQUIRED	1574.01
TOTAL PRESSURE REQUIRED	36.501
BASE OF RISER (gpm)	1074.01
BASE OF RISER (psi)	75.533
SAFETY MARGIN (psi)	+10.771 (22.8%)
DESIGN CRITERIA PROVIDED BY DESIGN TEAM: 0.19 GPM/S.F. OVER 3,250 S.F. WITH 8.0K UPRIGHT	

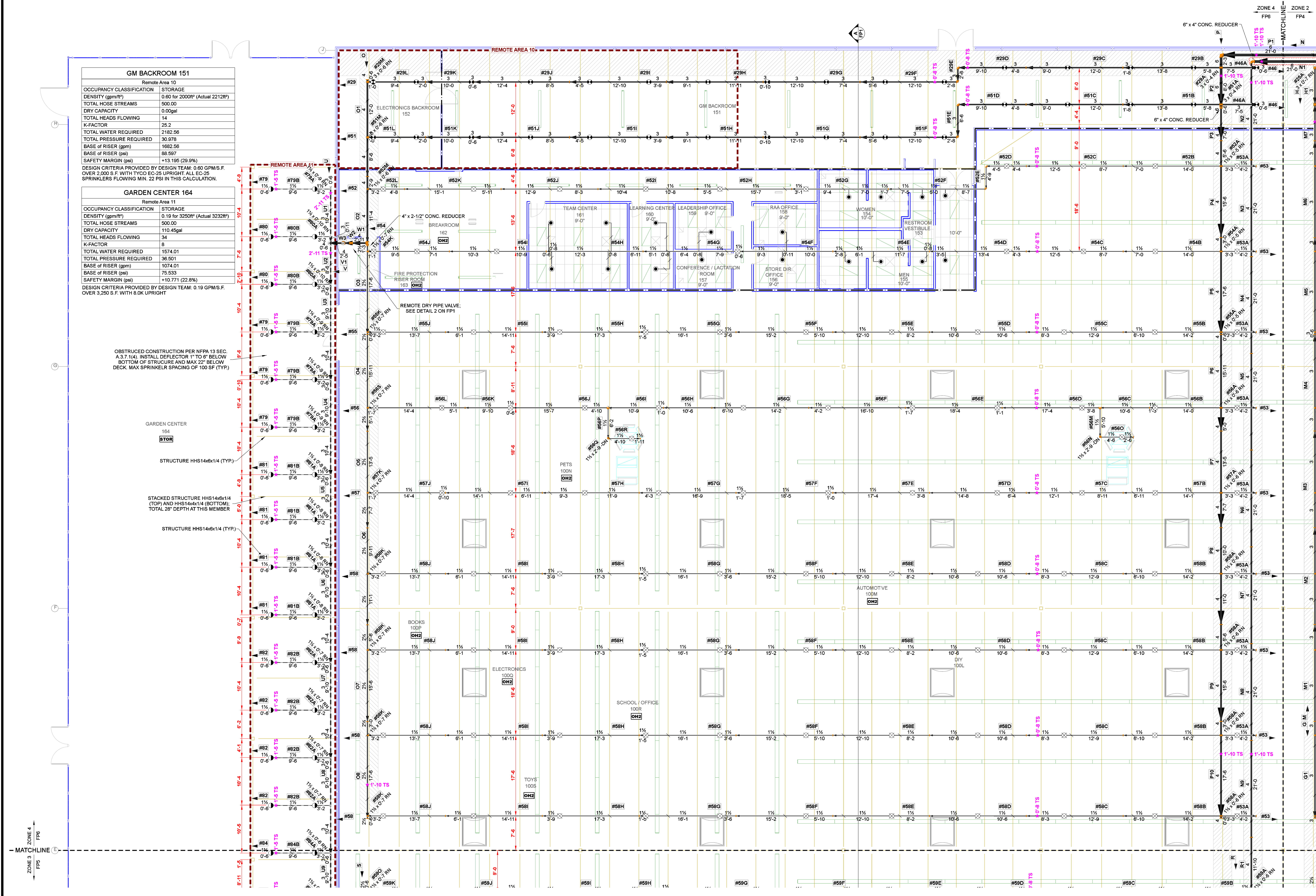
OBSTRUCTED CONSTRUCTION PER NFPA 13 SEC. A.3.7.1(4). INSTALL DEFLECTOR 1" TO 6" BELOW BOTTOM OF STRUCTURE AND MAX 22" BELOW DECK. MAX SPRINKLER SPACING OF 100 SF (TYP.)

GARDEN CENTER 164  
STOR

STRUCTURE HHS14x6x1/4 (TYP.)

STACKED STRUCTURE HHS14x6x1/4 (TOP) AND HHS14x4x1/4 (BOTTOM). TOTAL 28" DEPTH AT THIS MEMBER

STRUCTURE HHS14x6x1/4 (TYP.)



**ZONE 4 FIRE SPRINKLER PLAN**

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

SPRINKLER LEGEND TOTAL = 867

Symbol	Manufacturer	SIN	Model	Quantity	K-Factor	Type	Size	Response	Finish	Temperature	Note
⊗	Tyco	TY6137	EC-14	30	14	Upright	3/4"	Standard	Brass	200°F	SPRIG
⊗	Tyco	TY6137	EC-14	384	14	Upright	3/4"	Standard	Brass	200°F	N/A
⊗	Tyco	TY9128	EC-25	216	25.2	Upright	1"	Standard	Brass	212°F	N/A
⊗	Tyco	TY3131	TY-FRB	3	5.6	Upright	3/4"	Quick	Natural Brass	200°F	SPRIG
⊗	Tyco	TY3233	TY-FRB	126	5.6	Pendent	3/4"	Quick	Chrome	200°F	SEMI-RECESSED W
⊗	Tyco	TY3235	DS-1	63	5.6	Pendent	1"	Quick	Chrome	200°F	SEMI-RECESSED W DSB-2
⊗	Tyco	TY3131	TY-FRB	4	5.6	Upright	3/4"	Quick	Natural Brass	200°F	N/A
⊗	Tyco	TY3331	TY-FRB	7	5.6	Sidewall	3/4"	Quick	Natural Brass	200°F	N/A
⊗	Tyco	TY4111	TY-L	34	8	Upright	3/4"	Standard	Natural Brass	280°F	N/A

CONTRACTOR:

ADDRESS:

DATE	REVISION	DESCRIPTION	BY
1	CHANGE 4" MAIN TO 6" MAIN		ADK

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.

**MEIJER STORE #328**  
2500 CASSOPOLIS STELKHART, ELKHART COUNTY IN 46514  
ZONE 4 FIRE SPRINKLER PLAN

**NORTH**

DESIGNER	ADK
SCALE	1/8" = 1'-0"
CHECK BY	JVG
FILE NUMBER	000000
APPROVAL	STATE & LOCAL
DATE	08/23/22
DRAWING NO.	FP6 OF 6

THIS SPRINKLER WORK IS DESIGNED IN ACCORDANCE WITH NFPA PAMPHLET 13 2010 EDITION

ALARM SYSTEM BY OWNER. TO BE CENTRAL STATION PER NFPA, STATE AND LOCAL REQUIREMENTS

THIS SPRINKLER SYSTEM DESIGN IS BY: JARED VAN GAMMAREN NICET LEVEL III #

— FULL HEIGHT WALL

▨ ROOF AREAS WITH ADDED LOAD ALLOWANCES. SEE HANGER DETAILS FOR MORE INFORMATION.