

Sprinkler Design Data

| | | |
|---|-----------------------------|------------------------|
| Project: Lillington FD | | System: Wet |
| Project Street Address: 2873 NC 210 North | | Sys. Sq. Ft.: 8,838 |
| Suite: | Floor#: | Ceiling Height: Varies |
| Designed By: Carolina Fire Protection | Phone: (910) 892-1700 | Total Bldg. Hgt.: |
| Occupancy: Manufacturing | Hazard: Ord. Grp. 2 & Light | |

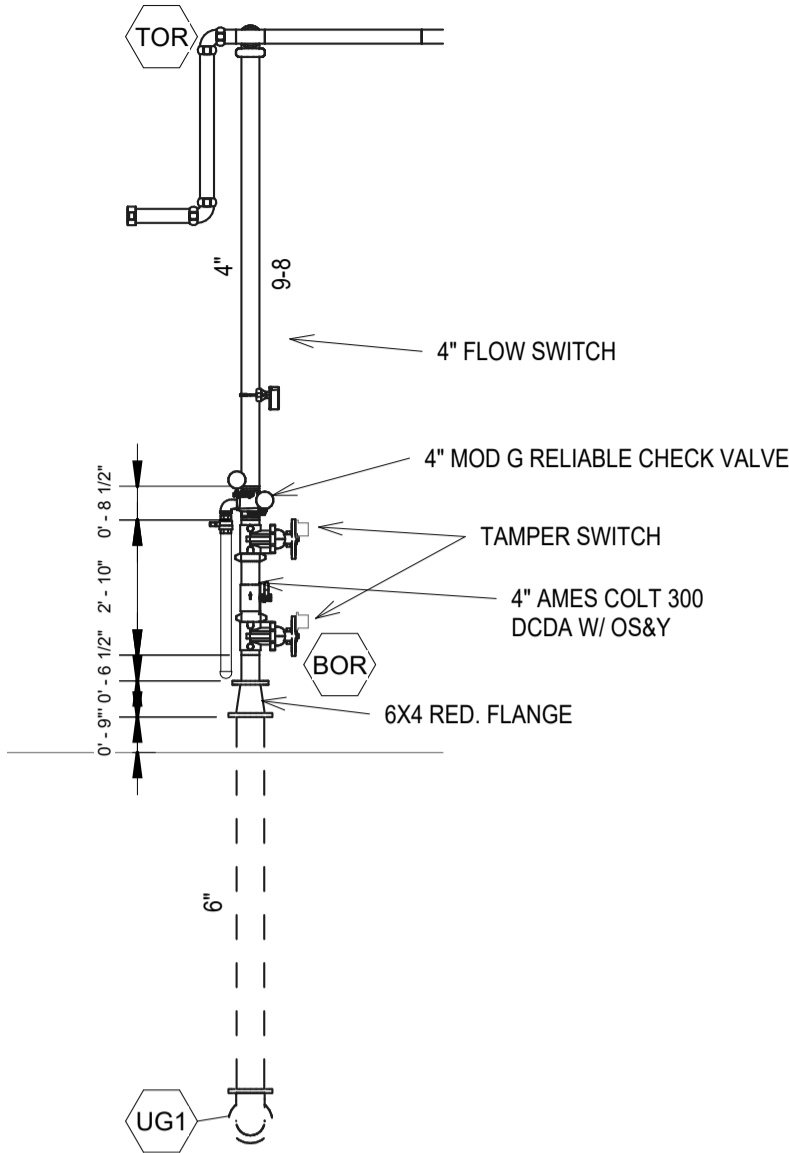
Design Summary

| | | | | |
|---------------------|-----------------------|-----------------------|--|--|
| Design Method | Hydraulic Calculation | Hydraulic Calculation | | |
| Design Area # | 1 | 2 | | |
| Location | TRUCK BAY | OFFICE | | |
| Type of System | Wet System | Wet System | | |
| Hazard Class | Ord. Grp. 2 | LIGHT | | |
| Criteria From | NFPA 13 | NFPA 13 | | |
| Design Area | 1565 | 1152 | | |
| Sprinkler Spacing | 130 sqft | 225 sqft | | |
| Density | .20 | .10 | | |
| K-factor | 5.6 | 5.6 | | |
| Hose Allowance | 250 | 100 | | |
| # Design Sprinklers | 15 | 11 | | |
| Special App. Spk. | 0 | 0 | | |
| Requirement @ | BOR | BOR | | |
| G.P.M. Req'd | 643.476 | 354.074 | | |
| P.S.I. Req'd | 60.364 | 54.385 | | |
| Safety Factor @ | TEST | TEST | | |
| Safety Factor (psi) | 41.134 | 48.118 | | |
| System Sq Ft | 8,838 | 8,838 | | |
| Dry Sys. Vol. (gal) | n/a | n/a | | |

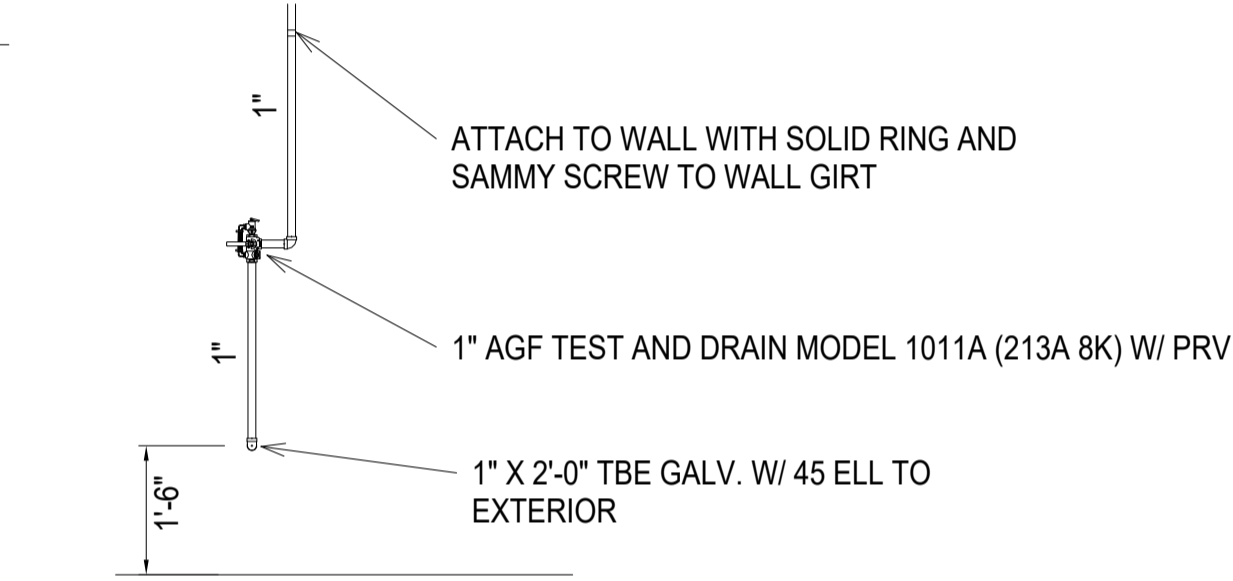
Water Supply Information

| | | | | | |
|-------------------|----------------------|------------------|---------------|------------------|----------|
| Tested by | CFP & HARNETT COUNTY | Date/Time | 02/25/25 11AM | Pressure Hydrant | |
| Hydrant Elevation | | Flow Hydrant # 1 | | Flow Hydrant #2 | |
| Static (PSI) | 103 | Residual (PSI) | 94 | Flow (gpm) | 1694 GPM |

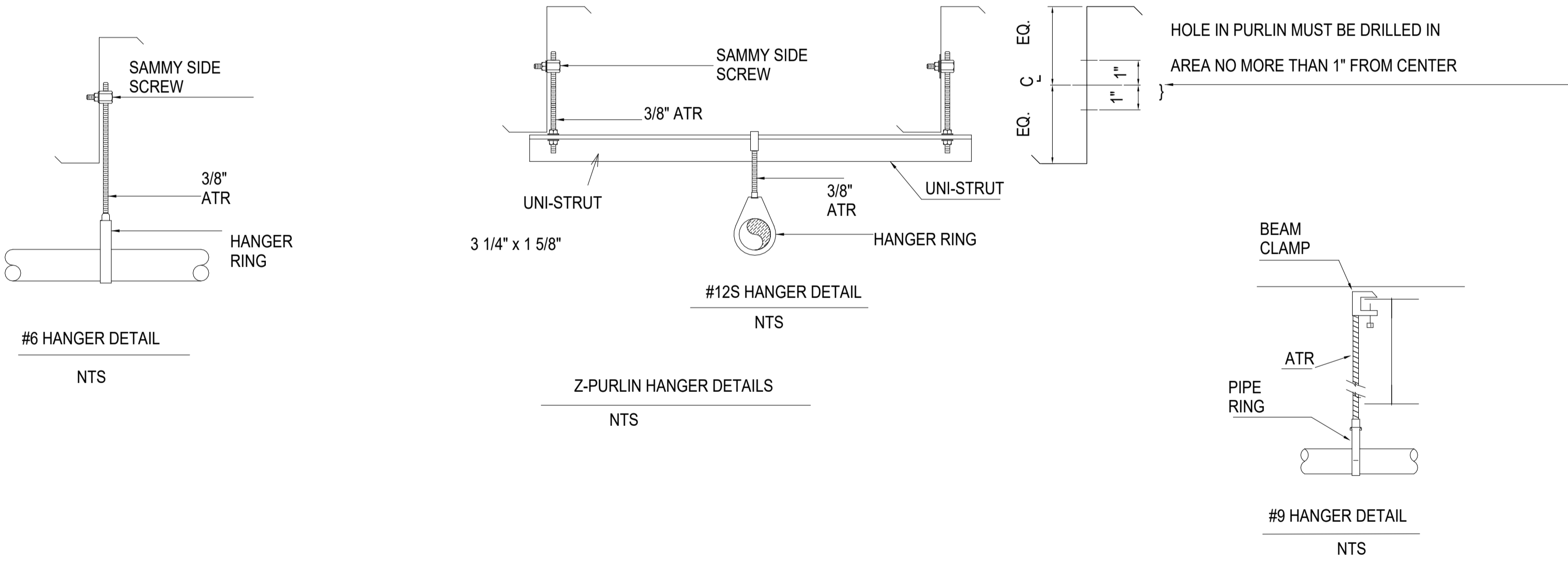
Water test data required



3 Riser Detail
1/4" = 1'-0"



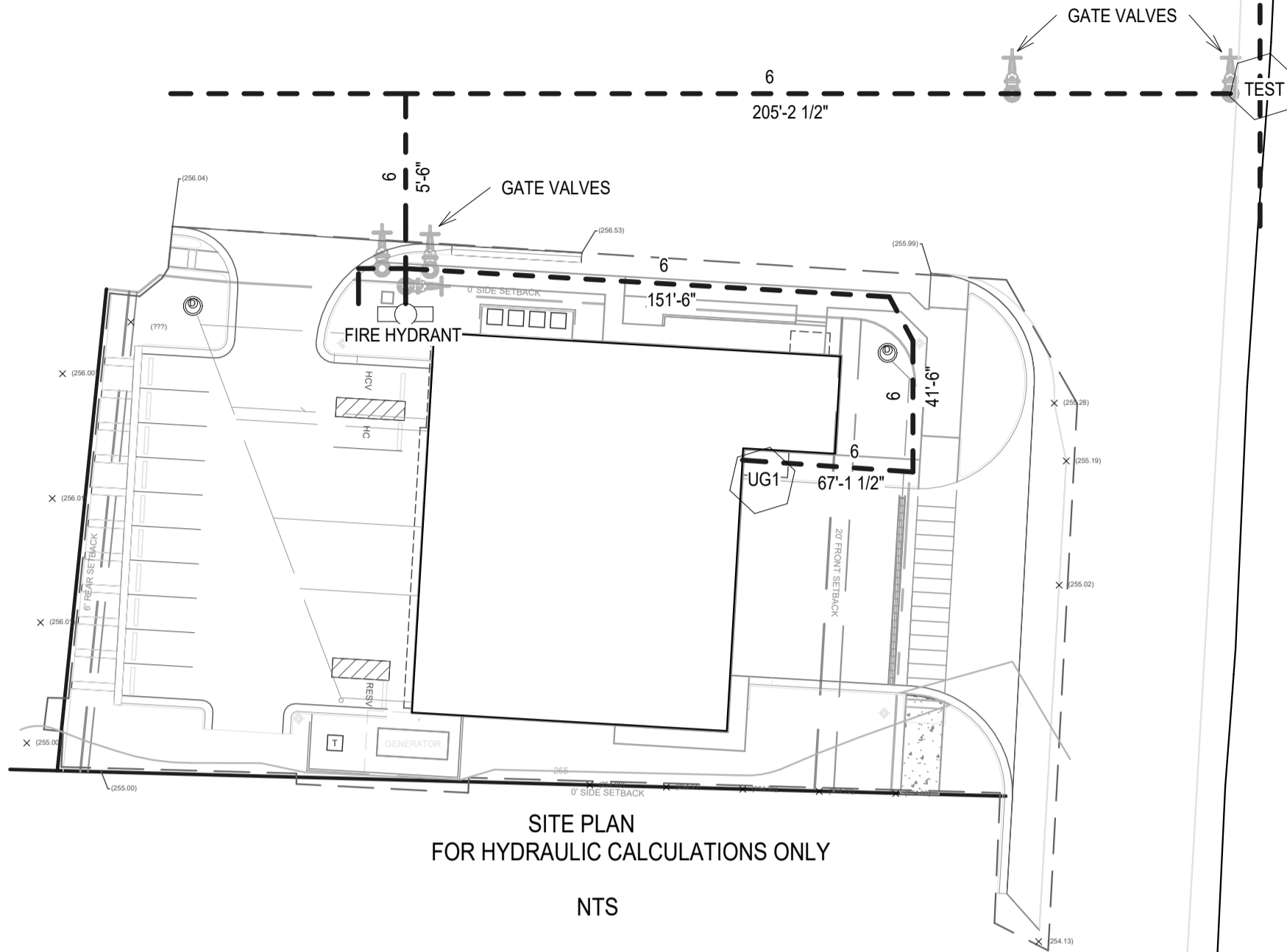
INSPECTORS TEST
NTS



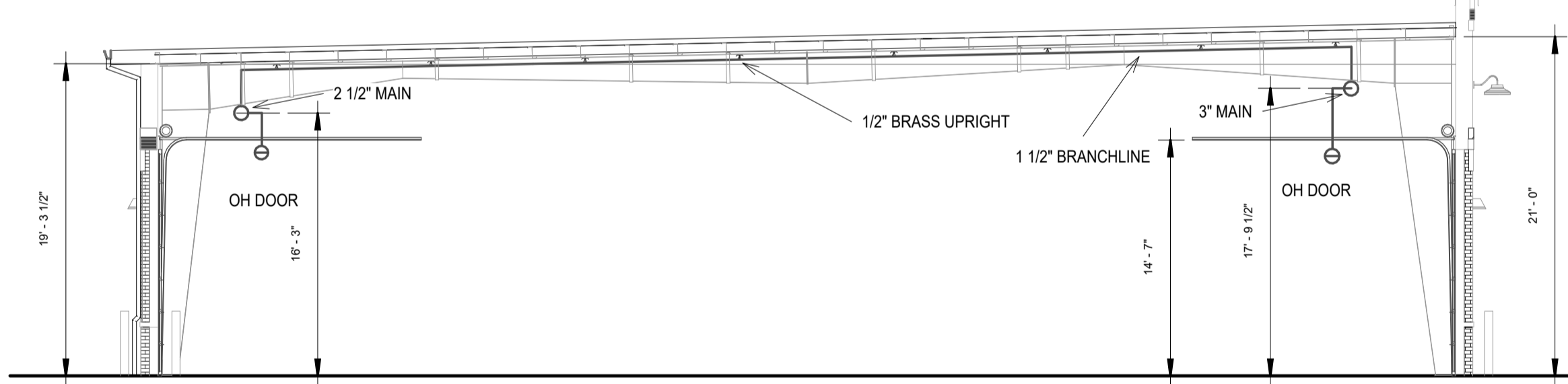
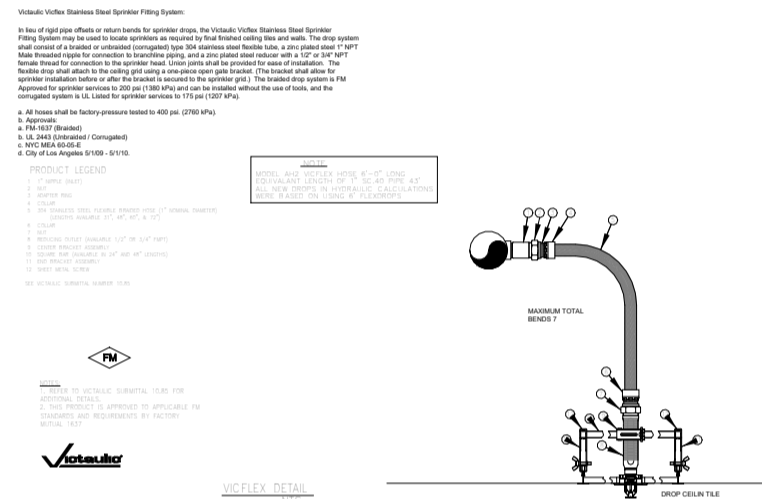
#9 HANGER DETAIL
NTS

GENERAL NOTES

- PIPE TO BE INSTALLED AND SUPPORTED IN ACCORDANCE WITH NFPA 13
- ALL PIPE 1 1/2" AND LARGER TO BE BLACK SCH. 10 PIPE ROLLED GROOVED WITH GROOVED FITTINGS U.N.O.
- 1" PIPE TO BE BLACK SCH. 40 WITH DUCTILE IRON FITTINGS
- INSTALL (1) NEW WET PIPE TYPE SPRINKLER SYSTEM THROUGHOUT BUILDING
- SYSTEM DESIGNED TO PROVIDE A DENSITY OF .20 GPM PER SQUARE FOOT OVER THE MOST REMOTE 1,565 SQ. FT. AREA +250 GPM FOR HOSE STREAM DEMANDS IN TRUCK APPARATUS BAYS
- SYSTEM DESIGNED TO PROVIDE A DENSITY OF .10 GPM PER SQUARE FOOT OVER THE MOST REMOTE 1,152 SQ. FT. AREA +100 GPM FOR HOSE STREAM DEMANDS IN OFFICE
- BUILDING TO BE HEATED AND MAINTAINED A MINIMUM OF 40 DEGREES FAHRENHEIT BY OWNER
- ALL FIRE PROTECTION PIPING PENETRATIONS THRU RATED WALLS SHALL BE FIRE PROOFED



NTS



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

IMPORTANT

In locations that are subject to freezing conditions, it is the owner's responsibility to provide heat throughout areas protected by wet pipe sprinkler systems and in enclosures for dry pipe, deluge or other types of valves controlling water supplies to sprinkler systems.

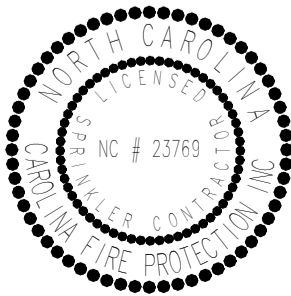
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| CONTRACT RESPONSIBILITIES | |
|---------------------------|-----------------|
| ITEM | C.F.P. / OTHERS |
| STREET WATER CONNECTION | N/A |
| UNDERGROUND WATER MAINS | N/A |
| EXCAVATIONS | N/A |
| BACKFILL | N/A |
| WIRING | N/A |
| PAINTING | N/A |
| | |
| | |
| | |
| | |
| | |

| SYMBOLS | |
|---------|---|
| | CEILING HT. ABOVE REF. C/L OF PIPE BELOW BOD C/L OF PIPE ABOVE REF. |
| | HYDRAULIC REF. POINT LINE DESIGNATION |
| | MAIN DESIGNATION |
| | HANGER |
| | UNION |
| | GROOVED COUPLING (GC) |
| | SCREWED CAP |
| | GROOVED CAP |
| | SCREWED PLUG |
| | FLANGE CONNECTION |
| | GATE VALVE (SEE NOTES) |
| | FIRE HOSE ASSEMBLY |
| | MONITOR SWITCH |
| | BUTTERFLY VALVE |
| | ALARM VALVE (ALV) |
| | DRY PIPE VALVE |
| | WATER CHECK VALVE |
| | SWING CHECK VALVE |
| | SYSTEM RISER |
| | INSPECTOR'S TEST |
| | GLOBE VALVE |
| | ANGLE VALVE |
| | ELECTRIC BELL |
| | WATER MOTOR GONG (WMG) |
| | FIRE DEPT. CONN. (STANDARD) |
| | FIRE DEPT. CONN. (FLUSH) |
| | FIRE DEPT. CONN. (SIDEWALK) |
| | POST INDICATOR VALVE (PIV) |
| | KEY GATE SECTIONAL VALVE |
| | FIRE HYDRANT (2 WAY) |
| | 2 & 4 WAY SEISMIC BRACING |
| | THRUST BLOCK |
| | ELEVATION CHANGE IN PIPE (NOT THROUGH FLOOR) |

| ABBREVIATIONS | |
|---------------|------------------------|
| BOB | BOTTOM OF BEAM |
| BOD | BOTTOM OF DECK |
| BOP | BOTTOM OF PIPE |
| DO | DITTO |
| N & C | NIPPLE AND CAP |
| NIC | NOTE IN CONTRACT |
| NTS | NOT TO SCALE |
| OSJ | OPEN BAR JOIST |
| PRV | PRESSURE RED. VALVE |
| RM | ROOT MANIFOLD |
| SP | STANDPIPE |
| TOB | TOP OF BEAM |
| TOS | TOP OF PIPE |
| TOS | TOP OF STEEL |
| UNO | UNLESS NOTED OTHERWISE |

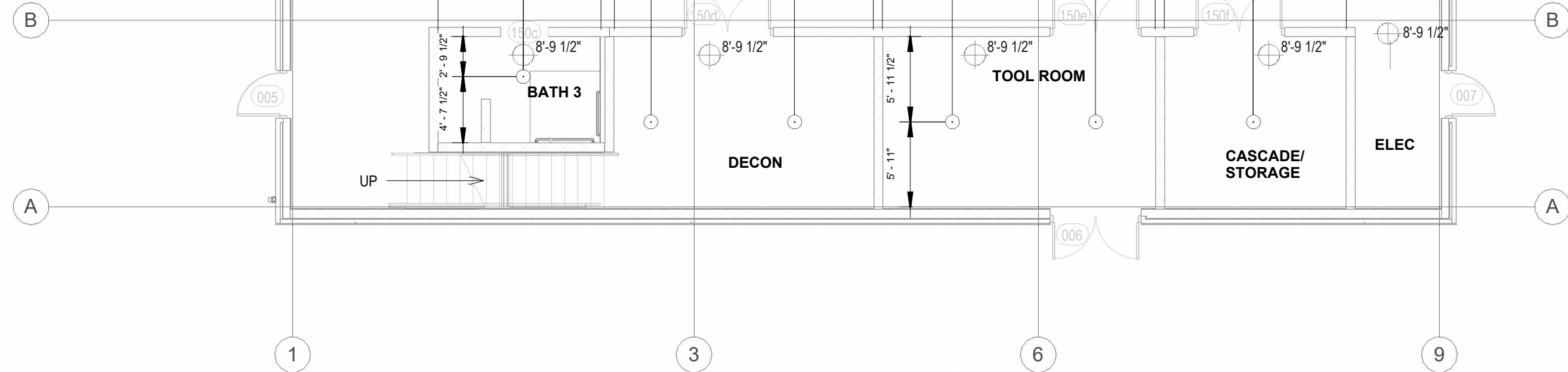
| SYSTEM TYPE | |
|--------------------------------|--------------------------------------|
| WET - <input type="checkbox"/> | DELUGE - <input type="checkbox"/> |
| DRY - <input type="checkbox"/> | PREACTION - <input type="checkbox"/> |
| APPROVALS | |
| <input type="checkbox"/> ISO | OUT IN |
| <input type="checkbox"/> IRI | OUT IN |
| <input type="checkbox"/> FM | OUT IN |
| <input type="checkbox"/> Q | OUT IN |



| SPRINKLER SYMBOL DESCRIPTION | | | | | | | | | |
|--|------|-------|-----------|-------|--------|---------------------|------|----------|-------|
| SYMBOL | SIZE | MODEL | MAKE | SIN | FINISH | STYLE | TEMP | K-FACTOR | TOTAL |
| | 1/2 | QR | VICTAULIC | V2708 | WHITE | RECESSED PENDENT | 155° | 5.6K | 50 |
| | 1/2 | QR | VICTAULIC | V2704 | BRASS | UPRIGHT | 155° | 5.6K | 62 |
| | 1/2 | QR | VICTAULIC | V2710 | CHROME | HORIZONTAL SIDEWALL | 155° | 5.6K | 6 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| TOTAL SPRINKLERS SHOWN ON THIS SHEET | | | | | | | | 0 | |
| TOTAL SPRINKLERS REQUIRED ON THIS CONTRACT | | | | | | | | 118 | |



| | | |
|---|------------------------|--------------------------|
| CONTRACT NAME: LILLINGTON FIRE DEPT. 2873 NC 210 NORTH LILLINGTON, NC | | CHECKED BY: M.FORD |
| CONTRACT WITH: BOBBITT | | DATE: 04/08/2025 |
| DESCRIPTION: INFO | | SCALE: AS SHOWN |
| SYSTEM DESIGN DATA | | CONTRACT NO. 25C999 |
| HAZARD CLASSIFICATION | SYSTEM AREA: SQ. FT. | DRAWN BY: A.LEE |
| HYDRAULIC DESIGN DATA DENSITY: GPM/SQ. FT. | COVERAGE: SQ. FT./HEAD | DRAWING NO. FP 1 OF 3 |
| AREA OF APPLICATION: SQ. FT. | HOSE ALLOWANCES: GPM | |
| TOTAL SYSTEM REQUIREMENTS: GPM AT PSI AT | | |
| WATER SUPPLY STATIC PRESSURE PSI RESIDUAL PRESSURE PSI W/ GPM FLOWING | | |
| TEST TAKEN AT: | BY: | DATE: |



| | | | |
|-----|------|----|--------------------------------------|
| | | | |
| | | | |
| | | | |
| NO. | DATE | BY | REVISIONS - SEE FLAGGED AREA ON PLAN |

| | | | |
|---|-----------------|-----------------------|------------------------|
| CONTRACT NAME: <u>LILLINGTON FIRE DEPT.</u> | | | CHECKED BY: M.FORD |
| 2873 NC 210 NORTH LILLINGTON, NC | | | DATE: 04/08/2025 |
| CONTRACT WITH: BOBBIT | | | SCALE: AS SHOWN |
| DESCRIPTION: DIMENSIONS | | | CONTRACT NO. 25C999 |
| SYSTEM DESIGN DATA | | | |
| HAZARD CLASSIFICATION | SYSTEM AREA | | SQ. FT. |
| HYDRAULIC DESIGN DATA DENSITY: | GPM/SQ. FT. | COVERARGE: | SQ. FT./HEAD |
| AREA OF APPLICATION: | SQ. FT. | HOSE ALLOWANCES: | GPM |
| TOTAL SYSTEM REQUIREMENTS: | | GPM AT | PSI AT |
| WATER SUPPLY | STATIC PRESSURE | PSI RESIDUAL PRESSURE | PSI/W GPM FLOWING |
| TEST TAPER AT: | BY: | DATE: | |
| | | | FP 2 OF 3 |

CHECKED BY:
M.FORD

DATE:
04/08/2025




SCALE:
AS SHOWN

CONTRACT NO.
25C999

DRAWN BY:
A.LEE

DRAWING NO.
FP 2 OF 3


**CAROLINA
FIRE
PROTECTION**
4055 HODGES CHAPEL ROAD
DUNN, N.C. 28334
PHONE (910) 892-1700
FAX (910) 892-7322

| SPRINKLER SYMBOL DESCRIPTION | | | | | | | | | |
|---|------|-------|-----------|-------|--------|---------------------|------|----------|-------|
| SYMBOL | SIZE | MODEL | MAKE | SIN | FINISH | STYLE | TEMP | K-FACTOR | TOTAL |
|  | 1/2 | QR | VICTAULIC | V2708 | WHITE | RECESSED PENDENT | 155° | 5.6K | 50 |
|  | 1/2 | QR | VICTAULIC | V2704 | BRASS | UPRIGHT | 155° | 5.6K | 62 |
|  | 1/2 | QR | VICTAULIC | V2710 | CHROME | HORIZONTAL SIDEWALL | 155° | 5.6K | 6 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| TOTAL SPRINKLERS SHOWN ON THIS SHEET | | | | | | | | | 118 |
| TOTAL SPRINKLERS REQUIRED ON THIS CONTRACT | | | | | | | | | 118 |

SYSTEM TYPE

WET - ☐ DELUGE - ☐

DRY - ☒ PREACTION - ☐

☐ ISO _____ OUT _____ IN _____

☐ IRI _____ OUT _____ IN _____

☐ FM _____ OUT _____ IN _____

☐ _____ OUT _____ IN _____

SYMBOLS

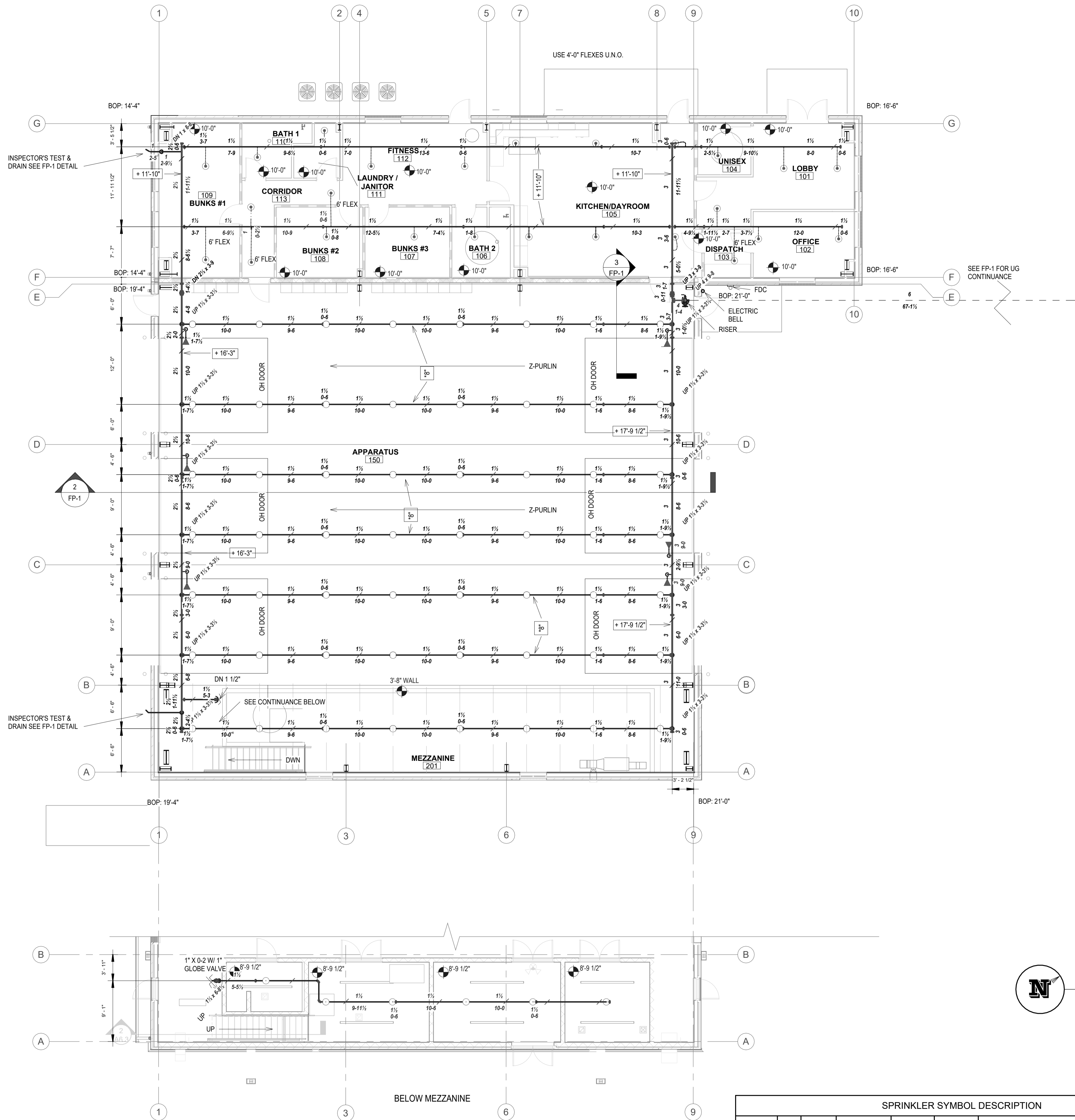
| | | | |
|--|------------------------|--|--|
| | GATE VALVE (SEE NOTES) | | ELECTRIC BELL |
| | FIRE HOSE ASSEMBLY | | WATER MOTOR GONG (W.M.G.) |
| | FLOW SWITCH (FS) | | FIRE DEPT. CONN. (STAND.) |
| | MONITOR SWITCH | | FIRE DEPT. CONN. (FLUSH) |
| | BUTTERFLY VALVE | | FIRE DEPT. CONN. (SIDE) |
| | ALARM VALVE (ALV) | | POST INDICATOR VALVE (PIV) |
| | DRY PIPE VALVE | | KEY GATE SECTIONAL VALVE WITH ROADWAY BOX |
| | WACKER CHECK VALVE | | FIRE HYDRANT (3 WAY) |
| | SWINGER CHECK VALVE | | THRUST BALL |
| | SYSTEM RISER | | 2 & 4 WAY SEISMIC BRANCH |
| | INSPECTOR'S TEST | | ELEVATION CHANGE IN PIPE (NOT THROUGH FLOOR) |
| | GLOBE VALVE | | |
| | ANGLE VALVE | | |

| CONTRACT RESPONSIBILITIES | | |
|---------------------------|-----------------|------------------------------|
| ITEM | C.F.P. / OTHERS | |
| STREET WATER CONNECTION | N/A | CEILING HT. ABOVE REF. LINE |
| UNDERGROUND WATER MAINS | N/A | C/L OF PIPE BELOW B.O. |
| EXCAVATIONS | N/A | C/L OF PIPE ABOVE REF. POINT |
| BACKFILL | N/A | LINE DESIGNATION |
| WIRING | N/A | A1 MAIN DESIGNATION |
| PAINTING | N/A | HANGER |
| | | UNION |
| | | GROOVED COUPLING (C) |
| | | SCREWED CAP |
| | | GROOVED CAP |
| | | FLANGE CONNECTION |

IMPORTANT

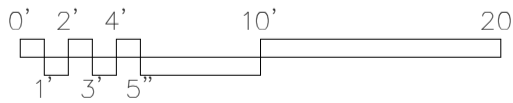
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PIPING PLAN

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



| NO. | DATE | BY | REVISIONS - SEE FLAGGED AREA ON PLAN |
|-----|------|----|--------------------------------------|
| | | | |
| | | | |
























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| CONTRACT RESPONSIBILITIES | |
|---------------------------|-----------------|
| ITEM | C.F.P. / OTHERS |
| STREET WATER CONNECTION | N/A |
| UNDERGROUND WATER MAINS | N/A |
| EXCAVATIONS | N/A |
| BACKFILL | N/A |
| WIRING | N/A |
| PAINTING | N/A |
| | |
| | |
| | |
| | |

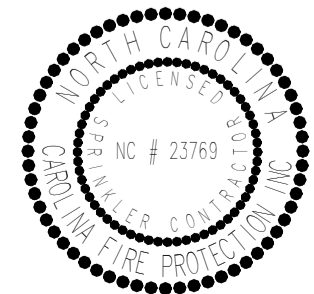
| | |
|--|--|
| | CEILING HT. ABOVE REF. C.F.P. / OTHERS |
| | CL OF PIPE ABOVE REF. C.F.P. / OTHERS |
| | HYDRAULIC REF. POINT LINE DESIGNATION |
| | MAIN DESIGNATION |
| | HANGER |
| | UNION |
| | GROOVED COUPLING (GC) |
| | GROOVED CAP |
| | SCREWED PLUG |
| | FLANGE CONNECTION |

| SYMBOLS | |
|---|--|
|  | GATE VALVE (SEE NOTES) |
|  | FIRE HOSE ASSEMBLY |
|  | FLOW SWITCH (FS) |
|  | MONITOR SWITCH |
|  | BUTTERFLY VALVE |
|  | ALARM VALVE (ALV) |
|  | WATER CHECK VALVE |
|  | SWING CHECK VALVE |
|  | SYSTEM RISER |
|  | INSPECTOR'S TEST |
|  | GLOBE VALVE |
|  | ANGLE VALVE |
|  | ELECTRIC BELL |
|  | WATER MOTOR GONG (WVG) |
|  | FIRE DEPT. CONN. (STANDARD) |
|  | FIRE DEPT. CONN. (FLUSH) |
|  | FIRE DEPT. CONN. (SIDE WALK) |
|  | POST INDICATOR VALVE (PIV) |
|  | KEY GATE SECTIONAL VALVE WITH ROADWAY BOX |
|  | FIRE HYDRANT (3 WAY) |
|  | THRUST BLOCK |
|  | 2 & 4 WAY SEISMIC BRACING |
|  | ELEVATION CHANGE IN PIPE (NOT THROUGH FLOOR) |

ABBREVIATIONS

| | |
|-------|------------------------|
| BOB | BOTTOM OF BEAM |
| BOD | BOTTOM OF DECK |
| BOP | BOTTOM OF PIPE |
| DO | DITTO |
| HV | HOSE VALVE |
| N & C | NIPPLE AND CAP |
| NIC | NOTE IN CONTRACT |
| NTS | NOT TO SCALE |
| OBJ | OPEN BAR JOIST |
| PRV | PRESSURE RED. VALVE |
| RM | ROOF MANHOLE |
| SP | STANDPIPE |
| TOB | TOP OF BEAM |
| TOP | TOP OF PIPE |
| TOS | TOP OF STEEL |
| UNO | UNLESS NOTED OTHERWISE |

| SYSTEM TYPE | | |
|------------------------------|-------------------------------------|--------------------------------------|
| WET - | <input checked="" type="checkbox"/> | DELUGE - <input type="checkbox"/> |
| DRY - | <input type="checkbox"/> | PREACTION - <input type="checkbox"/> |
| APPROVALS | | |
| <input type="checkbox"/> ISO | OUT | IN |
| <input type="checkbox"/> IRI | OUT | IN |
| <input type="checkbox"/> FM | OUT | IN |
| <input type="checkbox"/> | OUT | IN |



| SPRINKLER SYMBOL DESCRIPTION | | | | | | | | | |
|--|------|-------|-----------|-------|--------|---------------------|------|----------|-------|
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| | | | | | | | | | |
| | | | | | | | | | |
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| TOTAL SPRINKLERS REQUIRED ON THIS CONTRACT | | | | | | | | | 118 |

CAROLINA FIRE PROTECTION

4055 HODGES CHAPEL ROAD
DUNN, N.C. 28334
PHONE (910) 892-1700
FAX (910) 892-7322

| | | |
|----------------------------|--|--|
| CONTRACT NAME: | LILLINGTON FIRE DEPT. 2873 NC 210 NORTH LILLINGTON, NC | CHECKED BY: M.FORD DATE: 04/08/2025 |
| CONTRACT WITH: | BOBBITT | SCALE: AS SHOWN |
| DESCRIPTION: | PIPING PLAN | CONTRACT NO. 25C999 |
| SYSTEM DESIGN DATA | | DRAWN BY: A.LEE |
| HAZARD CLASSIFICATION | SYSTEM AREA: SQ. FT. | DATE: |
| HYDRAULIC DESIGN DATA | DENSITY: GPM/SQ. FT. COVERAGE: SQ. FT./HEAD | TEST TAKEN AT: |
| AREA OF APPLICATION: | SQ. FT. HOSE ALLOWANCES: GPM | BY: |
| TOTAL SYSTEM REQUIREMENTS: | GPM AT PSI AT | DATE: |
| WATER SUPPLY | STATIC PRESSURE PSI RESIDUAL PRESSURE PSI W/ GPM FLOWING | |
| TEST TAKEN AT: | | |