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Buildings whose permit applications are dated on or after January 1, 2020, must comply with the 2019 Standards. The California Energy Commission updates the standards every three years. There is no cost per report, simply keep your subscription uptodate for unlimited reports. With the integrated software, perform Manual J, Manual D, Manual S and Title 24 energy code compliance all in one program.For the first year, you are entitled to software updates and technical support. After the oneyear period ends, you must purchase Wrightsoft Software and Support WSS each year for continued software updates and technical support. After the oneyear period ends, the software will no longer function until a new license is purchased. The 3rd dimension takes the guesswork out of interstitial duct runs, navigating dropped ceiling areas, dropped girders, etc. The software is pretty easy to use given its complexity but the real benefit is the service. Tech support is friendly and patient, the 10 day training course was perfect for a novice user and the trainer was open and understanding the kind that doesnt make you feel stupid and knows his stuff so well he can explain why the software is doing what it is doing. Ive attended several classes, been to the World Headquarters in Lexington, and even hosted training classes. The level of support is phenomenal. Both in the classroom, call in and email. I cant imagine a better product. The learning curve is pronounced and requires commitment on the part of the user, but with constant use it becomes almost second nature. For a standard 3,000 square foot, 4 bedroom house, doing the load calculations manually would take many hours. I can simply import the AutoCAD building plans as a layer in the program, trace to complete the load calculations and add my ducts to the design, saving me a considerable amount of time.Thats a real game changer for us in terms of billable hours and revenue.http://gocmenotokurtarma.com/userfiles/emerson-soap-dispenser-user-manual.xml

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Mike sales and Donald tech support have been there for us for over 10 years. Keep up the good work and thanks again guys. Just another loyal happy customer.”We found a serious issue with improperly sized air conditioning systems in existing homes that was causing issues with humidity, or lack of cooling. We have used Manual J for over 30 years, but due to the timeconsuming process of entering information manually, it was not done unless we had a consumer complaint. We partnered with Wrightsoft over 15 years ago and can now do a Manual J Load Calculation in less than 30 minutes. Wrightsoft is always there for us, with tech support staff that answers the phone quickly, and offer advice when needed. There is also a library of how to videos available 24 hours a day on their website. Wrightsoft has continued to be the best option for us for Manual J load calculations.” Tim Kohut Director of Sustainable Design, National Community Renaissance says. Wrightsoft’s responsiveness on the support side is what truly sets you apart. Your team has made my life easier and using RSU has become an integral cornerstone to the work I do guiding our teams in the design and construction of high performance, soon to be ZNE affordable housing.” Steve Paxton from AirDynamics says. As long as the information is entered correctly, Wrightsoft takes all of the guesswork out of the equation. It has given me peace of mind and keeps our quality of installation above the rest. I cant imagine doing an install without it, its as important to us as the rest of the tools on our trucks.”Their support staff are patient and professional. Proper equipment sizing is imperative regarding our customers comfort. We have been able to provide our customers with

accurate professional data to backup our proposals awarding us multiple projects over our competitors. Well worth the investment of time and money.”. Click the X to close.http://buyapension.com/7strategy/multichem/assets/fck_upload_files/image/adsl2-2+-router-manual.xml

These manuals are based on the current science, practice, and technology of animal management to maximize capacity for excellence in animal care and welfare. Incorporating the information from these manuals into animal management practices at zoos and aquariums maximizes excellence in animal care and welfare, and ensures institutions are maintaining best practices. The use of information within the manuals should be in accordance with all local, state, and federal laws and regulations concerning the care of animals. The recommendations are not exclusive management approaches, diets, medical treatments, or procedures, and may require adaptation to the specific needs of individual animals and particular circumstances in each institution. Commercial entities and media identified are not necessarily endorsed by AZA. The statements presented throughout the body of the manual do not represent standards of care unless specifically identified as such in clearly marked sidebar boxes. A complete ACM Template is available to all AZA members. The template is divided into chapters, each of which focuses on a different animal care or management topic. Each section lists bulleted points, developed with input from AZA Committees, Scientific Advisory Groups, and the Animal Programs Population Management and Reproductive Management Centers, that are addressed by the authors. There are six primary steps needed to complete the publication process The ACM Coordinator should include any relevant Scientific Advisory Groups SAGs to assist with writing and reviewing those specific sections of the ACMs. If you continue using our website, well assume that you are happy to receive all cookies on this website and you agree to our Privacy Policy. It is helpful to know of other types of credits available that are often not thought of when pursuing energy compliance. This article addresses the compliance credits available with regards to HVAC design, equipment selection, and zoning.

This credit results in a reduction of duct surface area in the computer compliance programs. This option requires certification by the installer and field verification by a HERS Rater. This option requires field verification of the duct system by means of a visual inspection by a HERS Rater. This option requires field verification of the duct design layout drawings by a HERS Rater. Verified duct design, when required, will be included in the HERS Required Verification list on the certificate of compliance CF1R. This approach provides energy savings credits for having shorter duct runs, fewer ducts, ducts in beneficial locations of ductwork, and other benefits of a welldesigned duct system. This credit is available regardless of whether a highperformance attic HPA or ducts in conditioned space DCS option is chosen, as explained in Section 3.6.2.For these cases, the standard design in the compliance calculation uses the same type of system and has no ducts. However, other systems, such as hydronic heating systems with a central heater or boiler and multiple terminal units, are considered central HVAC systems that are compared to a ducted system in the standard design. If the hydronic system has no ducts, there may be a significant energy credit through the performance method. The information required for the input to the compliance software includes the length, diameter, insulation Rvalue, and location of all ducts. This method will result in a credit if the proposed duct system is better than the standard design. The duct systemResidential Appendix. For ducts that lie on the ceiling or within 3.5 inch of the ceiling, the effective Rvalue is calculated based on the duct size and the depth of ceiling insulation as shown in Table R338 in the Residential ACM Manual. Credits are available for multispeed compressors and low leakage air handlers even if the HVAC system is not zoned.

Twostage cooling means the air conditioner or heat pump has a compressor with two levels of operation high for hot summer days and low for milder days.A cutsheet from the manufacturer of the proposed HVAC equipment will be needed by the Title 24 Energy Documentation author. The

accreditation body shall be a signatory to the International Laboratory Accreditation Cooperation Mutual Recognition Arrangement ILAC MRA www.ilac.org. Increased comfort is attained by having the capacity of the HVAC system cooling or heating delivered follow the shift in load as it changes across the house. For example, it is common for twostory homes to be too hot on the second floor in both summer and winter. Zoning has the capability of diverting more of the HVAC capacity to the area with the increased load. Another common example is a home with a significant area of westfacing and eastfacing windows. In the summer, the east rooms overheat in the morning, and the west rooms overheat in the afternoon. Since the most common home is singlezoned and has only one thermostat placed near the center of the house, temperatures in the rooms distant from that thermostat will vary, sometimes significantly. If zoning is added, the more distant rooms may be conditioned to a more comfortable temperature. This increased conditioning requires more energy. When designed correctly, zoning allows only the zones that need conditioning to be conditioned, thus potentially saving energy. There are two primary methods by which the common multizoned dampered system lowers airflow additional restriction of zoning dampers and recirculation through the air conditioner from a bypass duct. To avoid this efficiency problem, zonally controlled central forced air cooling systems using a singlespeed air conditioner must simultaneously meet the following criteria See Reference Residential Appendix RA3.3 for the HERS verification procedures.

Zonal control accomplished by using multiple singlezone systems is not subject to these requirements. Twospeed and variablespeed compressors are considered multispeed. Multispeed compressors allow the system capacity to vary to more closely match reduced cooling loads when fewer than all zones are calling for cooling. Therefore, multispeed compressor systems are given special consideration when used in zoned systems and are not required to verify performance in all zonal control modes. Instead, the airflow and fan efficacy testing is required to be performed only at the highest speed with all zones calling. Zoned systems with singlespeed compressors must be tested and pass in all operating modes. Other energy features must offset the penalty. Entering a value between 150 and 350 can lessen the penalty. A house having at least two zones living and sleeping may qualify for this compliance credit. The equipment may consist of one heating system for the living areas and another system for sleeping areas or a single system with zoning capabilities, set to turn off the sleeping areas in the daytime and the living area unit at night. See Figure 427 The following steps must be taken for the building to show compliance with the standards under this exceptional method Each thermal zone, including a living zone and a sleeping zone, must have individual air temperature sensors that provide accurate temperature readings of the typical condition in that zone. For systems using a combination of a central system and a gas vented fireplace or other individual conditioning units, the zone served by the individual conditioning unit can be limited to a single room.Thermostats controlling vented gas fireplace heaters that are not permanently mounted to a wall are acceptable as long as they have the dualsetback capabilities. Return air dampers are not required.

No measurable amount of supply air is to be discharged into unconditioned or unoccupied space to maintain proper airflow in the system. The California Energy Commission was created then to oversee implementation of the new laws. The standards, referred to as Title 24, were updated in 2008 and again in 2019. Click below for the latest editions of our Title 24 series. Uses the ruleset to assessForms may be submitted for buildingIt also features an API to allow third partyThe software is capable of generating the standard design model as per the Alternate Compliance Method for a given user model. CBECCCom’s scope, features, and capabilities Documentation is available on theA project level flag enables this functionality, however projects for which daylighting controls have been installed by default cannot be used for compliance. Compliance with the Plan will be included as a condition in any and all contracts for demolitions or renovations. II. Definitions Asbestos the asbestiform varieties of serpentine chrysotile, riebeckite crocidolite, cummingtonitegunnerite amosite, anthophyllite, and actinolitetremolite. Asbestos Containing Materials ACM both friable

asbestoscontaining material or nonfriable asbestoscontaining material. Category II Nonfriable ACM any material, excluding Category I nonfriable ACM, containing more than 1 percent asbestos, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Class I Asbestos Work activities involving the removal of Thermal System Insulation TSI and surfacing ACM and Presumed Asbestos Containing Material PACM. Class II Asbestos Work activities involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestoscontaining wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

Class III Asbestos Work repair and maintenance operations, where ACM, including TSI and surfacing ACM and PACM, is likely to be disturbed. Class IV Asbestos Work maintenance and custodial activities during which employees contact but do not disturb ACM or PACM and activities to clean up dust, waste and debris resulting from Class I, II, and III activities. COMPETENT PERSON includes the following One who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure and who has the authority to take prompt corrective measures to eliminate them; in addition, For Class I and Class II work, one who is specially trained in a training course which meets the criteria of EPAs Asbestos Model Accreditation Plan for supervisor Plan 40 CFR Part 763, Subpart E, or its equivalent, and For Class III and Class IV work, one who is trained in a manner consistent with EPA requirements for training of local education agency maintenance and custodial 40 CFR 763.92a2. PPM Facilities Project Supervisor or Consultant Demolition the wrecking or taking out of any loadsupporting structural member of a facility together with any related handling operations, or the intentional burning of any facility. Structural member means any loadsupporting member of a facility, such as beams and load support walls; or any nonload supporting member, such as ceilings and nonload supporting walls. Friable Asbestos Material any material containing more than 1 percent asbestos, that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Homogeneous Area an area of surfacing material or thermal system insulation that is uniform in color and texture. National Emission Standards for Hazardous Air Pollutants NESHAP for Asbestos in 40 CFR Subpart M, Sections 61.140 61.156. Presumed Asbestos Containing Material PACM thermal system insulation and surfacing material found in buildings constructed no later than 1980.

Renovation the altering a facility or one or more facility components in any way, including the stripping or removal of ACM from a facility component. Operations in which loadsupporting structural members are wrecked or taken out are considered to be demolitions. Suspect Asbestos Containing Material material that has not yet been analyzed by an EPAaccredited laboratory to determine whether it is ACM. Responsibilities Employees Employees are responsible for being aware of the potential hazards and adverse health effect of asbestos. This can be accomplished by reading and understanding the Annual Notification of the Presence of Asbestos in Buildings at CSUN or by contacting the Environmental Health and Safety Department at extension 2401. In addition, employees should not handle, move or otherwise disturb asbestos containing or potential asbestos containing materials. Inspector Inspectors are responsible for the inspection of a building or job site prior to any renovation or demolition work to determine the presence of asbestos. Competent Person The Competent Person is responsible for Job Site Inspections to ensure compliance with the applicable asbestos requirements. On Class I worksites, onsite inspections shall be made at least once during each work shift, and by employee request. On Class II, III and IV worksites, onsite inspections shall be made at intervals sufficient to assess whether conditions have changed, and at any reasonable time by employee request. On all worksites where employees are engaged in Class I or II asbestos work, the competent person shall perform or supervise the following duties, as applicable Set up the regulated area, enclosure, or other containment. Ensure by onsite inspection the integrity of the enclosure or containment. Supervise all employee exposure monitoring and ensure that it is conducted in accordance with applicable regulations and requirements.

Ensure by onsite supervision that employees set up, use, and remove engineering controls, use work practices and personal protective equipment in compliance with all requirements. Ensure that employees use the hygiene facilities and observe decontamination procedures. Ensure that through onsite inspection, engineering controls are functioning properly and employees are using proper work practices. Ensure that notification requirements are met. V. Training Employee Training Any employee engaged in the removal of ACM during a demolition or renovation operation, or in the inspection of a facility for the presence of ACM or suspect ACM, will be properly trained. Copies of training certificates for each trained employee will be kept in the employee's department for the record retention period. The University will maintain at least one employee who has successfully completed an EPAapproved Building Inspector course or study, and two employees who have successfully completed a 4day EPAapproved training course for asbestos abatement workers. An individual employee can be trained as both an inspector and an abatement worker. Each of these trained employees will attend an EPAapproved refresher training course before the employees training certificate expires. Building Inspector Training Any person engaged in the inspection of a facility for ACM or suspect ACM will have successfully completed an EPAapproved 3day inspector course of study. The course material will contain, but not be limited to Federal, State, and local laws and regulations governing asbestos removal, notification, handling, transport and disposal requirements; Practices and procedures for detection and sampling asbestos, control of asbestos fiber releases, worker protection, and equipment decontamination; and Health effects of asbestos exposure.

Competent Person Training For Class I and II asbestos work the competent person shall be trained in all aspects of asbestos removal and handling, including abatement, installation, removal and handling; the contents of the EPA Model Accreditation Plan; the identification of asbestos; removal procedures, where appropriate; and other practices for reducing the hazard. Such training shall be obtained in a comprehensive course for supervisors, that meets the criteria of EPAs Model Accredited Plan 40 CFR Part 763, Subpart E. Appendix C, such as a course conducted by an EPAapproved or state approved training provider, certified by EPA or a state, or a course equivalent in stringency, content and length. For Class III and IV asbestos work, the competent person shall be trained in aspects of asbestos handling appropriate for the nature of the work, to include procedures for setting up glove bags and minienclosures, practices for reducing asbestos exposures, use of wet methods, the contents of this standard, and the identification of asbestos. Such training shall include successful completion of a course that is consistent with EPA requirements for training of local education agency maintenance and custodial staff 40 CFR 763.92a2, or its equivalent in stringency, content, and length. Competent persons for Class III and IV work may also be trained pursuant to the requirements of subsection o4A of this section. Asbestos Abatement Worker Training Any person engaged to perform maintenance, renovation, asbestos stripping, removal, handling, cleanup, transportation, or disposal activities, including maintenance personnel who can reasonably be expected to come in contact with ACM or suspect ACM during normal duties, will have successfully completed a 4day EPA approved training course for asbestos abatement workers.

Employees will be provided with this notification according to the following schedule Within 30 days of being hired or within 15 days of commencement of work in a building containing asbestos, whichever occurs first; Annually. Asbestos Locations Asbestos can be found in many common building materials. The campus performs inspections to locate and inventory asbestoscontaining materials in buildings. Environmental Health and Safety in coordination with Physical Plant Management PPM is responsible for keeping the list of asbestoscontaining materials current. This list will be periodically revised as asbestos is removed or discovered. Employees are urged to contact Environmental Health and Safety or PPM if there is any question regarding the location of asbestoscontaining materials or questions as to whether a material contains asbestos. VII. Procedures General Procedures Asbestos can be found in many buildings as a component of building

construction materials. Asbestos is a hazardous material which may cause adverse health effects. However, asbestos does not pose a threat to health unless the asbestos fibers become airborne. Avoid touching asbestos containing materials on walls, ceilings, pipes, or boilers. DO NOT drill holes, hang plants or other objects from walls or ceilings made of asbestoscontaining materials. When replacing light bulbs, DO NOT DISTURB asbestoscontaining materials. DO NOT DISTURB damaged asbestoscontaining materials or asbestos debris. If you find asbestoscontaining materials that have been damaged, immediately do the following Stop any activities that will generate dust or spread debris. Contact PPM work control center Extension 2222. If you or someone else is contaminated, contact Environmental Health and Safety at Extension 2401. DO NOT attempt to handle or clean up damaged materials unless trained, licensed, or authorized to do so.

Only persons specially trained, licensed, and authorized to do so may handle or otherwise disturb any asbestoscontaining materials. This Plan establishes procedures to be followed by all employees, contractors, and subcontractors to minimize the possibility of exposure to airborne asbestos fibers. This Plan is one component of the Universitys commitment to protect the health and safety of students, employees, and the public from asbestos hazards. Prior to the commencement of any demolition or renovation work, a diligent and complete inspection will be performed of the facility for the presence of ACM and suspect ACM. No activity will begin that might disturb or preclude access to any ACM or suspect ACM, including any activity that might disturb or preclude access to any ACM or suspect ACM in adjoining structures or buildings not directly involved in the demolition or renovation until The results of laboratory analyses conducted by a National Institute of Standards and Technology NIST or an Environmental Protection Agency EPA accredited laboratory are available establishing that the suspect ACM is, in fact, nonACM; or All ACM or suspect ACM has been completely removed from the facility in accordance with all applicable laws and regulations. If any suspect ACM is discovered during a demolition or renovation activity, this material may be treated as ACM without sampling and analysis. However, before suspect ACM is treated as nonACM, samples of all suspect ACM will be collected and analyzed. If any ACM or suspect ACM is discovered at a demolition or renovation operation that is already underway, all work that could disturb or preclude access to the ACM or suspect ACM will immediately cease. Activities will not resume that might disturb or preclude access to the ACM or suspect ACM until the material has been sampled, analyzed, and, if found to be ACM, removed by a trained asbestos abatement worker.

If a trained CSUN inspector is not available, the campus will arrange for an inspector trained in accordance with the inspection training requirements. All inspections will be documented in a report detailing procedures used to identify ACM and suspect ACM. All inspections will include a review of original blueprints and specifications of the facility when available. The inspection will identify and quantify all friable, and Class I and Class II nonfriable ACM. A visual inspection will be performed on all areas of the facility that any person involved in the demolition or renovation operation may come into contact, or which may contain asbestos and could be affected directly or indirectly by the operation. In conducting the inspections, each inspector will Visually inspect the area to identify the location of all suspect ACM not previously sampled; Touch all suspect ACM not previously identified to determine if it is friable; Identify all friable suspect ACM and all nonfriable suspect ACM that was not previously identified; and Collect bulk samples of suspect ACM not assumed to contain asbestos and suspect ACM not previously sampled. Bulk sampling will be conducted in accordance with bulk sampling procedures. An area of homogeneous material may be considered to be ACM without analyzing any remaining samples if one bulk sample analysis shows more than 1% asbestos. If all samples required to be collected are found by an EPAaccredited laboratory not to contain more than 1% asbestos, then the area of homogeneous material may be treated as nonACM. Bulk Sampling Asbestos bulk samples will be collected only by a person who has completed the asbestos Building Inspector training specified in the Training Section. The number of asbestos bulk samples collected will be based on the extent of homogeneous area. All asbestos bulk samples will be made up of a

core that has fully penetrated the suspect ACM.

Each sample collected will be immediately placed in a sealed, leak tight container and labeled with a unique identifier. Inspection Records Inspection records will be maintained in the Environmental Health and Safety Office. The location from which each sample is taken will be concurrently noted by sample number on a graphic depiction of the facility. If more than one person is inspecting the facility, each asbestos inspector will use a separate graphic depiction, and date and initial the same. The following sample records will be generated and maintained An inspection report with the dates of the inspection and the name, address, telephone number and signature of each person making the inspection; Written statement that the inspectors have successfully completed the required asbestos inspector training course; An inventory and graphic depiction of the demolition or renovation operation, showing the locations of the area of homogeneous material where samples were collected, the exact location where each bulk sample was collected, the dates that samples were collected, the areas of homogeneous material where friable samples were collected, the areas of homogeneous materials where nonfriable suspect ACM was assumed to be ACM and was therefore not sampled, and the areas where samples were determined by an EPA accredited laboratory to be ACM; A description of the manner used to determine sampling location and a description of sampling protocols; A list of the type of materials that make up each area of homogeneous material e.g.