

OWNER FURNISHED SPRINKLERS AND ACCESSORIES													
SYMBOL	SIZE	K-FACTOR	FINISH	MFR	MAKE	S.I.N.	TEMP	STYLE	QTY	SPARE QTY	ESCH STYLE	ESCH FINISH	ESCH QTY
⊙	1/2"	11.2	BRASS	TYCO	ELO-231	TY5831	155	UPRIGHT	1549	24	---	---	---
⊙	1/2"	11.2	BRASS	TYCO	ELO-231	TY5831	200	UPRIGHT	78	6	---	---	---
⊙	3/4"	16.8	BRASS	TYCO	K17-231	TY7158	155	UPRIGHT	307	12	---	---	---
⊙	3/4"	16.8	BRASS	TYCO	K17-231	TY7158	200	UPRIGHT	16	6	---	---	---

WHERE SPRINKLERS ARE INSTALLED BELOW OBSTRUCTIONS (REFRIGERATION PIPING, RTUs, CABLE TRAYS, ETC.), THESE SPRINKLERS SHALL BE REPLACED WITH SPRINKLERS MATCHING THE NEW SPRINKLERS BEING INSTALLED AT THE ROOF DECK LEVEL.

* INTERMEDIATE TEMPERATURE SPRINKLERS TO BE FURNISHED BY OWNER FOR INSTALLATION BELOW SKYLIGHTS AND ON AIR FLOW SIDE (INTERMEDIATE-TEMPERATURE ZONE) OF UNIT HEATERS PER NFPA 13.

THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE TO OWNER FURNISHED SPRINKLERS DURING INSTALLATION. TO REPLACE DAMAGED SPRINKLERS CONTACT HAINES, JONES, CADBURY 1-800-469-7099.

THE OWNER WILL FURNISH ADDITIONAL SPRINKLERS FOR THE SPARES CABINET. INSTALL SPARE SPRINKLER QUANTITY INDICATED ON CONTRACT DOCUMENTS PRIOR TO FIRE PROTECTION CONSULTANT SITE OBSERVATION.

SPRINKLER SYMBOL LEGEND											
SYMBOL	SIZE	MFR	MAKE	S.I.N.	FINISH	STYLE	TEMP	K-FACTOR	SYMBOL	DESCRIPTION	
⊙	1/2"	TYCO	TY-B	TY3251	WHITE	RECESSED STYLE 10	155	5.6	⊙	HYDRAULIC REFERENCE NODE POINT	
⊙	1/2"	TYCO	MATCH EXISTING	MATCH EXISTING	MATCH EXISTING	OR PENDING	MATCH EXISTING	MATCH EXISTING	⊙	CAP	
⊙	1"	TYCO	DS-2	TY2525	WHITE	DRY PEND	200	11.2	⊙	PLUG	
⊙	1/2"	TYCO	MATCH EXISTING	MATCH EXISTING	MATCH EXISTING	DRY PEND	MATCH EXISTING	MATCH EXISTING	⊙	RISER NIPPLE/DROP NIPPLE	
⊙	1/2"	TYCO	TY-B	TY3351	BRASS	HSW	200	5.6	⊙	SPRINKLER RISER	
⊙	MATCH EXISTING	TYCO	MATCH EXISTING	MATCH EXISTING	MATCH EXISTING	PENDING	MATCH EXISTING	MATCH EXISTING	⊙	INSPECTOR'S TEST/AUXILIARY DRAIN	
⊙	VARIABLES	VARIABLES	VARIABLES	VARIABLES	VARIABLES	EXISTING/PENDING	VARIABLES	VARIABLES	⊙	FIRE DEPARTMENT CONNECTION	
⊙	VARIABLES	VARIABLES	VARIABLES	VARIABLES	BRASS	EXISTING/UPRIGHT	VARIABLES	VARIABLES	⊙	HANGER	
⊙	DEMO	VARIABLES	VARIABLES	---	---	EXISTING/UPRIGHT	---	---	⊙	TRAPEZE HANGER	
⊙	DEMO	VARIABLES	VARIABLES	---	---	EXISTING/PENDING	---	---	⊙	NEW CONNECTION	
---	---	---	---	---	---	---	---	---	---	NEW SPRINKLER PIPE	
---	---	---	---	---	---	---	---	---	---	EXISTING SPRINKLER PIPE	
---	---	---	---	---	---	---	---	---	---	DEMOLISHED SPRINKLER PIPE	

WHERE SPRINKLERS ARE CALLED OUT TO "MATCH EXISTING," THE CONTRACTOR SHALL PROVIDE SPRINKLERS MANUFACTURED BY TYCO, WHICH ARE IDENTICAL TO THE EXISTING TO REMAIN SPRINKLERS. SUBSTITUTIONS WILL NOT BE PERMITTED.

PROVIDE ADDITIONAL SPRINKLERS AS REQUIRED PER NFPA 13 IN EXISTING SYSTEMS FOR ANY NEW SPRINKLERS INSTALLED.

SYMBOL LEGEND	
SYMBOL	DESCRIPTION
⊙	HYDRAULIC REFERENCE NODE POINT
⊙	CAP
⊙	PLUG
⊙	RISER NIPPLE/DROP NIPPLE
⊙	SPRINKLER RISER
⊙	INSPECTOR'S TEST/AUXILIARY DRAIN
⊙	FIRE DEPARTMENT CONNECTION
⊙	HANGER
⊙	TRAPEZE HANGER
⊙	NEW CONNECTION
---	NEW SPRINKLER PIPE
---	EXISTING SPRINKLER PIPE
---	DEMOLISHED SPRINKLER PIPE

SYSTEM IMPAIRMENT REQUIREMENTS

- THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION, VERIFICATION AND PROVISION OF A FIRE WATCH SUBJECT TO THE REQUIREMENTS OF THE LOCAL JURISDICTION. ALL FIRE WATCH COSTS INCURRED AS A RESULT OF THIS PROJECT SHALL BE INCLUDED IN THE PROJECT BID AS A SEPARATE LINE ITEM. COORDINATION AND VERIFICATION AS TO WHEN A FIRE WATCH MAY BE NEEDED SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
- THE GENERAL CONTRACTOR SHALL REQUEST THE STORE MANAGER TO NOTIFY ALARM CENTRAL OF THE SYSTEMS BEING SHUT OFF FOR WORK AND THE DURATION OF THE SHUT OFF.
- THE GENERAL CONTRACTOR SHALL CALL DIRECT TO THE FIRE DEPARTMENT AND ADVISE THAT THE FIRE ALARM SYSTEM IS IN TEST.
- AT THE END OF EACH NIGHTS WORK, THE GENERAL CONTRACTOR SHALL CALL DIRECT TO THE FIRE DEPARTMENT AND ALARM CENTRAL TO ADVISE WORK IS COMPLETE.
- A FIRE WATCH IN ACCORDANCE WITH SECTION 901.7 OF THE INTERNATIONAL FIRE CODE SHALL BE REQUIRED WHEN ANY FIRE PROTECTION SYSTEM IS IMPAIRED OR OTHERWISE DOWN FOR ALTERATION. ADDITIONAL SPECIFIC REQUIREMENTS MAY BE NECESSARY DEPENDING UPON THE AUTHORITY HAVING JURISDICTION. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ASSUMING THE ROLE OF IMPAIRMENT COORDINATOR TO DEVELOP AND MAINTAIN THE FIRE WATCH PLAN. THE PLAN SHALL ENSURE THAT A TRAINED INDIVIDUAL(S), WHOSE SOLE RESPONSIBILITY IS TO PERFORM CONSTANT PATROL AND WATCH FOR THE OCCURRENCE OF FIRE IS ON SITE WHILE ANY SYSTEM IS IMPAIRED. THE FIRE WATCH INDIVIDUAL SHALL HAVE AN APPROVED MEANS OF COMMUNICATION TO REPORT A FIRE TO THE FIRE DEPARTMENT AND/OR THE DESIGNATED CENTRAL STATION, AND DOCUMENT EVIDENCE OF THEIR PATROL IN WRITING. IF ONE SYSTEM IS PERMITTED TO BE SHUT DOWN AT A TIME, THE FOLLOWING PROCEDURES WILL BE AT THE GENERAL CONTRACTORS EXPENSE:
 - ANY FIRE DEPARTMENT FEES FOR FAILURE TO FOLLOW PROCEDURES WILL BE AT THE GENERAL CONTRACTORS EXPENSE.
 - REQUIRED MEANS OF EGRESS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION, DEMOLITION, REMODELING OR ALTERATIONS AND ADDITIONS TO THE WALKWAY. ALL EXITS SHALL NOT BE BLOCKED, REDUCED OR OTHERWISE MADE INOPERABLE WHICH ALSO INCLUDES THE EXIT ACCESS, THE EXIT AND EXIT DISCHARGE TO THE PUBLIC WAY. TEMPORARY MEANS OF EGRESS ARE ALLOWED.
 - ALL SYSTEMS TO BE LEFT IN SERVICE PRIOR TO THE END OF EACH WORKDAY.

SCOPE OF WORK

- CONTRACTOR TO FIELD VERIFY EXTENT OF WORK, UPGRADE THE EXISTING FIRE SPRINKLER SYSTEM IN THE GROCERY STOCKROOM, GENERAL MERCHANDISE STOCKROOM, SALES FLOOR AND SEASONAL SHOP TO MEET THE DISCHARGE PRESSURE, HOSE ALLOWANCE AND MAXIMUM SPRINKLER SPACING AS REFERENCED IN THE PROTECTION CRITERIA LEGEND.
- THE EXISTING FIRE SPRINKLER SYSTEMS WILL BE MODIFIED AS INDICATED ON THE PROJECT CONTRACT DOCUMENTS. THE SCOPE OF WORK MAY INCLUDE THE MODIFICATION OF EXISTING BRANCHLINES, INSTALLATION OF NEW BRANCHLINES, MODIFICATION OF EXISTING RISER(S), THE REMOVAL AND INSTALLATION OF NEW SPRINKLERS, MODIFICATION OF EXISTING MAINS, INSTALLATION OF NEW MAINS, REPLACEMENT OF THE EXISTING REARFLOW FRETTER.
- ALL NEW PIPING SHALL HAVE HANGERS INSTALLED IN ACCORDANCE TO THE DETAILS LOCATED ON THE FIRE PROTECTION DETAILS SHEET.
- ALL 1" INCH ARMORERS (IF APPLICABLE) SHALL HAVE A HANGER DETACHED TO THE STRUCTURAL STEEL ONLY, NOT TO THE DECK WHEN THE LENGTH EXCEEDS 2'-0" WHERE STATIC PRESSURES ARE UP TO 100 PSI AND 1'-0" WHERE STATIC PRESSURES EXCEEDS 100 PSI.
- WHEN REQUIRED EARTHQUAKE BRACING SHALL BE INSTALLED. REFERENCE EARTHQUAKE BRACING NOTES AND DETAILS LOCATED ON THE FIRE PROTECTION DETAILS SHEET.
- NO CEILING GRID SHALL BE PERMITTED TO BE REMOVED. ONLY THE TILE MAY BE REMOVED FOR THE ROUTING OF NEW PIPING. THE GRID SHALL BE REINSTALLED UNLESS OTHERWISE NOTED ON THE DESIGN PLANS. ALL REMOVED CEILING TILES MUST BE REPLACED AT THE END OF BUSINESS DAY. AREAS LEFT EXPOSED SUCH AS BUT NOT LIMITED TO REMOVED CEILING TILES SHALL NOT BE PERMITTED.
- NO PURCHASING AND INSTALLING MATCHING CEILING TILES TO REPLACE ANY CEILING TILES THAT HAVE EMPTY HOLES DUE TO SPRINKLER REPLACEMENT.
- USE EACH EXISTING OUTLETS FOR ONE NEW ARM OR NEW SPRINKLER LOCATION UNLESS OTHERWISE SPECIFIED. CONTRACTOR SHALL INSTALL 1" INCH MECHANICAL TIES IF ADDITIONAL MECHANICAL TIES ARE REQUIRED. AFTER THE SYSTEM IS COMPLETE, THE NEW SPRINKLER SYSTEM SHALL MEET ALL REQUIREMENTS OF NFPA 13.
- NECESSARY DRY PAINT, DAMAGE TO EXISTING FINISHES SHALL BE REPAIRED BY THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE STORE MANAGER AS TO STAGING FOR MATERIALS AND TOOLS TO BE USED IN THE PROJECT.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE FIRE LANES DURING THE CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE WITH THE STORE MANAGER AS TO STAGING FOR MATERIALS AND TOOLS TO BE USED IN THE PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE EXISTING SHOP DRAWINGS, GENERAL CALCULATIONS AND ALL DIMENSIONS, AS OUTLINED IN THE PROJECT SPECIFICATIONS, TO THE FIRE PROTECTION ENGINEER OF RECORD FOR APPROVAL. AFTER THE PROTECTION WORK IS COMPLETE, THE CONTRACTOR SHALL SUBMIT TO THE AUTHORITY HAVING JURISDICTION FOR INSTALLATION PERMIT.
- THE CONTRACTOR SHALL COORDINATE WITH THE STORE MANAGER ON THE AREA TO BE WORKED ON AT LEAST 24 HOURS IN ADVANCE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ANY CONTENT OR BUILDING COMPONENTS DUE TO CONTRACTOR NEGLIGENCE IN EXECUTION OF THE SCOPE OF WORK SHOWN IN CONTRACT DOCUMENTS. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO REDUCE POTENTIAL DAMAGE TO CONTENTS AND BUILDING COMPONENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ANY CONTENT OR BUILDING COMPONENTS DUE TO CONTRACTOR NEGLIGENCE IN EXECUTION OF THE SCOPE OF WORK SHOWN IN CONTRACT DOCUMENTS. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO REDUCE POTENTIAL DAMAGE TO CONTENTS AND BUILDING COMPONENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ANY CONTENT OR BUILDING COMPONENTS DUE TO CONTRACTOR NEGLIGENCE IN EXECUTION OF THE SCOPE OF WORK SHOWN IN CONTRACT DOCUMENTS. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO REDUCE POTENTIAL DAMAGE TO CONTENTS AND BUILDING COMPONENTS.
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GENERAL NOTES

- THE DESIGN SHOWN ON THESE CONTRACT DOCUMENTS IS THE PROPERTY OF THE CONTRACTOR. APPROVAL BY THE AUTHORITY HAVING JURISDICTION AND TO PROVIDE GUIDANCE FOR BIDDING, SUBMIT CONTRACT DOCUMENTS TO THE AUTHORITY HAVING JURISDICTION AS REQUIRED BY CONTRACT DOCUMENTS TO THE OWNERS DESIGNATED REVIEWERS. BASE SPRINKLER SYSTEMS AND ALL ADDITIONAL COST TO OWNER.
- DRRAWINGS MUST INCLUDE ELEVATIONS, HANGER LOCATIONS, PIPE LENGTHS, DIMENSIONS, FABRICATIONS METHODS, MATERIAL DATA, AND SYSTEMS INFORMATION. THESE DRAWINGS MUST CLARIFY THE INTENT OF INSTALLATION. CONTRACTOR SHALL PROVIDE PIPE SIZE, SPRINKLER SPACING, AND SYSTEMS INFORMATION TO THE FIRE PROTECTION ENGINEER OF RECORD OR VIA THE RFI PROCESS PRIOR TO BID.
- COORDINATE LOCATIONS OF FIRE PROTECTION COMPONENTS, INCLUDING PIPING, ALARMS, DRAM, TEST POINTS, ETC. WITH ARCHITECTURAL DRAWINGS AND ELECTRICAL DRAWINGS. CONTRACTOR SHALL DISCHARGE MUST BE CONSIDERED DURING SHOP DRAWING PRODUCTION AND INSTALLATION. ADDITIONAL SPRINKLERS MAY BE REQUIRED AT NO ADDITIONAL COST TO OWNER. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- CONTRACTOR MUST VISIT THE BUILDING SITE TO VERIFY THE EXISTING FIRE PROTECTION WORK AND EXISTING CONDITIONS. BECOME TOTALLY FAMILIAR WITH THE EXISTING FIRE PROTECTION WORK AND EXISTING CONDITIONS. NO EXTRA COMPENSATION WILL BE PAID FOR LACK OF SUCH DETERMINATION, FAMILIARIZATION, AND/OR INSPECTION.
- SUBMIT A REQUEST FOR INFORMATION (RFI) TO THE FIRE PROTECTION ENGINEER OF RECORD FOR APPROVAL. ALL RFI'S MUST BE SUBMITTED WITHIN THE RFI RESPONSE TIME PER RFI PROCESS LOCATED IN THE FIRE PROTECTION SPECIFICATIONS. NEW OR MODIFIED DRAWINGS ARE SHOWN ON ARCHITECTURAL DRAWINGS. REFER TO MECHANICAL DRAWINGS FOR NEUTRALIZATION OF EXISTING SYSTEMS.
- INTEGRATIONS OF "RATED ASSEMBLIES" SHALL BE VERIFIED WITH AN APPROVED MATERIAL PER THE METHODS REQUIRED BY PROJECT SPECIFICATIONS AND THE AUTHORITY HAVING JURISDICTION. THE FIRE PROTECTION ENGINEER OF RECORD SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CORROSION RESISTANCE RATING OF LESS THAN 1.0 SHALL BE USED ONLY WITH ROLL GROOVE FITTINGS.
- IF REQUIRED, PROVIDE 24 VOLT AC ELECTRIC BELL SIGNAL TO THE STORE MANAGER. PROVIDE ELECTRIC SIGNAL OF ST. LOUIS, MISSOURI LOCATE AS REQUIRED BY AUTHORITIES HAVING JURISDICTION. PROVIDE NEW DOUBLE POLE VOLTAGE TYPE FUSE DETECTOR, MODEL NO. VSR-F, BY POTTER ELECTRIC SIGNAL OF ST. LOUIS, MISSOURI. SET ADJUSTABLE DELAYED SIGNAL AT 30 SECONDS. MOUNT WATER FLOW INDICATORS NO HIGHER THAN 8 FEET ABOVE FINISH FLOOR.
- ALL SPRINKLER SYSTEMS THAT ARE TO BE MODIFIED SHALL BE HYDROSTATICALLY TESTED PER NFPA 13. CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING, MODIFICATION AND SHALL BE HYDROSTATICALLY TESTED AFTER COMPLETION OF WORK. REFERENCE HYDROSTATIC BOX NOTE FOR ADDITIONAL INFORMATION.
- DO NOT HANG OR SUPPORT ANY LOADS OR MAKE ANY ATTACHMENTS TO THE METAL ROOF DECK OR JOIST BRACING.
- CEILING FINISHES ARE NOT PERMITTED.
- CEILING PLAINING ARE NOT PERMITTED.
- REMOVE HANGERS STRAPS ON HANGERS WHERE DAMAGE FROM THE NORMAL OPERATIONS OF THE AREA.
- WHERE THE DESIGN IS SHOWN TO REPLACE SPRINKLERS, IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THE SIZE OF THE EXISTING SPRINKLER FITTING PRIOR TO BID. WHEN THE DESIGN SHOWS TO REPLACE PENDENT SPRINKLERS ON THE SALES FLOOR, THE CONTRACTOR IS RESPONSIBLE FOR REPLACING THE EXISTING REDUCING COUPLING IF THE SPRINKLER OUTLET THREAD IS LARGER THAN WHAT IS CURRENTLY INSTALLED. ADDITIONAL OUTLETS WILL BE REQUIRED WHEN THE DESIGN SHOWS 3/4" UPRIGHT SPRINKLERS AND THE EXISTING INSTALLATION IS 1/2". IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE NECESSARY FITTING(S) WHEN THE NEW SPRINKLER DIFFERS FROM THE EXISTING SPRINKLERS CURRENTLY INSTALLED.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE NECESSARY FITTINGS WHERE NEW SPRINKLERS DO NOT FIT THE EXISTING OUTLETS. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING THE EXISTING REDUCING COUPLING WITH A NEW 1 X 3/4" REDUCING COUPLING WHICH WILL EQUAL THE SAME AMOUNT OF PENDENT SPRINKLERS INSTALLED IN THE OWNER FURNISHED SPRINKLER LEGEND.
- ALL WET SYSTEMS SHALL BE REQUIRED TO HAVE A LISTED RELIEF VALVE NOT LESS THAN 1/2" IN SIZE AND SET TO OPERATE PER NFPA 13.
- THE CONTRACTOR SHALL DIVERT ALL DRAIN AND INSPECTORS TEST CONNECTION DISCHARGE AWAY FROM FINISHED SURFACES AND PPE TO APPROVED DRAIN LOCATIONS. THE CONTRACTOR WILL BE BACKCHARGED FOR ANY REPAIR, REPLACEMENT, OR CLEANING OF RUST STAINS ON PAVEMENT/CONCRETE DUE TO WATER DISCHARGE FROM SPRINKLER SYSTEM DRAIN DOWN.
- CONTRACTOR IS RESPONSIBLE FOR PERFORMING A 5 YEAR INTERNAL PPE INSPECTION IN ACCORDANCE WITH NFPA 25. REFERENCE ADDITIONAL INFORMATION IN SPECIFICATION 13500 - FIRE PROTECTION.
- INSPECTORS TEST/AUXILIARY DRAINS SHALL BE RELOCATED IF COOLERS/FREEZERS/STAINLESS STEEL GROCERY PICK-UPS ARE BEING ADDED. COORDINATE FINAL LOCATION WITH FINAL RACKING LAYOUT.

GENERAL NOTES CONT.

- ALL PIPING MUST BE COORDINATED AROUND STRUCTURAL MEMBERS AND PROPERLY INSTALLED INSIDE THE BAR JOIST.
- CONTRACTOR SHALL ROUTE PIPING AROUND ALL OBSTRUCTIONS AND PROVIDE SPRINKLER PROTECTION UNDER OBSTRUCTIONS, AS DETAILED IN NFPA 13 STANDARDS AS PART OF THE FIELD COORDINATION AT NO ADDITIONAL COST TO OWNER.
- ALL SPRINKLER DEFLECTOR DISTANCE REQUIREMENTS SHALL BE IN ACCORDANCE TO THE STANDARDS OUTLINED IN NFPA 13.
- CONTRACTOR IS RESPONSIBLE FOR PAINTING ALL NEW SPRINKLER PIPE ADDED TO EXISTING SPRINKLER SYSTEMS THAT IS VISIBLE TO THE PUBLIC. PIPE SHALL BE PAINTED THE SAME COLOR AS THE ADJACENT PIPING IN THAT SPACE (NOT APPLICABLE IF THE EXISTING SPRINKLER PIPE IS NOT PAINTED).
- ALL PIPING PASSING THROUGH CMU WALLS SHALL BE INSTALLED WITH ONE INCH CLEARANCE ON ALL SIDES. CORE DIAMETER EQUAL TO PIPE "K". ALL CORES SHALL BE COORDINATED WITH STRUCTURAL DRAWINGS AND MUST BE APPROVED BY THE PROJECT MANAGER PRIOR TO INSTALLATION. PROVIDE PROTECTIVE COATING WITH PROPER CLEARANCE AT ALL JOINTS. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL CLEARANCES WITHIN THE STANDARDS OUTLINED IN NFPA 13.
- PROVIDE ALL NECESSARY OFFSETS, RISERS OR SLOPING AND AUXILIARY DRAINS REQUIRED BY BUILDING CONDITIONS.
- EXAMINE THE JOB CONDITIONS AND VERIFY ALL CONDITIONS IN THE PROPOSAL FOR COORDINATION CLEARANCES, ETC.
- ARCHITECTURAL AND ELECTRICAL BACKGROUND INFORMATION IS SHOWN FOR COORDINATION PURPOSES ONLY. REFER TO THE CONTRACT DOCUMENTS FOR LOCATIONS, SIZES AND QUANTITIES OF OTHER TRADE WORK.
- SPRINKLER SPACING SHALL BE PER NFPA 13 UNLESS OTHERWISE NOTED ON PLANS AND/OR PROTECTION CRITERIA LEGEND.
- INTERFACE SPRINKLER SYSTEM WITH FIRE PROTECTION SUPERVISORY SYSTEM.
- INTEGRATIONS OF "RATED ASSEMBLIES" SHALL BE VERIFIED WITH AN APPROVED MATERIAL PER THE METHODS REQUIRED BY PROJECT SPECIFICATIONS AND THE AUTHORITY HAVING JURISDICTION. THE FIRE PROTECTION ENGINEER OF RECORD SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CORROSION RESISTANCE RATING OF LESS THAN 1.0 SHALL BE USED ONLY WITH ROLL GROOVE FITTINGS.
- IF REQUIRED, PROVIDE 24 VOLT AC ELECTRIC BELL SIGNAL TO THE STORE MANAGER. PROVIDE ELECTRIC SIGNAL OF ST. LOUIS, MISSOURI LOCATE AS REQUIRED BY AUTHORITIES HAVING JURISDICTION. PROVIDE NEW DOUBLE POLE VOLTAGE TYPE FUSE DETECTOR, MODEL NO. VSR-F, BY POTTER ELECTRIC SIGNAL OF ST. LOUIS, MISSOURI. SET ADJUSTABLE DELAYED SIGNAL AT 30 SECONDS. MOUNT WATER FLOW INDICATORS NO HIGHER THAN 8 FEET ABOVE FINISH FLOOR.
- ALL SPRINKLER SYSTEMS THAT ARE TO BE MODIFIED SHALL BE HYDROSTATICALLY TESTED PER NFPA 13. CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING, MODIFICATION AND SHALL BE HYDROSTATICALLY TESTED AFTER COMPLETION OF WORK. REFERENCE HYDROSTATIC BOX NOTE FOR ADDITIONAL INFORMATION.
- DO NOT HANG OR SUPPORT ANY LOADS OR MAKE ANY ATTACHMENTS TO THE METAL ROOF DECK OR JOIST BRACING.
- CEILING FINISHES ARE NOT PERMITTED.
- CEILING PLAINING ARE NOT PERMITTED.
- REMOVE HANGERS STRAPS ON HANGERS WHERE DAMAGE FROM THE NORMAL OPERATIONS OF THE AREA.
- WHERE THE DESIGN IS SHOWN TO REPLACE SPRINKLERS, IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THE SIZE OF THE EXISTING SPRINKLER FITTING PRIOR TO BID. WHEN THE DESIGN SHOWS TO REPLACE PENDENT SPRINKLERS ON THE SALES FLOOR, THE CONTRACTOR IS RESPONSIBLE FOR REPLACING THE EXISTING REDUCING COUPLING IF THE SPRINKLER OUTLET THREAD IS LARGER THAN WHAT IS CURRENTLY INSTALLED. ADDITIONAL OUTLETS WILL BE REQUIRED WHEN THE DESIGN SHOWS 3/4" UPRIGHT SPRINKLERS AND THE EXISTING INSTALLATION IS 1/2". IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE NECESSARY FITTING(S) WHEN THE NEW SPRINKLER DIFFERS FROM THE EXISTING SPRINKLERS CURRENTLY INSTALLED.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE NECESSARY FITTINGS WHERE NEW SPRINKLERS DO NOT FIT THE EXISTING OUTLETS. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING THE EXISTING REDUCING COUPLING WITH A NEW 1 X 3/4" REDUCING COUPLING WHICH WILL EQUAL THE SAME AMOUNT OF PENDENT SPRINKLERS INSTALLED IN THE OWNER FURNISHED SPRINKLER LEGEND.
- ALL WET SYSTEMS SHALL BE REQUIRED TO HAVE A LISTED RELIEF VALVE NOT LESS THAN 1/2" IN SIZE AND SET TO OPERATE PER NFPA 13.
- THE CONTRACTOR SHALL DIVERT ALL DRAIN AND INSPECTORS TEST CONNECTION DISCHARGE AWAY FROM FINISHED SURFACES AND PPE TO APPROVED DRAIN LOCATIONS. THE CONTRACTOR WILL BE BACKCHARGED FOR ANY REPAIR, REPLACEMENT, OR CLEANING OF RUST STAINS ON PAVEMENT/CONCRETE DUE TO WATER DISCHARGE FROM SPRINKLER SYSTEM DRAIN DOWN.
- CONTRACTOR IS RESPONSIBLE FOR PERFORMING A 5 YEAR INTERNAL PPE INSPECTION IN ACCORDANCE WITH NFPA 25. REFERENCE ADDITIONAL INFORMATION IN SPECIFICATION 13500 - FIRE PROTECTION.
- INSPECTORS TEST/AUXILIARY DRAINS SHALL BE RELOCATED IF COOLERS/FREEZERS/STAINLESS STEEL GROCERY PICK-UPS ARE BEING ADDED. COORDINATE FINAL LOCATION WITH FINAL RACKING LAYOUT.

HYDROSTATIC TEST

BUILDING SPRINKLER SYSTEM(S) INVOLVED IN THIS SCOPE OF WORK SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH NFPA 13. MOREOVER, THE FOLLOWING TWO (2) HYDROSTATIC TESTS SHALL BE PERFORMED BY THE CONTRACTOR:

- THE FIRST HYDROSTATIC TEST SHALL BE PERFORMED BY THE CONTRACTOR PRIOR TO START OF SPRINKLER SYSTEM SCOPE OF WORK (PRE-SCOPE HYDRO TEST); AND
- THE SECOND HYDROSTATIC TEST SHALL BE PERFORMED BY THE CONTRACTOR AFTER COMPLETION OF CONTRACT SCOPE OF WORK (POST-SCOPE HYDRO TEST).

THE HYDROSTATIC TESTS ON EXISTING SPRINKLER SYSTEM SHALL BE CONDUCTED AT A PRESSURE OF 200 PSI FOR 2 HOURS. NEW SYSTEMS SHALL BE TESTED PER PRESSURE REQUIREMENTS OF NFPA 13.

THE CONTRACTOR SHALL NOT BE RESPONSIBLE FOR DAMAGE TO CONTENTS OR BUILDING OCCURRING DURING THE PRE-SCOPE HYDRO TEST PROVIDED ALL COMMERCIALLY REASONABLE MEASURES WERE TAKEN TO PROTECT CONTENTS OR BUILDING COMPONENTS WERE FOLLOWED FOR APPROPRIATE TEST PROCESS. CONTRACTOR SHALL COMPLETE REPAIRS AND/OR REMEDIATION TO EXISTING SYSTEMS REQUIRED AS A RESULT OF DEFICIENCIES IDENTIFIED DURING PRE-SCOPE TESTING AS AN ADDITIONAL SERVICE. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DAMAGE TO CONTENTS OR BUILDING OCCURRING DURING THE POST-SCOPE HYDRO TESTING ON EXISTING SYSTEMS AS REQUIRED BY NFPA 13. CONTRACTOR SHALL TAKE SUCH ACTIONS AS MAY BE NECESSARY TO REDUCE POTENTIAL DAMAGE TO CONTENTS AND BUILDING. EXECUTION OF SCOPE OF WORK, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

- USE OF LOW CAPACITY PRESSURE PUMP TO INCREASE PRESSURE IN SYSTEM AT INCREMENTAL RATES TO LIMIT SURGES IN SYSTEM; AND
- PROVISION OF WORK STAFF DEDICATED TO MONITORING THE IMPACTED SYSTEM AREA DURING PRESSURE APPLICATION AND DURING HYDROSTATIC TEST FOR SIGNS OF SYSTEM COMPROMISE (MIN 1 PERSON / 20,000 SQ. FT. AREA); AND
- MAINTAINING DEDICATED PERSON AT SYSTEM CONTROL VALVE IN CONSTANT COMMUNICATION WITH SYSTEM MONITORS TO SHUT OFF TEST PUMP AND DRAIN SYSTEM IN EVENT OF SYSTEM FAILURE OR EXCESSIVE PRESSURE OR
- PROVISION OF READY SUPPLIES PRIOR TO START OF TESTING TO FACILITATE DRAINING AND MINIMIZING DRAINAGE TO EXISTING SYSTEMS (TARPS, PLASTIC SHEETING, WET DRY VACUUM, ETC.); AND
- COVERING HIGH VALUE EQUIPMENT PRIOR TO TESTING; AND
- LIMITATION OF TESTING TO ONE SYSTEM AT A TIME; AND
- TESTING OF SYSTEMS DURING OFF HOURS (OVERNIGHT).

PIPE TABLE (WET)

PRODUCT	NOMINAL PIPE SIZE	INSIDE DIAMETER
DYNA-FLOW	2"	2.03
DYNA-FLOW	2 1/2"	2.703
DYNA-FLOW	3"	3.314
DYNA-FLOW	4"	4.310
DYNA-THREAT	1 1/2"	1.980
DYNA-THREAT	1 1/4"	1.436
DYNA-THREAT	1 1/2"	1.639
DYNA-THREAT	1 1/4"	1.214
SCHEDULE 10	1 1/4"	1.442
SCHEDULE 10	2"	2.157
SCHEDULE 10	2 1/2"	2.635
SCHEDULE 10	3"	3.260
SCHEDULE 10	4"	4.260
SCHEDULE 10	6"	6.357
SCHEDULE 10	8"	8.249
SCHEDULE 40	1 1/4"	1.049
SCHEDULE 40	1 1/2"	1.380
SCHEDULE 40	1 1/2"	1.610
SCHEDULE 40	2"	2.067

PIPE SIZES SHOWN ARE FOR HYDRAULIC CALCULATIONS PURPOSES ONLY. REFER TO SPECIFICATIONS FOR ALLOWABLE SUBSTITUTIONS.

AIR RELEASE VENT

ONE AIR VENT MUST BE INSTALLED ON ALL WET FIRE PROTECTION SYSTEMS INCLUDING SYSTEMS NOT AFFECTED BY THE REMODEL SCOPE OF WORK. EACH AIR VENT IS TO BE INSTALLED AT THE HIGHEST POINT OF THE SYSTEM AND PREFERABLY ON THE MAIN. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING THE HIGHEST POINT OF EACH SYSTEM AND INSTALLING THE AIR VENT IN AN ACCESSIBLE LOCATION. IF THE AIR VENT IS TO BE INSTALLED ABOVE AN EXISTING CEILING, THE CONTRACTOR MUST PROVIDE SIGNAGE PER NFPA 13, REF 1-17-13.

WALCARD INFORMATION

THE FOLLOWING INFORMATION MUST BE SHOWN ON ALL PLANS FOR EACH UL PERFORMANCE BASE DESIGN REFERENCE SPECIFICATIONS FOR FIRE PROTECTION INFORMATION PLACARDS THAT ARE INSTALLED IN THE OWNER FURNISHED MARKERS SHALL NOT BE ACCEPTED.

SYSTEM # _____ AREA _____
 SPRINKLERS CALCULATED: X
 WORK END HEAD PRESSURE: X
 SYSTEM DEMAND: X
 SYSTEM FLOW DEMAND: X
 SYSTEM TEST SERIES NUMBER: X
 UL PERFORMANCE BASE DESIGN PROJECT 478812252, NC27954

GENERAL UNDERGROUND NOTES

- ALL UNDERGROUND IS SHOWN FOR HYDRAULIC REFERENCE ONLY.
- SEE CIVIL DRAWINGS FOR EXACT LOCATIONS IF AVAILABLE.
- NO NEW WORK UNLESS OTHERWISE NOTED.

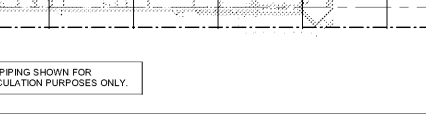
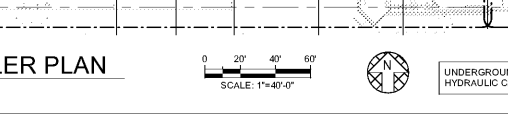
KEYNOTES

13.979 PROVIDE AIR VENT ON THE HIGHEST POINT OF THE SYSTEM, PREFERABLY ON THE MAIN. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING THE HIGHEST POINT OF EACH SYSTEM AND INSTALLING THE AIR VENT IN AN ACCESSIBLE LOCATION. REF 1-17-13

WATER SUPPLY INFORMATION

STATIC: 60 PSI
 RESIDUAL: 48 PSI AT 1502 GPM

INFORMATION DERIVED FROM A FLOW TEST PERFORMED BY HENDERSON ENGINEERS DURING A SITE VISIT ON 01/05/2021. ADDITIONAL SAFETY FACTORS ARE NOT INCLUDED.



1 FIRE SPRINKLER PLAN
 1" = 40'-0"

UNDERGROUND PIPING SHOWN FOR HYDRAULIC CALCULATION PURPOSES ONLY.

FIRE SPRINKLER PIPING AND DEMOLITION NOTES

- CONTRACTOR MUST VISIT THE BUILDING SITE TO DETERMINE THE FULL EXTENT OF THE EXISTING FIRE PROTECTION WORK AND EXISTING CONDITIONS. BECOME TOTALLY FAMILIAR WITH THE EXISTING DISCONNECTS, REMOVALS, RELOCATIONS AND/OR RECONNECTIONS OF EXISTING FIRE PROTECTION EQUIPMENT REQUIRED, AND CONDITIONS IN THE PROPOSAL FOR THIS PROJECT. NO EXTRA COMPENSATION WILL BE PAID FOR LACK OF SUCH DETERMINATION, FAMILIARIZATION, AND/OR ALLOWANCE.
- UNLESS INDICATED OTHERWISE, DISCONNECT AND REMOVE ALL EXISTING FIRE PROTECTION COMPONENTS NOT INTENDED TO BE REUSED, RELOCATED, RELOCATED, AND RECONNECT TO EXISTING FIRE PROTECTION SYSTEMS AND EQUIPMENT WHERE REQUIRED.
- NOTE CAREFULLY IN THE FIRE PROTECTION DRAWINGS ARE INTENDED TO INDICATE, ONLY DIAGRAMMATICALLY, THE EXTENT AND THE GENERAL CHARACTER AND LOCATIONS OF THE WORK INCLUDED. PROVIDE ALL WORK OBVIOUSLY INTENDED, BUT HAVING MINOR DETAILS OMITTED OR NOT SHOWN, COMPLETE AS REQUIRED TO PERFORM THE FUNCTIONS INTENDED. FOLLOW THE CONTRACT DOCUMENTS FOR BUILDING DETAILS AND FIT THE WORK OF THE FIRE PROTECTION DRAWINGS AND SPECIFICATIONS THERETO.
- REMOVE ALL DEMOLITION MATERIALS AND DEBRIS TO AN APPROVED DUMPING SITE AND CLEAN ALL FIRE PROTECTION WORK PRIOR TO THE PROJECT COMPLETION.
- PERFORM ALL WORK ACCORDING TO THE PROJECT PHASING SCHEDULE INFORMATION FOR THIS PROJECT. PROVIDE ALL NECESSARY FIRE PROTECTION WORK, TEMPORARY AND/OR OTHERWISE, AND USE THE NEAREST NECESSARY, TO CONFORM TO THE REQUIRED CONSTRUCTION PHASING OF THE PROJECT.
- CONTRACTOR IS RESPONSIBLE FOR REPAIRING OR REPLACING ITEMS DAMAGED DURING DEMOLITION AND CONSTRUCTION.
- CONTRACTOR SHALL PATCH ALL HOLES TO MATCH ADJACENT SURFACES LEFT UNUSED AFTER EXISTING SPRINKLER PIPING OR EQUIPMENT IS REMOVED AND VACATED FROM THESE HOLES.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING FIRE DEPARTMENT ACCESS ROADS THROUGHOUT THE PROJECT.
- SPRINKLER SYSTEMS NOT ASSOCIATED WITH THE DEMOLITION SHALL BE LEFT IN SERVICE.
- THE CONTRACTOR SHALL PROPERLY NOTIFY THE LANDLORD, THE LESSOR AND THE ADJACENT TENANTS A MINIMUM OF 48 HOURS IN ADVANCE BEFORE PROCEEDING WITH THIS WORK. ALL WORK SHALL BE SCHEDULED IN ADVANCE.

CONTACT INFORMATION

DOCUMENTS INCLUDE JURISDICTIONAL REQUIREMENTS PROVIDED BY THE FOLLOWING CONTACTS:

FIRE SPRINKLER REVIEWING AUTHORITY:
 DALLAS JOHNSON FIRE MARSHAL
 (334) 595-4306

APPLICABLE CODES

NFPA STANDARDS
 NFPA 13
 EDITION 2013

UL GUIDELINE:
 UL LLC TECHNICAL REPORT PROJECT 478812252

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SHEET INDEX

FP1	FIRE SPRINKLER PLAN
FP2.1	ENLARGED FIRE SPRINKLER PLAN
FP2.2	ENLARGED FIRE SPRINKLER PLAN
FP2.3	ENLARGED FIRE SPRINKLER PLAN
FP2.4	ENLARGED FIRE SPRINKLER PLAN
FP3	FIRE PROTECTION DETAILS

ISSUE BLOCK

NO. _____	DATE _____	DESCRIPTION _____
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CHECKED BY: RASMUS
DRAWN BY: MLG
PROTO CYCLE: 01/29/21
DOCUMENT DATE: 03/31/21

APPLICABLE CODES

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