

Sprinkler Design Data

Project Name: HARNETT COUNTY YMCA	System: 1
Project Street Address: 107 CARLETTA CAGLE DR. CAMERON, NC	Sys. Sq. Ft.: 40,000 +/-
Suite: n/a	Floor#: n/a
Designed By: K. Wilder	Phone: 910-892-1700
Occupancy: GYM	Hazard: LIGHT
	Total Bldg. Hgt.: 21'-0"

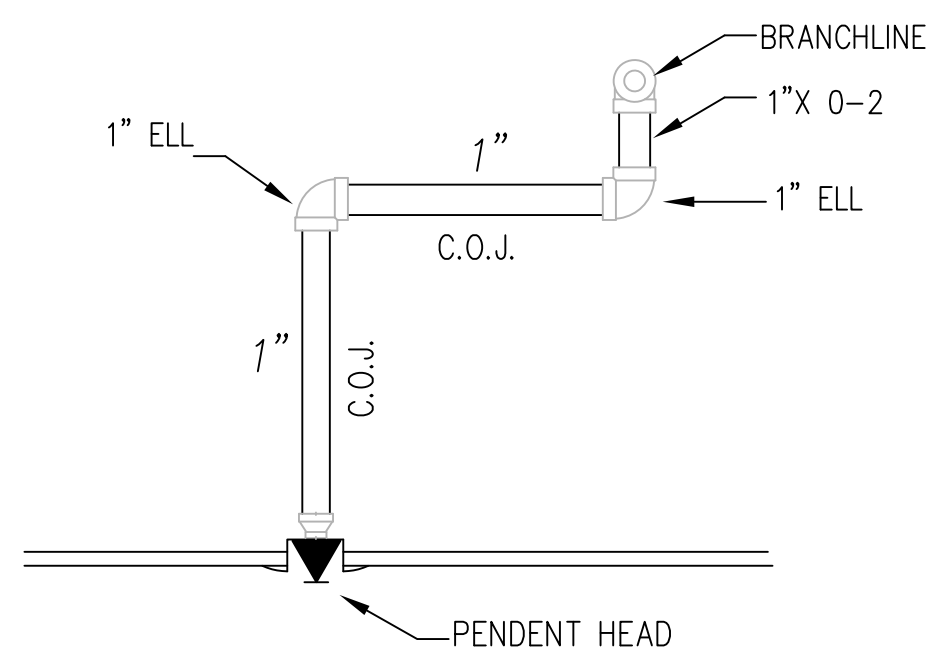
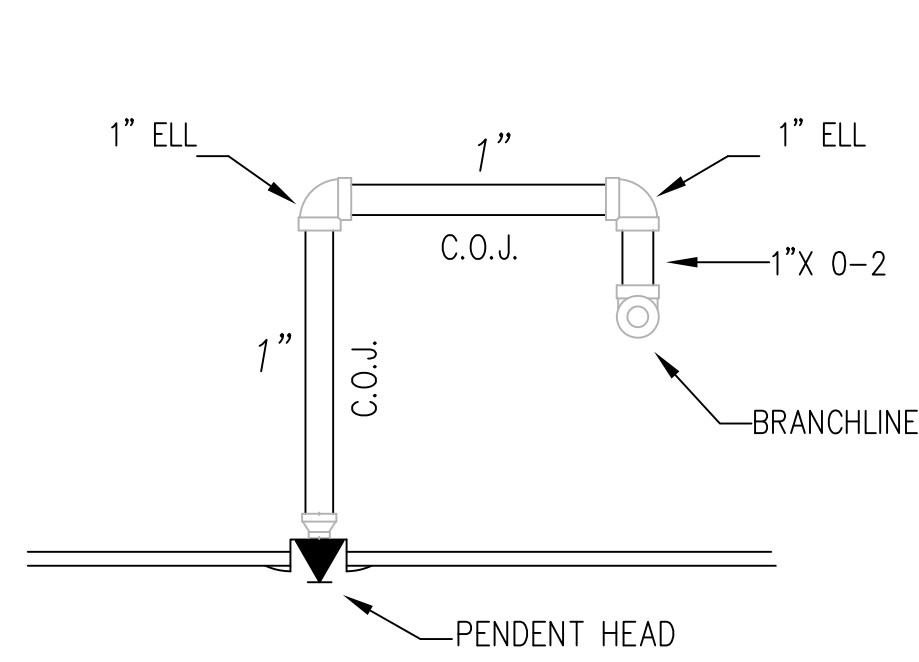
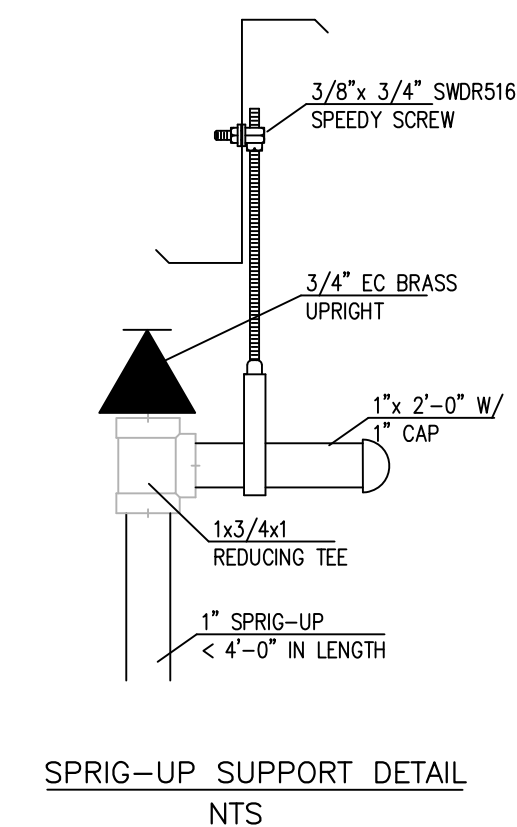
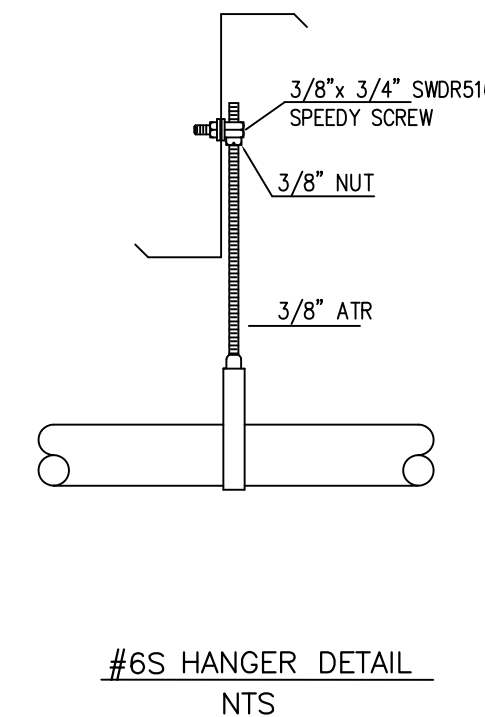
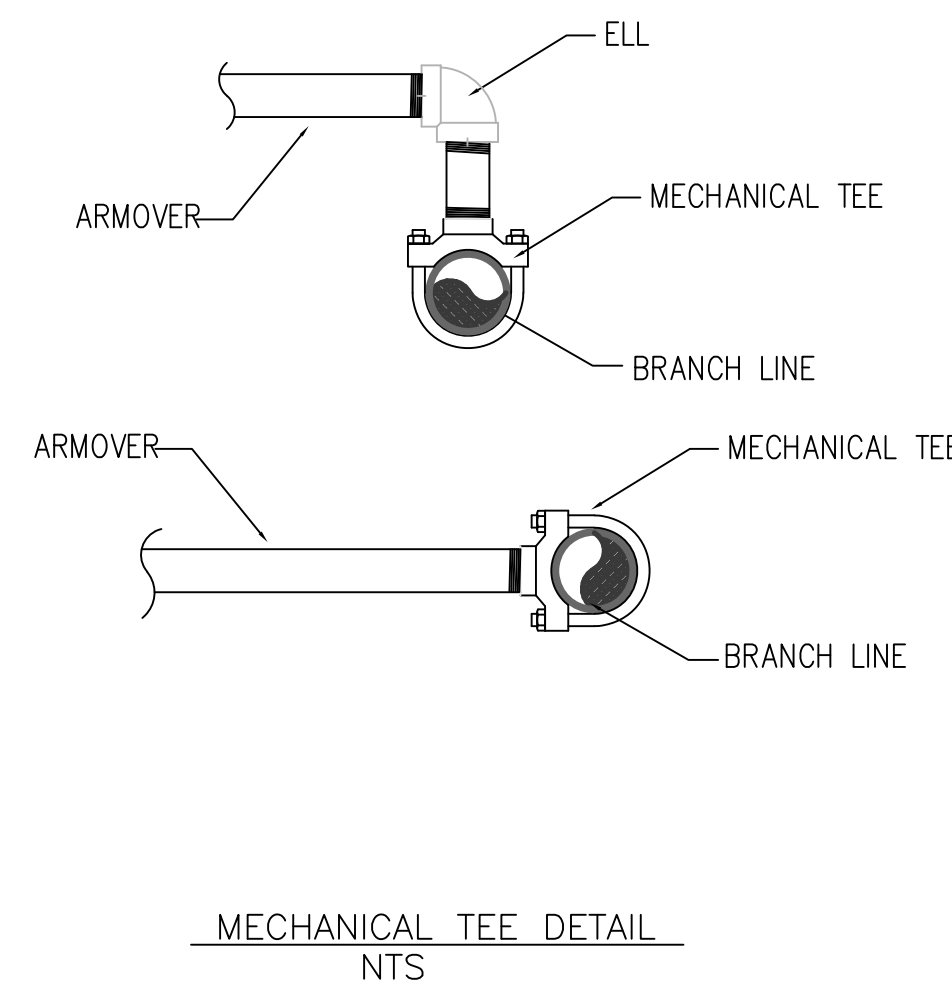
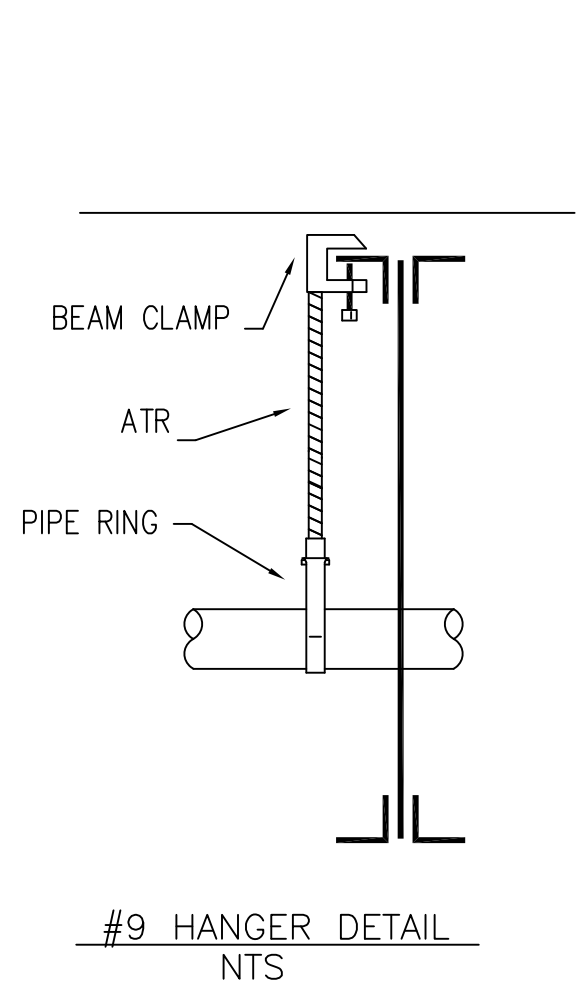
Design Summary

System #1			
Design Method	Hydraulic Calculated		
Design Area #	1		
Location	GYM		
Type of System	WET		
Hazard Class	LIGHT		
Criteria From	NFPA 13 2013 ED.		
Design Area	1573 SQ. FT.		
Sprinkler Spacing	20' X 20' Max.		
Density	40GPM @ 12.8 PSI		
K-factor	11.2		
Hose Allowance	100		
# Design Sprinklers	7		
Special Application Spk.	n/a		
Requirement	Test		
G.P.M. Req'd	402.04		
P.S.I. Req'd	42.14		
Safety Factor	Test= 25.69psi		
Dry Sys. Volume (gal)	N/A		

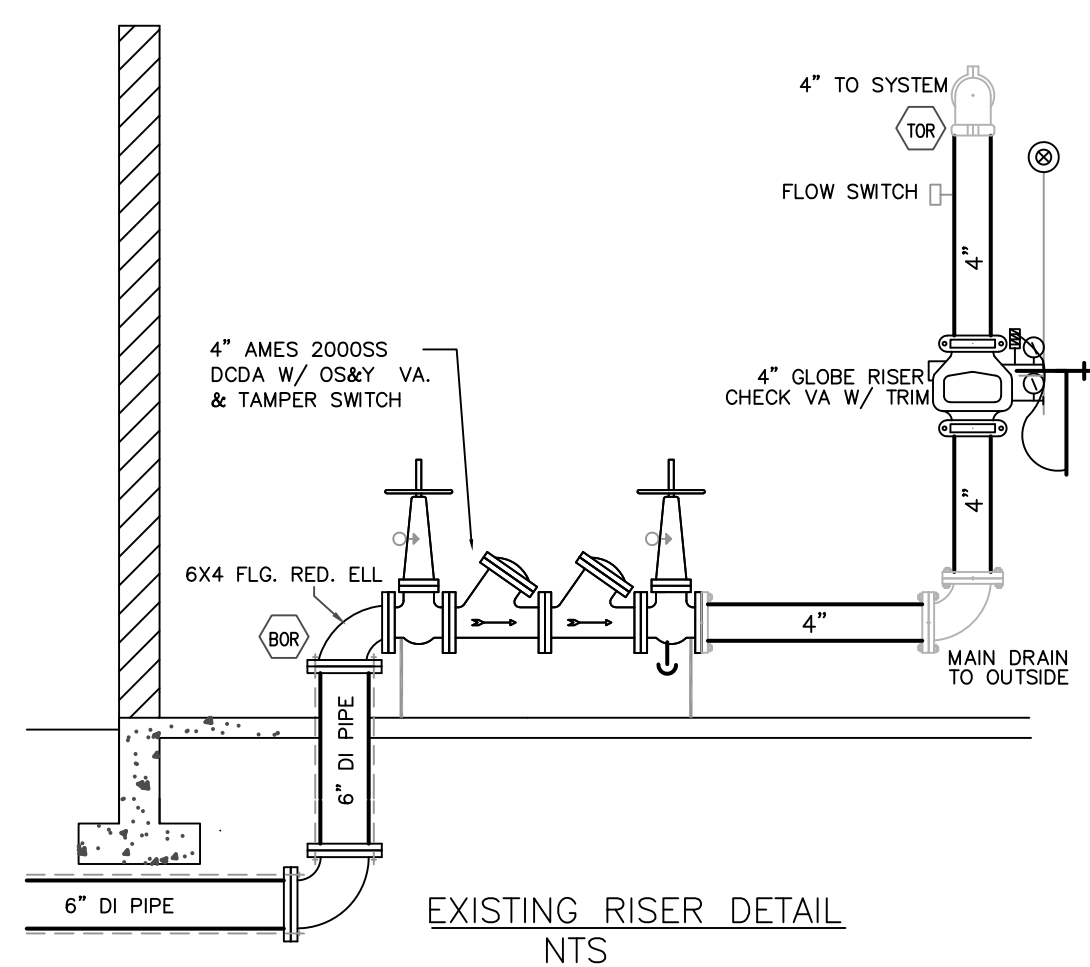
Water Supply Information

Tested by	LARRY KING & ASSOC.	Date/Time	3/26/19 2:12 pm	Pressure Hydrant	
Hydrant Elevation	371'	Flow Hydrant # 1	H.M. CAGLE DR.	Flow Hydrant #2	-
Static (PSI)	82	Residual (PSI)	32	Flow (gpm)	795

Copy of Water Test Data Included with Calculation is required



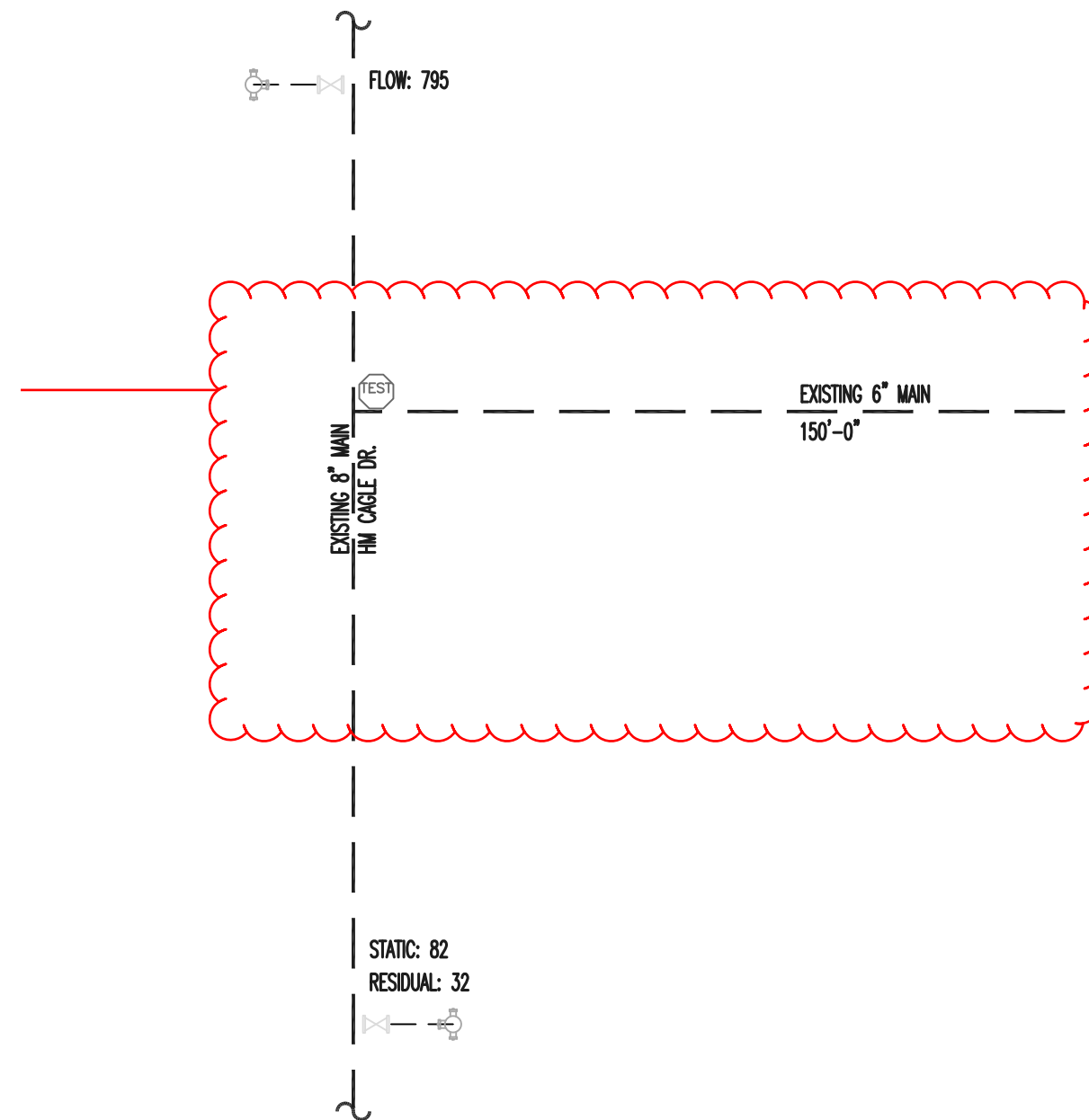
PENDENT PIPING DETAILS
NTS



SPRINKLER LEGEND

- ⊙ NEW CHROME EC PENDENT SPRINKLER(27)
- ⊗ NEW STAND SPRAY CHROME PENDENT(17)
- NEW EC BRASS UPRIGHT SPRINKLER(45)
- EXISTING GRID LINE PIPING
- EXISTING SPRINKLER MAIN PIPING
- NEW BRANCHLINE PIPE
- ⊕ NEW TEE-LOX (MECH-TEE)(25)
- HANGER
- ⊙ EXISTING EC PENDENT SPRINKLER TO REMAIN
- ⊙ EXISTING EC UPRIGHT SPRINKLER
- ⊙ RELOCATE EXISTING EC PENDENT SPRINKLER TO NEW LOCATION AS SHOWN (17)

Confirm
Diameters
existing as 8"



SITE PLAN
SCALE: NTS FOR HYD. REFERENCE ONLY

Reviewed For Code Compliance By:
D. Banks Wallace
Chief Deputy Fire Marshal
07/16/2019 2:45:52 PM

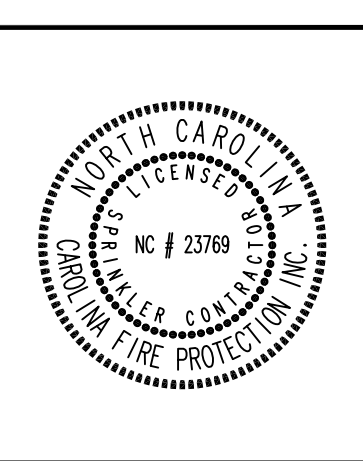
- NOTES:**
- ALL PIPE TO BE INSTALLED ACCORDING TO NFPA 13.
 - ALL PIPE TO BE SUPPORTED ACCORDING TO NFPA 13.
 - CONCEALED SPACE ABOVE CEILING TO BE NON-COMBUSTIBLE
 - RELOCATE SPRINKLERS ACCORDING TO THE DRAWING
 - ALL BREAKOVERS AND DROPS TO BE 1" SCH. 40.
 - UNSUPPORTED BREAKOVERS NOT TO EXCEED 24".
 - ALL AREAS IN WHICH PIPING IS INSTALLED SHALL BE HEATED AND MAINTAINED AT 40 F MINIMUM BY OWNER.
 - ALL FIRE PROTECTION PIPING PENETRATIONS THRU RATED WALLS SHALL BE FIRE PROOFED.
 - EXTENDED COVERAGE UPRIGHTS AND PENDENTS USED THROUGHOUT PREMISES. SPACING CALCULATED AT 20x20 FOR LIGHT HAZARD.
 - STANDARD SPRAY SPRINKLER UTILIZED IN SMALL ROOMS OR AREAS CREATED BY NEW WALLS.
 - HEADS DO NOT HAVE TO BE CENTER OF TILE.

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.

CONTRACT RESPONSIBILITIES	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	ABBREVIATIONS
⊙ GATE VALVE(SEE NOTES)	EBE Bottom of Beam
⊙ FIRE HOSE ASSEMBLY	EBD Bottom of Deck
⊙ WATER MOTOR GONG (W.M.G.)	EBP Bottom of Pipe
⊙ FLOW SWITCH (FS)	EV Valve
⊙ HYDRAULIC REF. POINT	EV-1 Fire Dept Conn. (FLUSH)
⊙ MONITOR SWITCH	EV-2 Fire Dept Conn. (SIDEWALK)
⊙ LINE DESIGNATION	EV-3 Nipple and Cap
⊙ BUTTERFLY VALVE	EV-4 Not to Scale
⊙ ALARM VALVE (ALV)	EV-5 Open End Joint
⊙ DRY PIPE VALVE	EV-6 Pressure Red. Valve
⊙ WAFER CHECK VALVE	EV-7 Road Manifold
⊙ SWING CHECK VALVE	EV-8 Standpipe
⊙ FIRE HYDRANT (3 WAY)	EV-9 Top of Beam
⊙ THRUST BLOCK	EV-10 Top of Pipe
⊙ INSPECTOR'S TEST	EV-11 Top of Steel
⊙ 2&4 WAY SEISMIC BRACING	EV-12 Unless Noted Otherwise
⊙ ELEVATION CHANGE IN PIPE (NOT THROUGH FLOOR)	
⊙ GLOBE VALVE	
⊙ ANGLE VALVE	

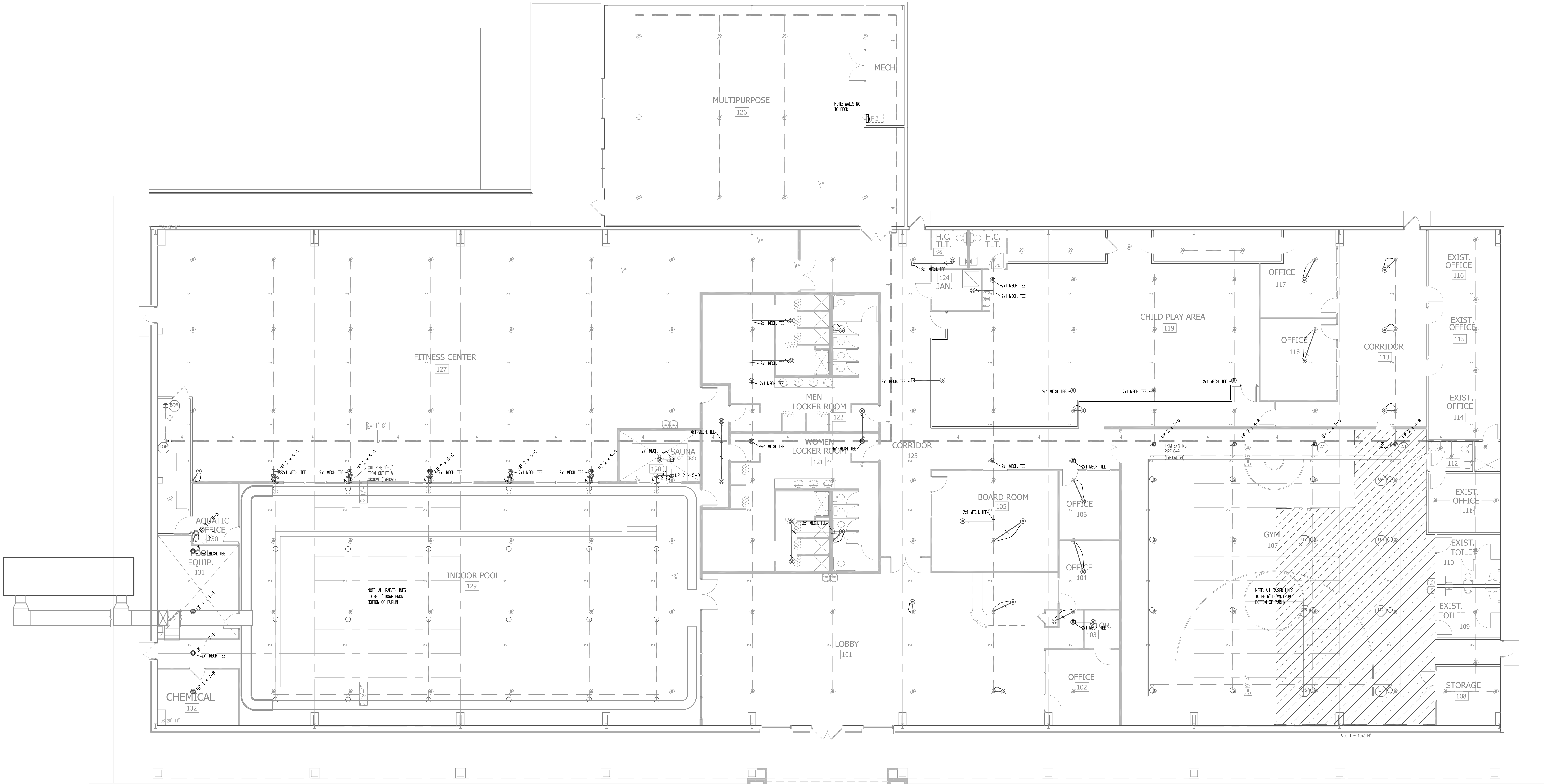
SYSTEM TYPE	APPROVALS
WET <input checked="" type="checkbox"/> DELUGE <input type="checkbox"/>	<input type="checkbox"/> ISO OUT IN
DRY <input type="checkbox"/> PREACTION <input type="checkbox"/>	<input type="checkbox"/> IRI OUT IN
	<input type="checkbox"/> FM OUT IN
	<input type="checkbox"/> OUT IN



SPRINKLER SYMBOL DESCRIPTION						
SYMBOL	SIZE	MODEL	MAKE	SIN	FINISH	STYLE
○	3/4	QR	VIKING	VK593	BRASS	UPRIGHT
⊙	3/4	QR	VIKING	VK608	CHROME	RECESSED EXTENDED COVERAGE PENDENT
⊗	1/2	QR	RELIABLE	RA1414	CHROME	RECESSED STANDARD SPRAY PENDENT
TOTAL SPRINKLERS SHOWN ON THIS SHEET						
TOTAL SPRINKLERS REQUIRED ON THIS CONTRACT						

CAROLINA FIRE PROTECTION
4055 HODGES CHAPEL ROAD
Dunn, N.C. 28334
Phone (910) 892-1700
Fax (910) 892-7322

CONTRACT NAME: HARNETT COUNTY YMCA 107 CARLETTA CAGLE DR. CAMERON, NC	CHECKED BY: M:FORD DATE: 6-5-19
CONTRACT WITH: -	SCALE: AS SHOWN
DESCRIPTION: SYSTEM DESIGN DATA	CONTRACT NO.: 19E384
DESIGNER: SYSTEM DESIGN DATA	DRAWN BY: KJW
DATE OF APPLICATION: DESIGN DATA DENSITY: - SQ. FT. - COVERAGE: - SQ. FT./HEAD	DRAWING NO.: FP 1 of 3
PIPE OF APPLICATION: RISK OF APPLICATION: - SQ. FT. - ALLOWANCES: - GPM	
DESIGN SYSTEM REQUIREMENTS: WATER SUPPLY STATIC PRESSURE: - PSI. RESIDUAL PRESSURE: - PSI. W/ - GPM FLOWING	
REMARKS: SEE HYDRAULIC DATA BOX	



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

NO.	DATE	BY	REVISIONS - SEE FLAGGED AREA ON PLAN

SPRINKLER SYMBOL DESCRIPTION							
SYMBOL	SIZE	MODEL	MAKE	SIN	FINISH	STYLE	TOTAL
○	3/4	QR	VIKING	VK593	BRASS	UPRIGHT	45
⊙	3/4	QR	VIKING	VK608	CHROME	RECESSED EXTENDED COVERAGE PENDENT	27
⊗	1/2	QR	RELIABLE	RA1414	CHROME	RECESSED STANDARD SPRAY PENDENT	17
TOTAL SPRINKLERS SHOWN ON THIS SHEET							89
TOTAL SPRINKLERS REQUIRED ON THIS CONTRACT							89

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Dunn, N.C. 28334
Phone (910) 892-1700
Fax (910) 892-7322

CONTRACT NAME: HARNETT COUNTY YMA 107 CARLETTA CAGLE DR. CAMERON, NC		CHECKED BY: M:FORD
CONTRACT WITH: -		DATE: 6-5-19
DESCRIPTION: PIPING PLAN		SCALE: AS SHOWN
SYSTEM DESIGN DATA		CONTRACT NO.: 19E384
DESIGNER:	SYSTEM AREA: - SQ. FT.	DRAWN BY: KJW
DESIGN DENSITY: - GPM/100 FT.	COVERAGE: - SQ. FT./HEAD	DRAWING NO. FP 2 of 3
AREA OF APPLICATION: - SQ. FT.	ALLOWANCES: - GPM	
DESIGN PRESSURE: - PSI	PSI AT: -	
WATER SUPPLY STATIC PRESSURE: - PSI	PSI AT: -	
SEE HYDRAULIC DATA BOX		

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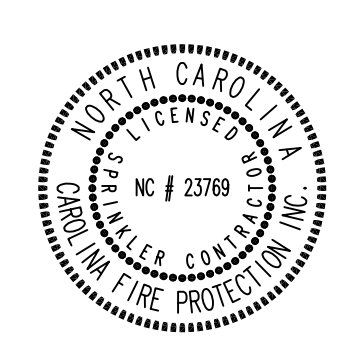
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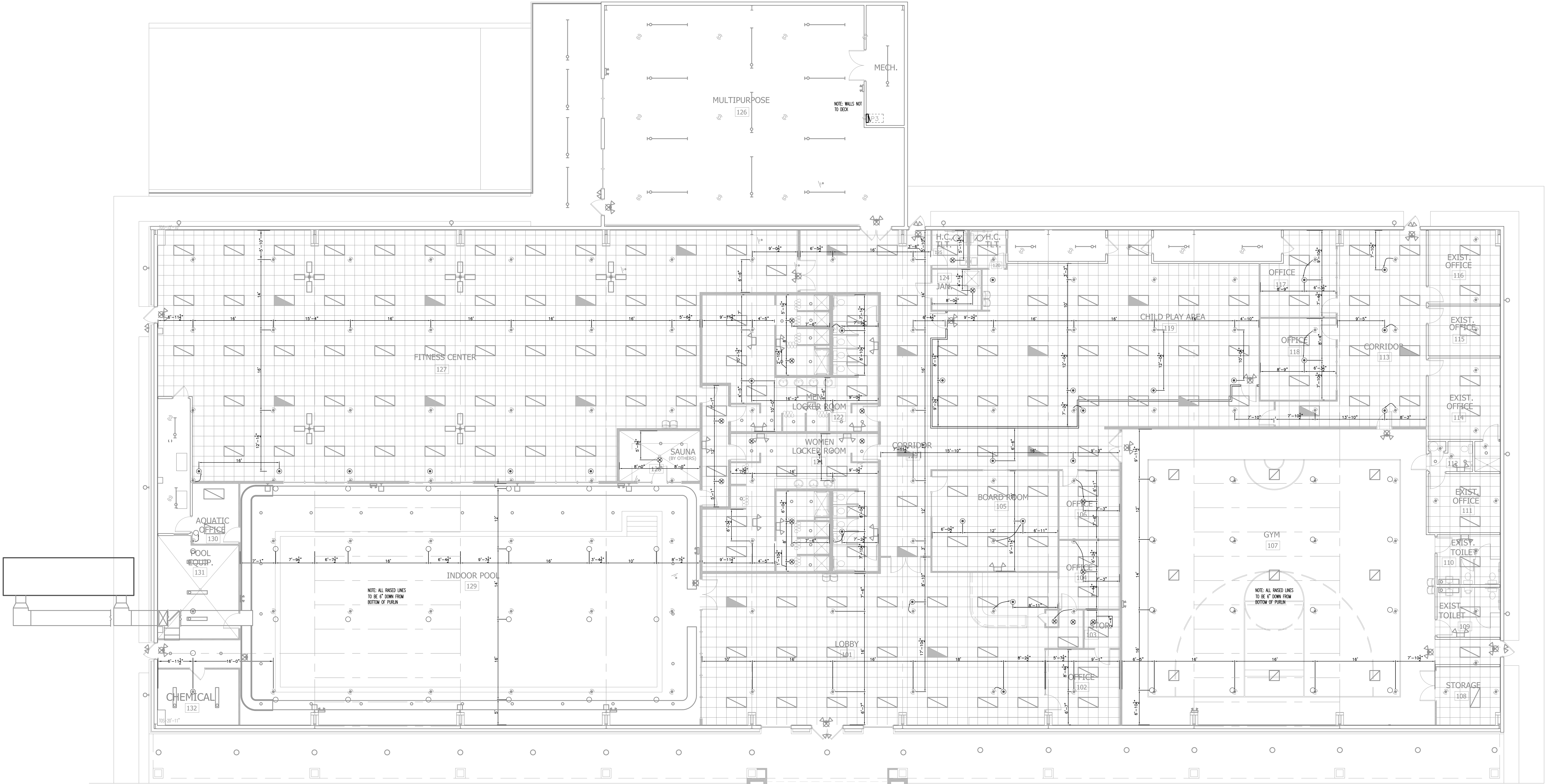
CONTRACT RESPONSIBILITIES	
ITEM	C.F.P. / OTHERS
STREET WATER CONNECTION	N/A
UNDERGROUND WATER MAINS	N/A
EXCAVATIONS	N/A
BACKFILL	N/A
WIRING	N/A
PAINTING	N/A

SYMBOLS	
○	CEILING HT. ABOVE REF.
○	C/L OF PIPE ABOVE REF.
○	C/L OF PIPE BELOW REF.
○	HYDRAULIC REF. POINT
○	LINE DESIGNATION
A 1	MAIN DESIGNATION
H	HANGER
U	UNION
GC	GROOVED COUPLING (GC)
S	SCREWED CAP
G	GROOVED CAP
P	SCREWED PLUG
F	FLANGED CONNECTION
⊕	GATE VALVE (SEE NOTES)
⊕	FIRE HOSE ASSEMBLY
⊕	MONITOR SWITCH
⊕	BUTTERFLY VALVE
⊕	ALARM VALVE (ALV)
⊕	DRY PIPE VALVE
⊕	WAFER CHECK VALVE
⊕	SWING CHECK VALVE
⊕	INSPECTOR'S TEST
⊕	GLOBE VALVE
⊕	ANGLE VALVE
⊕	ELECTRIC BELL
⊕	WATER MOTOR GONG (W.M.G.)
⊕	FIRE DEPT. COIN (STANDARD)
⊕	FIRE DEPT. COIN (FLUSH)
⊕	FIRE DEPT. COIN (SIDEWALK)
⊕	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	
BOP	Bottom of Beam
BOP	Bottom of Deck
DO	Drill
IV	Iron Valve
N	Nipple and Cap
NC	Not in Contract
NTS	Not to Scale
OB	Open Box Joint
PRV	Pressure Red. Valve
RM	Road Manifold
SP	Strapping
TOP	Top of Beam
TOP	Top of Pipe
UNC	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





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

NO.	DATE	BY	REVISIONS - SEE FLAGGED AREA ON PLAN

SPRINKLER SYMBOL DESCRIPTION									
SYMBOL	SIZE	MODEL	MAKE	SIN	FINISH	STYLE	TEMP	K-FACTOR	TOTAL
○	3/4	QR	VIKING	VK593	BRASS	UPRIGHT	155°	11.2	45
⊙	3/4	QR	VIKING	VK608	CHROME	RECESSED EXTENDED COVERAGE PENDENT	155°	11.2	27
⊗	1/2	QR	RELIABLE	RA1414	CHROME	RECESSED STANDARD SPRAY PENDENT	155°	5.6	17
TOTAL SPRINKLERS SHOWN ON THIS SHEET									89
TOTAL SPRINKLERS REQUIRED ON THIS CONTRACT									89

CAROLINA FIRE PROTECTION
4055 HODGES CHAPEL ROAD
Dunn, N.C. 28334
Phone (910) 892-1700
Fax (910) 892-7322

CONTRACT NAME: **HARNETT COUNTY YMA**
107 CARLETTA CAGLE DR.
CAMERON, NC

CONTRACT WITH: _____

DESCRIPTION: **CEILING PLAN**

SYSTEM DESIGN DATA

DESIGN CLASSIFICATION:	—	SYSTEM AREA:	—	SQ. FT.
DESIGN DENSITY:	—	COVERAGE:	—	SQ. FT./HEAD
RISK OF APPLICATION:	—	TYPE:	—	ALLOWANCES:
DESIGN SYSTEM:	—	GM. AT:	—	GM.
WATER SUPPLY:	—	PSI. RESIDUAL PRESSURE:	—	PSI. AT:
WATER SUPPLY:	—	PSI. RESIDUAL PRESSURE:	—	PSI. AT:
WATER SUPPLY:	—	PSI. RESIDUAL PRESSURE:	—	PSI. AT:

SEE HYDRAULIC DATA BOX

CHECKED BY: **M:FORD**
DATE: **6-5-19**
SCALE: **AS SHOWN**
CONTRACT NO.: **19E384**
DRAWN BY: **KJW**
DRAWING NO.: **FP 3 of 3**

IMPORTANT
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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 ABOVE BOB
⊙	C/L OF PIPE BELOW BOB
⊗	HYDRAULIC REF. POINT
—	LINE DESIGNATION
A1	MAIN DESIGNATION
—	HANGER
—	UNION
—	GROOVED COUPLING (GC)
—	SCREWED CAP
—	GROOVED CAP
—	SCREWED PLUG
—	FLANGED CONNECTION
⊕	GATE VALVE (SEE NOTES)
⊕	FIRE HOSE ASSEMBLY
⊕	MONITOR SWITCH
⊕	BUTTERFLY VALVE
⊕	ALARM VALVE (ALV)
⊕	DRY PIPE VALVE
⊕	WAFER CHECK VALVE
⊕	INSPECTOR'S TEST
⊕	GLOBE VALVE
⊕	ANGLE VALVE
⊕	ELECTRIC BELL
⊕	WATER MOTOR GONG (WVG)
⊕	FIRE DEPT. COIN. (STANDARD)
⊕	FIRE DEPT. COIN. (FLUSH)
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⊕	POST INDICATOR VALVE (PIV)
⊕	KEY GATE SECTIONAL VALVE
⊕	FIRE HYDRANT (3 WAY)
⊕	THRUST BLOCK
⊕	2&4 WAY SEISMIC BRACING
⊕	ELEVATION CHANGE IN PIPE (NOT THROUGH FLOOR)

ABBREVIATIONS	
BOB	Bottom of Beam
BOB	Bottom of Deck
BOB	Bottom of Pipe
BOB	Bottom of Slab
BOB	Bottom of Wall
BOB	Bottom of Window
BOB	Bottom of Ceiling
BOB	Bottom of Floor
BOB	Bottom of Foundation
BOB	Bottom of Structure
BOB	Bottom of Wall
BOB	Bottom of Window
BOB	Bottom of Ceiling
BOB	Bottom of Floor
BOB	Bottom of Foundation
BOB	Bottom of Structure

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

