



City of Madison Fire Department

314 W Dayton Street, Madison, WI 53703-2579
Phone: 608-266-4420 • Fax: 608-267-1100 • E-mail: fire@cityofmadison.com

Fire Protection System Work Permit

September 03, 2019

Charles Keltner
H.J. Pertzborn Plumbing and Fire Protection
802 John Nolen Dr.
Madison, WI 53713

RE: 1101 E Washington AVE, Madison, WI 53703
Project: Madison Metro Service Lane Addition
Project #: FIRSPR-2019-00814



194017

The City of Madison Fire Department (MFD) has reviewed the application materials for the installation of a Fire Protection System for the referenced project. This Fire Protection System Work Permit is hereby conditionally approved. The following are the conditions of approval:

1. The MFD review and conditional approval of this work permit shall not be deemed or construed as approval to violate any provisions of the applicable codes.
2. The fire protection system design and installation must comply with the applicable codes and standards. (E.g. Chapter 34, Madison General Ordinance; SPS 361 to 365, Wisconsin Commercial Building Code; NFPA 13, Installation of Sprinkler Systems, 2016 Edition; NFPA 14, Installation of Standpipe and Hose Systems, 2016 Edition; NFPA 72, National Fire Alarm Code, 2016 Edition; and the International Fire Code.)
3. Do not conceal any sprinkler system piping until it has been tested, inspected and approved by an inspector of the MFD.
4. The installing contractor shall conduct a complete system pretest prior to scheduling an acceptance test with MFD. A re-inspection fee will be assessed if the system or system components fail to comply with the applicable codes.
5. Final approval is subject to the completion of satisfactory inspections and acceptance tests witnessed by an inspector of the MFD. Contact the fire inspector noted below at least 48 hours in advance to schedule an inspection.
6. A copy of the approved plans, hydraulic calculations, specifications and this conditional approval letter must be available at the job site during construction.
7. Submit a completed copy of the Contractor's Material and Test Certificate to the MFD at the completion of construction. Note: the owner, architect and/or general contractor may also need a copy of the test certificate.
8. NFPA 13:25.2.5 The hydraulic calculations indicate a system demand of 67.5-psi with 756-gpm flowing is required at the BASE of the backflow preventer.
9. Per your email, the total area protected by this riser with the building addition is 34,252 Sq. Ft.

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If you have any questions regarding the above, please contact us. Your continued cooperation is greatly appreciated.

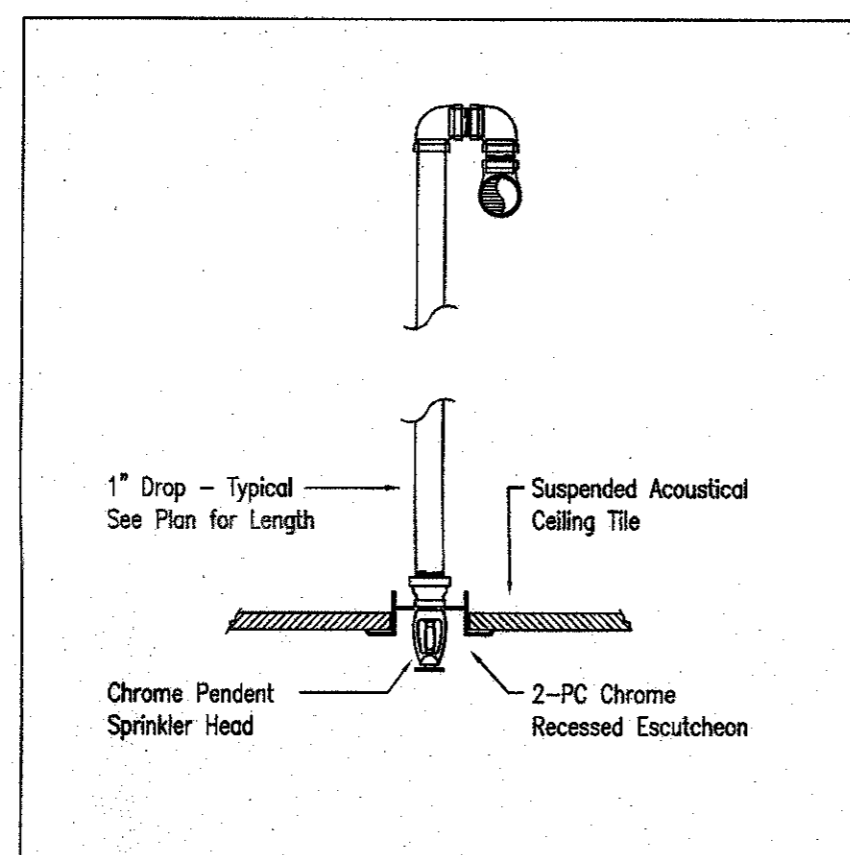
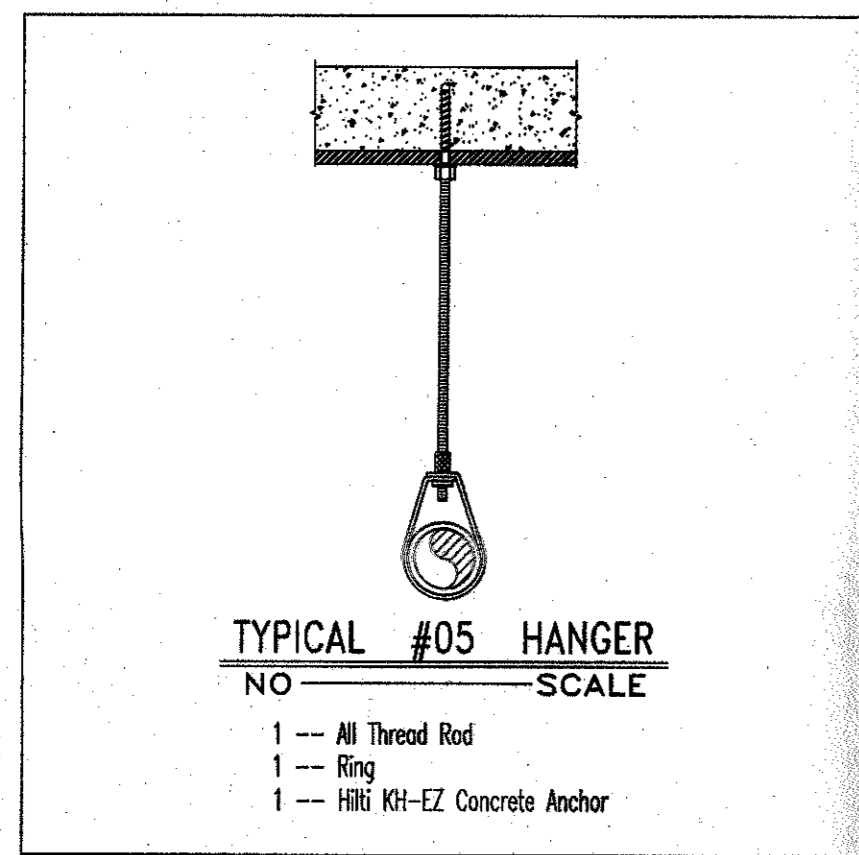
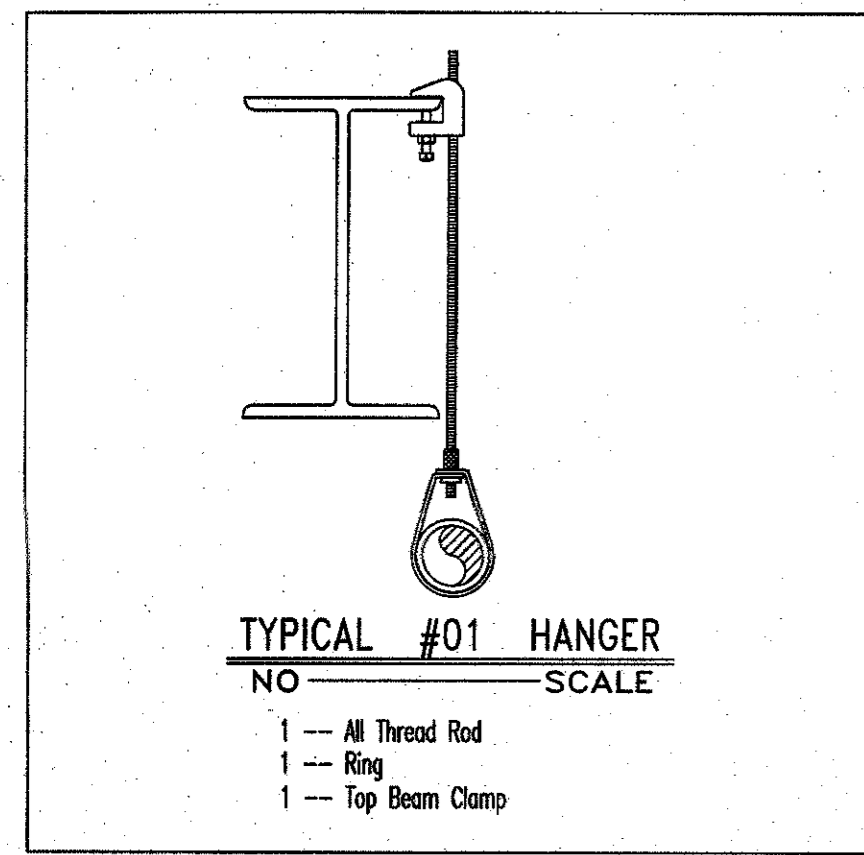
Sincerely,



William Sullivan
(608) 261-9658
wsullivan@cityofmadison.com
Office M, T, W, F 7am-4pm Th 7-11:45

For Inspections Contact:
Douglas Milks
(608) 261-9847
dmilks@cityofmadison.com
Fire Prevention Officer
Office M, W- F 7:15 am-9:15 am

cc: CHARLES KELTNER [H.J. PERTZBORN PLUMBING AND FIRE PROTECTION, 802 JOHN NOLEN DR.,
MADISON, WI 53713]
CITY OF MADISON TRANSIT [METRO ADMINISTRATION, 1101 E WASHINGTON AVE, MADISON, WI
53703]



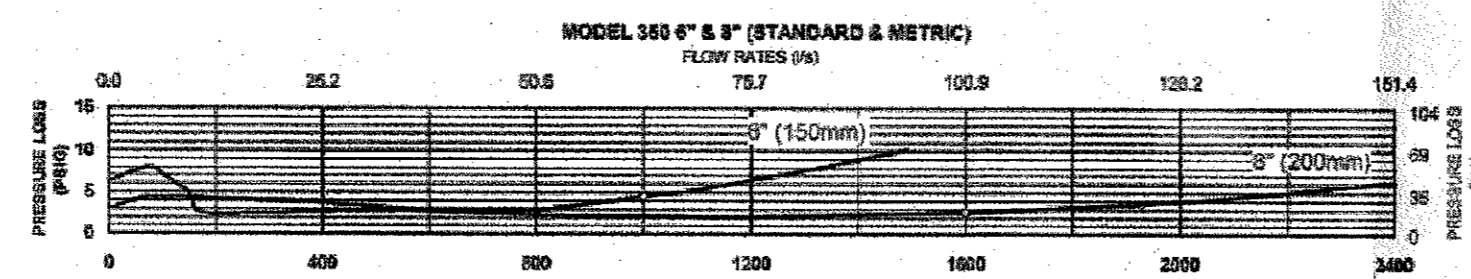
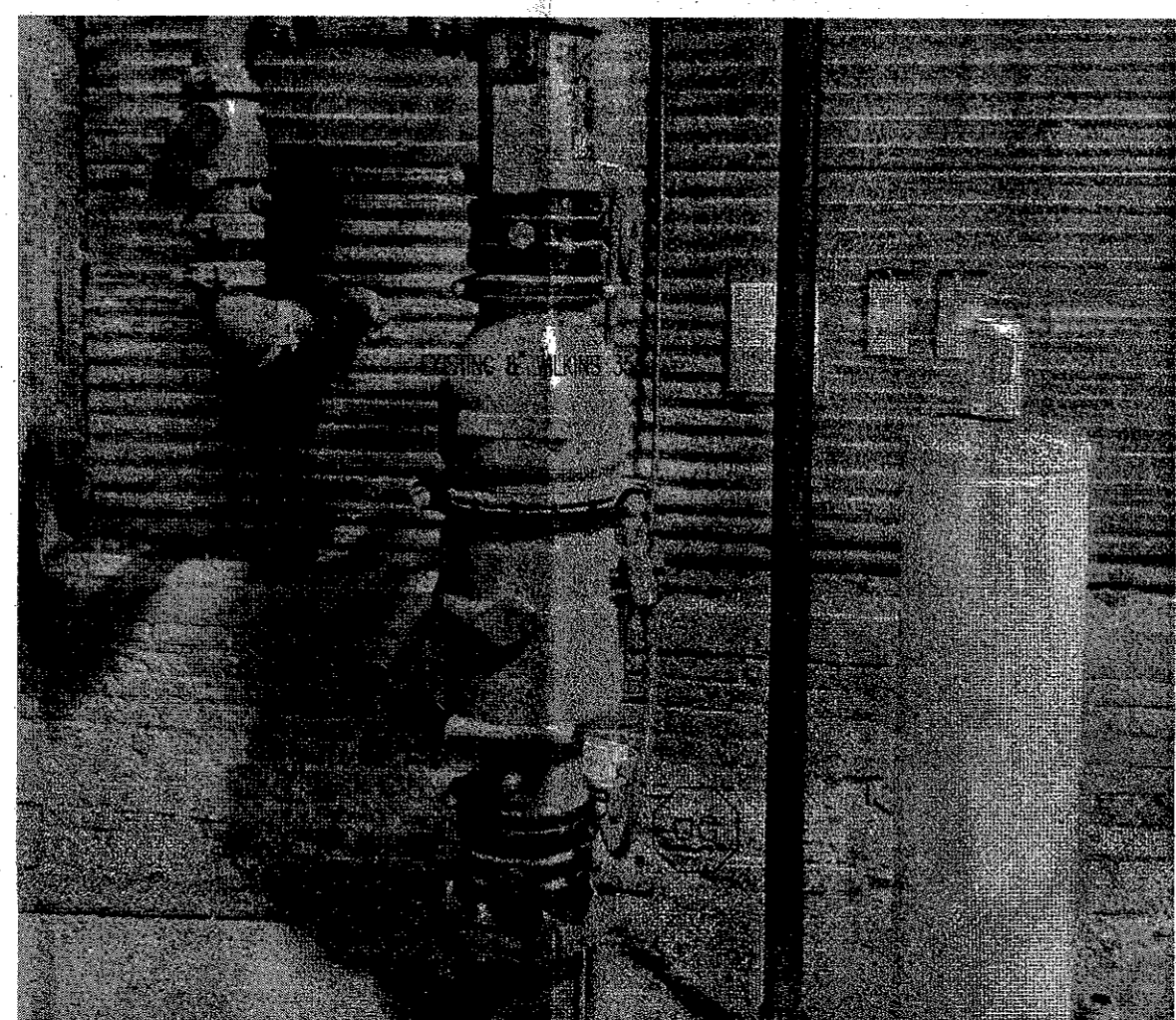
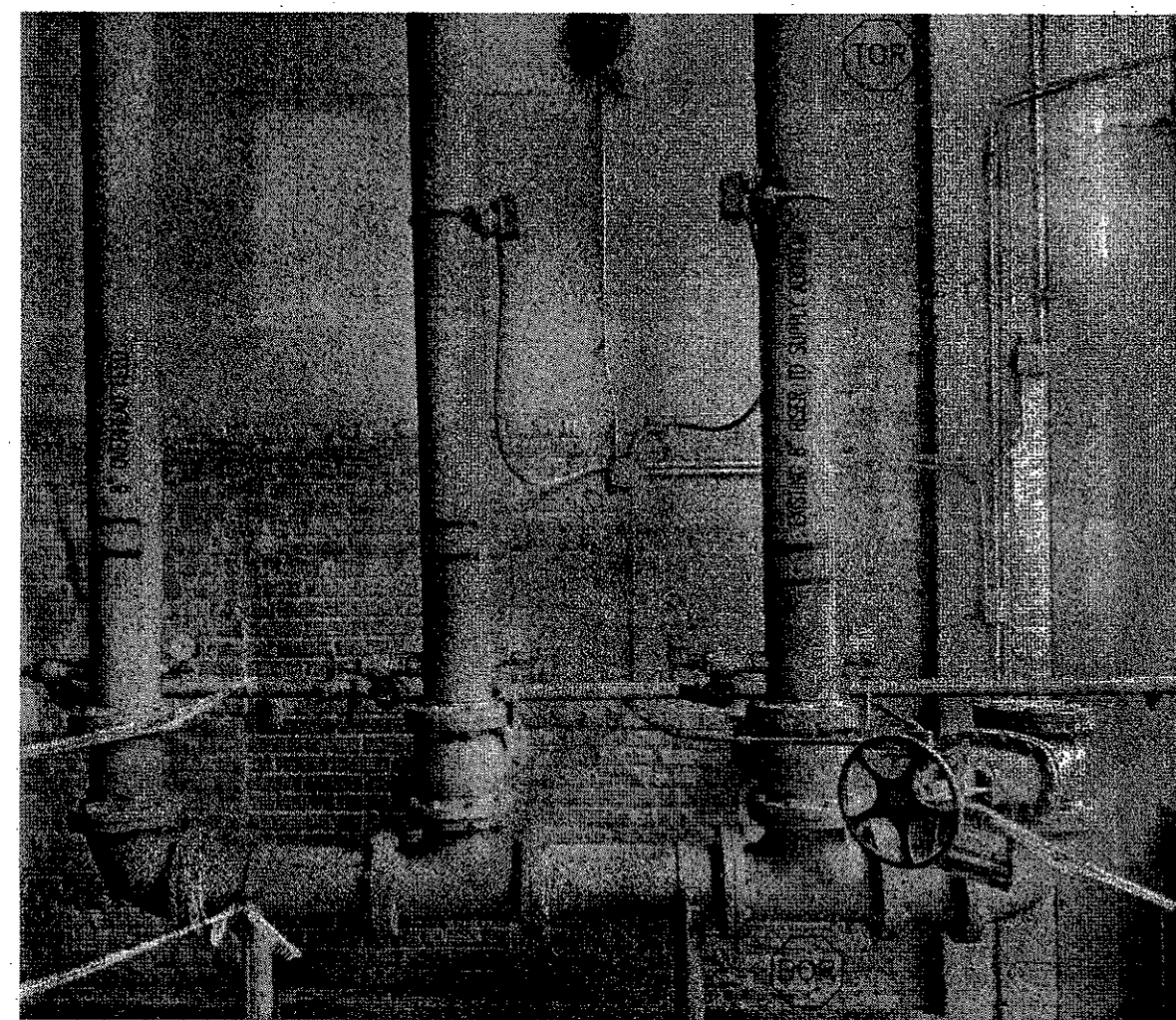
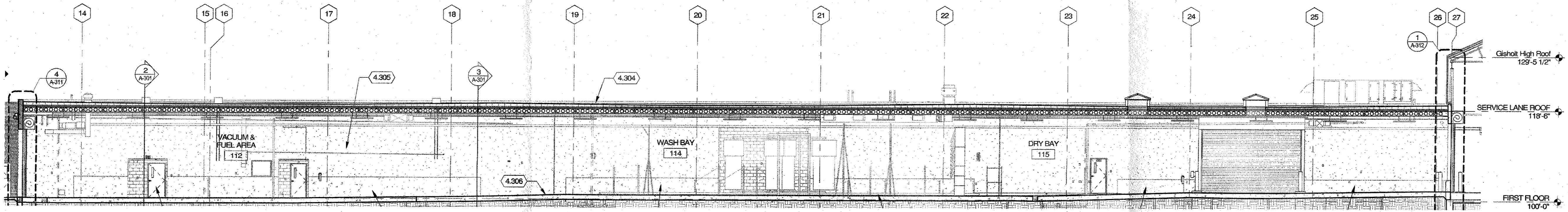
HANGERS SHALL BE INSTALLED ACCORDING TO NFPA 13 - 2016 EDITION
TABLE 9.2.2.1 (c) MAXIMUM DISTANCE BETWEEN HANGERS (ft. - in.)

NOMINAL PIPE SIZE (in.)	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6	8
STEEL PIPE EXCEPT THREADED LIGHTWALL STEEL PIPE	N/A	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0	15-0
THREADED LIGHTWALL STEEL PIPE	N/A	12-0	12-0	12-0	12-0	12-0	N/A	N/A	N/A	N/A	N/A	N/A
COPPER TUBE	8-0	8-0	10-0	10-0	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0
CPC	5-6	6-0	6-6	7-0	8-0	9-0	10-0	N/A	N/A	N/A	N/A	N/A

• THE UNSUPPORTED LENGTH BETWEEN THE END SPRINKLER AND THE LAST HANGER SHALL NOT EXCEED 36" FOR 1" PIPE AND 48" FOR 1-1/4" PIPE OR GREATER.
• ALL ARM-OVERS GREATER THAN 24" SHALL BE SUPPORTED BY A HANGER.

SYMBOLS

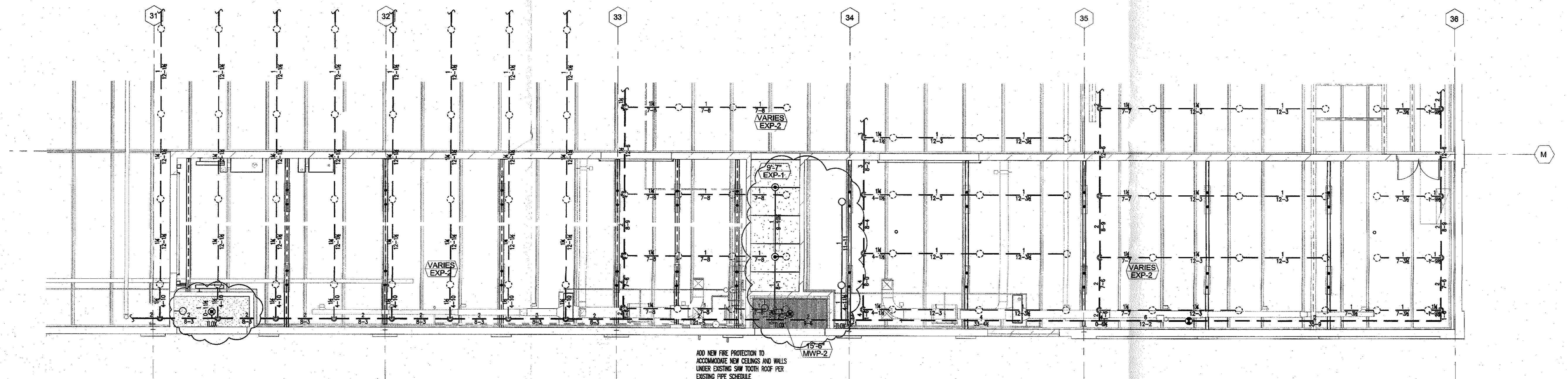
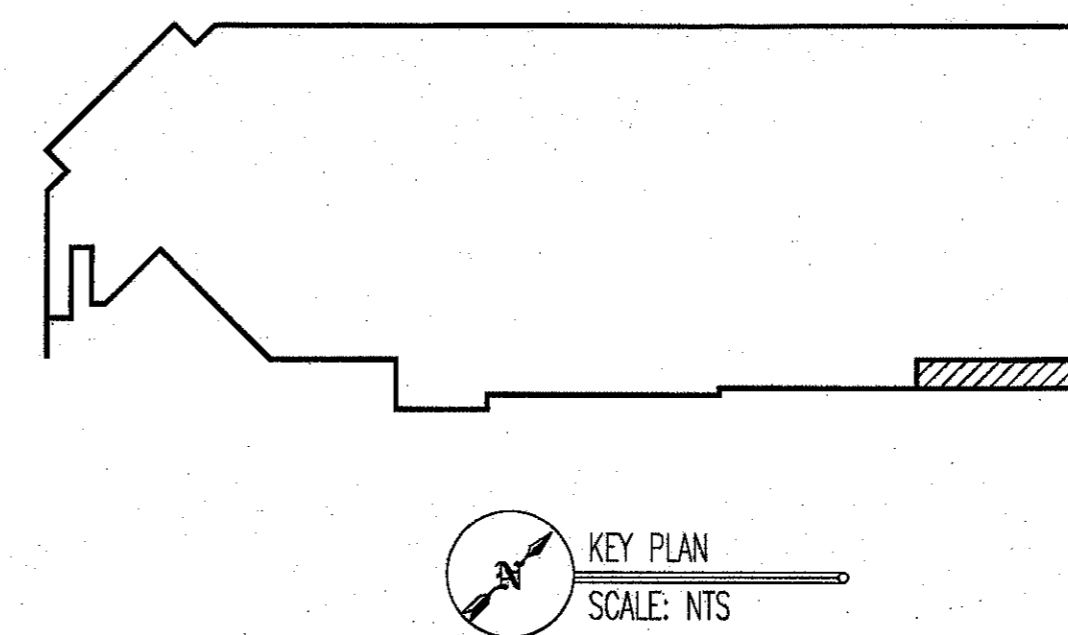
SYMBOL	DESCRIPTION
○	HYDRAULIC REFERENCE POINTS
[+0-0 B.O.A.]	BOT. OF TGI JOIST A.F.F.
[+0-0 B.O.B.]	BOT. OF BEAM A.F.F.
[0'-0"]	CENTER LINE OF PIPE A.F.F.
[0'-0"]	FINISHED CEILING A.F.F.
○	DENOTES HANGER LOCATION
○	RISE UP OR DOWN
○	EXISTING SPRINKLER PIPE
○	NEW SPRINKLER PIPE
○	EXISTING SPRINKLER HEAD
○	EXISTING OUTLET



Sprinkler Schedule

Symbol	Count	Thread	K-Factor	Description	Note
○	2	1/2"	5.6	VK1021 1/2 SR 200 CE PD	ON DROP
○	24	1/2"	5.6	VK1001 1/2 SR 200 B UP	
○	104	3/4"	8.0	VK200 17/32 SR 286 B UP	
○	3	1"	5.6	VK154 1/2 S-18.00 200 CE PDA	DRY

133 = Total Number of Heads This Project



- GENERAL NOTES:
- THE FOLLOWING SYSTEMS HAVE BEEN REVISED ACCORDING TO NFPA 13 2016 ED.
 - PIPE AND FITTING SPECIFICATIONS
 - PIPE & FITTINGS SCHEDULE 40 BLACK STEEL WITH DUCTILE IRON THREADED FITTINGS
 - PIPE 2" = SCHEDULE 10 BLACK STEEL WITH SHORT TURN GROOVED FITTINGS AND LIGHT WEIGHT GROOVED COUPLINGS.
 - ALL ELECTRICAL ALARM, DETECTION, AND RELEASE WIRING BY OWNER.
 - ALL SPRINKLER SYSTEM CONTROL VALVES SHALL BE MONITORED WITH A TAMPER SWITCH (WIRING BY OTHERS).
 - PRESSURE TESTING AND FLUSHING OF EXISTING UNDERGROUND WATER MAIN IS NOT PART OF THIS CONTRACT.
 - ALL AREAS OF THIS BUILDING WHERE WET PIPE SPRINKLER SYSTEMS ARE SHOWN SHALL BE MAINTAINED AT A MINIMUM OF 40' F AT ALL TIMES BY OWNER.
 - AUXILIARY DRAINS SHALL BE LOCATED AT ALL TRAPPED SECTIONS OF SYSTEM PIPING IN ACCORDANCE WITH NFPA 13.
 - A FORWARD FLOW TEST CONNECTION LARGE ENOUGH TO TEST THE BACKFLOW PREVENTER AT THE CALCULATED FLOW RATE SHALL BE PROVIDED AT THE SYSTEM RISER.
 - THE OWNER SHALL MAINTAIN A MINIMUM DISTANCE OF 18" BETWEEN SPRINKLER DEFLECTORS AND THE TOP OF STORAGE AND EQUIPMENT.
 - THE MAXIMUM STORAGE HEIGHT SHALL NOT EXCEED:
 - 8'-0" ABOVE FLOOR FOR ORDINARY HAZARD (GROUP I)
 - 12'-0" ABOVE FLOOR FOR ORDINARY HAZARD (GROUP II)
 - BUILDING STRUCTURE ADEQUATE TO SUPPORT ALL PIPING AND EQUIPMENT INDICATED ON THESE DRAWINGS SHALL BE PROVIDED BY OWNER.
 - SYSTEM DESIGN IS BASED ON THE FOLLOWING WATER SUPPLY INFORMATION:
 - 12.1. STATIC: 88 PSI
 - 12.2. RESIDUAL: 79 PSI
 - 12.3. FLOW: 2000 GPM
 - 12.4. DATE: 07/24/18
 - 12.5. LOCATION: SITE
 - 12.6. SOURCE: MADISON WATER UTILITY
 - HYDRAULIC PLANNING SHALL BE MOUNTED ON OR NEAR THE SYSTEM RISER PIPING.
 - THE OVERHEAD SPRINKLER SYSTEMS SHALL BE TESTED IN ACCORDANCE WITH NFPA 13:
 - 14.1. WET PIPE SYSTEMS:
 - 14.1.1. THE OVERHEAD SPRINKLER SYSTEM SHALL BE HYDROSTATICALLY TESTED AT A MINIMUM OF THE GREATER OF 200 PSI OR 50 PSI ABOVE THE MAXIMUM PRESSURE FOR A MINIMUM OF 2 HOURS.
 - 14.2. TYPICAL HANGER ROD = 3/8" ALL THREAD ROD.
 - 14.3. ALL NEW SPRINKLER HEADS SHALL BE INSTALLED IN CENTER OF CEILING TILES OR IN LINE WITH OTHER CEILING FIXTURES.
 - ALL HEATER DETECTORS, ELECTRICAL DEVICES, AND ELECTRICAL WIRING NECESSARY TO MEET THE ELECTRICAL CONTROL AND DISCONNECTION REQUIREMENTS OF THE WISCONSIN ADMINISTRATIVE CODE SHALL BE BY OTHERS.
 - THE OWNER SHALL BE RESPONSIBLE FOR THE CONDITION OF A SPRINKLER SYSTEM AND SHALL KEEP THE SYSTEM IN NORMAL OPERATING CONDITION. THE OWNER SHALL HAVE THE SPRINKLER SYSTEMS INSPECTED, TESTED, AND MAINTAINED IN ACCORDANCE WITH NFPA 25.

- DEFINITIONS:
- WET PIPE SPRINKLER SYSTEM:**
- SPRINKLER SYSTEM EMPLOYING AUTOMATIC SPRINKLERS ATTACHED TO A PIPING SYSTEM CONTAINING WATER AND CONNECTED TO A WATER SUPPLY SO THAT WATER DISCHARGES IMMEDIATELY FOR SPRINKLERS OPENED BY HEAT FROM A FIRE.
- OCCUPANCY NOTES:**
- LIGHT HAZARD (1.0/1500)**
 - OCCUPANCIES OR PORTIONS OF OCCUPANCIES WHERE THE QUANTITY AND/OR COMBUSTIBILITY OF THE CONTENTS IS LOW AND FIRES WITH RELATIVELY LOW RATES OF HEAT RELEASE ARE EXPECTED.
 - ORDINARY HAZARD (GROUP 1) (1.5/1500)**
 - OCCUPANCIES OR PORTIONS OF OCCUPANCIES WHERE THE QUANTITY AND/OR COMBUSTIBILITY OF THE CONTENTS IS LOW, QUANTITY OF COMBUSTIBLES IS MODERATE, STOCKPILES OF COMBUSTIBLES DO NOT EXCEED 8 FT. AND FIRES WITH MODERATE RATES OF HEAT RELEASE ARE EXPECTED.
 - ORDINARY HAZARD (GROUP 2) (2.0/1500)**
 - OCCUPANCIES OR PORTIONS OF OCCUPANCIES WHERE THE QUANTITY AND/OR COMBUSTIBILITY OF THE CONTENTS ARE MODERATE TO HIGH, QUANTITY OF COMBUSTIBLES IS MODERATE, STOCKPILES OF COMBUSTIBLES DO NOT EXCEED 12 FT. AND FIRES WITH MODERATE TO HIGH RATES OF HEAT RELEASE ARE EXPECTED.
 - EXTRA HAZARD (GROUP 1) (3.0/2500)**
 - OCCUPANCIES OR PORTIONS OF OCCUPANCIES WHERE THE QUANTITY AND COMBUSTIBILITY OF CONTENTS ARE VERY HIGH AND DUST, LINT, OR OTHER MATERIALS ARE PRESENT, INTRODUCING THE PROBABILITY OF RAPIDLY DEVELOPING FIRES WITH HIGH RATES OF HEAT RELEASE BUT WITH LITTLE OR NO COMBUSTIBLE OR FLAMMABLE LIQUIDS.

SCOPE OF WORK

ADD TO EXISTING WET SPRINKLER SYSTEM TO ACHIEVE COMPLETE COVERAGE IN BUILDING ADDITION. ADDITIONALLY, REUSE EXISTING WET SYSTEM TO ACCOMMODATE BUILDING IMPROVEMENTS.

SHEET INDEX

FP1 NEEDS LEAKS BUILDING SECTION RISER, SITE PLAN
FP2 EAST CORNER IMPROVEMENT PLAN
SERVICE LANE ADDITION PLAN

RECEIVED

SEP - 9 2019

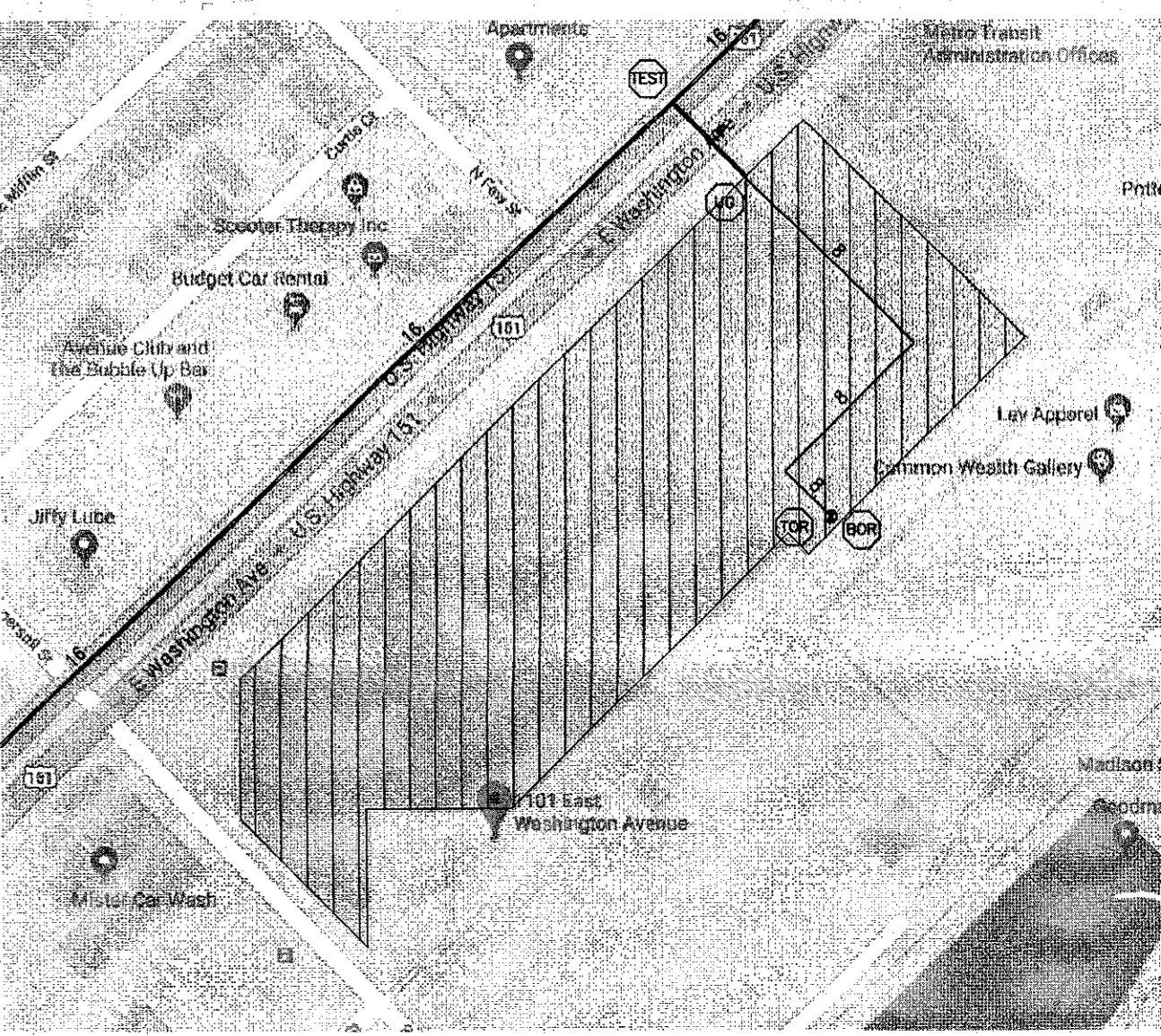
H.J. PERTZBORN
PLMB. & F.P. CORP.

CONDITIONALLY APPROVED

SUBJECT TO THE ATTACHED LETTER OF CONDITIONAL APPROVAL

MADISON FIRE DEPARTMENT
FIRE PREVENTION DIVISION

APPROVING OFFICER: [Signature]
DATE: 9/3/2019



NOTICE: THESE DRAWINGS WERE PREPARED BY H.J. PERTZBORN PLUMBING AND FIRE PROTECTION, INC. THESE DRAWINGS ARE PREPARED BY A COMMON LAW CORPORATION. THESE DRAWINGS ARE NOT TO BE REPRODUCED OR COPIED WITHOUT THE WRITTEN APPROVAL OF H.J. PERTZBORN PLUMBING AND FIRE PROTECTION CORPORATION. ANY REPRODUCTION OF THESE DRAWINGS WITHOUT THE WRITTEN APPROVAL OF H.J. PERTZBORN PLUMBING AND FIRE PROTECTION CORPORATION IS STRICTLY PROHIBITED. H.J. PERTZBORN PLUMBING AND FIRE PROTECTION CORPORATION ASSUMES NO LIABILITY INCLUDING DAMAGES, INJUNCTIVE RELIEF, LEGAL FEES AND LITIGATION COSTS.

THESE SHOP DRAWINGS HAVE BEEN CHECKED AND FOUND TO BE IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. IT IS RECOMMENDED THAT THEY BE ACCEPTED AS SHOWN.

INITIALS: [Blank]
DATE: [Blank]

H.J. PERTZBORN PLUMBING & FIRE PROTECTION CORP.

REVISIONS

NO.	DATE	BY	DESCRIPTION
1	09/26/19	CRK	APPROVAL DRAWING

H.J. Pertzborn
PLUMBING & FIRE PROTECTION CORPORATION

APSC# 280136
1000 HANCOCK DRIVE, MADISON, WISCONSIN 53703
608-255-3800 www.hjpertzborn.com

SINCE 1928

MADISON METRO SERVICE LANE
1101 EAST WASHINGTON AVE.
MADISON, WI 53703

FIRE PROTECTION
SERVICE LANE ADDITION

CONTRACT NO: 194017
DRAWN BY: R. KELTNER
SCALE: AS NOTED
DATE: 08/26/19
APPROVAL AGENCY: MFD
DRAWING NO: FP 1 OF 2

