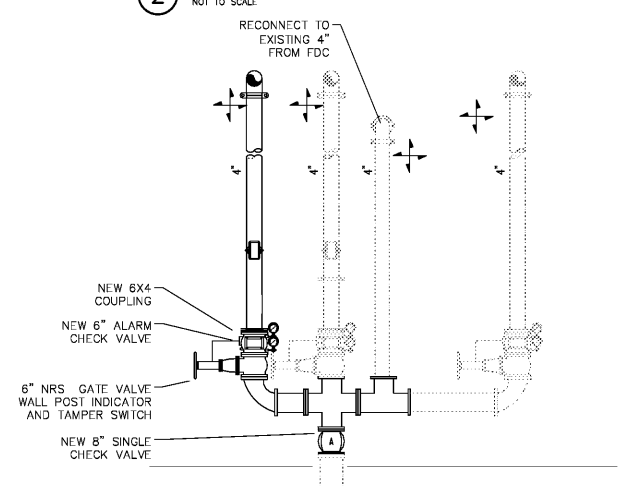
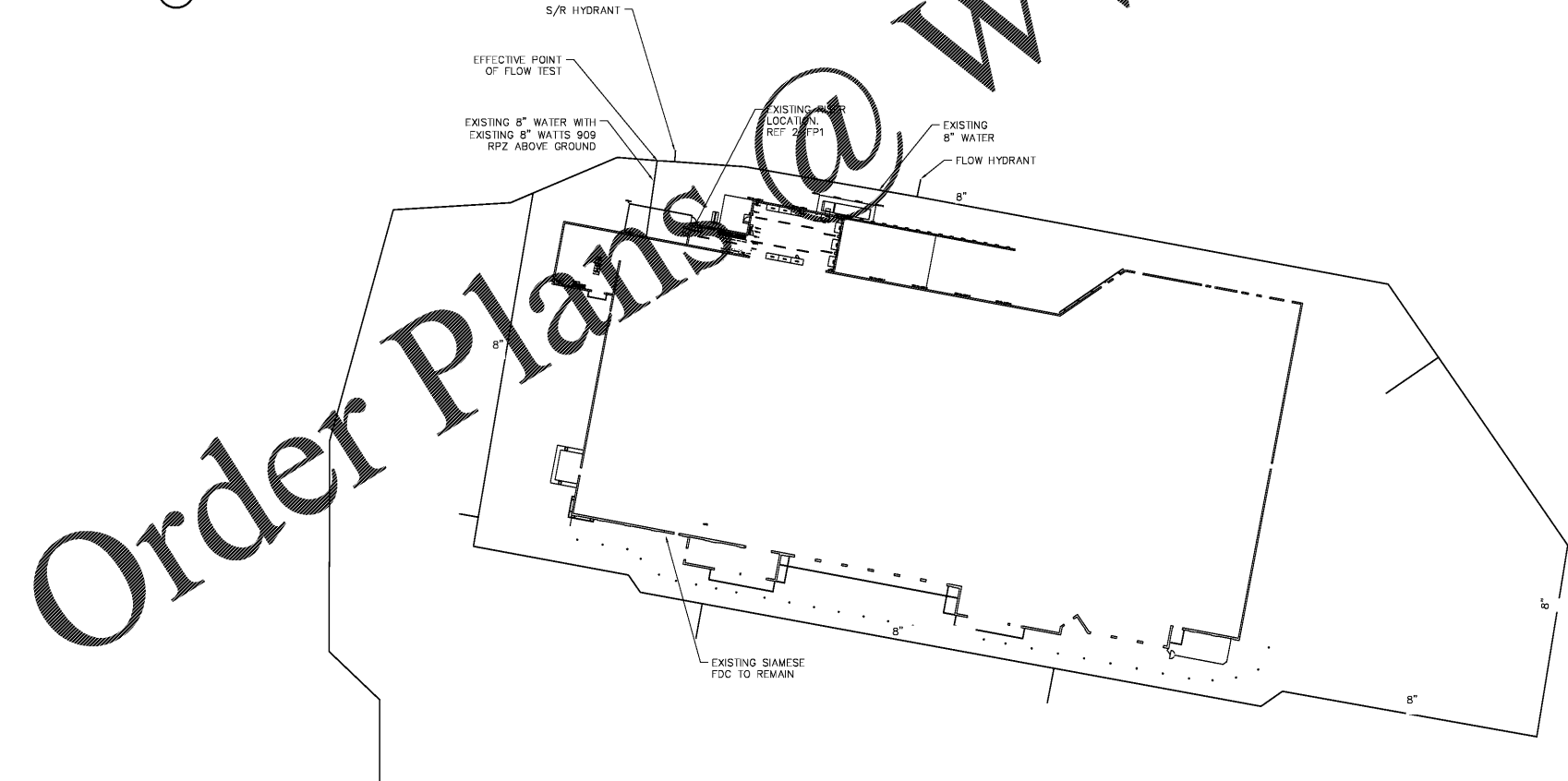


2 EXISTING/ DEMO SPRINKLER RISER
NOT TO SCALE



3 EXISTING/ NEW SPRINKLER RISER
NOT TO SCALE



1 FIRE SERVICE SITE PLAN
SCALE: 1" = 30'

UNDERGROUND PIPING SHOWN FOR HYDRAULIC CALCULATION PURPOSES ONLY. REFER TO CIVIL DOCUMENTS FOR ADDITIONAL INFORMATION.

PROTECTION CRITERIA LEGEND BASED ON 2010 NFPA 13

OCCUPANCY CLASSIFICATION	DENSITY	HOSE ALLOWANCE (GPM)	MAXIMUM SPRINKLER SPACING (SQ FT)
SALES FLOOR	0.20/1500 SQ FT	250	130
TENANT SPACE/DELI/PHARMACY/OFFICES	0.20/1500 SQ FT	250	130
CANOPY	0.20/1500 SQ FT	250	130
COOLERS/FREEZERS	0.20/ENTIRE AREA	250	130

AUTOMATIC FIRE SPRINKLER LEGEND
NOTE: NO 0-RING SPRINKLERS ARE TO BE USED ON THIS PROJECT

SYMBOL	MFR	MODEL	SLN.	STYLE	FINISH	ESC	TEMP	K-FACTOR	TOTAL
○	TYCO	JPRIGHT	TY3151	SSU	BRASS	NONE	200°	5.6	290
◆	TYCO	DS-1	TY3255	DPEN	CHROME	401	286°	5.6	87
◀	TYCO	DS1	TY3351	SDW	CHROME	NONE	200°	5.6	12
◀	TYCO	TY-FRB	TY3231	SSP	WHITE	REC	155°	5.6	172
◀	TYCO	TY-B	TY3351	SDW	CHROME	NONE	286°	5.6	3
●	TYCO	JPRIGHT	TY3151	SSU	BRASS	NONE	286°	5.6	176
* MATCH EXISTING									738

SHEET INDEX

SHEET NUMBER	SHEET NAME
FP1	FIRE SPRINKLER SITE PLAN AND NOTES
FP2	FIRE SPRINKLER EXISTING & DEMOLITION PLAN
FP3	SYSTEM ONE & THREE FIRE SPRINKLER PIPING PLAN - REMODEL
FP4	SYSTEM TWO FIRE SPRINKLER PIPING PLAN - EXPANSION
FP4	FIRE SPRINKLER DETAILS SHEET

SYMBOL LEGEND

SYMBOL	DESCRIPTION
---*	DEMO PIPING
---	EXISTING BRANCH LINE TO REMAIN
----	EXISTING MAIN LINE TO REMAIN
---	BRANCH LINE TO BE INSTALLED
---	MAIN LINE TO BE INSTALLED
⊗	DEMO SPRINKLERS
⊗	EXISTING SPRINKLERS TO REMAIN
□	NEW OUTLET TO NEW SPRINKLER / PIPING
○	EXISTING OUTLET WITH ARM-OVER TO NEW SPRINKLER
⊥	PLUG EXISTING OUTLET

PIPE DIMENSION TABLES
REFER TO HYDRAULIC CALCULATIONS FOR PIPE TYPE

NOMINAL SIZE	SCHEDULE 40		SCHEDULE 10	
	INSIDE DIAMETER	WALL THICKNESS	INSIDE DIAMETER	WALL THICKNESS
1"	1.049"	0.097"	1.000"	0.097"
1 1/4"	1.380"	0.148"	1.300"	0.148"
1 1/2"	1.610"	0.187"	1.500"	0.187"
2"	2.067"	0.250"	1.900"	0.250"
2 1/2"	2.463"	0.312"	2.300"	0.312"
3"	2.907"	0.375"	2.700"	0.375"
4"	3.549"	0.438"	3.300"	0.438"
6"	5.765"	0.625"	5.500"	0.625"
8"	7.625"	0.750"	7.300"	0.750"

GENERAL NOTES

1. THE DESIGN SHOWN ON THESE CONTRACT DOCUMENTS IS TO PROVIDE GUIDANCE FOR THE BIDDING, SUBMIT COMPLETE FIRE SPRINKLER SHOP DRAWINGS AS REQUIRED BY CONTRACT DOCUMENTS TO THE OWNERS DESIGNATED REVIEWER AND ALL BASE DESIGN UPON THESE DRAWINGS AND AS REQUIRED BY THE SPECIFICATIONS. SHOP DRAWINGS SHALL INCLUDE ELEVATIONS, HANGER LOCATIONS, PIPE LENGTHS, DIMENSIONS, FABRICATIONS METHODS, MATERIAL DATA AND ADDITIONAL INFORMATION NECESSARY TO CLARIFY THE INTENT OF INSTALLATION. CONTRACTOR SHALL PROVIDE PIPE SIZE, SPRINKLER SPACING, AND SYSTEM CONFIGURATION AS SHOWN. ALTERNATES MUST BE APPROVED IN WRITING BY FIRE PROTECTION ENGINEER OF RECORD DOCUMENTS PRIOR TO BID.

2. COORDINATE LOCATIONS OF FIRE PROTECTION COMPONENTS, INCLUDING PIPING, ALARMS, GRANS, TEST POINTS, ETC. WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS OBSTRUCTION TO SPRINKLER 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.

3. CONTRACTOR MUST VISIT THE BUILDING SITE TO DETERMINE THE FULL EXTENT OF THE EXISTING FIRE PROTECTION WORK AND EXISTING CONDITIONS, BECOME TOTALLY FAMILIAR WITH DISCONTINUATIONS, 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.

4. SUBMIT A REQUEST FOR INFORMATION FOR QUESTIONS REGARDING THE FIRE PROTECTION DOCUMENTS.

5. NEUTRALIZATION WALLS, IF PROVIDED, ARE SHOWN ON THE ARCHITECTURAL DRAWINGS. REFER TO MECHANICAL DRAWINGS FOR NEUTRALIZATION WALL PENETRATION DETAIL.

6. PENETRATIONS OF "B" TYPE WALLS SHALL BE STOPPED WITH AN APPROVED MATERIAL. STOPPING METHOD SHALL BE APPROVED BY THE AUTHORITY HAVING JURISDICTION.

GENERAL NOTES CONT.

7. THE FIRE PROTECTION ENGINEER OF RECORD SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. NOR SHALL THEY BE REQUIRED TO SUPERVISE THE CONDUCT OF THE WORK. THE CONSTRUCTION PROCEDURES FOLLOWED BY THE CONTRACTOR, SUBCONTRACTORS, THEIR RESPECTIVE EMPLOYEES OR ANY OTHER PERSON AT THE JOB SITE OTHER THAN THAT OF THE ENGINEERING FIRMS EMPLOYEES.

8. CONTRACTOR MUST REVIEW ALL CONSTRUCTION DOCUMENTS PRIOR TO BID. SHOULD MODIFICATIONS TO THESE PLANS BECOME NECESSARY TO PROPERLY COORDINATE THE SYSTEM WITH ALL OTHER TRADES, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL OF THE CHANGES FROM BOTH THE AUTHORITY HAVING JURISDICTION AND THE OWNER'S DESIGNATED REVIEWER CONSULTANT IN ADDITION TO OBTAINING THE NECESSARY APPROVALS. THE CONTRACTOR MUST MAKE NOTE OF ANY FIELD OR COORDINATION CHANGES ON THE INSTALLATION DRAWINGS, AND THEN MUST PROVIDE A SET OF AS-BUILT DRAWINGS ONCE COMPLETE.

9. CONTRACTOR MUST VERIFY ALL DEMO LOCATIONS AT EXTERIOR WALLS. THE PROJECT MANAGER SHALL VERIFY ALL DEMO LOCATIONS AT EXTERIOR WALLS. ALL DEMO WORK SHALL BE COMPLETED AND ALL PIPING MUST BE CORRECTLY INSTALLED INSIDE THE BAR JOIST.

10. ALL PIPING MUST BE CORRECTLY INSTALLED INSIDE THE BAR JOIST.

11. CONTRACTOR SHALL VERIFY ALL DEMO LOCATIONS AT EXTERIOR WALLS. THE PROJECT MANAGER SHALL VERIFY ALL DEMO LOCATIONS AT EXTERIOR WALLS. ALL DEMO WORK SHALL BE COMPLETED AND ALL PIPING MUST BE CORRECTLY INSTALLED INSIDE THE BAR JOIST.

12. CONTRACTOR SHALL VERIFY ALL DEMO LOCATIONS AT EXTERIOR WALLS. THE PROJECT MANAGER SHALL VERIFY ALL DEMO LOCATIONS AT EXTERIOR WALLS. ALL DEMO WORK SHALL BE COMPLETED AND ALL PIPING MUST BE CORRECTLY INSTALLED INSIDE THE BAR JOIST.

13. ALL PIPING PASSING THROUGH CMU WALLS SHALL BE INSTALLED WITH ONE INCH CLEARANCE ON ALL SIDES. (CORE DIAMETER TO PIPE + 2"). ALL CORES SHALL BE NEUTRALIZED WITH STRUCTURAL REINFORCING. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL CORING WITH PROPER CLEARANCE AT ALL CMU WALLS. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A TWO INCH CLEARANCE AROUND ALL PIPING PASSING THROUGH CONCRETE SLABS. THE SPRINKLER CONTRACTOR SHALL FILL ALL CLEARANCES WITH APPROVED MASTIC.

14. PENETRATIONS OF ASSEMBLIES SHALL BE FIRE STOPPED WITH APPROVED MATERIALS PER METHODS DESCRIBED BY THE UL FIRE RESISTANCE DIRECTORY.

15. PROVIDE FLUSHING CONNECTIONS IN ACCORDANCE WITH THE STANDARDS OUTLINED IN NFPA 13.

16. PROVIDE ALL NECESSARY TESTS, RISER OR DROPS IN PIPING AND ALARMS GRANS REQUIRED BY BUILDING CONDITIONS.

17. EXAMINE THE JOB CONDITIONS AND VERIFY ALL MEASUREMENTS, DISTANCES, ELEVATIONS, CLEARANCES, ETC.

18. 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.

19. SPRINKLER SPACING TO BE PER NFPA 13.

20. INTERFACE SPRINKLER SYSTEM WITH FIRE PROTECTION SUPERVISORY SYSTEM.

21. ALL MATERIALS SHALL BE UL LISTED AND FM APPROVED. SPRINKLER PIPE SHALL BE MANUFACTURED TO STANDARDS RECOGNIZED BY NFPA 13. THREADED PIPE SHALL HAVE A CORROSION RESISTANCE RATING OF 1.0 OR GREATER. CRIMP-TYPE COUPLINGS SHALL NOT BE USED. THREADED THINWALL PIPE WITH CORROSION RESISTANCE RATING OF LESS THAN 1.0 SHALL BE USED ONLY WITH ROLL GROOVE FITTINGS.

22. ALL SPRINKLER SYSTEMS TO BE MODIFIED SHALL BE HYDROSTATICALLY TESTED PER NFPA 13 PRIOR TO SPRINKLER SYSTEM MODIFICATION AND SHALL BE RE-HYDROSTATICALLY TESTED AFTER COMPLETION OF WORK.

23. DO NOT HANG OR SUPPORT ANY LOADS OR MAKE ANY ATTACHMENTS TO THE METAL ROOF DECK OR JOIST BRIDGING.

24. PROVIDE RETAINING STRIPS ON HANGERS WHERE REQUIRED.

UNDERGROUND NOTES

ALL UNDERGROUND IS SHOWN FOR HYDRAULIC REFERENCE ONLY. NO NEW WORK UNLESS OTHERWISE NOTED.

WATER SUPPLY INFORMATION

STATIC: 89 PSI
RESIDUAL: 58 PSI AT 2201 GPM

INFORMATION DERIVED FROM WATER REPORT SUPPLIED BY TELGIAN CORP. & OXFORD, MS WATER EFFECTIVE POINT OF WATER SUPPLY INFORMATION: S/R HYDRANT, REF 1/F/1

DATE OF TEST: 07/08/18 @ 11:40 AM CDT
FLOW TEST ELEVATION: 1475 FT AMSL
BUILDING PAD ELEVATION: 1475 FT AMSL

WATER SUPPLY IS FURTHER REDUCED BY THE FOLLOWING:
10% PER KROGER REQUIREMENTS

WATER SUPPLY TO BE USED FOR FIRE SPRINKLER DESIGN AT EFFECTIVE POINT:
STATIC: 82.1 PSI
RESIDUAL: 51.1 PSI AT 2201 GPM

SCOPE OF WORK

1. ALL EXISTING OVERHEAD SYSTEMS TO REMAIN, UNLESS NOTED OTHERWISE.
2. USE EACH EXISTING OUTLET FOR ONE NEW ARM OVER TO NEW SPRINKLER LOCATION UNLESS HYDRAULICALLY CALCULATED. CONTRACTOR TO INSTALL 1" INCH UNO MECHANICAL TEE IF ADDITIONAL OUTLETS ARE REQUIRED. AFTER THE DEMOLITION IS COMPLETE, THE NEW SPRINKLER SYSTEM SHALL MEET ALL REQUIREMENTS OF NFPA 13.
3. CONTRACTOR TO FIELD VERIFY EXTENT OF WORK.
4. EXISTING SPRINKLER PROTECTION TO BE MAINTAINED. CONTRACTOR TO RESPACE AND/OR INSTALL NEW SPRINKLERS AS NECESSARY TO MAINTAIN PROPER SPRINKLER COVERAGE AS PER THE REQUIREMENTS OF NFPA 13.
5. INTERIOR REMODEL AREA, CONTRACTOR TO PROVIDE NEW SPRINKLERS AS NECESSARY DUE TO PAINT, DAMAGE, ETC. CONTRACTOR TO COORDINATE.
6. SPRINKLER HEAD LAYOUT IS CONCEPTUAL. SPRINKLER CONTRACTOR TO COORDINATE HEAD LOCATIONS WITH ELECTRICAL AND MECHANICAL EQUIPMENT AND/ OR PROVIDE, INSTALL ADDITIONAL SPRINKLERS AS REQUIRED TO MEET SPACING REQUIREMENTS OF NFPA 13.
7. CONTRACTOR TO ADD ADDITIONAL BRANCH UNITS AS REQUIRED.
8. CONTRACTOR TO ADD HANGERS AS NECESSARY TO ANY PIPING AS REQUIRED BY NFPA 13.

APPLICABLE CODES

NFPA STANDARD	EDITION
NFPA 13	2013
INTERNATIONAL FIRE CODE W/ AMENDMENTS	2012
INTERNATIONAL BUILDING CODE W/ AMENDMENTS	2012

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FIRE PROTECTION

ISSUE LOG

NO.	REV.	DESCRIPTION	DATE
1	-	PERMIT SET	12/05/18
2	-	BID SET	03/21/19

JOB: 2019041

SCALE:

SHEET NO.

FIRE SPRINKLER SITE PLAN AND NOTES

FP1

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