

The Survey Process for Removable Partial Dentures

By Mark A. Dellinges, D.D.S., F.A.C.P.

1. Secure cast at a zero degree (neutral) tilt.
2. Identify proximal surfaces for guiding planes next to edentulous areas.
3. Adjust the anteroposterior tilt to align guiding plane areas.
4. Identify retentive areas (undercuts) on potential abutments.
5. Adjust lateral tilt to redistribute undercuts and verify alignment of undercuts.
6. Index the cast. (Tripod)
7. Draw survey lines.
8. Mark depth of undercut. (2 mm long red line.)
9. Indicate tooth modification areas. (Green cross hatches if diagnostic cast.)
10. Draw design. (Refer to the design sequence.)
11. Highlight subtle features of the design in red (e.g., int. finish lines, amount of relief, location for solder.)

The Design Sequence for Removable Partial Dentures

By Mark A. Dellinges, D.D.S., F.A.C.P.

1. Complete the surveying of the diagnostic or master cast, tripodize it and remove it from the surveyor. Survey lines are drawn in black (carbon marker) and undercut areas are indicated in red. Sharp red, blue, green and black pencils are used to outline the framework on the cast.
2. Outline rests in blue confined to the rest seat preparation.
3. Outline the minor connectors and proximal plates in blue, indicating exact width, height and relationship to prepared guiding planes.
4. Outline the major connector in blue incorporating maximum gingival exposure in the areas joining the minor connectors and proximal plates.
5. Outline all clasp arms in blue, indicating precise width, taper and relationship to survey lines and free gingival margins.
6. Outline the retentive mesh or lattice of the resin base in blue, including a metal stop for extension bases. Limit the posterior extension to one half to two thirds the length of the edentulous span.
7. The external finish line is drawn in blue. The internal finish line is drawn in red.
8. Highlight any additional features of the design such as posts, loops or beads utilizing a blue pencil.
9. The measured depth of undercut may be written on the cast along with other written instructions such as the gauge of relief, location for solder or use of a specific material like 19 gauge wrought wire.
10. Fill out a removable partial denture treatment plan form for diagnostic casts or a work authorization form for master casts in detail.