

FIRE PROTECTION NOTES

1. THE ENTIRE INSTALLATION SHALL MEET THE APPROVAL OF THE OWNER'S INSURANCE CARRIER, NFPA, MUNICIPAL, STATE AGENCIES HAVING JURISDICTION AND IN ACCORDANCE WITH THE 2020 FIRE CODE OF NYS.
2. CERTIFIED APPROVAL BY OWNER'S INSURANCE CARRIER AND ALL OTHERS AGENCIES AND AUTHORITIES HAVING JURISDICTION SHALL APPEAR ON CONTRACTORS SHOP DRAWING.
3. DESIGN CRITERIA:

* HAZARD CLASSIFICATION

– AS SPECIFIED ON THE DRAWINGS

* DENSITY OF COVERAGE:

– AS SPECIFIED ON THE DRAWINGS

* TEMPERATURE CLASSIFICATION OF SPRINKLER HEADS :

SHALL BE PER NFPA 13 –2016 EDITION.

* MAXIMUM PROTECTED AREA PER SPRINKLER HEAD SHALL BE PER NFPA 13–2016 EDITION.

4. CONTRACTOR TO PERFORM HYDRAULIC CALCULATIONS TO DETERMINE THE NEW SPRINKLER PIPE SIZES.

5. SPRINKLER PIPE SHALL BE BLACK AND HOT–DIPPED ZINC COATED (DROP PIPE) WELDED AND SEAMLESS STEEL PIPE FOR FIRE PROTECTION USE PER ASTM A 795, FOR PIPING 1–1/4 INCH AND LARGER, SCHEDULE 10 ROLL GROOVED PIPE WITH VICTAULIC COUPLINGS MAY BE USED. OTHERWISE, SCHEUDLE 40 THREADED PIPE SHALL BE USED.

6. A NEW SPRINKLER SYSTEM SHALL BE REQUIRED AS INDICATED ON THE DRAWINGS COVERING 100% OF THE RENOVATED AREAS.

7. THE SPRINKLER SYSTEM SHALL BE HYDRAULICALLY DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 13–2016 EDITION.

8. NOT USED.

9. SPRINKLERS AND FITTINGS SHALL BE UL LISTED AND FACTORY MUTUAL APPROVED.

10. SPRINKLER HEADS SHALL BE UNIFORMLY SPACED ON BRANCH LINES. SPRINKLERS IN SUSPENDED CEILINGS SHALL BE INSTALLED IN CENTER OF CEILING PANELS AND TILES AS APPLICABLE.

11. CONTRACTOR SHALL PRESSURE TEST WATER MAIN FOR ADEQUACY OF WATER FLOW AND PRESSURE.

12. THE SPRINKLER SYSTEM SHALL BE HYDRAULICALLY CALCULATED, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER WITH FIRE PROTECTION BACKGROUND AND REGISTERED IN THE STATE OF NEW YORK STATE.

13. CONTRACTOR SHALL SUBMIT SPRINKLER SHOP DRAWINGS INCLUDING LAYOUT, DETAILS AND HYDRAULIC CALCULATIONS FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
- FIRE PROTECTION SPECIFICATIONS
1. SCOPE OF WORK

A. THE WORK UNDER THIS CONTRACT INCLUDES ALL LABOR, AND MATERIALS NECESSARY FOR THE FURNISHING, INSTALLATION AND TESTING, COMPLETE AND READY FOR SAFE OPERATION OF THE EXISTING FIRE PROTECTION SYSTEMS MODIFIED. INCLUDE ALL COSTS FOR PERMITS, LICENSES AND CERTIFICATE FILING AND INSPECTIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION. ALL WORK MUST COMPLY WITH NFPA AND OWNER'S CORPORATE STANDARDS.

B. SPRINKLER SYSTEM SHALL BE:

1. A MODIFICATION TO A EXISTING HYDRAULICALLY DESIGNED SYSTEM IN ACCORDANCE WITH THE STANDARDS OF THE NATIONAL FIRE PROTECTION AND OWNER'S GUIDELINES AND STANDARDS.

2. DESIGN SYSTEM TO CONFORM WITH BUILDING STRUCTURAL, MECHANICAL AND ELECTRICAL SYSTEMS EITHER EXISTING OR PROPOSED.

C. CONTRACTOR SHALL PROVIDE ALL SCAFFOLDING, RIGGING AND SERVICES NECESSARY FOR ERECTION AND DELIVERY ONTO THE PREMISES OF ALL MATERIALS FURNISHED AND/OR INSTALLED UNDER THIS SECTION OF THE SPECIFICATIONS AND REMOVE SAME FROM PREMISES WHEN NO LONGER REQUIRED.

D. CONTRACTOR SHALL MAINTAIN CONSTRUCTION SITE IN A CLEAN AND ORDERLY CONDITION AND SHALL REMOVE ALL CONSTRUCTION DEBRIS/TRASH FROM THE PREMISES PRIOR TO ACCEPTANCE OF THE WORK.

E. THE SCHEDULING OF THE SPRINKLER WORK SHALL BE COORDINATED WITH THE BUILDING OWNER AND OTHER CONTRACTORS ON THIS PROJECT.

2. SYSTEM PERFORMANCE REQUIREMENTS

A. DESIGN AND OBTAIN APPROVAL FROM AUTHORITY HAVING JURISDICTION FOR FIRE PROTECTION SYSTEMS TO BE MODIFIED.

B. SPRINKLER SYSTEM COMPONENTS SHALL BE CAPABLE OF WITHSTANDING A MINIMUM WORKING PRESSURE RATING OF 175 PSIG.

C. THE SPRINKLER SYSTEM SHALL BE INSPECTED AND TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF LOCAL AUTHORITIES, NEW YORK STATE IBC, AND NFPA.

3. SUBMITTALS

A. PRODUCT DATA FOR FIRE PROTECTION SYSTEM COMPONENTS. INCLUDE THE FOLLOWING:

(1) PIPE MATERIAL, FITTINGS, AND NEW SPRINKLER HEADS.

(2) SPRINKLER HEADS. INCLUDE SPRINKLER FLOW CHARACTERISTICS, MOUNTING, FINISH, AND OTHER DATA.

(3) HANGERS AND SUPPORTS

(4) SPRINKLER PIPING LAYOUT

B. SPRINKLER SYSTEM DRAWINGS IDENTIFIED AS "WORKING PLANS", SHALL BE PREPARED ACCORDING TO NFPA 13, 2016 EDITION, CHAPTER 23. SUBMIT REQUIRED NUMBER OF SETS TO OWNER'S INSURANCE COMPANY FOR REVIEW, COMMENT AND STAMPED APPROVAL PRIOR TO SUBMITTING TO ENGINEER. INCLUDE SYSTEM HYDRAULIC CALCULATIONS WHERE APPLICABLE.

14. CONTRACTOR SHALL FURNISH A CERTIFICATE OF FINAL INSPECTION TO THE OWNER FROM INSPECTION DEPARTMENT HAVING JURISDICTION.

15. ALL PIPING SHALL BE LABELED IN COLOR IN ACCORDANCE WITH ANSI REQUIREMENTS. VALVE TAGS SHALL BE FURNISHED AND ATTACHED BY BRASS LINE CHAIN TO EACH VALVE.

16. CONTRACTOR SHALL INSTALL "INSPECTOR'S TEST CONNECTIONS" IN SPRINKLER SYSTEM PIPING, COMPLETE WITH SHUTOFF VALVE, SIZED AND LOCATED ACCORDING TO NFPA 13–2016 EDITION.

17. CONTRACTOR SHALL INSTALL PRESSURE GAGES ON RISER OR FEED MAIN, AT EACH SPRINKLER TEST CONNECTION OF NOT LESS THAN NPS 1/4" AND WITH SOFT METAL SEATED GLOBE VALVE ARRANGED FOR DRAINING PIPING BETWEEN GAGE AND VALVE.

18. ALL HANGERS, BRACKETS AND STRAPS SHALL BE SECURED TO BUILDING STRUCTURE. HANGERS AND SUPPORTS FOR SPRINKLER PIPING AND SUPPORTS SHALL COMPLY WITH NFPA 13 EDITION FOR HANGER MATERIALS, PIPE.

19. CONTRACTOR SHALL SEAL ALL PIPE PENETRATIONS THROUGH NEW AND EXISTING BUILDING CONSTRUCTION WITH APPROVED FIRESTOP SAFING.

20. ALL MATERIAL AND EQUIPMENT SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS, NFPA 13–2016 EDITION AND 2020 FIRE CODE OF NYS.

21. CONTRACTOR SHALL PROVIDE ALL NECESSARY FACILITIES, WATER OR COMPRESSED AIR, GAUGE AND MEASURING DEVICES, PUMP AND LABOR AS REQUIRED FOR TESTING.

22. ALL REQUIRED FEES, PERMITS AND INSPECTIONS SHALL BE OBTAINED AND PAID FOR BY THE CONTRACTOR.

23. COORDINATE SPRINKLER COVERAGE AT OBSTRUCTIONS SUCH AS ANY FORMED BY HVAC DUCTS & EQUIPMENT AND OTHER EQUIPMENT.

24. SPRINKLER HEAD SHALL BE UPRIGHT TYPE IN AREAS W/OUT CEILING. SPRINKLER HEADS BE CONCEALED TYPE, TILE CENTERED IN ONE DIRECTION, IN AREAS WITH CEILINGS.

25. AVOID INTERFERENCE WITH LIGHTS, DUCTS, DIFFUSERS, CEILING GRILLES, SPEAKERS, CEILING TEES, ETC. COORDINATE WORK WITH OTHER TRADES.

26. THE DENSITY SHALL BE MAINTAINED OVER 100% OF THE AREA.

27. CONTRACTOR SHALL COORDINATE WITH OWNER FOR TIE–IN AND SHUTTING OFF SPRINKLER WATER SERVICE BEFORE STARTING WORK. PROVIDE A WRITTEN SCHEDULE ON WORK REQUIREMENTS INDICATING WHEN THE EXISTING SPRINKLER SYSTEM IS EXPECTED TO BE SHUT–DOWN, HOW LONG OF A PERIOD, AND PROVIDE A FIRE WATCH THROUGHOUT THE JOB SITE.

28. EXISTING MAIN

STATIC WATER PSI

BY OWNER

RESIDUAL WATER MAIN

BY OWNER

(INSPECTION DATED)

BY OWNER

LOCATION HYDRANTS

BY OWNER

MAIN SIZE

BY OWNER

SPRINKLER NOTE:

TYPE OF CEILING MOUNTED SPRINKLER HEAD SHOWN ON DRAWING IS BASIS OF DESIGN.
CONTRACTOR SHALL COORDINATE WITH OWNER ON TYPE OF CEILING MOUNTED SPRINKLER HEAD REQUIRED FOR PROJECT.

SYSTEM		MATERIAL
LOW–POINT DRAINAGE CONNECTIONS	CONCEALED	STEEL
SPRINKLER MAIN PIPING	CONCEALED	SCHEDULE 40 STEEL
SPRINKLER PIPING	EXPOSED	SCHEDULE 40 STEEL
SPRINKLER BRANCH PIPING	CONCEALED	SCHEDULE 40 STEEL
SPRINKLER HEADS	OFFICES	CONCEALED TYPE

FIRE PROTECTION CRITERIA SCHEDULE				
AREA	DENSITY GPM/SF	MAX. PROTECTION AREA, SF	HAZARD CLASSIFICATION	SPRINKLER HEAD
LOCKER ROOM	0.10	1500	LIGHT HAZARD	CONCEALED AUTOMATIC SPK, RELIABLE G4FR
R&D LAB	0.15	1500	ORDINARY HAZARD	CONCEALED AUTOMATIC SPK, RELIABLE G4FR

LEGEND

DESIGNATED AREAS SHALL BE PROTECTED BY AND HYDRAULICALLY CALCULATED FOR THE DESIGNATED HAZARD CLASSIFICATION SHOWN ON THE DRAWINGS IN ACCORDANCE WITH NFPA 13–2016 EDITION.

ABBREVIATIONS:

*F DEGREES FAHRENHEIT

(E) EXISTING TO REMAIN

(D) EXISTING TO BE REMOVED AND CAPPED

(N) NEW

(R) EXISTING TO BE RELOCATED

AH PENDANT

ASTM AMERICAN SOCIETY FOR TESTING AND MATERIALS

BH UPRIGHT

CH UPRIGHT, GUARD

CS CARBON STEEL

CSP CONCEALED SPRINKLER

DH FULLY RECESSED, CENTRAL TWO DIRECTIONS

DWG DRAWING

FP FIRE PROTECTION

GPM GALLONS PER MINUTE

LH LIGHT HAZARD

MAX MAXIMUM

NA NOT APPLICABLE

NFPA NATIONAL FIRE PROTECTION ASSOCIATION

NIC NOT IN CONTRACT

PSI POUNDS PER SQUARE INCH

SF SQUARE FEET

SQ.FT. SQUARE FEET

UH UPRIGHT

UH(G) UPRIGHT, GUARD

UL UNDERWRITER'S LAB

U.O.N. UNLESS OTHERWISE NOTED

GENERAL SPRINKLER NOTES:

1. SEE SHEET T02 FOR ADDITIONAL GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS.

2. SEE GENERAL NOTES #19, 20 & 21 ON SHEET T02 FOR MANDATORY SUBCONTRACTOR REQUIREMENTS.

3. REFER TO AND COORDINATE FIRE PROTECTION WORK WITH THAT OF OTHER DISCIPLINES AS SHOWN ON ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL AND CIVIL DRAWINGS.

4. THE FIRE PROTECTION TRADE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO PROCEEDING WITH ANY WORK. WHERE DISCREPANCIES OCCUR BETWEEN THESE DOCUMENTS AND EXISTING CONDITIONS, THE DISCREPANCY SHALL BE REPORTED TO THE CONSTRUCTION MANAGER AND/OR ENGINEER FOR EXPEDITING AND RESOLUTION.

5. THE CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS.

6. FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR A COMPLETE FIRE SUPPRESSION SYSTEM WHERE SHOWN ON DRAWINGS AND AS REQUIRED BY NFPA No. 13, 2016 EDITION.

7. SPRINKLER CONTRACTOR SHALL INCLUDE IN HIS BID DRAINAGE OF THE EXISTING SYSTEM, CONNECTION TO THE MAIN AND RE–ACTIVATING SYSTEM. ALL OF THE ABOVE SHALL BE COORDINATED WITH THE OWNERS UNDERWRITERS INSURANCE COMPANY & LOCAL FIRE AUTHORITIES.

8. LOCATION OF INCOMING NEW AND/OR EXISTING SPRINKLER SERVICE PIPING AS SHOWN ON DRAWING IS APPROXIMATE. THIS TRADE SECTION SHALL VERIFY ALL LOCATIONS IN FIELD.

9. THE BUILDING WILL REMAIN TOTALLY OCCUPIED DURING THE ENTIRE DEMOLITION AND CONSTRUCTION PERIOD, ANY AND ALL UTILITY SERVICE SHUTDOWNS AND/OR FIRE PROTECTION SYSTEM INTERRUPTIONS (TO OPERATIONS) MUST BE LIMITED AND COORDINATED WITH THE OWNER'S REPRESENTATIVE PRIOR TO BEING IMPLEMENTED.

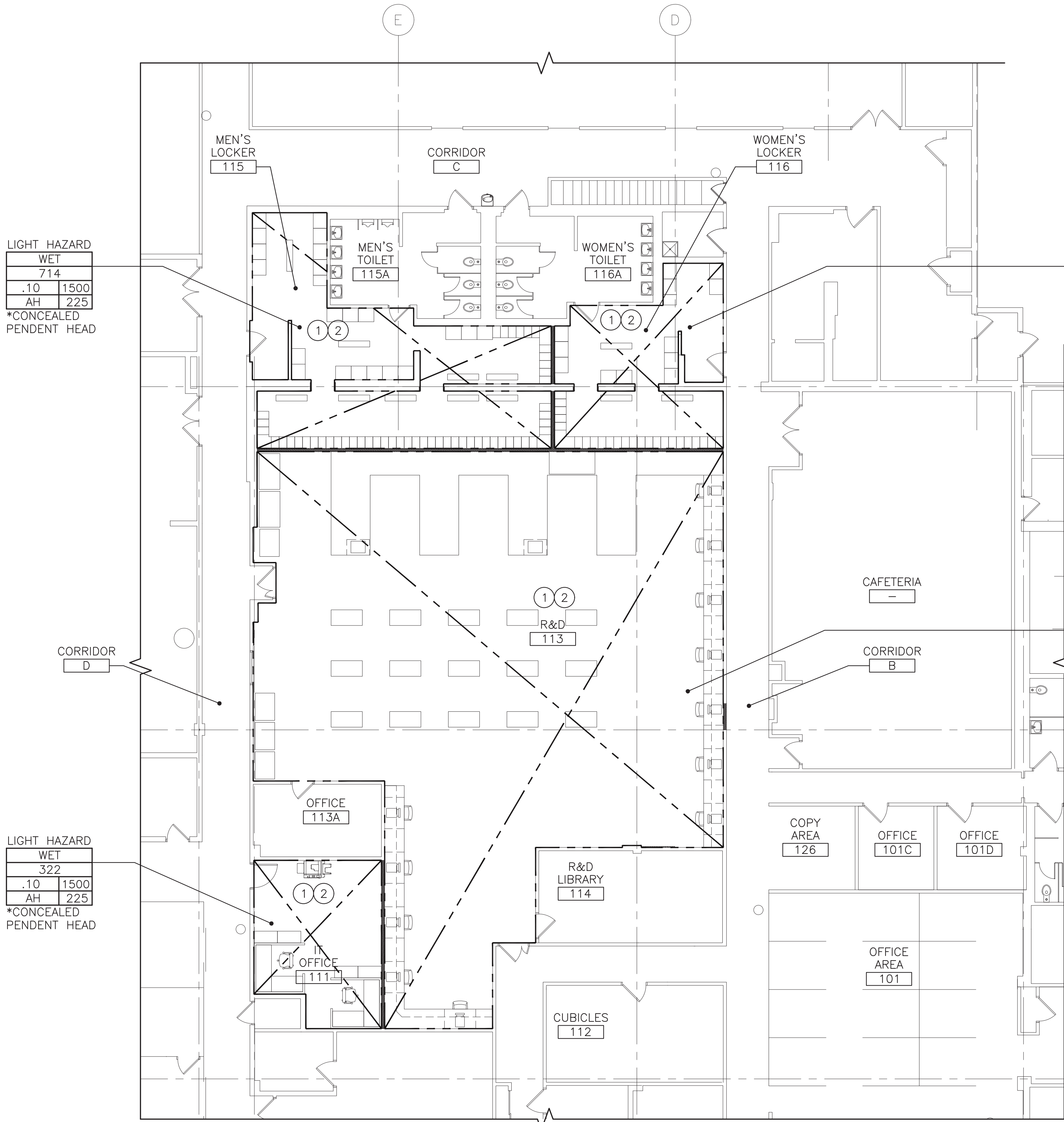
10. THE FIRE PROTECTION CONTRACTOR IS RESPONSIBLE TO REPAIR/REPLACE ANY DAMAGED EXISTING APPURTENANCES WHICH ARE NOT INTENDED TO BE DEMOLISHED DURING THIS PHASE OF WORK.

0	ISSUED FOR BID AND CONSTRUCTION	LG	24 SEPT 21
REV	REVISION DESCRIPTION	BY	DATE
<div><div><div>EI</div><div>ARCHITECTURE ENGINEERING PLANNING</div></div><div><div>EI Associates</div><div>ARCHITECTS & ENGINEERS, PC</div><div>8 RIDGEDALE AVENUE•CEDAR KNOLLS NJ 07927•973.777.7777</div></div></div>			
GAETANO P. CIPRIANO, P.E.		PROFESSIONAL ENGINEER LICENSE NO. NY 064215–1	FIRE PROTECTION
SCALE	AS NOTED	PROJECT	EIA DRAWING NO.
DRAWN BY:	DATE	INSTRUMENTATION LABORATORY LOCKER ROOM EXPANSION ORANGEBURG NEW YORK	FP00
DESIGNED BY:	DATE		
CHECKED BY:	DATE		
APPROVED BY:	DATE		
PROJECT MANAGER:		TITLE GENERAL NOTES, LEGEND, AND ABBREVIATIONS	CLIENT DWG. NO. – – – – – EIA PROJECT NO. EG8577.03

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XX

PLAN
NORTH



FIRST FLOOR PLAN – NEW WORK
1/8"=1'-0" 1 FP11

FIRE PROTECTION NOTES:

- THE ENTIRE INSTALLATION SHALL MEET THE APPROVAL AND REQUIREMENTS OF FACTORY MUTUAL, OWNER'S INSURANCE CARRIER, NFPA, MUNICIPAL AND STATE AGENCIES HAVING JURISDICTION.
- ALL MATERIAL AND EQUIPMENT SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS, NFPA 13 AND APPLICABLE NEW YORK STATE CODES.
- CERTIFIED APPROVAL BY OWNER'S INSURANCE CARRIER AND ALL OTHERS AGENCIES AND AUTHORITIES HAVING JURISDICTION SHALL APPEAR ON CONTRACTORS SHOP DRAWING.
- DESIGN CRITERIA:
 - HAZARD CLASSIFICATION
4.1.1. LIGHT HAZARD.
 - DENSITY OF COVERAGE:
 - LIGHT HAZARD DENSITY 0.10 GPM/SF OVER THE MOST HYDRAULICALLY REMOTE 1500 SQUARE FEET FOR EACH ZONE.
 - ORDINARY HAZARD DENSITY 0.15 GPM/SF OVER THE MOST HYDRAULICALLY REMOTE 1500 SQUARE FEET FOR EACH ZONE.
 - TEMPERATURE CLASSIFICATION OF SPRINKLER HEADS : 165°F OR U.O.N.
 - MAXIMUM PROTECTED AREA PER SPRINKLER HEAD SHALL BE PER NFPA 13 REQUIREMENT AS FOLLOWS:
 - 225 SQUARE FOOT FOR LIGHT HAZARD.
- SPRINKLER HEAD:
 - CONCEALED PENDENT:
 - K5.6, ½" ORDINARY TEMPERATURE
 - RELIABLE MODEL: G4FR OR APPROVED EQUAL.
- QUICK RESPONSE SPRINKLERS SHALL BE USED THROUGHOUT THE FACILITY. ALL EXISTING SPRINKLER HEADS IN PROPOSED AREAS OF WORK SHALL BE REPLACED WITH NEW QUICK RESPONSE. SPRINKLER HEADS IN FINISHED AREAS SHALL BE CONCEALED TYPE HEADS, RELIABLE MODEL G4FR WITH A MINIMUM K-FACTOR OF 5.6.
- THE SPRINKLER TRADE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN THE FIELD, PRIOR TO BID AND STARTING WORK. VERIFY AVAILABLE STATIC AND RESIDUAL PRESSURE AND FLOW, IN SPRINKLER MAIN PRIOR TO BID AND STARTING WORK.
- SPRINKLER PIPE SHALL BE BLACK WELDED OR SEAMLESS STEEL PIPE (SCHEDULE 40) WITH THREADED CONSTRUCTION UP TO 2" FOR FIRE PROTECTION USE PER ASTM A 795. FOR PIPING 2-1/2 INCH AND LARGER PIPING SHALL BE ROLL GROOVED PIPE WITH VICTAULIC COUPLINGS.
- MINIMUM SPRINKLER BRANCH PIPE SIZING SHALL BE 1". IN THE CASE THAT EXISTING BRANCH PIPING IS LESS THAN 1" IT SHALL BE REPLACED WITH NEW AND SIZED AS REQUIRED PER HYDRAULIC CALCULATIONS SUBMITTED BY THE SPRINKLER CONTRACTOR.
- THE SPRINKLER SYSTEM SHALL BE HYDRAULICALLY DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 13 EDITION.
- SPRINKLERS AND FITTINGS SHALL BE UL LISTED AND FACTORY MUTUAL APPROVED.
- SPRINKLER HEADS SHALL BE UNIFORMLY SPACED ON BRANCH LINES. SPRINKLERS IN SUSPENDED CEILINGS SHALL BE INSTALLED IN CENTER OF CEILING PANELS AND TILES AS APPLICABLE.
- CONTRACTOR SHALL PRESSURE TEST EXISTING WATER MAIN FOR ADEQUACY OF WATER FLOW AND PRESSURE.
- THE SPRINKLER SYSTEM SHALL BE HYDRAULICALLY CALCULATED, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER WITH FIRE PROTECTION BACKGROUND AND REGISTERED IN THE STATE OF NEW JERSEY.
- CONTRACTOR SHALL SUBMIT SPRINKLER SHOP DRAWINGS INCLUDING LAYOUT, DETAILS AND HYDRAULIC CALCULATIONS FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
- CONTRACTOR SHALL FURNISH A CERTIFICATE OF FINAL INSPECTION TO THE OWNER FROM INSPECTION DEPARTMENT HAVING JURISDICTION.
- ALL PIPING SHALL BE LABELED IN COLOR IN ACCORDANCE WITH ANSI REQUIREMENTS. VALVE TAGS SHALL BE FURNISHED AND ATTACHED BY BRASS LINE CHAIN TO EACH VALVE.
- CONTRACTOR SHALL INSTALL "INSPECTOR'S TEST CONNECTIONS" IN SPRINKLER SYSTEM PIPING, COMPLETE WITH SHUTOFF VALVE, SIZED AND LOCATED ACCORDING TO NFPA 13 EDITION.
- ALL HANGERS, BRACKETS AND STRAPS SHALL BE SECURED TO BUILDING STRUCTURE. HANGERS AND SUPPORTS FOR SPRINKLER PIPING AND SUPPORTS SHALL COMPLY WITH NFPA 13 EDITION FOR HANGER MATERIALS, PIPE.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY FACILITIES, WATER OR COMPRESSED AIR, GAUGE AND MEASURING DEVICES, PUMP AND LABOR AS REQUIRED FOR TESTING.
- ALL REQUIRED FEES, PERMITS AND INSPECTIONS SHALL BE OBTAINED AND PAID FOR BY THE CONTRACTOR.
- ALL PENETRATIONS OF RATED WALLS AND PARTITIONS TO BE PROVIDED WITH FIRESTOP. REFER TO SPECIFICATIONS FOR REQUIREMENTS FOR WALL AND PARTITION RATINGS (TYPICAL). COORDINATE WITH REQUIREMENT ON AREA DRAWINGS.
- COORDINATE SPRINKLER COVERAGE AT OBSTRUCTIONS SUCH AS ANY FORMED BY HVAC DUCTS & EQUIPMENT AND OTHER EQUIPMENT.
- AVOID INTERFERENCE WITH LIGHTS, DUCTS, DIFFUSERS, CEILING GRILLES, SPEAKERS, CEILING TEES, ETC. COORDINATE WORK WITH OTHER TRADES.
- THE DENSITY SHALL BE MAINTAINED OVER 100% OF THE AREA.
- SPRINKLER CONTRACTOR SHALL PROVIDE HYDRAULIC CALCULATIONS AS WELL AS A HYDRANT FLOW TEST INDICATING THE STATIC AND RESIDUAL PRESSURES OF THE EXISTING INCOMING SPRINKLER MAINFROM THE STREET. THE HYDRANT FLOW TEST SUBMITTED SHALL BE CONDUCTED WITHIN 6 MONTHS OF THE PROJECT STARY DATE.

GENERAL NOTES:

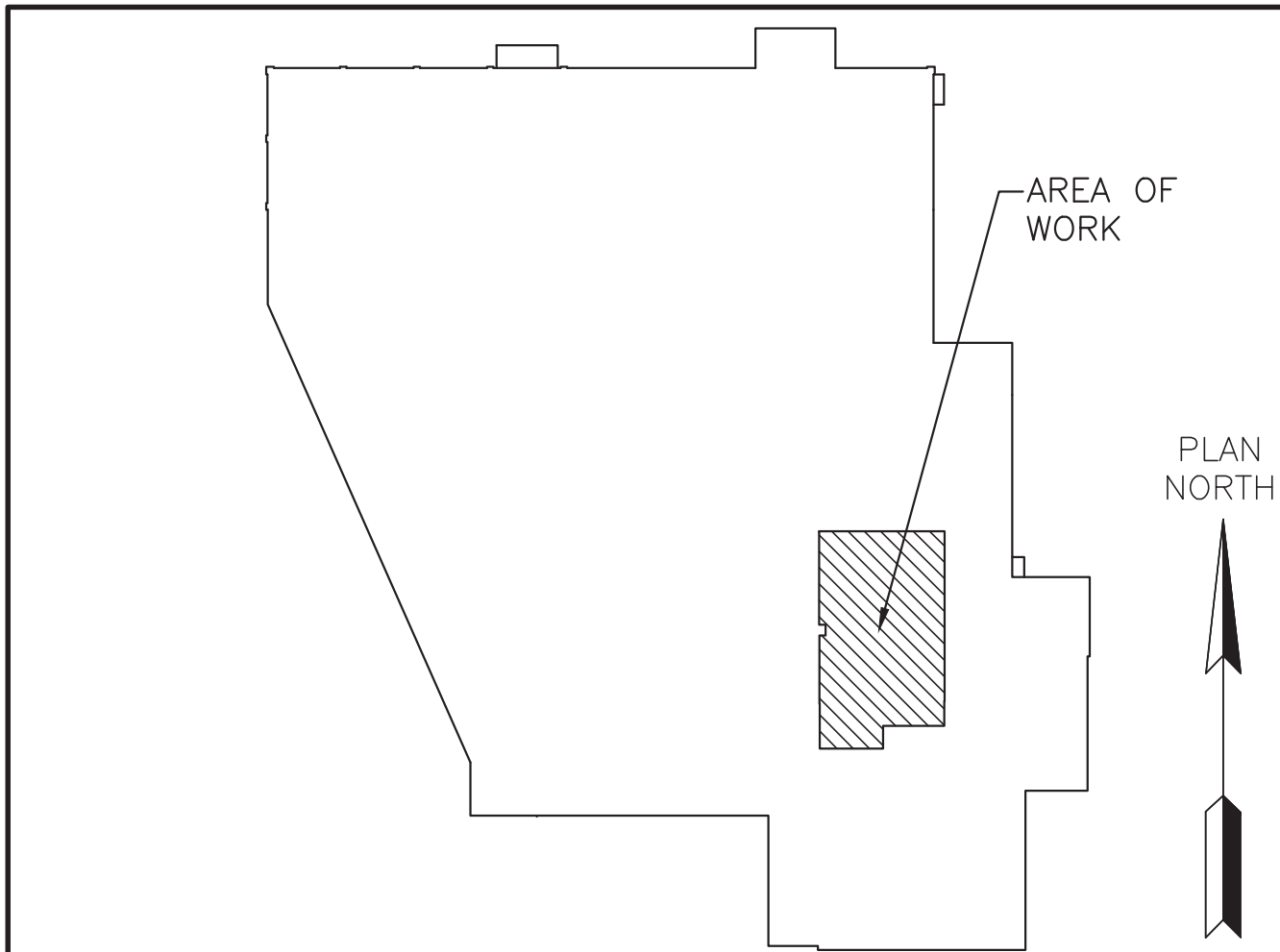
- SEE SHEET TO1 FOR ADDITIONAL GENERAL NOTES, ABBREVIATIONS, SYMBOLS AND LEGENDS.
- SEE GENERAL NOTES #18, 19 & 20 ON SHEET TO1 FOR MANDATORY SUBCONTRACTOR REQUIREMENTS.
- THE SPRINKLER CONTRACTOR SHALL PROVIDE FOR TEMPORARY EGRESS SPRINKLER COVERAGE OR A FIRE WATCH THROUGHOUT CONSTRUCTION.

GENERAL SPRINKLER NOTES:

- SPRINKLER PIPING IN GENERAL SHALL BE CONCEALED ABOVE HUNG CEILING WITH DROP NIPPLES TO SPRINKLER HEADS (UNLESS OTHERWISE NOTED)
- THE CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER CONTRACTORS INVOLVED IN SPACE CONDITIONS AND ARCHITECTURAL RCP BEFORE PROCEEDING. COORDINATE CEILING MOUNTED DEVICE LOCATIONS WITH LIGHTING, DIFFUSERS, HVAC EQUIPMENT, ETC.
- THE CONTRACTOR SHALL INSTALL ALL SPRINKLERS IN CENTER OF PANELS AND PROVIDE ALL NECESSARY ELBOWS, TEES AND NIPPLES TO ACCOMMODATE SAME.
- THE CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR CEILING HEIGHTS.
- CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS REQUIRED FOR A COMPLETE FIRE SUPPRESSION SYSTEM WHERE SHOWN ON DRAWINGS AND AS REQUIRED BY NFPA No. 13.
- QUANTITY AND LOCATIONS OF SPRINKLER HEADS SHOWN ON THESE PLANS ARE FOR ILLUSTRATION PURPOSES ONLY. EXACT QUANTITY AND LOCATION OF SPRINKLER HEADS SHALL BE SHOWN ON SPRINKLER CONSTRUCTION SHOP DRAWINGS, WHICH SHALL BE PROVIDED BY THIS CONTRACTOR. THE SPRINKLER CONTRACTOR SHALL PROVIDE AN ALLOWANCE IN THE BASE BID FOR THE MATERIALS AND LABOR ASSOCIATED WITH THE INSTALLATION OF 10 ADDITIONAL SPRINKLER HEADS, 100 LINEAR FEET OF 1" BRANCH PIPING, FITTINGS AND ALL ASSOCIATED HANGERS, SUPPORTS, VALVES, ETC. TO ACCOMMODATE ADDITIONAL SPRINKLER COVERAGE REQUIRED FOR EXISTING AND/OR NEW CONSTRUCTION CONDITIONS.
- ALL SPRINKLER PIPING SHALL BE PITCHED BACK TO THE SPRINKLER MAIN TO ALLOW FOR DRAINAGE OF THE SYSTEM. WHERE LOW POINTS OCCUR IN THE SYSTEM DUE TO OBSTRUCTIONS THE CONTRACTOR SHALL INSTALL A LOW POINT DRIP DRAIN (TYPICAL FOR ALL).
- THE GRAPHIC SYMBOLS IN THE PLAN LEGEND ARE SHOWN ON THE PLANS FOR GRAPHICAL LOCATION COORDINATION ONLY. SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR SPECIFICS IN TERMS OF SIZE, TYPE, AND CAPACITY OF ALL MECHANICAL & ELECTRICAL EQUIPMENT.
- NUMBER OF SPRINKLER HEADS SHOWN IS THE MINIMUM ALLOWABLE PER SQUARE FOOTAGE REQUIREMENTS PER NFPA No. 13.
- SPRINKLER CONTRACTOR SHALL INCLUDE IN THEIR BID DRAINAGE OF THE EXISTING SYSTEM, CONNECTION TO THE MAIN, TESTING AND RE-ACTIVATING SYSTEM. ALL OF THE ABOVE SHALL BE COORDINATED WITH THE OWNERS UNDERWRITERS INSURANCE COMPANY AND LOCAL FIRE AUTHORITIES.

SHEET NOTES:

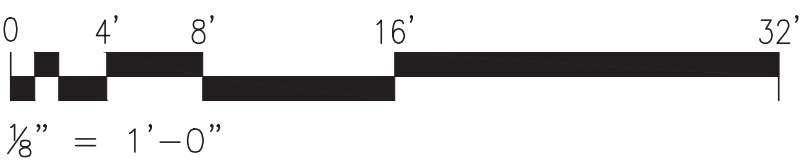
- EXISTING SPRINKLER HEAD LOCATIONS AND ASSOCIATED PIPING AND ALL HANGERS, SUPPORTS, ETC. SHALL BE MODIFIED AS REQUIRED TO ACCOMMODATE NEW CEILING PLAN. VERIFY EXISTING CONDITIONS IN THE FIELD PRIOR TO THE START OF WORK.
- EXISTING SPRINKLER HEADS IN THIS AREA SHALL BE REPLACED WITH NEW AND RECONFIGURED TO ACCOMMODATE NEW CEILING PLAN. SPRINKLER CONTRACTOR SHALL COORDINATE NEW HEAD LAYOUT WITH FINAL ARCHITECTIRAL REFLECTED CEILING PLAN. PROVIDE AN ALLOWANCE FOR 10'-0' OF BRANCH PIPING AND NEW SPRINKLER HEADS BASED ON HAZZAD CLASSIFICATION. SPRINKLER CONTRACTOR SHALL SUBMIT SHOP DRAWINGS WITH HYDRAULIC CALCULATIONS FOR REVIEW AND APPROVAL BY ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

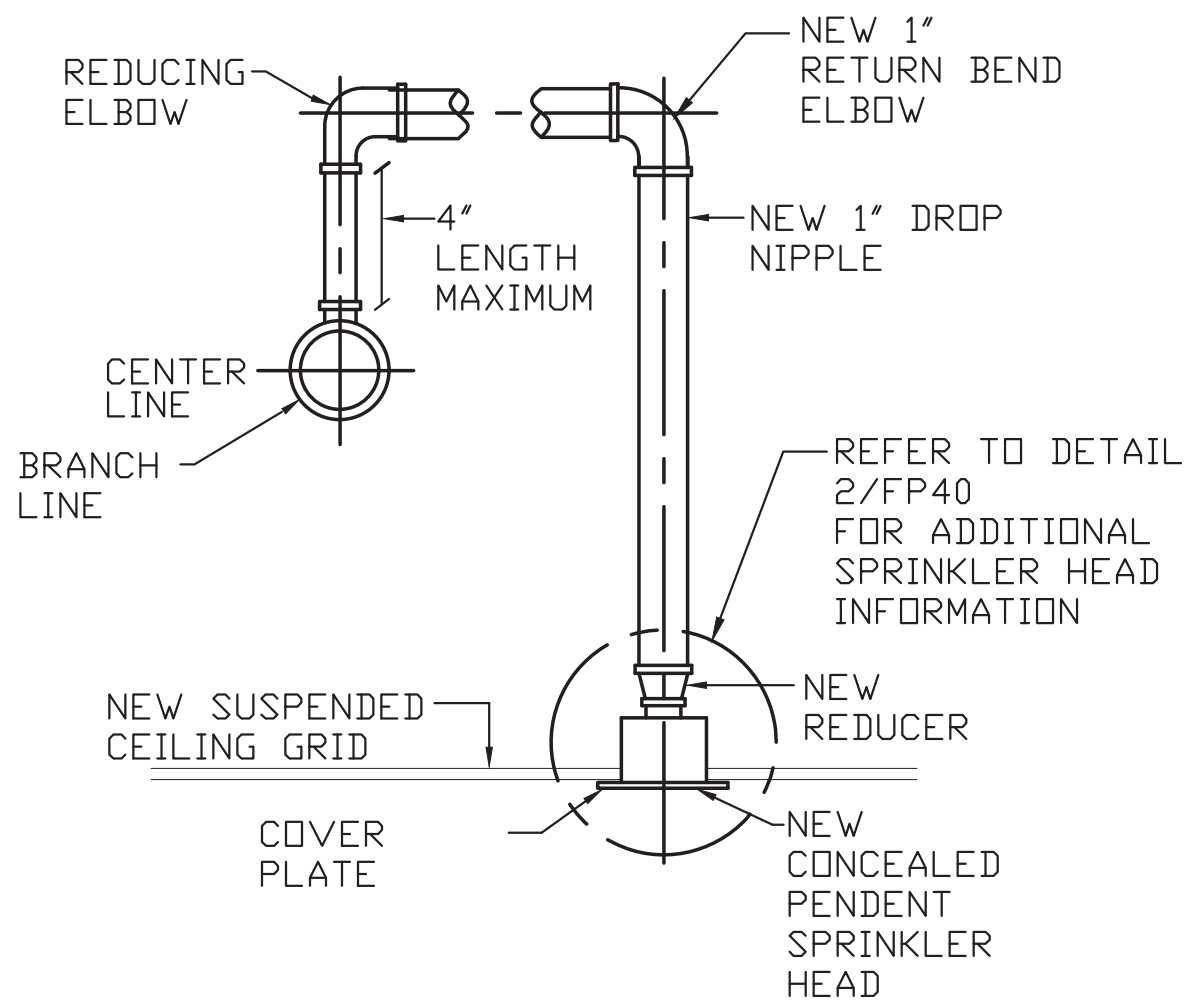


KEY PLAN – FIRST FLOOR
NTS

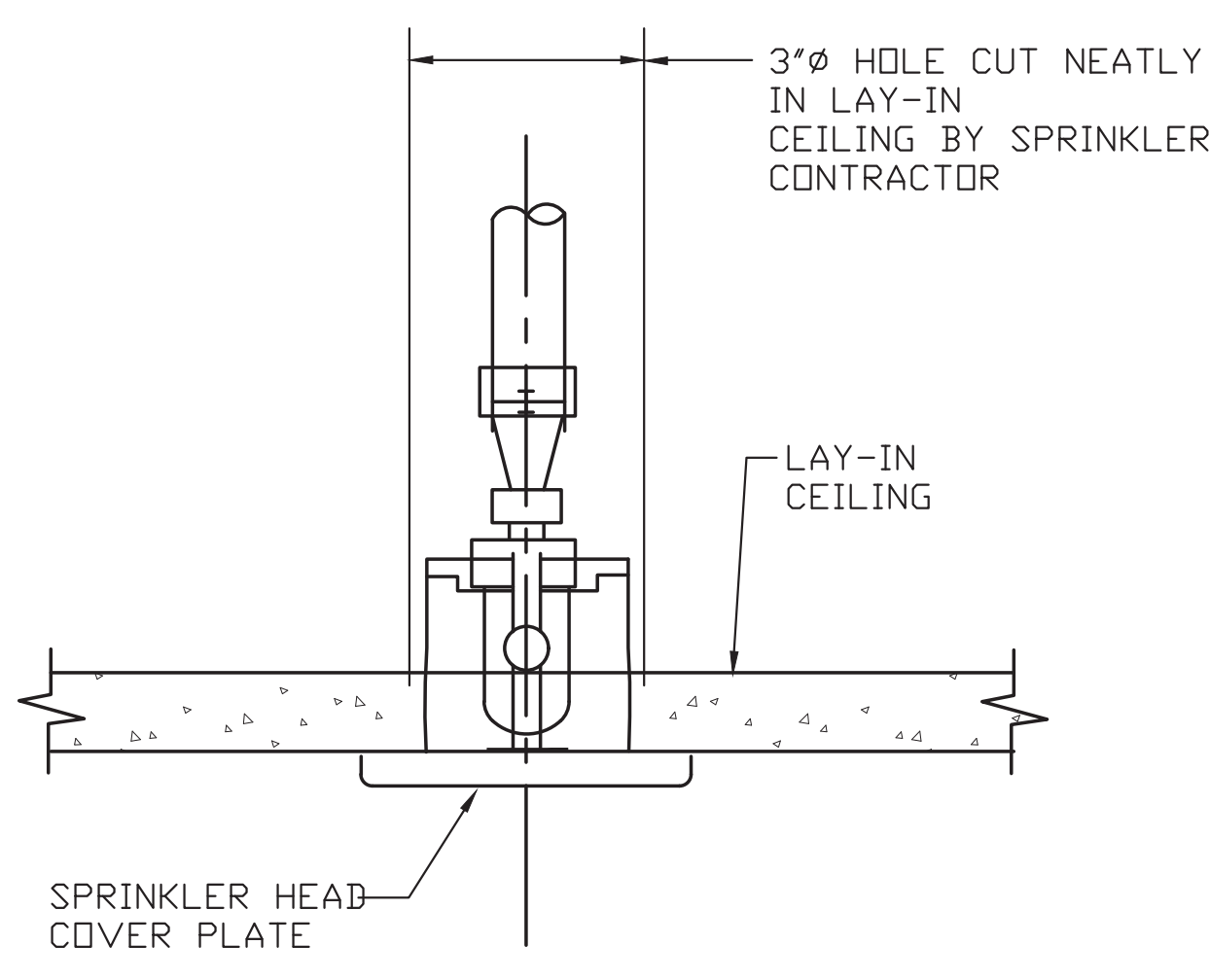
0	ISSUED FOR BID AND CONSTRUCTION	LG	24 SEPT 21
REV	REVISION DESCRIPTION	BY	DATE

EI ARCHITECTURE ENGINEERING PLANNING	EI Associates ARCHITECTS & ENGINEERS, PC 8 RIDGEDALE AVENUE•CEDAR KNOLLS NJ 07927•973.775.7777	
GAETANO P. CIPRIANO, P.E.	PROFESSIONAL ENGINEER LICENSE NO. NY 064215-1	FIRE PROTECTION
SCALE AS NOTED	PROJECT INSTRUMENTATION LABORATORY LOCKER ROOM EXPANSION ORANGEBURG NEW YORK	EIA DRAWING NO. FP11
DRAWN BY: [signature] DESIGNED BY: [signature] CHECKED BY: [signature] APPROVED BY: [signature] PROJECT MANAGER: [signature]	TITLE FIRST FLOOR PLAN	CLIENT DWG. NO. - - - - - EIA PROJECT NO. EGB577.03

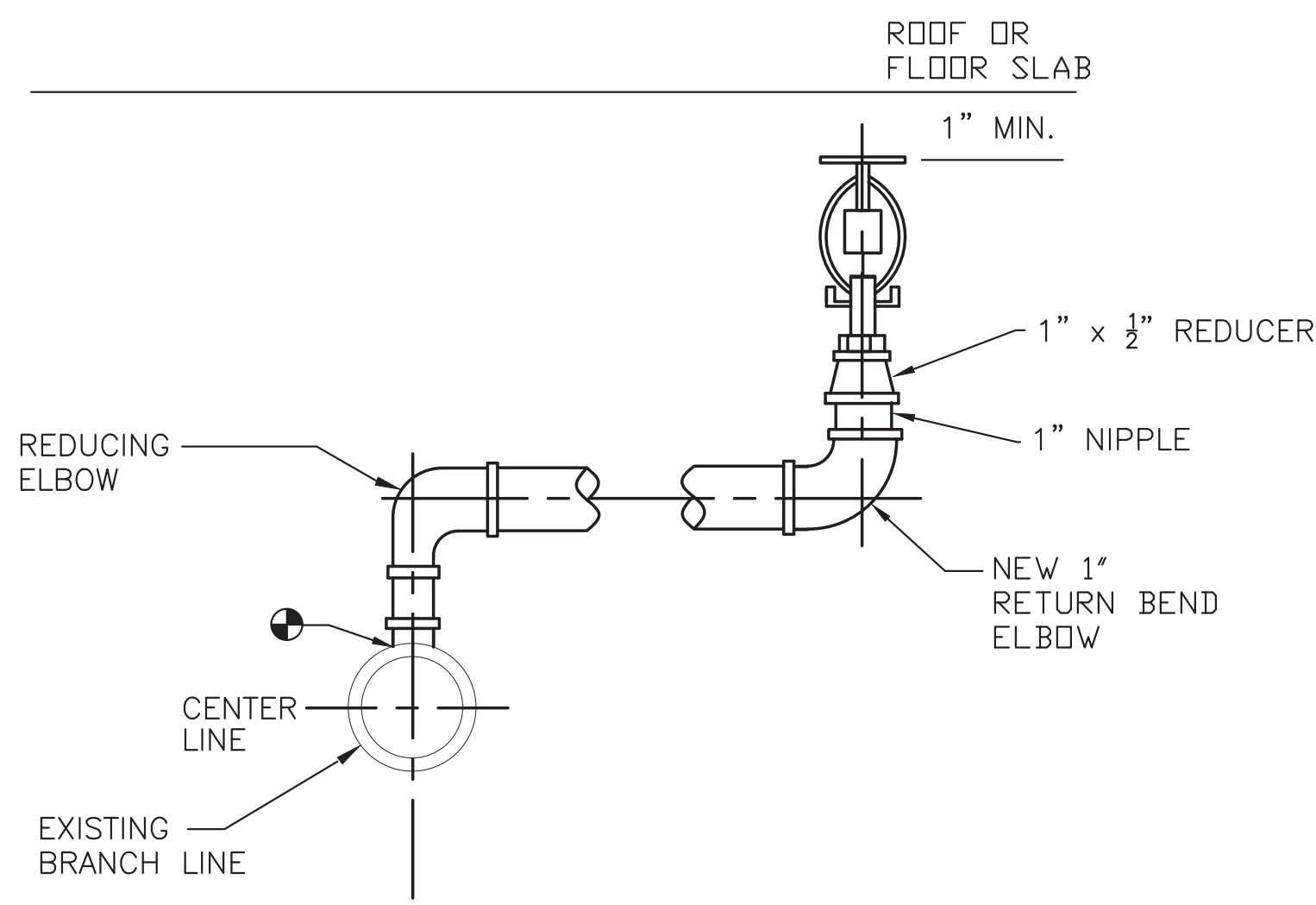




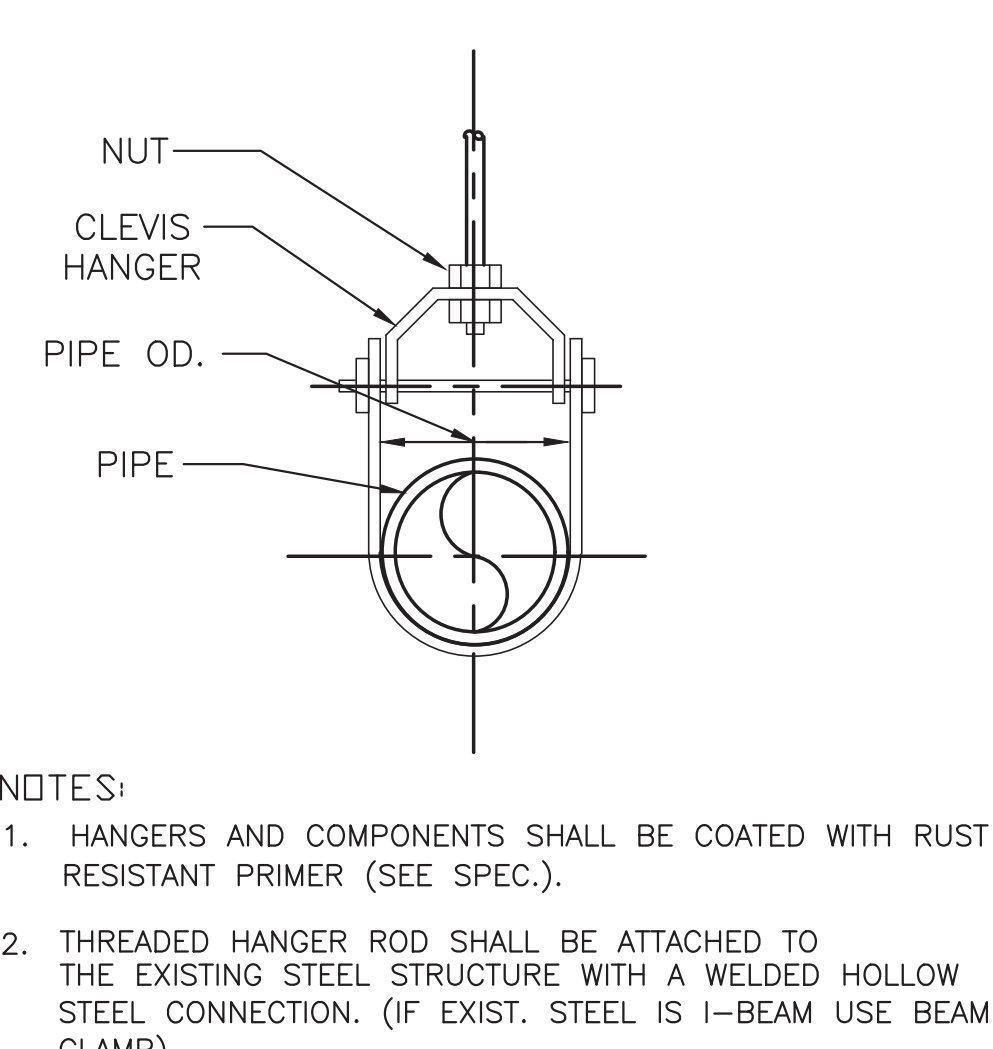
NEW CONCEALED SPRINKLER HEAD DETAIL
NTS (1) FP40



TYPICAL CONCEALED SPRINKLER HEAD DETAIL
NTS (2) FP40

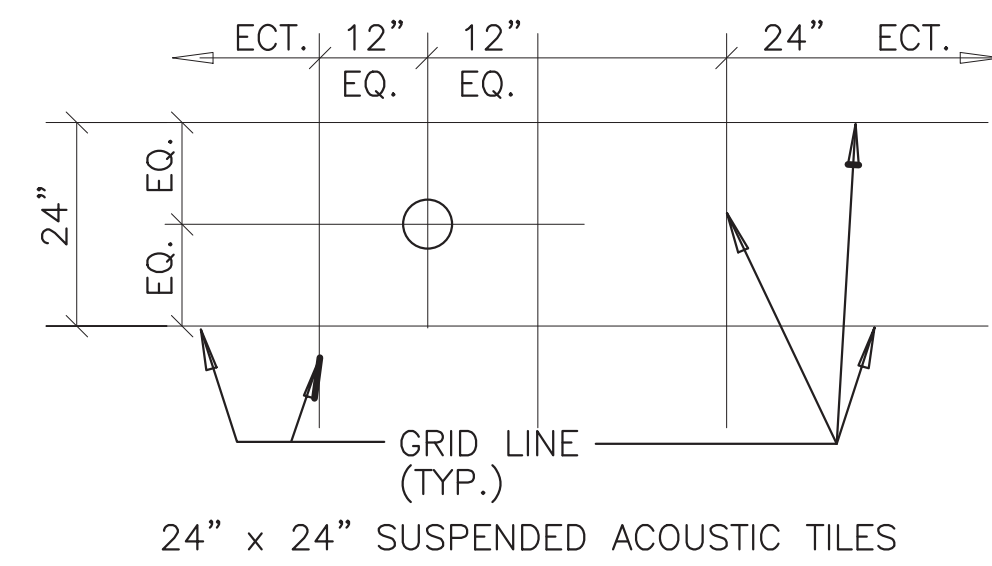


UPRIGHT SPRINKLER HEAD PIPING DETAIL
NTS (3) FP40

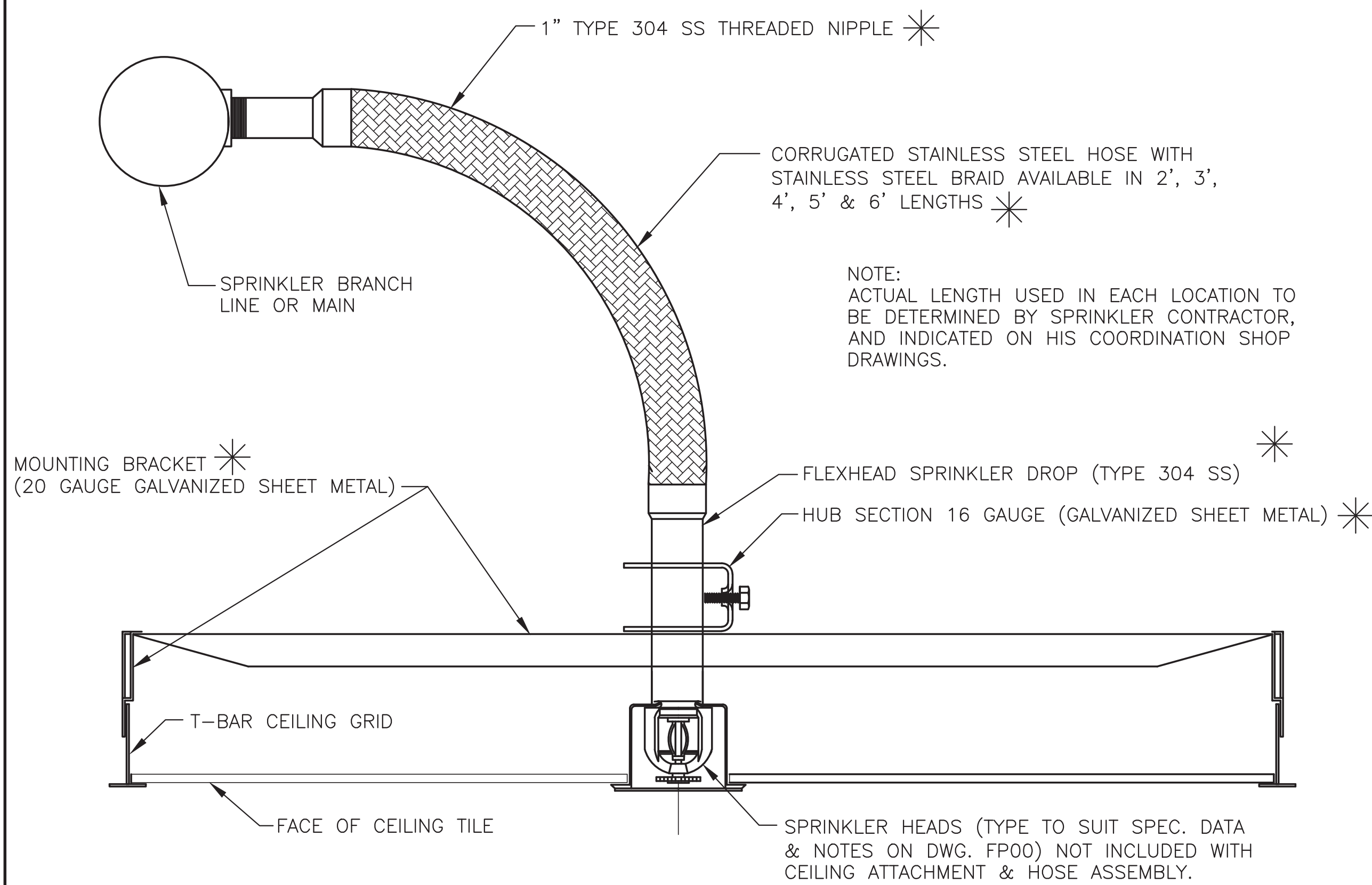


NOTES:
1. HANGERS AND COMPONENTS SHALL BE COATED WITH RUST RESISTANT PRIMER (SEE SPEC.).
2. THREADED HANGER ROD SHALL BE ATTACHED TO THE EXISTING STEEL STRUCTURE WITH A WELDED HOLLOW STEEL CONNECTION. (IF EXIST. STEEL IS I-BEAM USE BEAM CLAMP)

PIPE HANGER CLEVIS TYPE DETAIL
NTS (4) FP40



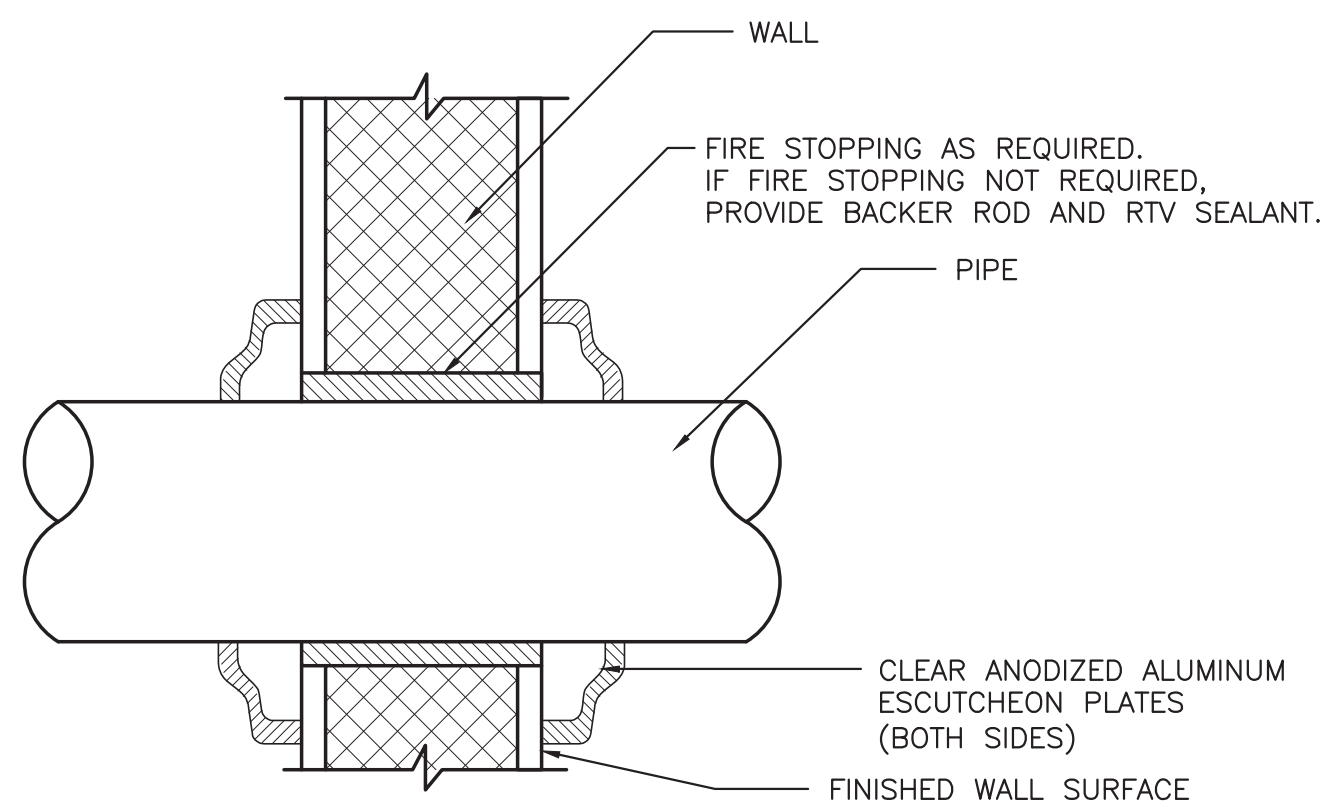
SPRINKLER HEAD INSTALLATION DETAIL
NTS (5) FP40



FLEXIBLE HEAD CEILING SPRINKLER INSTALLATION DETAIL
NTS (6) FP40

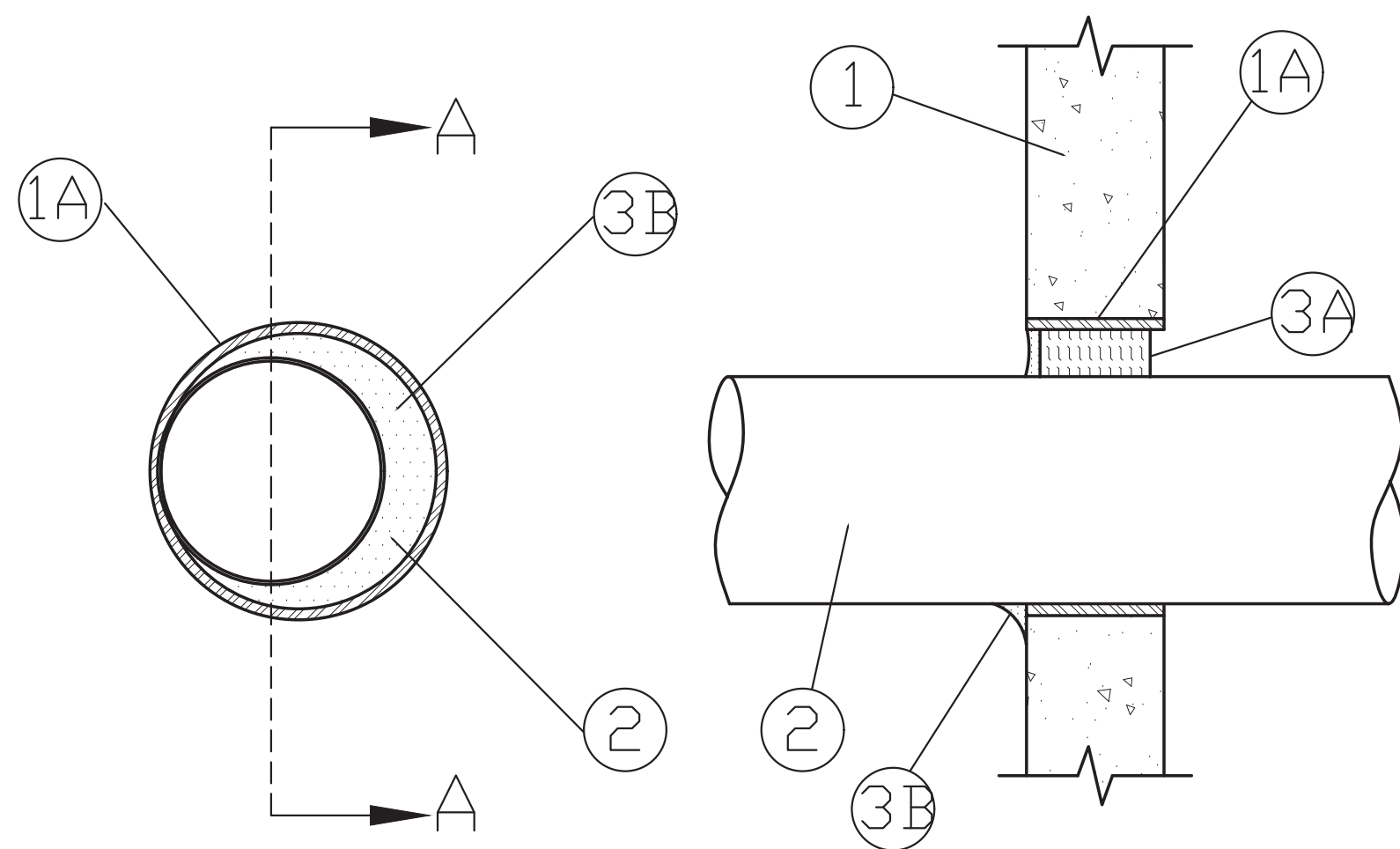
* DESIGNATES COMPONENTS SUPPLIED BY FLEXIBLE CEILING SPRINKLER UNIT MANUFACTURER.

NOTE: ALL PENDENT WET-PIPE SPRINKLER HEADS, INSTALLED IN SUSPENDED CEILINGS (LABS & OFFICES) SHALL BE FED FROM (RIGID) STEEL SPRINKLER BRANCHES, AND MAINS, UTILIZING COMPONENTS SHOWN ABOVE. EACH SPRINKLER INSTALLATION REQUIRES: 1" THREADED NIPPLE; HOSE ASSEMBLY WITH SPRINKLER DROP; HUB SECTION AND MOUNTING BRACKET. ALL COMPONENTS SHALL BE 'FLEXHEAD INDUSTRIES' MODEL #2024, 2036, 2048, 2060 OR 2072 TYPE, COMMERCIAL CEILING UNIT (OR APPROVED EQUAL)

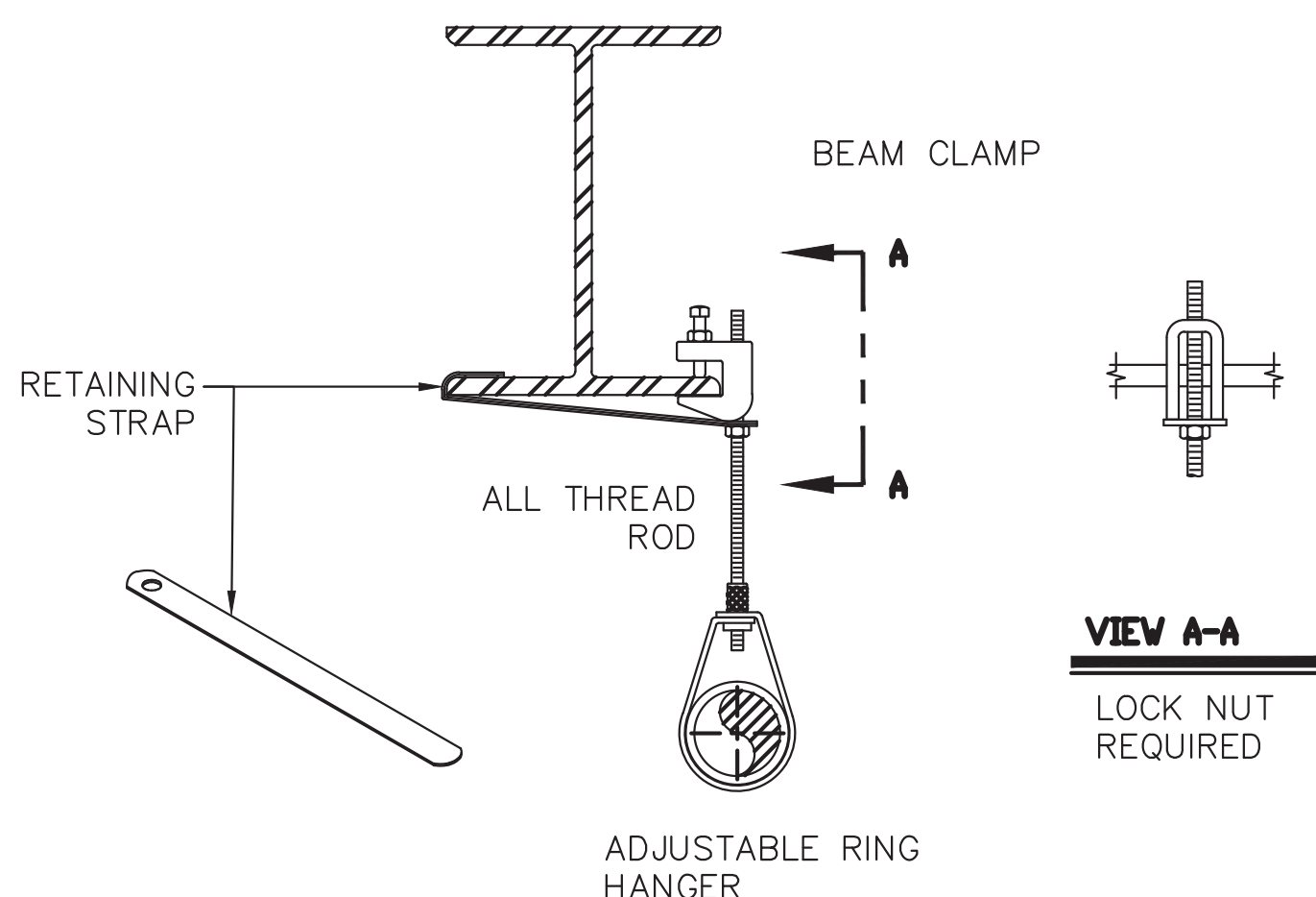


PIPE PENETRATION INTERIOR WALL BELOW CEILING DETAIL
NTS (9) FP40

NOTE: REFER TO SPECIFICATION 078413, "THROUGH-PENETRATION FIRESTOP SYSTEMS" FOR ADDITIONAL INFORMATION ON FIRE STOPPING REQUIREMENTS.



SECTION A-A
SYSTEM NO. C-AJ-1427
MAY 18, 2005
F RATING - 3 HR
T RATING - 0 HR
W RATING - CLASS I (SEE ITEM 3)
FIRE PENETRATION DETAIL FULL HEIGHT CMU WALL
NTS (7) FP40



ADJUSTABLE RING HANGER DETAIL FROM STEEL
NTS (10) FP40

1. FLOOR OR WALL ASSEMBLY - MIN 2-1/2 IN. (64 MM) THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF OR 1600-2400 KG/M3) CONCRETE FLOORS OR MIN 3 IN. (76 MM) THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE WALLS. FLOOR ASSEMBLY MAY ALSO BE CONSTRUCTED OF ANY MIN 6 IN. (152 MM) THICK UL CLASSIFIED HOLLOW-CORE PRECAST CONCRETE UNITS*. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX DIAM OF OPENING 12-3/4 IN. (324 MM) MAX DIAM OF OPENING IN FLOORS CONSTRUCTED OF HOLLOW-CORE CONCRETE IS 7 IN. (78 MM). SEE CONCRETE BLOCKS (CAZT) AND PRECAST CONCRETE UNITS (CFTV) CATEGORIES IN FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.

1A. STEEL SLEEVE - NOM 12 IN. (305 MM) DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL SLEEVE CAST OR GROUTED INTO FLOOR OR WALL ASSEMBLY. STEEL SLEEVE MAY BE INSTALLED FLUSH OR MAY PROJECT MAX 2 IN. (51 MM) BEYOND THE FLOOR OR WALL SURFACES.

2. THROUGH PENETRANT - ONE METALLIC PIPE, CONDUIT, TUBING OR FLEXIBLE METAL PIPING INSTALLED CONCENTRICALLY OR ECCENTRICALLY WITHIN OPENING. ANNULAR SPACE BETWEEN PENETRANT AND PERIPHERY OF OPENING OR SLEEVE SHALL BE MIN OF 0 IN. (POINT CONTACT) TO MAX 2 IN. (0 MM TO MAX 51 MM). PENETRANT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF PENETRANTS MAY BE USED:

A. STEEL PIPE - NOM 10 IN. (254 MM) DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.

B. IRON PIPE - NOM 10 IN. (254 MM) DIAM (OR SMALLER) CAST OR DUCTILE IRON PIPE.

C. CONDUIT - NOM 6 IN. (152 MM) DIAM (OR SMALLER) STEEL CONDUIT OR NOM 4 IN. (102 MM) DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING.

D. COPPER TUBING - NOM 4 IN. (102 MM) DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.

E. COPPER PIPE - NOM 4 IN. (102 MM) DIAM (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.

F. THROUGH PENETRATING PRODUCT* - FLEXIBLE METAL PIPING - THE FOLLOWING TYPES OF STEEL FLEXIBLE METAL GAS PIPING MAY BE USED:

1. NOM 2 IN. (51 MM) DIAM (OR SMALLER) STEEL FLEXIBLE METAL GAS PIPING. PLASTIC COVERING ON PIPING MAY OR MAY NOT BE REMOVED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.

OMEGA FLEX INC.

2. NOM 1 IN. (25 MM) DIAM (OR SMALLER) STEEL FLEXIBLE METAL GAS PIPING. PLASTIC COVERING ON PIPING MAY OR MAY NOT BE REMOVED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.

TITEFLEX CORP., A BUNDY CO.

3. NOM 1 IN. (25 MM) DIAM (OR SMALLER) STEEL FLEXIBLE METAL GAS PIPING. PLASTIC COVERING ON PIPING MAY OR MAY NOT BE REMOVED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. WARD MFG INC.

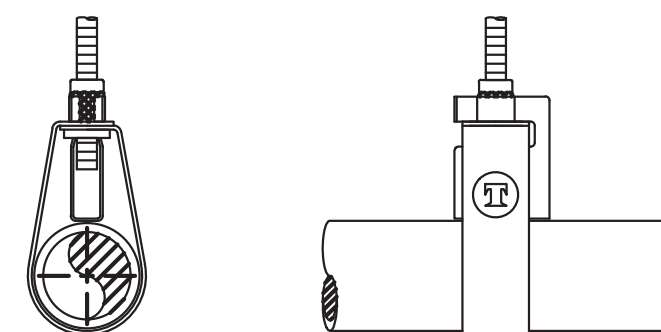
3. FIRESTOP SYSTEM - THE DETAILS OF THE FIRE STOP SYSTEM SHALL BE AS FOLLOWS:
A. PACKING MATERIAL - MIN 2 IN. (51 MM) THICKNESS OF MIN 4 PCF (64 KG/M3) MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR TO EDGE OF SLEEVE OR FROM BOTH SURFACES OF WALL OR BOTH ENDS OF SLEEVE AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL. IN FLOORS CONSTRUCTED OF HOLLOW-CORE CONCRETE, PACKING MATERIAL TO BE RECESSED FROM TOP AND BOTTOM SURFACES OF FLOOR OR SLEEVE AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
B. FILL, VOID OR CAVITY MATERIALS* - CAULK OR SEALANT-MIN 1/2 IN. (13 MM) THICKNESS OF CAULK APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR OR TOP EDGE OF SLEEVE OR WITH BOTH SURFACES OF WALL OR BOTH ENDS OF SLEEVES. IN FLOORS CONSTRUCTED OF HOLLOW-CORE CONCRETE, MIN 1/2 IN. (13 MM) THICKNESS OF CAULK APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP AND BOTTOM SURFACES OF FLOOR OR SLEEVE. MIN 1/4 IN. (6MM) DIAM BEAD OF CAULK APPLIED TO THE PENETRANT/CONCRETE OR PENETRANT/SLEEVE INTERFACE AT THE POINT CONTACT LOCATION ON THE TOP SURFACE OF FLOOR OR BOTH SURFACES OF WALL OR HOLLOW-CORE CONCRETE.

3M COMPANY - IC 15WB+, CP 25WB+ CAULK OR FB-3000 WT SEALANT. (NOTE: W RATING APPLIES ONLY WHEN FB-3000 WT IS USED.)

*BEARING THE UL CLASSIFICATION MARK

TOLCO SURGE RESTRAINER

TYPE 1 - FOR 1" AND 1-1/4" PIPE AND HANGER TYPE 2 - FOR 1-1/2" AND 2" PIPE AND HANGER



TOLCO SURGE RESTRAINER IS DESIGNED TO BE USED ONLY WITH TOLCO BAND HANGERS AND 2NPPA TO RESTRAIN THE UPWARD MOVEMENT OF PIPE AS IT OCCURS DURING SPRINKLER HEAD ACTIVATION OR SEISMIC ACTIVITY

PIPE HANGER SURGE RESTRAINER DETAIL
NTS (8) FP40

0	ISSUED FOR BID AND CONSTRUCTION	LG	24 SEPT 21
REV	REVISION DESCRIPTION	BY	DATE
EI ARCHITECTURE ENGINEERING PLANNING		EI Associates ARCHITECTS & ENGINEERS, PC 8 RIDGEDALE AVENUE • CEDAR KNOLLS NJ 07927 • 973.775.7777	
GAETANO P. CIPRIANO, P.E.		PROFESSIONAL ENGINEER LICENSE NO. NY 064215-1	FIRE PROTECTION
SCALE	AS NOTED	PROJECT	EIA DRAWING NO.
DRAWN BY:	PROJECT	INSTRUMENTATION LABORATORY	
DESIGNED BY:	PROJECT	LOCKER ROOM EXPANSION	
CHECKED BY:	PROJECT	ORANBURG	NEW YORK
APPROVED BY:	PROJECT	TITLE	
PROJECT MANAGER:	PROJECT	DETAILS	
		CLIENT DWG. NO.	-----
		EIA PROJECT NO.	EG8577.03

(XX)