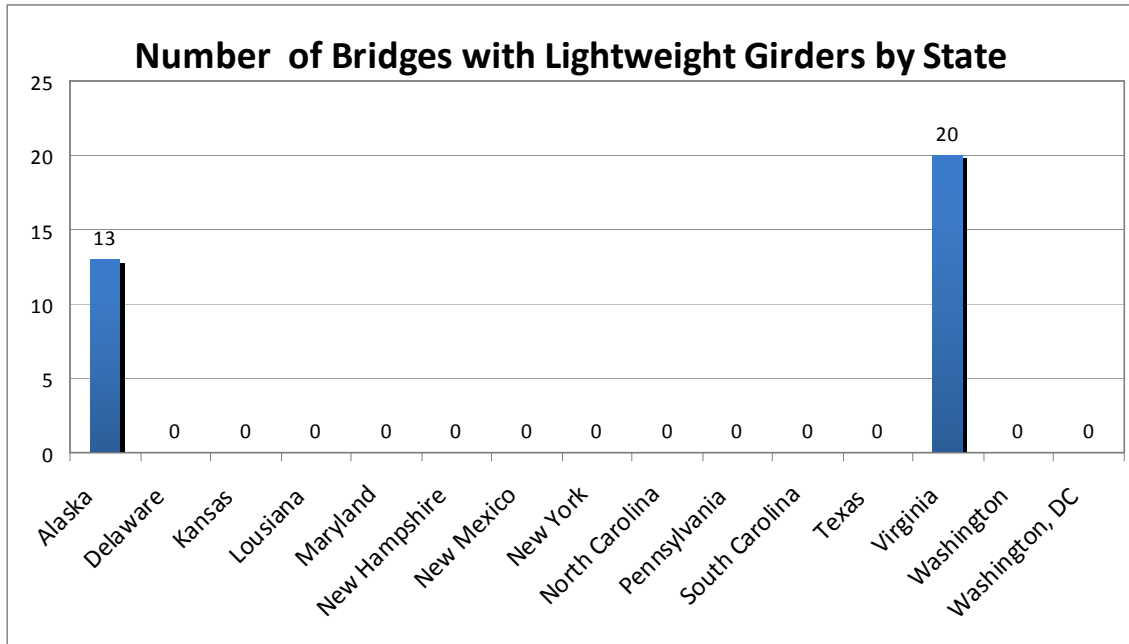
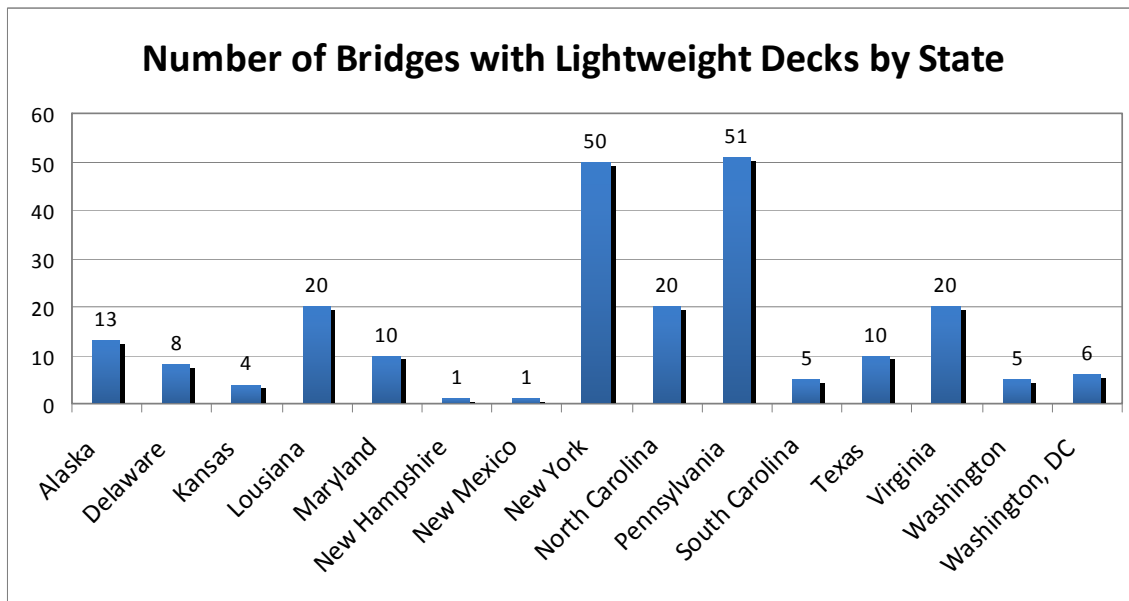




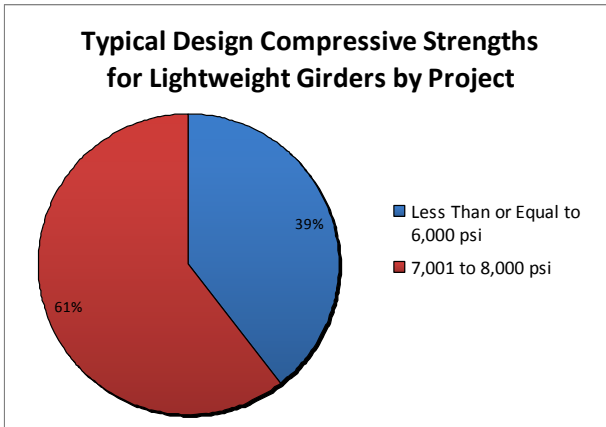
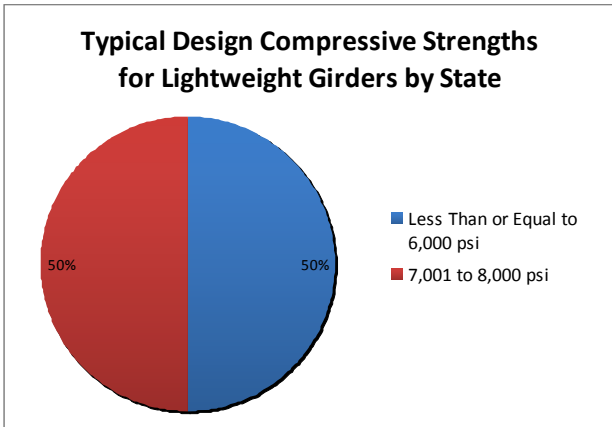
1. How many projects using Lightweight concrete girders have been constructed in your state?



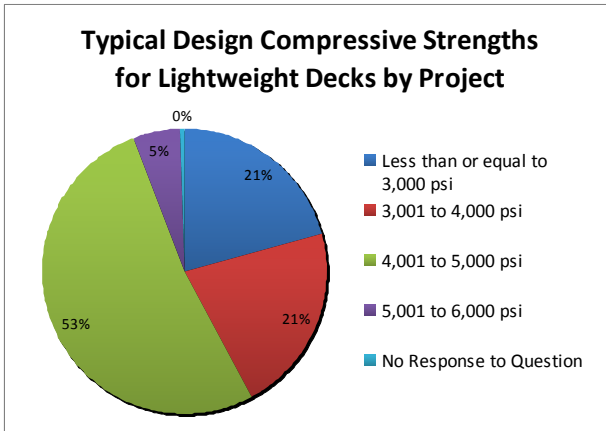
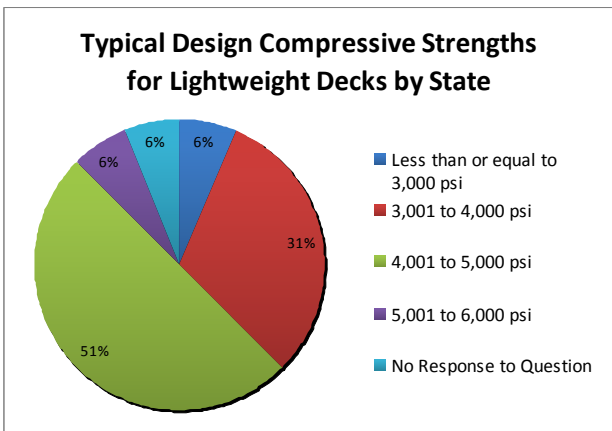
2. How many projects using Lightweight concrete decks have been constructed in your state?



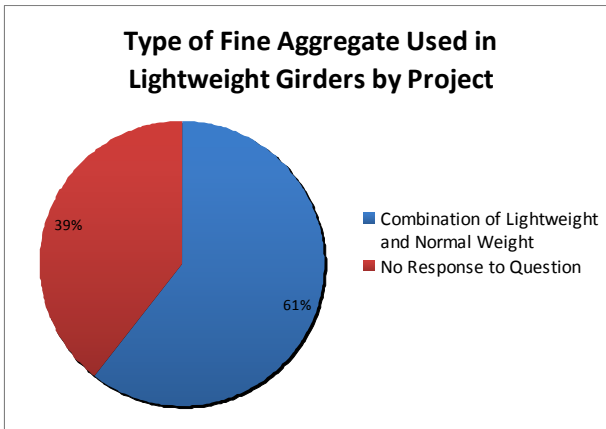
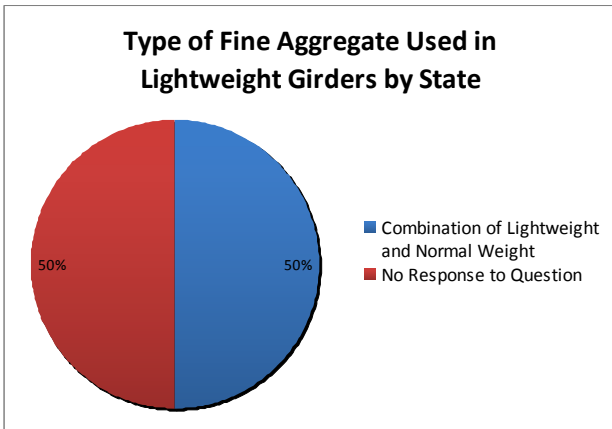
3. What are the typical design compressive strengths of lightweight concrete girders used in your bridges?



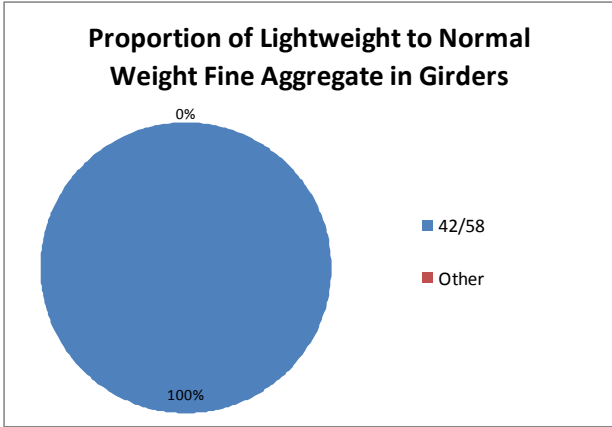
4. What are the typical design compressive strengths of lightweight concrete decks used in your bridges?



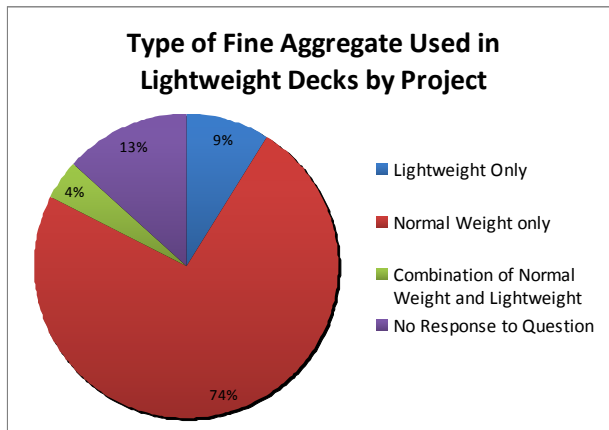
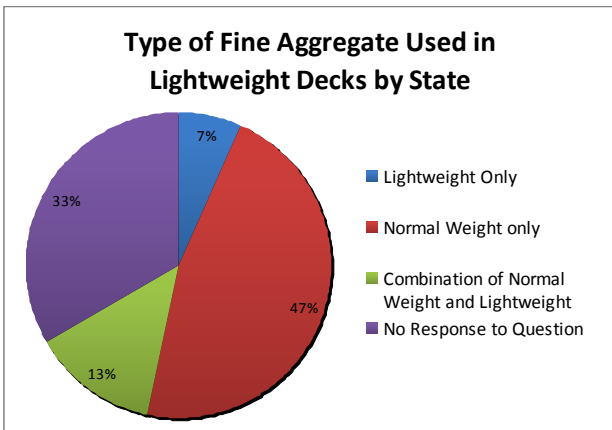
6. In lightweight concrete mix designs for bridge girders, the type of fine aggregate used is typically:



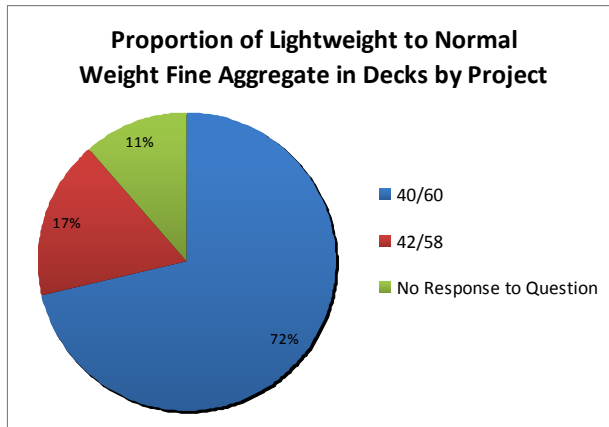
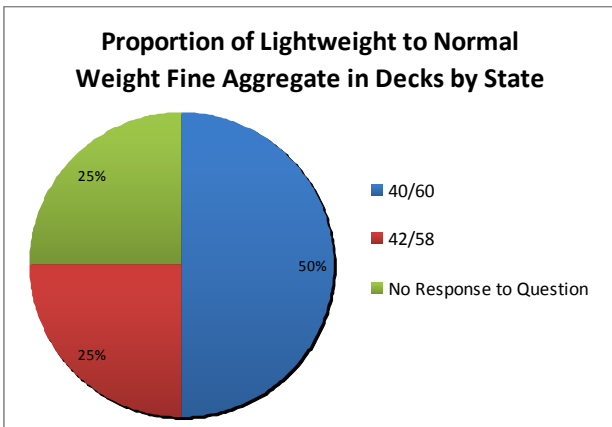
7. If a combination of lightweight and normal weight fine aggregate is used in your bridge girders, what is the most common proportion of lightweight to normal weight aggregate?



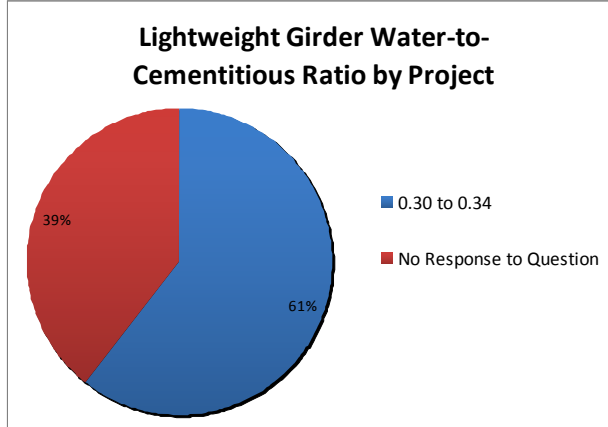
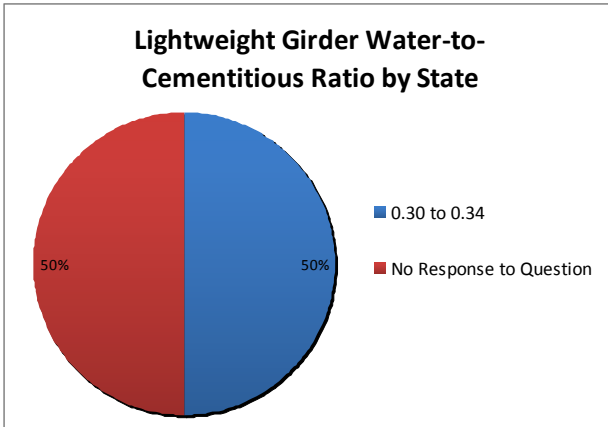
8. In lightweight concrete mix designs for bridge decks, the type of fine aggregate used is typically:



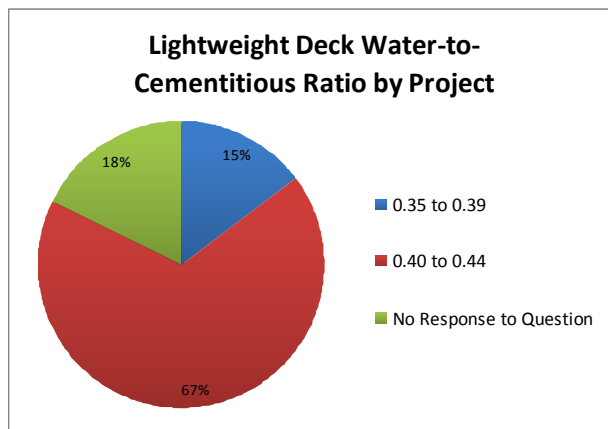
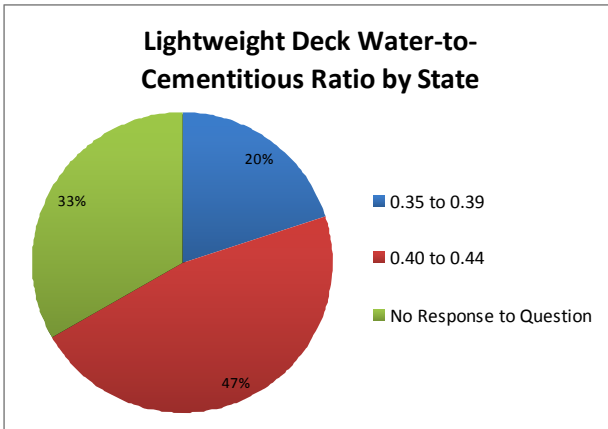
9. If a combination of lightweight and normal weight fine aggregate is used in your bridge decks, what is the most common proportion of lightweight to normal weight aggregate?



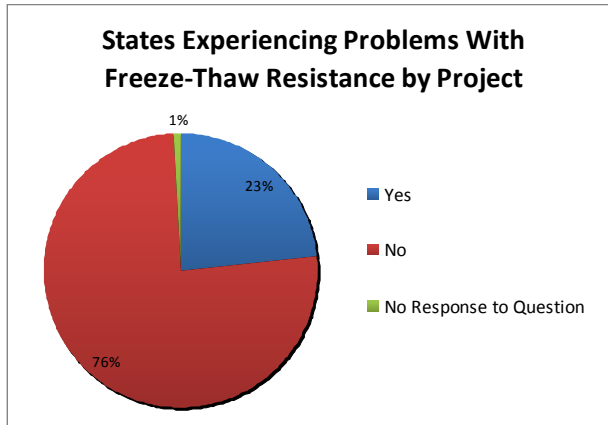
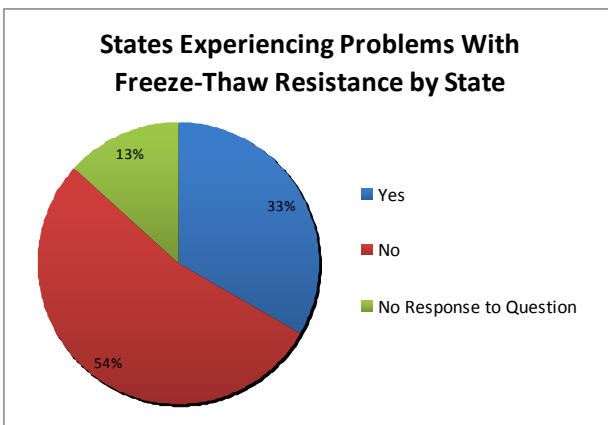
10. What is the typical water-to-cementitious material ratio in the designs for lightweight bridge girders?



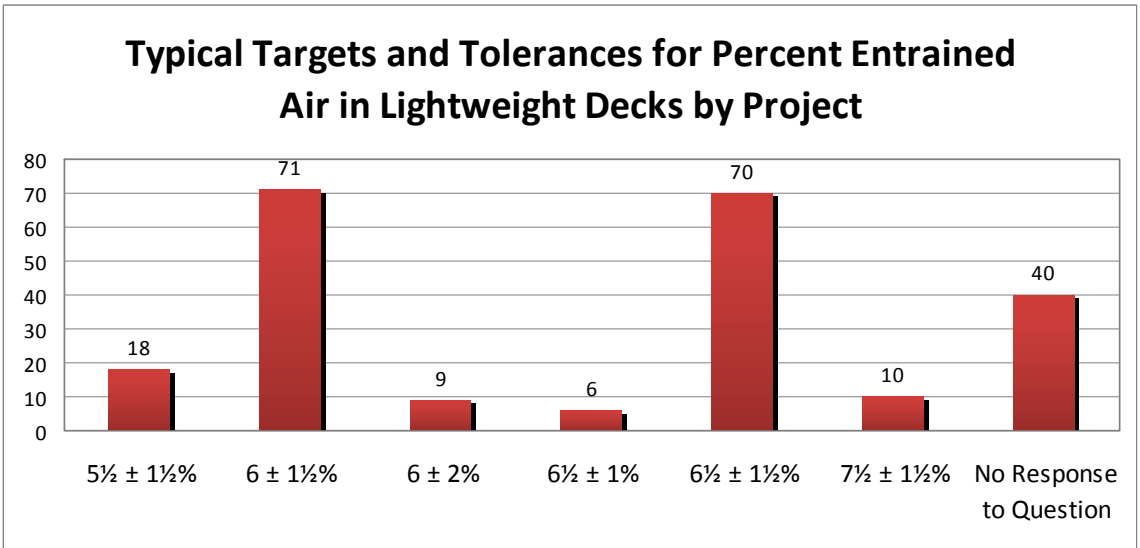
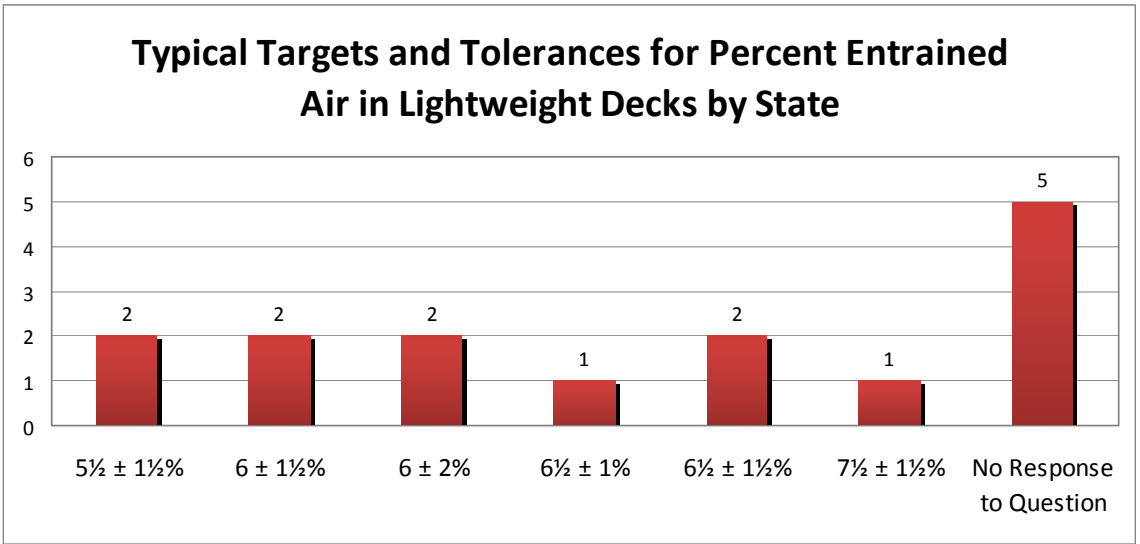
11. What is the typical water-to-cementitious material ratio in the designs for lightweight bridge decks?



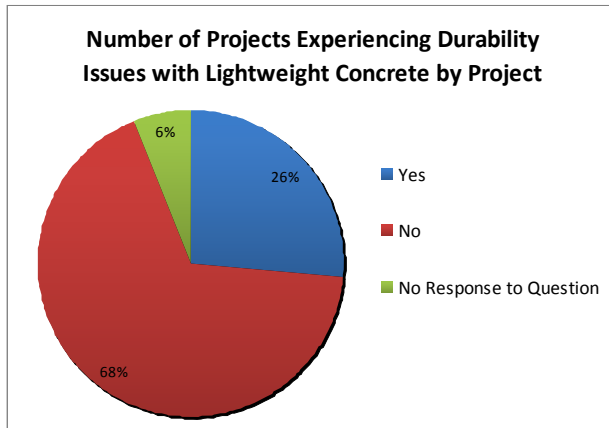
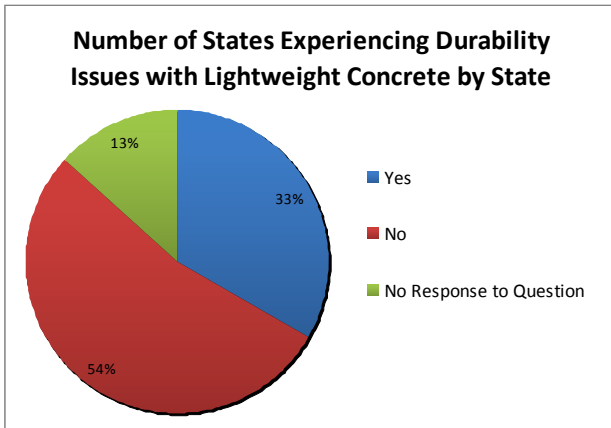
12. Has your state experienced problems with freeze-thaw resistance of lightweight concrete?



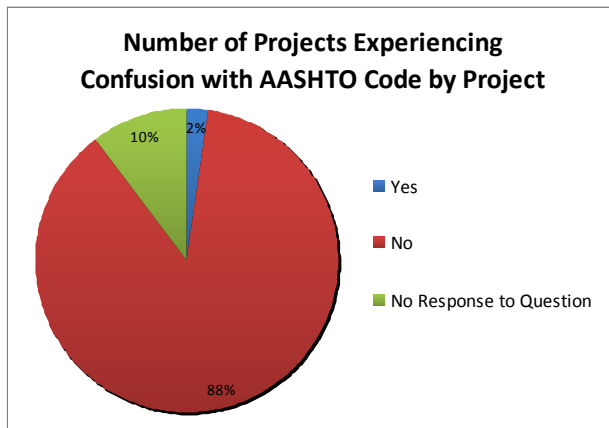
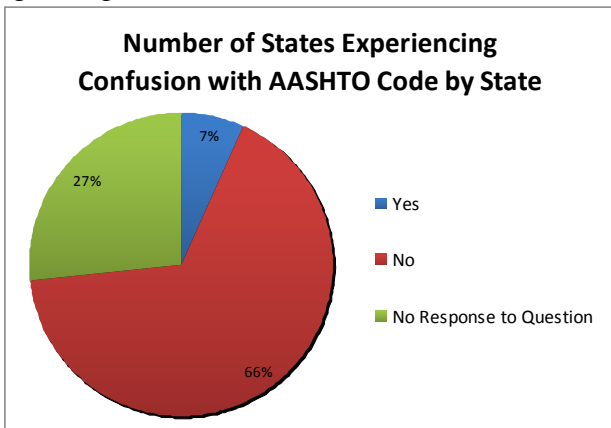
14. What are the typical targets and tolerance ranges for percent entrained air in lightweight concrete for bridge decks?



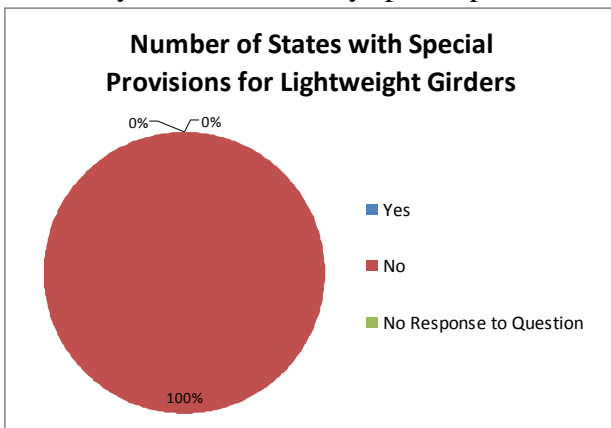
15. Has your state experienced any other issues with the durability of lightweight concrete that have been more of a concern compared to normal weight concrete?



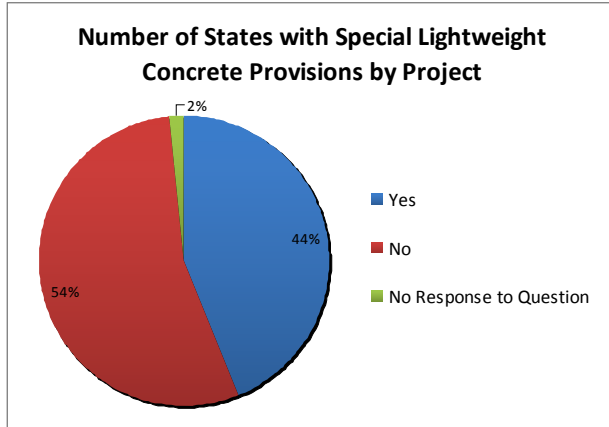
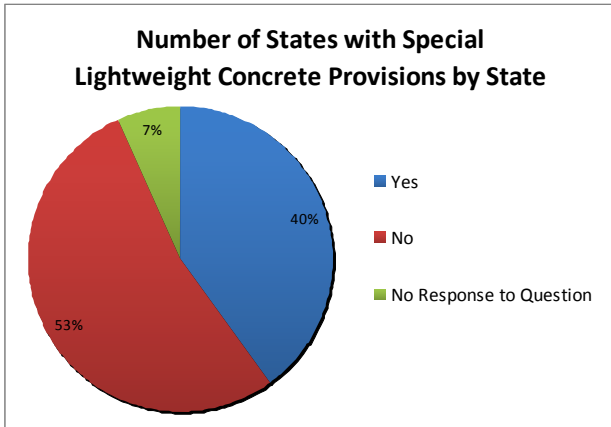
17. Has your state experienced any confusion in using the AASHTO code with respect to designing with lightweight concrete?



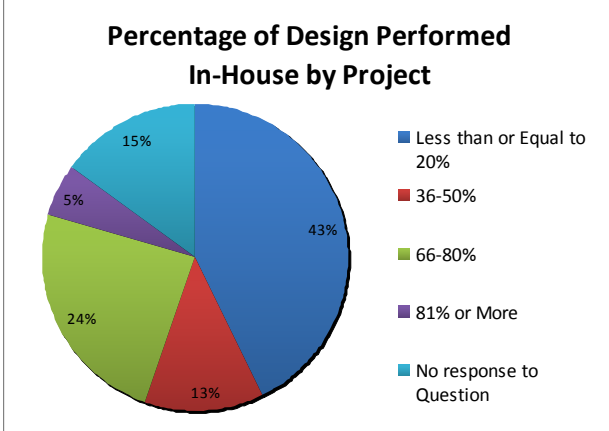
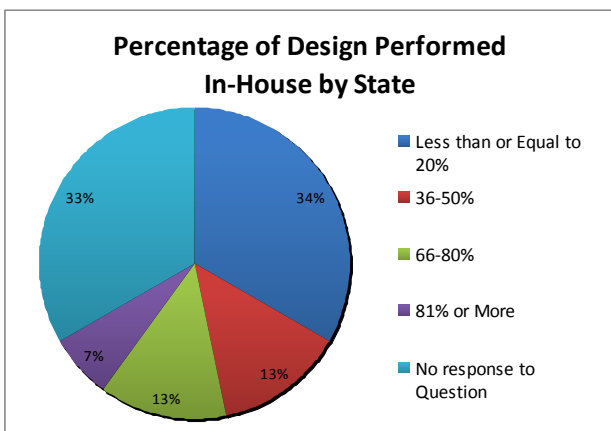
18. Does your state have any special provisions specifically for lightweight concrete girder designs?



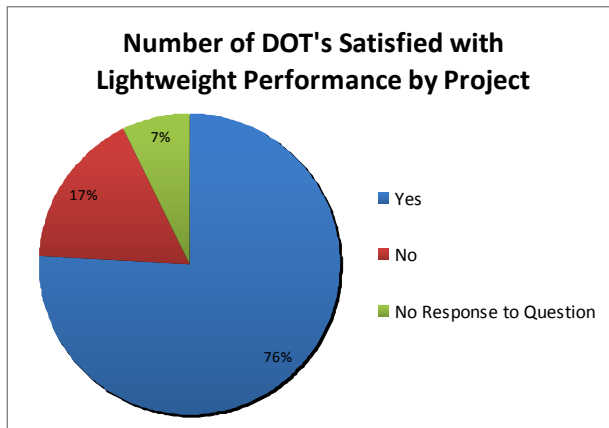
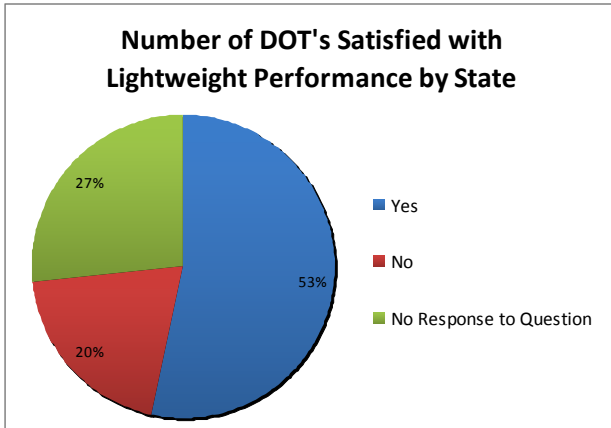
19. Does your state have any special provisions specifically for lightweight concrete deck designs?



23. What percentage of the designs for lightweight concrete bridges has been performed “in-house” at your transportation department?

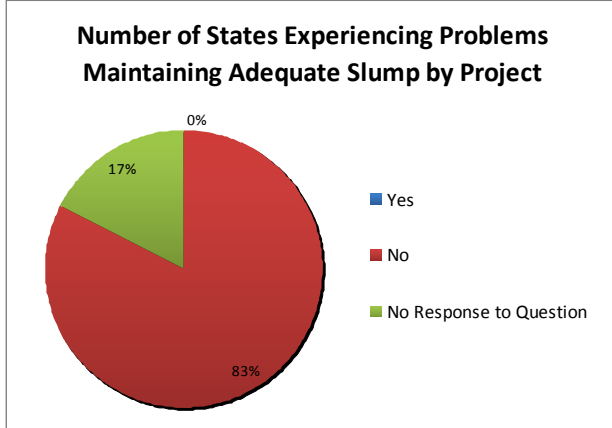
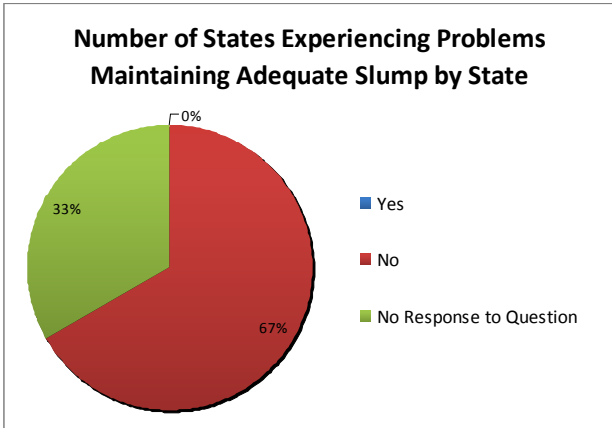


24. Overall, is your department of transportation satisfied with the performance of bridges constructed with lightweight concrete?

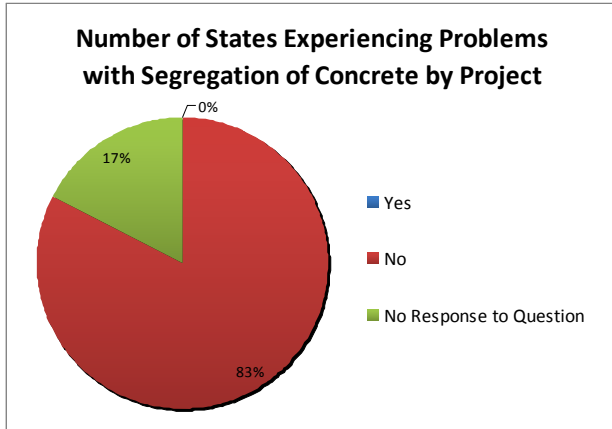
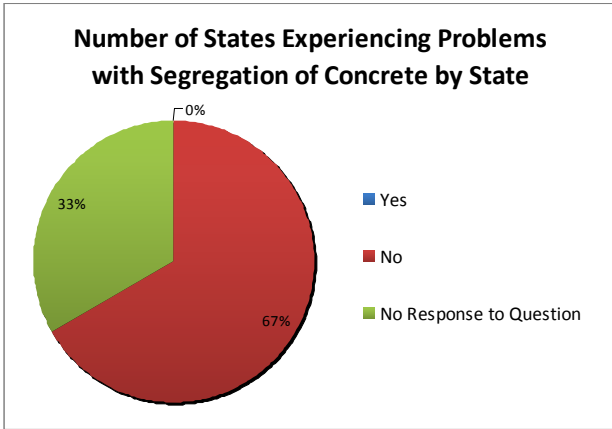




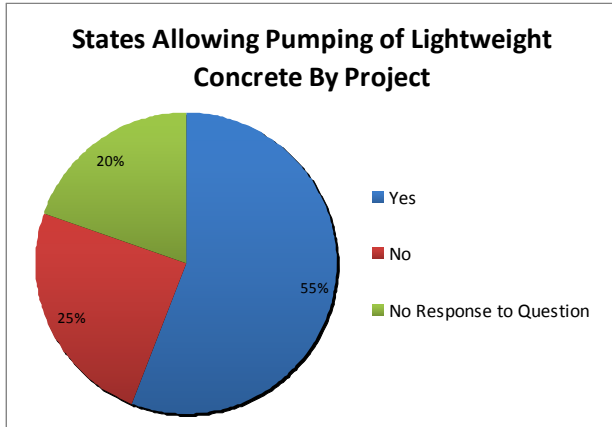
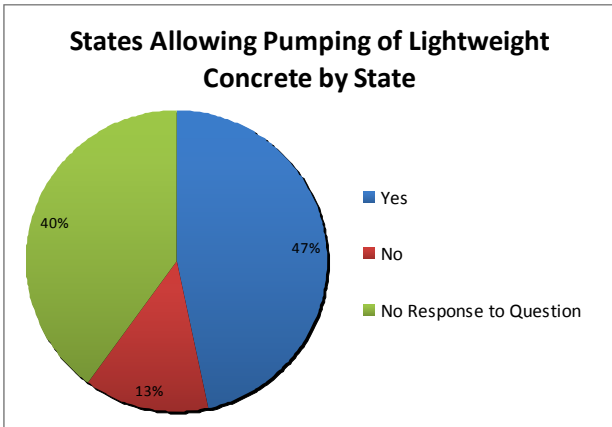
25. Has your state experienced issues with maintaining adequate slump in lightweight concrete mixes during placement?



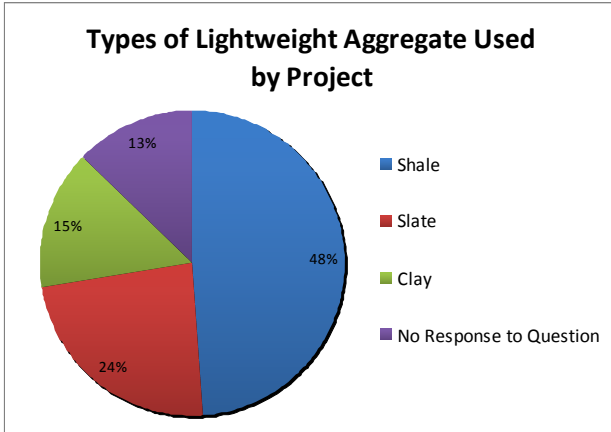
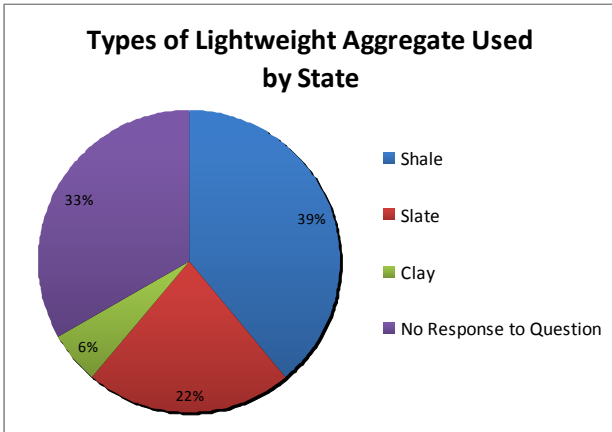
26. Has your state experienced problems with the segregation of lightweight concrete mixes during placement?



27. Does your state allow pumping of lightweight concrete?



30. What type of aggregate is used in concrete production for lightweight bridge girders and decks in your state?



33. How is lightweight aggregate pre-wetted just prior to concrete batching?

