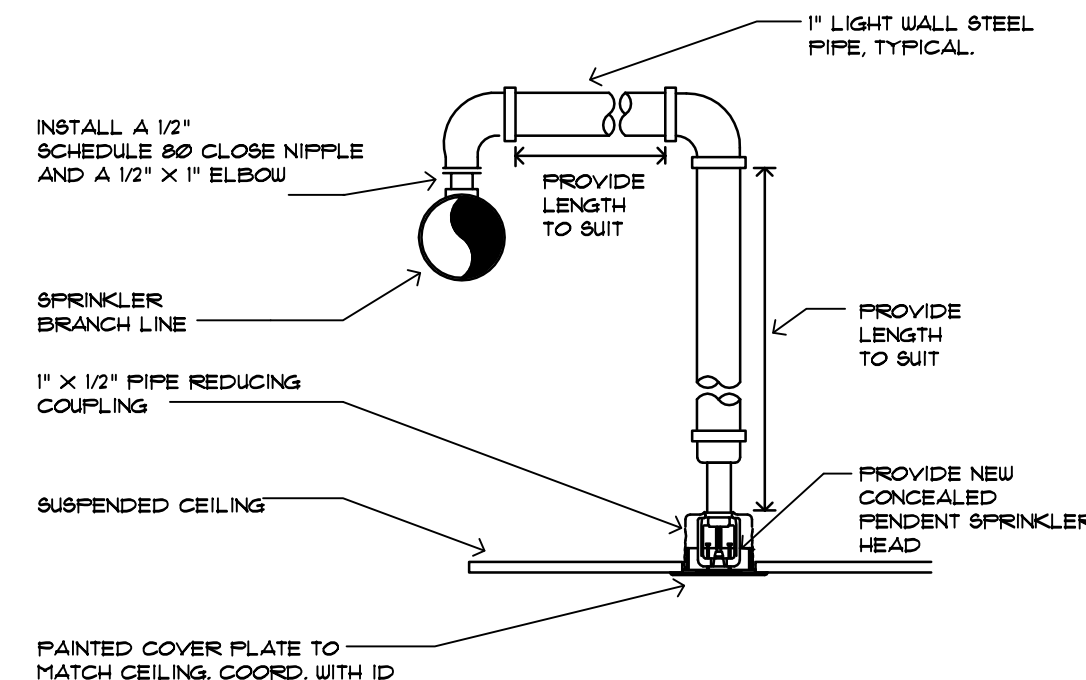


NOTE: ALL SPRINKLERS SHALL BE QUICK-RESPONSE TYPE AND BE APPROVED FOR HAZARD.

1 SPRINKLER HEAD TYPES

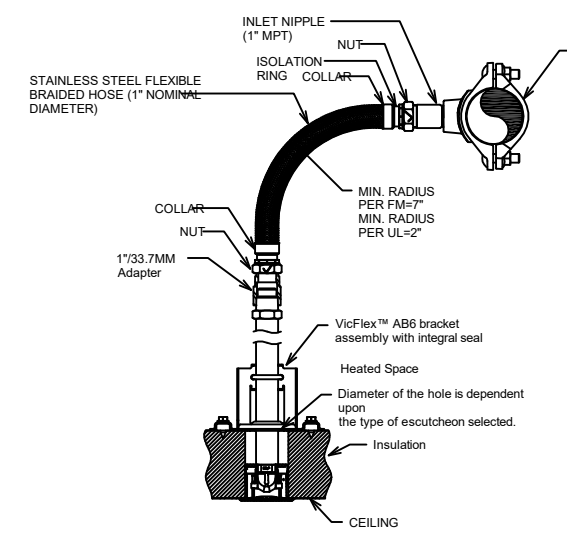
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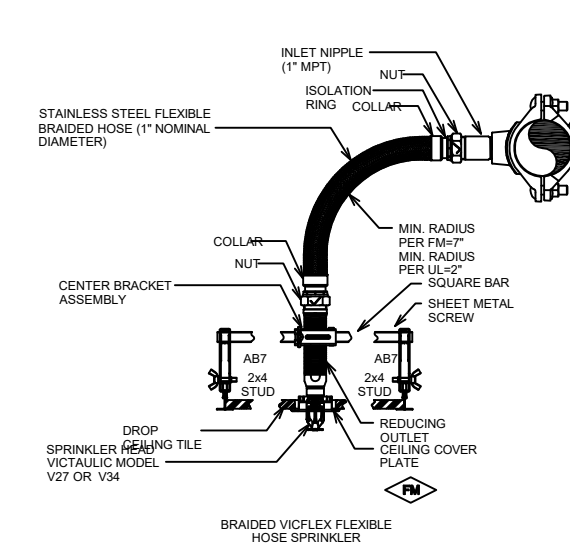
- NOTES:
- ADJUST SPRINKLER DROP AS NECESSARY TO CLEAR OBSTRUCTIONS SUCH AS THE CEILING T.Y. BAR SUSPENSION SYSTEM, LIGHT FIXTURES, ETC. PROVIDE A PIPE HANGER IF THE HORIZONTAL OFFSET LENGTH EXCEEDS 24 INCHES.
 - THIS SPRINKLER HEAD DROP IS APPLICABLE ONLY WHERE IT IS NOT NECESSARY TO RETAIN AN UPRIGHT SPRINKLER FOR PROTECTION OF COMBUSTIBLE CONSTRUCTION ABOVE THE CEILING.
 - FLEXIBLE ARMOVER PIPING SHALL BE IN ACCORD WITH THE UL LISTING CRITERIA FOR INTENDED INSTALLATION.

2 RELOCATED SPRINKLER ARMOVER

SCALE: NOT TO SCALE

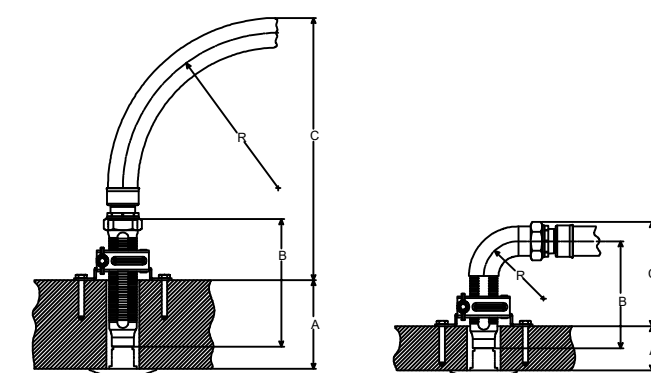


Braided Hoses Assembly:
BRAIDED VICTAULIC FLEXIBLE HOSE FOR DRY PENDING SPRINKLERS



FIRE SPRINKLER STEEL PIPE TABLE LIGHT HAZARD CLASSIFICATION

STEEL PIPE DIA. (INCH)	MAXIMUM NUMBER OF SPRINKLER HEADS
1"	2
1 1/4"	3
1 1/2"	5
2"	10
2 1/2"	30
3"	60
3 1/2"	100
4"	SECTION 5-2



Note: Style AB3 and Series AH2 figures show variations of block wall sprinkler heads, reducers and hoses are permitted but may result in clearance differences from the figure above.

Wall Thickness "A"	Hose Clearance											
	2 50	4 100	6 150	8 200	10 250	12 300	2 50	4 100	6 150	8 200	10 250	12 300
Outlet Length "B"	0.76	1.51	2.27	3.02	3.78	4.54	0.76	1.51	2.27	3.02	3.78	4.54
Hose Clearance "C"	13.02	11.02	11.02	11.02	11.02	11.02	13.02	11.02	11.02	11.02	11.02	11.02
Bend Radius "D"	175						200					

Model Number Correlation

Series AH4 Hose Assembly Designation	Outlet Size	Series AGB Hose Assembly Designation	Series AFB Hose Assembly Designation
AH4-31	1/2	AGB31HLD	AFB31HLD
	3/4	AGB31TLD	AFB31TLD
AH4-36	1/2	AGB36HLD	AFB36HLD
	3/4	AGB36TLD	AFB36TLD
AH4-48	1/2	AGB48HLD	AFB48HLD
	3/4	AGB48TLD	AFB48TLD
AH4-60	1/2	AGB60HLD	AFB60HLD
	3/4	AGB60TLD	AFB60TLD
AH4-72	1/2	AGB72HLD	AFB72HLD
	3/4	AGB72TLD	AFB72TLD

Note: For out of plane (three-dimensional) bends care must be taken to avoid imparting torsional stress on the hose.

Flexible Hose In-Plane Bend Characteristics

NOTES:

- SPRINKLER DATA & DETAILS HAVE BEEN PROVIDED BY VICTAULIC FIRE PRODUCTS. UL LISTED FIRE PIPING FOR FIRE HAZARD LEVELS PROPOSED SHALL BE OF EQUAL QUALITY AND LISTED TO THE UL CRITERIA REQUIRED.

SPRINKLER DENSITY AND SPACING

CLASSIFICATION	SYSTEM DESIGN	DENSITY	MAXIMUM PROTECTION	MAXIMUM SPACING
LIGHT HAZARD	HYDRAULICALLY	0.10 GPM/ SQ FT	225 SQ. FT.	15 FT.
ORDINARY HAZARD GROUP 1	HYDRAULICALLY	0.15 GPM/ SQ FT	130 SQ. FT.	15 FT.

MAXIMUM PIPE HANGER SPACING

	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"
CPVC PIPING	3'	3'	4'	4'	4'	4'	4'	N/A	N/A
THREADED LT. WALL STEEL	N/A	12'	12'	12'	12'	12'	N/A	N/A	N/A
STEEL PIPING	N/A	12'	12'	12'	12'	12'	12'	12'	12'

NOTE: STANDPIPES SHALL BE SUPPORTED AT EACH FLOOR USING RISER CLAMPS.

SPRINKLER LEGEND

SYM.	NAME	FINISH	TEMP	K	NPT	ORIFICE	ESCH.
●	RECESSED	WHITE	155	5.6	1/2"	1/2"	WHITE
▶	REC. SIDE	WHITE	155	5.6	1/2"	1/2"	WHITE

NOTES:

- ALL SPRINKLER HEADS SHALL BE QUICK RESPONSE TYPE IN LIGHT HAZARD OCCUPANCIES.

HYDRAULIC DESIGN DATA - LIGHT HAZARD WITH ORDINARY HAZARD AREAS

A.H.J.	PINELLAS COUNTY
DESIGN STD.	NFPA 13
PIPE TYPES:	
MAINS	SCH 10 BLACK STEEL
BRANCHES	SCH 40 BLACK STEEL
SPRINKLER ORIFICE	1/2" K = 5.6
AREA LOCATION	
* OF FLOWING SPRINKLERS	12
DENSITY (GPM/SQ. FT.)	0.1
REMOTE AREA (SQ. FT.)	1300
FIRE FLOW TEST DATA	
TEST HYDRANT	HYDRANT 1-910 NEW YORK AVENUE
TEST DATE	MAY 16 2019
FLOW (GPM)	1190
STATIC PRESSURE (PSI)	72
RESIDUAL PRESSURE (PSI)	50
DEMAND AT SOURCE CONNECTION	
FLOW (GPM)	1190 *
PRESSURE (PSI)	50.0 *
OUTSIDE HOSE STREAM (GPM)	250.00 *
* TO BE DETERMINED BY HYDRAULIC CALCULATIONS - MAX. PIPE VELOCITY TO BE 25 FPS	

FIRE PROTECTION GENERAL NOTES

- THE FIRE PROTECTION SYSTEM ENGINEERING DOCUMENTS ARE PROVIDED TO BE USED FOR THE PREPARATION OF THE FIRE PROTECTION SYSTEM LAYOUT DRAWINGS TO INDICATE THE NATURE AND SCOPE OF THE WORK. CONTRACTOR SHALL PROVIDE FINAL SUBMITTALS AND SHOP DRAWINGS INDICATING WORK TO BE DONE. DOCUMENTS SHALL BE SEALED BY A FL. REG. LICENSED ENGINEER, AND PROVIDED TO THE LOCAL BUILDING OFFICIAL(S); REFER TO REC. 1071.31
- COORDINATE ANY REQUIRED INTERRUPTIONS IN PROTECTION WITH THE AUTHORITY HAVING JURISDICTION AND THE BUILDING OWNER/OPERATOR.
- COORDINATE ALL WORK WITH THE OWNER AND ALL OTHER TRADES PRIOR TO COMMENCEMENT. REPORT ANY CONFLICTS THAT MAY ARISE TO THE ARCHITECT IN WRITING IMMEDIATELY BEFORE CONSTRUCTION.
- THE FIRE PROTECTION WORK SHALL INCLUDE BUT NOT LIMITED TO:
 - FIRE DEPARTMENT CONNECTIONS SHALL BE PROVIDED FOR CHARGING THE AUTOMATIC SPRINKLER SYSTEM. ALL FIRE DEPARTMENT CONNECTIONS SHALL HAVE INTERNAL THREADED SAUVEL FITTINGS AND SHALL BE EQUIPPED WITH CAPS OR PLUGS AS REQUIRED BY FIRE MARSHALL.
 - INSPECTORS TEST STATIONS AND SYSTEM DRAINS AS REQUIRED TO COMPLETE THE SYSTEM.
 - ASSOCIATED MAIN, CROSS MAIN, BRANCH, AND OTHER PIPING AND FITTINGS AS SIZED BY HYDRAULIC CALCULATION.
 - SPRINKLER HEADS LISTED AND APPROVED FOR INSTALLATION AS WILL BE INDICATED IN THE LAYOUT DOCUMENTS.
 - THRUST BLOCKS, HANGERS, RISER CLAMPS, COUPLINGS, CLAMPS, STRAPPING, RESTRAINTS, NIPPERS, HOSE CONNECTIONS, SCREWS, BOLTS, NUTS, INSERTS, RODS, ETC. AS REQUIRED TO COMPLETE THE SYSTEM.
 - THE CALCULATED WATER VELOCITY SHALL NOT EXCEED 20 FEET PER SECOND IN ANY SEGMENT OF THE DESIGNED SYSTEM.
 - PROVIDE TESTING AS REQUIRED PER NFPA 13-2013, and NFPA 24-2013.
- ALL FIRE PROTECTION PIPE AND FITTINGS SHALL BE IN ACCORDANCE WITH NFPA 13. PROVIDE LABELS AT REGULAR INTERVALS INDICATING PIPING SERVICE SUCH AS "FIRE PROTECTION WATER" AND ARROWS INDICATING FLOW DIRECTION.
- PIPING 1" TO 2" SHALL BE SCHEDULE 40 BLACK STEEL, ASTM SPECIFICATIONS A53, A100 OR A135. PIPING 2-1/2" AND LARGER SHALL BE SCHEDULE 10 BLACK STEEL, ASTM SPECIFICATIONS A53, A100 OR A135. ALL EXPOSED PIPING SHALL BE GALVANIZED. ALL FITTINGS 2" AND SMALLER TO BE CAST IRON SCREWED. ALL FITTINGS THAT ARE 2-1/2" AND LARGER TO BE MECHANICAL GROOVED COUPLINGS, VICTAULIC OR EQUAL. THE INSTALLATION OF UL LISTED FLEX OVER-ARM CONNECTIONS SHALL CONFORM STRICTLY TO THE UL INSTALLATION REQUIREMENTS.
- FIRE PROTECTION PIPING SHALL NOT BE SUPPORTED FROM ANYTHING OTHER THAN THE BUILDING STRUCTURE. NOR SHALL ANYTHING BE SUPPORTED FROM FIRE PROTECTION PIPING. ALL PIPE HANGERS AND SUPPORTS MUST BE CAPABLE OF SUPPORTING THE WEIGHT OF THE FILLED PIPE PLUS 250 POUNDS AT EACH SUPPORT POINT.
- SUPPORT ALL FIRE PROTECTION PIPING AT MAXIMUM 10 FOOT INTERVALS. THE DISTANCE BETWEEN THE LAST HANGER AND THE LAST SPRINKLER ON A BRANCH LINE SHALL NOT EXCEED 3 FEET. OTHERWISE THE PIPE SHALL BE EXTENDED BEYOND THE LAST SPRINKLER, AND AN ADDITIONAL HANGER SHALL BE ADDED, ON CROSS MAINS THERE SHALL BE AT LEAST ONE HANGER BETWEEN EACH TWO BRANCH LINES
- ALL VALVES SHALL BE OF THE POSITION INDICATING TYPE AND SHALL NOT BE CAPABLE OF CLOSING WITHIN 9 SECONDS FROM THE FULL OPEN POSITION.
- ALL CONTROL, DRAIN, AND TEST VALVES SHALL BE PROVIDED WITH A PERMANENTLY MARKED, WEATHERPROOF IDENTIFICATION SIGN. THE SIGN SHALL BE SECURED WITH CORROSION RESISTANT WIRE, CHAIN, ETC. TERMINATING
- ALL FIRE PROTECTION PIPING AND FITTINGS SHALL BE INSTALLED SUCH THAT THE SYSTEM CAN BE EASILY DRAINED. DRAINS SHALL BE INDIRECTLY CONNECTED TO A STORM OR SANITARY SEWER DRAIN OR TO THE EXTERIOR, TERMINATING 6" ABOVE GRADE WITH A TURNED DOWN ELBOW.
- PRESSURE GAUGES IN EACH RISER AND ON EACH SIDE OF EACH FLOW SWITCH OR ALARM CHECK VALVE. ALL VALVES AND GAUGES SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.
- THE SPRINKLER CONTRACTOR SHALL INSTALL NEW HEADS THAT ARE OF THE TYPE AND TEMPERATURE RATINGS AS REQUIRED FOR THE AREA. STANDARD COMMERCIAL - FOR LIGHT AND ORDINARY HAZARDS, UPRIGHT, PENDENT, RECESSED PENDENT, CONFIGURATIONS. STANDARD ORIFICE K=5.6.
- CONCEALED SPRINKLER HEADS SHALL BE USED WHEREVER POSSIBLE THROUGHOUT THE FINISHED SPACES OF THIS PROJECT. COVER PLATE COLOR OR CHARGE FINISH SHALL BE APPROVED IN WRITING BY THE ARCHITECT PRIOR TO PURCHASE OR INSTALLATION OF SPRINKLER UNITS. SUBMIT TO ARCHITECT FOR APPROVAL ANY AND ALL SPRINKLER HEAD COLORS AND ESCUTCHEON FINISHES PRIOR TO PURCHASE OR INSTALLATION.
- UNFINISHED AREAS SHALL BE PERMITTED TO BE PROTECTED BY ROUGH FINISH BRASS SPRINKLER HEADS. NOTE ALL SPRINKLERS IN UNCONDITIONED SPACES SHALL BE PROVIDED WITH CORROSION PROTECTION EQUIVALENT TO WAX OR POLYESTER COATING. UNFINISHED CEILING - BRASS UPRIGHT.
- SPRINKLER HEADS SHALL BE UNDERWRITERS LABORATORIES LISTED (CANADA AND USA) WITH FRAME OF DIE CAST BRASS, TEFLON ENCAPSULATED BELLEVILLE SPRING SEAL, AND FRANGIBLE GLASS BULB. THE GLASS BULBS ARE AVAILABLE IN STANDARD AND QUICK RESPONSE WITH VARIOUS TEMPERATURE RATINGS ACCORDING TO APPLICATION REQUIREMENT.
- MAINTAIN A SUPPLY OF SPARE SPRINKLERS (NO LESS THAN 6) AND A SPRINKLER WRENCH IN A CABINET ON THE PREMISES WHICH WILL AT NO TIME BE EXPOSED TO TEMPERATURES OVER 100 DEGREES F.

CODES & STANDARDS COMPLIANCE

FIRE PROTECTION INSTALLATION, MATERIALS & CONTROL MATRIX SHALL COMPLY WITH (2013) NFPA-13, NFPA-24 AND 6TH EDITION 2017 FLORIDA BUILDING COD3.

NOTE: IF SPRINKLER SYSTEM TO BE OUT OF SERVICE FOR GREATER THEN 4 HOURS IN A 24 HOUR PERIOD DURING DEMOLITION OR CONSTRUCTION, AN APPROVED FIRE WATCH MUST BE PROVIDED FOR ALL PORTIONS LEFT UNPROTECTED BY THE FIRE PROTECTION SYSTEM SHUTDOWN UNTIL THE FIRE PROTECTION SYSTEM HAS BEEN RETURNED TO SERVICE.

INDEX OF FIRE PROTECTION DRAWINGS

FP001 FIRE PROTECTIN GENERAL MECHANICAL INFORMATION
FP101 OVERALL 1ST FLOOR FIRE PROTECTION RENOVATION

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727 894-4668
PROFESSIONAL SEAL

Gregory M. Clements, P.E.
State of Florida 62775

BARBEE TOWERS RENOVATION
1100 E DRUID ROAD
CLEARWATER, FL 33756

ISSUED
DATE: 09-15-20
CONSTRUCTION DOCUMENTS

REVISIONS		
NO.	DATE:	DESCRIPTION

PROJECT NO: 19019.00
DRAWN BY: TLJ
PROJECT MANAGER: RW
CHECKED BY: GMC
DATE: 09-15-20
SCALE: NOT TO SCALE

FP100
FIRE PROTECTION
GENERAL
INFORMATION

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**BARBEE TOWERS
 RENOVATION**
 1100 E DRUID ROAD
 CLEARWATER, FL 33756

ISSUED
 DATE: 10/09/2009 FOR:
 09-15-20 CONSTRUCTION DOCUMENTS

REVISIONS		
NO.	DATE	DESCRIPTION

PROJECT NO.: 19079.00
 DRAWN BY: TLJ
 PROJECT MANAGER: RW
 CHECKED BY: G1C
 DATE: 09-15-20
 SCALE: 1/8" = 1'-0"

FP101
 PARTIAL FIRST FLOOR
 FIRE PROTECTION PLAN

FIRE PROTECTION NOTE:

- IF SPRINKLER SYSTEM TO BE OUT OF SERVICE FOR GREATER THAN 4 HOURS IN A 24 HOUR PERIOD DURING DEMOLITION OR CONSTRUCTION, AN APPROVED FIRE WATCH MUST BE PROVIDED FOR ALL PORTIONS LEFT UNPROTECTED BY THE FIRE PROTECTION SYSTEM. SHUTDOWN UNTIL THE FIRE PROTECTION SYSTEM HAS BEEN RETURNED TO SERVICE.
- FIRE SPRINKLER CONTRACTOR SHALL PROVIDE NEW FLOW TEST AT BEGINNING AND VERIFY PIPE SIZES.
- REFER TO SHEET M1602 FOR FIRE PIPING PENETRATIONS THROUGH RATED & NON-RATED WALLS OF ALL APPROVED FIRE PIPING TYPES.

FIRE PROTECTION LEGEND:

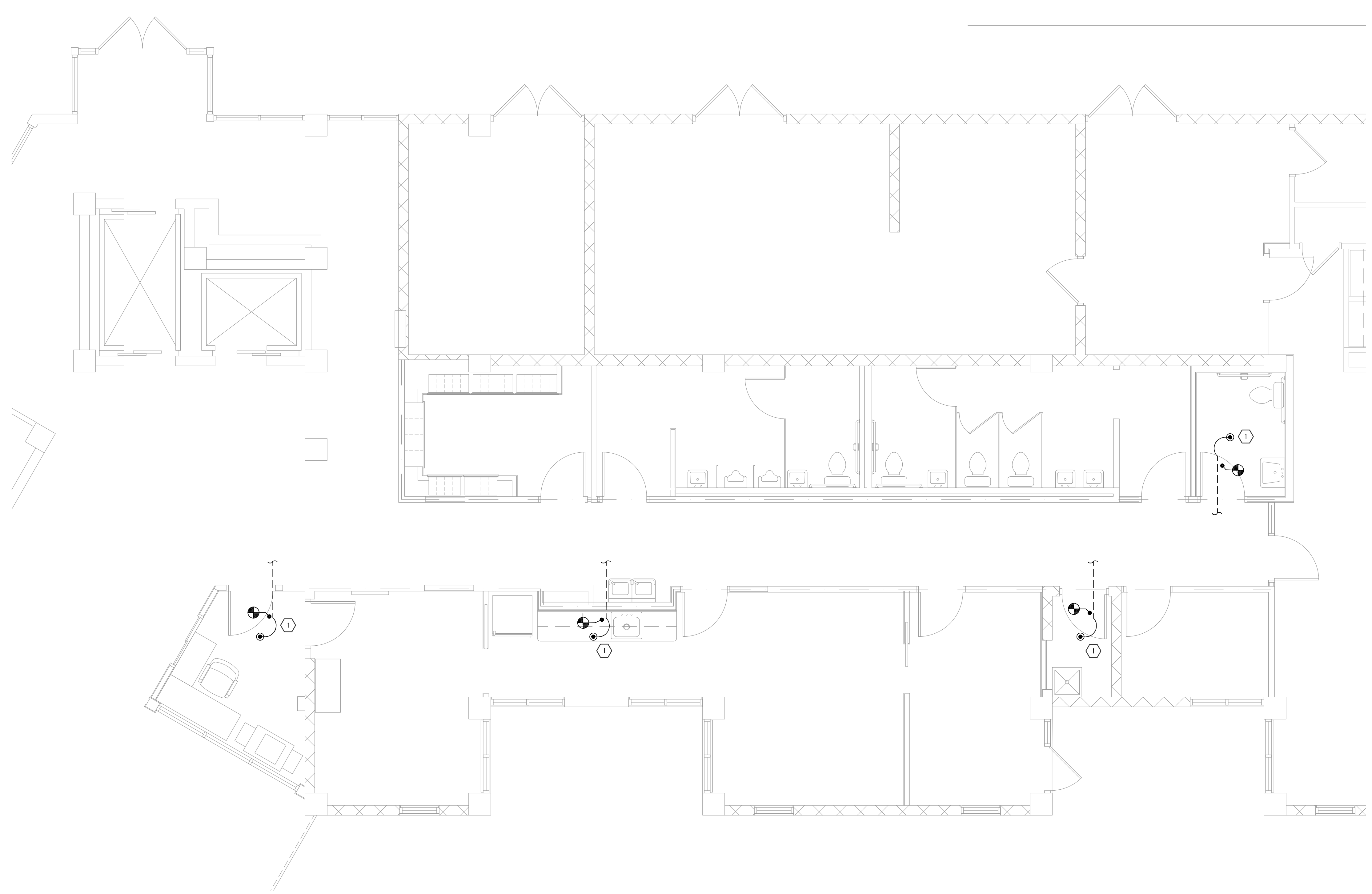
- NEW RECESSED FIRE SPRINKLER
- ◄ NEW SIDE WALL FIRE SPRINKLER
- ⊙ EX. FIRE SPRINKLER
- FIRE PIPING DRAIN
- ADJUSTED BRANCH CONNECTION TO EX. FIRE SPRINKLER LINE

FIRE PROTECTION LINE TYPES

EX. FIRE PROTECTION BRANCH LINE

RENOVATION KEY NOTES:

- ① PROVIDE NEW FIRE SPRINKLER HEAD WITH FLEXIBLE CONNECTION TO NEW LOCATION



① **PARTIAL FIRST FLOOR FIRE PROTECTION PLAN**
 SCALE: 1/8" = 1'-0" NORTH