FIRE PROTECTION PLANS

F. E. MORAN, INC. FIRE PROTECTION
16815 COLLEGE BLVD.
LENEXA, KS 66219
(217) 356-0700 (217) 356-0777 FAX

MISSOURI COA: E-2022012018
LS BUSINESS LICENSE #: LC23230017

SCOPE OF WORK

SCOPE OF WORK:
** FURNISH & INSTALL (11) NEW WET PIPE SPRINKLER SYSTEM FOR THE NEW BUILDING.
** FURNISH & INSTALL A NEW FIRE PUMP AND ACCESSORIES
** FIRE PUMP ROOM POINT OF CONNECTION (START OF CONTRACT): 10'' FLANGE, 12'' ABOVE THE FINISHED FLOOR IN THE FIRE PUMP ROOM.
**FEED RISER POINT OF CONNECTION (START OF CONTRACT): 8'' FLANGE, 12'' ABOVE THE FINISHED FLOOR IN THE FIRE PUMP ROOM. TWO LOCATED ON EACH END OF THE BUILDING AND ONE ON EACH SIDE.
** INSTALL (18) 2½'' HOSE VALVES LOCATED AT MAN DOORS AND FED FROM ADJACENT SYSTEMS

NOT INCLUDED:
** WIRING OF ELECTRICAL DEVICES
** FIRE EXTINGUISHERS
** STANDPIPES AND HOSE STATIONS
** FIRE PUMP CONTROLLER AUTO TRANSFER SWITCH
** UNDERGROUND PIPING AND TESTING
** COLUMN SPRINKLERS
** SEISMIC BRACING
** PAINTED PIPING
** CONCRETE PADS
** COMPONENT IDENTIFICATION BEYOND NFPA 13 REQUIREMENTS
** ACCESS PANELS
** CUTTING AND PATCHING
** PIPE SLEEVES
** WALL POST INDICATOR VALVE
** PUMP CONTROLLER AUTOMATIC TRANSFER SWITCH

CODE INFORMATION

CODE INFORMATION:
**NFPA 13, 2016 EDITION: INSTALLATION OF SPRINKLER SYSTEMS
**NFPA 20, 2016 EDITION: INSTALLATION OF CENTRIFUGAL FIRE PUMPS
**INTERNATIONAL BUILDING & FIRE CODE, 2018 EDITION
**LOCAL AMENDMENTS

BUILDING INFO:
IBC OCCUPANCY CLASSIFICATION: S-1
IBC CONSTRUCTION TYPE: II-B
IBC SEISMIC DESIGN CATEGORY: B
HIGHEST FLOOR ELEVATION FROM FIRE DEPARTMENT VEHICLE ACCESS: GRADE
NUMBER OF STORIES: 1
BUILDING AREA: 433,364 S.F.

GENERAL REQUIREMENTS

** SUPPLY A SPARE SPRINKLER CABINET WITH WRENCH FOR EACH SPRINKLER TYPE AS REQUIRED BY NFPA 13.
** IDENTIFY ALL HYDRAULICALLY CALCULATED SYSTEMS WITH A PERMANENTLY MARKED AND WEATHERPROOF SIGN.
** ALL NEW PIPING OR PIPING MODIFICATIONS WHICH AFFECT MORE THAN 20 SPRINKLERS SHALL BE HYDROSTATICALLY TESTED AT 200 PSI OR 50 PSI OVER THE SYSTEM WORKING PRESSURE. THE SYSTEM SHALL MAINTAIN THIS PRESSURE WITHOUT LOSS FOR 2 HOURS.
** ALL NEW PIPING OR PIPING MODIFICATIONS WHICH AFFECT 20 SPRINKLERS OR LESS, SHALL BE TESTED AT THE SYSTEM WORKING PRESSURE.
** ALL PIPING MODIFICATIONS WHICH CANNOT BE ISOLATED FROM THE EXISTING SYSTEM, SHALL BE TESTED AT THE SYSTEM WORKING PRESSURE.
** THE LOCAL FIRE/BUILDING INSPECTOR IS TO BE NOTIFIED 48 HOURS IN ADVANCE OF ALL TESTING.
UNDERGROUND TESTING AND FLUSHING:
** ALL UNDERGROUND PIPE SHALL BE TESTED AND FLUSHED BY THE INSTALLING CONTRACTOR AS REQUIRED BY NFPA 24 BEFORE ANY OVERHEAD SPRINKLER PIPING IS CONNECTED.

VALVES

** ALL VALVES CONTROLLING WATER FLOW TO SPRINKLERS SHALL BE INDICATING & SUPERVISED.
** ALL VALVES SHALL BE ACCESSIBLE AT ALL TIMES AND PERMANENTLY IDENTIFIED.
** THE IDENTIFICATION OF CONTROL VALVES SHALL INCLUDE A DESCRIPTION OR DIAGRAM OF WHAT THEY CONTROL.
** ALL TRAPPED PORTIONS OF SPRINKLER PIPING SHALL BE PROVIDED WITH A LOW POINT DRAIN AS REQUIRED BY NFPA 13.

PIPE HANGERS

** 2½''-6'' HANGER RINGS ARE TO BE ADJUSTABLE SWIVEL RINGS, ZINC PLATED, MANUFACTURED TO ANSI/MSS SP-69 STANDARDS.
** 2½''-6'' CLEVIS HANGERS ARE TO BE ADJUSTABLE CLEVIS RINGS, PLAIN, MANUFACTURED TO ANSI/MSS SP-69 STANDARDS.
** HANGERS AND SEISMIC BRACING ARE TO BE INSTALLED PER NFPA 13 REQUIREMENTS.
** HANGER ROD SIZES AND LOCATIONS ARE TO BE AS REQUIRED BY NFPA 13.

DESIGN CRITERIA - LIGHT HAZARD

SPRINKLER SYSTEM DESIGN CRITERIA - LIGHT HAZARD AREA/DENSITY (WET & SINGLE INTERLOCKED PREACTION SYSTEMS):
THE NEW SYSTEM HAS BEEN DESIGNED WITH A DESIGN DENSITY OF .10 GPM/S.F. OVER THE MOST REMOTE AND DEMANDING DESIGN AREA OF 1500 S.F. WITH 225 S.F. (15') MAXIMUM SPRINKLER HEAD SPACING AND 100 GPM OUTSIDE HOSE ALLOWANCE. WHERE ROOF OR CEILING SLOPES EXCEED A PITCH OF 2:12, THE DESIGN AREA HAS BEEN INCREASED IN SIZE BY 30% TO 1950 S.F. THE DESIGN AREA MAY BE REDUCED IN SIZE IN ACCORDANCE WITH NFPA 13 DUE TO THE USE OF QUICK RESPONSE SPRINKLERS BUT SHALL NEVER CONTAIN LESS THAN 5 SPRINKLERS. TOTAL SYSTEM SIZE SHALL NOT EXCEED 52,000 S.F.

WHERE EXTENDED COVERAGE SPRINKLERS ARE UTILIZED, THE MINIMUM DESIGN AREA SHALL BE 5 SPRINKLERS WITH 400 S.F. (20') MAXIMUM SPRINKLER HEAD SPACING. EXTENDED COVERAGE SPRINKLERS SHALL NOT BE USED WHERE ROOF OR CEILING SLOPES EXCEED A PITCH OF 2:12. WHERE SPECIFICALLY LISTED FOR SUCH USE, EXTENDED COVERAGE SPRINKLERS MAY BE USED FOR ROOF OR CEILING SLOPES UP TO A 4:12 PITCH.

WHEN A REDUCTION IN THE DESIGN AREA IS NOT USED, SPRINKLER DISCHARGE IN SMALL ROOMS SUCH AS CLOSETS AND WASHROOMS CONTAINING A SINGLE SPRINKLER MAY BE OMITTED FROM THE HYDRAULIC CALCULATIONS.

DRAWING SYMBOLS

PIPING CENTERLINES	
★ 0'' TS	TO TOP OF STEEL OR ROOF DECK
★ 0'' TS	TO FLOOR
	HANGER LOCATION
(H)	HYDRAULIC NODE
	ELECTRIC ALARM BELL

WET SYSTEM PIPE & FITTINGS

WET-PIPE SPRINKLER SYSTEM BLACK PIPE:
** 1'' LINE PIPING SHALL BE BLACK STEEL SCH. 40 PIPE, MANUFACTURED TO ASTM A53 OR A795 STANDARDS.
** 2½'' LINE PIPING SHALL BE BLACK STEEL SCH. 7 PIPE, MANUFACTURED TO ASTM A795 STANDARDS.

** 8'' MAIN PIPING SHALL BE BLACK STEEL SCH. 10 PIPE, MANUFACTURED TO ASTM A135 STANDARDS.
** 2''-6'' MAIN PIPING SHALL BE BLACK STEEL SCH. 7 PIPE, MANUFACTURED TO ASTM A795 STANDARDS.

WET-PIPE SPRINKLER SYSTEM BLACK FITTINGS:
** 1'' BRANCH LINE FITTINGS SHALL BE BLACK DUCTILE IRON THREADED, CLASS 150 STANDARD, MANUFACTURED PER ANSI/ASME B16.3, U.L. LISTED FOR FIRE PROTECTION USE UP TO 175 PSI WORKING PRESSURE.
** 1/2'' - 3'' BRANCH LINE PIPE OUTLETS TO BE WELDED MANUFACTURED TO ASTM A53 & ANSI B1.20.1 STANDARDS.
** 1 1/4''-3'' BRANCH LINE FITTINGS SHALL BE STANDARD GROOVED DUCTILE IRON, MANUF. TO ASTM A536 STANDARDS.

** 2½''-8'' MAIN PIPE BRANCH OUTLETS TO BE WELDED MANUFACTURED TO ASTM A53 & ANSI B1.20.1 STANDARDS.
** 2½''-8'' MAIN PIPE FITTINGS SHALL BE STANDARD GROOVED DUCTILE IRON, MANUF. TO ASTM A536 STANDARDS.
** 2½''-8'' MAIN PIPE FITTINGS SHALL BE STANDARD GROOVED STEEL, MANUF. TO ASTM A958/A53 STANDARDS.

DESIGN CRITERIA - ESFR

SPRINKLER SYSTEM DESIGN CRITERIA (ESFR)-PALLETIZED/SOLID-PILE/RACK STORAGE:

FROM NFPA 13, 2016 EDITION TABLE 16.3.3.1
COMMODITY CLASSIFICATION: CLASS I, II, III OR IV, ENCAPSULATED OR UNENCAPSULATED, NO OPEN TOP CONTAINERS
STORAGE ARRANGEMENT: PALLETIZED/SOLID-PILE/SINGLE & DOUBLE ROW RACKS WITH NO SOLID SHELVING
CONSTRUCTION TYPE: ALL TYPES
MAXIMUM STORAGE HEIGHT: 35 FEET
MAXIMUM CEILING/ROOF HEIGHT: 40 FEET
MINIMUM CLEARANCE FROM SPRINKLER DEFLECTOR TO TOP OF STORAGE: 36 INCHES
SPRINKLER TYPE: ESFR (EARLY SUPPRESSION FAST-RESPONSE)
SPRINKLER K-FACTOR: 16.8
SPRINKLER TEMPERATURE RATING: 205°F
SPRINKLER ORIENTATION: PENDENT
MAXIMUM SPRINKLER DEFLECTOR DISTANCE BELOW CEILING: 14 INCHES
MINIMUM SPRINKLER DEFLECTOR DISTANCE BELOW CEILING: 6 INCHES
MAXIMUM SPRINKLER SPACING/AREA: 10 FEET/100 S.F.
MINIMUM SPRINKLER SPACING: 8 FEET/64 S.F.
TYPE OF SYSTEM: WET
NUMBER OF DESIGN SPRINKLERS: 12
MINIMUM SPRINKLER OPERATING PRESSURE: 52 PSI
INSIDE HOSE STREAM ALLOWANCE: 0 GPM
OUTSIDE HOSE STREAM ALLOWANCE: 250 GPM
TOTAL HOSE STREAM ALLOWANCE: 250 GPM
IN-RACK SPRINKLERS: NO

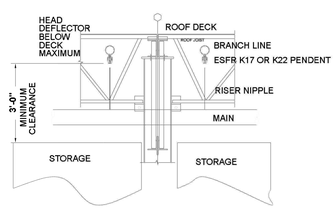
SPRINKLER SYSTEM DESIGN CRITERIA (ESFR)-PALLETIZED/SOLID-PILE/RACK STORAGE:

FROM NFPA 13, 2016 EDITION TABLE 16.3.3.1
COMMODITY CLASSIFICATION: CLASS I, II, III OR IV, ENCAPSULATED OR UNENCAPSULATED, NO OPEN TOP CONTAINERS
STORAGE ARRANGEMENT: PALLETIZED/SOLID-PILE/SINGLE & DOUBLE ROW RACKS WITH NO SOLID SHELVING
CONSTRUCTION TYPE: ALL TYPES
MAXIMUM STORAGE HEIGHT: 40 FEET
MAXIMUM CEILING/ROOF HEIGHT: 45 FEET
MINIMUM CLEARANCE FROM SPRINKLER DEFLECTOR TO TOP OF STORAGE: 36 INCHES
SPRINKLER TYPE: ESFR (EARLY SUPPRESSION FAST-RESPONSE)
SPRINKLER K-FACTOR: 22.4
SPRINKLER TEMPERATURE RATING: 205°F
SPRINKLER ORIENTATION: PENDENT
MAXIMUM SPRINKLER DEFLECTOR DISTANCE BELOW CEILING: 18 INCHES
MINIMUM SPRINKLER DEFLECTOR DISTANCE BELOW CEILING: 6 INCHES
MAXIMUM SPRINKLER SPACING/AREA: 10 FEET/100 S.F.
MINIMUM SPRINKLER SPACING: 8 FEET/64 S.F.
TYPE OF SYSTEM: WET
NUMBER OF DESIGN SPRINKLERS: 12
MINIMUM SPRINKLER OPERATING PRESSURE: 40 PSI
INSIDE HOSE STREAM ALLOWANCE: 0 GPM
OUTSIDE HOSE STREAM ALLOWANCE: 250 GPM
TOTAL HOSE STREAM ALLOWANCE: 250 GPM
IN-RACK SPRINKLERS: NO

SYSTEMS SHALL BE WET ONLY.

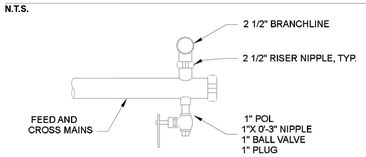
ROOF OR CEILING SLOPES SHALL NOT EXCEED A PITCH OF 2:12.

TOTAL SYSTEM SIZE SHALL NOT EXCEED 40,000 S.F. COMBINED HIGH PILED/RACK STORAGE & LIGHT/ORDINARY HAZARD SYSTEMS MAY COVER UP TO 52,000 S.F.



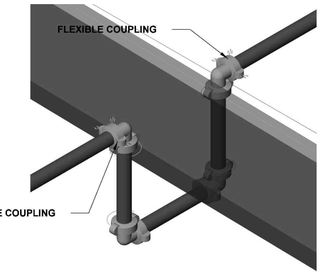
STORAGE CLEARANCE

N.T.S.



TYPICAL DRAIN DETAIL

N.T.S.



TYPICAL LINE AT EXPANSION JOINT

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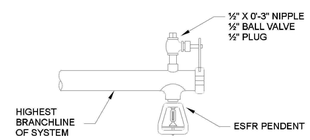
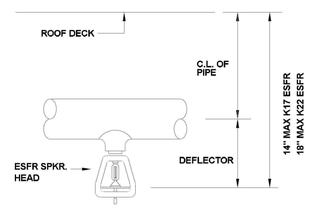


MANUAL AIR VENT DETAIL

N.T.S.



ESFR PENDENT DETAIL

N.T.S.

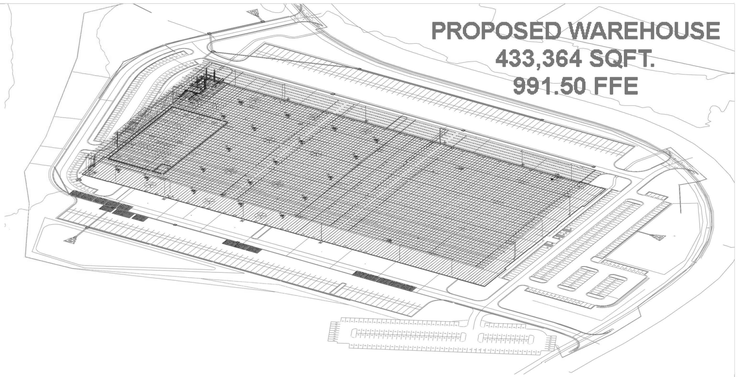
HANGER INSTALLATION REQUIREMENTS

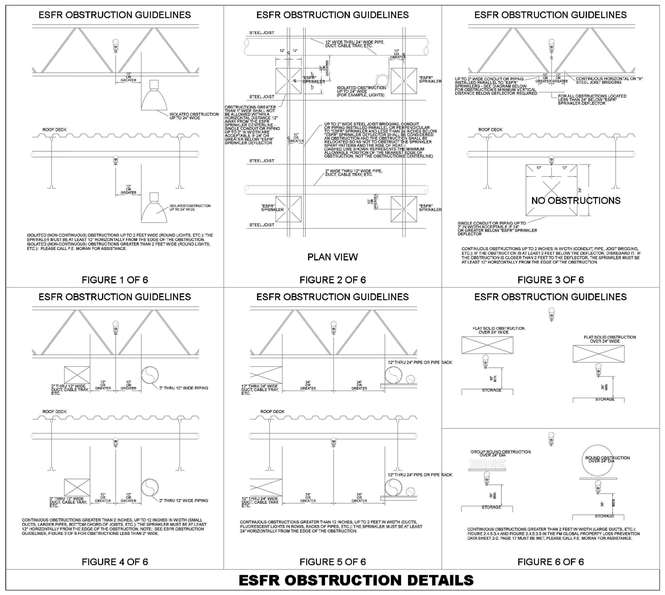
	MAXIMUM DISTANCE BETWEEN HANGERS							
NOMINAL PIPE SIZE	3/4''	1''	1-1/4''	1-1/2''	2''	2-1/2''	3''	4''
~~BLAZEMASTER CPVC~~	~~5' 6''~~	~~6' 0''~~	~~6' 6''~~	~~7' 0''~~	~~8' 0''~~	~~9' 0''~~	~~10' 0''~~	~~N/A~~
~~THREADABLE LIGHTWALL~~	~~N/A~~	~~12' 0''~~	~~12' 0''~~	~~12' 0''~~	~~12' 0''~~	~~12' 0''~~	~~12' 0''~~	~~N/A~~
STEEL PIPE (7/10/ 40)	N/A	12' 0''	12' 0''	15' 0''	15' 0''	15' 0''	15' 0''	15' 0''

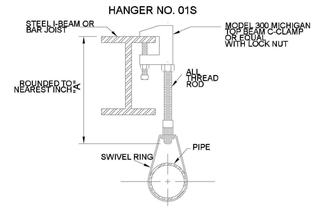
THE UNSUPPORTED LENGTH BETWEEN THE END SPRINKLER AND THE LAST HANGER ON THE LINE SHALL NOT EXCEED 36'' FOR 1'' PIPE, 48'' FOR 1 1/4'' PIPE AND 60'' FOR 1 1/2'' PIPE OR LARGER

THE CUMULATIVE HORIZONTAL LENGTH OF AN UNSUPPORTED ARMOVER TO A SPRINKLER, SPRINKLER DROP, OR SPRIG-UP SHALL NOT EXCEED 24''

NOMINAL PIPE SIZE	SCHEDULE 40			SCHEDULE 10			EDDYFLOW		
	O.D.	I.D.	WALL THICKNESS	O.D.	I.D.	WALL THICKNESS	O.D.	I.D.	WALL THICKNESS
1	1.315	1.049	.133	1.315	1.097	.109	1.315	1.191	.062
1¼	1.660	1.380	.140	1.660	1.442	.109	1.660	1.536	.062
1½	1.900	1.610	.145	1.900	1.682	.109	1.900	1.728	.086
2	2.375	2.067	.154	2.375	2.157	.109	2.375	2.203	.086
2½	2.875	2.469	.203	2.875	2.635	.120	2.875	2.703	.086
3	3.500	3.068	.216	3.500	3.260	.120	3.500	3.314	.093
4	4.500	4.026	.237	4.500	4.260	.120	4.500	4.310	.095
5	5.563	5.047	.258	5.563	5.295	.134	----	----	----
6	6.625	6.065	.280	6.625	6.357	.134	----	----	----
8	8.625	7.981	.322	8.625	8.249	.188	----	----	----
10	10.750	10.020	.365	10.750	10.370	.188	----	----	----







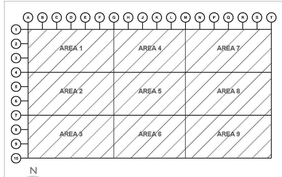
NOTE ON PLAN: HANGER NUMBER AND "A" DIMENSION

TOP BEAM C-CLAMP DETAIL

N.T.S.

NICET #156488 CERTIFIED

JASIEL COLBERT
NICET LEVEL 1
AUTO. SPRINKLER SYS. LAYOUT
VALID THROUGH MARCH 03, 2025



KEY PLAN

DRAWING INDEX

CURRAN
ARCHITECTURE
5719 LAWTON LOOP E. DR. #212
INDIANAPOLIS, IN 46216
O :: 317 . 288 . 0681
F :: 317 . 288 . 0753

SCANNELL PROPERTIES

CERTIFICATION

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS BUILDING A LOT 1
1100 NW MAIN ST.
LEE'S SUMMIT, MO 64086

F.E. MORAN, INC.
FIRE PROTECTION
WWW.FEMORANFP.COM

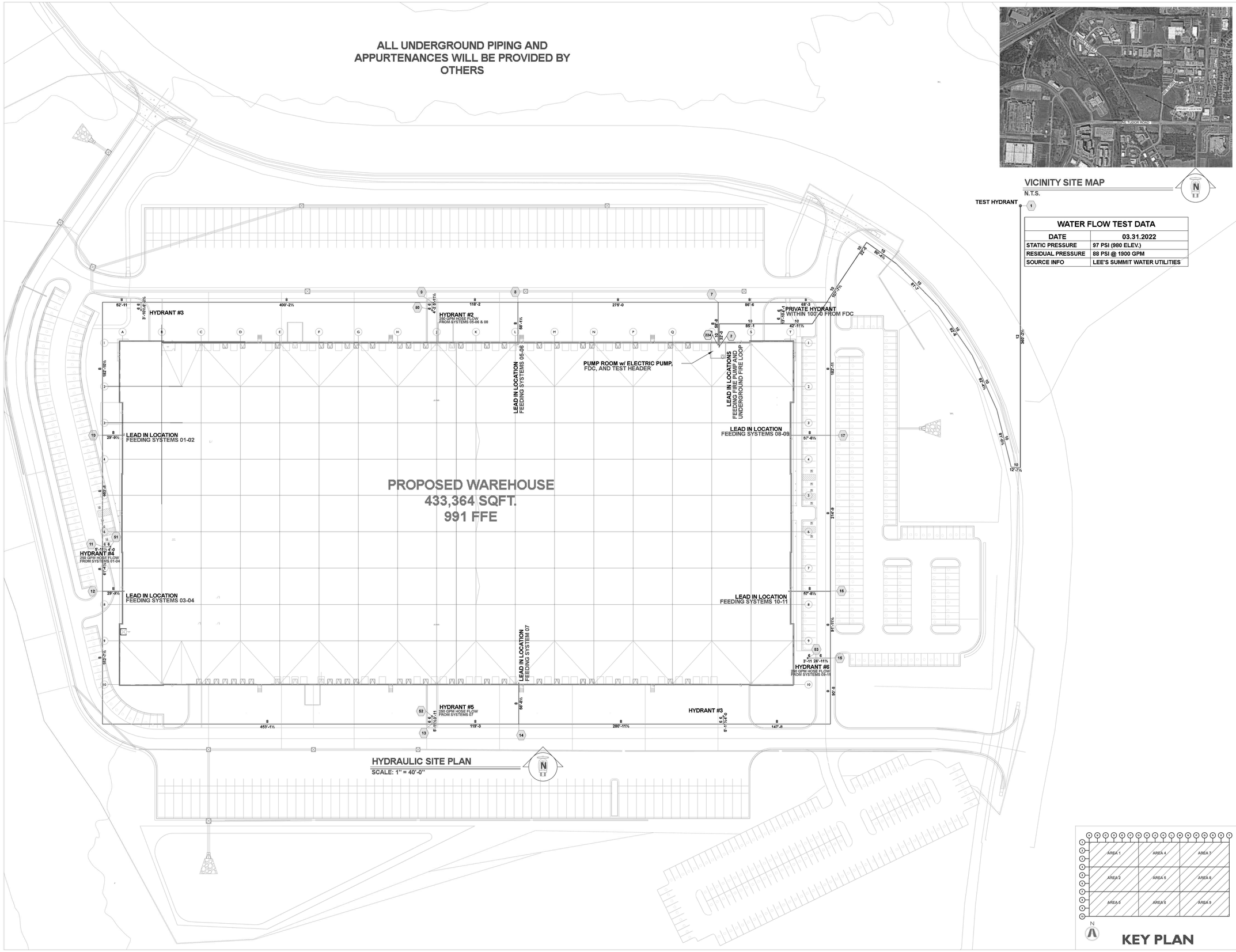
ISSUE DATES	
PERMIT SET	02.18.22
1 TENANT IMPROVEMENT	09.07.22

210300

FP0.0

SYSTEM NOTES

ALL UNDERGROUND PIPING AND
APPURTENANCES WILL BE PROVIDED BY
OTHERS



HYDRAULIC SITE PLAN
SCALE: 1" = 40'-0"

VICINITY SITE MAP
N.T.S.

WATER FLOW TEST DATA	
DATE	03.31.2022
STATIC PRESSURE	97 PSI (980 ELEV.)
RESIDUAL PRESSURE	88 PSI @ 1900 GPM
SOURCE INFO	LEE'S SUMMIT WATER UTILITIES

KEY PLAN

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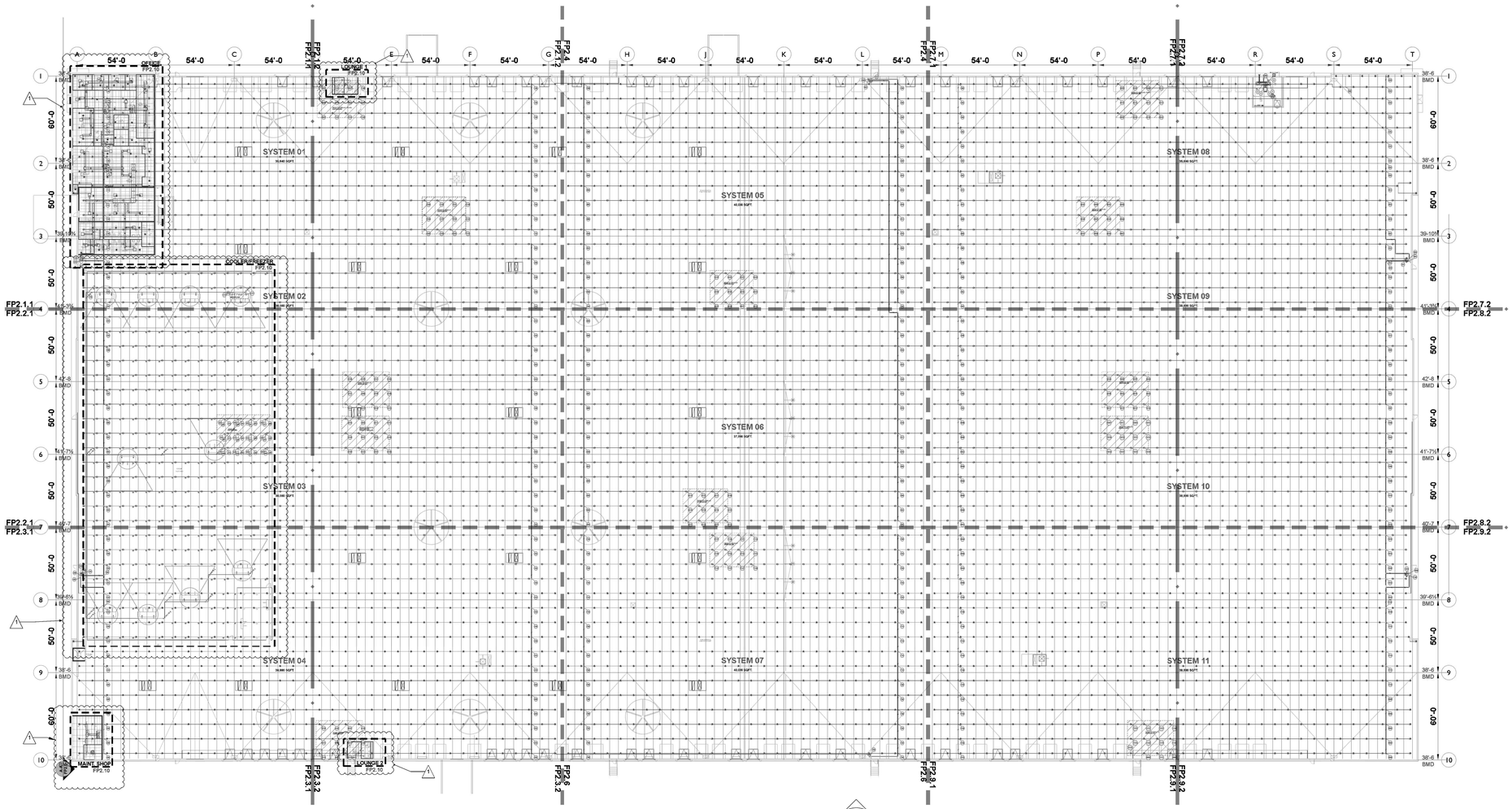
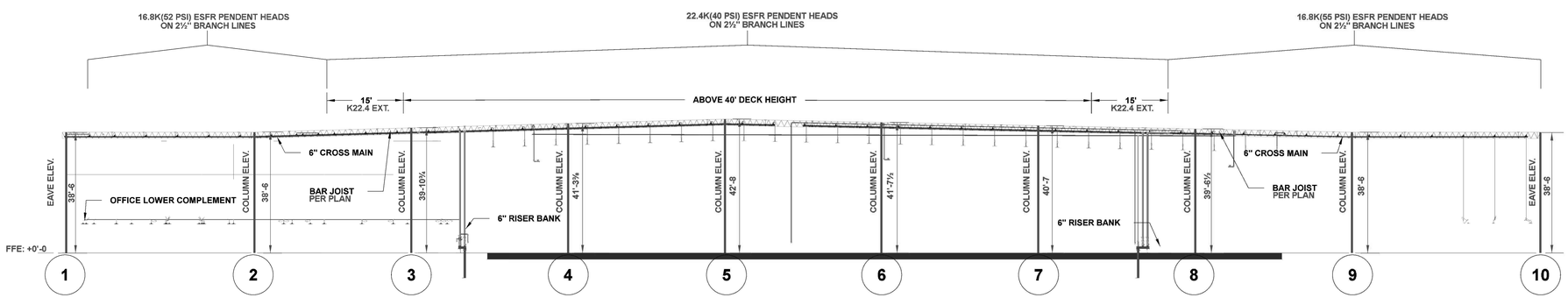
FP1.0

HYDRAULIC SITE PLAN



OVERHEAD PIPING

SCALE: 1" = 30'-0"



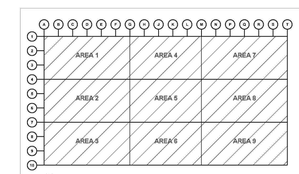
WALL VIEW (SECTION A-A)

SCALE: 1/16" = 1'-0"

SPRINKLER LEGEND

SYMBOL	MANUFACTURER	SIN	MODEL	QUANTITY	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
	VICTAULIC	V4702	FL-QR/ST/ESFR	2054	16.8	PENDENT	¾	FAST	BRASS	200 °F	
	VICTAULIC	V3406	V34	4	8	PENDENT	¼	QUICK	BRASS	200 °F	
	VICTAULIC	V4806	ESFR	2754	22.4	PENDENT	1	FAST	BRASS	212 °F	
	VIKING	VK6600	MICROFAST	48	5.6	PENDENT	½	QUICK	CHROME	135 °F	
	VIKING	VK3021		6	5.6	PENDENT	½	QUICK	CHROME	135 °F	
	VIKING	VK504	ESFR DRY	303	16.8	PENDENT	¾	QUICK	BRASS	205 °F	
	VIKING	VK504	ESFR DRY	65	16.8	PENDENT	¾	QUICK	BRASS	165 °F	
				TOTAL = 5235							

**JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6 OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE



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FIRE PROTECTION
WWW.FEMORANINC.COM

ISSUE DATES	
PERMIT SET	02.18.22
1 TENANT IMPROVEMENT	09.07.22

210300

FP2.0

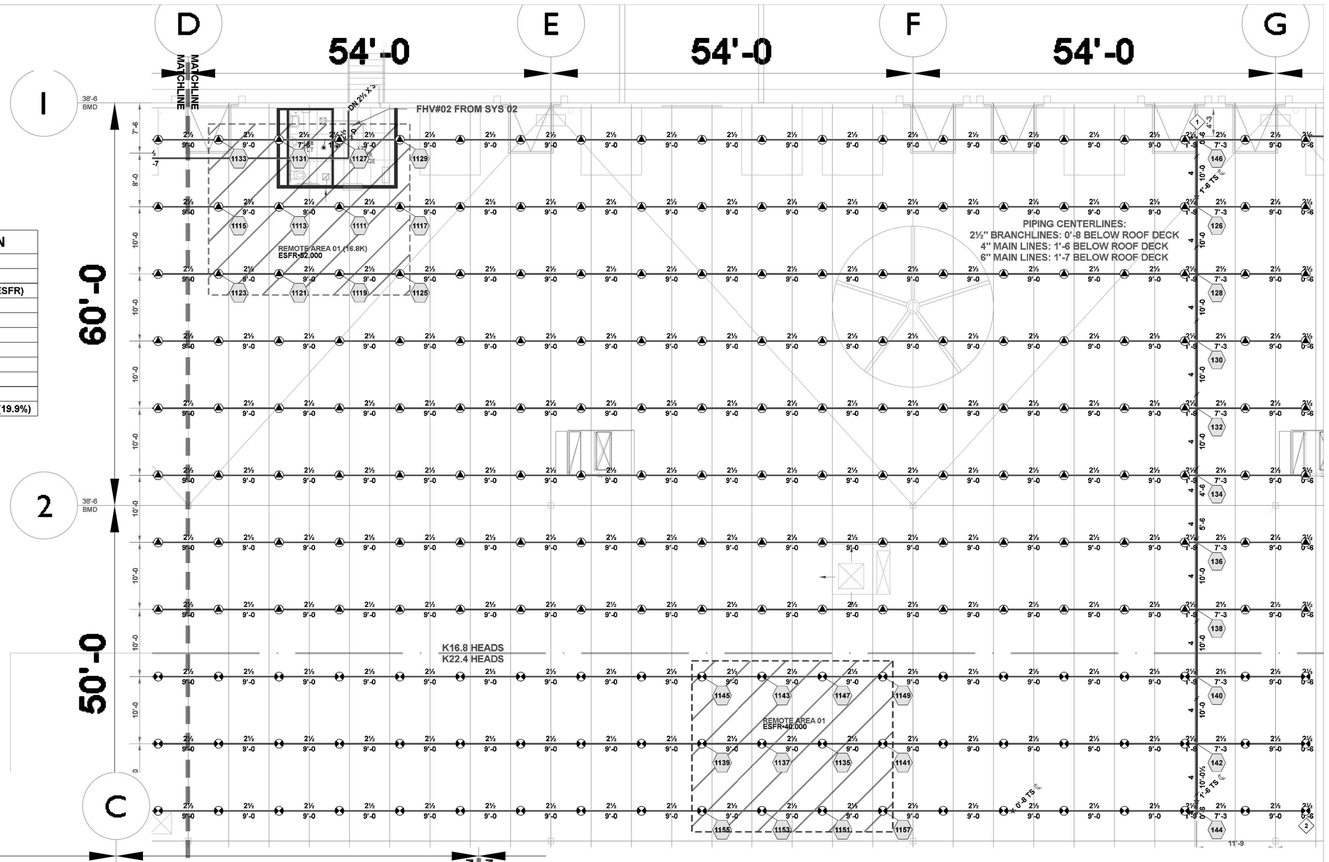
OVERHEAD PIPING LAYOUT

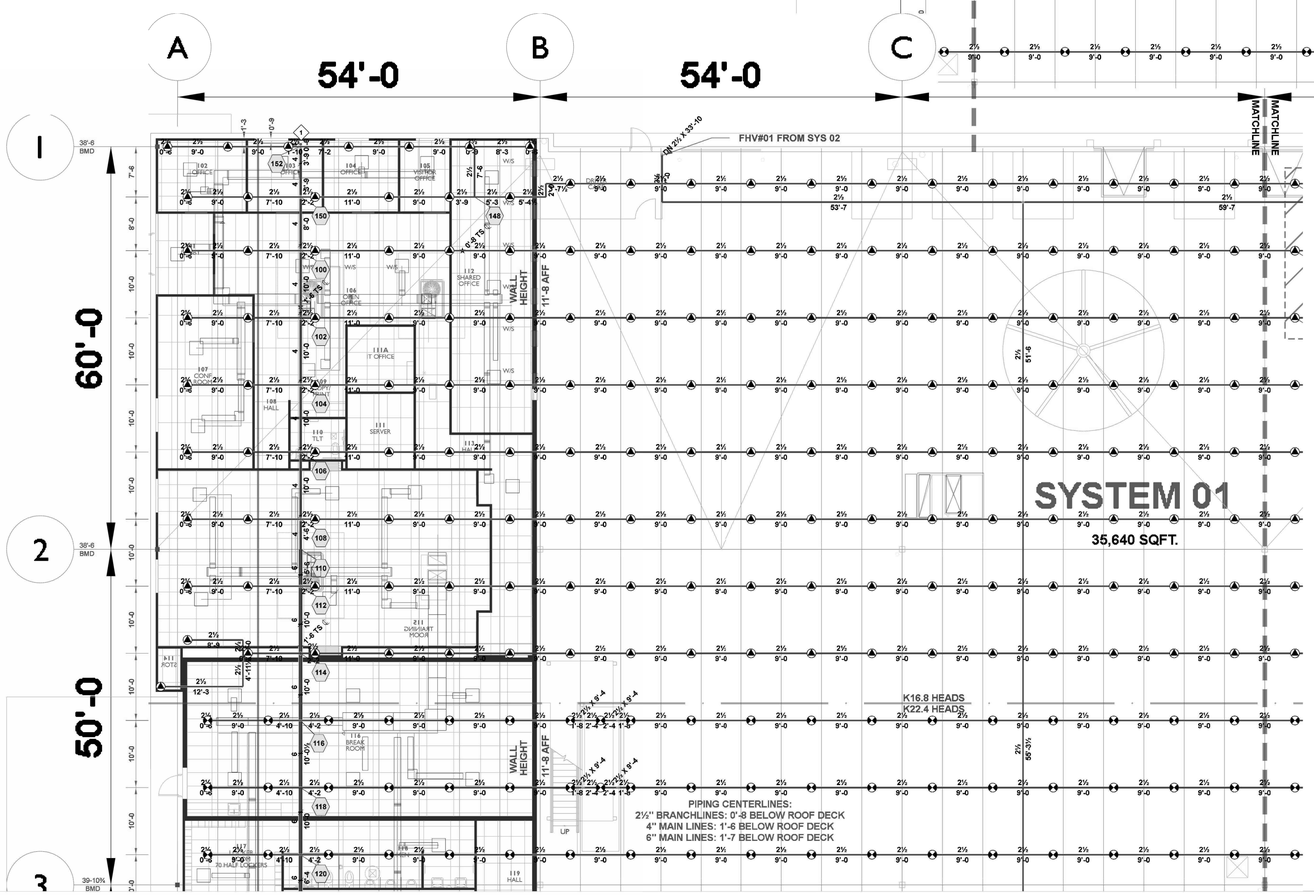
**JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6 OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE

◇ - AUXILIARY DRAIN SEE FP0.0 FOR DETAIL

◇ - AIR VENT SEE FP0.0 FOR DETAIL

HYDRAULIC INFORMATION	
REMOTE AREA 01 (K16.8)	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	52.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	16.8
TOTAL WATER REQUIRED	1711.69
TOTAL PRESSURE REQUIRED	71.795
BASE OF RISER (GPM)	1711.69
BASE OF RISER (PSI)	71.795
SAFETY MARGIN (PSI)	+17.785 (19.9%)



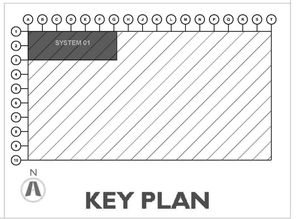


SYSTEM 01 FP LAYOUT

SCALE: 3/32" = 1'-0"

HYDRAULIC INFORMATION	
REMOTE AREA 01	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1965.72
TOTAL PRESSURE REQUIRED	81.112
BASE OF RISER (GPM)	1965.72
BASE OF RISER (PSI)	81.112
SAFETY MARGIN (PSI)	+6.303 (7.2%)

SPRINKLER LEGEND								
SYMBOL	QUANTITY	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
▲	2054	16.8	PENDENT	¾	FAST	BRASS	200 °F	
⊗	4	8	PENDENT	¾	QUICK	BRASS	200 °F	
◆	2754	22.4	PENDENT	1	FAST	BRASS	212 °F	
●	49	5.6	PENDENT	½	QUICK	CHROME	135 °F	
◎	6	5.6	PENDENT	½	QUICK	CHROME	135 °F	
◆	303	16.8	PENDENT	¾	QUICK	BRASS	205 °F	
◇	65	16.8	PENDENT	¾	QUICK	BRASS	165 °F	
	TOTAL = 5235							



KEY PLAN

CURRAN ARCHITECTURE
5719 LAWTON LOOP E. DR. #212
INDIANAPOLIS, IN 46216
O :: 317 . 288 . 0681
F :: 317 . 288 . 0753

SCANNELL PROPERTIES

CERTIFICATION

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS BUILDING A LOT 1

1100 NW MAIN ST.
LEE'S SUMMIT, MO 64086

F.E. MORAN, INC.
FIRE PROTECTION
WWW.FEMORANINC.COM

ISSUE DATES	
PERMIT SET	02.18.22
1 TENANT IMPROVEMENT	09.07.22

210300

FP2.1

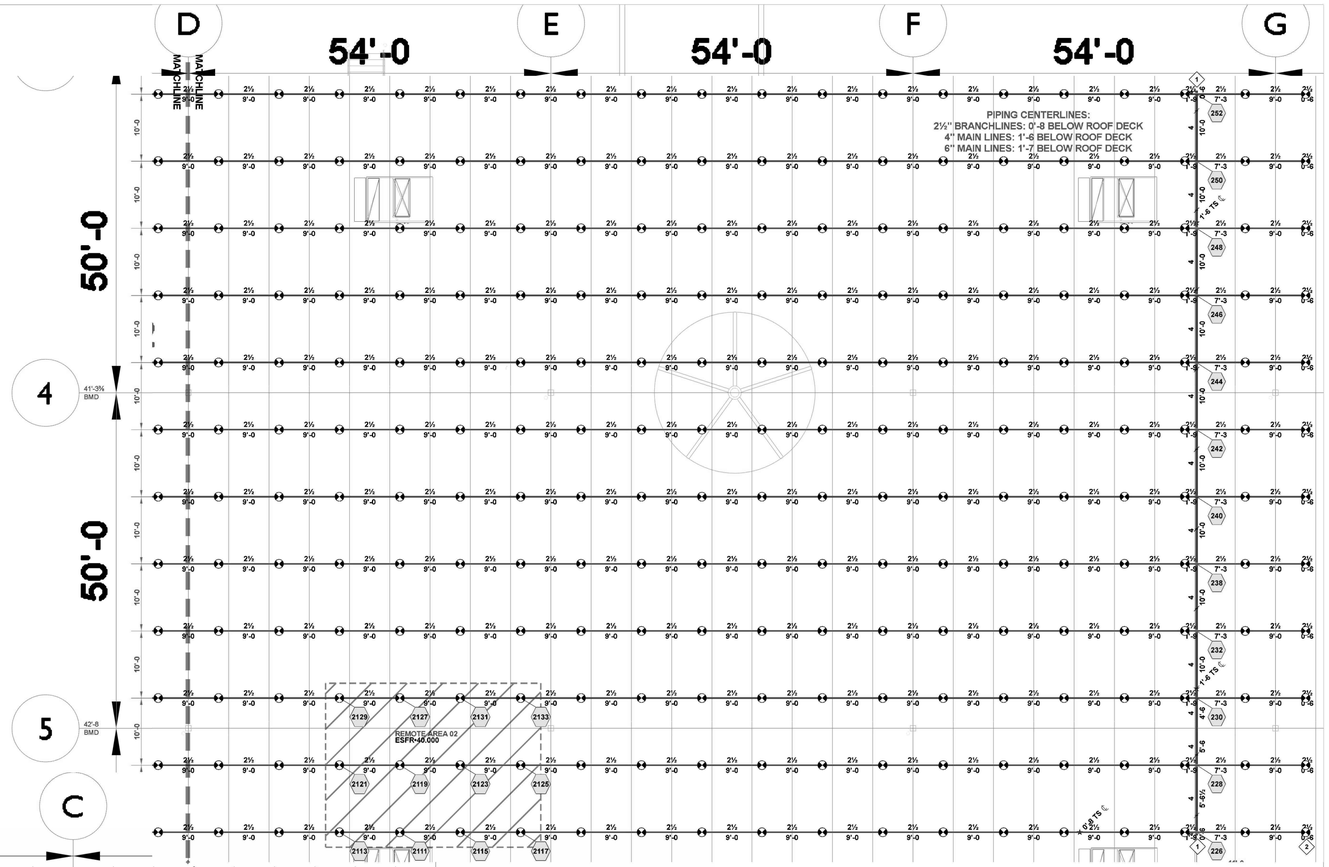
SYSTEM 01 FP LAYOUT

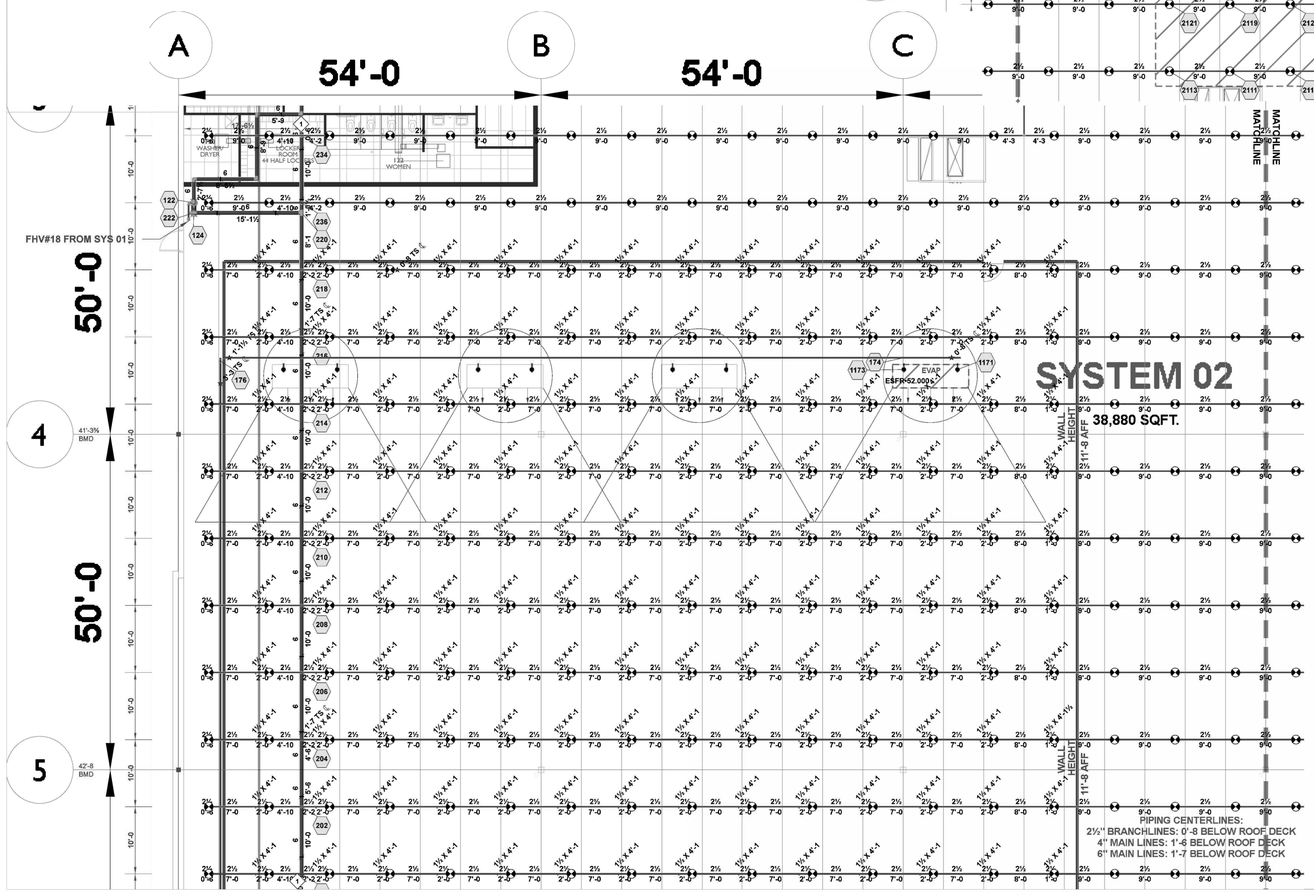
**JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6 OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE

◇ - AUXILIARY DRAIN SEE FP0.0 FOR DETAIL

◇ - AIR VENT SEE FP0.0 FOR DETAIL

HYDRAULIC INFORMATION	
REMOTE AREA COOLER	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	52.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	2
K-FACTOR	25.2
TOTAL WATER REQUIRED	607.37
TOTAL PRESSURE REQUIRED	60.867
BASE OF RISER (GPM)	607.37
BASE OF RISER (PSI)	60.867
SAFETY MARGIN (PSI)	+35.041 (36.5%)



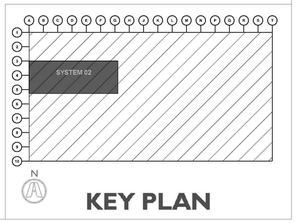


SYSTEM 02 FP LAYOUT

SCALE: 3/32" = 1'-0"

HYDRAULIC INFORMATION	
REMOTE AREA 02	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1956.70
TOTAL PRESSURE REQUIRED	77.636
BASE OF RISER (GPM)	1956.70
BASE OF RISER (PSI)	77.636
SAFETY MARGIN (PSI)	+9.860 (11.3%)

SPRINKLER LEGEND								
SYMBOL	QUANTITY	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
▲	2054	16.8	PENDENT	¾	FAST	BRASS	200 °F	
⊗	4	8	PENDENT	¾	QUICK	BRASS	200 °F	
◐	2754	22.4	PENDENT	1	FAST	BRASS	212 °F	
●	49	5.6	PENDENT	½	QUICK	CHROME	135 °F	
◎	6	5.6	PENDENT	½	QUICK	CHROME	135 °F	
◆	303	16.8	PENDENT	¾	QUICK	BRASS	205 °F	
⊘	65	16.8	PENDENT	¾	QUICK	BRASS	165 °F	
	TOTAL = 5235							



KEY PLAN

CURRAN ARCHITECTURE
5719 LAWTON LOOP E. DR. #212
INDIANAPOLIS, IN 46216
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SCANNELL PROPERTIES

CERTIFICATION

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS BUILDING A LOT 1

1100 NW MAIN ST.
LEE'S SUMMIT, MO 64086

F.E. MORAN, INC.
FIRE PROTECTION

ISSUE DATES	
PERMIT SET	02.18.22
1 TENANT IMPROVEMENT	09.07.22

210300

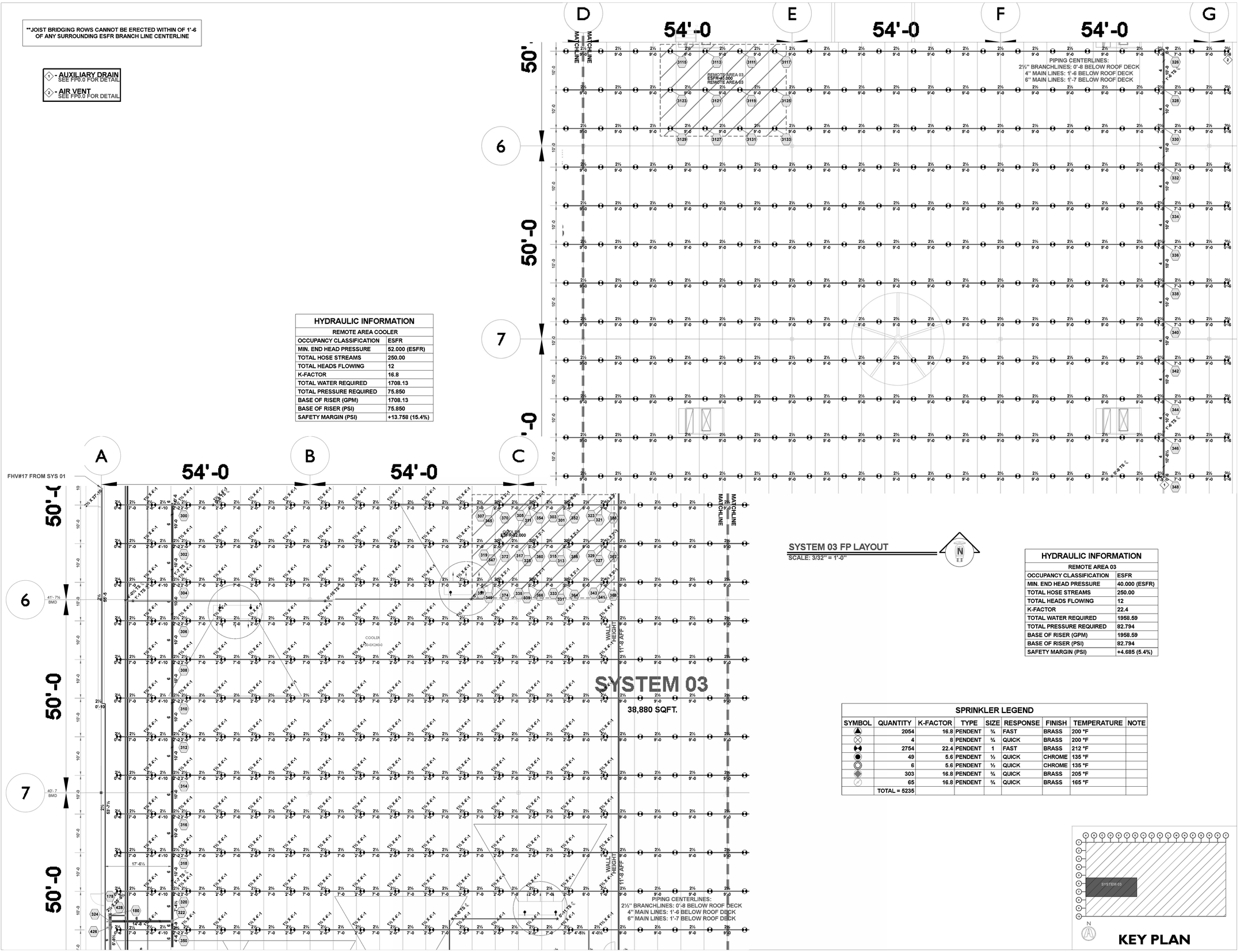
FP2.2

SYSTEM 02 FP LAYOUT

**JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6 OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE

◇ - AUXILIARY DRAIN SEE FP0.0 FOR DETAIL

◇ - AIR VENT SEE FP0.0 FOR DETAIL



HYDRAULIC INFORMATION

REMOTE AREA COOLER	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	52.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	16.8
TOTAL WATER REQUIRED	1708.13
TOTAL PRESSURE REQUIRED	75.850
BASE OF RISER (GPM)	1708.13
BASE OF RISER (PSI)	75.850
SAFETY MARGIN (PSI)	+13.758 (15.4%)

SYSTEM 03 FP LAYOUT

SCALE: 3/32" = 1'-0"

HYDRAULIC INFORMATION

REMOTE AREA 03	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1958.59
TOTAL PRESSURE REQUIRED	82.794
BASE OF RISER (GPM)	1958.59
BASE OF RISER (PSI)	82.794
SAFETY MARGIN (PSI)	+4.685 (5.4%)

SPRINKLER LEGEND

SYMBOL	QUANTITY	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
▲	2054	16.8	PENDENT	¾	FAST	BRASS	200 °F	
⊗	4	8	PENDENT	¾	QUICK	BRASS	200 °F	
◆	2754	22.4	PENDENT	1	FAST	BRASS	212 °F	
●	49	5.6	PENDENT	½	QUICK	CHROME	135 °F	
◎	6	5.6	PENDENT	½	QUICK	CHROME	135 °F	
◆	303	16.8	PENDENT	¾	QUICK	BRASS	205 °F	
⊘	65	16.8	PENDENT	¾	QUICK	BRASS	165 °F	
	TOTAL = 5235							

KEY PLAN

CURRAN ARCHITECTURE
5719 LAWTON LOOP E. DR. #212
INDIANAPOLIS, IN 46216
O :: 317 . 288 . 0681
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SCANNELL PROPERTIES

CERTIFICATION

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS BUILDING A LOT 1

1100 NW MAIN ST.
LEE'S SUMMIT, MO 64086

F.E. MORAN, INC.
FIRE PROTECTION

ISSUE DATES

PERMIT SET	02.18.22
1 TENANT IMPROVEMENT	09.07.22

210300

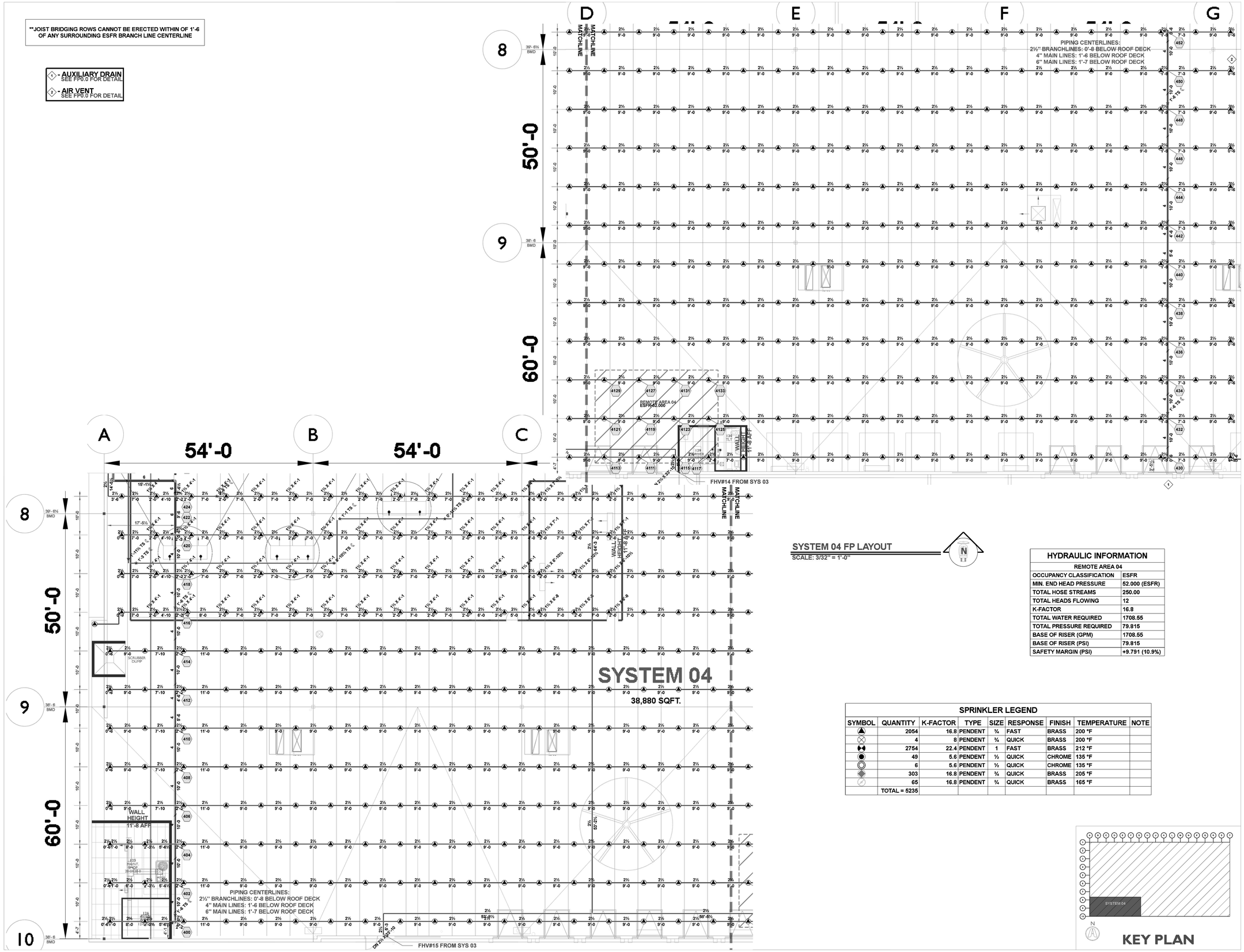
FP2.3

SYSTEM 03 FP LAYOUT

**JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6 OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE

◇ - AUXILIARY DRAIN SEE FP0.0 FOR DETAIL

◇ - AIR VENT SEE FP0.0 FOR DETAIL



SYSTEM 04 FP LAYOUT

SCALE: 3/32" = 1'-0"

HYDRAULIC INFORMATION	
REMOTE AREA 04	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	52.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	16.8
TOTAL WATER REQUIRED	1708.55
TOTAL PRESSURE REQUIRED	79.815
BASE OF RISER (GPM)	1708.55
BASE OF RISER (PSI)	79.815
SAFETY MARGIN (PSI)	+9.791 (10.9%)

SPRINKLER LEGEND								
SYMBOL	QUANTITY	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
	2054	16.8	PENDENT	¾	FAST	BRASS	200 °F	
	4	8	PENDENT	¾	QUICK	BRASS	200 °F	
	2754	22.4	PENDENT	1	FAST	BRASS	212 °F	
	49	5.6	PENDENT	½	QUICK	CHROME	135 °F	
	6	5.6	PENDENT	½	QUICK	CHROME	135 °F	
	303	16.8	PENDENT	¾	QUICK	BRASS	205 °F	
	65	16.8	PENDENT	¾	QUICK	BRASS	165 °F	
	TOTAL = 5235							

KEY PLAN

CURRAN ARCHITECTURE
5719 LAWTON LOOP E. DR. #212
INDIANAPOLIS, IN 46216
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F :: 317 . 288 . 0753

SCANNELL PROPERTIES

CERTIFICATION

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS BUILDING A LOT 1

1100 NW MAIN ST.
LEE'S SUMMIT, MO 64086

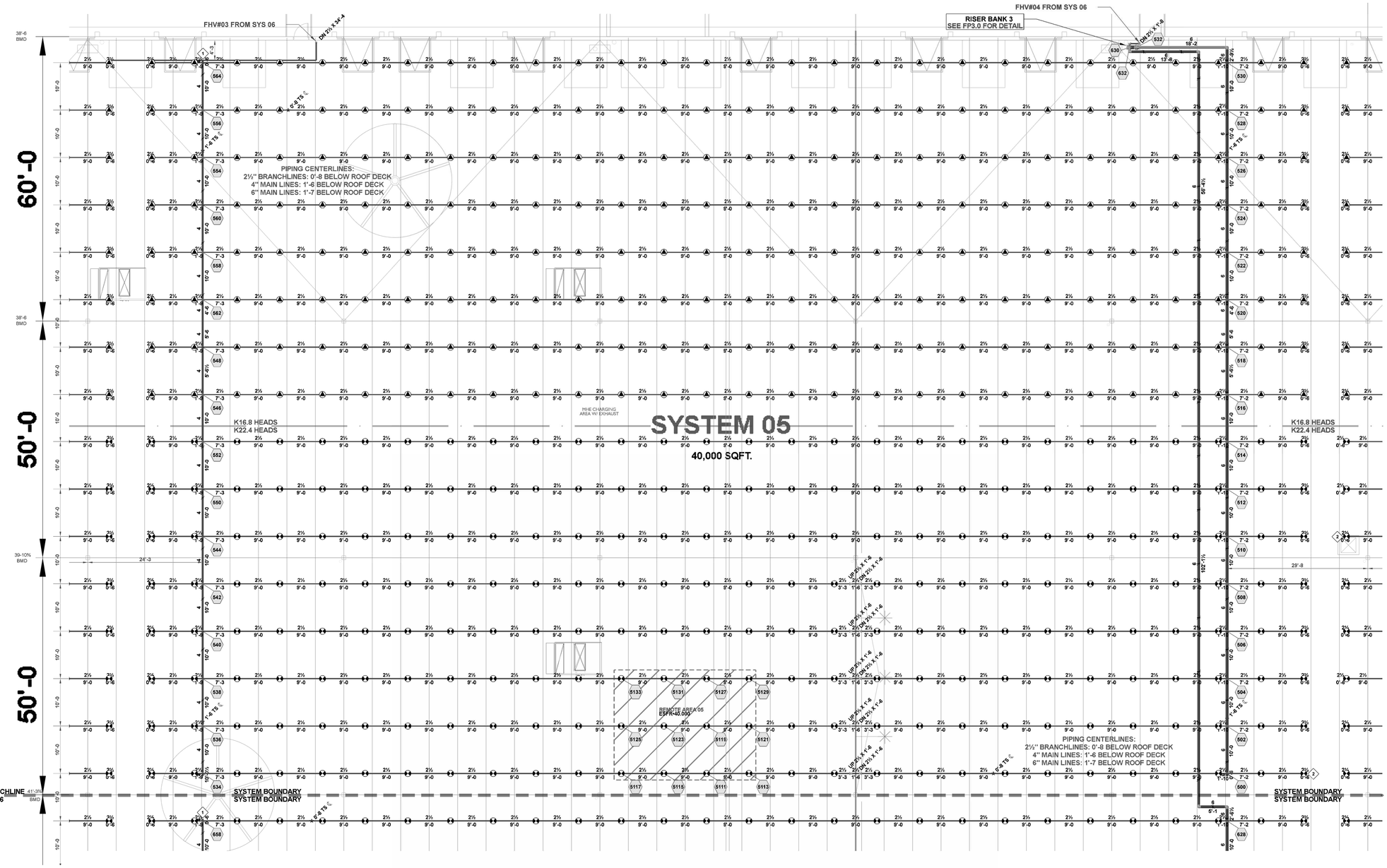
F.E. MORAN, INC.
FIRE PROTECTION
WWW.FEMORANFP.COM

ISSUE DATES	
PERMIT SET	02.18.22
1 TENANT IMPROVEMENT	09.07.22

210300

FP2.4

SYSTEM 04 FP LAYOUT



HYDRAULIC INFORMATION

REMOTE AREA 05	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1959.12
TOTAL PRESSURE REQUIRED	73.084
BASE OF RISER (GPM)	1959.12
BASE OF RISER (PSI)	73.084
SAFETY MARGIN (PSI)	+14.391 (16.5%)

SYSTEM 05 FP LAYOUT

SCALE: 3/32" = 1'-0"

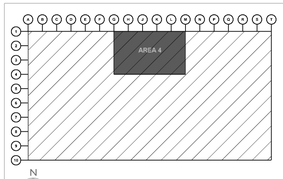
SPRINKLER LEGEND

SYMBOL	MANUFACTURER	SIN	MODEL	QUANTITY	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
▲	VICTAULIC	V4702	FL-QR/ST/ESFR	2054	16.8	PENDENT	¾	FAST	BRASS	200 °F	
⊗	VICTAULIC	V3406	V34	4	8	PENDENT	¾	QUICK	BRASS	200 °F	
◆	VICTAULIC	V4806	ESFR	2754	22.4	PENDENT	1	FAST	BRASS	212 °F	
◉	VIKING	VK600	MICROFAST	49	5.6	PENDENT	½	QUICK	CHROME	135 °F	
◎	VIKING	VK3021		6	5.6	PENDENT	½	QUICK	CHROME	135 °F	
◆	VIKING	VK504	ESFR DRY	303	16.8	PENDENT	¾	QUICK	BRASS	205 °F	
⊘	VIKING	VK504	ESFR DRY	65	16.8	PENDENT	¾	QUICK	BRASS	165 °F	
				TOTAL = 5235							

**JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6 OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE

1 - AUXILIARY DRAIN
SEE FP0.0 FOR DETAIL

2 - AIR VENT
SEE FP0.0 FOR DETAIL



KEY PLAN

CURRAN
ARCHITECTURE
5719 LAWTON LOOP E. DR. #212
INDIANAPOLIS, IN 46216
O :: 317 . 288 . 0681
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SCANNELL PROPERTIES

CERTIFICATION

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS BUILDING A LOT 1

1100 NW MAIN ST.
LEE'S SUMMIT, MO 64086

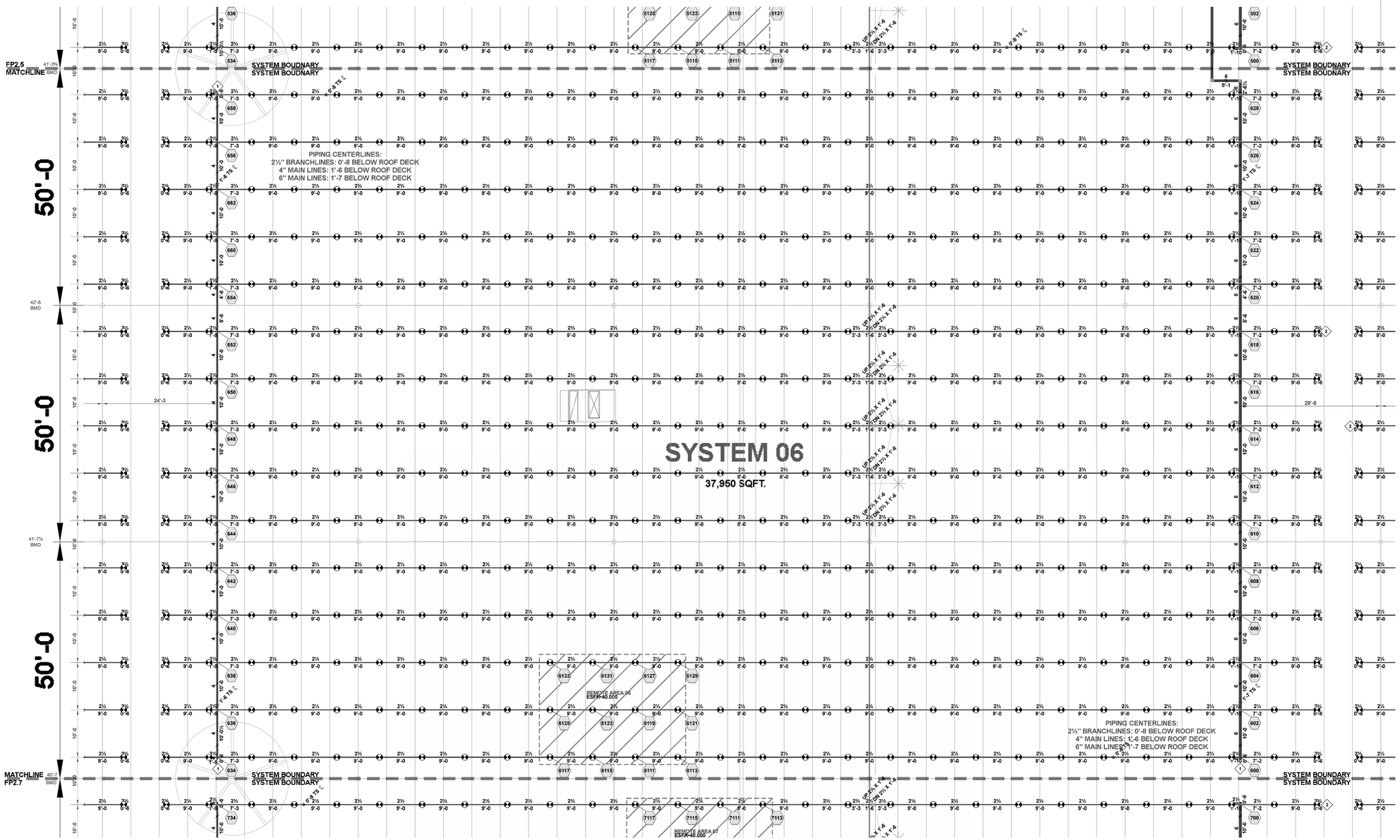
F.E. MORAN, INC.
FIRE PROTECTION
WWW.FEMORANINC.COM

ISSUE DATES	
PERMIT SET	02.18.22
1 TENANT IMPROVEMENT	09.07.22

210300

FP2.5

SYSTEM 05 FP LAYOUT



HYDRAULIC INFORMATION

REMOTE AREA 06	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1956.47
TOTAL PRESSURE REQUIRED	80.972
BASE OF RISER (GPM)	1956.47
BASE OF RISER (PSI)	80.972
SAFETY MARGIN (PSI)	+6.527 (7.5%)

SYSTEM 06 FP LAYOUT

SCALE: 3/32" = 1'-0"

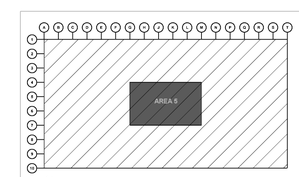
SPRINKLER LEGEND

SYMBOL	QUANTITY	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
	2054	16.8	PENDENT	¾	FAST	BRASS	200 °F	
	4	8	PENDENT	¾	QUICK	BRASS	200 °F	
	2754	22.4	PENDENT	1	FAST	BRASS	212 °F	
	49	5.6	PENDENT	½	QUICK	CHROME	135 °F	
	6	5.6	PENDENT	½	QUICK	CHROME	135 °F	
	303	16.8	PENDENT	¾	QUICK	BRASS	205 °F	
	65	16.8	PENDENT	¾	QUICK	BRASS	165 °F	
	TOTAL = 5235							

**JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6 OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE

1 - AUXILIARY DRAIN
SEE FP0.0 FOR DETAIL

2 - AIR VENT
SEE FP0.0 FOR DETAIL



KEY PLAN

CURRAN
ARCHITECTURE
5719 LAWTON LOOP E. DR. #212
INDIANAPOLIS, IN 46216
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SCANNELL
PROPERTIES

CERTIFICATION

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS
BUILDING A LOT 1

1100 NW MAIN ST.
LEE'S SUMMIT, MO 64086

F.E. MORAN, INC.
FIRE PROTECTION
WWW.FEMORANINC.COM

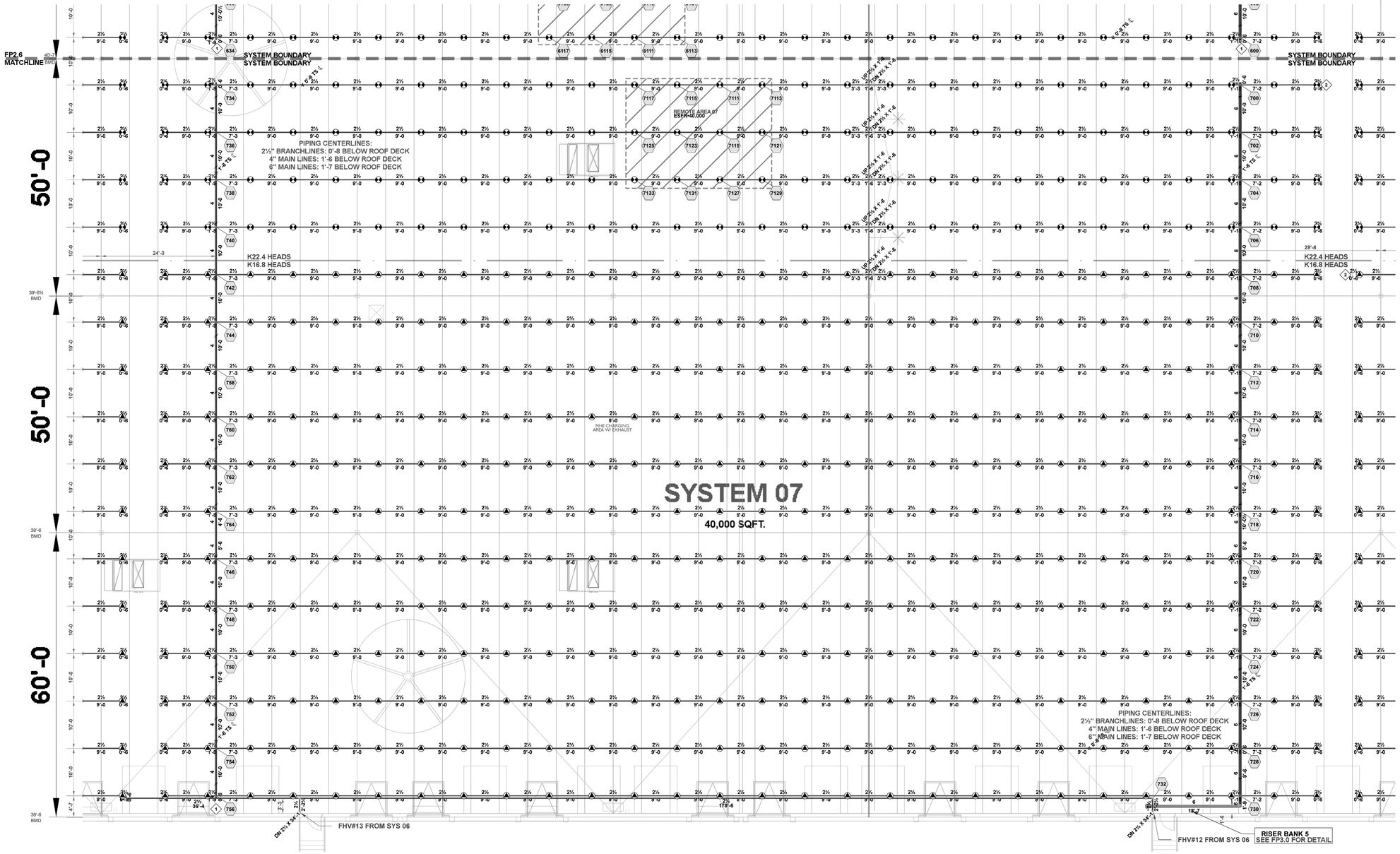
ISSUE DATES

	PERMIT SET	02.18.22
1	TENANT IMPROVEMENT	09.07.22

210300

FP2.6

SYSTEM 06 FP
LAYOUT



SYSTEM 07 FP LAYOUT

SCALE: 3/32" = 1'-0"

HYDRAULIC INFORMATION	
REMOTE AREA 07	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1958.72
TOTAL PRESSURE REQUIRED	73.605
BASE OF RISER (GPM)	1958.72
BASE OF RISER (PSI)	73.605
SAFETY MARGIN (PSI)	+13.874 (15.9%)

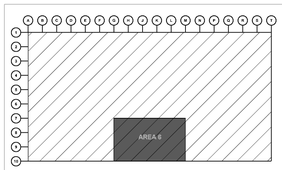
SPRINKLER LEGEND

SYMBOL	QUANTITY	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
	2054	16.8	PENDENT	¾	FAST	BRASS	200 °F	
	4	8	PENDENT	¾	QUICK	BRASS	200 °F	
	2754	22.4	PENDENT	1	FAST	BRASS	212 °F	
	49	5.6	PENDENT	½	QUICK	CHROME	135 °F	
	6	5.6	PENDENT	½	QUICK	CHROME	135 °F	
	303	16.8	PENDENT	¾	QUICK	BRASS	205 °F	
	65	16.8	PENDENT	¾	QUICK	BRASS	165 °F	
	TOTAL = 5235							

**JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6 OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE

1 - AUXILIARY DRAIN SEE FP0.0 FOR DETAIL

2 - AIR VENT SEE FP0.0 FOR DETAIL



KEY PLAN

CURRAN ARCHITECTURE
5719 LAWTON LOOP E. DR. #212
INDIANAPOLIS, IN 46216
O :: 317 . 288 . 0681
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SCANNELL PROPERTIES

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS BUILDING A LOT 1

1100 NW MAIN ST.
LEE'S SUMMIT, MO 64086

F.E. MORAN, INC.
FIRE PROTECTION

ISSUE DATES

	PERMIT SET	02.18.22
1	TENANT IMPROVEMENT	09.07.22

210300

FP2.7

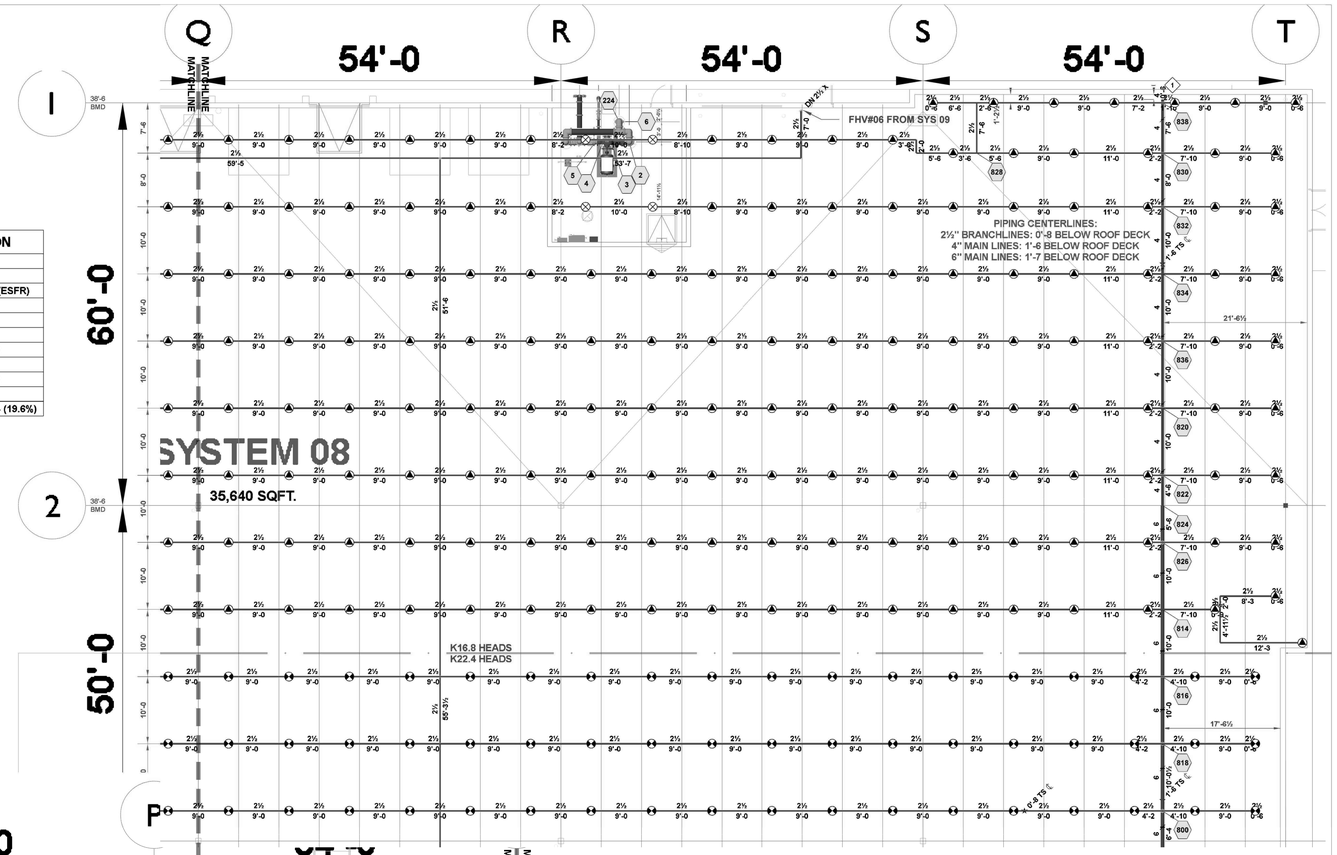
SYSTEM 07 FP LAYOUT

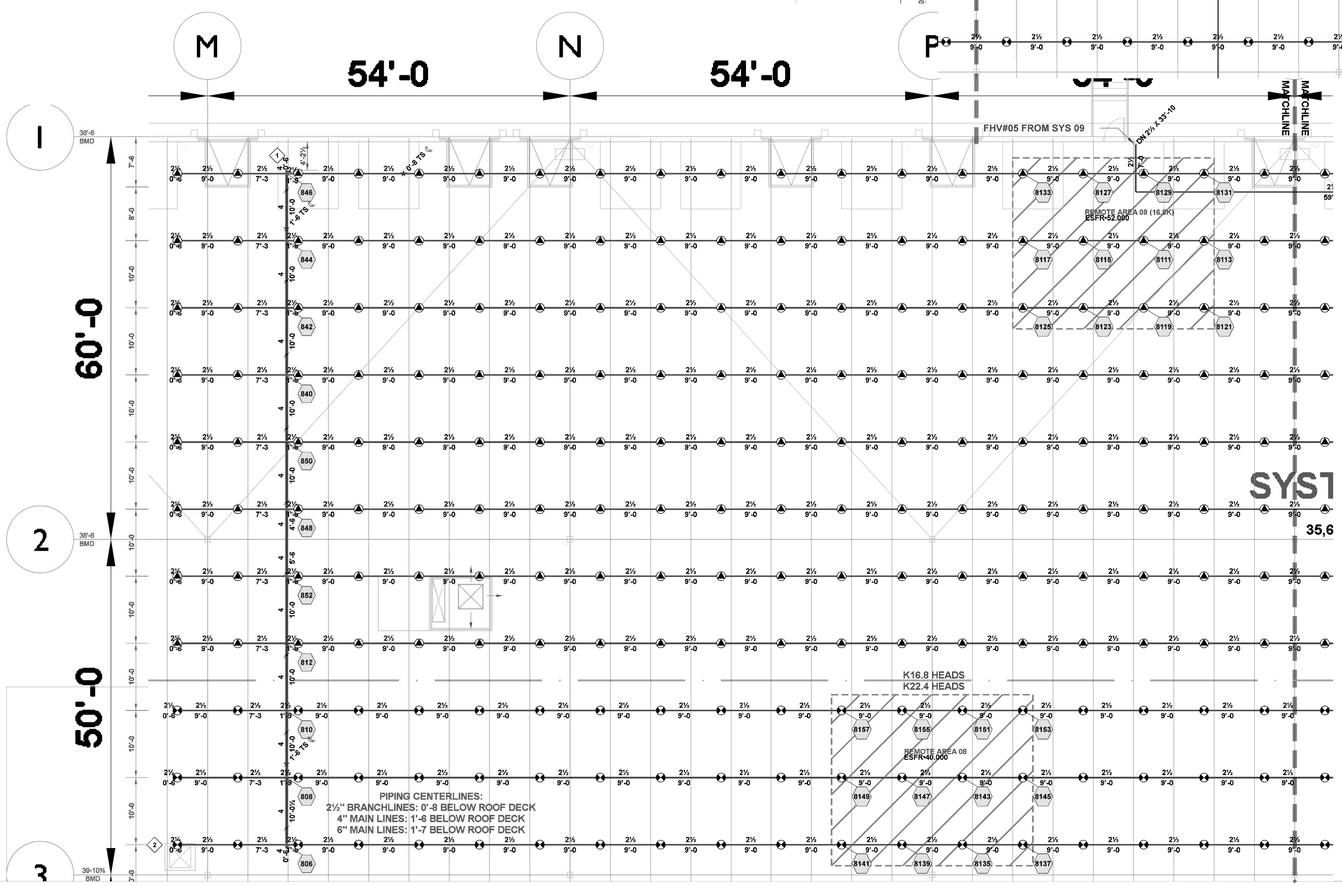
**JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6 OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE

◇ - AUXILIARY DRAIN SEE FP0.0 FOR DETAIL

◇ - AIR VENT SEE FP0.0 FOR DETAIL

HYDRAULIC INFORMATION	
REMOTE AREA 08 (K16.8)	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	52.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	16.8
TOTAL WATER REQUIRED	1711.62
TOTAL PRESSURE REQUIRED	72.057
BASE OF RISER (GPM)	1711.62
BASE OF RISER (PSI)	72.057
SAFETY MARGIN (PSI)	+17.524 (19.6%)



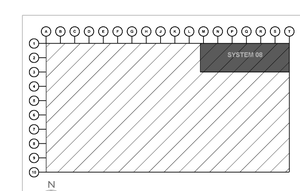


SYSTEM 08 FP LAYOUT

SCALE: 3/32" = 1'-0"

HYDRAULIC INFORMATION	
REMOTE AREA 08	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1956.80
TOTAL PRESSURE REQUIRED	79.724
BASE OF RISER (GPM)	1956.80
BASE OF RISER (PSI)	79.724
SAFETY MARGIN (PSI)	+7.772 (8.9%)

SPRINKLER LEGEND								
SYMBOL	QUANTITY	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
▲	2054	16.8	PENDENT	¾	FAST	BRASS	200 °F	
⊗	4	8	PENDENT	¾	QUICK	BRASS	200 °F	
◆	2754	22.4	PENDENT	1	FAST	BRASS	212 °F	
●	49	5.6	PENDENT	½	QUICK	CHROME	135 °F	
◎	6	5.6	PENDENT	½	QUICK	CHROME	135 °F	
◆	303	16.8	PENDENT	¾	QUICK	BRASS	205 °F	
⊘	65	16.8	PENDENT	¾	QUICK	BRASS	165 °F	
	TOTAL = 5235							



KEY PLAN

CURRAN ARCHITECTURE
5719 LAWTON LOOP E. DR. #212
INDIANAPOLIS, IN 46216
O :: 317 . 288 . 0681
F :: 317 . 288 . 0753

SCANNELL PROPERTIES

CERTIFICATION

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS BUILDING A LOT 1

1100 NW MAIN ST.
LEE'S SUMMIT, MO 64086

F.E. MORAN, INC.
FIRE PROTECTION

ISSUE DATES	
PERMIT SET	02.18.22
1 TENANT IMPROVEMENT	09.07.22

210300

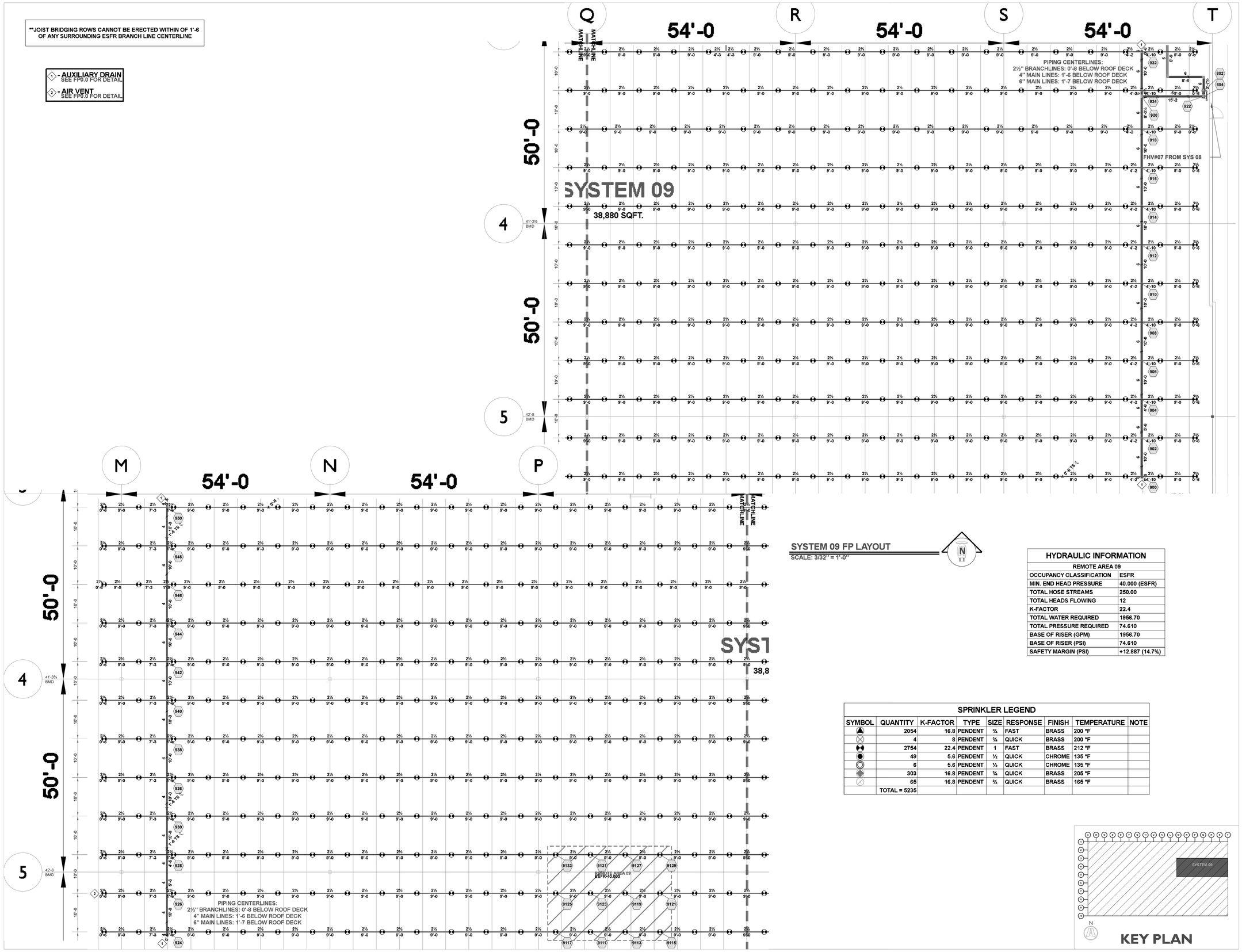
FP2.8

SYSTEM 08 FP LAYOUT

**JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6 OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE

◇ - AUXILIARY DRAIN SEE FP0.0 FOR DETAIL

◇ - AIR VENT SEE FP0.0 FOR DETAIL



SYSTEM 09 FP LAYOUT

SCALE: 3/32" = 1'-0"

HYDRAULIC INFORMATION	
REMOTE AREA 09	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1956.70
TOTAL PRESSURE REQUIRED	74.610
BASE OF RISER (GPM)	1956.70
BASE OF RISER (PSI)	74.610
SAFETY MARGIN (PSI)	+12.887 (14.7%)

SPRINKLER LEGEND								
SYMBOL	QUANTITY	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
▲	2054	16.8	PENDENT	¾	FAST	BRASS	200 °F	
⊗	4	8	PENDENT	¾	QUICK	BRASS	200 °F	
◆	2754	22.4	PENDENT	1	FAST	BRASS	212 °F	
●	49	5.6	PENDENT	½	QUICK	CHROME	135 °F	
◎	6	5.6	PENDENT	½	QUICK	CHROME	135 °F	
◆	303	16.8	PENDENT	¾	QUICK	BRASS	205 °F	
⊘	65	16.8	PENDENT	¾	QUICK	BRASS	165 °F	
	TOTAL = 5235							

KEY PLAN

CURRAN ARCHITECTURE
5719 LAWTON LOOP E. DR. #212
INDIANAPOLIS, IN 46216
O :: 317 . 288 . 0681
F :: 317 . 288 . 0753

SCANNELL PROPERTIES

CERTIFICATION

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS BUILDING A LOT 1

1100 NW MAIN ST.
LEE'S SUMMIT, MO 64086

F.E. MORAN, INC.
FIRE PROTECTION

ISSUE DATES

	PERMIT SET	02.18.22
1	TENANT IMPROVEMENT	09.07.22

210300

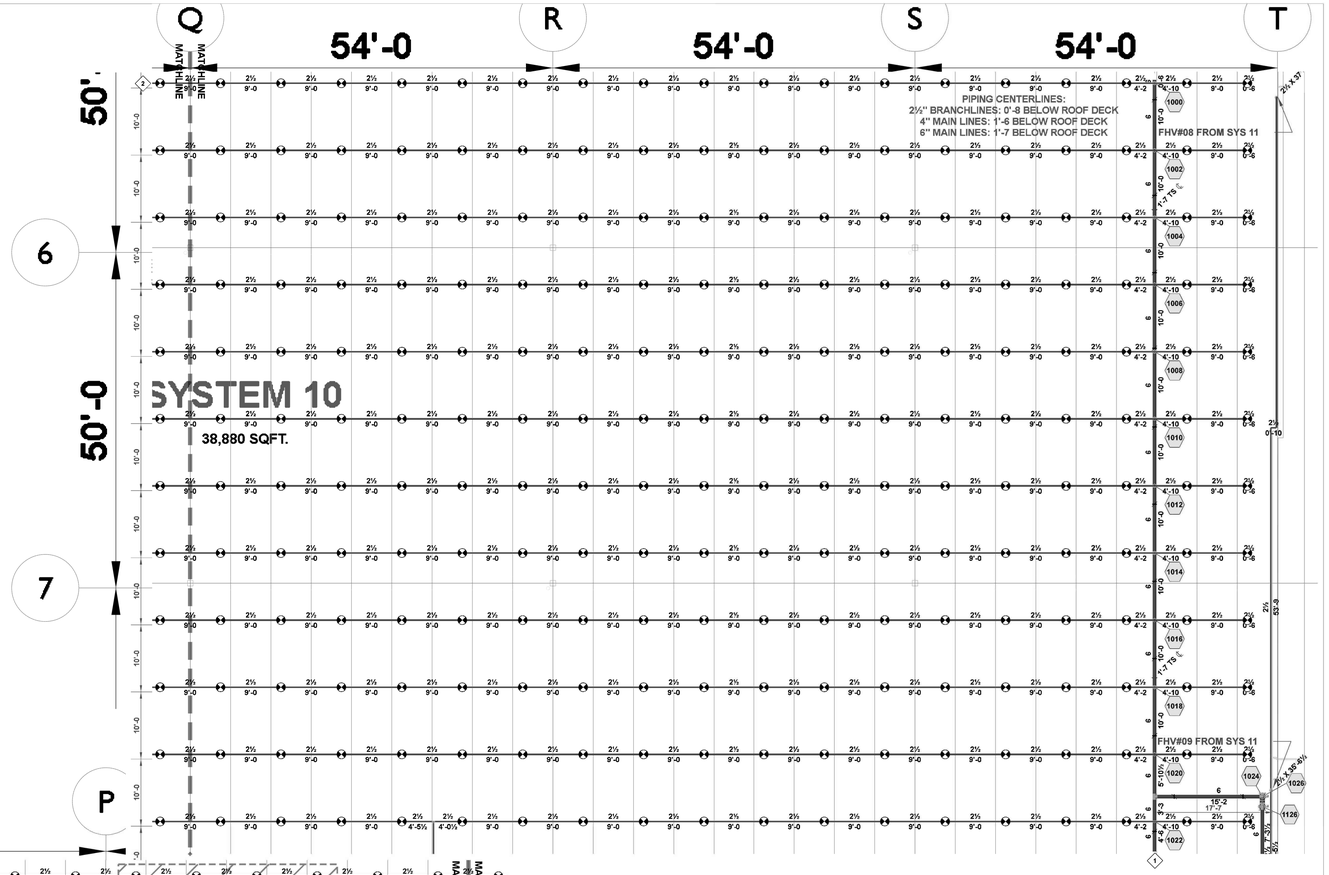
FP2.9

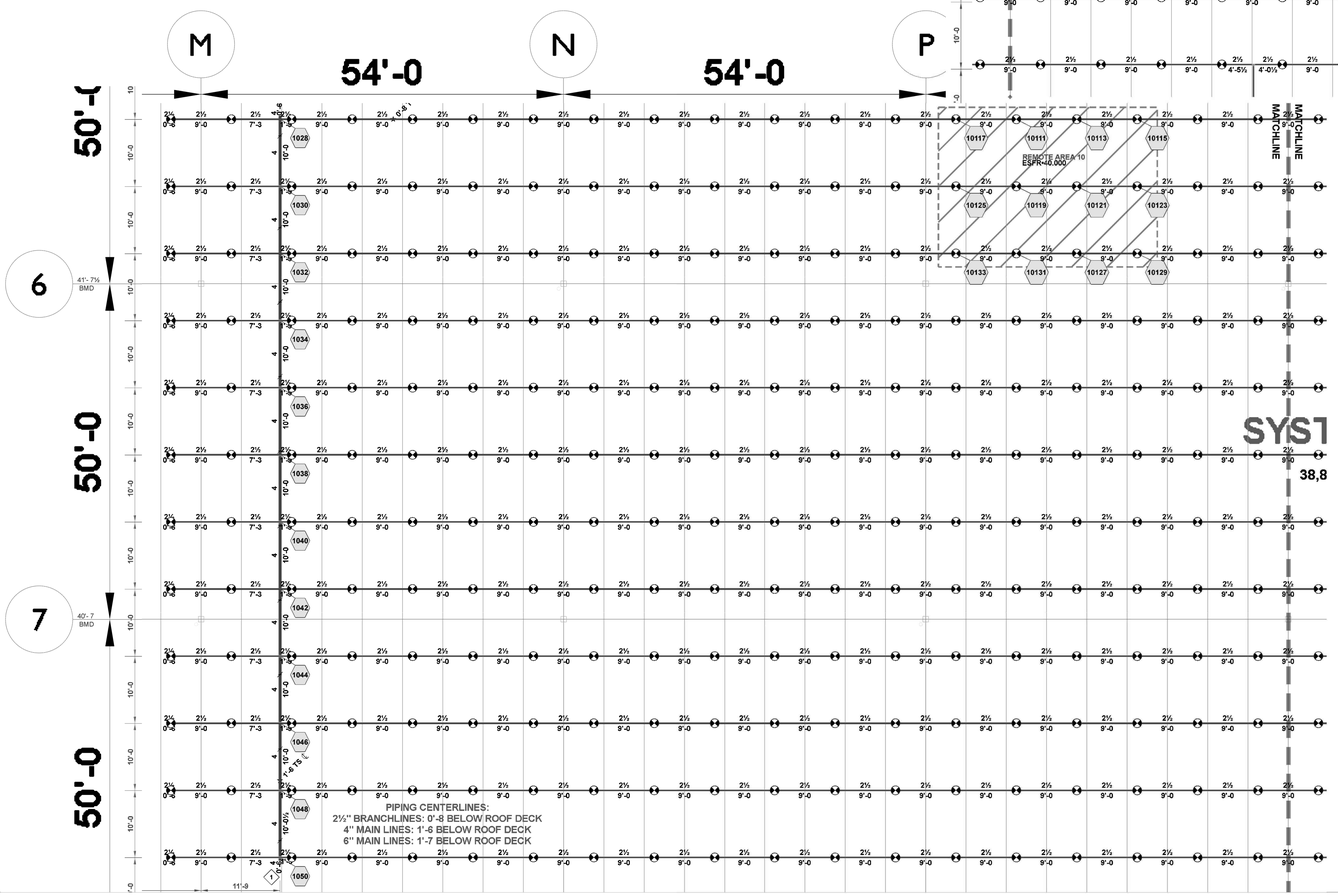
SYSTEM 09 FP LAYOUT

**JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6 OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE

◇ - AUXILIARY DRAIN SEE FP0.0 FOR DETAIL

◇ - AIR VENT SEE FP0.0 FOR DETAIL





SYSTEM 10 FP LAYOUT

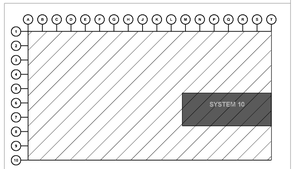
SCALE: 3/32" = 1'-0"

HYDRAULIC INFORMATION

REMOTE AREA 10	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1958.59
TOTAL PRESSURE REQUIRED	76.883
BASE OF RISER (GPM)	1958.59
BASE OF RISER (PSI)	76.883
SAFETY MARGIN (PSI)	+10.597 (12.1%)

SPRINKLER LEGEND

SYMBOL	QUANTITY	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
	2054	16.8	PENDENT	¾	FAST	BRASS	200 °F	
	4	8	PENDENT	¾	QUICK	BRASS	200 °F	
	2754	22.4	PENDENT	1	FAST	BRASS	212 °F	
	49	5.6	PENDENT	½	QUICK	CHROME	135 °F	
	6	5.6	PENDENT	½	QUICK	CHROME	135 °F	
	303	16.8	PENDENT	¾	QUICK	BRASS	205 °F	
	65	16.8	PENDENT	¾	QUICK	BRASS	165 °F	
	TOTAL = 5235							



KEY PLAN

CURRAN ARCHITECTURE
5719 LAWTON LOOP E. DR. #212
INDIANAPOLIS, IN 46216
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F :: 317 . 288 . 0753

SCANNELL PROPERTIES

CERTIFICATION

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS BUILDING A LOT 1

1100 NW MAIN ST.
LEE'S SUMMIT, MO 64086

F.E. MORAN, INC.
FIRE PROTECTION
WWW.FEMORANINC.COM

ISSUE DATES

	PERMIT SET	02.18.22
1	TENANT IMPROVEMENT	09.07.22

210300

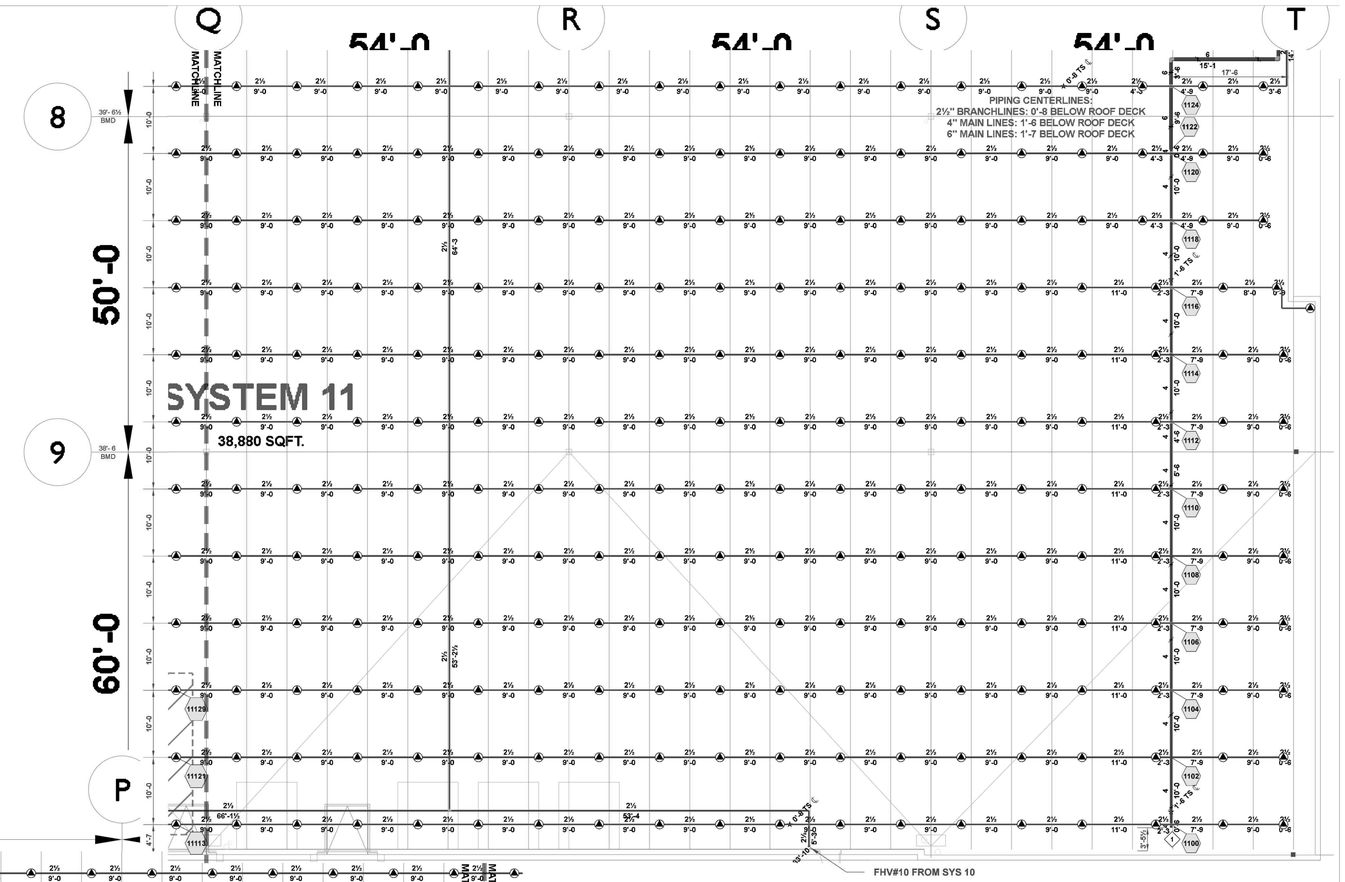
FP2.10

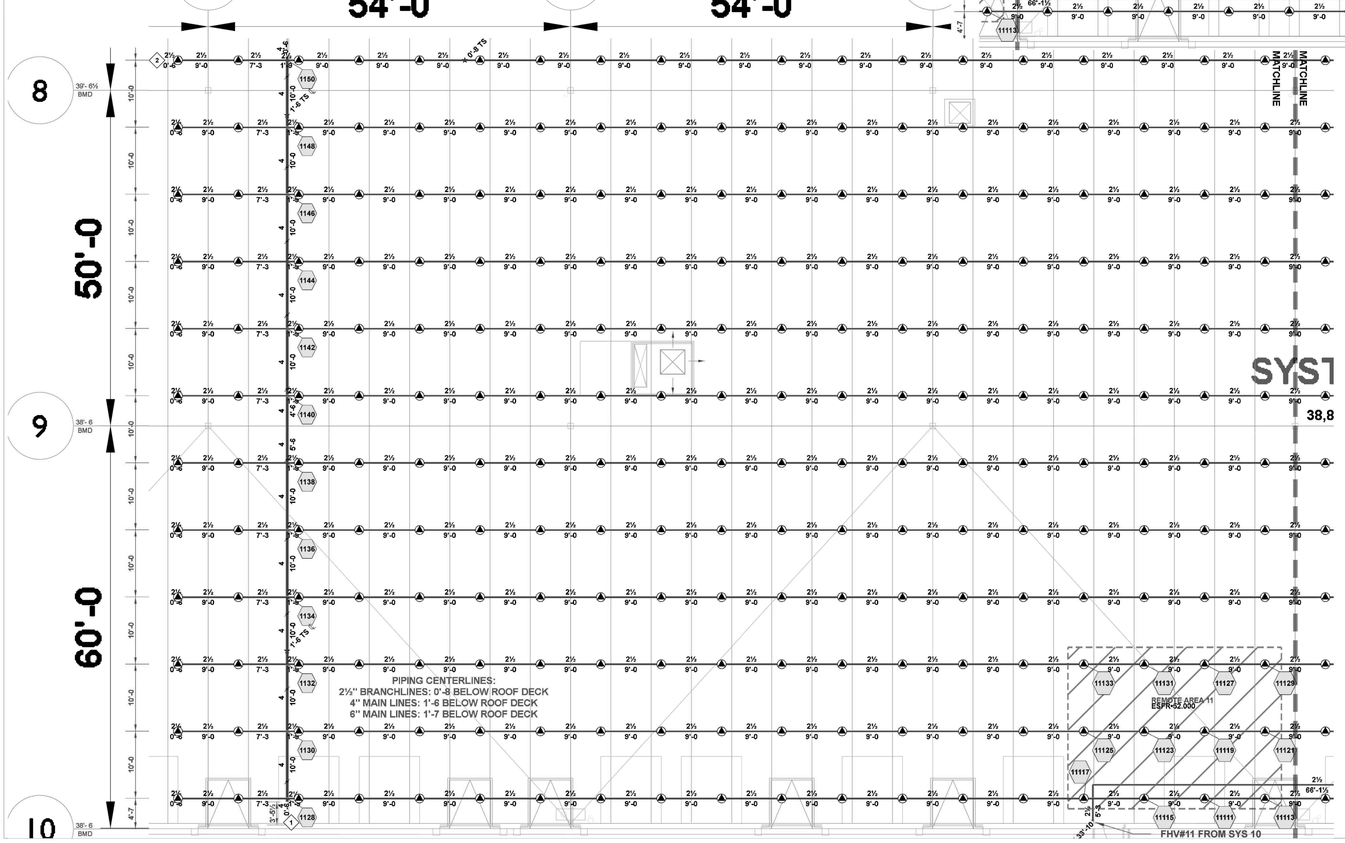
SYSTEM 10 FP LAYOUT

**JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6 OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE

◇ - AUXILIARY DRAIN SEE FP0.0 FOR DETAIL

◇ - AIR VENT SEE FP0.0 FOR DETAIL



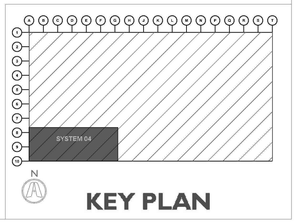


SYSTEM 11 FP LAYOUT

SCALE: 3/32" = 1'-0"

HYDRAULIC INFORMATION	
REMOTE AREA 11	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	52.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	16.8
TOTAL WATER REQUIRED	1708.55
TOTAL PRESSURE REQUIRED	78.267
BASE OF RISER (GPM)	1708.55
BASE OF RISER (PSI)	78.267
SAFETY MARGIN (PSI)	+11.339 (12.7%)

SPRINKLER LEGEND								
SYMBOL	QUANTITY	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
	2054	16.8	PENDENT	¾	FAST	BRASS	200 °F	
	4	8	PENDENT	¾	QUICK	BRASS	200 °F	
	2754	22.4	PENDENT	1	FAST	BRASS	212 °F	
	49	5.6	PENDENT	½	QUICK	CHROME	135 °F	
	6	5.6	PENDENT	½	QUICK	CHROME	135 °F	
	303	16.8	PENDENT	¾	QUICK	BRASS	205 °F	
	65	16.8	PENDENT	¾	QUICK	BRASS	165 °F	
	TOTAL = 5235							



KEY PLAN

CURRAN ARCHITECTURE
5719 LAWTON LOOP E. DR. #212
INDIANAPOLIS, IN 46216
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SCANNELL PROPERTIES

CERTIFICATION

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS BUILDING A LOT 1

1100 NW MAIN ST.
LEE'S SUMMIT, MO 64086

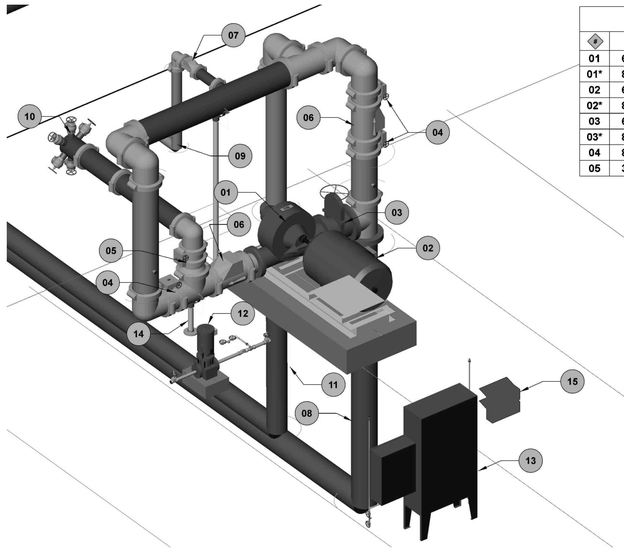
F.E. MORAN, INC.
FIRE PROTECTION
WWW.FEMORAN1.COM

ISSUE DATES	
PERMIT SET	02.18.22
1 TENANT IMPROVEMENT	09.07.22

210300

FP2.11

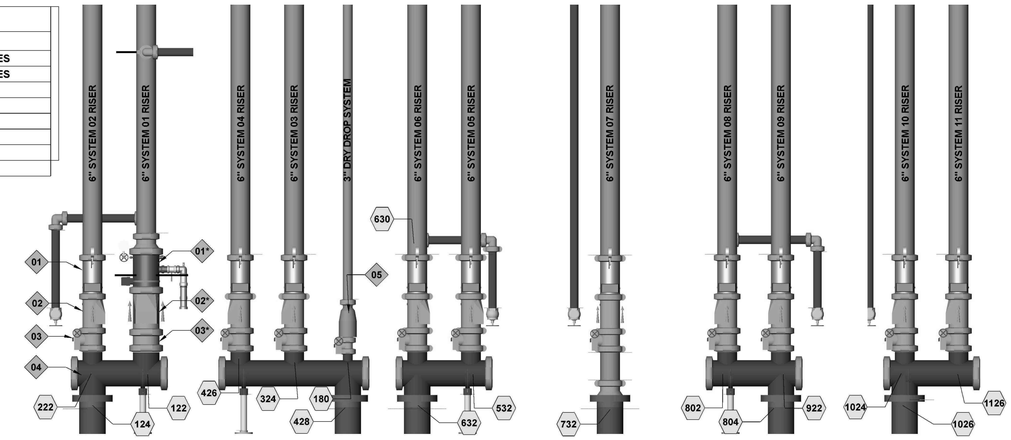
SYSTEM 11 FP LAYOUT



PUMP ROOM (3D VIEW)
SCALE: 3/32" = 1'-0"

#	MATERIAL CALL OUT
01	6" RISER MANIFOLD W/ FLOW SWITCH, INSP. TEST AND 2" MAIN DRAIN, & PRESSURE RELIEF VALVES
01*	8" RISER MANIFOLD W/ FLOW SWITCH, INSP. TEST AND 2" MAIN DRAIN, & PRESSURE RELIEF VALVES
02	6" CHECK VALVE
02*	8" CHECK VALVE
03	6" BUTTERFLY VALVE W/ TAMPER (NORMALLY OPEN)
03*	8" BUTTERFLY VALVE W/ TAMPER (NORMALLY OPEN)
04	8" RISER BANK HEADER
05	3" DRY VALVE

#	MATERIAL CALL OUT
01	2000 GPM @ 60 PSI 10X8 FIRE PUMP
02	SPP 100 HP ELECTRIC MOTOR
03	10" FLG OS&Y GATE VALVE W/ TAMPER (NORMALLY OPEN)
04	10" BUTTERFLY VALVE W/ TAMPER (NORMALLY OPEN)
05	8" BUTTERFLY VALVE W/ TAMPER (NORMALLY CLOSED)
06	10" CHECK VALVE
07	4" CHECK VALVE
08	10" UNDERGROUND SUPPLY PIPING
09	4" FDC PIPING W/ STORZ TYPE CONNECTION
10	8X2½(6) TEST HEADER
11	10" WATER DISCHARGE PIPING TO FIRE LOOP
12	2 HP JOCKEY PUMP ASSEMBLY (15 GPM @ 104 PSI)
13	ELECTRIC & JOCKEY PUMP CONTROLLERS
14	10" PIPE STAND
15	SPARE HEAD BOXES



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

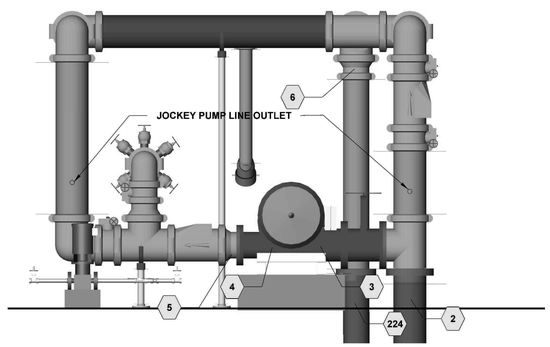
RISER BANK 2
SCALE: 1/2" = 1'-0"

RISER BANK 3
SCALE: 1/2" = 1'-0"

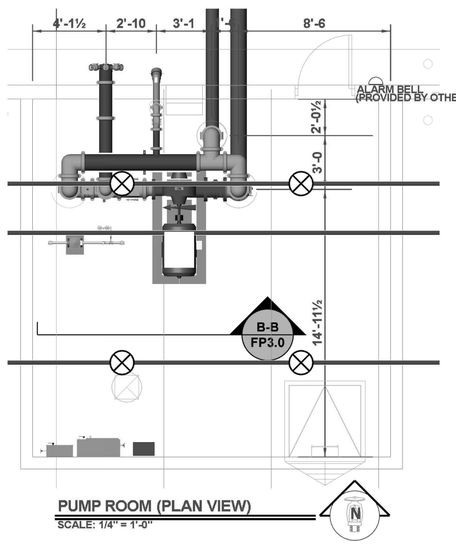
RISER BANK 4
SCALE: 1/2" = 1'-0"

RISER BANK 5
SCALE: 1/2" = 1'-0"

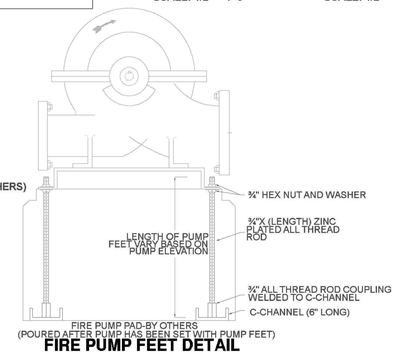
RISER BANK 6
SCALE: 1/2" = 1'-0"



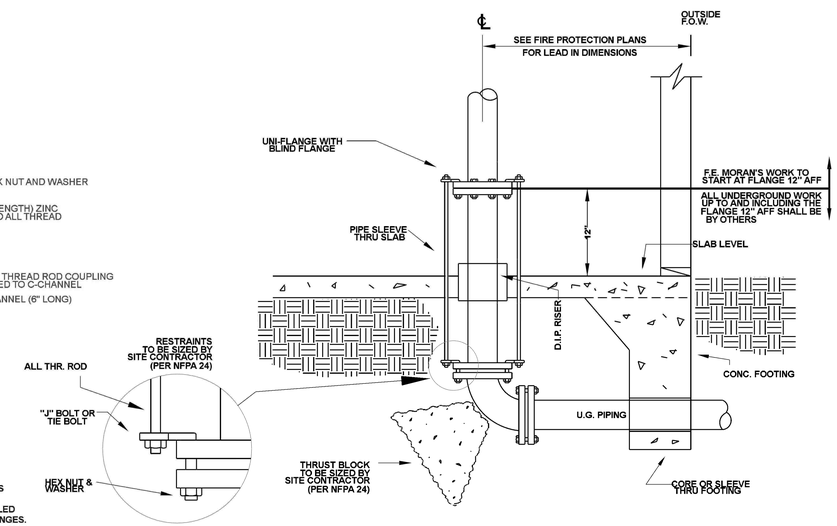
FIRE PUMP (SECTION B-B)
SCALE: 1/2" = 1'-0"



PUMP ROOM (PLAN VIEW)
SCALE: 1/4" = 1'-0"

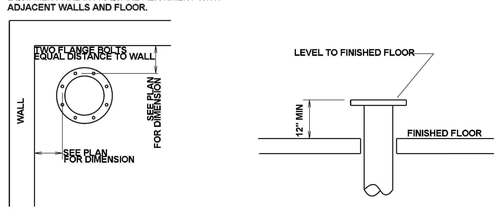


FIRE PUMP FEET DETAIL

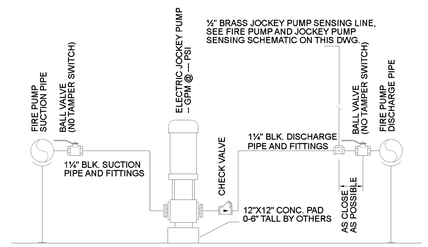


TYPICAL UNDERGROUND LEAD-IN

NOTE: ALL FIRE PROTECTION PIPING STUB-UPS WHETHER INSIDE OR OUTSIDE A BUILDING (INCLUDING PUMP ROOMS), SHALL BE INSTALLED UTILIZING THE "2-HOLE METHOD" ON ALL FLANGES. THE FLANGE SHALL BE INSTALLED WITH THE BOLT HOLES ALIGNED SO THAT FITTING, VALVES, AND EQUIPMENT ARE IN A SQUARE ALIGNMENT WITH ADJACENT WALLS AND FLOOR.



INCOMING FIRE PROTECTION SUPPLY DETAIL
NOT TO SCALE



JOCKEY PUMP SCHEMATIC
NO SCALE

FIRE PUMP NOTES:
-IN ADDITION TO THE FOLLOWING NOTES, ALL WORK AND MATERIAL SHALL CONFORM TO NFPA 13 AND NFPA 20, AS APPLICABLE

NFPA 20 REQUIREMENTS:

EQUIPMENT PROTECTION:
SUITABLE MEANS SHALL BE PROVIDED FOR MAINTAINING THE TEMPERATURE OF A PUMP ROOM OR PUMP HOUSE, WHERE REQUIRED, ABOVE 40 DEG F. ARTIFICIAL LIGHT SHALL BE PROVIDED IN THE PUMP ROOM OR PUMP HOUSE. EMERGENCY LIGHTING SHALL BE PROVIDED BY FIXED OR PORTABLE BATTERY OPERATED LIGHTS, INCLUDING FLASHLIGHTS. EMERGENCY LIGHTS SHALL NOT BE CONNECTED TO AN ENGINE STARTING BATTERY. PROVISION SHALL BE MADE FOR VENTILATION OF THE PUMP ROOM OR PUMP HOUSE. FLOORS SHALL BE PITCHED FOR ADEQUATE DRAINAGE OF ESCAPING WATER AWAY FROM CRITICAL EQUIPMENT SUCH AS THE PUMP, DRIVER, CONTROLLER, ECT. THE PUMP ROOM OR PUMP HOUSE SHALL BE PROVIDED WITH A FLOOR DRAIN THAT WILL DISCHARGE TO A FROST-FREE LOCATION.

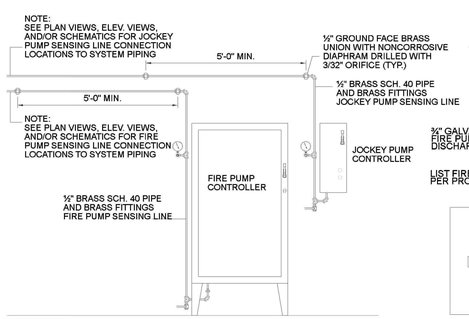
PIPE AND FITTINGS:
WHERE CORROSIVE CONDITIONS EXIST, THE STEEL SUCTION PIPE SHALL BE GALVANIZED. ALL PROVISIONS FOR WELDED PIPE SHALL BE IN ACCORDANCE WITH NFPA 51B, STANDARD FOR FIRE PREVENTION DURING WELDING, CUTTING, AND OTHER HOT WORK.

SUCTION PIPE AND FITTINGS:
THE SUCTION PIPE SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH NFPA. A BY-PASS SHALL BE INSTALLED AROUND THE PUMP WHEN THE SUCTION PRESSURE IS OF MATERIAL VALUE WITHOUT THE PUMP. THE PIPE SIZE OF THE BY-PASS SHALL BE AS LARGE AS THE SIZE REQUIRED FOR SUCTION PIPE IN NFPA 20. THE BY-PASS CONTROL VALVES SHALL BE NORMALLY OPEN

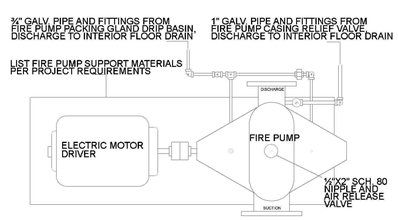
DISCHARGE PIPE:
SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH NFPA 13. THE SIZE OF THE PUMP DISCHARGE PIPE AND FITTINGS SHALL BE NOT LESS THAN THAT GIVEN IN NFPA 20.

ELECTRIC DRIVE FOR PUMPS:
ALL ELECTRICAL WORK TO SUPPLY POWER TO THE FIRE PUMP SHALL BE IN ACCORDANCE WITH CHAPTER 6 OF NFPA 20. ELECTRICAL WORK SHALL COMPLY WITH NFPA 70, ARTICLE 695 AND OTHER APPLICABLE ARTICLES. THE FIRE PUMP FEEDER CIRCUIT CONDUCTORS AND THEIR ACCESSORIES SHALL BE DEDICATED AND PROTECTED TO RESIST POSSIBLE DAMAGE BY FIRE, STRUCTURAL FAILURE, OR OPERATIONAL ACCIDENT. THE SUPPLY CONDUCTORS DIRECTLY CONNECT THE POWER SOURCE TO THE LISTED FIRE PUMP CONTROLLER.

FIRE PUMP CONTROLLER:
SHALL BE WIRED FOR MANUAL SHUTDOWN. FIRE PUMP SHALL BE MONITORED FOR THE FOLLOWING CONDITIONS: FIRE PUMP OR MOTOR RUNNING, LOSS OF PHASE, PHASE REVERSAL.



FIRE PUMP AND JOCKEY PUMP SENSING SCHEMATIC
NO SCALE



ELECTRIC FIRE PUMP SCHEMATIC
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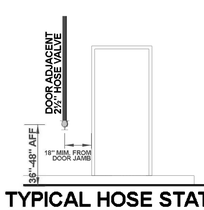
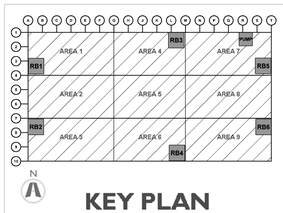


TYPICAL HOSE STATION
N.T.S.



KEY PLAN

CURRAN
ARCHITECTURE
5719 LAWTON LOOP E. DR. #212
INDIANAPOLIS, IN 46216
O :: 317 . 288 . 0681
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SCANNELL
PROPERTIES

CERTIFICATION

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS BUILDING A LOT 1
1100 NW MAIN ST.
LEE'S SUMMIT, MO 64086

F.E. MORAN, INC.
FIRE PROTECTION
WWW.FEMORANFP.COM

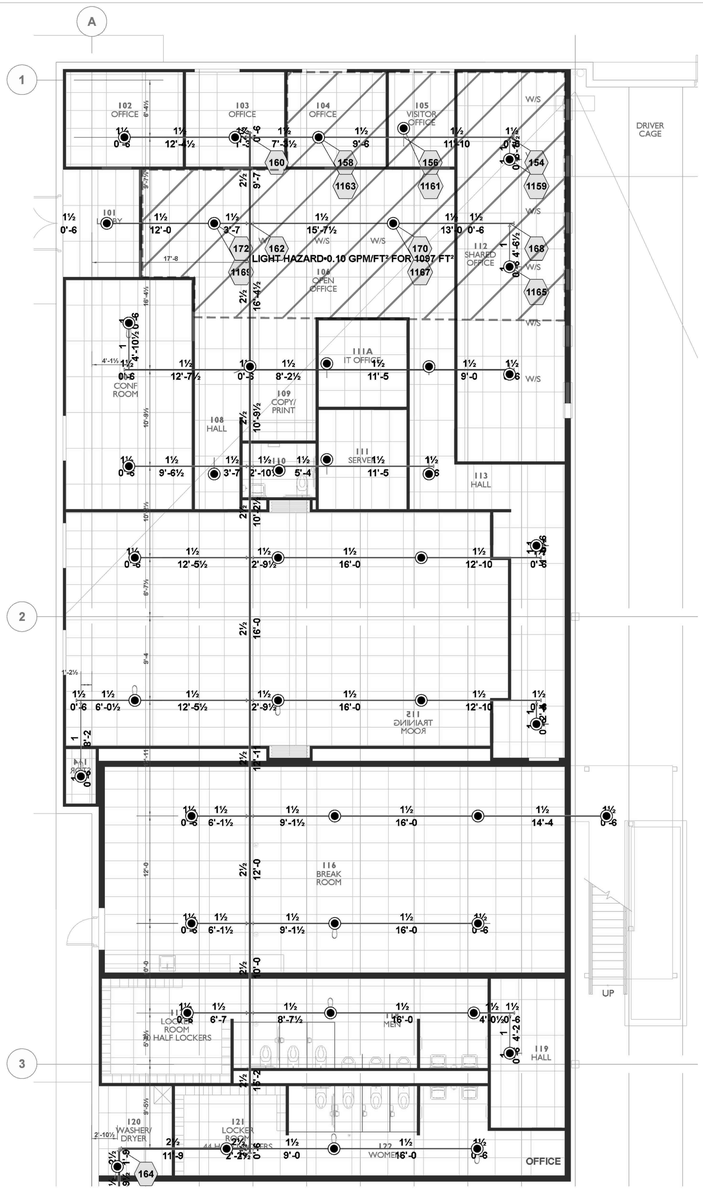
ISSUE DATES

PERMIT SET	02.18.22
1 TENANT IMPROVEMENT	09.07.22

210300

FP3.0

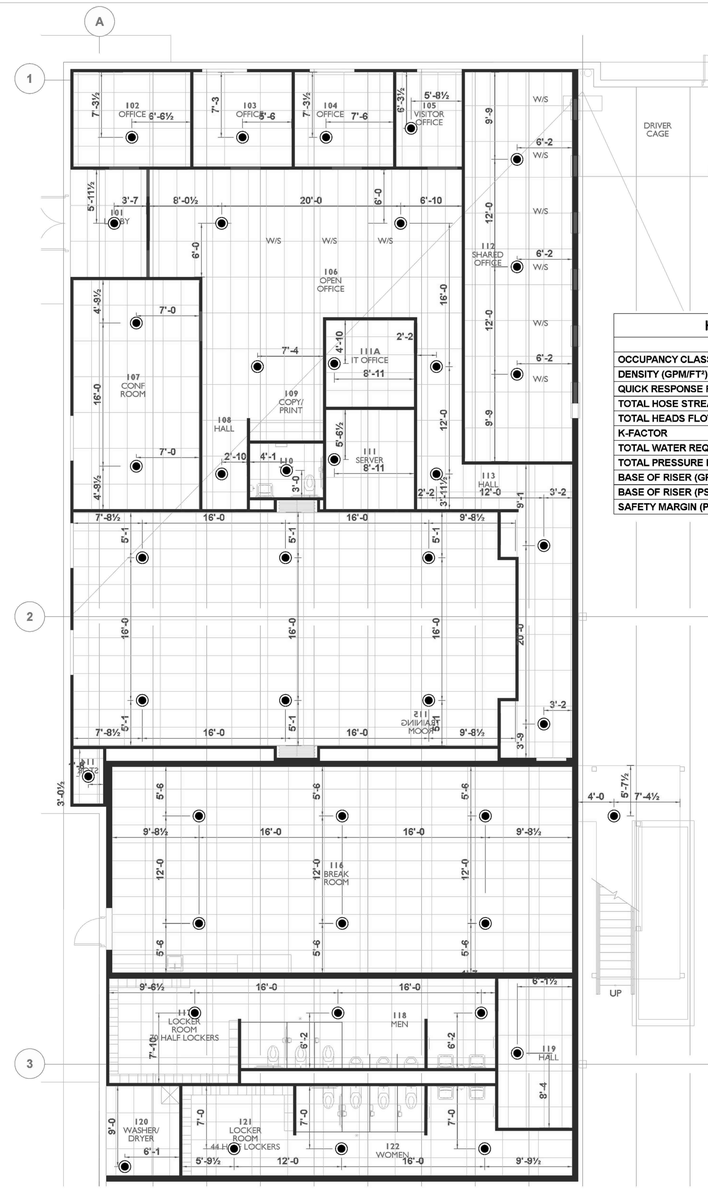
FIRE PUMP & RISER DETAIL



OFFICE PIPING LAYOUT

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

**ACT ELEVATIONS: 9'-8 AFF
**PIPING CENTERLINES: 10'-8 AFF

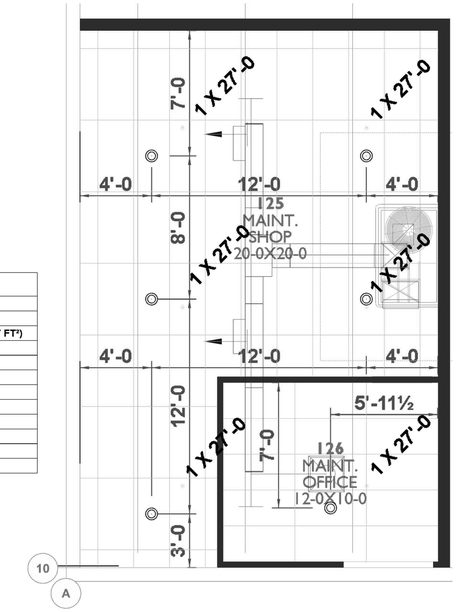


OFFICE SPRINKLER REFLECTED CEILING PLAN

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

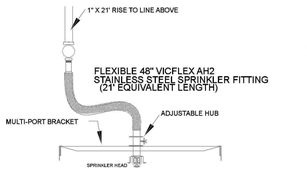
HYDRAULIC INFORMATION

REMOTE AREA OFFICE	
OCCUPANCY CLASSIFICATION	LIGHT HAZARD
DENSITY (GPM/FT²)	0.10 FOR 1500 FT² (ACTUAL 1097 FT²)
QUICK RESPONSE REDUCTION	9'-8 CEILING (40.0%) 900 FT²
TOTAL HOSE STREAMS	100.00
TOTAL HEADS FLOWING	6
K-FACTOR	5.6
TOTAL WATER REQUIRED	345.40
TOTAL PRESSURE REQUIRED	31.842
BASE OF RISER (GPM)	345.40
BASE OF RISER (PSI)	31.842
SAFETY MARGIN (PSI)	+64.774 (67.0%)



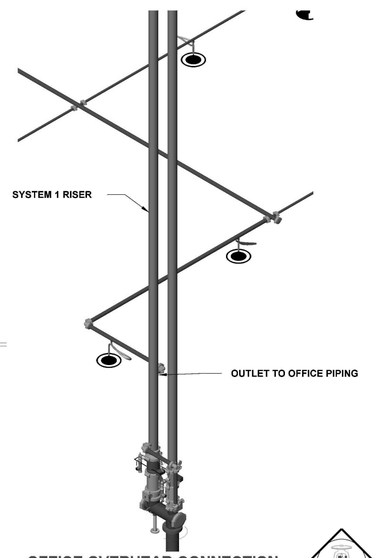
MAINT. SHOP SPRINKLER LAYOUT

SCALE: 1/4" = 1'-0"



FLEXIBLE SPRINKLER DROP DETAIL

N.T.S.

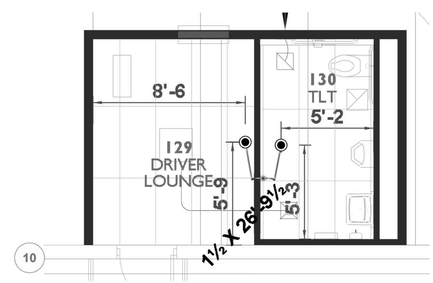


OFFICE OVERHEAD CONNECTION

N.T.S.

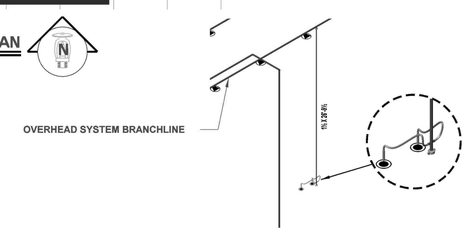
DRIVERS LOUNGE 1 REFLECTED CEILING PLAN

SCALE: 1/4" = 1'-0"



DRIVERS LOUNGE 2 REFLECTED CEILING PLAN

SCALE: 1/4" = 1'-0"

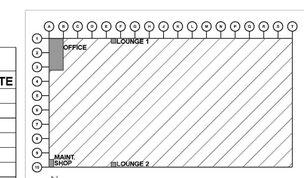


LOUNGE 1&2 OVERHEAD CONNECTION

N.T.S.

SPRINKLER LEGEND

SYMBOL	MANUFACTURER	SIN	MODEL	QUANTITY	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
	VICTAULIC	V4702	FL-QR/ST/ESFR	2054	16.8	PENDENT	¾	FAST	BRASS	200 °F	
	VICTAULIC	V3406	V34	4	8	PENDENT	¾	QUICK	BRASS	200 °F	
	VICTAULIC	V4806	ESFR	2754	22.4	PENDENT	1	FAST	BRASS	212 °F	
	VIKING	VK600	MICROFAST	49	5.6	PENDENT	½	QUICK	CHROME	135 °F	
	VIKING	VK3021		6	5.6	PENDENT	½	QUICK	CHROME	135 °F	
	VIKING	VK504	ESFR DRY	303	16.8	PENDENT	¾	QUICK	BRASS	205 °F	
	VIKING	VK504	ESFR DRY	65	16.8	PENDENT	¾	QUICK	BRASS	165 °F	
				TOTAL = 5235							



KEY PLAN

CURRAN ARCHITECTURE
5719 LAWTON LOOP E. DR. #212
INDIANAPOLIS, IN 46216
O :: 317 . 288 . 0681
F :: 317 . 288 . 0753

SCANNELL PROPERTIES

CERTIFICATION

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS BUILDING A LOT 1

1100 NW MAIN ST.
LEE'S SUMMIT, MO 64086

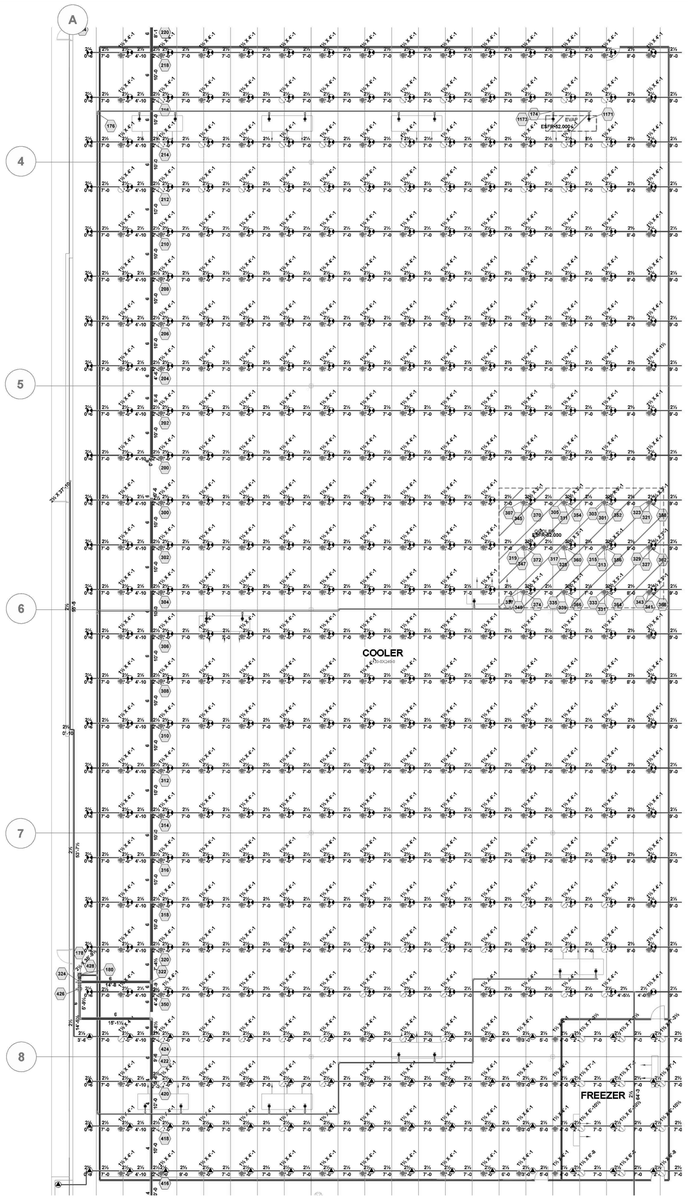
F.E. MORAN, INC.
FIRE PROTECTION

ISSUE DATES	
PERMIT SET	02.18.22
1 TENANT IMPROVEMENT	09.07.22

210300

FP2.12

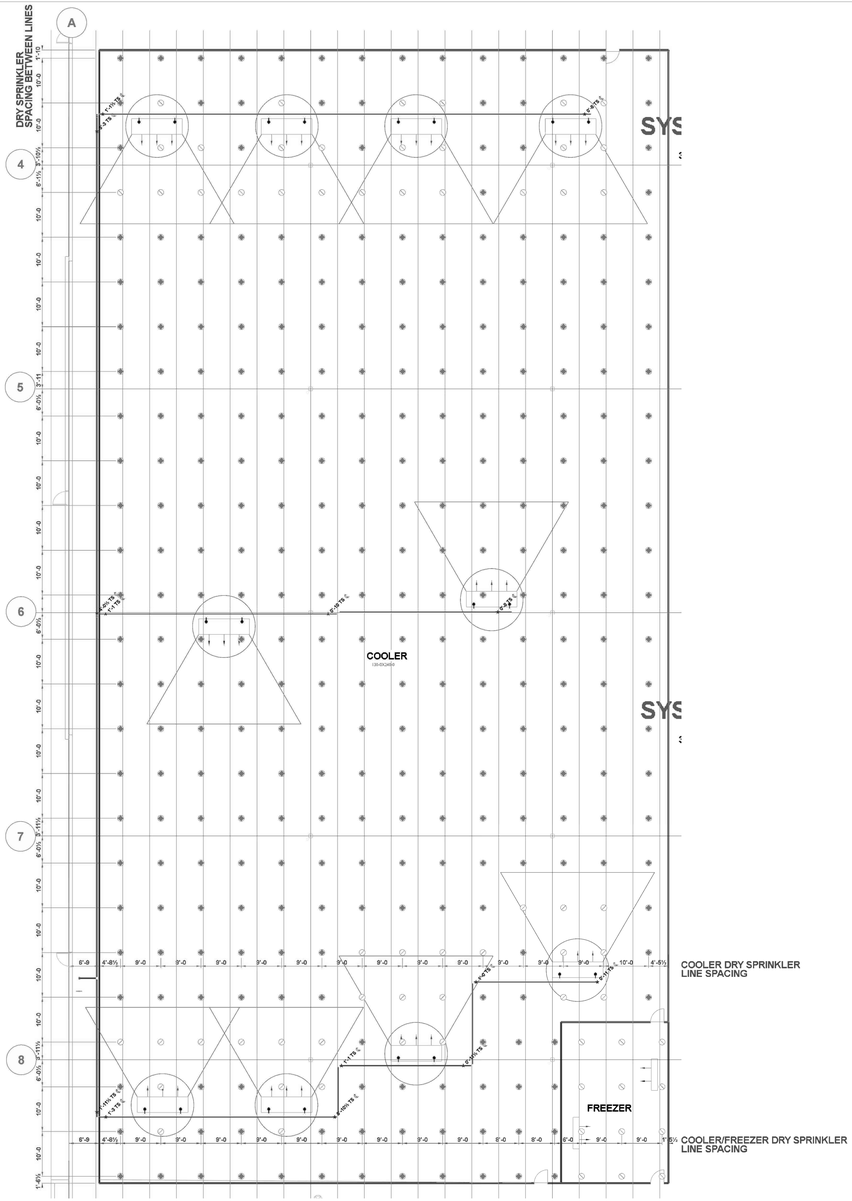
TENANT IMPROVEMENT OFFICE PLAN



COOLER/FREEZER OVERHAD LAYOUT

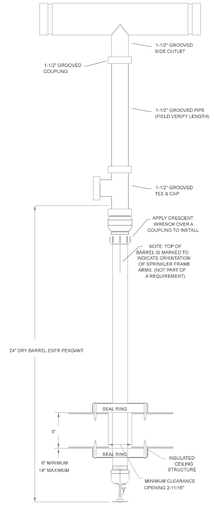
SCALE: 1/16" = 1'-0"

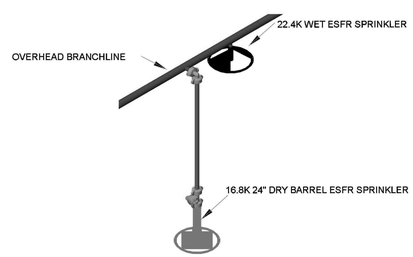
HYDRAULIC INFORMATION	
REMOTE AREA COOLER	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	52.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	16.8
TOTAL WATER REQUIRED	1708.13
TOTAL PRESSURE REQUIRED	75.850
BASE OF RISER (GPM)	1708.13
BASE OF RISER (PSI)	75.850
SAFETY MARGIN (PSI)	+13.758 (15.4%)



COOLER/FREEZER LAYOUT

SCALE: 1/16" = 1'-0"



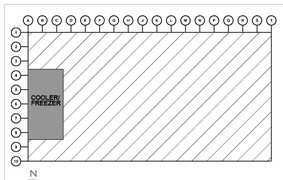


DRY BARREL OVERHEAD CONNECTION

N.T.S.

**COOLER CEILING ELEVATION: 6'-4 BELOW DECK
**COOLER CEILING THICKNESS: 0'-5
**BRANCHLINE CENTERLINES: 0'-8 BELOW DECK

SPRINKLER LEGEND											
SYMBOL	MANUFACTURER	SIN	MODEL	QUANTITY	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
▲	VICTAULIC	V4702	FL-QR/ST/ESFR	2054	16.8	PENDENT	¾	FAST	BRASS	200 °F	
⊗	VICTAULIC	V3406	V34	4	9	PENDENT	¾	QUICK	BRASS	200 °F	
◆◆	VICTAULIC	V4806	ESFR	2756	22.4	PENDENT	1	FAST	BRASS	212 °F	
◉	VIKING	VK600	MICROFAST	47	5.6	PENDENT	½	QUICK	CHROME	135 °F	
◎	VIKING	VK3021		6	5.6	PENDENT	½	QUICK	CHROME	135 °F	
◆	VIKING	VK504	ESFR DRY	303	16.8	PENDENT	¾	QUICK	BRASS	205 °F	
⊘	VIKING	VK504	ESFR DRY	65	16.8	PENDENT	¾	QUICK	BRASS	165 °F	
●	VIKING	VK598	VK598	20	25.2	UPRIGHT	1	STANDARD	BRASS	155 °F	
				TOTAL = 5255							



KEY PLAN

CURRAN
ARCHITECTURE
5719 LAWTON LOOP E. DR. #212
INDIANAPOLIS, IN 46216
O :: 317 . 288 . 0681
F :: 317 . 288 . 0753

SCANNELL PROPERTIES

CERTIFICATION

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS BUILDING A LOT 1

1100 NW MAIN ST.
LEE'S SUMMIT, MO 64086

F.E. MORAN, INC.
FIRE PROTECTION
WWW.FEMORANFP.COM

ISSUE DATES	
PERMIT SET	02.18.22
1 TENANT IMPROVEMENT	09.07.22

210300

FP2.13

TENANT IMPROVEMENT COOLER PLAN