



**DIVISION 15300- FIRE PROTECTION SPECIFICATIONS**

- A. PROJECT CLOSEOUT - REFER TO THE PROJECT MANUAL SUPPLEMENTARY GENERAL CONDITIONS FOR ADDITIONAL INFORMATION. REFER TO THE PROJECT MANUAL SUBMITTALS FOR REQUIRED CLOSE OUT DOCUMENTS.
- B. THE CONTRACTOR FOR THE FIRE PROTECTION WORK SHALL BE A RECOGNIZED, QUALIFIED AND LICENSED FIRE PROTECTION CONTRACTOR, PRIMARILY ENGAGED IN THE DESIGN AND INSTALLATION OF FIRE PROTECTION SYSTEMS.
- C. THIS WORK INCLUDES THE COMPLETE DESIGN (DRAWINGS AND CALC) AND PROVIDING OF AN APPROVED AUTOMATIC WET PIPE SPRINKLER SYSTEM (LIGHT, ORD HAZ 1 OCCUPANCY) TO AFFORD FIRE PROTECTION COVERAGE OF THE NEW BUILDING FACILITY. THE DESIGN, EQUIPMENT, MATERIALS, INSTALLATION AND WORKMANSHIP SHALL BE IN STRICT ACCORDANCE WITH THE REQUIRED AND ADVISORY PROVISIONS OF NFPA 13, EXCEPT AS SPECIFIED OTHERWISE HEREIN. BY HYDRAULIC CALCULATIONS FOR UNIFORM DISTRIBUTION OF WATER OVER THE DESIGN AREA. THE SYSTEM SHALL INCLUDE ALL MATERIALS, ACCESSORIES AND EQUIPMENT INSIDE THE BUILDING NECESSARY TO PROVIDE THE SYSTEM COMPLETE AND READY FOR USE. THE SYSTEM SHALL BE DESIGNED AND INSTALLED TO GIVE FULL CONSIDERATION TO BUILT-IN OR BUILT-UP SPACES, PIPING, ELECTRICAL EQUIPMENT, DUCTWORK AND ALL OTHER CONSTRUCTION AND EQUIPMENT TO AFFORD COMPLETE COVERAGE AND BE FREE FROM OPERATING AND MAINTENANCE DIFFICULTIES ALL IN ACCORDANCE WITH DETAILED WORKING DRAWINGS TO BE SUBMITTED BY THE CONTRACTOR FOR REVIEW BY THE STATE INSPECTION SERVICE (IF APPLICABLE), THE ENGINEER, THE LOCAL FIRE MARSHAL AND APPROVAL BY THE LOCAL FIRE MARSHAL AND THE OWNER'S FIRE INSURANCE UNDERWRITER. LOCATE SPRINKLER HEADS IN A CONSISTENT PATTERN WITH THE CEILING, LIGHTS, AND AIR CONDITIONING GRILLES AND DIFFUSERS. DEVICES AND EQUIPMENT SHALL BE OF A MAKE AND TYPE LISTED BY THE UNDERWRITERS LABORATORIES, INC., APPROVED FOR USE IN WET PIPE SYSTEMS. IN EACH OF THE NFPA STANDARDS REFERRED TO HEREIN, THE ADVISORY PROVISIONS SHALL BE CONSIDERED TO BE MANDATORY, AS THOUGH THE WORD "SHALL" HAD BEEN SUBSTITUTED FOR "SHOULD" WHEREVER IT APPEARS; REFERENCE TO THE "AUTHORITY HAVING JURISDICTION" SHALL BE INTERPRETED TO MEAN THE STATE FIRE MARSHAL AND/OR LOCAL FIRE MARSHAL.
- D. SUBMITTALS REQUIRED: BEFORE ANY WORK IS COMMENCED, THE CONTRACTOR SHALL SUBMIT FOR REVIEW COMPLETE PDF SETS OF WORKING DRAWINGS OF THE SPRINKLER SYSTEM, AND FULL DESCRIPTIVE DATA (CATALOG CUTS) FOR PIPE, FITTINGS, O.S.&Y. VALVES, CHECK VALVES, SPRINKLER HEADS AND ESCUTCHEONS, HANGERS, ALARM DEVICES, MATERIALS, AND ASSOCIATED EQUIPMENT TO THE FIRE MARSHAL, AND THE ENGINEER OF RECORD (INCLUDING A COURTESY COPY TO THE LOCAL FIRE MARSHAL). PARTIAL SUBMISSIONS WILL NOT BE ACCEPTABLE. DESCRIPTIVE DATA SHALL BE ANNOTATED TO SHOW THE SPECIFIC MODEL, TYPE AND SIZE OF EACH ITEM THE CONTRACTOR PROPOSES TO FURNISH. THE DRAWINGS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS FOR "WORKING PLANS" AS SPECIFIED IN NFPA 13 2013, 23.1 AND SHALL INCLUDE ALL APPLICABLE DATA SPECIFIED THEREIN AND SHALL BE SUBMITTED WITH STAMP, AUTHORIZED SIGNATURE AND LICENCE NUMBER OF THE FIRE SPRINKLER CONTRACTOR LICENSED IN SOUTH CAROLINA WHO PREPARED THEM. NO WORK (EQUIPMENT ORDER, FABRICATION, OR INSTALLATION) SHALL BEGIN UNTIL THE DESIGN OF THE SYSTEM AND THE VARIOUS COMPONENTS HAVE BEEN REVIEWED BY THE ENGINEER AND APPROVED IN WRITING BY THE STATE FIRE MARSHAL. SUBMITTAL REVIEW TO LLR SHALL ALSO INCLUDE ARCHITECTURAL DRAWINGS THAT INCLUDE LIFE/SAFETY PLANS, BUILDING PLANS, BUILDING SECTIONS AND OTHER INFORMATION AS NECESSARY TO FULLY DESCRIBE THE BUILDING COMPOSITION INCLUDING DRAWINGS TO MAKE CLEAR COMBUSTIBILITY OF CONSTRUCTION AND ANY CONCEALED COMBUSTIBLE SPACES.
- E. THE FIRE PROTECTION SHOP DRAWINGS SHALL BE PREPARED BY A STATE CERTIFIED SPRINKLER SYSTEM DESIGNER OR PROFESSIONAL ENGINEER.
- F. THE COMPLETE INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH ALL STATE, LOCAL AND NATIONAL CODES AND APPLICABLE SECTIONS OF THE NATIONAL FIRE PROTECTION ASSOCIATION AND STATE BASIC BUILDING CODE STANDARDS.
- G. TESTING AND ACCEPTANCE SHALL BE PER NFPA 13 2013, 10.10. FLUSHING AND TESTING (INCLUDING UNDERGROUND FIRE SERVICE LINES) SHALL BE WITNESSED BY AN APPROVED 3RD PARTY INSPECTOR, ENGINEER OF RECORD, OR FIRE OFFICIAL. HYDROSTATIC TEST SHALL BE TESTED AT 200 PSI FOR 2 HOURS. ALL DEFECTS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE AND ADDITIONAL TESTS MADE UNTIL IT HAS BEEN DEMONSTRATED THAT THE SYSTEMS COMPLY WITH ALL CONTRACT REQUIREMENTS. ALL APPLIANCES AND EQUIPMENT FOR TESTING SHALL BE FURNISHED BY THE CONTRACTOR AND ALL EXPENSES, IN CONNECTION WITH THE TESTS, SHALL BE DEFRAYED BY HIM. WATER FOR TESTING WILL BE FURNISHED BY THE CONTRACTOR.
- H. THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC TO THE EXTENT THAT MANY OFFSETS, BENDS, SPECIAL FITTINGS AND EXACT LOCATIONS ARE NOT INDICATED.
- I. IT IS ESSENTIAL FOR THE COORDINATION OF ALL TRADES THAT THIS CONTRACTOR BE RESPONSIBLE FOR CONFIRMING THE LOCATIONS AND ELEVATIONS OF HIS PIPING AND EQUIPMENT AT THE JOB SITE, TO AVOID ENCRDACHING UPON THE SPACE NEEDED AND ALLOCATED FOR ANOTHER TRADE.
- J. DRAWINGS ARE NOT INTENDED TO BE SCALED FOR ROUGHING-IN MEASUREMENTS NOR TO SERVICE AS SHOP DRAWINGS, INSTALLATION DRAWINGS, OR SLEEVE DRAWINGS. DRAWINGS FOR THESE PURPOSES SHALL BE PREPARED BY THE SPRINKLER CONTRACTOR.
- K. MAKE HYDROSTATIC TEST ON NEW BUILDING SPRINKLER SYSTEM, 200 PSI FOR 2 HOURS.
- L. ALL DEFECTS MADE EVIDENT BY THE TESTS SHALL BE PROPERLY REPAIRED BY THE SPRINKLER CONTRACTOR. LEAKS IN OVERHEAD LINES SHALL BE REPAIRED ONLY BY MEANS OF TIGHTENING OR REPLACING THE FITTING AND NOT RESORTING TO ANY CAULKING METHOD.
- M. NEW SPRINKLER SYSTEMS INCLUDING PIPING, CONDUIT, HANGERS, MISCELLANEOUS METALWORK AND ACCESSORIES SHALL BE PAINTED. PAINT SHALL BE APPLIED ONLY TO CLEAN DRY SURFACES USING CLEAN BRUSHES. CLEAN ALL SURFACES TO REMOVE DUST, DIRT, RUST, LOOSE MIL SCALE, ETC. IMMEDIATELY AFTER CLEANING, THE METAL SURFACES SHALL RECEIVE 0.3 MIL AND ONE COAT OF ZINC CHROMATE PRIMER APPLIED TO A MINIMUM DRY THICKNESS OF 1.0 MIL. DUE CARE SHALL BE EXERCISED TO AVOID THE PAINTING OF THE SPRINKLER HEADS OR PROTECTIVE DEVICES. MATERIALS WHICH ARE USED TO PROTECT SPRINKLER HEADS, WHILE PAINTING IS IN PROCESS, SHALL BE REMOVED UPON THE COMPLETION OF PAINTING. THE CONTRACTOR SHALL REMOVE ALL SPRINKLER HEADS WHICH ARE PAINTED AND SHALL PROVIDE NEW CLEAN SPRINKLER HEADS OR THE PROPER FITTING AT THE OWNERS EXPENSE. PRIMER SURFACES SHALL RECEIVE THE FOLLOWING:
  - 1. SPRINKLER SYSTEMS UNFINISHED AREAS: UNFINISHED AREAS ARE DEFINED AS ATTIC SPACES, SPACES ABOVE SUSPENDED CEILING, PIPE CHASSES, AND SPACES WHERE WALLS OR CEILING ARE NOT PAINTED OR NOT CONSTRUCTED OF A PAINT-FINISHED MATERIAL. PIPE DOES NOT HAVE TO BE PRIMED OR PAINTED, HOWEVER, WILL REQUIRE PIPE LABELS INDICATING "FIRE SPRINKLER" NO GREATER THAN 30 FEET APART. LABELS SHALL BE THERMOFORMED VINYL WITH WHITE LETTER ON RED BACKGROUND PER ANSI A13.1 2007.
  - 2. SPRINKLER SYSTEMS IN ALL OTHER AREAS: PRIMED SURFACES SHALL RECEIVE TWO COATS OF PAINT TO MATCH ADJACENT SURFACES, EXCEPT VALVES AND OPERATING ACCESSORIES SHALL RECEIVE ONE COAT OF ENAMEL (COLOR DETERMINED BY ARCHITECT) CONFORMING TO FED. SPEC. TT-E-489 APPLIED TO A TOTAL DRY FILM THICKNESS OF ONE MIL.
- N. THE SPRINKLER CONTRACTOR SHALL PROVIDE THE OWNER WITH TWO (2) COMPLETE SETS OF PRINTED INSTRUCTIONS AND HIS DRAWINGS COVERING THE PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT FURNISHED UNDER THESE SPECIFICATIONS.
- O. GUARANTEE OF WORK UNDER THIS SECTION OF THE SPECIFICATIONS SHALL BE FOR A PERIOD OF ONE YEAR AFTER COMPLETION AND FORMAL ACCEPTANCE OF THE FIRE PROTECTION SYSTEMS.
- P. PIPE TYPE AND FITTINGS SHALL BE AS ALLOWED BY NFPA 13.
- Q. PROVIDE APPROVED QUICK RESPONSE TUBULAR SPRINKLERS WITH COVERAGE AS ALLOWED BY NFPA 13.
- R. SUPPORT ALL SPRINKLER SYSTEMS AS SPECIFIED IN NFPA 13 INSTALLATION OF SPRINKLER EQUIPMENT.
- S. REDUCERS SHALL BE ECCENTRICALLY INSTALLED IN PIPING SUCH THAT PIPING CAN BE DRAINED.
- T. USE DIELECTRIC CONNECTIONS OR ISOLATOR CONNECTIONS WHERE PIPE MATERIALS CHANGE FROM FERROUS TO NON-FERROUS.
- U. MAKE SCREWED JOINTS WITH PIPE COMPOUND APPLIED TO MALE THREADS ONLY. ALL CUT ENDS OF THE PIPE SHALL BE CAREFULLY REAMED TO FULL SIZE. U.L. APPROVED FLEXIBLE COUPLERS ARE PERMITTED ON ALL FEED MAINS.
- V. ALL PIPING AND EQUIPMENT SHALL BE FURNISHED AND INSTALLED IN A MANNER AND IN LOCATIONS AVOIDING ALL OBSTRUCTIONS AND MAINTAINING REQUIRED HEAD ROOM CLEARANCES. FIELD CHECK BEFORE STARTING ANY INSTALLATION.
- W. ROD SIZE FOR ALL HANGERS SHALL BE AS SPECIFIED IN NFPA 13.
- X. SPRINKLER HEADS SHALL BE SUPPORTED FROM STRUCTURAL MEMBERS WHEREVER POSSIBLE. ALL PIPING LOCATED BENEATH A ROOF SHALL BE SUPPORTED FROM THE ROOF TRUSSES.

Order Plans @

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**LLR Fire Sprinkler System Specification Sheet**  
(Per 240-10-250)

Project Data			
Project name: Andrews Recreation Center			
Address (street & street name):	Martin Luther King Avenue	State project:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
City:	Andrews SC 29510	County:	Georgetown
Water Supply Information			
Date test conducted:	4 / 5 / 2018	Static pressure (psi):	44
		Radiant pressure (psi):	33
		Flow (gpm):	1453
Horizontal (ft):	430	Vertical (elevation difference in ft):	5
Water supply: <input type="checkbox"/> Municipal non-wood <input checked="" type="checkbox"/> Municipal overhead <input type="checkbox"/> Other			
Pipe Size (in.): 6"			
Test Data by Firm:			
Name:	Andrews Fire Department	Telephone #:	843-264-8666
Fire pump:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Pump Capacity (gpm):	N/A
		Churn Pressure (psi):	N/A
		Rated Pressure (psi):	N/A
		Pressure @ 150% flow (psi):	N/A
On-site storage tank:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Tank capacity (gallons):	
NFPA Hazard Classification			
Area #	Class of Code Reference	Description of Hazard Protected (occupancy, equipment, process, etc.)	
1	Light Hazard	Open	
2	Light Hazard & Cell Hazard (Cp 1)	Locker Rooms / Storage	
3	Light Hazard	Casualty / Aerosols	
Design Parameters			
Area #	System Type	Design Density (gpm/ft <sup>2</sup> )	Area (sq ft)
1	Wet Pipe	10 / 2108 Sqft *	(closed ceiling)
2	Wet Pipe	10 @ 15 / 952 Sqft **	
3	Wet Pipe	10 / 1136 Sqft **	
Seismic Design Data: Se <sup>w</sup> 0.97 (Seismic Design Category: D)			
Codes and Standards			
Applicable Codes, Standards & Editions: 2016 NFPA 13			
2015 IBC			
2015 IBC			
Scope of work (such as sprinkler system A-C, from 1'-0" A.F.F., 1-ft. from top to 9'-0" outside, etc.) and notes (attach continuation page when necessary): Scope of Work is provide new wet pipe for new building facility from 5'-0" outside.			
*Area increase 30% per 11.2.3.2.4.			
**Area reduction permitted per 11.2.3.2.1.1 values using quick response sprinklers.			
Supplier's Information			
Name:	John Dedon	Engineering services provided through a firm: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Firm name:	Charleston Engineering	Address:	125 B Wappoo Creek Drive
City:	Charleston	State:	South Carolina
Zip:	29412	Phone #:	843-762-4242
Fax #:	843-762-4239	E-mail:	johnny@charlottesvilleengineering.com
		 	
Revision No. 0		Page 1 of 1	
		Signature: <i>J. Dedon</i> Date: April 6, 2018	

Georgetown County Regional Parks and Recreation Center

Owner:  
Georgetown County  
716 Prince Street  
Georgetown, SC 29442

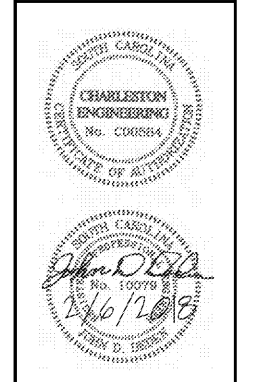
SGA ARCHITECTURE  
ARCHITECTURE ENGINEERING & INTERIOR DESIGN  
Fawcetts Island / Charleston / GREENVILLE  
8243 Ocean Hwy. / PO Box 189  
Fawcetts Island, SC 29585  
Phone: 843.237.2421 / Fax: 843.237.1992  
www.sgaarchitecture.com

Civil Consultant:  
**ETS**  
ENGINEERING AND TECHNICAL SERVICES, INC.  
CONSULTING ENGINEERS  
54 Chalmers Lane  
PO Box 1027  
Charleston, SC 29405  
Phone: (843) 237-5002 Fax: (843) 237-2289

MEP Consultant:  
**Charleston Engineering**  
125 B Wappoo Creek Dr.  
Charleston, SC 29412  
843-762-4242  
Mechanical, Heating & Electrical

Structural Consultant:  
**WEATHERLY STRUCTURAL ENGINEERS**  
1000 North Main Street, Suite 200, Charleston, SC 29403

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Date: 2/6/18  
Drawn by: SMTH  
Checked by: DEDON

Notes:  
bidding Documents  
Not for Construction

Revisions:

FIRE PROTECTION SPECS.  
**FP211**  
— of —  
Bidding Documents