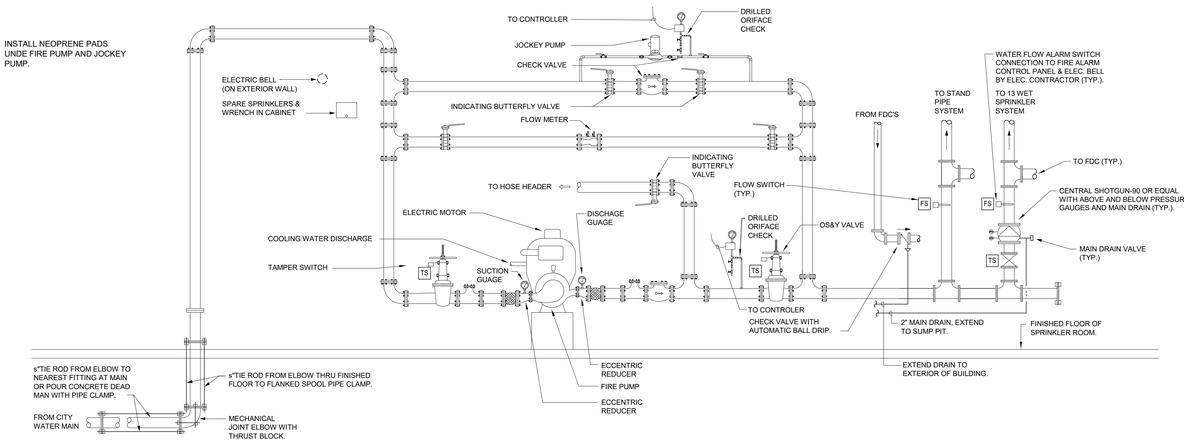
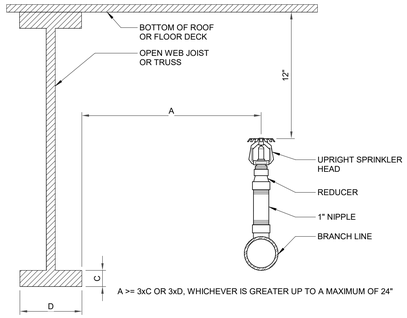
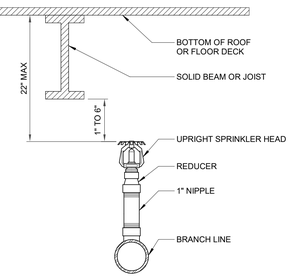


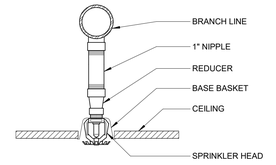
1 FP0.01 — FIRE PUMP DETAIL
SCALE: NTS



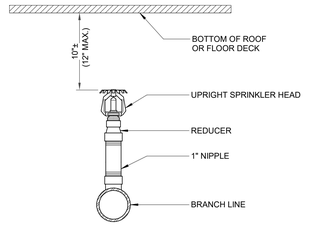
4 FP0.01 — TRUSS OBSTRUCTED UPRIGHT SPRINKLER HEAD DETAIL
SCALE: NTS



3 FP0.01 — BEAM OBSTRUCTED UPRIGHT SPRINKLER HEAD DETAIL
SCALE: NTS



2 FP0.01 — PENDENT SPRINKLER HEAD DETAIL
SCALE: NTS



5 FP0.01 — UPRIGHT SPRINKLER HEAD DETAIL
SCALE: NTS

FIRE PROTECTION CRITERIA

OVERALL DESCRIPTION
THE CONSTRUCTION WILL CONSIST OF A NEW 4-STORY RETAIL/OFFICE BUILDING WITH 5 LEVEL PARKING GARAGE NEXT DOOR. THE BUILDING WILL BE LOCATED IN CHARLOTTE, NC. BUILDING SHALL BE SERVED BY 6" FIRE MAIN.

ACCEPTANCE TESTING
ACCEPTANCE TESTING SHALL BE PROVIDED PER NFPA 13, 2013 EDITION, 2018 NORTH CAROLINA BUILDING CODE, AND 2018 NORTH CAROLINA FIRE CODE.

OCCUPANCY CLASSIFICATION
THE BUILDING IS A NEW 4-STORY RETAIL/OFFICE BUILDING. THE BUILDING SHALL HAVE A LIGHT HAZARD OCCUPANCY. THE 5-STORY PARKING GARAGE DOES NOT REQUIRE TO BE PROTECTED WITH SPRINKLER SYSTEM.

PREPERATION OF DOCUMENTS
THE SPRINKLER SYSTEM FOR THE HOTEL WILL BE A WET PIPE SYSTEM, DESIGNED PER NFPA 13, 2013 EDITION, FOR LIGHT HAZARD. THE SYSTEM WILL INCLUDE USING STEEL, SCHEDULE 40 PIPING ABOVE CEILING TO UPRIGHT HEADS LOCATED IN THE BUILDING. ANY EXPOSED PIPING WILL BE STEEL, SCHEDULE 40. SPRINKLERS WILL BE "QUICK RESPONSE" TYPE.

THE STANDPIPE SYSTEM WILL BE AN MANUAL, WET, CLASS 1 SYSTEM DESIGNED PER NFPA 14, 2013 EDITION AND THE SOUTH CAROLINA BUILDING CODE, 2015 EDITION. THE SYSTEM WILL INCLUDE USING HYDRAULICALLY SIZED, STEEL STANDPIPES, ONE IN EACH STAIRWELL. ONE OF THE STANDPIPES/FIRE RISER 2-1/2" HOSE VALVES AND FIRE SPRINKLERS AT EACH LEVEL. THE OTHER STANDPIPE WILL BE CLASS 1 WET STANDPIPE SERVING THE 2-1/2" HOSE VALVE ON EACH LEVEL. A MANUAL STANDPIPE SHALL EXTEND TO ROOF LEVEL.

STRUCTURAL SUPPORT
STRUCTURAL SUPPORT AND STRUCTURAL OPENINGS FOR THE FIRE PROTECTION SYSTEM INCLUDING LIVE AND DEAD LOADS HAVE BEEN COORDINATED WITH THE STRUCTURAL ENGINEER. STEEL SLEEVES WILL BE SET PRIOR TO CONCRETE PLACEMENT, TO PROVIDE FOR PENETRATIONS OF FIRE PROTECTION PIPING THROUGH THE FLOORS OR ROOF STRUCTURE. ALL PENETRATIONS WILL BE PROPERLY FIRE-CAULKED, AS REQUIRED.

POINT OF SERVICE:
A 6" FIRE SERVICE WILL BE EXTENDED INTO THE BUILDING TO SERVE THE SPRINKLER SYSTEM.

GOVERNING STANDARDS:
SYSTEM DESIGN AND INSTALLATION SHALL COMPLY WITH 2013 EDITION OF NFPA 13 AND THE 2013 EDITION OF NFPA 24 AS WELL AS THE 2012 INTERNATIONAL FIRE CODE AND THE LOCAL FIRE PREVENTION CODE.

OCCUPANCY CLASSIFICATIONS:
THIS BUILDING IS CLASSIFIED AS LIGHT HAZARD OCCUPANCY.

SPRINKLER HEADS:
CONCEALED SPRINKLER HEADS SHALL BE INSTALLED IN ALL PUBLIC AREAS AND CORRIDORS.

FLOW TEST RESULT:
DATE: 10/23/19 AT 6PM
LOCATION: 1900 E 7TH STREET
HYDRANT No.: 055707
MAIN PIPE SIZE: 8 INCH
STATIC PRESSURE: 56 PSI
RESIDUAL PRESSURE: 50 PSI
48 HOUR AVERAGE PRESSURE: 58 PSI
FLOW AT 20 PSI: 2,928.83 GPM

FIRE PROTECTION CRITERIA

DESIGN APPROACH:
THE SYSTEM SHALL BE A HYDRAULICALLY-CALCULATED FULLY-AUTOMATIC, WET SYSTEM INSTALLED THROUGHOUT THE ENTIRE BUILDING. LIGHT HAZARD OCCUPANCY AREAS OF THE BUILDING SHALL BE DESIGNED FOR 0.10 GPM/SF OVER THE MOST DEMANDING 1500 SF USING 155°F (K=5.6) "QUICK RESPONSE" HEADS WITH A MAXIMUM COVERAGE AREA OF 225 SF PER HEAD AND MAXIMUM HEAD SPACING OF 15 FEET.

ORDINARY HAZARD (GROUP 1) OCCUPANCY AREAS OF THE BUILDING SHALL BE DESIGNED FOR 0.15 GPM/SF OVER THE MOST DEMANDING 1500 SF USING 155°F (K=5.6) "QUICK RESPONSE" HEADS WITH A MAXIMUM COVERAGE AREA OF 130 SF PER HEAD AND MAXIMUM HEAD SPACING OF 15 FEET.

FLOW TEST INFORMATION:
LOCATION - XXXX
TEST DATE - XXXX
STATIC - XX
RESIDUAL - XX
RESIDUAL FLOW AT 20 PSI - X,XXXX GPM

VALVING AND ALARM REQUIREMENTS:
INSTALL FLOW SWITCH IN FIRE RISER AND PUT TAMPER SWITCH ON CONTROL VALVE IN RISER WITH LOCAL AUDIBLE ALARM AND CENTRAL STATION MONITORING.

MIC RISK EVALUATION:
VERIFY THAT THERE IS NO RISK OF MIC WITH LOCAL UTILITY.

BACKFLOW PREVENTION DETAILS:
BACKFLOW PREVENTER IS LOCATED ON SITE.

COMPONENT SPECIFICATIONS:
ALL INSIDE AND UNDERGROUND PIPING, VALVES, SWITCHES AND OTHER COMPONENTS TO BE UL AND FM LISTED MATERIALS FOR FIRE PROTECTION. ALL UNDERGROUND PIPING SHALL BE INSTALLED BY A STATE CERTIFIED CONTRACTOR, WHO SHALL BE RESPONSIBLE FOR PIPING OUTSIDE OF THE BUILDING UP TO ONE FOOT ABOVE FINISHED FLOOR INSIDE THE BUILDING.

DESIGN CRITERIA NFPA 13

1. SPRINKLER HEADS SHALL BE SPACED IN ACCORDANCE WITH NFPA 13 AND THE MANUFACTURERS APPROVAL LISTING.
2. SPRINKLER HEAD SPACING SHALL NOT EXCEED 225 SQ. FT. PER HEAD FOR LIGHT HAZARD AREAS. SPRINKLER HEAD SPACING SHALL NOT EXCEED 130 SQ. FT. PER HEAD FOR ORDINARY HAZARD AREAS.
   LIGHT HAZARD OCCUPANCIES MAY INCLUDE BUT NOT LIMITED TO: CORRIDORS, RESTROOMS AND VESTIBULES
   ORDINARY HAZARD GROUP 1 OCCUPANCIES MAY INCLUDE BUT NOT LIMITED TO: MECHANICAL ROOMS, ELECTRICAL ROOMS, SMALL STORAGE ROOMS, AND JANITOR ROOMS.
3. DESIGN DENSITY FOR LIGHT HAZARD = 0.10 GPM/SQ.FT (MINIMUM AREA OF 1500 SQ FT) + 100 GPM HOSE MINIMUM.
   DESIGN DENSITY FOR ORDINARY HAZARD = 0.15 GPM/SQ.FT (MINIMUM AREA OF 1500 SQ FT) + 250 GPM HOSE MINIMUM.

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 040327 LARRY P. McWILLIAMS

85% REVIEW SET

CRESCENT 7TH STREET MIXED-USE

CRESCENT COMMUNITIES

LOCATION / CHARLOTTE, NC
PROJECT # / 19CRC150
DATE / 01.21.2020
DRAWN / Author

Revisions		
No.	Description	Date

NOTES & LEGENDS - FIRE PROTECTION

FP0.01