

# TRADITIONAL FIXED MAXILLARY ARCH BRIDGE

PT: BARBARA G  
DR. LOGIN



# LEARNING POINTS FROM BARBARA G

- Long span bridgework on natural teeth
- Telescopic abutment as a stress-breaker
- Odontoplasty of hyper erupted teeth to recreate natural smile lines
- Restoring functional planes of occlusion
- Increased Vertical dimension
- Detailed documentation of records visit, provisionals, labwork, final insertion
- FMR complexity level 3

# TREATMENT STRATEGY

- Patient declined implants
- Use remaining periodontally sound natural teeth to support a cross arch stabilized bridge PFM bridges
- Rationale: patient has light occlusal forces
- Use a telescopic gold abutment on the posterior abutment tooth #2 as a stress breaker for the 3-unit long pontic span (prevent open margins on #2)
- Simplify bridge frame fitting issues by segmenting bridge and minimizing the number of abutments.
  - Bridge span #2-#9 with four abutments and four pontics
  - Bridge span 10-13 with 4 abutments and 1 pontic
  - Bridge segments abut between 9d and 10m so that a diastema does not show at midline

# PATIENT INFORMATION

- Age: 73
  - Accomplished photographer and artist.
  - Enjoys playing tennis.
  - Currently works with elderly
- 
- Initial Visit: 8/14/2018

# CHIEF COMPLAINTS

- “I want to have all my teeth back”
- “I want to be out of pain, especially on the lower right side of my mouth”
- “ I want an aesthetic, white smile with no gaps in-between teeth”

Before the patient’s initial consultation with us, she had not been to a dentist in 10 years

# INITIAL VISIT

## PROCEDURES

- CONSULTATION
- FULL SET OF PHOTOS
- FMX
- PERIOCHARTING

## TIME

- 1 HOUR

# PRE-TREATMENT CONDITIONS

- Class II Jaw to Jaw relationship
- Missing teeth
- Buccal proclined anterior teeth
- Collapsed Vertical
- Miller class III Mucogingival defects
- Mobility: #7 Miller score 1, #18: Miller score 2, #24 Miller score 1.
- Caries and Missing Fillings: deep mesial decay, cervical mesial #2; Missing resin #10 DL; Recurring decay #11 DL; #12 missing MOD amalgam, fracture cusps lingual; #21 missing amalgam DO; Recurring decay around #27 DL resin.
- Exudate around tooth #18 on the buccal roots.

# PRE-TREATMENT

With partial denture



Without partial denture





# PRE-TREATMENT OCCLUSAL AND BUCCAL VIEWS

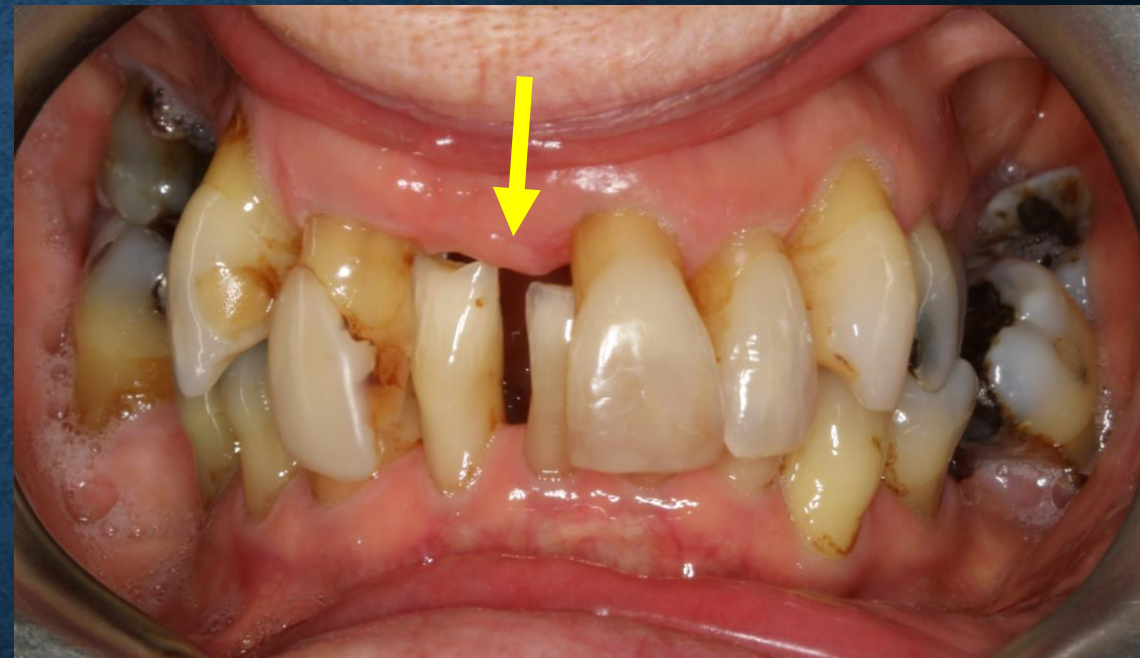


# RETRACTED SMILE

With partial denture



Without partial denture

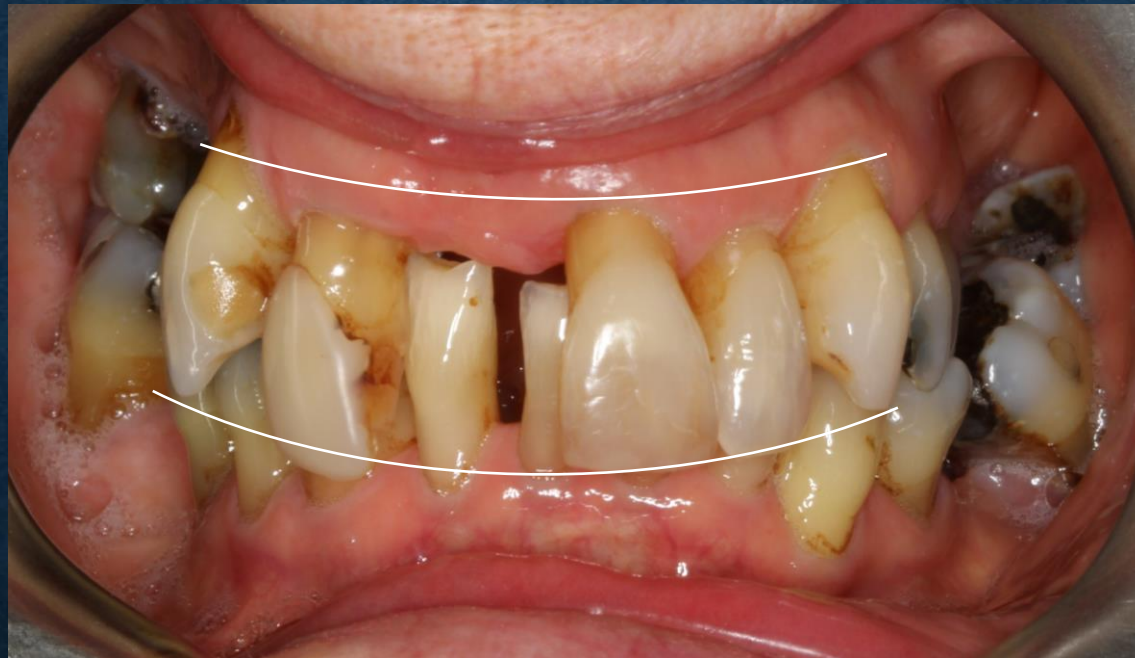


# SMILE CURVES TO DETERMINE SMILE DESIGN

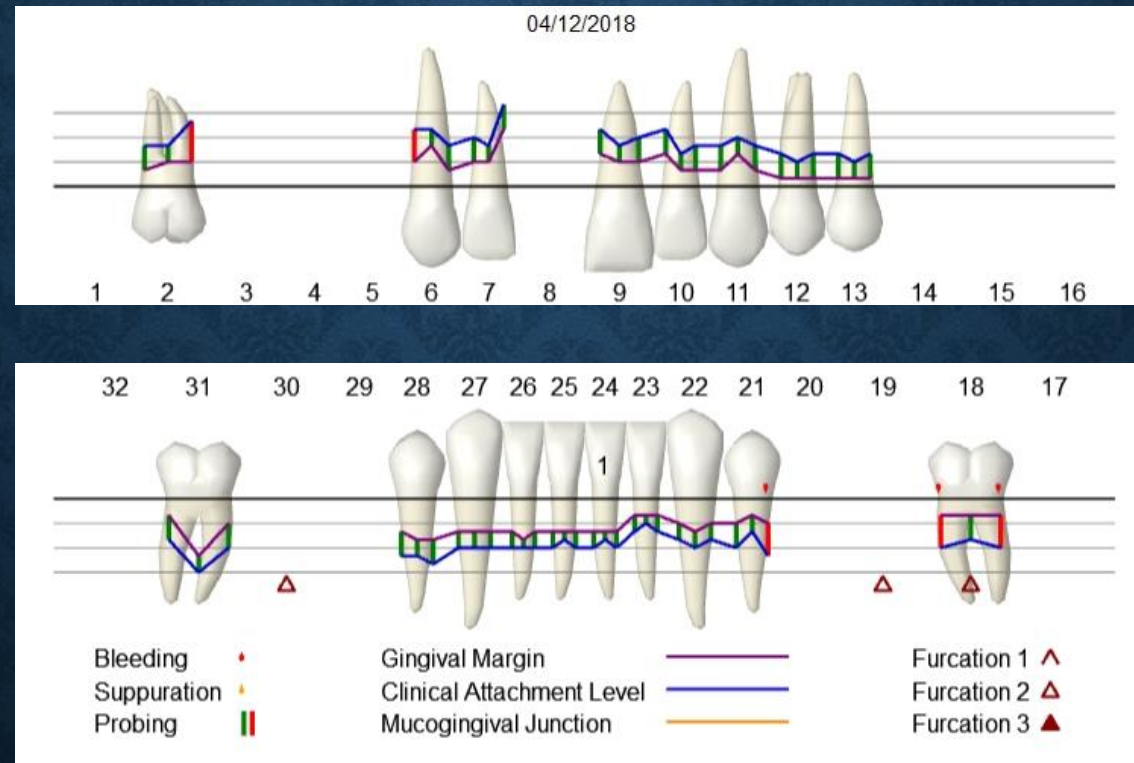


Observation: minor plastic connector on #8 flipper partial opens patient to a <sup>11</sup> functional and aesthetic vertical.

# SMILE CURVES



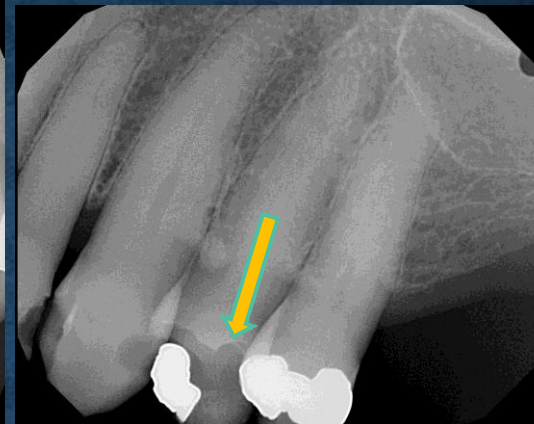
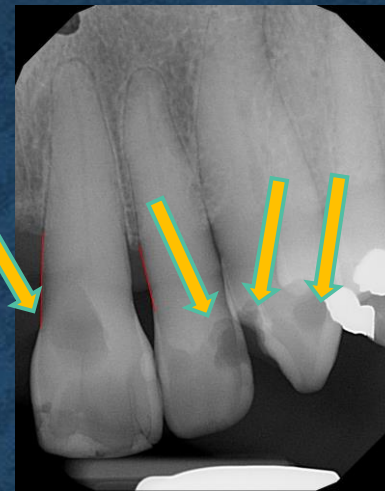
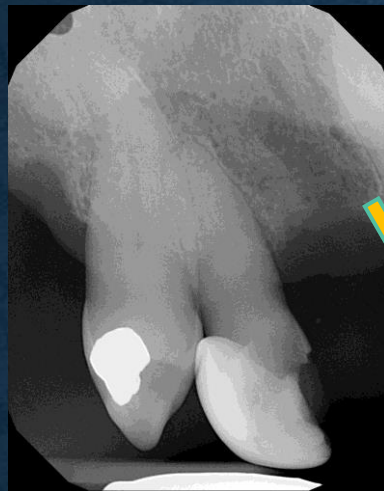
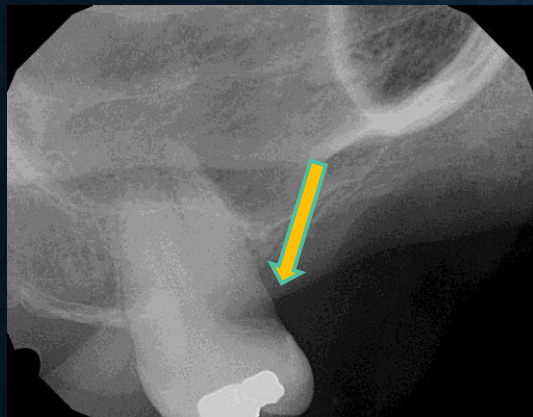
# PERIODONTAL CONDITION





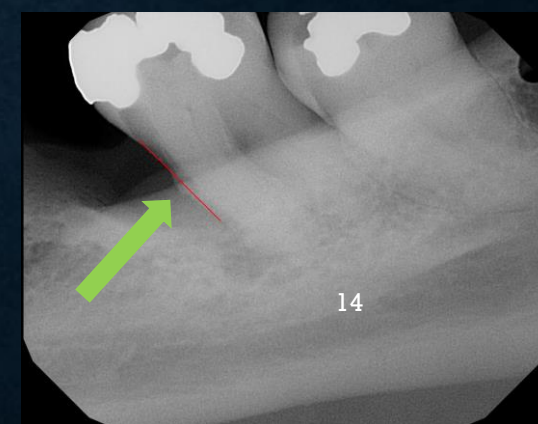
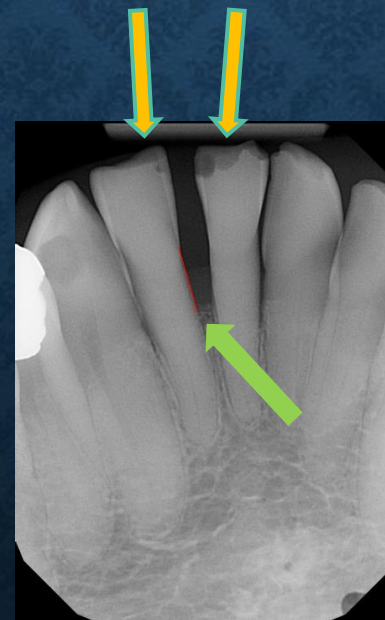
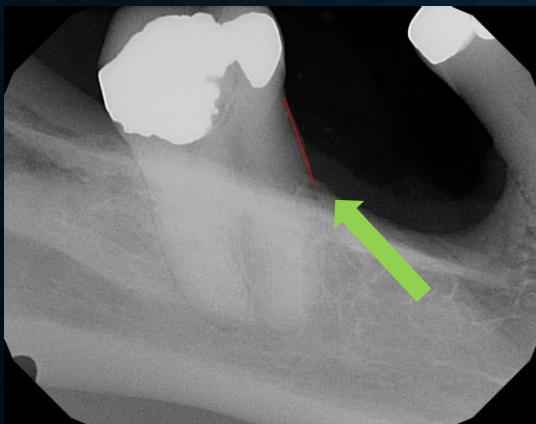
## Summary Maxilla

1. No mobility
2. No bleeding or inflammation
3. Pocket depths 3-4mm
4. No furcations

# X-RAYS



Legend:  
Orange arrow: Decay   
Green arrow: Bone loss 



# RECORDS VISIT

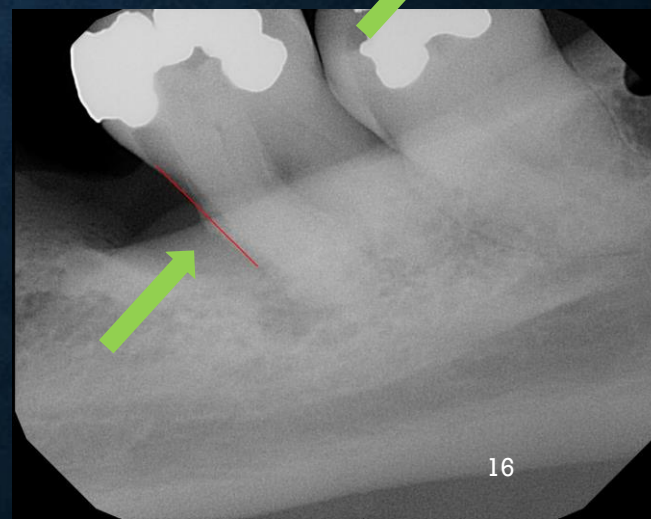
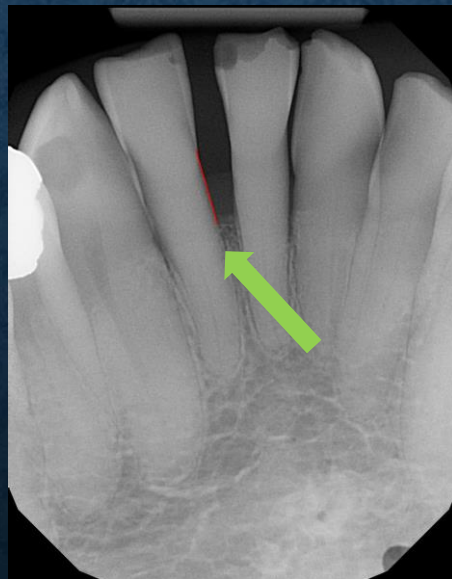
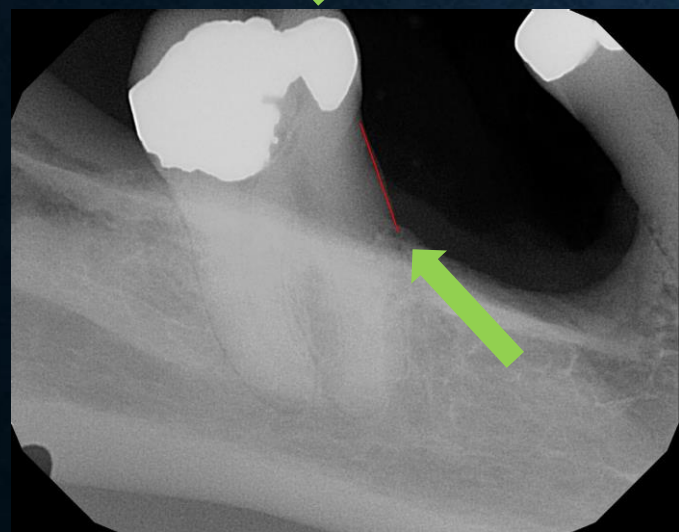
## PROCEDURES

- TEETH MEASUREMENTS
- INITIAL AND PROPOSED VDO
- SHADE PHOTOS

## TIME

- 2 HOURS

# CONDITIONS PRE-TREATMENT





# INITIAL ESTIMATED CHAIR TIME

|  | Time Est. |
|--|-----------|
| Maxillary arch rehabilitation  |           |
| • Phase 1: Records to determine VDO  | - 90 min  |
| • Lab will fabricate waxup and prep guides   | - 5 hrs   |
| • Phase 2: Prep maxillary teeth and chairside provisionalize- evaluate bite function |           |
| • Lab will fabricate a lab provisional   | - 4 hrs   |
| • Phase 3: Refine preps, master impression, facebow, replace provisional             |           |
| • Lab will fabricate frame works   | - 90 min  |
| • Phase 4: framework try in  |           |
| • Lab will return porcelain  | - 2 hrs   |
| • Phase 5: porcelain bridge work try in/insert - occlusal refinement                 |           |

# TOOTH LENGTH AND VDO MEASUREMENTS



#7 to 27 :  
17.26 mm



#11 to 22:  
19.70 mm



#9 CEJ to  
Incisal Edge  
= 13.38



#24 CEJ to incisal  
edge = 10.66



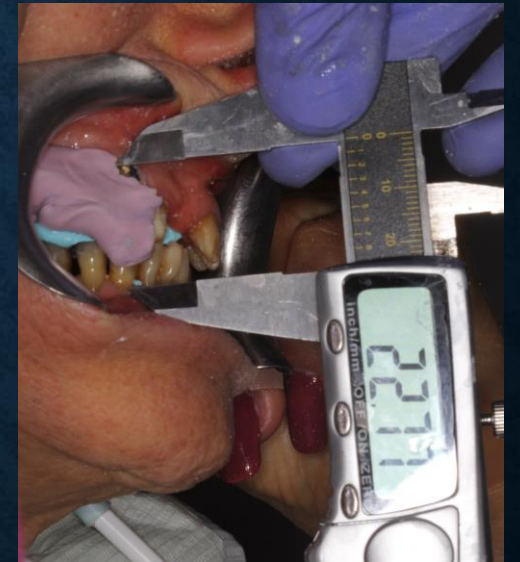
#7 to 27 CEJ to CEJ= 20.69 mm



#11 to 22 CEJ to CEJ = 25.08 mm

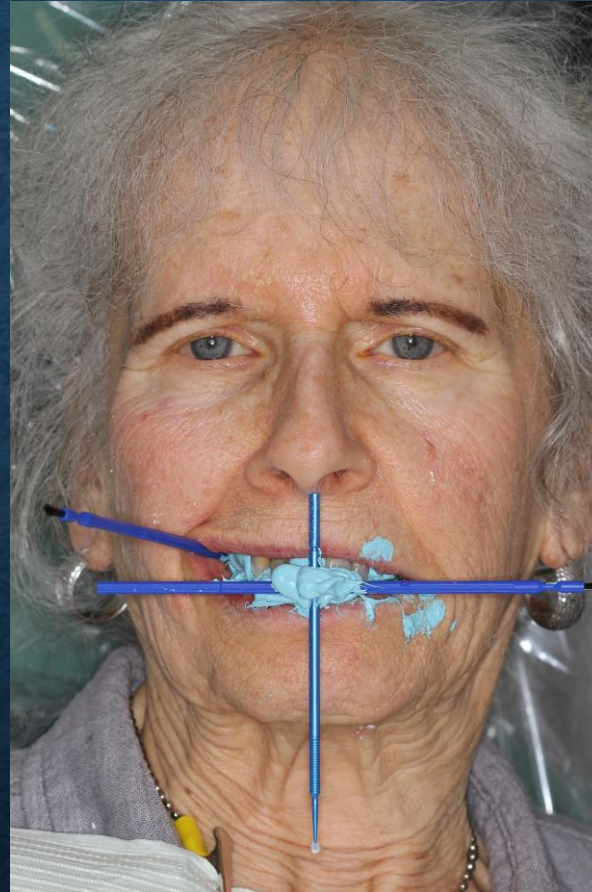
Proposed final Vertical

# INITIAL PUTTY BITE RELATION AT PROPOSED VDO



# BITE RELATION (PROPOSED) A VISUALIZATION EXERCISE

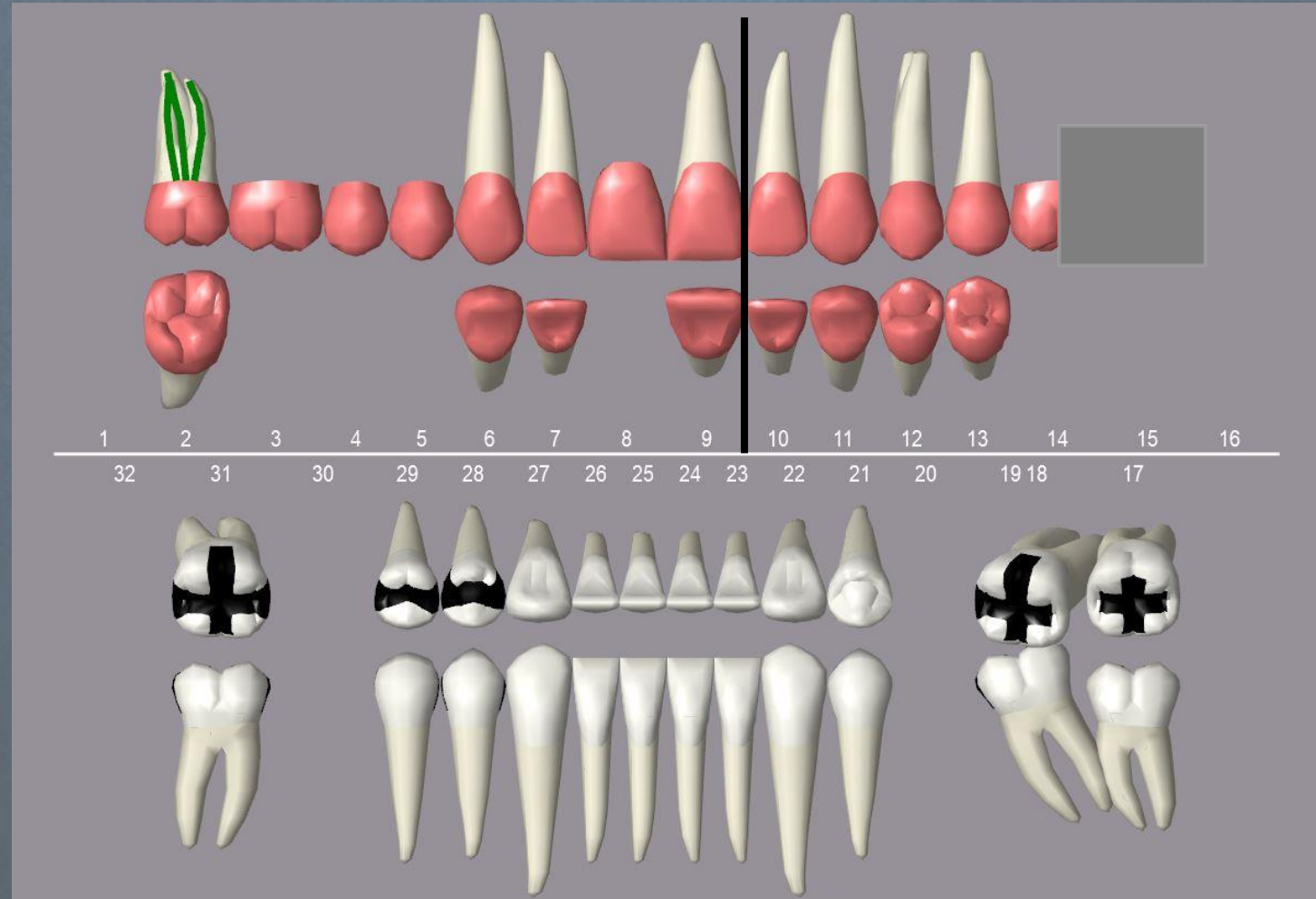
Posterior bite opening stick



Horizontal occlusal plane

Vertical occlusal plane

# PROPOSED TX PLAN



# REFERRAL TO SPECIALISTS:

- Endodontic evaluation of tooth #2 for RCT prior to the tooth being used as an abutment for definitive bridge.

# PREPS + PROVISIONALS

## PROCEDURES

- DIAGNOSTIC WAX UP
- PREP OF MAXILLARY TEETH

## TIME

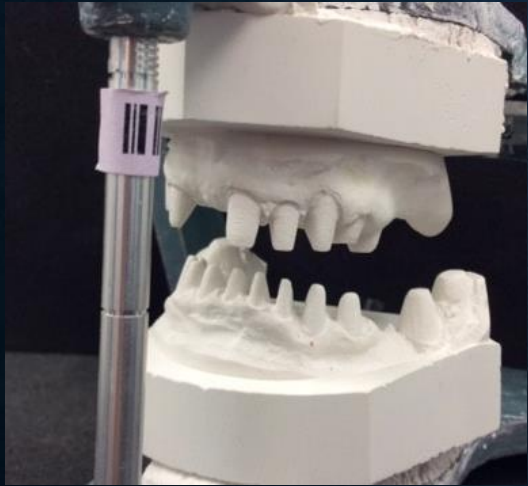
2 HOURS AND 30 MINUTES

# LAB RX TEMPLATE

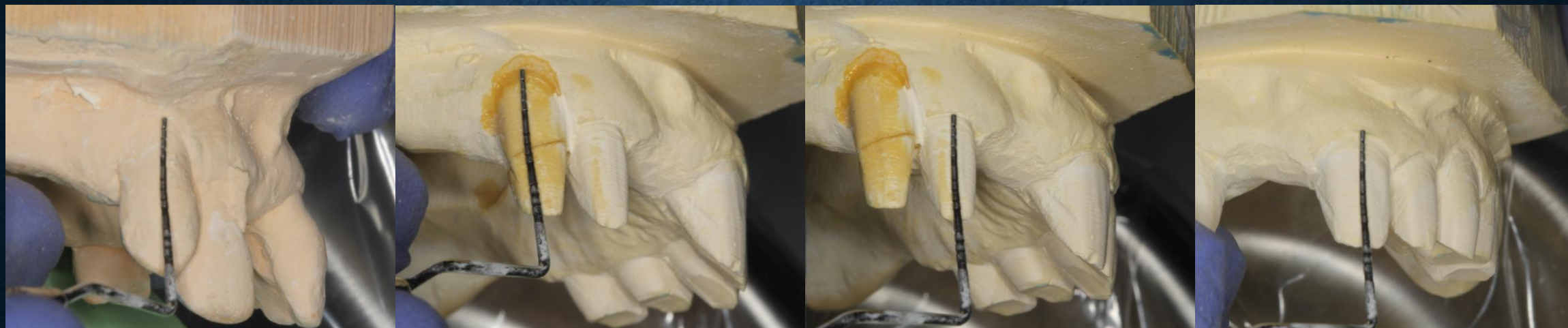
- case goal- natural tooth supported round house bridge.
- goals for this phase of the case:
  - 1. Please fabricate and ideal wax up based on the clinical measurements listed below
  - 2. Please duplicate the waxup in stone
  - 3. please prepare a putty reduction guide for all teeth
  - 4. please prepare an ideal prep model showing ideal reduction of each tooth (shoulder preps) (0.5 mm axial reduction)
  - 5. please prepare a PMMA provisional based on the ideal waxup to fit the ideal prep model



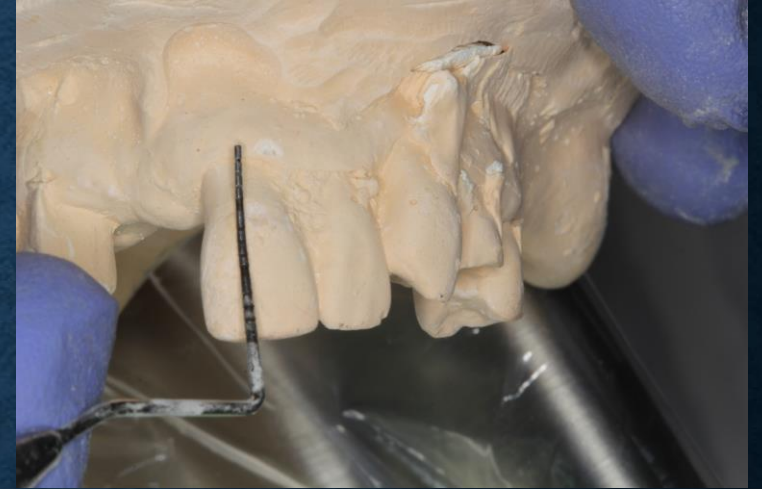
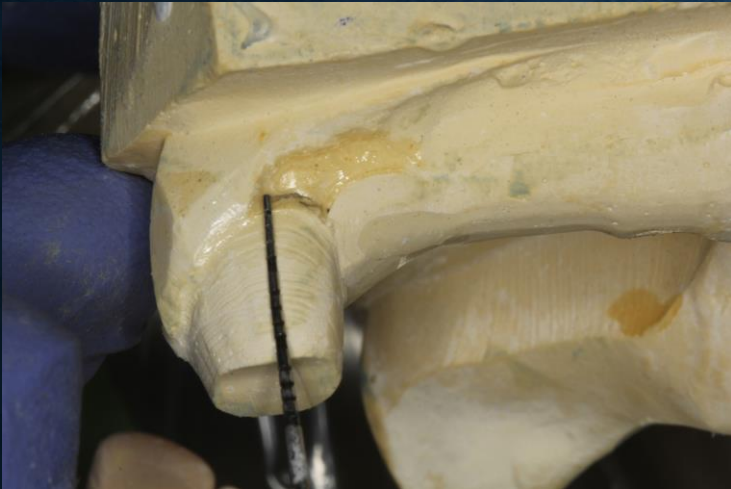
# 1b: Lab's verification Measurements for Provisionals



# STAGE 2A: REVIEW GUIDE CASTS



# Stage 2a: Review Guide Casts





## **STAGE 2B: TEETH PREP FOR MAXILLARY BRIDGE**

## STAGE 2C: CREATE PROVISIONAL



Initial Chairside Provisional  
(Luxatemp)



Adjusting preps to line of draw of  
Lab PMMA Provisional

# STAGE 3: PROVISIONAL BRIDGE INSERT



# LEVELING THE CURVE OF SPEE AND THE CURVE OF WILSON



Fox Plane on  
Mandibular Arch



Initial  
incisor  
height



Proposed  
reduction of  
incisors



Finished  
incisor height



Leveled Curve of  
Wilson

PROVISIONALS – 8/28/18





PROVISIONALS – 8/28/18



# BEFORE



# AFTER



# PROVISIONALS – 8/28/18

**Before** (with flipper)



**After** (with bridge)  
8/28/18



# PROVISIONALS – 8/28/18

Before

&

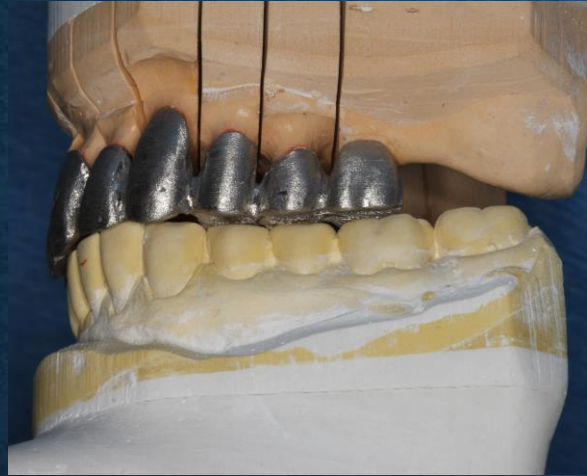
After



# METAL FRAME EVALUATION ON CASTS



Master Model with  
Reduction guides for  
parallelism



Metal frame  
left buccal



Metal Frame  
anterior view



Metal Frame  
occlusal view  
Showing two  
bridges

# TRY-IN METAL FRAMEWORK



Maxillary prepped teeth



Telescopic coping on terminal bridge abutment



Bridge frame right buccal



Occlusal view of framework



Anterior view of framework



VDO verification 20 mm CEJ 6-22

# INSERTION VISIT

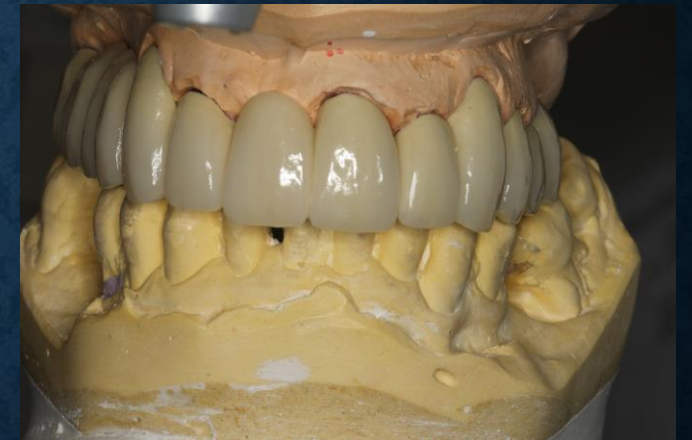
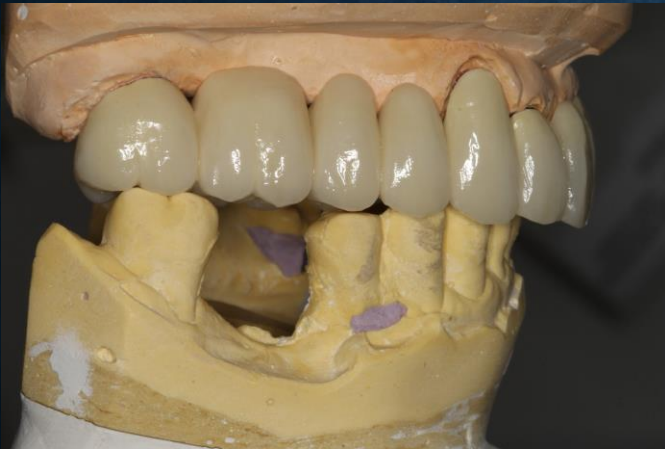
## PROCEDURES

- INSERTING FINAL RESTORATIONS
- VDO CONFIRMATION

## TIME

1 HOUR AND 30 MINUTES

# EVALUATION OF PORCELAIN TO METAL BRIDGES ON MOUNTED MODELS





# VDO VERIFICATION OF CASE



VDO of Provisionals



VDO of mounted models



VDO of inserted case

# PROSTHODONTIC REHABILITATION

BEFORE



AFTER



# PROSTHODONTIC REHABILITATION

BEFORE



AFTER



# PROSTHODONTIC REHABILITATION

BEFORE



AFTER



# PROSTHODONTIC REHABILITATION

BEFORE



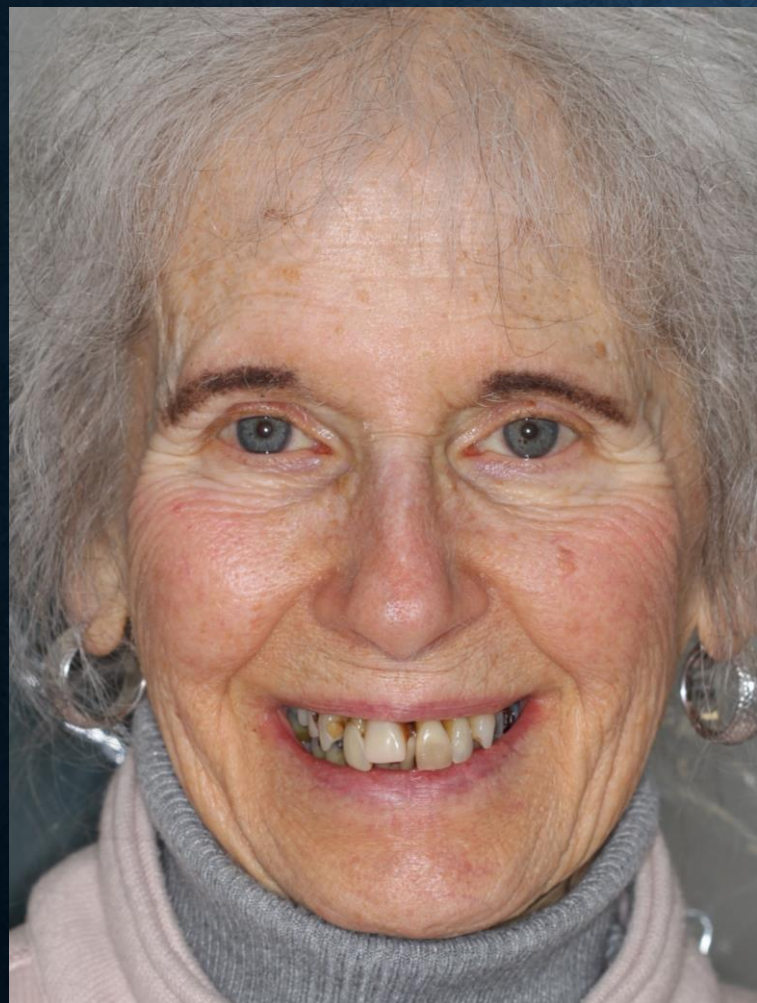
AFTER



Initial

&

Final



# Barbara G.

|                      |           |                  |          |
|----------------------|-----------|------------------|----------|
| <b>INITIAL DATE:</b> | 8/14/2018 | TOTAL CHAIR TIME | 24       |
| <b>FINAL DATE:</b>   | 7/25/2019 | TOTAL LAB FEES:  | \$ 4,739 |

| Date   | Visit                                  | LAB COSTS | Description                   | Amount of time |
|--------|--|-----------|-------------------------------|----------------|
| 14-May | TXDisc                                 | -         | Tx Planning                   | 1              |
| 7-Jun  | Records Visit                          | -         | Study Models, Facebow, Waxupw | 2              |
| 14-Aug | Crowns #2 - 14                         | \$ 1,139  | Preps                         | 2.5            |
| 28-Aug | Tissue Check                           | -         | Occlusal Adjustment           | 0.5            |
| 21-Sep | CCA                                    | -         |                               | 1              |
| 27-Sep | Core buidup, Impressions               | -         |                               | 5              |
| 15-Oct | CCA                                    | -         | Bite Evaluation               | 1              |
| 14-Nov | Try in Copings and Metal Frame work    | \$ 1,800  |                               | 2              |
| 10-Dec | Finished Bridge Insert                 | \$ 1,800  |                               | 1.5            |
| 13-Dec | CCA                                    | -         | Bite Evaluation               | 0.5            |
| 29-Apr | Resins #29, 28, 31                     | -         |                               | 2              |
| 6-May  | Resins #17, 18, 21, 23, 24, 25, 26, 27 |           |                               | 3.5            |
| 25-Jul | Resin veneer #28                       | -         |                               | 1.5            |

**TOTAL \$ 4,739 24**

## CASE SUMMARY

Actual Chair Hours: 24

Lab fees: \$4739

Original treatment estimate: 14

Additional chairtime:

1. functional occlusion
2. provisionals
3. Framework try-ins