

## STATE BUILDING CODE COUNCIL

## Washington State Energy Code Development Standard Energy Code Proposal Form

May 2018

Log No. 19-WSEC-R15

Code being amended:	Commercial Provisions	Residential Provisions	
· · · · · · · · · · · · · · · · · · ·		dit under section 4 of the prescriptive table for mechanical	
Proposed code change to new text and strikeout for		he Integrated Draft, linked above, and then use <u>underline</u> for	
Under option column of	table: <u>4a</u>		
Under description colum paragraph R403.3.6	n of table: All supply and return o	ducts deeply buried in ceiling insulation per requirements in	
linear feet of supply duct	s connections to the equipment litioned space must have both tra	ed space, a maximum of 10 linear feet of return ducts and 5 may be outside the deeply buried insulation. All metallic ducts insverse and longitudinal joints sealed with mastic. If flex ducts	
Under option credits of t	able: <u>0.5</u>		
Under option column of	table, row currently labeded 4: 4	<u>b</u>	
improvement as placing ceiling insulation is optio	the entire HVAC distribution syste	ductwork provide almost the same energy efficiency em in the conditioned space. Locating ductwork underneath will encourage broader use of what is a cost neutral building efficiency.	
Your amendment must n	neet one of the following criteria.	. Select at least one:	
Addresses a critical li	fe/safety need.	Consistency with state or federal regulations.	
The amendment clarifies the intent or application of the code.		Addresses a unique character of the state.  Corrects errors and omissions.	
Addresses a specific so (Note that energy cor	state policy or statute. nservation is a state policy)		

Check the building types that would be impacted by your code change:							
Single family/duplex/townhome		Multi-family 4 + stories		Institutional			
Multi-family 1 − 3 stories		Commercial / Retail		☐ Industrial			
Your name	Alan Nolan		Email address	alan@509.design			
Your organization	Spokane Home Builders Assoc.		Phone number	509-847-4651			
Other contact name Kieran Sprague, 360-791-7462							

**Economic Impact Data Sheet** 

Briefly summarize your proposal's primary economic impacts and benefits to building owners, tenants and businesses.

Provide your best estimate of the construction cost (or cost savings) of your code change proposal? (See OFM Life Cycle Cost <u>Analysis tool</u> and <u>Instructions</u>; use these <u>Inputs</u>. Webinars on the tool can be found <u>Here</u> and <u>Here</u>)

\$-0.16/square foot (For residential projects, also provide \$-396/ dwelling unit)

Show calculations here, and list sources for costs/savings, or attach backup data pages

Installation of flexible ductwork for deeply buried ducts requires ~25% less materials (~100 LF @ \$2/LF) and 15-20% less labor (~5.6 hrs @\$35/hr). In a typical 2,500 Sq Ft single family residence, this equates to a savings of \$396.

Provide your best estimate of the annual energy savings (or additional energy use) for your code change proposal?

0.15 KWH/ square foot or ~375KWH / dwelling unit.

Show calculations here, and list sources for energy savings estimates, or attach backup data pages

Per REMRate V15.7.3 modeling a 2,500 Sq Ft single family residence with 9 HSPF, 14.5 SEER heat pump and attic hung ductwork has annual energy consumption of 7,028KWH heating / 632kwh cooling, while the same residence with deeply buried ductwork has 66,53KWH heating / 598 KWH cooling.

List any code enforcement time for additional plan review or inspections that your proposal will require, in hours per permit application:

Proposal would not create any additional demands for plan review or inspection.

## **Attachments**



LCCA Executive Report.pdf



LCCA Baseline scenario.pdf



LCCA Alternative



LCCA Expenditure Report.pdf