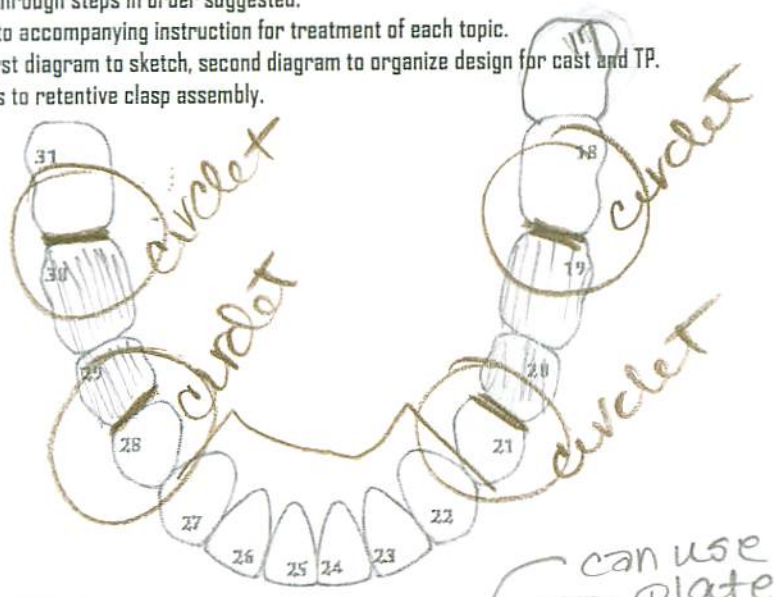
8 RPD DESIGNS

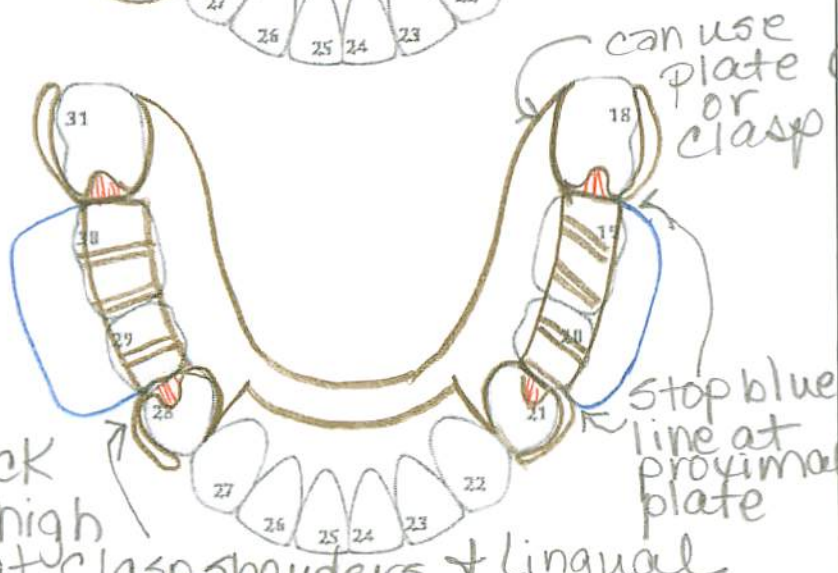
1. **Md III, 1**
2. **Mx III, 1**
3. **Mx III**
4. **Mx II, 1**
5. **Md II, 1**
6. **Md II, 1**
7. **Md I**
8. **Mx I, 2**

1. Md III,1

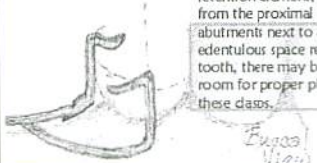
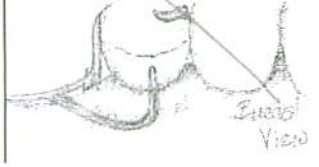
MD RPD Design Worksheet

Work through steps in order suggested.
Refer to accompanying instruction for treatment of each topic.
Use first diagram to sketch, second diagram to organize design for cast and TP.
* refers to retentive clasp assembly.





Distal Extension RCA choices for posterior teeth

Clasp assemblies by: Retentive clasp / Rest location	SUPRABULGE	INFRABULGE
	May need to adjust survey line for shoulder. Unesthetic	Esthetic... But, cannot be used if: High frena attachment; Mucogingival defect; Bony buccal undercut; Cl V restoration
DISTAL REST — Less vertical movement. Clasps move opposite occlusal load.	WAW More stress to tissue, less stress to tooth. More esthetic than cast circlet because larger undercut places it more apically. 	MOD T BAR WAW and infrabulge retainers originate from the denture base retention element, remotely from the proximal plate. For abutments next to a small edentulous space replacing one tooth, there may be too little room for proper placement of these clasps. 
MESIAL REST — More vertical movement. Distal plate and clasps move same direction as occlusal load. Cannot use on mesially tipped tooth.	REVERSE CIRCLET May have difficulty with occlusal clearance. 	I BAR Special requirements for reciprocation elements and distal guiding plane. Physiologic adjustment. 

Clinical information:

Survey:
>Flat with floor.
>Adjust tilt to best position for proximal surfaces of abutments.
>Lightly mark survey lines.

Plan Design:

1.
>Lightly block out missing teeth. ✓
>Proximal plates. ✓

2.
Classification:
>III or IV: quadrilateral RCA* distribution.
>I: bilateral RCA distribution. } *rotational axis &*
>II: tripodal RCA distribution. } *indirect retention rest*

3.
Clasp selection (with survey & cast):
>Existing restorations.
>Esthetics.
>Undercut location.
>Mechanics of DE.

all tooth supported → seldom do clasp selection simplest is cast circlet

↳ enough room, use bar

4.
Major connector:
>MD: Bar or plate

5.
Complete framework.

6.
Tooth and soft tissue replacement:
>Denture base retention → long span
>Tube tooth, RAP
>Denture base outline

Preliminary Design:
>Tripod study model.
>Resurvey.
>Design in brown on study model.
>Mark adjustment areas in red on study model.
>Complete TP form.

1

1. Md III, 1

(central incisors are missing, missing rests on premolars)

This is a demonstration model. It has been processed with the denture teeth, but instead of the traditional pink denture base, clear resin has been used to show the denture base retention inside.

•Note the interface between the resin and the framework on both the cameo and intaglio surfaces. They meet at the internal and external finish lines.

•Note the way the major connector, because there is no distal extension, curves up to the terminal tooth.

•Note that the lingual denture base does not extend past the framework.

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2. Max III, 1

MX RPD Design Worksheet

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Use first diagram to sketch, second diagram to organize design for cast and TP.
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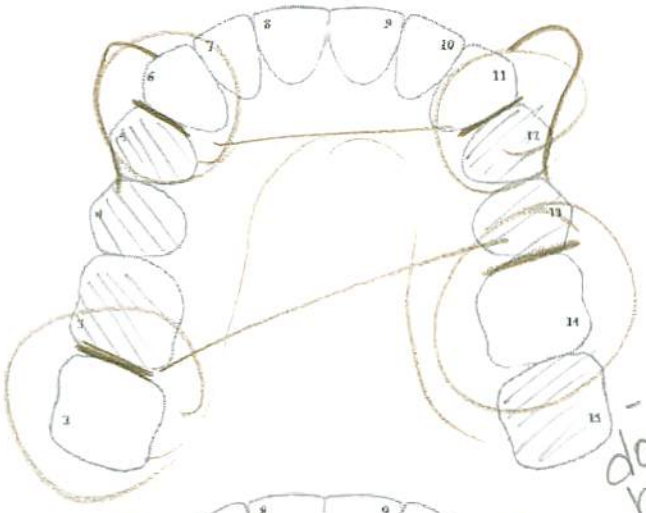
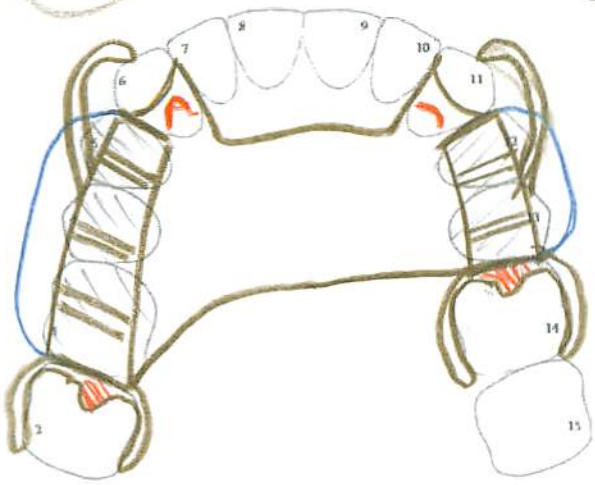
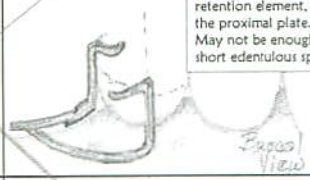


don't replace



Distal Extension RCA choices for posterior teeth

Clasp assemblies by: Retentive clasp / Rest location	SUPRABULGE	INFRABULGE
	May need to adjust survey line for shoulder. Unesthetic	Esthetic... But, cannot be used if: High frena attachment; Mucogingival defect; Bony buccal undercut; Cl V restoration
DISTAL REST — Less vertical movement of distal extension under occlusion load. Clasps move opposite direction of occlusal load.	WW More stress to tissue, less stress to tooth. More esthetic than cast circlet because larger undercut places it more apically. 	MOD T BAR WW and infrabulge retainers originate from the denture base retention element, away from the proximal plate. May not be enough room in short edentulous spaces. 
MESIAL REST — More vertical movement of distal extension under occlusal load. Distal plate and clasps move same direction as occlusal load. Cannot use on mesially tipped tooth.	REVERSE CIRCLET May have difficulty with occlusal clearance. 	I BAR Special requirements for reciprocation elements and distal guiding plane. Requires physiologic adjustment. 

Clinical information:

Survey:
>Flat with floor.
>Adjust tilt to best position for proximal surfaces of abutments.
>Lightly mark survey lines.

Plan Design:

1.
>Lightly block out missing teeth. ✓
>Proximal plates. ✓

2.
Classification:
>III or IV: quadrilateral RCA* distribution.
>I: bilateral RCA distribution. } *rotational axis &*
>II: tripodal RCA distribution. } *indirect retention rest*

3.
Clasp selection (with survey & cast):
>Existing restorations.
>Esthetics.
>Undercut location.
>Mechanics of DE.

all tooth supported
any clasp okay
choose infrabulge
for esthetics
anterior

4.
Major connector:
>MX: Strap, AP strap, full palate, horseshoe

* all possible

5.
Complete framework.

6.
Tooth and soft tissue replacement:
>Denture base retention — long spans
>Tube tooth, RAP
>Denture base outline

Preliminary Design:
>Tripod study model.
>Resurvey.
>Design in brown on study model.
>Mark adjustment areas in red on study model.
>Complete TP form.

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2. Mx III, 1
(fractured 7)

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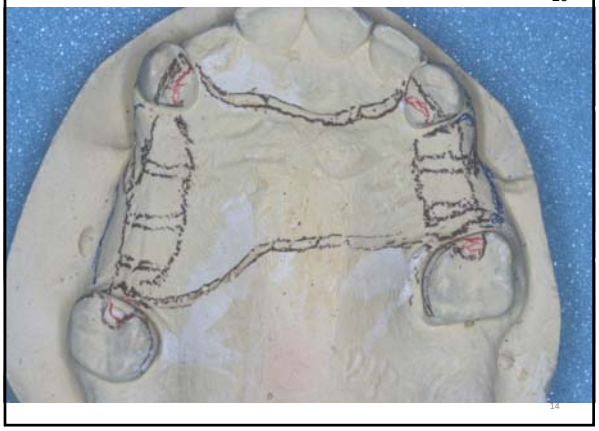

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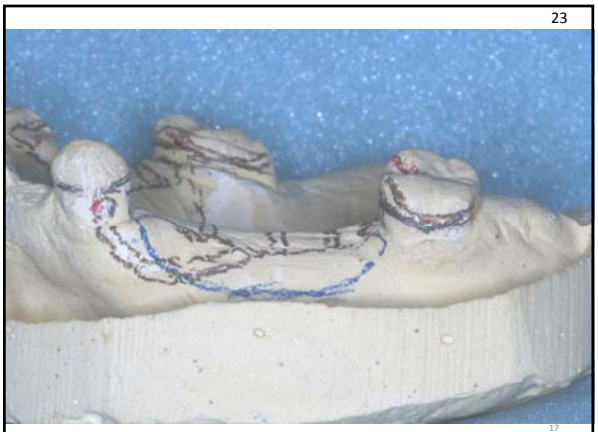

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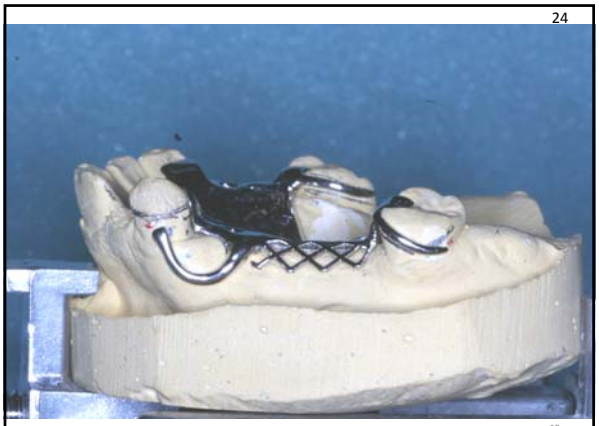

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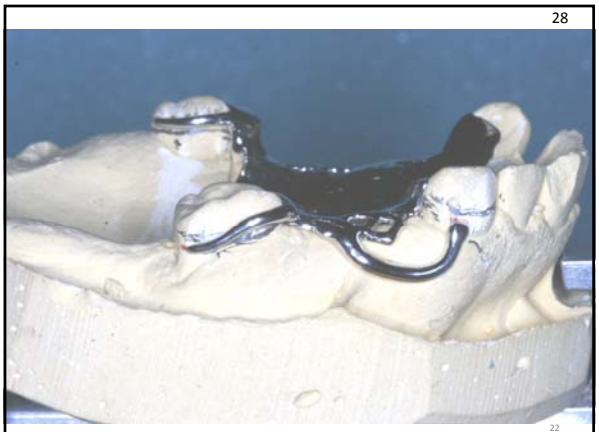

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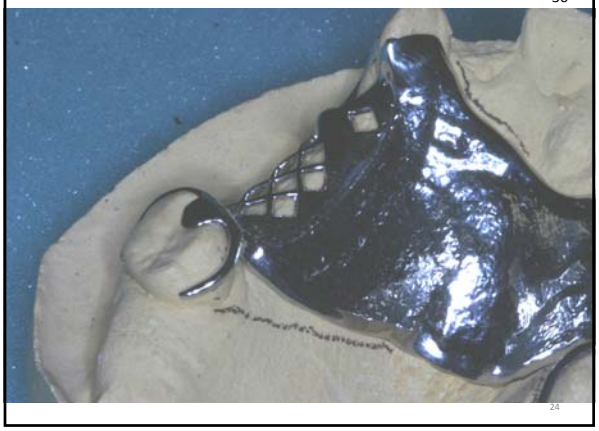

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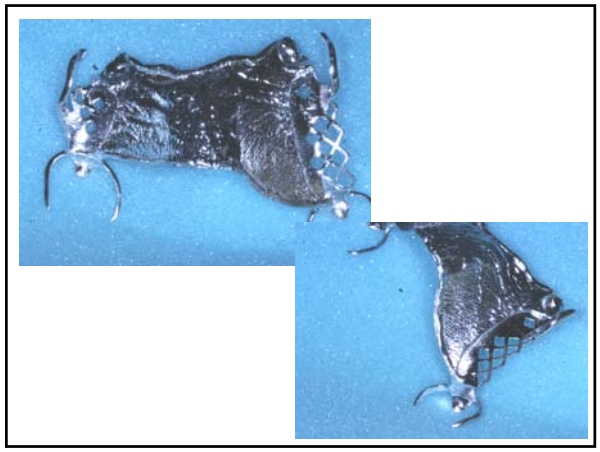

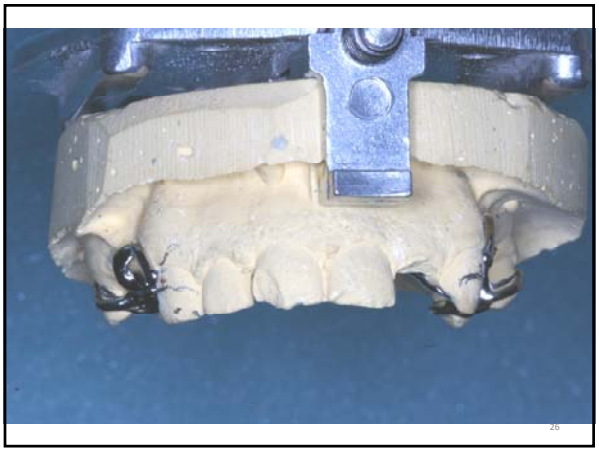

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3. Mx III
(missing 7)

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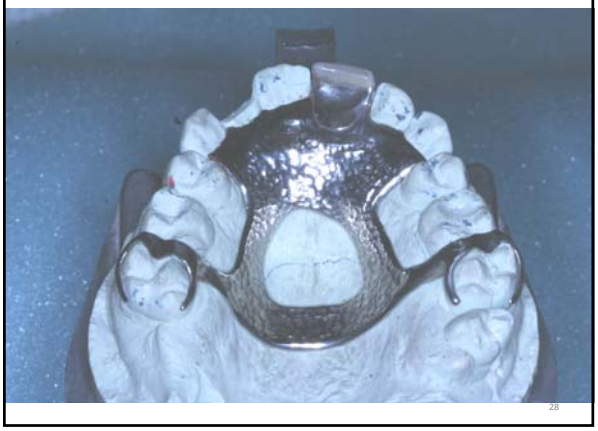

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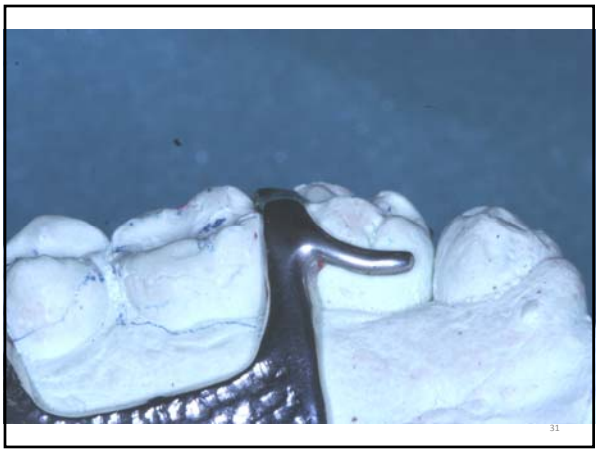

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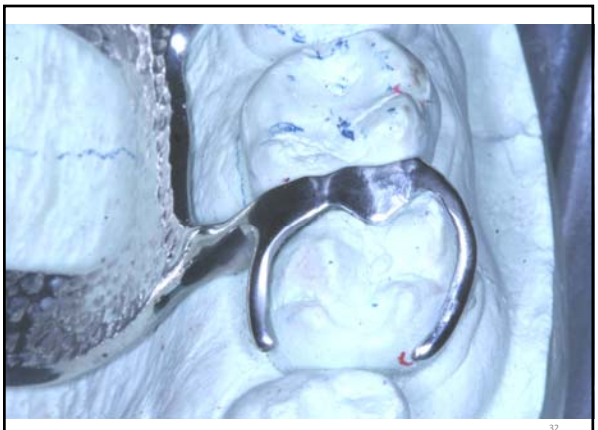

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4. Mx II, I

MX RPD Design Worksheet

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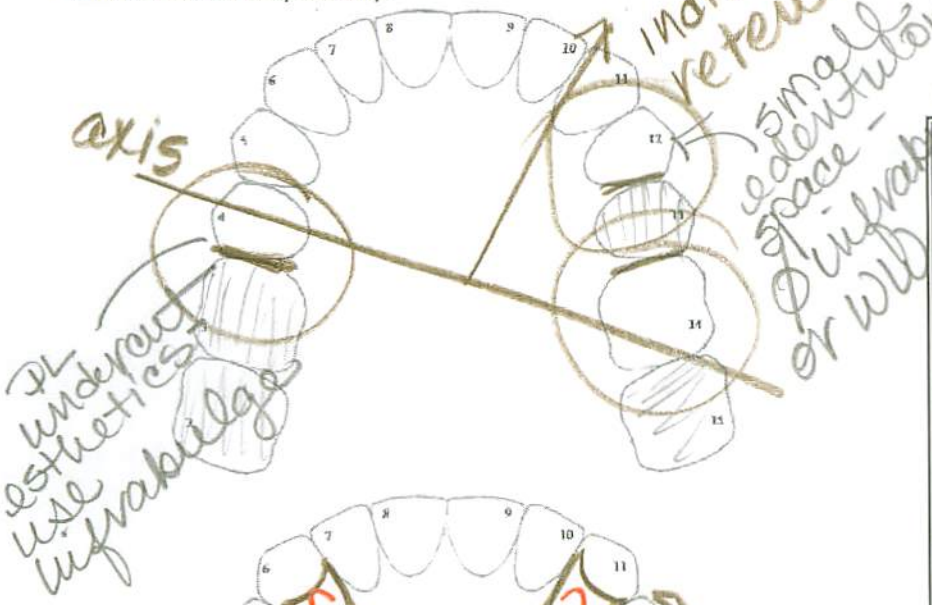
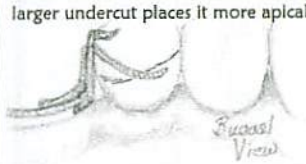
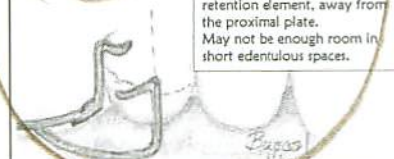


Distal Extension RCA choices for posterior teeth

Clasp assemblies by:

Rest location \ Retentive clasp	SUPRABULGE	INFRABULGE
	May need to adjust survey line for shoulder. Unesthetic	Esthetic... But, cannot be used if: High frena attachment; Mucogingival defect; Bony buccal undercut; Cl V restoration
DISTAL REST Less vertical movement of distal extension under occlusion load. Clasps move opposite direction of occlusal load.	WW More stress to tissue, less stress to tooth. More esthetic than cast circlet because larger undercut places it more apically. 	MOD T BAR WW and infrabulge retainers originate from the denture base retention element, away from the proximal plate. May not be enough room in short edentulous spaces. 
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Clinical information:

Survey:
>Flat with floor.
>Adjust tilt to best position for proximal surfaces of abutments.
>Lightly mark survey lines.

Plan Design:

1.
>Lightly block out missing teeth.
>Proximal plates.

2.
Classification:
>III or IV: quadrilateral RCA* distribution.
>I: bilateral RCA distribution. *rotational axis &*
>II: tripodal RCA distribution. *indirect retention rest*

3.
Clasp selection (with survey & cast):
>Existing restorations.
>Esthetics.
>Undercut location.
>Mechanics of DE.

1 of 4 for distal extension

4.
Major connector:
>MX: Strap, AP strap, full palate, horseshoe

for distal extensio

5.
Complete framework.

6.
Tooth and soft tissue replacement:
>Denture base retention
>Tube tooth, RAP
>Denture base outline

distal extensio

Preliminary Design:
>Tripod study model.
>Resurvey.
>Design in brown on study model.
>Mark adjustment areas in red on study model.
>Complete TP form.

4. Mx II, 1

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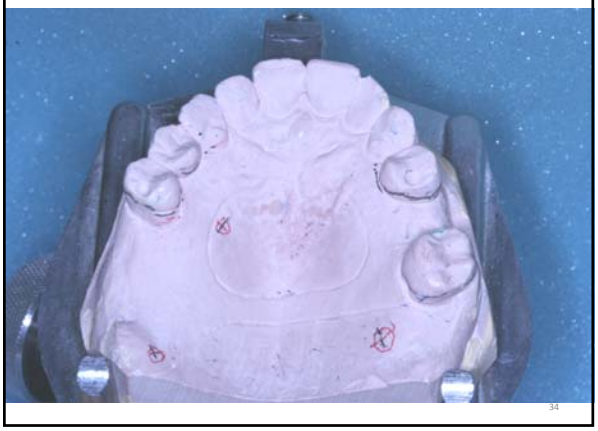

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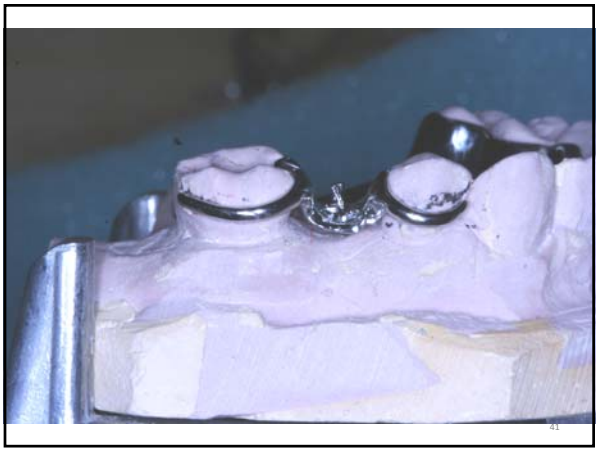
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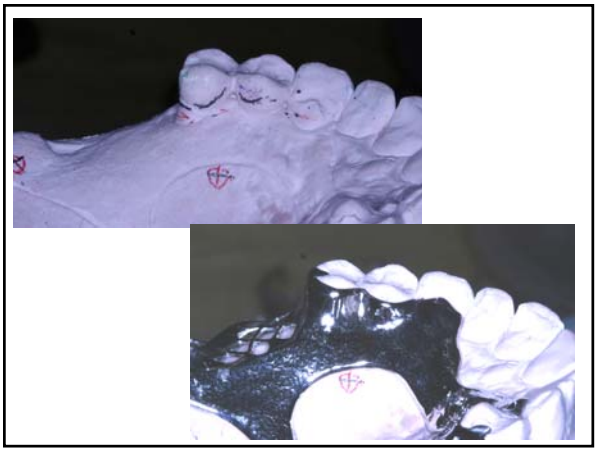

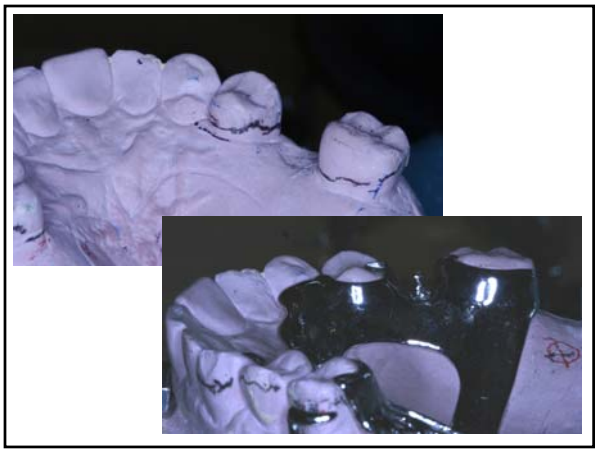

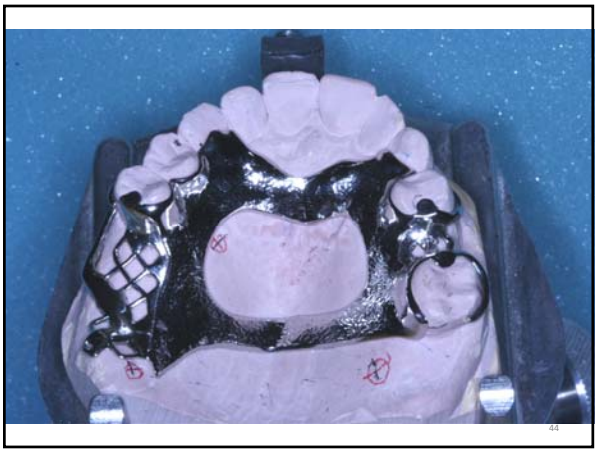
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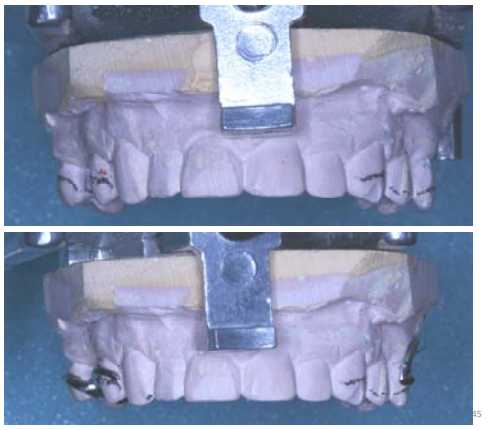

5. Md II, 1

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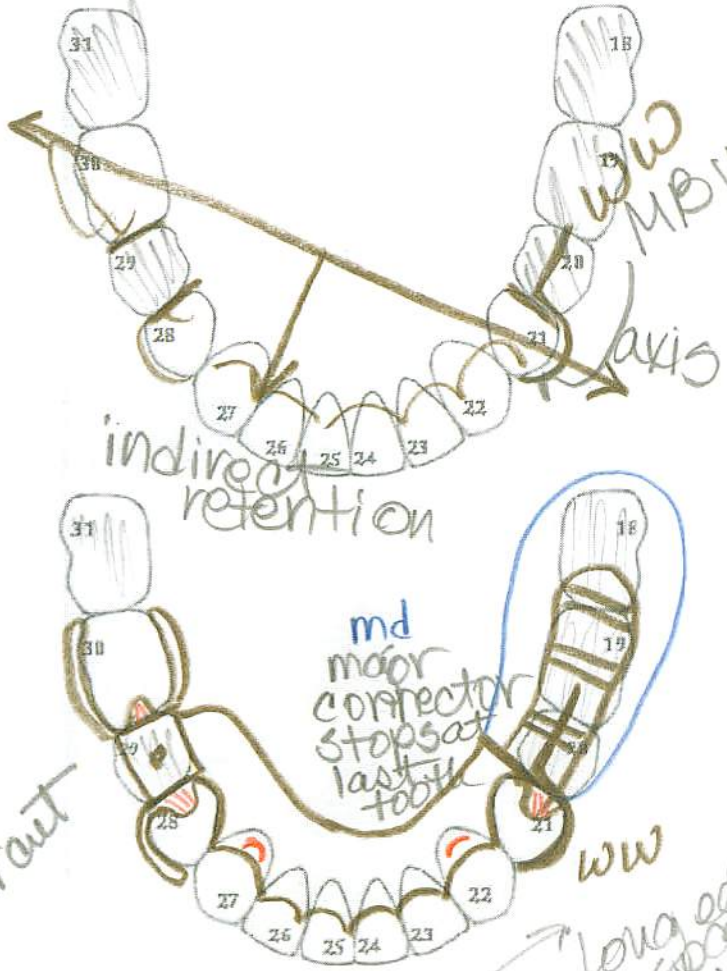
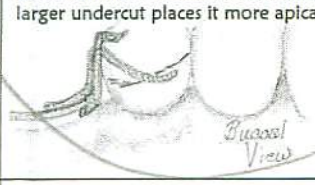
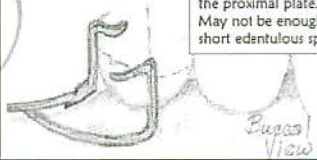
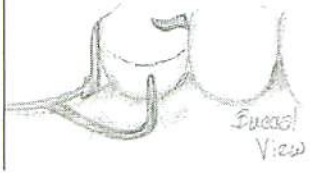


Distal Extension RCA choices for posterior teeth

Clasp assemblies by: Retentive clasp / Rest location	SUPRABULGE	INFRABULGE
	May need to adjust survey line for shoulder. Unesthetic	Esthetic... But, cannot be used if: High frena attachment; Mucogingival defect; Bony buccal undercut; CI V restoration
DISTAL REST — Less vertical movement of distal extension under occlusion load. Clasps move opposite direction of occlusal load.	WW More stress to tissue, less stress to tooth. More esthetic than cast circlet because larger undercut places it more apically. 	MOD T BAR WW and infrabulge retainers originate from the denture base retention element, away from the proximal plate. May not be enough room in short edentulous spaces. 
MESIAL REST — More vertical movement of distal extension under occlusal load. Distal plate and clasps move same direction as occlusal load. Cannot use on mesially tipped tooth.	REVERSE CIRCLET May have difficulty with occlusal clearance. 	I BAR Special requirements for reciprocation elements and distal guiding plane. Requires physiologic adjustment. 

Clinical information:

Survey:
>Flat with floor.
>Adjust tilt to best position for proximal surfaces of abutments.
>Lightly mark survey lines.

Plan Design:

1.
>Lightly block out missing teeth.
>Proximal plates.

2.
Classification:
>III or IV: quadrilateral RCA* distribution.
>I: bilateral RCA distribution. } *rotational axis &*
>II: tripodal RCA distribution. } *indirect retention rest*

3.
Clasp selection (with survey & cast):
>Existing restorations.
>Esthetics.
>Undercut location.
>Mechanics of DE.

28 & 30 - tooth
21 - tooth + tissue
choose 1 of 4

4.
Major connector:
>MD: Bar or plate

↑ no sublingual room
md incisors at risk

5.
Complete framework.

6.
Tooth and soft tissue replacement:
>Denture base retention
>Tube tooth, RAP
>Denture base outline

distal extension
> 29

Preliminary Design:
>Tripod study model.
>Resurvey.
>Design in brown on study model.
>Mark adjustment areas in red on study model.
>Complete TP form.

5. Md II, 1

(missing incisors)
(MO rest with WW next to distal extension is wrong, should be a DO rest)

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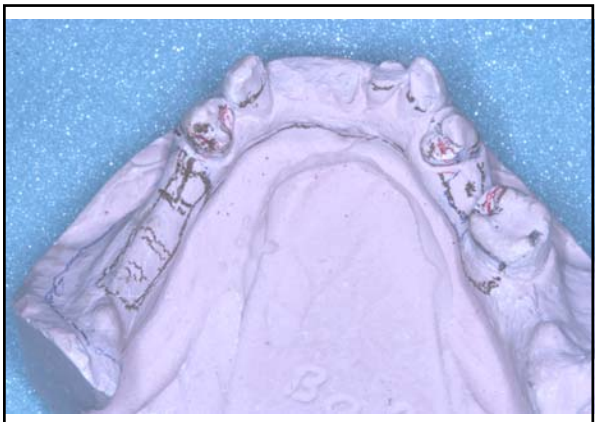

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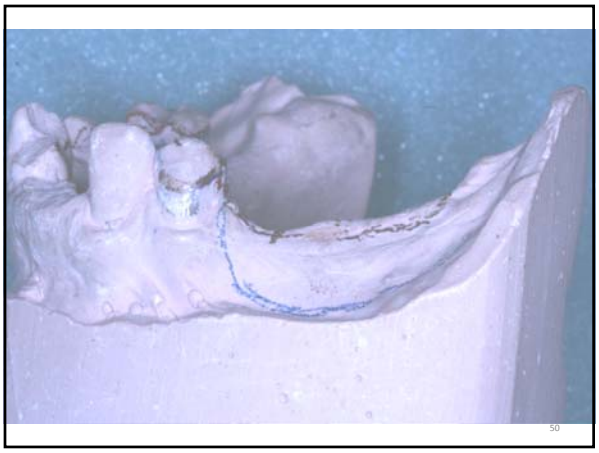

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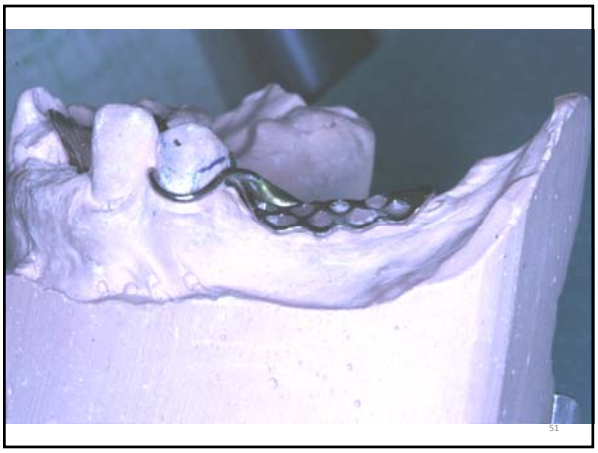

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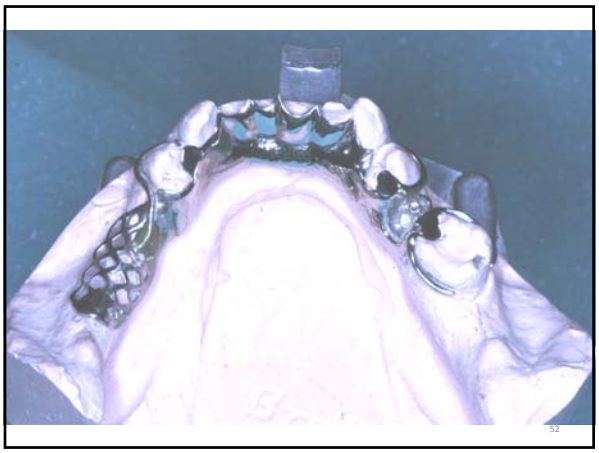
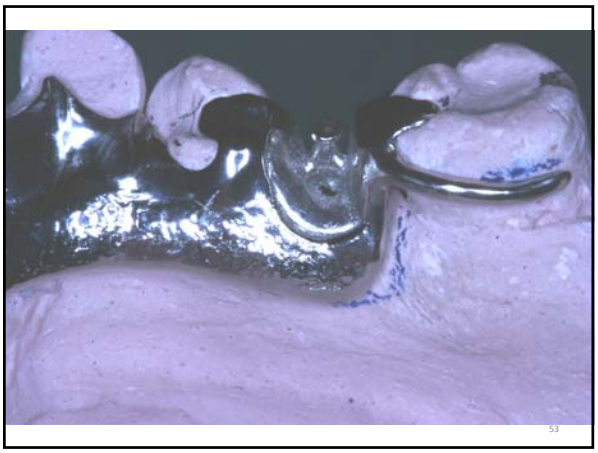
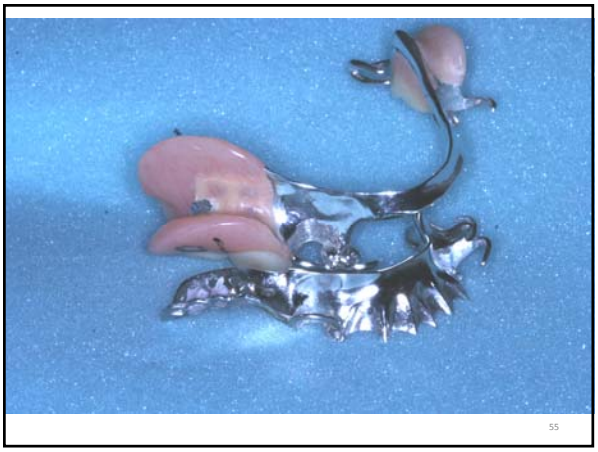


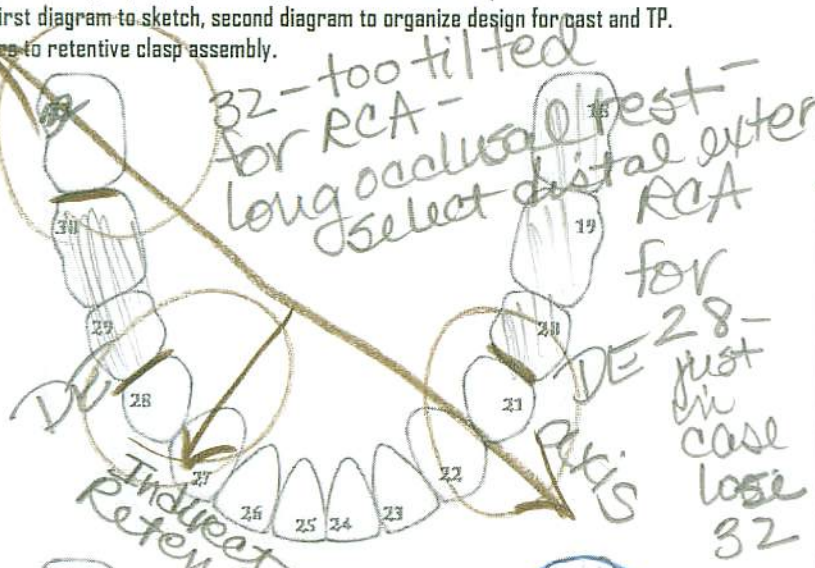


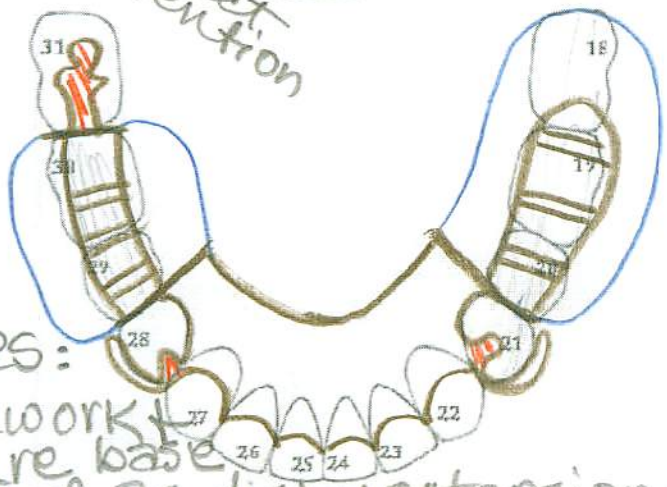


6. Md II, 1

MD RPD Design Worksheet

Work through steps in order suggested.
Refer to accompanying instruction for treatment of each topic.
Use first diagram to sketch, second diagram to organize design for cast and TP.
* refers to retentive clasp assembly.

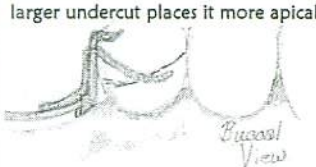
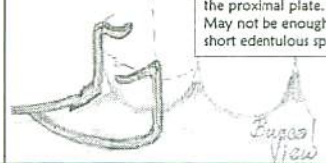
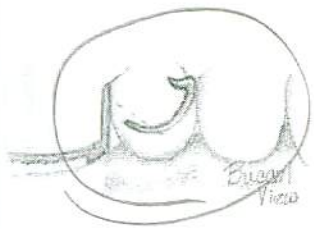
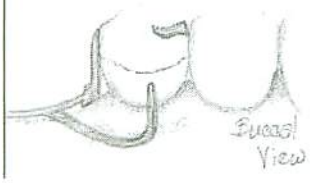




Notes:
framework + denture base treated as distal extension - look at #5 for tooth supported

Distal Extension RCA choices for posterior teeth

Clasp assemblies by:

Rest location \ Retentive clasp	SUPRABULGE May need to adjust survey line for shoulder. Unesthetic	INFRABULGE Esthetic... But, cannot be used if: High frena attachment Bony buccal undercut Mucogingival defect Cl V restoration
DISTAL REST Less vertical movement of distal extension under occlusion load. Clasps move opposite direction of occlussal load.	WW More stress to tissue, less stress to tooth. More esthetic than cast circlet because larger undercut places it more apically.  	MOD T BAR WW and infrabulge retainers originate from the denture base retention element, away from the proximal plate. May not be enough room in short edentulous spaces. 
MESIAL REST More vertical movement of distal extension under occlusal load. Distal plate and clasps move same direction as occlusal load. Cannot use on mesially tipped tooth.	REVERSE CIRCLET May have difficulty with occlusal clearance.  	I BAR Special requirements for reciprocation elements and distal guiding plane. Requires physiologic adjustment. 

Clinical information:

Survey:
>Flat with floor.
>Adjust tilt to best position for proximal surfaces of abutments.
>Lightly mark survey lines.

Plan Design:

1.
>Lightly block out missing teeth.
>Proximal plates.

2.
Classification:
>III or IV: quadrilateral RCA* distribution.
>I: bilateral RCA distribution. } *rotational axis &*
>II: tripodal RCA distribution. } *indirect retention rest*

3.
Clasp selection (with survey & cast):
>Existing restorations.
>Esthetics.
>Undercut location. - DB
>Mechanics of DE.

4.
Major connector:
>MD: Bar or plate

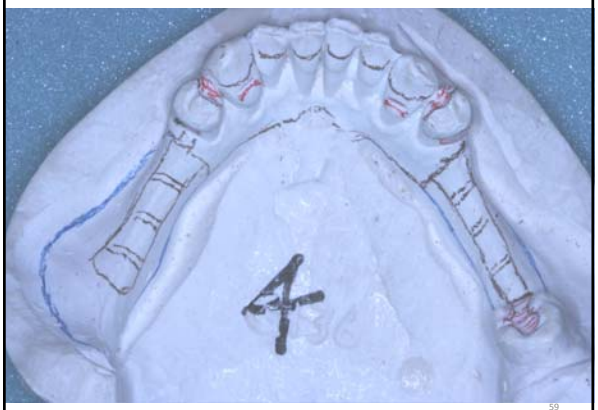
5.
Complete framework.

6.
Tooth and soft tissue replacement:
>Denture base retention
>Tube tooth, RAP
>Denture base outline

Preliminary Design:
>Tripod study model.
>Resurvey.
>Design in brown on study model.
>Mark adjustment areas in red on study model.
>Complete TP form.

6. Md II, 1

58



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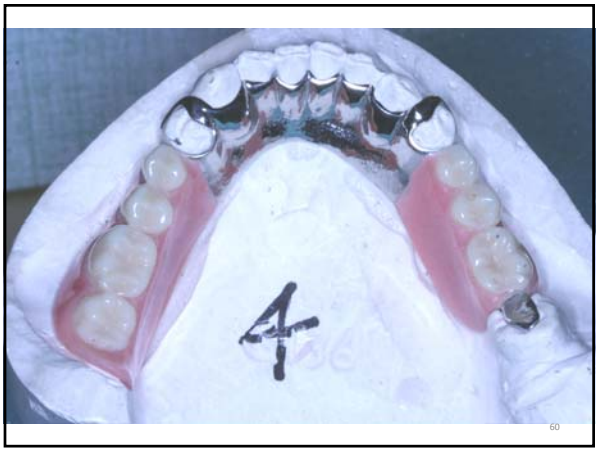

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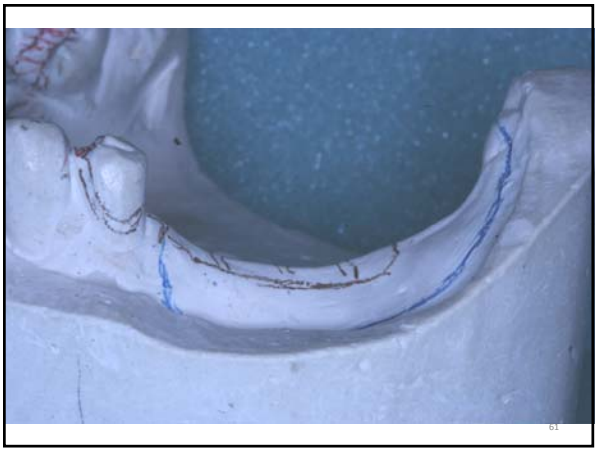

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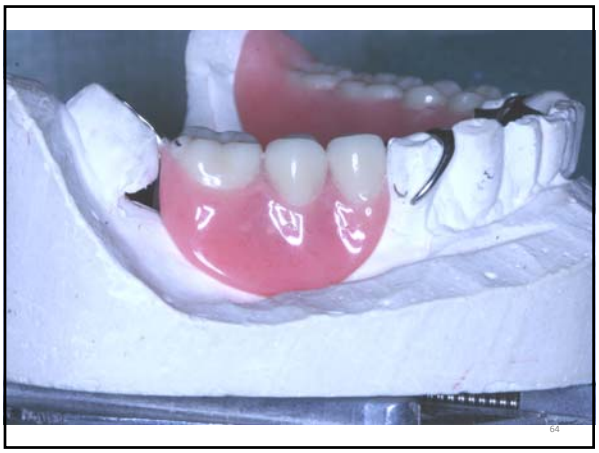
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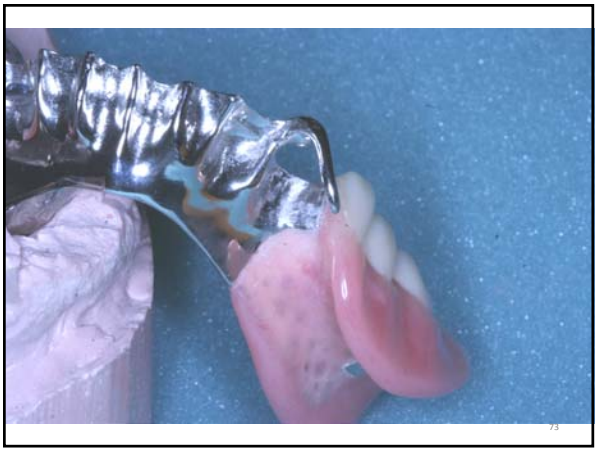
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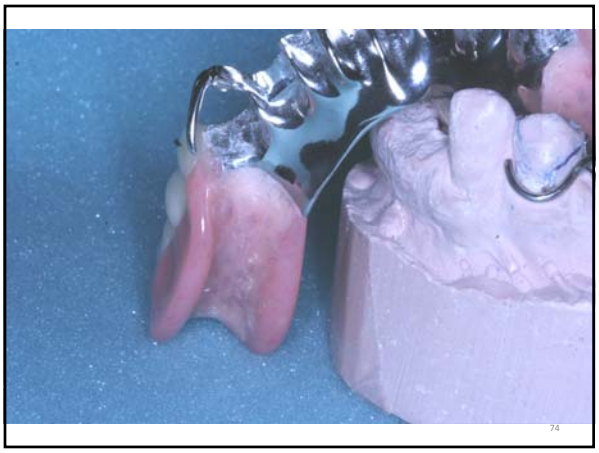
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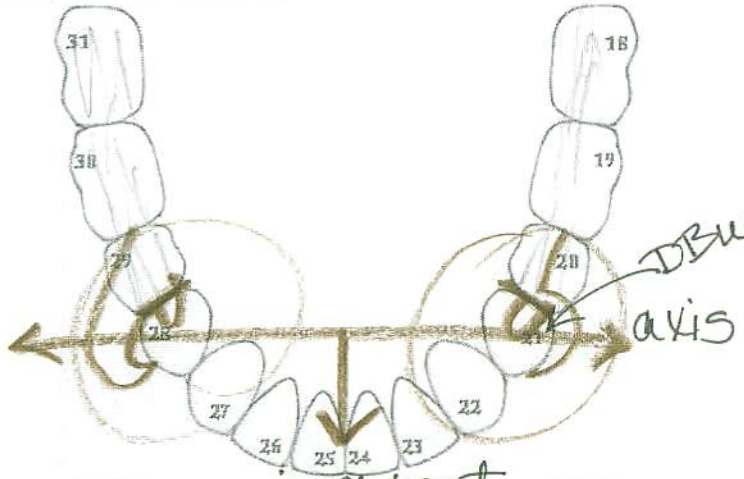
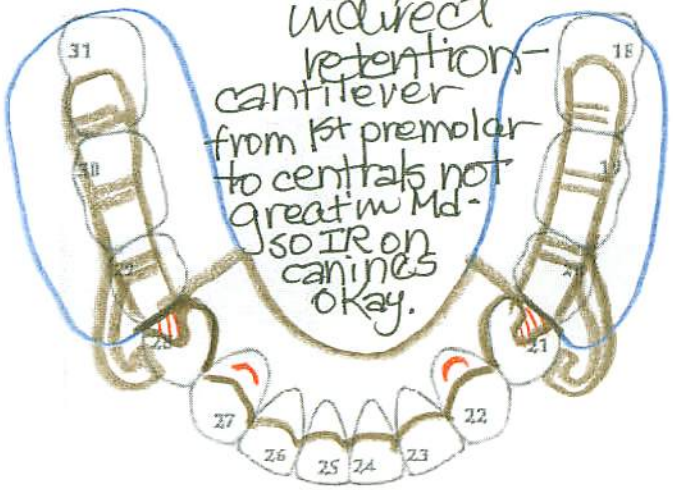
7. Md KI

MD RPD Design Worksheet

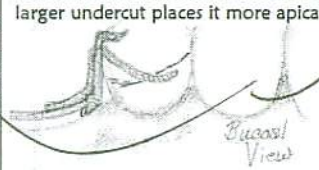
Work through steps in order suggested.
Refer to accompanying instruction for treatment of each topic.
Use first diagram to sketch, second diagram to organize design for cast and TP.
* refers to retentive clasp assembly.





Distal Extension RCA choices for posterior teeth

Clasp assemblies by:

Retentive clasp / Rest location	SUPRABULGE	INFRABULGE
	May need to adjust survey line for shoulder. Unesthetic	Esthetic... But, cannot be used if: High frena attachment, Mucogingival defect, Bony buccal undercut, Cl V restoration
DISTAL REST — Less vertical movement of distal extension under occlusal load. Clasps move opposite direction of occlusal load.	WW More stress to tissue, less stress to tooth. More esthetic than cast circlet because larger undercut places it more apically.  	MOD T BAR WW and infrabulge retainers originate from the denture base retention element, away from the proximal plate. May not be enough room in short edentulous spaces. 
MESIAL REST — More vertical movement of distal extension under occlusal load. Distal plate and clasps move same direction as occlusal load. Cannot use on mesially tipped tooth.	REVERSE CIRCLET May have difficulty with occlusal clearance.  	I BAR Special requirements for reciprocation elements and distal guiding plane. Requires physiologic adjustment. 

Clinical information:

Survey:
>Flat with floor.
>Adjust tilt to best position for proximal surfaces of abutments.
>Lightly mark survey lines.

Plan Design:

1.
>Lightly block out missing teeth.
>Proximal plates.

2.
Classification:
>III or IV: quadrilateral RCA* distribution.
>I: bilateral RCA distribution. } *rotational axis &*
>II: tripodal RCA distribution. } *indirect retention rest*

3.
Clasp selection (with survey & cast):
>Existing restorations.
>Esthetics.
>Undercut location.
>Mechanics of DE.

if abutment teeth mesially tilted - use DO rest - so can use mod T Bar or WW

4.
Major connector:
>MD: Bar or plate

greater strength for remaining posterior teeth

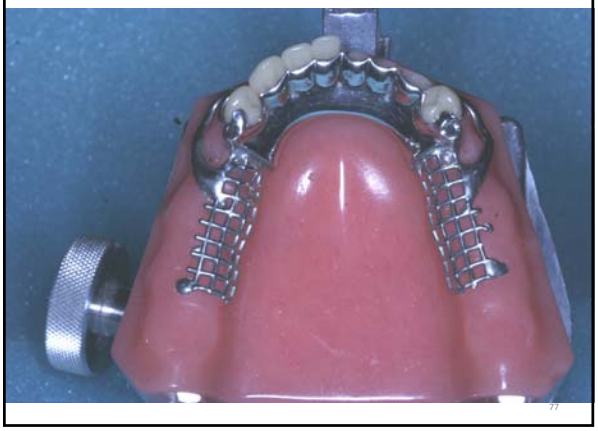
5.
Complete framework.

6.
Tooth and soft tissue replacement:
>Denture base retention
>Tube tooth, RAP
>Denture base outline - back to retromolar pad

Preliminary Design:
>Tripod study model.
>Resurvey.
>Design in brown on study model.
>Mark adjustment areas in red on study model.
>Complete TP form.

7. Md I
(missing incisors)

76



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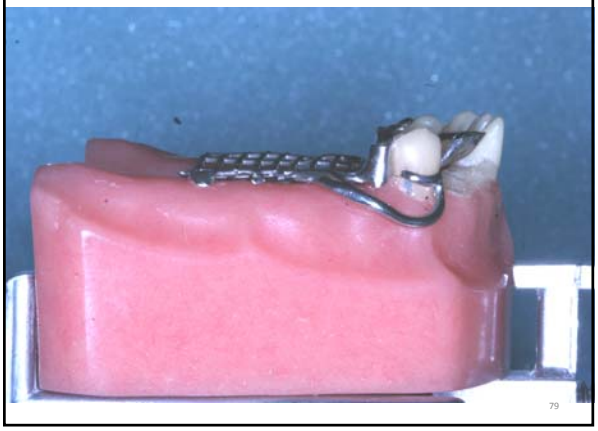

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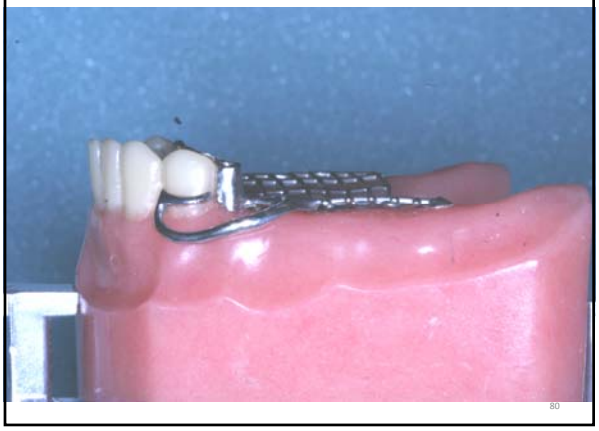

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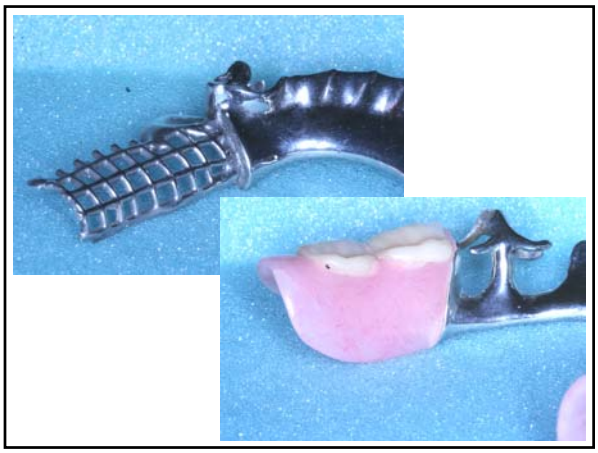

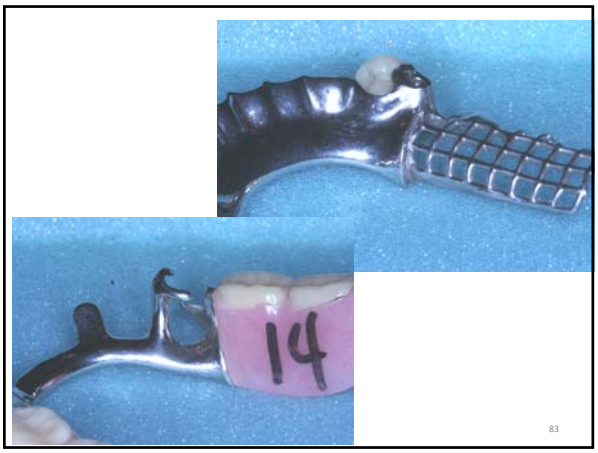
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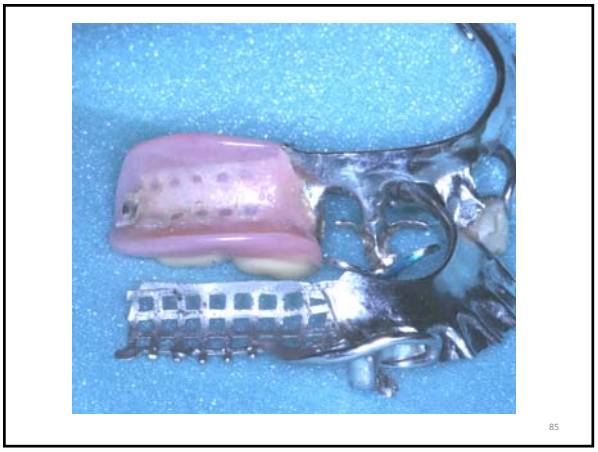
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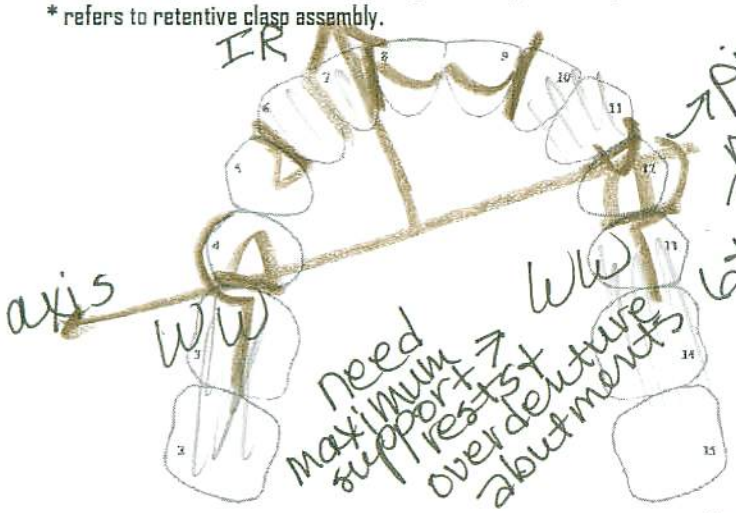
8. Mx KI, 2

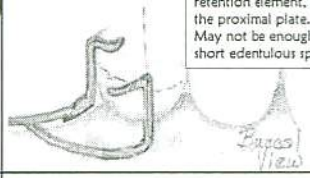
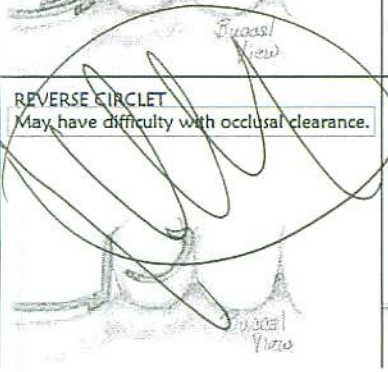
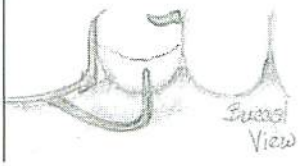
MX RPD Design Worksheet

Work through steps in order suggested.
Refer to accompanying instruction for treatment of each topic.
Use first diagram to sketch, second diagram to organize design for cast and TP.
* refers to retentive clasp assembly.



Distal Extension RCA choices for posterior teeth

Clasp assemblies by:

Rest location \ Retentive clasp	SUPRABULGE	INFRABULGE
	May need to adjust survey line for shoulder. Unesthetic	Esthetic... But, cannot be used if: High frena attachment; Mucogingival defect; Bony buccal undercut; CI V restoration
DISTAL REST Less vertical movement of distal extension under occlusion load. Clasps move opposite direction of occlusal load.	WW More stress to tissue, less stress to tooth. More esthetic than cast circlet because larger undercut places it more apically. 	MOD T BAR WW and infrabulge retainers originate from the denture base retention element, away from the proximal plate. May not be enough room in short edentulous spaces. 
MESIAL REST More vertical movement of distal extension under occlusal load. Distal plate and clasps move same direction as occlusal load. Cannot use on mesially tipped tooth.	REVERSE CIRCLET May have difficulty with occlusal clearance. 	I BAR Special requirements for reciprocation elements and distal guiding plane. Requires physiologic adjustment. 

Clinical information:

Survey:
>Flat with floor.
>Adjust tilt to best position for proximal surfaces of abutments.
>Lightly mark survey lines.

Plan Design:

1.
>Lightly block out missing teeth.
>Proximal plates.

2.
Classification:
>III or IV: quadrilateral RCA* distribution.
>I: bilateral RCA distribution. } *rotational axis &*
>II: tripodal RCA distribution. } *indirect retention rest*

3.
Clasp selection (with survey & cast):
>Existing restorations.
>Esthetics.
>Undercut location.
>Mechanics of DE.

lots of missing teeth - should be kind to teeth + shift stress to soft tissue → WW

4.
Major connector:
>MX: Strap, AP strap, full palate, horseshoe either

5.
Complete framework.

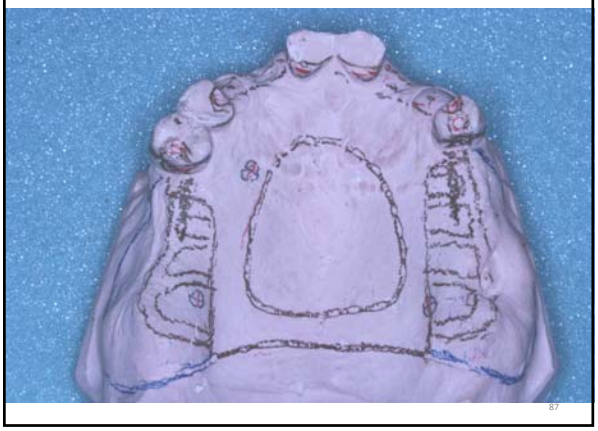
6.
Tooth and soft tissue replacement:
>Denture base retention
>Tube tooth, RAP
>Denture base outline

esthetics - minimal soft tissue loss - can place denture teeth so they appear to emerge from ridge - no denture base

Preliminary Design:
>Tripod study model.
>Resurvey.
>Design in brown on study model.
>Mark adjustment areas in red on study model.
>Complete TP form.

8. Mx I, 2

86



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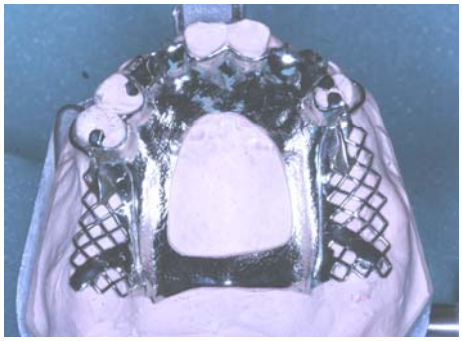

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R side WW

89

L Side

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91