

## **IDEAL PREPS FOR CERAMIC LAMINATES ©**

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One of the results of the last 30 years of rapid evolution of dental materials and techniques has been a rapid expansion in the versatility of bonded all-ceramic laminates. In this evolution, we have seen many innovative preparation designs, intended to meet new requirements in previously untouched territory.

At Shanto, we have found that some of these designs are good while some are not so good. We would like to show three different prep designs which, through many years of experience, we have found to work well for both dentist and technicians. We believe that an ideal laminate preparation depends on case specific requirements. The intention is to be able to choose the best prep design possible for each specific case.

### **DESIGN 1:**

*Facial View:*



*Approximal View:*



*Palatal View:*



In cases where original form of the teeth is to be preserved (not closing any gaps, doing anti-rotations, or moving incisal edges), it is best to do only facial (0.5 - 1mm) and incisal (1.0 - 2.0mm) reduction. There's no need to prep lingually or to break contacts. The incisal edge should be finished in a "butt" joint to the lingual wall.

In this type of design, you will avoid struggling with labial and lingual space in the incisal edge (a common problem for laminates with lingual preparation), you will get a stronger restoration that has a labial path of insertion. Some interproximal preparation is necessary to hide the margins, but it is not necessary to break contacts.

## DESIGN 2:

*Facial View:*



*Approximal View:*



*Palatal View:*



*Design 2B:*



If major changes are being made to the form; widening, narrowing, closing gaps, doing anti-rotations, moving incisal edges, etc. you must break adjacent contact points and prep the entire interproximal wall (all the way to the gingiva) to give us enough room to make the necessary changes.

Consequently, this design will be more like a  $\frac{3}{4}$  crown prep rather than a traditional veneer. Begin by preparing all teeth to the desired overjet, overbite, and other dimensions before you start reducing to make space for the restorations. All subsequent reductions should be made from the desired tooth form, not from the pre-op condition. After that you can start reducing to make space for the laminates.

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## DESIGN 3:

*Facial View:*



*Approximal View:*



*Palatal View:*



*Design 3B:*



This design is a variant of Design 2 but follows the same principles. Interproximal walls are prepped but not all the way to the gingiva. Contact points could be preserved if they are far enough gingivally. It's suited for cases where minor form changes are desired, where a tooth needs to be restored due to a chipped or broken edge, or, for example, restoring anterior guidance on a canine with a worn cusp where labial contour and contact points remain the same. It is not suited for doing anti-rotations or closing of gaps.