PROVIDE NEW AUTOMATIC WET-PIPE SP SUPPLIED BY AN ELECTRIC FIRE PUMPS ORDINARY HAZARD GROUP 1 HAZARDS ACCEPTANCE TEST CRITERIA: PRINKLER SYSTEM I S IN ACCORDANCE AS INDICATED IN IN ACCORDANGE WITH NFPA20 SECTION "C"

(FIG. 16.1)
CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR ABOVE GROUND SYSTEM ACCEPTANCE AND CHAPTER 26 FOR INSPECTION, TESTING AND FIRE SPRINKLER SYSTEM SHALL BE DESIGNED PER NFPA 13, 2010 EDITION AND SHALL COMPLY WITH THE LOCAL FIRE MARSHAL AND ALL AUTHORIZES HAVING JURISDICTION.THE ACCEPTANCE TESTING OF THE FIRE SPRINKLER SYSTEM AND IT'S COMPONENTS SHALL CONSIST OF ALL APPLICABLE ITEMS SHOWN ON THESE TWO FORMS, NFPA 13, 2010 EDITION CHAPTER 10 (FIG. 16.1) PIPING. SEE NFPA13, 2010 D MAINTENANCE.

A. CHAPTER 24, SYSTEM ACCEPTANCE
B. 24.1 APPROVAL OF SPRINKLER SYSTEM
C. 24.2 ACCEPTANCE REQUIREMENTS
D. 24.3 CI 16.4 INSTRUCTION
E. 24.4 INSTRUCTION
F. 24.5 HYDRAULIC DESIGN INFORMATION SIG
G. 10.8.3.2.3 CONTRACTORS MATERIAL & TES

UNDE

61G15-32.004 (2) (A-J) POINT OF SERVICE:

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WATER MAIN 0 유

B. APPLICABLE CODES AND STANDARDS TO FLORIDA BUILDING CODE 2014 FLORIDA FIRE PREVENTION CODE 2014 NFPA13, 2010 EDITION, STANDARD FOR THE NFPA20, 2010 EDITION, STANDARD FOR THE NFPA20, 2010 EDITION, STANDARD FOR THE NFPA21, 2010 EDITION, STANDARD FOR THE NFPA224, 2010 EDITION, STANDARD EDITION, STANDARD EDITION, STANDARD EDITION, STANDARD EDITION, STANDARD EDITION THE INSTALLATION OF STATE INSTALLATION OF ST ER SYSTEM

VARY PUMPS FOR FIRE PROTECTION

SE FIRE SERVICE MAINS AND THEIR APPURTENANCES

LIGHT HAZARD: ALL AREAS OF BUILDING UNLESS NOTED OTHERWISE. ORDINARY HAZARD GROUP1: STORAGE ROOMS, MECHANICAL ROOMS, CLOSETS AND AS NOTED ON DRAWINGS. CLASSIFICATION OF HAZARD OCCUPANCY FOR EACH ROOM OF AREA RKING AREA, ELECTRICAL/DATA ROOMS, JANITOR'S

D. <u>DESIGN APPROACH:</u> SPRINKLER SYSTEM TO EXTEND INTO ALL AREAS IN ACCORDANCE WITH NFPA13. UL LISTED AND APPROVED SIDEWALL, UPRIG AND PENDENT SPRINKLER HEADS WITH STANDARD ORIFICE AND ORDINARY TEMPERATURE SHOULD BE USED. ONLY AREA/ DENSITY DESIGN METHOD IN ACCORDANCE WITH NFPA13 SHOULD BE USED. SPECIAL DESIGN APPROACHES LISTED IN NFPA13 ARE NOT ALLOWED.

LIGHT HAZARD

SYSTEM TYPE: WET-PIPE AUTOMATIC SPRINKLERS SYSTEM, USING NFPA APPROVED SUPPLY PIPING TO NEW QUICK RESPONSE STANDARD SPRAY SPRINKLER HEADS. CONCEALED SPRINKLER HEADS WITH OWNER/ARCHITECT APPROVED COVERS SHALL BE INSTALLED IN ALL FINISH CEILING, UPRIGHT SPRINKLERS IN EXPOSED CEILINGS AND SIDEWALL SPRINKLERS AS NOTED ON DRAWINGS.

K-FACTOR: 4.4 - 4.9 (STANDARD)

DENSITY: 0.10 GPM/SQ.FT. OR 0.15 GPM/SQ.FT

HEAD TEMPERATURE RATING: AREA OF OPERATION: 900 SQ.FT. MIN. AND 1500 SQ.FT. MAX. HEIGHT AND AREA CLASSIFICATION PERMITS PER NFPA13, 2010 ORDINARY TEMPERATURE (135-170 DEGREE F) UNLESS NOTED OTHERWISE ON DRAWINGS.

ORDINARY HAZARD GROUP 1 <u>SPACING:</u> 225 SQ.FT. MAX PER SPRINKLER HEAD OR BY MANUF RER LITERATURE.

SYSTEM TYPE: WET-PIPE AUTOMATIC SPRINKLERS SYSTEM, USING NFPA APPROVED SUPPLY PIPING TO NEW QUICK RESPONSE, STANDARD SPRAY SPRINKLER HEADS. CONCEALED SPRINKLER HEADS WITH OWNER/ARCHITECT APPROVED COVERS SHALL BE INSTALLED IN A FINISH CEILING, UPRIGHT SPRINKLERS IN EXPOSED CEILINGS AND PARKING AREA AND SIDEWALL SPRINKLERS AS NOTED ON DRAWINGS.

0.15 GPM/SQ.FT. 4.9 (STANDARD)

AREA OF OPERATION: 900 SQ.FT. MIN. AND 1500 SQ.FT. MAX. (DESIGNED FOR THE SQ.FT. MAX.) 130 SQ.FT. MAX PER SPRINKLER HEAD ORDINARY TEMPERATURE (135-170 DEG OR BY MANUFACTU

AND ALARM REQUIREMENTS TO MINIMIZE POTENTIAL IMPAIRMENTS AND UNRECOGNIZED FLOW OF

ALL WATER CONTROL VALVES SHALL BE INDICATING TYPE AND ELECTRICALLY SUPERVISED. BY THE BUILDING'S FIRE ALARM SYSTEM. EVERY SPRINKLER ZONE WILL BE APPROVED WITH FLOW SWITCHES, WHICH WILL BE SUPERVISED BY THE FIRE ALARM SYSTEM. BRANCH PIPING SERVING SPRINKLER HEADS IN ELEVATOR SHAFT OR ELEVATOR MACHINE ROOM SHALL BE PROVIDED WITH INDICATING TYPE CONTROL VALVE AND ELECTRONICALLY SUPERVISED.

DELEGATED ENGINEER (ENGINEER OF RECORD FOR THE SPRINKLER CONDITIONS EXIST IN THEIR WATER SUPPLY THAT COULD LEAD TO CORRECTIVE MEASURES IN THE FIRE PROTECTION DESIGN. BACKFLOW PREVENTION AND METERING SPECIFICATIONS: SYS: TEM) SHALL CONTACT THE LOCAL WATER PURVEYOR IF SO, DELEGATED ENGINEER SHALL INCORPORATE

THE BACKFLOW PREVENTION DEVICE ASSEMBLY AND METERING EQUIPMENT WILL MEET THE REQUIREMENTS OF THE LOCAL WATER PURVEYOR. SEE CIVIL FOR ADDITIONAL INFORMATION. VALVES ON BACKFLOW PREVENTER SHALL BE ELECTRONICALLY SUPERVISED BY THE BUILDING'S FIRE ALARM SYSTEM. H. QUALITY AND PERFORMANCE SPECIFICATIONS OF ALL FIRE PROTECTION COMPONENTS ALL NEW FIRE PROTECTION EQUIPMENT SHALL BE UL LISTED AND FM APPROVED.

THE FIRE PROTECTION SYSTEM DESIGN FOR THIS PROJECT SHALL BE IN FULL ACCORDANCE WITH PROVISIONS OF THE FLORID. ADMINISTRATIVE CODE, CHAPTER 61 G15—30 AS IT PERTAINS TO "DELEGATED ENGINEER" THE FIRE PROTECTION CONTRACTOR SHALL PROCURE THE SERVICES OF A FLORIDA REGISTERED ENGINEER WHO WILL ACT AS THE DELEGATED ENGINEER FOR THE FIRE PROTECTION SYSTEM DESIGN BASED ON THE DESIGN INTENT OF THE CONTRACT DOCUMENTS. THE DELEGATED ENGINEER WILL BECOME THE "BECOME OF RECORD" FOR THIS PORTION (FIRE PROTECTION SYSTEM) OF THE ENGINEERING PROJECT. THE DELEGATED ENGINEER'S SHALL CONFORM TO ALL REQUIREMENTS SET FORTH IN THE FLORIDA ADMINISTRATIVE CODE, 61 G15—3—.006" DELEGATED ENGINEER'S RESPONSIBILITY". ALL FINAL DELEGATED ENGINEERING DOCUMENTS REQUIRE THE IMPRESSED SEAL AND SIGNATURE OF THE DELEGATED ENGINEER.

- SYSTEM SHALL COMPLY WITH N.F.P.A. 13, 14, 20, 24 & ALL APPLICABLE STATE CODES. ALL EQUIPMENT USED IN THIS INSTALLATION SHALL BE "FACTORY MUTUAL" APPROVED AND INSTALLATION DETAILS SHALL CONFORM TO F.M.E.A. RECOMMENDED GOOD PRACTICES. SPRINKLER SYSTEM SHALL BE INSTALLED BY AN APPROVED AUTOMATIC FIRE SPRINKLER CONTRACTOR
- NO COMBUSTIBLE OCCUPANCY SHALL BE INTRODUCED INTO THE AREA UNTIL ARE INSTALLED AND IN FULL SERVICE.

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- ALL AREAS WITH DROPPED CEILINGS SHALL HAVE RECESSED PENDENT SPRINKLER HEADS UNLESS NOTED OTHERWISE.

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PROVIDE ACCESS PANELS TO ALL VALVES ABOVE NON—ACCESSIBLE CEILINGS AND CHASES. SHALL HAVE CONCEALED HINGES AND FINISHED TO MATCH THE CEILING FINISH.

PROVIDE A PERMANENTLY ATTACHED NAME TAG TO THE RISER STATING THE REQUIRED EACH HYDRAULICALLY—DESIGNED SYSTEM.

DESIGN CRITERIA

ACCESS PANELS

SLEEVE AND/OR FIRESTOP ALL PENETRATIONS THROUGH RATED WALL, CEILINGS, AND FLOORS WITH U/L LISTED ASSEMBLIES. FIRESTOP ASSEMBLIES SHALL BE EQUAL OR EXCEED THE RATING OF THE WALL, CEILING, OR FLOORS. SEE ARCHITECTURAL DRAWINGS FOR FINAL FINISHES.

SPRINKLERS IN AREAS WITH EXPOSED STRUCTURE (OBSTRUCTED CONSTRUCTION) SHALL BE INSTALLED WITH DEFLECTOR 1" BELOW THE BOTTOM OF THE BEAM (MAXIMUM 22" BELOW ROOF DECK). EXPOSED BAR JOISTS THAT HAVE SPRAY-ON FIRE PROOFING THAT MAKES THE JOIST SOLID SHALL BE TREATED LIKE A BEAM WITH SPRINKLERS 1" BELOW THE BOTTOM OF THE FIRE PROOFING.

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- ALL AREAS WITH EXPOSED F.S. PIPING SHALL HAVE CORROSION RESISTANT COATED BRASS UPRIGHT HEAD.
- ALL PIPE ELEVATIONS AND HEAD LOCATIONS ARE TO BE COORDINATED WITH ALL OTHER TRADES

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ALL FITTINGS TO BE BLACK CAST IRON.

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- L PIPING 2 1/2" & LARGER TO BE BLACK STEEL SCHEDULE ACK STEEL SCHEDULE 10 OR THREADABLE XL AS PER N.F.P. USED IN ALL RESIDENTIAL LIGHT HAZARD AREAS.
- ALL PIPING TO BE FLUSHED AS PER N.F.P.A. 13
- HANGERS SHALL BE IN ACCORDANCE WITH N.F.P.A. 13, 2010 EDITION SECTION 6-1.

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- THE FIRE PROTECTION CONTRACTOR SHALL CONSULT THE STRUCTURAL ENGINEER PRIOR DRIVEN STUDS OR PIERCING STEEL BEAMS OR COLUMNS. TO
- CONTRACTOR SHALL SUBMIT 4 COPIES OF SHOP DRAWINGS AND HYDRAULIC CALCULATIONS COORDINATED WITH ELECTRICAL AND A/C CONTRACTOR SHOP DRAWINGS FOR OUR REVIEW.
- PROVIDE A 24 HEAD SPRINKLER HEAD CABINET WITH WRENCH AND STANDARD RED ENAMEL FINISH

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- ALL WELDED FITTINGS USED IN THIS INSTALLATION SHALL CONFORM TO F.M.R.C. STANDARDS
- COORDINATE WITH "OWNER'S" STANDARD SPECS FOR ALL ADDITIONAL INFORMATION AND REQUIREMENTS REGARDING THE FIRE PROTECTION SYSTEM.

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24.

- WHERE CORROSIVE CONDITIONS EXIST OR SPRINKLERS & PIPING ARE EXPOSED TO CORROSION TYPE MATERIAL OR PROTECTIVE CORROSION COATINGS SHALL BE USED.
- ALL UPRIGHT SPRINKLERS SHALL BE INSTALLED PARALLEL TO BRANCH PIPING

- PROTECTION SYSTEM TO COMPLY WITH NFPA 13, 14, 20, 24 AND ALL APPLICABLE STATE CODE.
- SHOP DRAWINGS(WORKING DRAWINGS), HYDRAULIC CALCULATIONS AND MATERIAL SUBMITTALS SUBMITTED TO THE ARCHITECT/ENGINEER AND LOCAL FIRE MARSHAL AND SHALL BE APPROVED ANY INSTALLATION. SHOP DRAWINGS AND HYDRAULIC CALCULATIONS SHALL BE SEALED BY A ENGINEER IN GOOD STANDINGS WITH THE STATE OF FLORIDA.
- PIPE ROUTING SHOWN IS SCHEMATIC ONLY. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO PROVIDE ANY ADDITIONAL OFFSETS REQUIRED FOR PROPER INSTALLATION AND COORDINATION WITH OTHER TRADES. PIPE SIZING SHOWN SHALL BE CONSIDERED AS MINIMUM PIPE SIZE REQUIRED UNLESS SHOWN OTHERWISE BY CONTRACTOR'S HYDRAULIC CALCULATIONS.

PROGRESS OR CHECK SETS, BY THEIR NATURE, MAY BE INCOMPLETE AND ARE NOT TO BE USED FOR BIDDING OF CONSTRUCTION. CONTRACTOR RECOGNIZES HIS SOLE RESPONSIBILITY TO INCLUDE ALL CONTINGENCIES FOR DESIGN AND INSTALLATION TO MEET THE PROJECT REQUIREMENTS IN ANY PRICING EXERCISE. THE DESIGN OF THESE PLANS ARE NOT FINAL UNTIL PERMIT SETS ARE ISSUED.

PRIOR TO SUBMITTING THE BID, THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND INFORM THE ARCHITECT AND THE ENGINEER OF ANY DISCREPANCY BETWEEN THESE DOCUMENTS AND THE EXISTING CONDITIONS AND SHALL INCLUDE IN THE BID TO CORRECT THE SAME AS DIRECTED. THE ENGINEER AND THE ARCHITECT, ARE NOT RESPONSIBLE FOR ANY ADDITIONAL COSTS RESULTING FROM VERIFIABLE EXISTING CONDITIONS DISCOVERED AFTER CONTRACT HAS BEEN AWARDED. NO CHANGES SHALL BE MADE TO THESE PLANS WITHOUT PRIOR APPROVAL FROM THE ENGINEER OF RECORD. ALL CHANGES SHALL BE SUBMITTED FOR REVIEW PRIOR TO INSTALLATION.

LIC. No.

500 NE SPANISH RIVER BLVD. SUITE 203, BOCA RATON, FLORIDA 33431 PHONE: 561.419.8977; INFO@APD-ENGINEERING.COM MARTIN WHITELOCKE, P.E. FLORIDA LICENCE No. 53899

SPRINKLER NOTES SPECS:

SPRINKLERS LOCATIONS

SHALL BE CENTERED IN THE TILE. PROVIDE ARMOVER OF

SWING

JOINT AS REQUIRED

REVISIONS

IN ALL FINISHED AREAS WITH DROPPED CEILINGS HEADS SHALL BE INSTALLED VISUALLY STRAIGHT AND NOT LESS THAN 6" FROM EDGE OF TILE.

ALL FIRE DEPARTMENT CONNECTIONS SHALL BE POLISHED CHROME PLATED WITH SIGN SIZED AS REQUIRED

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ROVIDE SPRINKLERS UNDERNEATH ALL OBSTRUCTION IN IDE AND SPACE HEADS AROUND ALL OBSTRUCTIONS IN RE NOT INDICATED ON THE DRAWINGS BUT ARE REQUIFFPA13. SPRINKLER LOCATIONS UNDER DUCTWORK AND NAL INSTALLED LOCATIONS.

INCLUDING EXPOSED DUCTWORK WHICH IS OVER IN ACCORDANCE WITH NFPA13 HEADS UNDER DUIRED AND SHALL BE PROVIDE IN ACCORDANCE AROUND OBSTRUCTIONS SHALL BE GOVERNED

PIPE SIZE TO BE HYDRAULICALLY DESIGNED AS PER N.F.P.A. 13 IF REQUIRED BY

45.

COORDINATE PIPING WITH ALL ELECTRICAL EQUIPMENT (PANELS, TRANSFORMER, ETC.) PRIOR TO ANY INSTALLATION. DO NOT ROUTE ANY PIPING OVER ANY ELECTRICAL PANELS UNDER ANY CIRCUMSTANCES ANY PIPING RUN OVER ELECTRICAL SHALL BE REROUTED AT NO ADDITIONAL COST.

F SYSTEM PRESSURE EXCEEDS 100 PSI, ALL HANGERS ON END HEADS IN PENDANT POSITION SHALL BE WITHIN 12" OF END OF LINE IN ACCORDANCE WITH NFPA13.

PROVIDE SPRINKLERS GUARDS ON ALL HEADS IN MECHANICAL ROOMS, ELEPHONE ROOMS, ELEVATOR ROOMS, ELEVATOR SHAFTS AND ON ANY

STORAGE ROOMS, ELECTRIC ROOMS, HEADS LESS THAN 7'-0"ABOVE TH

WET BULK SUPPLY MAINS AND HOSE SUPPLY MAINS EXPOSED TO THE WEATHER SHALL BE PROVIDED WITH AN ALUMINUM JACKET.

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ALL PIPING TO BE HYDROSTATICALLY TESTED AT 200 P.S.I. FOR 2 HOURS AS PER N.F.P.A.

ALL VALVES TO BE U.L. LISTED WITH TAMPER SWITCH (UNLESS N.F.P.A. $13\,$

ALL MATERIALS AND DEVCES TO BE U.L. LISTED AND COMPLY WITH N.F.P.A.

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PAINT ALL PIPING, INCLUDING HANGERS, FITTINGS, ARCHITECT.

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COORDINATE

COLOR WITH

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TO DRAIN ALL

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IN THE BUILDING

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INSULATED AND

CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES INSPECTIONS AND TESTS. USING POWDER

THE FIRE PROTECTION SYSTEM AND INFORMATION SHOWN WITHIN THESE DRAWING REPRESENT THE DESIGN INTENT OF THE ENGINEER OF RECORD. IT IS THE RESP CONTRACTOR TO SUBMIT LAYOUT DRAWINGS TO THE AUTHORITY HAVING JURISDI REVIEW. THE LAYOUT DRAWINGS SHALL BE IN COMPLIANCE WITH NFPA13, 8-1, NEALED BY A QUALIFIED ENGINEER LICENSED IN THE STATE OF FLORIDA.

NOTION FOR PERMITTING, WORKING PLANS AND BE

ALL VALVES SHALL E

BE PROVIDED WITH TAMPER SWITCHES O THE FIRE ALARM SYSTEM.

AND

ZONES

SHALL

WITH FLOW

ALL EXPOSED VISIBLE PIPING SHALL BE PAINTED RED OR AS RECOMMENDED BY ARCHITECT. T0

THE HYDRAULICALLY CALCULATED SYSTEM SHALL BE IDENTIFIED BY A PERMANENT PLACARD ATTACHED BASE OF THE RISER INDICATING THE DESIGN CHARACTERISTICS OF THE SYSTEM.

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26.

WHEN THE AUTOMATIC SPRINKLER SYSTEM IS REQUIRED TO BE OUT OF SERVICE FOR MORE THAN 4 HOURS IN A 24—HOUR PERIOD, THE AUTHORITY HAVING JURISDICTION SHALL BE NOTIFIED, AND THE BUILDING SHALL BE EVACUATED OR AN APPROVED FIRE WATCH SHALL BE PROVIDED FOR ALL PARTIES LEFT UNPROTECTED BY THE SHUTDOWN UNTIL THE SPRINKLER SYSTEM HAS BEEN RETURNED TO SERVICE.

WHERE CONDITIONS ARE FOUND THAT CONTRIBUTES TO MICROBIOLOGICALLY INFLUENCED CORROSION (MIC), PLANS SHALL BE DEVELOPED BY THE OWNERS TO TREAT THE SYSTEM USING ONE OF THE FOLLOWING METHODS AS PER NFPA 13:

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29.2. 29.1. INSTALL A WATER PIPE THAT WILL NOT BE AFFECTED BY THE MIC MICROBES

TREAT ALL WATER THAT ENTERS THE SYSTEM USING AN APPROVED BIOCIDE.

IMPLEMENT AN APPROVED PLAN FOR MONITORING THE INTERIOR CONDITIONS OF ESTABLISHED TIME INTERVALS AND LOCATIONS.

INSPECTION AND APPROVAL BY LOCAL FIRE MARSHAL AND ARCHITECT/ENGINEER.

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IN AREAS WITH EXPOSED STRUCTURE SHALL BE INSTALLED AS HIGH AS POSSIBLE TO ALLOW MAXIMUM USE OF THE SPACE.

REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR CEILING DESCRIPTIONS AND HEIGHTS

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36.

SPRINKLERS ARE TO BE COORDINATED WITH ALL DIFFUSERS, SPEAKERS, LIGHTING FIXTURES AND CEILING SYSTEMS. SPACING OF SPRINKLERS SHALL BE IN ACCORDANCE WITH NFPA13 AND THE LISTING OF THE SPRINKLER. ALL CEILING DEVICES INCLUDING DIFFUSERS, SPEAKERS AND LIGHTS SHALL HAVE FIRST PRIORITY

CHECK SET: 05/20/16

Professional Consulting Engineers ssociated Design

JUAN C. LINARES

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SHEET #

Linares

ARCHITECTURE

1600 SOUTH DIXIE HWY., SUITE 400 BOCA RATON, FLORIDA 33432 PHONE 561-391-0081 EMAIL mail@rwb-arch.com

FAX 561-391-0085

SPRINKLER HEADS LOCATED IN ELEVATOR SHAFTS AND ELEVATOR MACHINE ROOMS MUST BE INSTALLED WITHIN 2 FEET OF HEAT DETECTOR. COORDINATE CLOSELY WITH FIRE ALARM CONTRACTOR. SPRINKLER HEADS SHALL BE INTERMEDIATE TEMPERATURE (212 DEGREE F).