

HYDRAULIC CALCULATION NODES

- BUTTERFLY VALVE WITH INTEGRAL TAMPER SWITCH AND POSITION INDICATOR
- O.S.Y. GATE VALVE
- O.S.Y. GATE VALVE WITH TAMPER SWITCH-LINE SIZE
- CONNECT NEW TO EXISTING
- ALARM VALVE
- DRY PIPE VALVE
- FIRE HYDRANT
- FIRE DEPARTMENT CONNECTION
- W.M.G.
- A.F.C.
- A.F.F.
- A.F.G.
- B.F.C.
- B.F.F.
- B.F.G.
- C.
- D.I.
- F.H.C.
- O.S.&Y.
- P.I.V.
- U.N.O.
- F.S.

SPRINKLER SCHEDULE

SYMBOL	THREAD	DESCRIPTION	TEMPERATURE	ORIFICE	K
○	0"	PENDENT	165°F	0"	5.6
○	0"	BRASS UPRIGHT	165°F	0"	5.6
▽	0"	SIDEWALL	165°F	0"	5.6

SPRINKLER NOTES

- HOSE THREADS TO MATCH CITY OF WILMINGTON FIRE DEPARTMENT SPECIFICATIONS OR REQUIREMENTS.
- POUR 1 CUBIC YARD MINIMUM CONCRETE THRUST BLOCKING SET IN UNDISTURBED EARTH AT EACH PIPE ELBOW BELOW GRADE, FOR PIPES 4" & LARGER.
- WET TAP EXISTING WATER MAIN FOR NEW CONNECTIONS.
- ALL DAY SYSTEM PIPING MUST BE GALVANIZED.
- ALL INDOOR CONTROL VALVES 2" THROUGH 8" ARE TO BE THE BUTTERFLY TYPE.
- REFER TO DRAWINGS FP-1 & FP-2 FOR DETAILS PERTAINING TO PIPE PENETRATIONS OF RATED ASSEMBLIES.

SPRINKLER SYSTEM DATA

WET PIPE SYSTEM

AREA A: 2nd FLOOR SPRINKLER
ORDINARY HAZARD GROUP 3
AREA CALCULATED.....3097 S.F.
NO. SPRINKLERS.....26
MINIMUM DENSITY.....0.17 G.P.M./S.F.
PRESSURE REQUIRED AT NODE 0.....21.05 P.S.I.
PRESSURE AVAILABLE AT NODE 0.....58.28 P.S.I.
OUTSIDE FIRE HOSE FLOW.....400 G.P.M. AT NODE 30
INSIDE FIRE HOSE FLOW.....100 G.P.M. AT NODE 55
TOTAL SPRINKLER FLOW.....561.54 G.P.M.
TOTAL WATER FLOW.....1061.54 G.P.M.

DRY PIPE SYSTEM

AREA B: ATTIC SPRINKLER
ORDINARY HAZARD GROUP 3
AREA CALCULATED.....3087 S.F.
NO. SPRINKLERS.....21
MINIMUM DENSITY.....0.17 G.P.M./S.F.
PRESSURE REQUIRED AT NODE 0.....33.07 P.S.I.
PRESSURE AVAILABLE AT NODE 0.....37.75 P.S.I.
OUTSIDE FIRE HOSE FLOW.....400 G.P.M. AT NODE 30
INSIDE FIRE HOSE FLOW.....100 G.P.M. AT NODE 55
TOTAL SPRINKLER FLOW.....577.81 G.P.M.
TOTAL WATER FLOW.....1077.81 G.P.M.

FIRE PUMP

RATED CAPACITY.....500 G.P.M.
RATED PRESSURE.....70 P.S.I.

WATER FLOW TEST

STATIC PRESSURE.....55 P.S.I.G.
RESIDUAL PRESSURE.....40 P.S.I.G.
FLOW.....349 G.P.M.
LOCATION.....HYDRANTS C2 & C3
ELEVATION.....41.5 FT.
TEST DATE.....12 MAY 1994

LEGEND

- ALARM CHECK VALVE
- RETARDING CHAMBER
- WATER MOTOR ALARM BELL
- RESTRICTED VENT
- AUTOMATIC DRIP
- DRIP CUP
- ALARM TEST VALVE (NORMALLY CLOSED)
- ALARM SHUT-OFF VALVE & CHECK VALVE (NORMALLY OPENED)
- WATER PRESSURE GAUGE
- MAIN DRAIN VALVE - 8" MINIMUM FOR RISERS UP TO 2" 10" MINIMUM FOR 20" & 3" RISERS 2" FOR RISERS 4" & LARGER
- PIPE TO FLOOR DRAIN
- ALARM RELAY
- ALARM VALVE STRAINER
- FLOW SWITCH

SP1 02 SPRINKLER ALARM VALVE DETAIL NO SCALE

KEY PLAN

SP1 01 SPRINKLER SITE PLAN SCALE: 1" = 40'-0"

DRAWING REVISIONS:

NO.	DATE	REMARKS

DATE: 16 MAY 1994
PROJECT#: 9305

DESIGNED BY: DLH
DRAWN BY: RDH II
CHECKED BY: WMP
CHECKED BY: REM

BUTTLOR, MORGAN & ASSOC., INC.
CONSULTING ENGINEERS
1115 LAW WHEELER ROAD
RALEIGH, N.C. 27603
(919) 853-1627

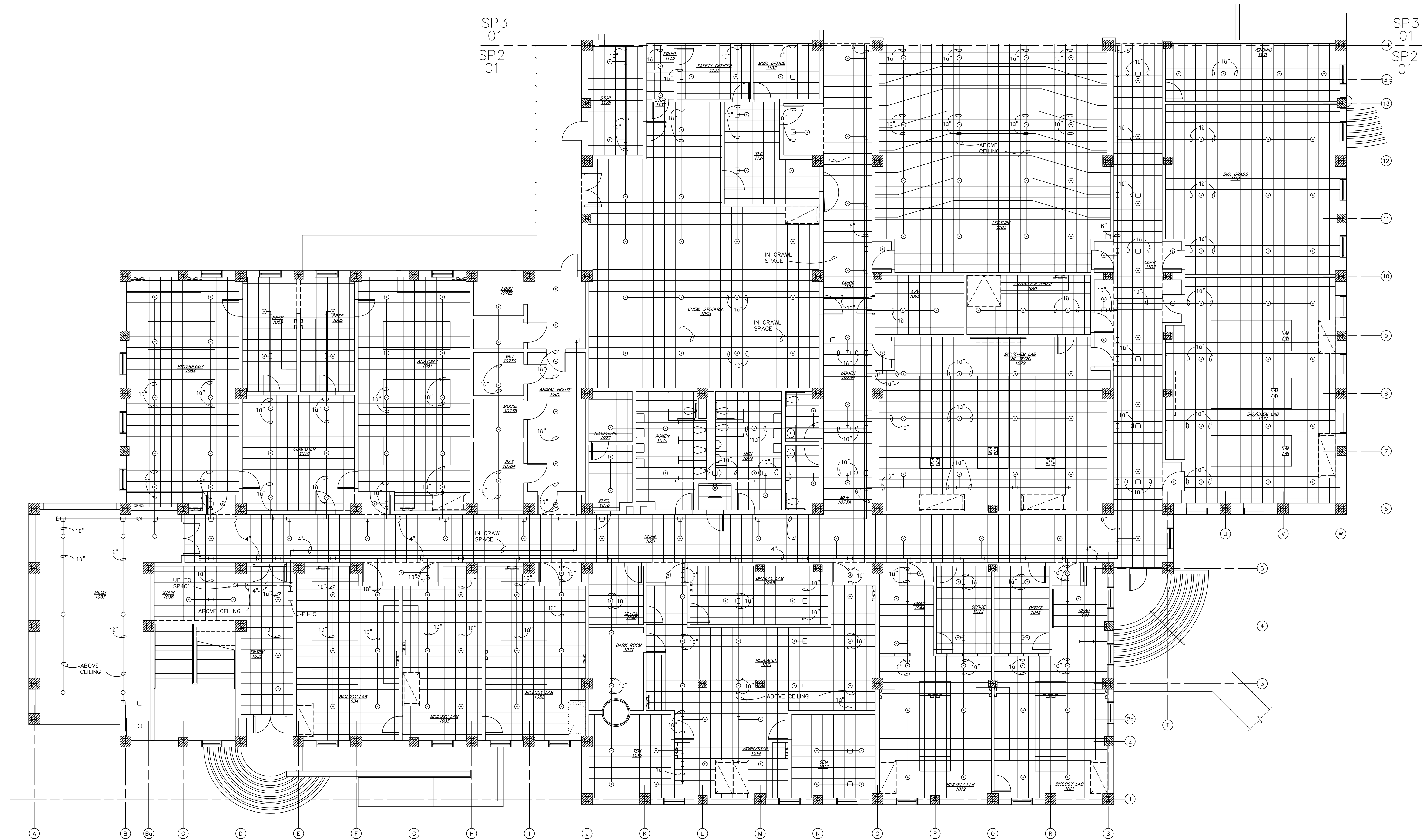
SEAL 3494
NORTH CAROLINA PROFESSIONAL ENGINEER
PAUL E. MORGAN

JEFFERIES AND FARIS ASSOCIATES
ARCHITECTS • PLANNERS
SEA TOWERS, SUITE 201
2002 EASTWOOD ROAD
WILMINGTON, N.C. 28403
TEL: 910.256.6633
FAX: 910.256.9088

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UNIVERSITY OF NORTH CAROLINA AT WILMINGTON
CODE 49388 ITEM 301 ID#6089280301A

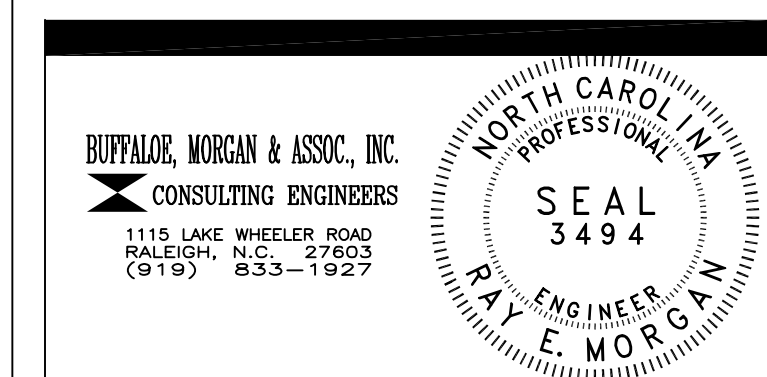
SHEET TITLE:
FIRST FLOOR WEST - SPRINKLER DETAILS

SHEET NO.:
SP1
OF 7



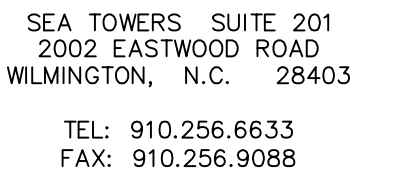
NOTE: ALL BRANCH LINES 1" U.N.O.

SP2
01
FIRST FLOOR - WEST - SPRINKLER
FLOOR PLAN
SCALE: 1/8" = 1'-0"



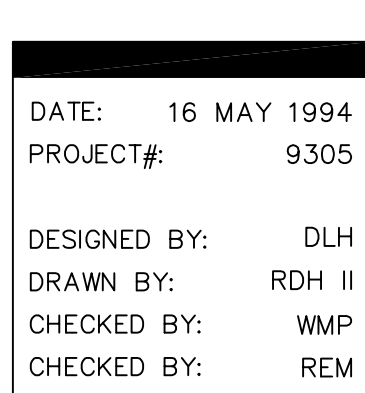
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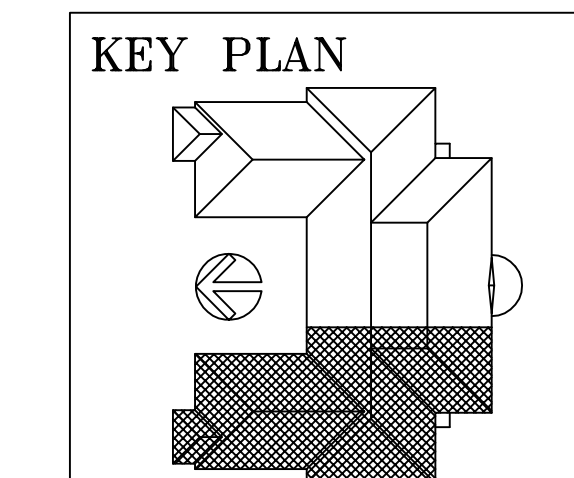
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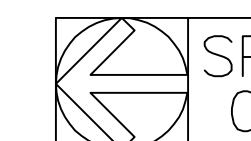
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FIRST FLOOR EAST - SPRINKLER DETAILS

SP3
7




NOTE: ALL BRANCH LINES 1" U.N.O.



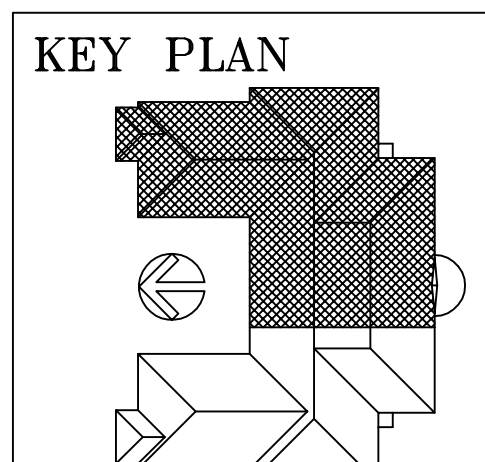
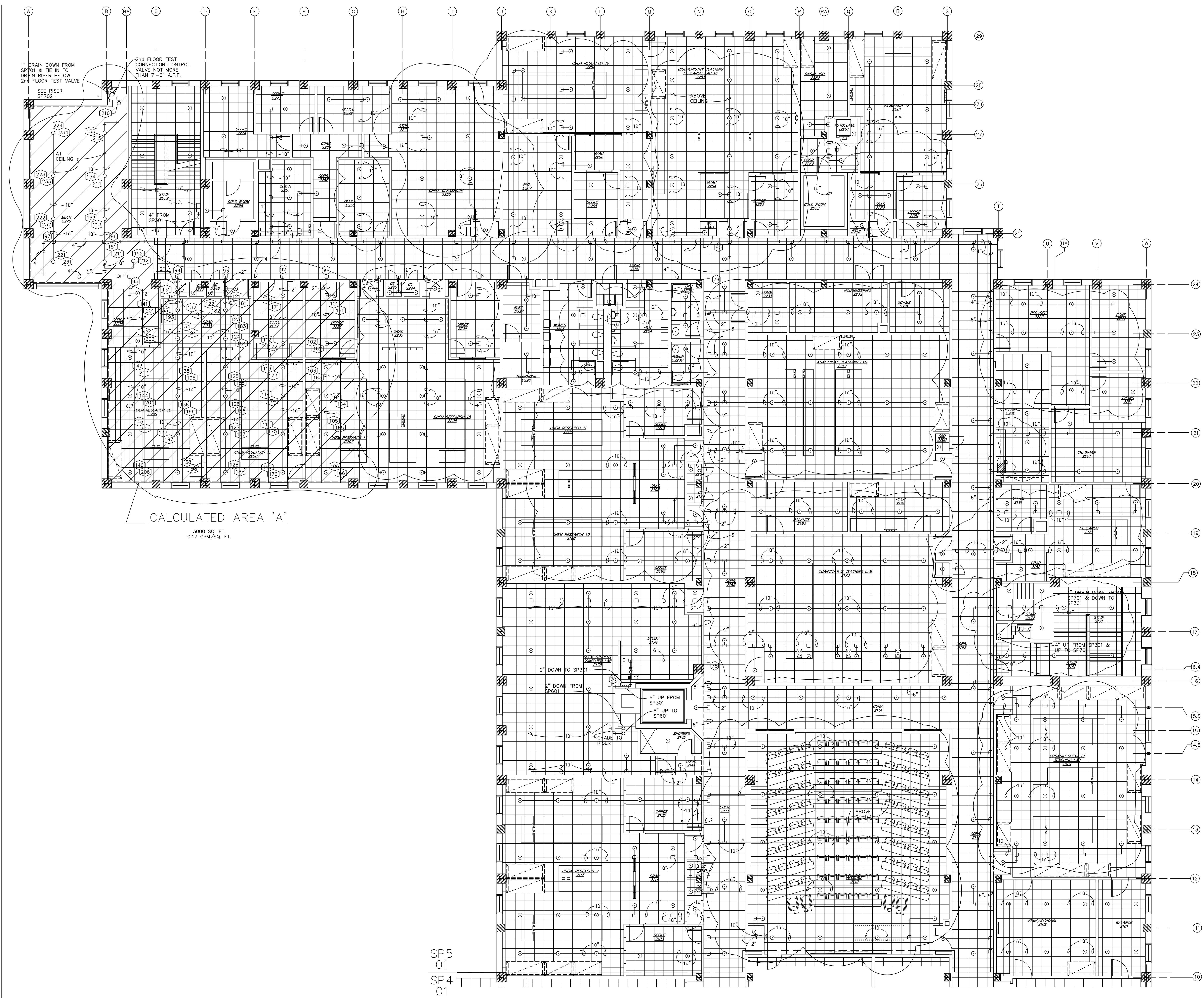
4 SECOND FLOOR - WEST - SPRINKLER
01 FLOOR PLAN
SCALE: 1/8" = 1'-0"

DRAWING REVISIONS:		
NO.	DATE:	REMARKS:

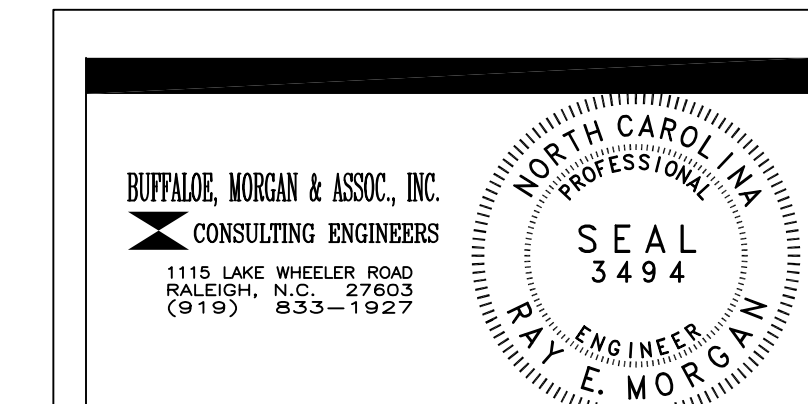
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 CONSULTING ENGINEERS
 1115 LAKE WHEELER ROAD
 RALEIGH, N.C. 27603
 (919) 853-1927

NORTH CAROLINA
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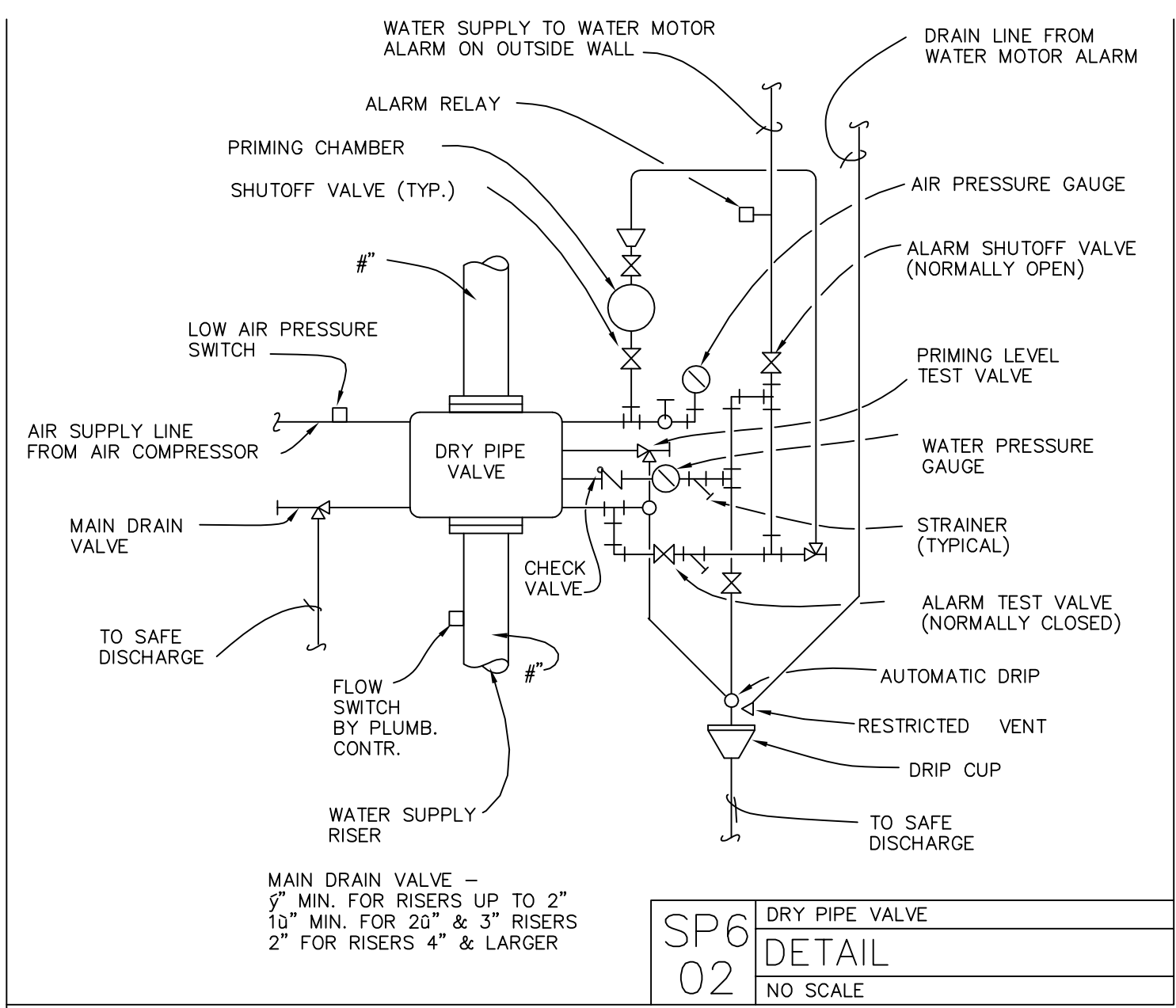


SP5
01
SECOND FLOOR - EAST - SPRINKLER
FLOOR PLAN
SCALE: 1/8" = 1'-0"

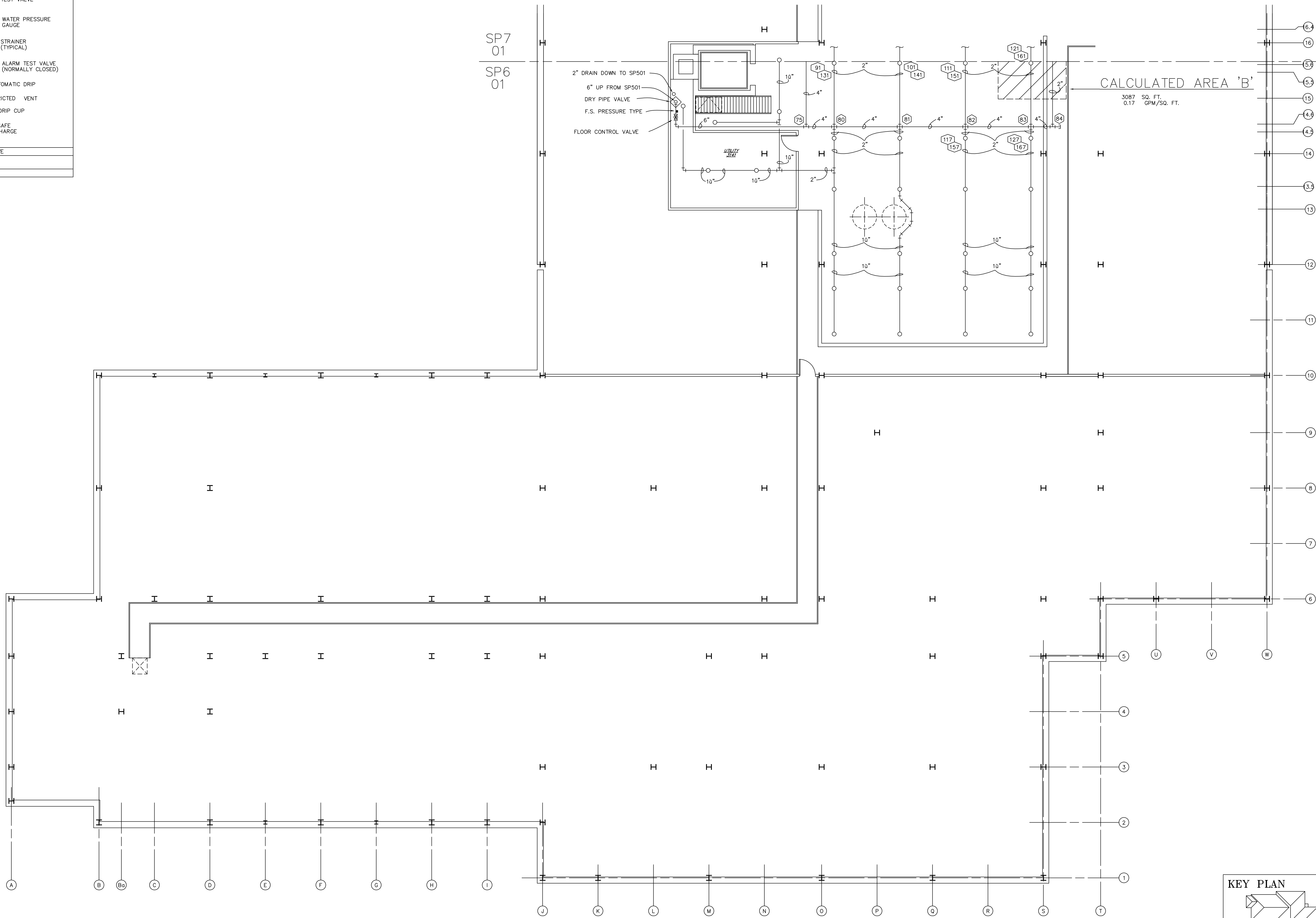


DRAWING REVISIONS:		
NO.	DATE:	REMARKS:
2/8/95		SPRINKLER HEADS ADDED
2/20/95		SPRINKLER HEADS ADDED
2/23/95		PIPING REVISIONS

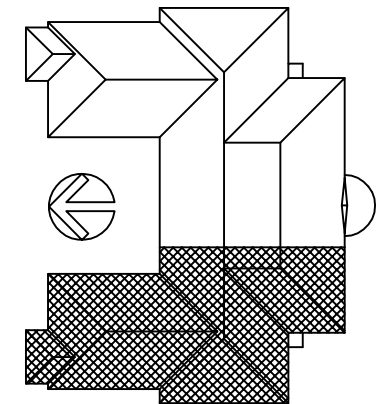
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SP6
02
DETAIL
NO SCALE



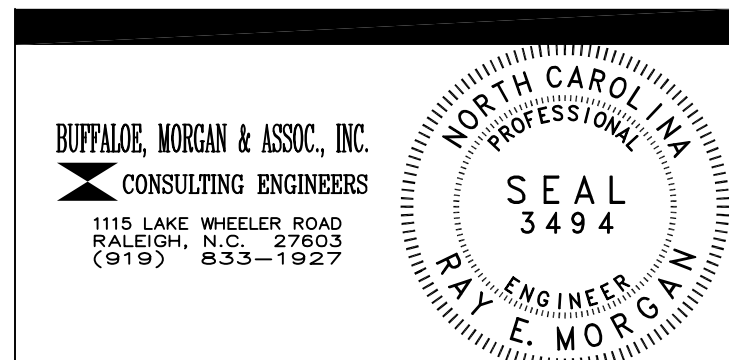
KEY PLAN



SP6
01
FLOOR PLAN

ATTIC - WEST - SPRINKLER
FLOOR PLAN
SCALE: 1/8" = 1'-0"

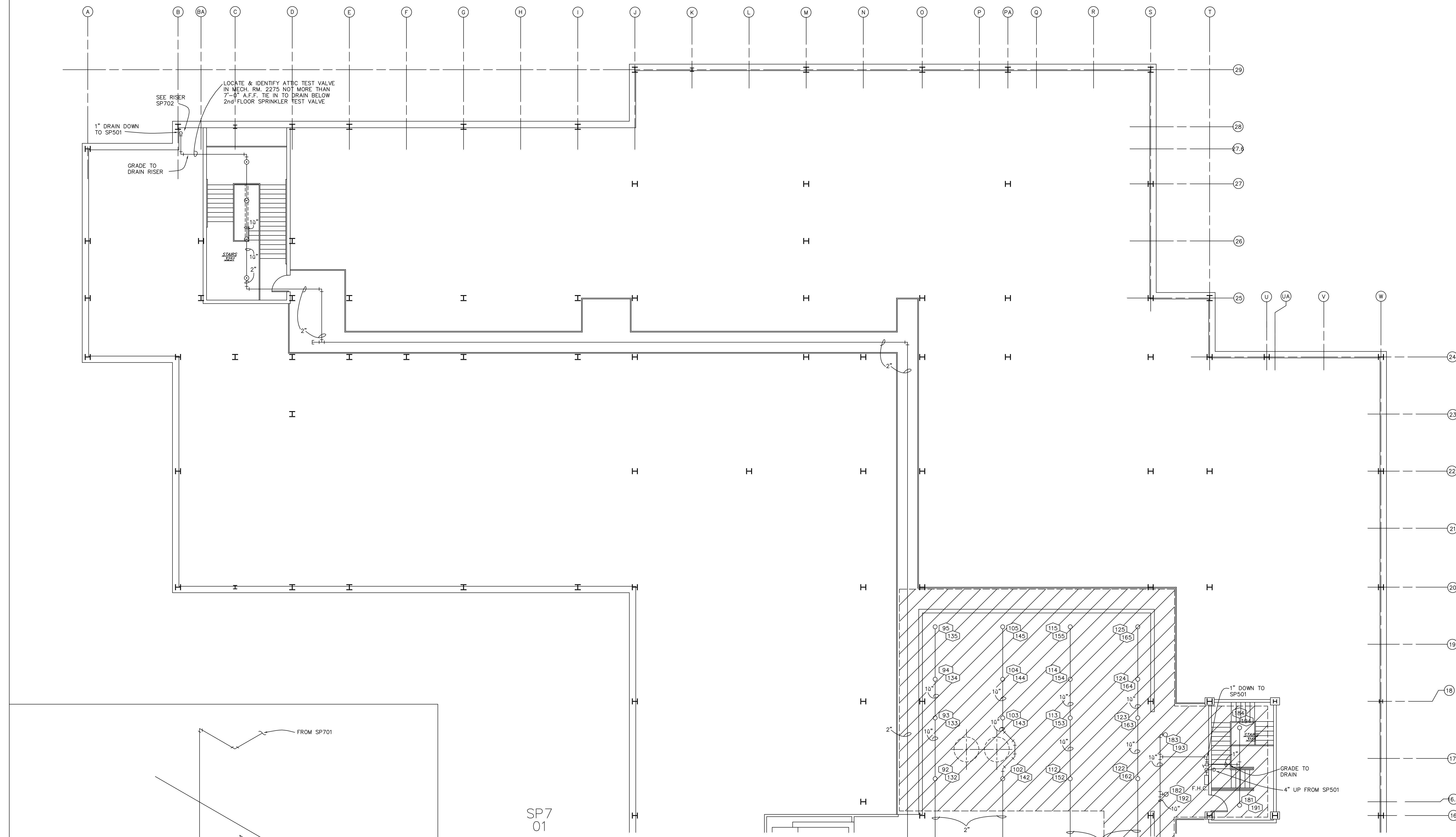
NOTE: ALL BRANCH LINES 1" U.N.O.



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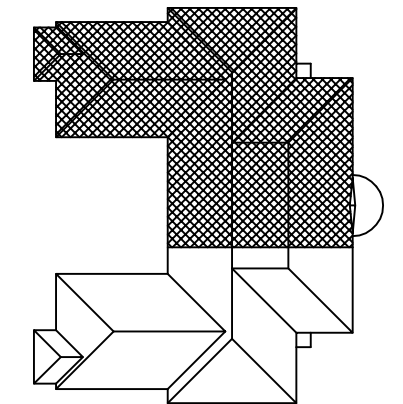
SHEET NO.:
SP6
OF 7



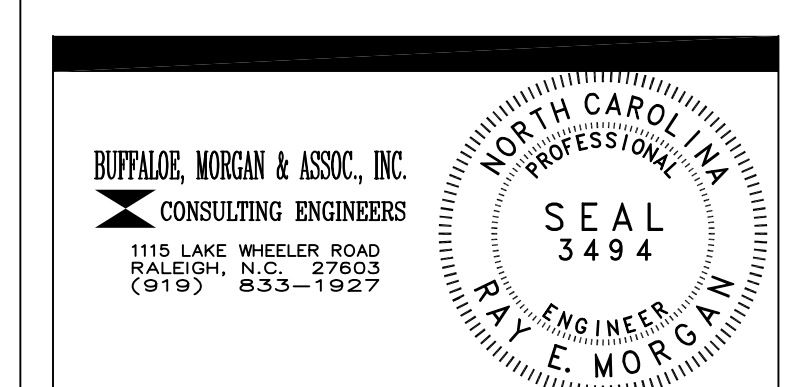
CALCULATED AREA 'B'
3087 SQ. FT.
0.17 GPM/SQ. FT.

NOTE: ALL BRANCH LINES 1" U.N.O.

KEY PLAN

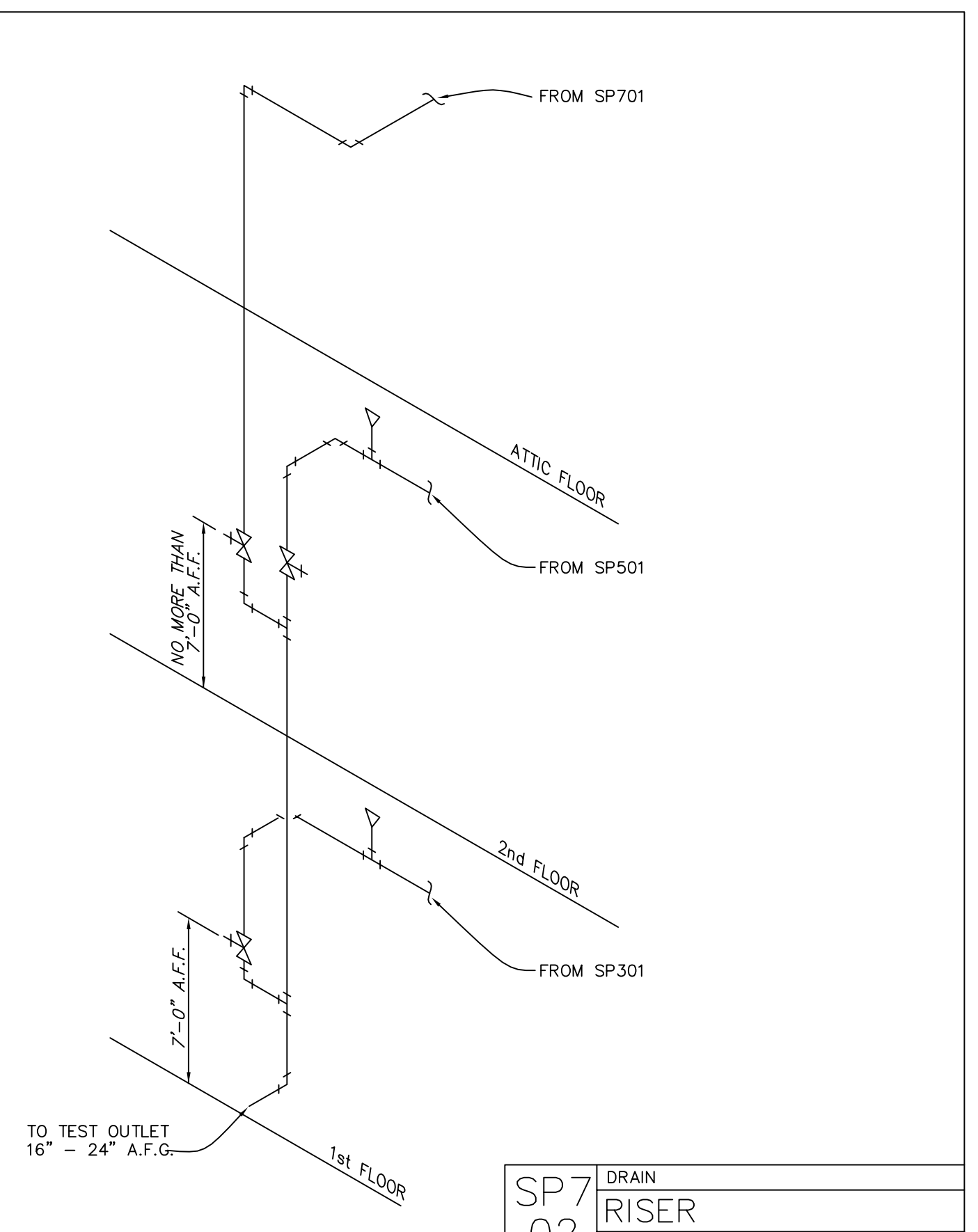


SP7
01
ATTIC - EAST - SPRINKLER
FLOOR PLAN
SCALE: 1/8" = 1'-0"



DRAWING REVISIONS:		
NO.	DATE:	REMARKS:

DATE: 16 MAY 1994
PROJECT#: 9305
DESIGNED BY: DLH
DRAWN BY: RDH II
CHECKED BY: WMP
CHECKED BY: REM



SP7
02
DRAIN
RISER
NO SCALE