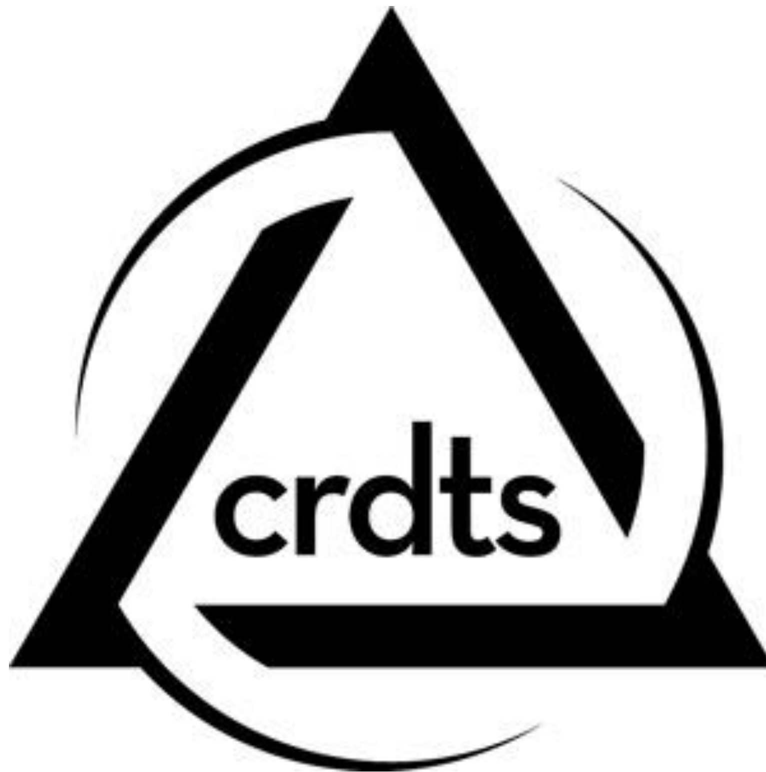
DENTAL THERAPY EXAMINATION FOR PACIFIC UNIVERSITY PILOT STUDY CANDIDATE MANUAL

May 15, 2022



As administered by:

Central Regional Dental Testing Service, Inc.
1725 SW Gage Blvd.
Topeka, Kansas 66604
(785) 273-0380
www.crdts.org

Please read this candidate manual prior to attending the candidate orientation and bring it with you to the orientation and the examination.

Copyright © 2022 Central Regional Dental Testing Service, Inc.

CONTENT, CRITERIA & SCORING SYSTEM - OVERVIEW

DENTAL THERAPY FOR PACIFIC UNIVERSITY RESTORATIVE MANIKIN EXAMINATION - 100 POINTS

CONTENT	FORMAT & TIMING
The Restorative Clinical Examination consists of two procedures: Prepare 2 teeth with simulated decay on **9DL** and **14MO**. For the posterior procedure, candidates may choose to prepare/place a Class II Amalgam, or a Class II Composite: Class II Amalgam –Preparation **OR** Class II Composite –Preparation **AND** Class III Composite –Preparation	- Performed on a Manikin - Candidates will have 30 minutes to set-up. - Candidates will have 1.5 hours to complete both procedures.

SCORING SYSTEM

The examination scoring system was developed in consultation with three different measurement specialists; the scoring system is criterion-based and was developed using an analytical model. A compensatory scoring system is used to compute the final score, as explained below.

This exam is intended to be part of a Pilot Study for Dental Therapy students at Pacific University and is NOT intended for licensure purposes. However, in developing the examination, CRDTS has recommended a score of 75 to be a demonstration of sufficient competence.

Each examination score is based on 100 points.

SCORING SYSTEM FOR RESTORATIVE PROCEDURES

CRDTS and other testing agencies have worked together on a national level to draft and refine the performance criteria for each procedure in this examination. For the majority of those criteria, gradations of competence are described across a 4-level rating scale. Those criteria appear in this manual and are the basis of the scoring system. Those four rating levels may be generally described as follows:

SATISFACTORY
The treatment is of good to excellent quality, demonstrating competence in clinical judgment, knowledge and skill. The treatment adheres to accepted mechanical and physiological principles permitting the restoration of the tooth to normal health, form and function.

MINIMALLY ACCEPTABLE
The treatment is of acceptable quality, demonstrating competence in clinical judgment, knowledge and skill to be acceptable; however, slight deviations from the mechanical and physiological principles of the satisfactory level exist which do not cause damage nor significantly shorten the expected life of the restoration.

MARGINALLY SUBSTANDARD
The treatment is of poor quality, demonstrating a significant degree of incompetence in clinical judgment, knowledge or skill of the mechanical and physiological principles of restorative dentistry, which if left unmodified, will cause damage or substantially shorten the life of the restoration.

CRITICALLY DEFICIENT

The treatment is of unacceptable quality, demonstrating critical areas of incompetence in clinical judgment, knowledge or skill of the mechanical and physiological principles of restorative dentistry. The treatment plan must be altered and additional care provided, possibly temporization in order to sustain the function of the tooth and the manikin patient's oral health and well-being.

A rating is assigned for each criterion in each procedure by three different examiners evaluating independently. Based on the level at which a criterion is rated by at least two of the three examiners, points may be awarded to the candidate. In any instance that none of the three examiners' ratings are in agreement, the median score is assigned. However, if any criterion is assigned a rating of ***critically deficient*** by two or more of the examiners, ***no points are awarded for that procedure or for the Examination Part***, even though other criteria within that procedure may have been rated as satisfactory. A description of criteria that are evaluated for the procedures appears below:

RESTORATIVE EXAMINATION – 100 Points

The Dental Therapy Exam requested by Pacific University consists of two procedures: Prepare 2 teeth with simulated decay on **9DL** and **14MO**. For the posterior procedure, candidates may choose to prepare/place either a Class II Amalgam or a Class II Composite:

Class II Amalgam Preparation — 12 Criteria

OR

Class II Composite Preparation — 11 Criteria

AND

Class III Composite Preparation — 7 Criteria

To compute the score for each individual procedure, the number of points the candidate has earned for each criterion is totaled, divided by the maximum number of possible points for that procedure and the results are multiplied by 100. This computation converts scores for each procedure to a basis of 100 points. Any penalties that may have been assessed during the treatment process are deducted ***after*** the total score for the Examination Part has been converted to a basis of 100 points.

If no ***critical deficiency*** has been confirmed by the examiners, the total score is computed by adding the number of points that the candidate has earned ***across both procedures,*** and that sum is divided by the number of possible points for all procedures in that Part. If a ***critical deficiency*** has been confirmed by the examiners, an automatic failure is recorded for both the procedure and the Examination. An example for computing scores that include no critical deficiency is shown below:

PROCEDURE	# CRITERIA	POINTS EARNED	POINTS POSSIBLE	COMPUTED SCORE
Anterior Composite Preparation	7 Criteria	26	28	92.85
Posterior Amalgam Preparation	12 Criteria	42	48	87.50
TOTALS	19 Criteria	**68**	**76**	**89.47**

*Although there are 2 procedures that are scored separately for restorative clinical skills, **within the exam, a compensatory system** is used to compute the final score, as long as there is **no critical deficiency**. The computed score for each procedure is **not averaged**, but instead is numerically weighted by the ratio of its number of scorable criteria to the total number of scorable criteria. For example, the Anterior Composite Preparation has a total of 7 scorable criteria which represents 28 possible points out of the total of 68 possible points. As shown in the example above, the candidate earned 68 out of 76 possible points for the 2 procedures for a final score of 89.47 points. If any penalties were assessed, the points would be deducted as percentage points from the final score.*

STANDARDS FOR THE CONDUCT OF THE EXAMINATION

As a participant in an examination to assess professional competency, each candidate is expected to maintain professional standards. The candidate's conduct and treatment standards will be observed during the examination and failure to maintain appropriate conduct and/or standards may result in point penalties and/or dismissal from the exam.

Each candidate will be expected to conduct himself/herself in an ethical, professional manner and maintain a professional appearance at all times. Candidates are prohibited from using any study or reference materials during the examination. Any substantiated evidence of dishonesty; such as collusion, use of unauthorized assistance or intentional misrepresentation during application, pre-examination or during the course of the examinations shall automatically result in dismissal from and failure of the entire examination and forfeiture of all examination fees for the current examination.

DISHONESTY CLAUSE: Candidates failed for dishonesty shall be denied re-examination for one full year from the time of the infraction. Additionally, all State Boards will be notified of the situation. In some states, candidates failed for dishonesty may be permanently ineligible for licensure. Therefore, candidates should address these matters with the state(s) where they desire licensure prior to retaking the examination.

The standards itemized below apply to all candidates. Failure to adhere to these standards will result in failure of the procedure in progress and/or the entire examination.

1. **Anonymity.** The anonymous testing procedures for the examination shall exclude the possibility that any person who is involved with the grading of the examination may know, learn of, or establish the identity of a candidate, work-product graded or to be graded to a particular candidate. The candidate's name and school information should not appear on any examination forms, materials, or instruments. All examination forms and materials are identified by the candidates' identification number which is assigned prior to the examination.

2. **Approved Communication.** All approved communication must be in English and communication between candidates and Examination Officials must be in English.

3. **Assigned Operatories.** The candidate shall work only in the assigned clinic, operatory or laboratory spaces.

4. **Assigned Procedures.** The candidate must perform only the treatment and/or procedures assigned. Performing other treatment or procedures is strictly prohibited.

5. **Auxiliary Personnel: Use of Assistants.** *Auxiliary personnel are not permitted to assist at chairside during the manikin examinations.*

6. **Check-Out Procedures.** The items specified below should be enclosed in the original Candidate packet envelope and provided to the examination representative at the completion of the examination:
   - Identification badge
   - Progress Forms with labels placed

7. **Clinic Attire.** Clinic attire that meets CDC and OSHA standards must be worn in clinic areas. No bare arms or legs, or open-toed shoes are allowed in the clinic areas. Lab coats, lab jackets, and/or long-sleeved protective garments are all acceptable. Color and style are not restricted. There must be no personal or school identification on clinic attire other than the candidate identification badge.

8. **Electronic Equipment.** The use of cellular telephones, pagers, CD's, radios (with or without earphones) and other electronic equipment by candidates is prohibited within the clinic and scoring areas. All cellular telephones must be off and stored with personal belongings. In addition, the use of electronic recording devices by the candidate or an auxiliary during any part of the examination; or the taking of photographs during the evaluation or treatment procedures is prohibited.

9. **Equipment Failure.** In case of equipment failure, the Chief Examiner must be notified immediately so the malfunction may be corrected.

10. **Equipment: Use/Misappropriation/Damage.** No equipment, instruments, or materials shall be removed from the examination site without written permission of the owner. Nonpayment of fees for rental of space or equipment will be treated as misappropriation of equipment. Willful or careless damage of typodonts, manikins or shrouds may result in failure and any repair or replacement costs must be paid by the candidate before examination results will be released.

11. **Evaluation Procedures.** Candidate performance will be evaluated by three independent examiners. Candidates are not assigned specific examiners.

12. **Examination Completion and Start/Finish Times.** All procedures of the examination shall be completed within the specified time frame in order for the examination to be considered complete. Any examination procedures performed outside the assigned time schedule will be cause for the examination to be considered incomplete and will result in failure. Treatment procedures may not be initiated prior to the established starting time(s) and must be completed by the established finish time(s). Violation of this Standard will result in failure of the examination.

13. **Examination Guidelines.** Violation of the published standards, guidelines and requirements for the examination will result in failure.

14. **Examination Materials.** CRDTS examination materials distributed by the testing agency may NOT be removed from the examining area, nor may the forms be reviewed by unauthorized personnel.

15. **Extraneous materials.** Only those materials distributed or authorized by CRDTS may be brought to the examining area. Authorized materials include only your Candidate's Manual which may include hand- written notes on the pages provided; additional pages, texts or documents are prohibited. Impressions, registrations, overlays, stents, or clear plastic shells of any kind as well as models or pre-preparations are not permitted to be brought to the examination site. Use of unauthorized materials will result in failure of the entire examination.

16. **Failure to Follow Directions.** Failure to follow directions and instructions from examiners will be considered unprofessional conduct. Unprofessional conduct and improper behavior is cause for dismissal from the examination and will result in failure of the examination. Additionally, the candidate shall be denied re-examination by CRDTS for one full year from the time of the infraction.

17. **Feedback Forms:** Candidates have an opportunity to provide input about the examination. In an effort to continually improve our examination, feedback from the perspective of the candidates is one of the best ways to gather this information. The Feedback Form for candidates will be included in the candidate's packet. It is not required but will be collected separately from the candidate's packet to ensure that the candidate's examination results will in no way be affected by any feedback the candidate might have. Candidates are encouraged to complete the form honestly and thoughtfully before checking out.

18. **Identification Badges.** During the examinations, candidate ID badges must be worn at all times.

19. **Infection Control Standards.** During all *manikin clinical procedures,* the candidate must follow the most current recommended infection control procedures as published by the CDC. The operatory and/or operating field must remain clean and sanitary in appearance. (www.cdc.gov/oralhealth/infectioncontrol/guidelines)

20. **Instruments and Equipment.** All necessary materials and instruments for the clinical procedures, other than the operating chair, light and dental unit must be provided by the candidate. All equipment must be compatible with the testing site attachments. Arrangements for rental handpieces and/or other equipment may be made through the testing site.

21. **New Technology.** New and innovative technologies are constantly being developed and marketed in dentistry. However, until such time as these innovations become the standard of care and are readily available to all candidates at all testing sites, the use of such innovative technologies will not be allowed in this examination unless expressly written as allowed elsewhere in this manual.

22. **Submission of Examination Records.** All required records must be turned in at the Examiner Desk before the examination is considered complete.

23. **Test Site Fees.** Schools may charge a rental fee for use of instruments, clinic facilities, supplies and disposables. This fee is independent of the examination fee and is not collected by the testing agency. Testing site fees vary from school to school. If not paid in advance, candidates should have cash or a check, as may be required by the respective testing site, for materials and equipment used during the examination. Specific information regarding site fees will be included in the candidate's Confirmation email.

24. **Tissue Management.** There shall be no unwarranted damage to simulated hard or soft tissues during manikin-based procedures. Incompetent or careless management of tissue will result in a score reduction.

25. **Tooth Identification.** The tooth numbering system 1-32 will be used throughout the examination. In this system, the maxillary right third molar is number 1 and mandibular left third molar is number 17.

GENERAL GUIDELINES FOR CLINICAL EXERCISES

1. **Progress Form:** At the examination, a Progress Form will be issued which will contain a record of the treatment, examiner signatures for all completed portions of the examination, and progress notes from the candidate to examiner as appropriate to the course of treatment. A ***BLUE pen*** shall be used for all notations on the Progress Form.

2. **Unauthorized Personnel:** Only authorized personnel will be allowed in the examining and clinic areas. Only the candidate is allowed in the operatory during treatment sections. No visitors are allowed.

3. **Performance Standards:** The candidate's clinical performance will be rated according to specific criteria. The performance criteria and the standards by which the examination is conducted are provided to the candidate within this manual.

4. **Penalty Deductions:** Throughout the examination, the candidate's professional conduct and clinical performance will be evaluated. A number of considerations will weigh in determining the candidate's final grades and penalties may be assessed for violation of examination standards and/or for certain procedural errors, as defined and described within this manual.

5. **Reasons for Dismissal**: In addition to the standards of conduct expectations, the following list is provided as a quick reference guide for candidates. While the following is not an all-inclusive listing, it does provide examples of behaviors that may result in dismissal/failure of the examination:
    - Using unauthorized equipment at any time during the examination process.
    - Altering records.
    - Performing required examination procedures outside the allotted examination time.
    - Failure to follow the published time limits and/or complete the examination within the allotted time.
    - Receiving assistance from another practitioner including but not limited to; another candidate, dentist, University/School representative(s), etc.
    - Exhibiting dishonesty.
    - Failure to recognize or respond to systemic conditions that potentially jeopardize the health of the manikin patient and/or total disregard for manikin patient welfare, comfort and safety.
    - Unprofessional, rude, abusive, uncooperative, or disruptive behavior to other candidates, or exam personnel.
    - Misappropriation or thievery during the examination.
    - Noncompliance with anonymity requirements.
    - Noncompliance with established guidelines for asepsis and/or infection control.
    - Use of unauthorized documents or materials in treatment or evaluation areas.

- Use of cellular telephones, pagers or other electronic equipment in treatment areas.
- Use of electronic recording devices by the candidate or an auxiliary during any part of the examination; or the taking of photographs during the evaluation or treatment procedures.

6. **Authorized Photography:** At some selected test sites, oral photographs may be taken randomly during the examination by an authorized photographer retained by CRDTS. The purpose is to capture a broad representation of actual procedures which can be used for examiner calibration exercises. The photographs will include no identification of candidates. An announcement will be made or a notice will be distributed to inform candidates if photographs are authorized at a site.

7. **Communications from Examiners:** A Clinic Floor Examiner and Exam Proctor will be available for your benefit and to help facilitate the examination process. If you have any questions about any part of exam, ***please do not hesitate*** to confer with them.

   Typodonts from this Pacific University exam will be shipped off-site for grading, so no examiners will be present at the school.

   In every instance, each procedure is evaluated as it is presented rather than as it may be modified. The examiner ratings are not converted to scores until after the examination is completed and all records are processed by computer.

8. **Infection Control:** Candidates must follow all infection control guidelines required by the state where the examination is taking place and must follow the CDC's *Guidelines for Infection Control in Dental Health-Care Settings* The current recommended infection control procedures as published by the CDC must be followed. Procedures must begin with the initial setting up of the unit, continue throughout the examinations and include the final cleanup of the operatory. Failure to comply will result in loss of points and any violation that could lead to direct harm will result in termination of the examination and loss of all points.

RESTORATIVE MANIKIN PROCEDURES

Restorative Examination Procedural and Clinical Management Guidelines

Requirements Specific to the Restorative Manikin Examination

General

Required Procedures: A Class II Preparation **14MO** and Class III Preparation **9DL**. A new diamond bur is the recommended manufacturer option for the Acadental typodont teeth with simulated decay.

Typodont instructions: At the beginning of the exam, candidates should immediately etch the maxillary arch with their 1 or 2-digit candidate # on the end caps of the arch.

Upon completion of the exam, contact the CRDTS Proctor for permission to dismantle. Place the Restorative arch into the labeled baggie and submit to the CRDTS Proctor for evaluation/storage.

Modification Requests

If during the preparation the tooth indicates a need for a significant change from the criteria outlined for Satisfactory, the candidate should make modification request(s) ***prior to performing them.*** The preparation ***must*** be prepared to the Satisfactory criteria and all pre-existing restorative material must be removed before submitting the first Modification Request. Requests to extend the preparation to an MOD or to place different material than the approved Treatment Selection must be made utilizing the Modification Request process. Exceptions include: modification to extend the proximal box because of tooth rotation or position. These do not require a request for modification but are listed in the Notes to Examiners area at the bottom of the Progress Form and must be initialed by a CFE. Each modification needs to be numbered and listed separately with the time noted and a brief explanation of the proposed modifications.

The request to modify should include:

What: (Type of modification)
Where: (gingival axial line angle, mesial box) *See Illustration below*
Why: (due to caries, decalcification)
How much: (reference back to either ideal or to the start)

The request should be shown to a Clinic Floor Examiner who will direct the candidate through the authorization process for modifications. If the candidate feels a finger extension is appropriate and/or necessary to eliminate marginal decalcification, such a modification should also be submitted for approval. ***If the candidate anticipates or actually experiences a pulpal exposure, the Clinic Floor Examiner should be notified at once***.

Example Modification Request

Modification Request # 1
What: Extend
Where: axial wall
Why: remove caries
How Much: .5 mm
☐ **Granted** ☐ **Not Granted**

Carefully review the criteria for modification requests. Inappropriate requests for modification(s) will result in a small penalty for each modification not granted. Requests for a modification for removal of caries when no stain, caries or decalcification exists will receive a larger penalty. Modifications that have been approved and appropriately accomplished will not result in any penalties.

If more than one modification is anticipated at any time, it is to the candidate's advantage to submit them on the same form as no additional time is provided for evaluation of modification requests and multiple submissions may significantly decrease treatment time. Candidates will submit their copy of the Modification Request Form with their Progress Form.

EXAMINATION CHECK-OUT

Candidate Feedback Forms

Candidates have an opportunity to provide input to CRDTS about the examination. CRDTS wishes to continually improve its examination program, and feedback from the perspective of candidates is one of the best ways for CRDTS to gather ideas on how to do this. The Feedback Form for candidates will be included in the candidate's packet. It is not required and will be collected separately from the candidate's packet to ensure that the candidate's examination results will in no way be affected by any feedback the candidate might have. Therefore, CRDTS encourages candidates to complete this form honestly and thoughtfully before checking out.

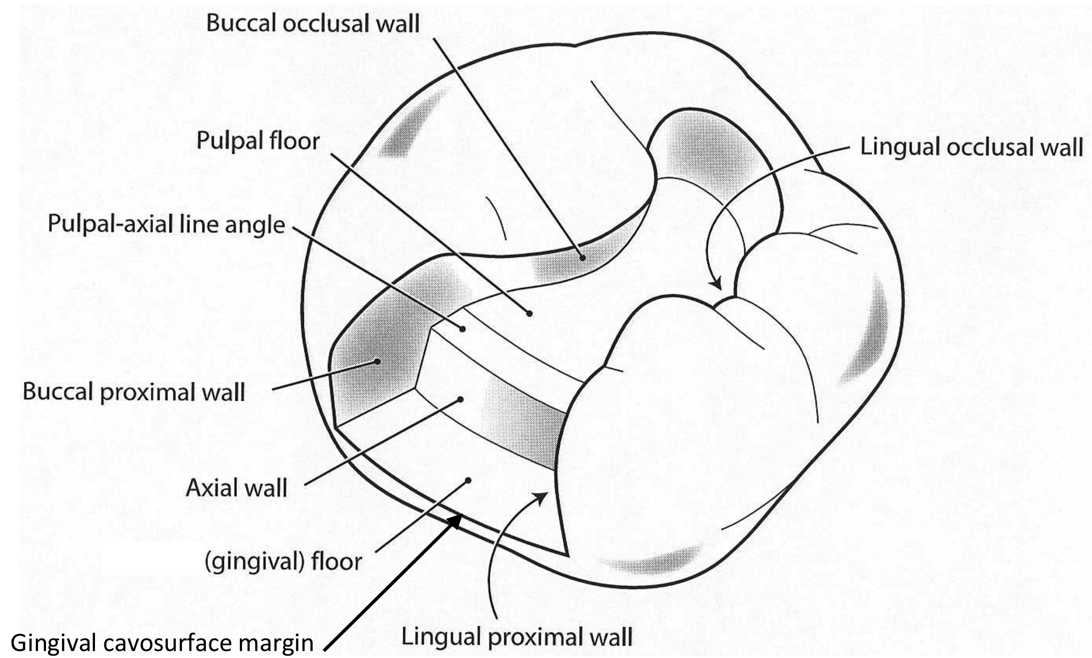
Check-Out Procedure

When the candidates are ready to check out, they must go to the CRDTS Proctor's desk and get a clearance check that everything is completed or accounted for. The following items must be enclosed **in the candidate's packet envelope:**

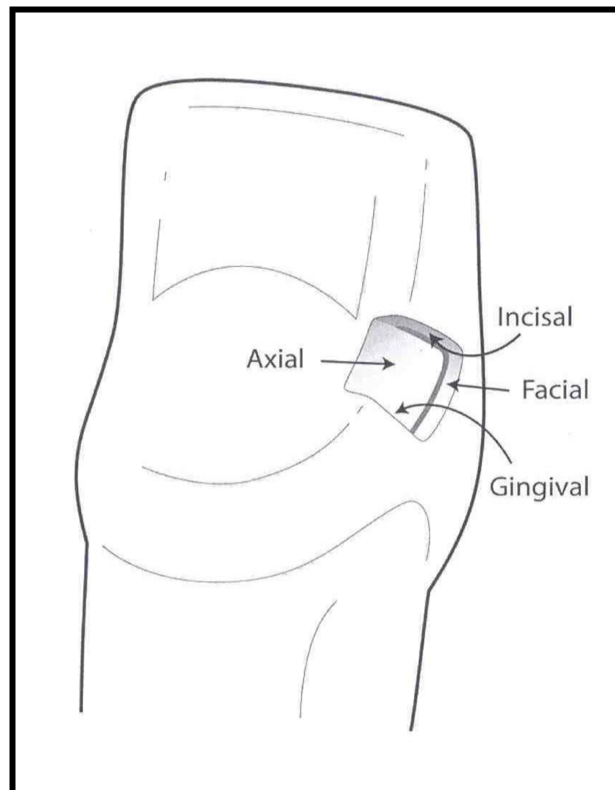
1. Completed Progress Form
2. Identification badge

Terminology for Modification Requests

Manikin Amalgam & Posterior Composite Preparations



Composite Preparation



AMALGAM PREPARATION
External Outline Form

PROXIMAL CLEARANCE

SAT	Contact is visibly open proximally.
ACC	Proximal contact is visibly open, and proximal clearance at the height of contour extends beyond 0.5 mm but not more than 1.0 mm on either one or both proximal walls.
SUB	Proximal contact is [_] not visually open; or proximal clearance at the height of contour [_] extends beyond 1.0 mm but not more than 2.0 mm on either one or both proximal walls.
DEF	The proximal clearance at the height of contour extends beyond 2.0 mm on either one or both proximal walls.

GINGIVAL CLEARANCE

SAT	Contact is open gingivally up to 0.5 mm.
ACC	The gingival clearance is greater than 0.5 mm but not greater than 2.0 mm.
SUB	The gingival clearance is greater than 2.0 mm but not more than 3.0 mm, or is not open.
DEF	The gingival clearance is greater than 3.0 mm.

OUTLINE SHAPE/CONTINUITY/EXTENSION

SAT	The outline form includes all carious and non-coalesced fissures.
SUB	The outline form is inappropriately overextended so that it compromises the remaining marginal ridge and/or cusp(s). The outline form is underextended and non-coalesced fissure(s) remain which extend to the DEJ and are contiguous with the outline form.
DEF	The outline form is overextended so that it compromises, undermines and leaves unsupported the remaining marginal ridge to the extent that the pulpal-occlusal wall is unsupported by dentin or the width of the marginal ridge is 1 mm or less.

ISTHMUS

SAT	The isthmus must be 1-2 mm wide, but not more than ¼ the intercuspal width of the tooth.
ACC	The isthmus is more than ¼ and not more than 1/3 the intercuspal width.
SUB	The isthmus is more than 1/3 and not more than ½ the intercuspal width.
DEF	The isthmus is greater than ½ the intercuspal width or less than 1 mm.

CAVOSURFACE MARGIN

SAT	The external cavosurface margin meets the enamel at 90°. There are no gingival bevels. The proximal gingival point angles may be rounded or sharp.
ACC	The proximal cavosurface margin deviates from 90°, but is unlikely to jeopardize the longevity of the tooth or restoration; this would include small areas of unsupported enamel.
SUB	The proximal cavosurface margin deviates from 90° and is likely to jeopardize the longevity of the tooth or restoration. This would include unsupported enamel and/or excessive bevel(s).

SOUND MARGINAL TOOTH STRUCTURE

SAT	The cavosurface margin terminates in sound natural tooth structure. There is no previous restorative material , including sealants, at the cavosurface margin. There is no decalcification on the gingival margin.
SUB	The cavosurface margin does not terminate in sound natural tooth structure; or, there is explorer penetrable decalcification remaining on any cavosurface margin, or the cavosurface margin

	terminates in a previously placed pit and fissure sealant.

AMALGAM PREPARATION

Internal Form

AXIAL WALLS

SAT	The axial wall follows the external contours of the tooth, and is entirely in dentin, .5 mm from the DEJ.
ACC	The depth of the axial wall is .5 mm to 1.5 mm beyond the DEJ.
SUB	The axial wall is more than 1.5 mm beyond the DEJ, but no more than 2.5 mm or the axial wall depth does not include the DEJ.
DEF	The axial wall is [_] more than 2.5 mm beyond the DEJ or [_] there is no gingival floor.

PULPAL FLOOR

SAT	The pulpal floor is optimally 1.5 to 2.0 mm from the cavosurface margin at its shallowest point.
SUB	The pulpal floor is less than 1.5 mm at its shallowest point or greater than 2.0 mm but not greater than 3.0 mm from the cavosurface margin.
DEF	The pulpal floor is more than 3.0 mm from the cavosurface margin or is 0.5 mm or less at its shallowest point.

PULPAL-AXIAL LINE ANGLE

SAT	The pulpal-axial line angle is rounded.
SUB	The pulpal-axial line angle is sharp.

CARIES/REMAINING MATERIAL

SAT	All caries and/or previous restorative material are removed.
DEF	Caries or previous restorative material remains in the preparation or preparation is not extended to include caries.

PROXIMAL BOX WALLS

SAT	The walls of the proximal box should be convergent occlusally and meet the external surface at a 90º angle.
ACC	The walls of the proximal box are parallel, but appropriate internal retention is present.
DEF	The walls of the proximal box diverge occlusally which offers no retention and will jeopardize the longevity of the tooth or restoration.

PREPARED SURFACES

SAT	All prepared surfaces are smooth and well-defined, and the gingival floor is perpendicular to the long axis of the tooth.
SUB	The prepared surfaces are irregular or ill-defined.

AMALGAM PREPARATION

Critical Errors

Wrong Tooth/Surface Treated
Retention, when used, grossly compromises the tooth or restoration
Unrecognized Exposure
Critical Lack of Clinical Judgment/Diagnostic Skills

POSTERIOR COMPOSITE PREPARATION

External Outline Form

PROXIMAL CLEARANCE

SAT	Proximal contact is visibly open up to 0.5 mm.
ACC	Proximal contact is visibly open, and proximal clearance at the height of contour extends beyond 0.5 mm but not more than 1.0 mm on either one or both proximal walls.
SUB	Proximal contact is [_] not visually open; or proximal clearance at the height of contour [_] extends beyond 1.0 mm but not more than 2.0 mm on either one or both proximal walls.
DEF	The proximal clearance at the height of contour extends beyond 2.0 mm on either one or both proximal walls.

GINGIVAL CLEARANCE

SAT	Contact is open gingivally up to 0.5 mm.
ACC	The gingival clearance is greater than 0.5 mm but not greater than 2.0 mm.
SUB	The gingival clearance is greater than 2.0 mm but not more than 3.0 mm, or is not open.
DEF	The gingival clearance is greater than 3.0 mm.

OUTLINE SHAPE/CONTINUITY/EXTENSION

SAT	The outline form includes all carious and non-coalesced fissures, and is smooth, rounded and flowing with no sharp curves or angles.
SUB	The outline form is inappropriately overextended so that it compromises the remaining marginal ridge and/or cusp(s). The outline form is underextended and non-coalesced fissure(s) remain which extend to the DEJ and are contiguous with the outline form.
DEF	The outline form is overextended so that it compromises, undermines and leaves unsupported the remaining marginal ridge to the extent that the cavosurface margin is unsupported by dentin or the width of the marginal ridge is 1.0 mm or less.

ISTHMUS

SAT	The isthmus may be up to 2 mm wide, but not more than ¼ the intercuspal width of the tooth.
ACC	The isthmus is more than ¼ and not more than 1/3 the intercuspal width.
SUB	The isthmus is more than 1/3 and not more than ½ the intercuspal width
DEF	The isthmus is greater than ½ the intercuspal width.

CAVOSURFACE MARGIN

SAT	The external cavosurface margin meets the enamel at 90o.
SUB	The proximal cavosurface margin deviates from 90o and is likely to jeopardize the longevity of the tooth or restoration. This would include unsupported enamel and/or excessive bevel(s).

SOUND MARGINAL TOOTH STRUCTURE

SAT	The cavosurface margin terminates in sound natural tooth structure. There is no previous restorative material , including sealants, at the cavosurface margin. There is no decalcification on the gingival margin.
SUB	The cavosurface margin does not terminate in sound natural tooth structure; or, there is explorer penetrable decalcification remaining on any cavosurface margin, or the cavosurface margin terminates in a previously placed pit and fissure sealant.

POSTERIOR COMPOSITE PREPARATION

Internal Form

AXIAL WALLS

SAT	The axial wall follows the external contours of the tooth, and is entirely in dentin, .5 mm from the DEJ.
ACC	The depth of the axial wall is .5 mm to 1.5 mm beyond the DEJ.
SUB	The axial wall is [_] more than 1.5 mm beyond the DEJ, but no more than 2.5 mm or the axial wall depth does not include the DEJ.
DEF	The axial wall is more than 2.5 mm beyond the DEJ or [_] there is no gingival floor.

PULPAL FLOOR

SAT	The pulpal floor depth must be at 1.5—2.0 mm in all areas; there may be remaining enamel.
SUB	The pulpal floor depth is greater than 0.5 mm but less than 1.5 mm or up to 3.0 mm.
DEF	The pulpal floor is [_] less than 0.5 mm or [_] is more than 3.0 mm from the cavosurface margin.

CARIES/REMAINING MATERIAL

SAT	All caries and/or previous restorative material are removed.
DEF	Caries or previous restorative material remains in the preparation or preparation is not extended to include caries.

PROXIMAL BOX WALLS

SAT	The walls of the proximal box should be parallel or converge occlusally.
SUB	The walls of the proximal box are divergent.
DEF	The walls of the proximal box are grossly [_] convergent so that the buccal-lingual gingival floor width is > than 2 times the buccal-lingual width of the occlusal access or [_] divergent so that the occlusal access is > two times the width of the buccal-lingual gingival floor.

PREPARED SURFACES

SAT	All prepared surfaces are smooth and well-defined, and the gingival floor is perpendicular to the long axis of the tooth.
SUB	The prepared surfaces are irregular or ill-defined.

POSTERIOR COMPOSITE PREPARATION

Critical Errors

Wrong Tooth/Surface Treated
Unrecognized Exposure
Critical Lack of Clinical Judgment/Diagnostic Skills

ANTERIOR CLASS III COMPOSITE PREPARATION
External Outline Form

OUTLINE EXTENSION

SAT	Outline form provides adequate access for complete removal of caries and/or previous restorative material and insertion of composite resin. Access entry is appropriate to the location of caries and tooth position. If a lingual approach is initiated, facial contact may or may not be broken as long as the margin terminates in sound tooth structure.
ACC	The wall opposite the access, if broken, may extend no more than 1.0 mm beyond the contact area. The outline form is overextended mesiodistally 0.5-1 mm beyond what is necessary for complete removal of caries and/or previous restorative material.
SUB	The outline form is underextended making caries removal or insertion of restorative material questionable. The outline form is overextended mesiodistally more than 1mm, but no more than 2 mm beyond what is necessary for complete removal of caries and/or previous restorative material. The incisal cavosurface margin is overextended so that the integrity of the incisal angle is compromised. The wall opposite the access opening extends more than 1 mm beyond the contact area.
DEF	The outline form is underextended making it impossible to manipulate and finish the restorative material. The outline form is overextended mesiodistally more than 2.0 mm beyond what is necessary for complete removal of caries and/or previous restorative material. The incisal cavosurface margin is overextended so that the incisal angle is removed or fractured. A Class IV restoration is now necessary without justification. The wall opposite the access opening extends more than 2.5 mm beyond the contact area.

GINGIVAL CONTACT BROKEN

SAT	The gingival contact must be broken. The incisal contact need not be broken, unless indicated by the location of the caries. If a lingual approach is initiated, facial contact may or may not be broken as long as the margin terminates in sound tooth structure.
ACC	The gingival clearance does not exceed 1.5 mm.
SUB	The gingival clearance is greater than 1.5 mm. The gingival contact is not visibly broken.
DEF	The gingival clearance is greater than 2.0 mm.

MARGIN SMOOTHNESS/CONTINUITY/BEVELS

SAT	Cavosurface margins form a smooth continuous curve with no sharp angles. Enamel cavosurface margins may be beveled.
ACC	The cavosurface margins are slightly irregular. Enamel cavosurface margin bevels, if present, do not exceed 1.0 mm in width.
SUB	The cavosurface margin is rough and severely irregular. Enamel cavosurface margin bevels, if present, exceed 1.0 mm in width, are not uniform or are inappropriate for the size of the restoration.

SOUND MARGINAL TOOTH STRUCTURE

SAT	The cavosurface margin terminates in sound natural tooth structure. There is no previous restorative material, including sealants, at the cavosurface margin. All unsupported enamel is removed unless it compromises facial esthetics.
ACC	There is a small area of unsupported enamel which is not necessary to preserve facial esthetics.
SUB	There are large or multiple areas of unsupported enamel which are not necessary to preserve facial esthetics. The cavosurface margin does not terminate in sound natural tooth structure; or, the cavosurface margin terminates in previous restorative material.

ANTERIOR CLASS III COMPOSITE PREPARATION
Internal Form

AXIAL WALLS

SAT	The axial wall follows the external contours of the tooth and the depth does not exceed .5 mm beyond the DEJ.
ACC	The depth of the axial wall is no more than 1.5 mm beyond the DEJ.
SUB	The axial wall is more than 1.5 mm beyond the DEJ.
DEF	The axial wall is more than 2.5 mm beyond the DEJ.

INTERNAL RETENTION

SAT	If used, rounded internal retention is placed in the dentin of the gingival and incisal walls just axial to the DEJ as dictated by cavity form. Retention is tactilely and visually present.
SUB	When used, retention is excessive and undermines enamel or jeopardizes the incisal angle or encroaches on the pulp.

CARIES/REMAINING MATERIAL

SAT	All caries and/or previous restorative material are removed.
DEF	Caries or previous restorative material remains in the preparation or preparation is not extended to include caries.

ANTERIOR COMPOSITE PREPARATION
Critical Errors

Wrong Tooth/Surface Treated
Unrecognized Exposure
Critical Lack of Clinical Judgment/Diagnostic Skills

RESTORATIVE PROCEDURES
Treatment Management

Penalty Points Only

CONDITION OF ADJACENT TEETH

SAT	The adjacent teeth and/or restorations are free from damage.
ACC	Damage to adjacent tooth/teeth can be removed with polishing without adversely altering the shape of the contour and/or contact.
SUB	Damage to adjacent tooth/teeth requires recontouring which changes the shape and/or position of the contact.
DEF	There is gross damage to adjacent tooth/teeth which requires a restoration.

CONDITION OF SOFT TISSUE

SAT	The soft tissue is free from damage or there is tissue damage that is consistent with the procedure.
SUB	There is iatrogenic soft tissue damage that is inconsistent with the procedure.
DEF	There is gross iatrogenic damage to the soft tissue inconsistent with the procedure and pre-existing condition of the soft tissue.

EXAMINATION APPLICATION POLICIES

Qualified candidates may apply to take the examination by submitting an application ***online*** at www.crdts.org. Once an application is completed online, it is considered a contract with CRDTS. If a candidate fails to fulfill all requirements of the application, or is unable to take the exam, the policies below will apply. Additional portions of the application must be submitted by mail. Detailed information regarding required documents/fees, test sites and examination dates/deadlines are outlined on the CRDTS website and in this Manual. A fully executed application complete with the appropriate documentation and fee is required to take the examination.

Read the entire application form before submitting any information. Be accurate and complete. If directions are not followed, the application may not be accepted.

1. **Application Deadline:** The application deadline is approximately 40 days before the date of the examination. Applications and all documentation/fees must be received on or before the published application deadline date. (Visit www.crdts.org)

2. **Social Security Number:** Candidates must enter their US government-issued social security number when applying online. Candidates without a social security number must contact CRDTS Central Office. The social security number will remain a part of the candidate's secure record. A 10-digit CRDTS ID number will be assigned, appear on all the candidate's examination forms and become the Username for login to CRDTS website. When logged-in, candidates will be able manage their information and view application documents, examination results. This 10-digit CRDTS ID number will connect the results back to the candidate's permanent record.
3. **Photographs:** Candidates must submit a digital photograph. The photograph MUST BE RECENT, passport quality, it may be in black & white or color, JPG/JPEG, FIG, or PNG formats, square and have minimal resolution of 200x200 and max resolution of 500x500.

4. **Signature of Candidate:** The candidate will sign the online application electronically. The electronic signature is legally binding and has the full validity and meaning as the applicant's handwritten signature. With the signature the applicant acknowledges that he/she has read and understands the process and the Candidate Manual and agrees to abide by all terms and conditions contained therein.

5. **Initial Examination/Application Fee**: The appropriate examination fee of $395 must be paid at the time of application. ***Payment submitted must be for the exact amount and can be paid online via VISA or Mastercard or by cashier's check or money order with the applicant's CRDTS ID number written in the lower left-hand corner.*** PERSONAL CHECKS WILL NOT BE ACCEPTED AND WILL BE RETURNED TOGETHER WITH THE APPLICATION TO THE APPLICANT.

   The examination fee of $395 includes application for one attempt at the exam.

6. **Site Fee:** The school may charge a site fee/rental fee for use of instruments, clinic facilities, manikin heads, supplies, and disposables. Some sites require that all instruments be supplied by the school. A rental charge or deposit imposed by the testing site must be remitted directly to the school.

7. **Retest Examination Fee**: There will be no opportunity for a retest of this exam.

After fully executing the online application, a Letter of Certification from Pacific University listing candidates eligible to sit for this examination must be received in CRDTS Central Office prior the Application Deadline. The Letter of Certification must be completed by the Program Director and emailed to Renee@crdts.org verifying that the candidate has demonstrated sufficient clinical competence, is in good standing, and it is anticipated that all program requirements are current and up to date.

ADMINISTRATIVE POLICIES

Once an application has been received or accepted for examination, the policies described in this section become effective.

1. **Disqualification:** A candidate may be disqualified to site for the exam by the Program Director at any time.

2. **Fee Refunds:** Refunds will be made, minus a $25 administrative fee, if notification of cancellation is received in the CRDTS Central Office 30 days prior to the examination. A 50% refund will be made if notification is made at least 6 business days prior to the examination. After that time, any cancellations will result in forfeiture of the entire examination fee. In addition, failure to appear for the exam will result in a forfeiture of the entire examination fee. This policy applies to all cancellations, regardless of reason.
3. **Confirmation Notification:** Candidates will receive a notice confirming their examination schedule; this notice may be distributed or posted by the school. Candidates will receive an email approximately 30 days prior to the examination. This email will contain:
    1. A letter confirming the exam date and the exam schedule.
    2. Other information and/or forms which may be needed to take the examination.
4. **Release of Scores:** Since procedures for this examination at Pacific University will be evaluated off-site, score results will be reported to the Program Director approximately three to four weeks after the examination.

Glossary of Words, Terms and Phrases

Term	Definition
Angle	A corner; **cavosurface angle**: angle formed between the cavity wall and surface of the tooth; **line angle:** angle formed between two cavity walls or tooth surfaces.
Axial wall	An internal cavity surface parallel to the long axis of the tooth.
Bevel	A plane sloping from the horizontal or vertical that creates a cavosurface angle which is greater than 90°.
Cavity Preparation	Removal and shaping of diseased or weakened tooth tissue to allow placement of a restoration.
Cavosurface Margin	The line angle formed by the prepared cavity wall with the unprepared tooth surface. The margin is a continuous entity enclosing the entire external outline of the prepared cavity. Also called the cavosurface line angle.
Convenience Form	The shape or form of a cavity preparation that allows adequate observation, accessibility, and ease of operation in preparing and restoring the cavity.
Convergence	The angle of opposing cavity walls which, when projected in a gingival to occlusal direction, would meet at a point some distance occlusal to the occlusal or incisal surface.
Cusp (functional)	Those cusps of teeth which by their present occlusion, provide a centric stop which intercuspates with a fossa or marginal ridge of an opposing tooth/teeth.
Cusp (non-functional)	Those cusps of teeth which by their present occlusion, do not provide a centric stop which intercuspates with a fossa or marginal ridge of an opposing tooth/teeth.
Debris	Scattered or fragmented remains of the cavity preparation procedure. All debris should be thoroughly removed from the preparation before the restoration is placed.
Decalcification	Demineralized area of enamel that may appear white and chalky or may be discolored. It is considered unsound tooth structure if it can be penetrated by an explorer or is more than ½ the thickness of the enamel.
Dentin	Calcified tissue surrounding the pulp and forming the bulk of the tooth.
Divergence	The angle of opposing cavity walls which, when projected in an occlusal to gingival direction, would meet at a point some distance gingival to the crown of the tooth.

Exposure — *See "Pulp Exposure"*

Finish Line — The terminal portion of the prepared tooth.

Fissure — A developmental linear fault in the occlusal, buccal or lingual surface of a tooth, commonly the result of the imperfect fusion of adjoining enamel lobes.

Ill-defined — A cavity preparation which, while demonstrating the fundamentals of proper design, lacks detail and refinement in that design.

Isthmus — A narrow connection between two areas or parts of a cavity preparation.

Line angle — The angle formed by the junction of two surfaces. In cavity preparations there can be internal and external line angles which are formed at the junction of two cavity walls.

Liner - treatment — An appropriate dental material placed in deep portions of a cavity preparation to produce desired effects on the pulp such as insulation, sedation, stimulation of odontoblasts, bacterial reduction, etc. Also called therapeutic liner.

Long axis — An imaginary straight line passing through the center of the whole tooth occlusoapically.

Over-extension (preparation) — The placement of final cavity preparation walls beyond the position required to properly restore the tooth as determined by the factors which necessitated the treatment.

Pulp cap (direct) — The technique of placing a base over the exposed pulp to promote reparative dentin formation and the formation of a dentinal bridge across the exposure. The decision to perform a pulp cap or endodontics and the success of the procedure is determined by the conditions under which the pulp was exposed.

Pulp cap (indirect) — The technique of deliberate incomplete caries removal in deep excavation to prevent frank pulp exposure followed by basing of the area with an appropriate pulpal protection material to promote reparative dentin formation. The tooth may or may not be re-entered in 6-8 weeks to remove the remaining dentinal caries.

Pulp exposure (carious) — The frank exposure of the pulp through clinically carious dentin.

Pulp exposure (general) — The exposure of the pulp chamber or former pulp chamber of a tooth with or without evidence of pulp hemorrhage.

Pulp exposure (irreparable) — Generally, a pulp exposure in which most or all of the following conditions apply: The exposure is greater than 0.5 mm; the tooth had been symptomatic; the hemorrhage is not easily controlled; the exposure occurred in a contaminated field; the exposure was relatively traumatic.

Pulp exposure (mechanical) (unwarranted)	The frank exposure of the pulp through non-carious dentin caused by operator error, misjudgment, pulp chamber aberration, etc.
Pulp exposure (reparable)	Generally, a pulp exposure in which most or all of the following conditions apply: the exposure is less than 0.5 mm; the tooth had been asymptomatic; the pulp hemorrhage is easily controlled; the exposure occurred in a clean, uncontaminated field; the exposure was relatively atraumatic.
Pulpal wall	An internal cavity surface perpendicular to the long axis of the tooth. Also pulpal floor.
Pulpoaxial line angle	The line angle formed by the junction of the pulpal wall and axial wall of a prepared cavity.
Resistance Form	The features of a tooth preparation that enhance the stability of a restoration and resist dislodgement along an axis other than the path of placement.
Retention Form	The feature of a tooth preparation that resists dislodgment of a crown in a vertical direction or along the path of placement.
Sound Tooth Structure	Enamel that has not been demineralized or eroded; it may include proximal decalcification that does not exceed ½ the thickness of the enamel and cannot be penetrated by an explorer.
Taper	To gradually become more narrow in one direction.
Uncoalesced	The failure of surfaces to fuse or blend together such as the lobes of enamel resulting in a tooth fissure.
Undercut	a. Feature of tooth preparation that retains the intra-coronal restorative material. b. An undesirable feature of tooth preparation for an extra-coronal restoration.
Under-extension (preparation)	Failure to place the final cavity preparation walls at the position required to properly restore the tooth as determined by the factors which necessitated the treatment.
Undermined enamel	During cavity preparation procedures; an enamel tooth surface (particularly enamel rods) which lacks dentinal support. Also called unsupported enamel.
Unsound Marginal Enamel	Loose or fragile cavosurface enamel that is usually discolored or demineralized, which can be easily removed with hand instruments when mild to moderate pressure is applied.

CRDTS

Place Candidate label here

MANIKIN PREPARATION PROGRESS FORM

	#14 ___A ___C		#9
STARTING TIME:	__________	__________	__________
FINISH TIME:	__________	__________	__________

CRDTS will provide the candidate a typodont to complete the Restorative Procedures. When the typodonts are received, the candidate's 3-digit candidate number must immediately be etched onto the end caps of the arch and then the typodont inserted into the facial shroud. The typodont may be dismantled only with the authorization of a CFE.

MODIFICATION REQUEST:

#14	#9
1	1
2	2
3	3
4	4

Ex 1	Ex 2	Ex 3

REST Ex ID: Mod Req Reviewed

Exposure Processed: *(any pulpal exposure must be checked by Clinic Floor Examiner)*

CFE

TYPODONT MOUNTING APPROVED
Arches Labeled with Cand #
2nd arches placed in labeled bag

			FINAL EVALUATION #4 DO PREPARATION
			FINAL EVALUATION #14 MO PREPARATION
			FINAL EVALUATION #9 DL COMP PREPARATION

NOTES TO EXAMINERS *(Use ink. Please number each note. Notes should be written clearly and include specific information, i.e. description, location, etc.)*	*Ex. ID#*		

CRDTS ID: ____________________ Test Site #_________ CANDIDATE # [ ]

MANIKIN MODIFICATION REQUEST FORM

Prepare to SAT criteria and see CFE BEFORE proceeding

CFE #: ______

Submission #: _______ Tooth #: _______ Amal ☐ Post Comp ☐ Ant Comp ☐

Modification Request # 1
What:
Where:
Why:
How Much:
☐ Granted ☐ Not Granted

Modification Request # 2
What:
Where:
Why:
How Much:
☐ Granted ☐ Not Granted

Modification Request # 3
What:
Where:
Why:
How Much:
☐ Granted ☐ Not Granted

Submission #: _______ Tooth #: _______ Amal ☐ Post Comp ☐ Ant Comp ☐

Modification Request # 1
What:
Where:
Why:
How Much:
☐ Granted ☐ Not Granted

Modification Request # 2
What:
Where:
Why:
How Much:
☐ Granted ☐ Not Granted

Modification Request # 3
What:
Where:
Why:
How Much:
☐ Granted ☐ Not Granted