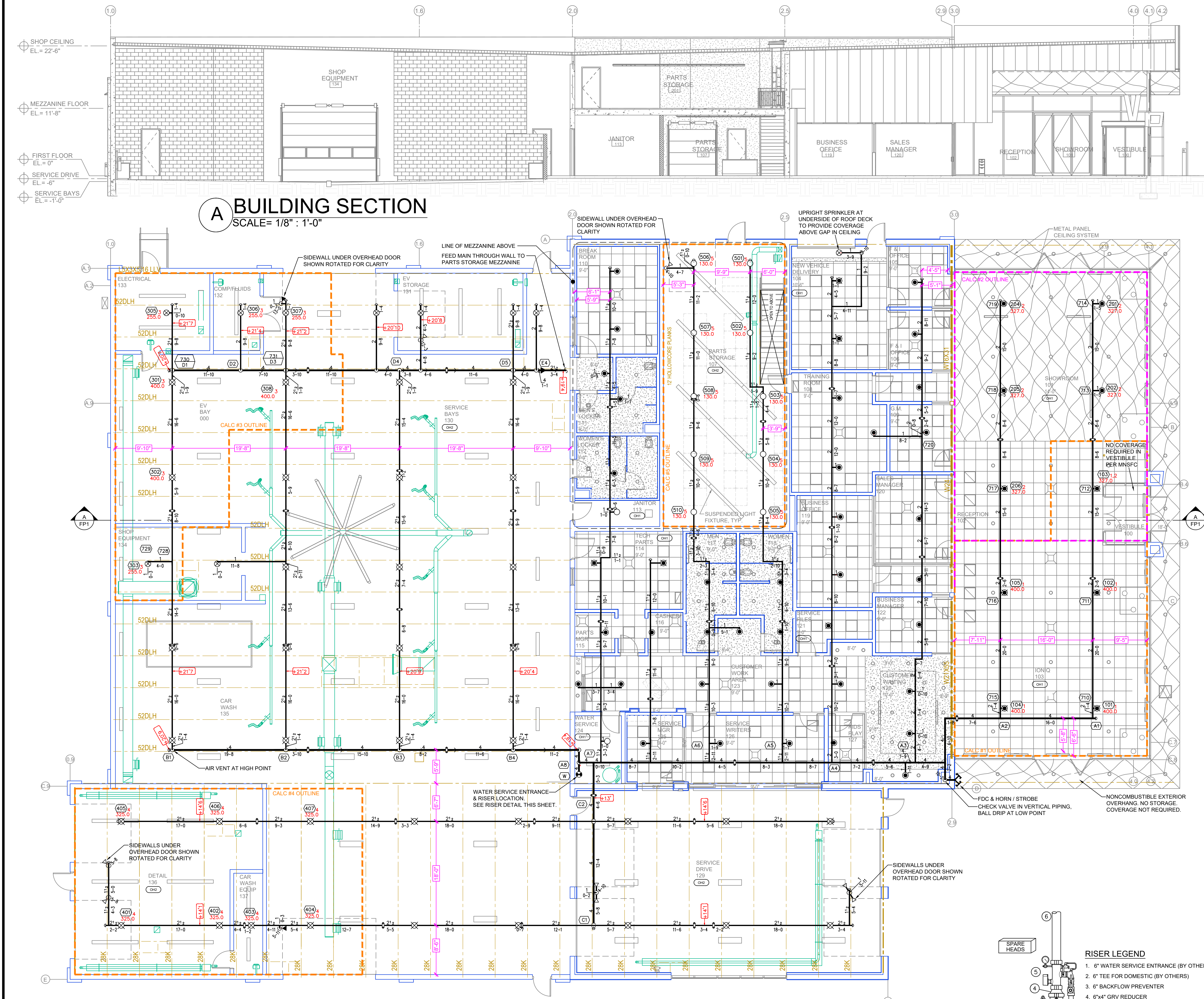




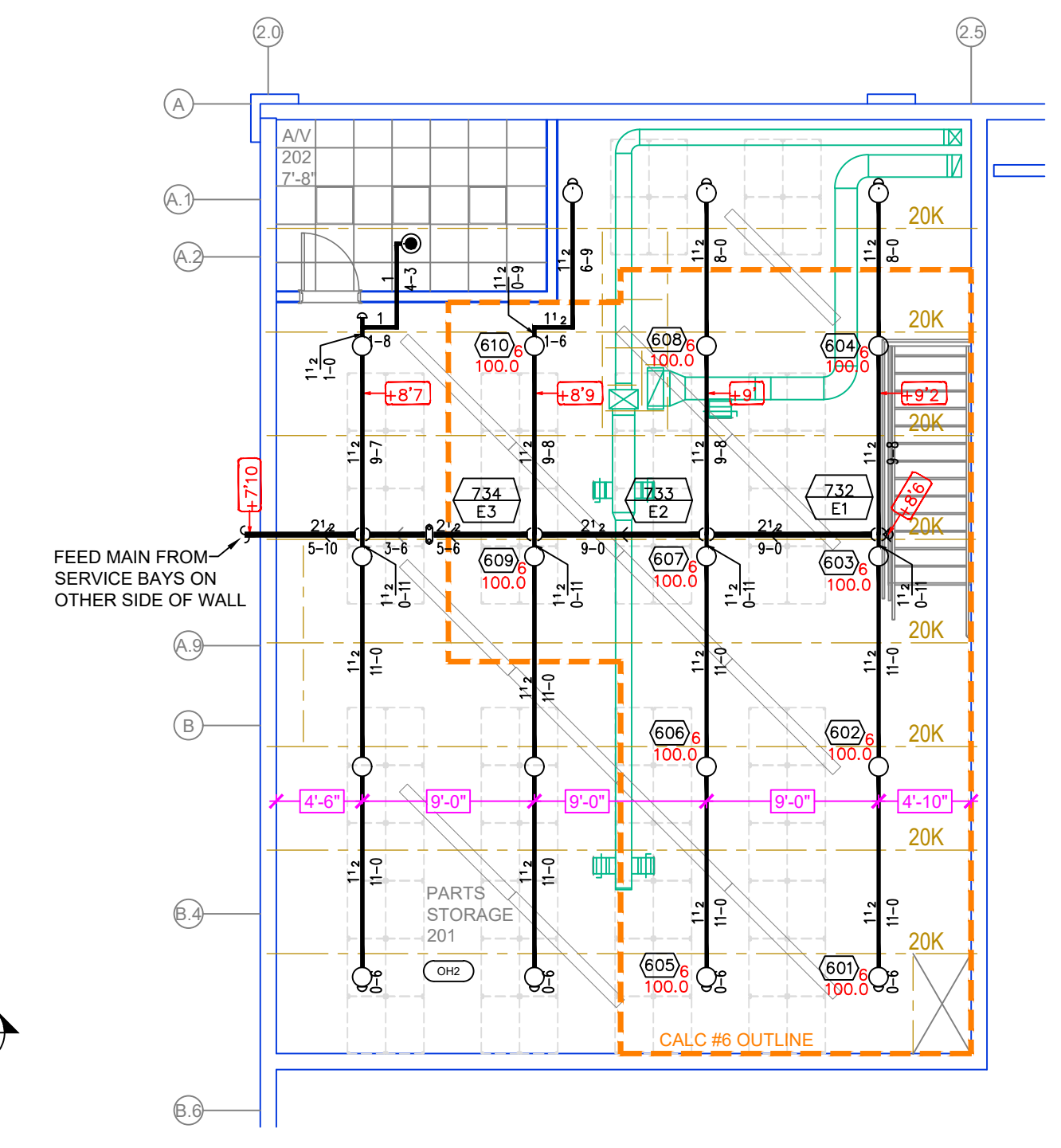
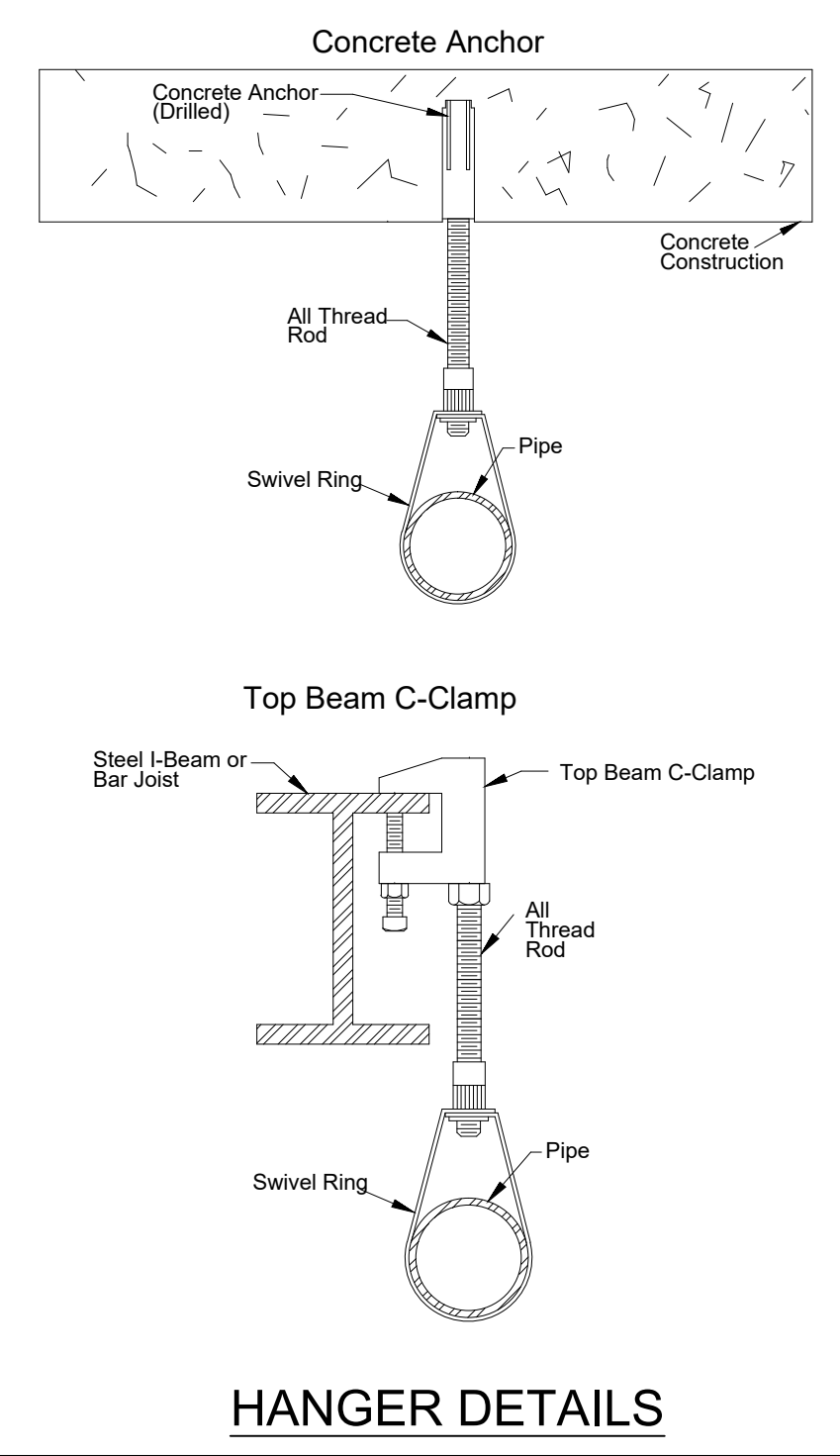
A BUILDING SECTION
SCALE= 1/8" : 1'-0"

GENERAL NOTES

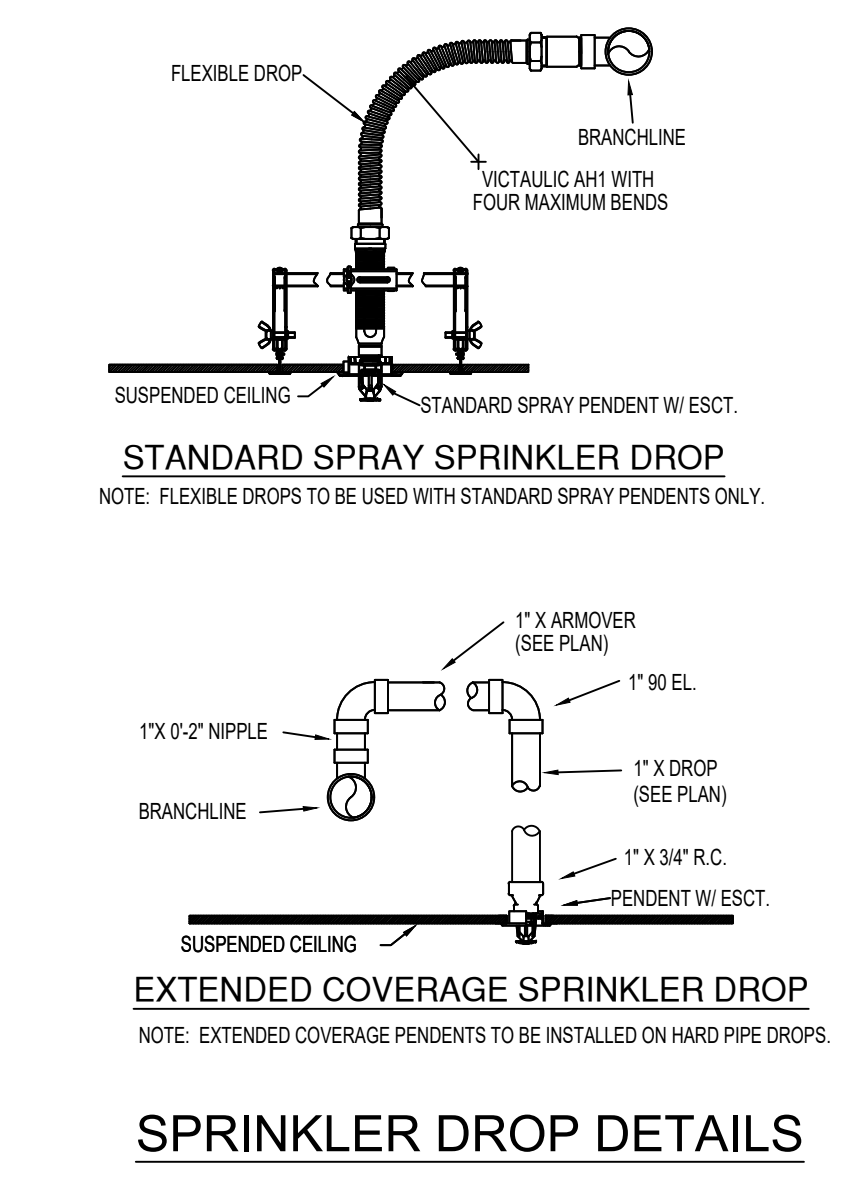
- MINNESOTA STATE FIRE CODE (2020)
OCCUPANCY: S-1, B, M
TYPE OF CONSTRUCTION: II-B (NONCOMBUSTIBLE CONSTRUCTION)
SPRINKLERED AREAS (APPROXIMATE - SEE ARCHITECTURAL PLANS FOR ACTUAL)
1st FLOOR = 20,000 S.F.
MEZZANINE = 1,800 S.F.
TOTAL = 21,800 S.F.
- INSTALLATION STANDARDS:
• SPRINKLER SYSTEM DESIGNED AND INSTALLED PER NFPA 13 (2016)
- SPRINKLER PIPE TYPES:
• 1" TO BE BLACK STEEL SCHEDULE 40 WITH THREADED FITTINGS
• 1 1/2" AND LARGER TO BE BLACK STEEL SCHEDULE 7 WITH WELDED OUTLETS AND GROOVED FITTINGS
- DESIGN CRITERIA:
• OFFICES, RESTROOMS, AND SIMILAR AREAS DESIGNED TO LIGHT HAZARD
• SHOWROOMS AND VEHICLE PARKING AREAS DESIGNED TO ORDINARY HAZARD GROUP 1
• WASH BAY AND TRUCK STORAGE DESIGNED TO ORDINARY HAZARD GROUP 2
- NOTES:
• ALL MATERIAL TO BE NEW AND MEET U.L. STANDARDS
• HANGERS TO BE INSTALLED IN ACCORDANCE WITH NFPA 13 - SEE PLAN FOR HANGING REQ.
- SYMBOLS USED ON DRAWINGS:
-ELEVATION A-F-F
-ROOM HAZARD CLASSIFICATION (ALL ROOMS ARE CONSIDERED LIGHT HAZARD UNLESS NOTED)
-HYDRAULIC CALCULATION JUNCTION POINT
- SCOPE OF WORK:
• PROVIDE ONE WET FIRE SPRINKLER SYSTEM DESIGNED PER NFPA 13 TO PROVIDE COVERAGE FOR THE ENTIRE BUILDING AS SHOWN ON THIS PLAN

NFPA 13 STEEL PIPE HANGER SPACING
(EXCEPT LIGHT WALL THROU PIPING)

NOMINAL SIZE inches	MAX SPACING feet
1"	12'-0"
1-1/4"	12'-0"
1-1/2"	15'-0"
2"	15'-0"
2-1/2"	15'-0"
3"	15'-0"
4" & LARGER	15'-0"



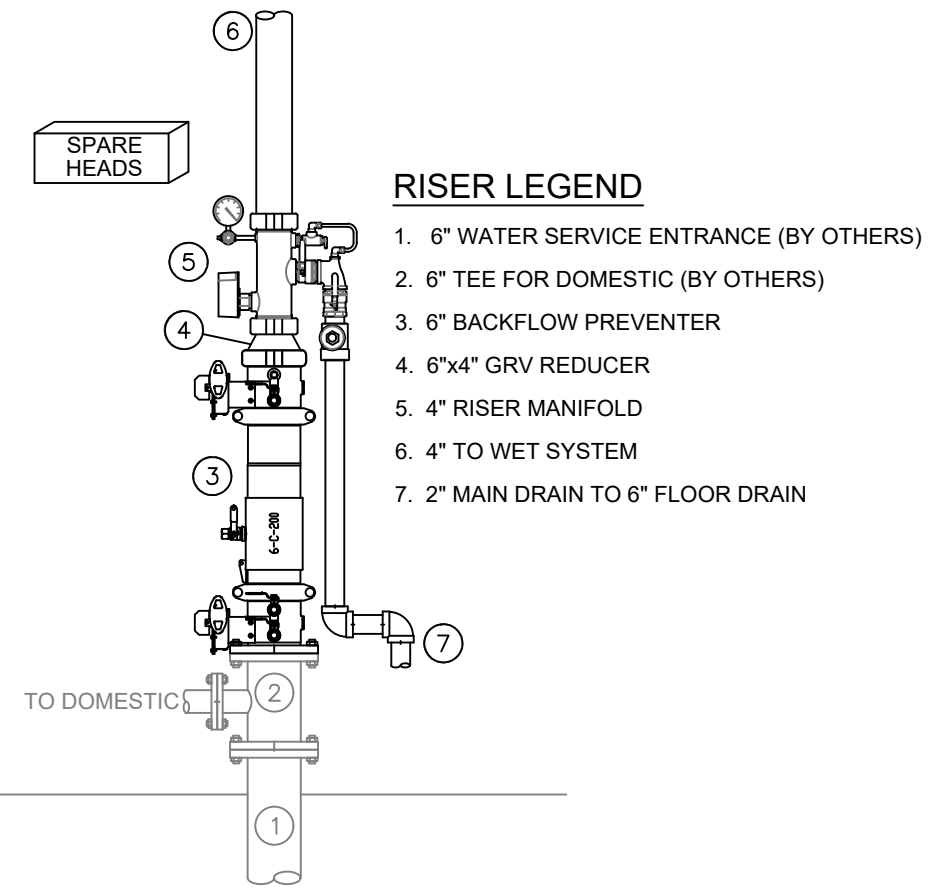
2ND FLOOR MEZZ
SCALE= 1/8" : 1'-0"



SPRINKLER HEAD LEGEND

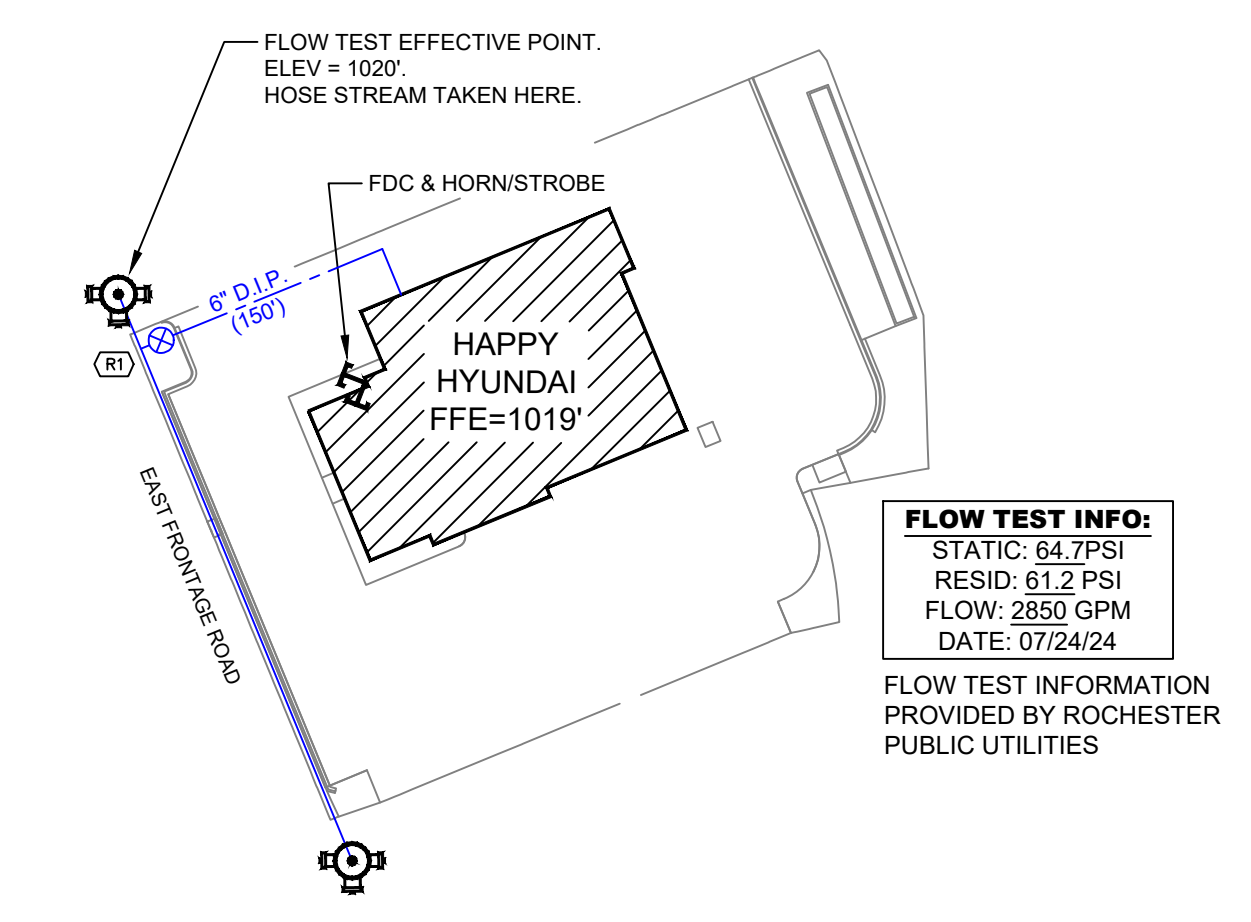
SYM	CHT	POSITION	FINISH	TEMP	K	WPT	SN	MPFS	MODEL#	ESCUTCHEON	MAX SPACING
4	PEND	BLACK	200	14.00	3/4"	V3421	Vic	FL-ECH	SEM-RECESSED	18x18	20x20
11	PEND	WHITE	200	14.00	3/4"	V3421	Vic	FL-ECH	SEM-RECESSED	18x18, 20x20	
36	UPR	BRASS	200	14.00	3/4"	V3425	Vic	FL-ECH	N/A	20x20	
31	UPR	BRASS	200	8.00	3/4"	V3402	Vic	FL-OR	N/A	130 SQ. FT.	
38	PEND	WHITE	200	5.00	1/2"	V2708	Vic	FL-OR	SEM-RECESSED	130, 225	
10	UPR	BRASS	200	11.20	3/4"	V1121	Vic	FL-ECH	N/A	16x16	
8	SIDE	BRASS	200	5.00	1/2"	V2709	Vic	FLSR-SW	N/A	14x14	
2	SIDE	BRASS	200	11.20	3/4"	TY5332	Typo	ELOS-W20	N/A	16x20	

136 TOTAL SPRINKLERS



HYDRAULIC INFO

Design Area #1	HAZARD: OH 1	Design Area #4	HAZARD: OH 2
Zone: 1	System Type: Wet	Zone: 1	System Type: Wet
Location: Showroom		Location: Detail	
Flowing Outlets: 5		Flowing Outlets: 7	
Density: 0.15	Remote Area: 1525	Density: 0.20	Remote Area: 1600
Flow: 558 gpm @ 51.0 psi		Flow: 729 gpm @ 51.6 psi	
Calculation Safety: 13.9 psi		Calculation Safety: 12.9 psi	
Includes 250 gpm Hose allowance		Includes 250 gpm Hose allowance	
Design Area #2	HAZARD: OH 1	Design Area #5	HAZARD: OH 2
Zone: 1	System Type: Wet	Zone: 1	System Type: Wet
Location: Showroom		Location: Parts Storage	
Flowing Outlets: 6		Flowing Outlets: 10	
Density: 0.15	Remote Area: 1546	Density: 0.20	Remote Area: 1025
Flow: 559 gpm @ 44.0 psi		Flow: 537 gpm @ 56.1 psi	
Calculation Safety: 20.5 psi		Calculation Safety: 8.4 psi	
Includes 250 gpm Hose allowance		Includes 250 gpm Hose allowance	
Design Area #3	HAZARD: OH 2	Design Area #6	HAZARD: OH 2
Zone: 1	System Type: Wet	Zone: 1	System Type: Wet
Location: Service Bays		Location: Parts Mezzanine	
Flowing Outlets: 7		Flowing Outlets: 10	
Density: 0.20	Remote Area: 1516	Density: 0.20	Remote Area: 921
Flow: 739 gpm @ 57.5 psi		Flow: 480 gpm @ 32.2 psi	
Calculation Safety: 6.9 psi		Calculation Safety: 32.3 psi	
Includes 250 gpm Hose allowance		Includes 250 gpm Hose allowance	



GENERAL NOTES

- SYSTEM INSTALLED PER NFPA-13 (2016 EDITION) AND STATE FIRE MARSHAL
- ALL EQUIPMENT FOR THIS SYSTEM SHALL BE U.L. LISTED
- MINIMUM PIPE SIZE SHALL BE 1" NOMINAL PIPE
- ALL SCH-40 & LIGHTWALL PIPING HAS WELDED OUTLETS & GROOVED SHORT RADIUS FITTINGS
- ALL WELDING PER NFPA-1342-2
- NO INSTALLATION OR FABRICATION TO BEGIN WITHOUT APPROVED SHOP DRAWINGS
- ALL PIPE LOCATIONS ARE TO BE FIELD MEASURED PRIOR TO FABRICATION AND INSTALLATION BY SPRINKLER CONTRACTOR
- ALL DIMENSIONS SHOWN ARE CENTER TO CENTER
- HIGH TEMPERATURE HEADS ARE TO BE FIELD LOCATED WHERE REQUIRED
- PROVIDE ON SPARE HEAD CABINET WITH HEADS & 1 HEAD WRENCH
- HANGERS ARE TO BE U.L. LISTED AND F.M. APPROVED
- ELECTRICAL WIRING, ALARM, DETECTION AND SUPERVISORY BY OWNER
- OWNERS RESPONSIBILITY TO PROVIDE ADEQUATE HEATING TO PREVENT WET SYSTEM PIPING FROM FREEZING.

NO	REVISIONS	DATE	APPROVAL STAMPS

Contract No. **C24-84**

Drawing Title: **FIRE PROTECTION PLAN**

Drawing Date: 10/24/2024

Scale: 1/8" = 1'-0"

Drawn By: **HAPPY HYUNDAI**

Approval By: STATE FIRE MARSHAL DIV.

SHEET NO. **FP 1 of 1**