3-4623 GENERAL. This section provides the inspector with the necessary guidance to evaluate and qualify a certificate holder’s onboard flightcrew member rest facilities as meeting the specifications and criteria of a Class 1, 2, or 3 facility.

3-4624 BACKGROUND. Under Title 14 Code of Federal Regulations (14 CFR) part 121, §§ 121.485(a) and 121.523(b), if a flightcrew member is scheduled to fly more than 12 hours during any 24-consecutive hour period, the certificate holder must provide the flightcrew member with “adequate” sleeping quarters. The criteria for adequate sleeping quarters may be found in Advisory Circular (AC) 121-31, Flight Crew Sleeping Quarters and Rest Facilities. Additionally, the Federal Aviation Administration (FAA) has issued legal interpretations defining the meaning of adequate sleeping quarters (see letter to Mr. Wells dated 9/22/03) in which the FAA stated, “Generally, an adequate rest facility means a bunk or berth.” However, the industry has loosely interpreted the meaning of a rest facility, which has resulted in a wide variation of sleeping quarters.

NOTE: It is important to note that the purpose of a rest facility is to provide a suitable area for flightcrew members to rest during long-haul operations while operating in an augmented crew configuration.

A. Title 14 CFR Part 117. On January 4, 2012, the FAA published (Final Rule) 14 CFR part 117, Flightcrew Member Flight and Duty Time Limitations and Rest Requirements. Part 117 prescribes many limitations supporting fatigue mitigation that are based on current fatigue science. Part 117 established three classes of onboard flightcrew member rest facilities. The minimum criteria required for a rest facility to be qualified as meeting either a Class 1, 2, or 3 designation is defined in § 117.3 and outlined in AC 117-1, Flightcrew Member Rest Facilities.

B. Qualification. Qualification of an onboard rest facility is an essential function for determining whether a particular rest facility meets the criteria of one of the three classes. Once the FAA qualifies that rest facility as meeting one of the three classifications prescribed in part 117, the classification for that specific airplane will remain in effect until the rest facility is modified or the FAA determines it no longer meets its previously qualified status. Ensuring that a rest facility meets and is maintained to its qualified classification is crucial as the class of rest facility used is one of the three elements required to determine a flightcrew member’s maximum flight duty period (FDP) limit for augmented operations.

3-4625 DIFFERENCES BETWEEN A REST FACILITY AND A SUITABLE ACCOMMODATION. In an effort to eliminate confusion between the terms rest facility and a suitable accommodation, part 117 defines a rest facility as a bunk or seat accommodation installed in an airplane that provides a flightcrew member with sleep opportunity.
A. **Suitable Accommodation.** A suitable accommodation means a temperature-controlled facility with sound mitigation, the ability to control light and provides a flightcrew member with the ability to sleep either in a bed, bunk, or in a chair that allows for a flat or near flat sleeping position. Suitable accommodation only applies to ground facilities and does not apply to airplane onboard rest facilities.

B. **Classification of Rest Facilities.** Each classification of a rest facility is designed to provide a minimum sleep quality based upon its classification. A Class 1 facility provides good sleep, a Class 2 provides fair sleep, and a Class 3 provides poor sleep quality. The better the quality of sleep the longer the flightcrew member’s maximum FDP limit. Conversely, the lesser the sleep quality, the shorter the flightcrew member’s FDP limit. Part 117, § 117.3 defines the classification of each onboard flightcrew member rest facility based upon the following physical characteristics, specifications, and design criteria:

1) Class 1 rest facility means a bunk or other surface that allows for a flat sleeping position and is located separate from both the flight deck and passenger cabin in an area that is temperature-controlled, allows the flightcrew member to control light, and provides isolation from noise and disturbance.

2) Class 2 rest facility means a seat in an airplane cabin that allows for a flat or near flat sleeping position, is separated from passengers by a minimum of a curtain to provide darkness and some sound mitigation, and is reasonably free from disturbance by passengers or flightcrew members.

3) Class 3 rest facility means a seat in an airplane cabin or flight deck that reclines at least 40 degrees and provides leg and foot support.

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**TNO REPORT.** During the development of part 117, with regard to what constitutes each specific type of rest facility, the FAA took note of a comprehensive evaluation of available onboard rest facilities (refer to pages 343-345 of the part 117 preamble), which was conducted by the Dutch government in 2007 (Simons M., Spencer M., Extension of Flying Duty Period by In-Flight Relief Report TNO–DV2007C362. TNO, Soesterberg, Netherlands, 2007 (TNO Report)). The TNO Report was created in order to provide science-based advice on the maximum permissible extension of the FDP related to the quality of the available onboard rest facility and the augmentation of the flightcrew with one or two pilots. As such, the FAA relied heavily on the data contained in the TNO report.

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**FDP LIMITS.**

A. **Relationship Between Rest Facility Qualification and Augmented FDP Limits.** The FDP limits for augmented operations may be found in Table C of part 117 and are reflected in Figure 3-163, Table C to Part 117 – Flight Duty Period: Augmented Operations (see Volume 3, Chapter 58, Section 2.) In determining the flightcrew member’s maximum FDP limits, the FAA took note of the recommendations set out in the TNO Report. The TNO Report recommended that:

1) An airplane with a Class 1 rest facility provides an FDP extension equal to 75 percent of the duration of the rest period,
2) An airplane with a Class 2 rest facility provides an FDP extension equal to 56 percent of the duration of the rest period, and

3) An airplane with a Class 3 rest facility provides an FDP extension equal to 25 percent of the duration of the rest period.

NOTE: The augmented FDP limits in Table C of part 117 (see Figure 3-163) are based on the quality of rest opportunity that would be provided the flightcrew member while in the rest facility.

B. Difference Between Maximum FDP Limits and Maximum Applicable FDP Limits. FDP limits apply to the individual flightcrew member. For the purpose of augmented flightcrew member operations, Table C of part 117 (see Figure 3-163) prescribes a flightcrew member’s maximum FDP limits based upon the class of rest facility used, the number of pilots assigned, and the flightcrew member’s scheduled time of start. The table assumes the flightcrew member is acclimated; however, if the flightcrew member is not acclimated their maximum FDP limit must be reduced by 30 minutes. The term “maximum applicable FDP limit” illustrates the flightcrew member’s maximum FDP limits based upon the class of rest facility, number of pilots assigned, scheduled time of start and whether the flightcrew member is acclimated.

3-4628 REST FACILITIES.

A. Physical Location of the Rest Facility. The certificate holder must consider many factors when determining the location of an onboard rest facility. Such factors include isolation from disturbance by passengers and other crewmembers, environmental noise, and the location of the rest facility with respect to the serving carts and around the galley areas. Rest facilities should not be located in the economy-class section of the airplane. One of the reasons why an economy-class seat does not provide restful sleep is that space around the seat is not sufficient to create an adequate separation from the passengers (economy jostling). Because there are substantially more passengers in the economy section of an airplane, that section is generally noisier and have more densely-packed people than the other sections of the airplane. In addition, the FAA notes that economy cabins are generally located behind the airplane engines, and thus, have to deal with louder engine noise. Due to all of these considerations, locating a rest facility in the economy section would reduce the restfulness of the sleep obtained by a flightcrew member.

B. Prohibition on the Use of an Economy-Class Passenger Seat as a Rest Facility. The decision to not consider an economy-class seat as a rest facility was based on the TNO Report (refer to pages 343-345 of the preamble to part 117), which determined that “the probability of obtaining recuperative sleep in such a seat would be minimal” on the following considerations:

1) An economy-class seat does not recline more than 40 degrees “and has no opportunities for adequate foot and leg rest, which diminishes the probability of recuperative sleep,”

2) “Space around the seat is not sufficient to create an adequate separation from the passengers (jostle in economy class), or guarantee any privacy,” and
3) “A majority of passengers are unable to sleep at all in an economy seat.”

NOTE: In developing part 117, the FAA agreed with the TNO Report’s analysis of economy-class passenger seats and based on this analysis, which states that economy-class seats provide minimal amounts of recuperative sleep, the FAA has determined that economy-class seats should not be considered as a rest facility for the purposes of part 117. To that end, the FAA will not accept an economy-class seat as a rest facility because the TNO Report has determined that these types of seats provide a minimal amount of restful sleep.

C. Relationship Between Rest Facility and Sleep Surface. A sleep surface is the fundamental part of the rest facility and may be a bed, bunk, or a seat based upon the classification of rest facility. Each class of rest facility has physical specifications relative to that specific classification.

D. When a Rest Facility is Required. A rest facility is required any time the flightcrew is augmented. The rest facility used must meet one of the three classifications outlined in § 117.3.

3-4629 DEFINITIONS.

A. Applying Augmentation. The primary purpose of augmentation is to provide the operating flightcrew members with in-flight rest relief. However, in-flight rest may not be the only reason for the application of augmentation. A certificate holder may augment the minimum required flightcrew because their planned FDP and/or flight time may exceed their maximum applicable FDP and/or flight time limits prescribed for unaugmented operations. For example, an unaugmented flightcrew is assigned an FDP starting at 0700 hour; with 5 planned segments during that FDP, the flightcrew member’s maximum applicable FDP limit would be 12.5 hours (see Figure 3-162, Table B to Part 117 – Flight Duty Period: Unaugmented Operations (Volume 3, Chapter 58, Section 2). Due to operational necessity, the planned FDP requires 13.5 hours.

1) The certificate holder has a few potential options available. First, they could potentially extend the flightcrew member’s FDP with pilot in command (PIC) concurrence. However, if the option of an extension is not available, the certificate holder could reduce the number of segments during that FDP to two segments (14-hour FDP limit) or plan to augment that FDP. Applying the augmentation FDP limits (see Figure 3-163), a flightcrew consisting of three pilots with a scheduled time of start of 0700, and using a Class 3 rest facility, the flightcrew member’s maximum applicable FDP limit would now be 15 hours. A similar approach can be applied to flight time limits. Considering the same scheduled time of start in an unaugmented operation, the planned flight time may exceed 9 hours. In this case, by using augmentation (three pilots), the flightcrew would have a new flight time limit of 13 hours during that augmented FDP.

2) Flightcrew members serving in an augmented crew are considered to be in excess of the minimum required flightcrew member complement. Because the entire flightcrew would consist of 3 or 4 pilots, their maximum applicable FDP limit would be determined by use of...
Table C of part 117 (see Figure 3-163). Table C of part 117 prescribes the flightcrew member’s FDP limits based upon three criteria: the FDP scheduled time of start, the number of pilots assigned to the FDP, and the classification of rest facility being used. Flight time limits for 3 and 4-pilot crews are prescribed in § 117.11(a)(2)(3), which are 13 and 17 hours, respectively.

B. **Evaluation and Qualification Inspection.** An evaluation and qualification inspection is a two-step process performed by the principal operations inspector (POI) (or the Aircraft Evaluation Group (AEG) for Class 1 rest facilities). The purpose of the inspection is to ensure the rest facility and sleep surface conforms to its design and operational criteria and conforms to the limitations and specifications prescribed in § 117.3. The first step is to review the data contained in the certificate holder’s technical report for the rest facility being qualified. The second step is to perform a qualification inspection using the appropriate Qualification Analysis Statement (QAS) (See Figure 3-191, Qualification Analysis Statement Class 1 Rest Facility; Figure 3-192, Qualification Analysis Statement Class 2 Rest Facility; and Figure 3-193, Qualification Analysis Statement Class 3 Rest Facility).

C. **Technical Report.** The certificate holder will prepare a technical report pertinent to the class of rest facility being qualified explaining how the rest facility complies with part 117 and the guidance in AC 117-1. The purpose of the technical report is to provide the POI or AEG with the necessary supporting documentation for qualification of the rest facility. The technical report must identify the installation approval source for the specific class of rest facility being qualified. The installation approval source may be from the airplane’s type certificate (TC) and reflected in the Type Certificate Data Sheet (TCDS), a Supplemental Type Certificate (STC) or a Designated Engineering Representative (DER) approval. In the event the Flight Standardization Board (FSB) Report for that airplane type includes and identifies a specific rest facility that meets the criteria prescribed in § 117.3 for a specific class of rest facility, this data may be used as a substitute for the installation approval source provided the rest facility is identical to class included in the FSB.

1) The technical report must contain a complete list of the certificate holder’s airplanes (by registration and serial number, make, model and series (M/M/S)) that correspond to the installation approval for the specific class of rest facility being qualified. The technical report is instrumental in providing relevant data applicable to all the rest facilities installed under a particular installation approval. Absence of this data will result in the FAA evaluating each rest facility separately.

2) When the certificate holder is prepared to have their rest facilities qualified they will make this request through their POI. With this notification, the certificate holder should provide their POI with a copy of a technical report. It is important for the certificate holder to recognize that a more organized and complete technical report will result in a smoother evaluation and qualification. The technical report should contain the following data:

   a) A list of airplanes, by registration number, serial number, M/M/S, classification of rest facility to be qualified, and the number of sleep surfaces installed under that classification.
b) The method for approval of the rest facility installation such as TC, STC, DER approval or another acceptable means of approval. If applicable, a statement from the FSB stating the rest facility meets the criteria prescribed in § 117.3.

c) Specific dimensions and layout of the rest facility and sleep surface (photographs, drawings, diagrams, etc.) and its location on the airplane.

d) Operating instructions pertinent to the operation and use of the sleep surface and rest facility.

e) Design features for the specific rest facility class qualification.

f) Sound mitigation data for Class 1 rest facilities.

g) Sound mitigation data and operating procedures applicable to curtain installed for a Class 2 rest facility.

h) Any other appropriate approved data supporting the proposed qualification of rest facility.

i) If applicable, a differences table identifying the differences associated with the class of rest facility under this installation approval.

j) Augmented operations procedures.

k) In the event the design of the rest facility requires some preparation by the crew prior to use, such as expanding sections, the evaluation request should include appropriate preparation procedures, and recommended qualification/training requirements (if required).

D. **Differences Table.** In any class of rest facilities under the same installation approval source, the design, location and layout should be identical. However, in the event differences exist in a class of rest facility under the same installation, the certificate holder should identify those differences and incorporate them into a differences table. The table should be included in the certificate holder’s technical report.

E. **QAS.** There are three QAS documents, one document applicable for each classification of rest facility. Each QAS (Class 1, 2 or 3) document contains a checklist of items applicable to that classification of rest facility. When evaluating and qualifying a rest facility, the inspector (or AEG) must use the appropriate QAS for the classification being conducted.

F. **Completing the QAS.** Prior to completing, the POI or AEG should review the data within the certificate holder’s technical report that outlines the design criteria and specifications for the class of rest facility being qualified. This data should outline the information supporting the class of rest facility to be qualified. The QAS should be completed in the following manner:

1) **Certificate Holder:** Enter the name of the certificate holder.

2) **Certificate No.:** Enter the certificate holder’s air carrier certificate number.
3) **TC/STC/DER Approval**: For Class 1 rest facilities qualification only, in the installation approval is under the airplane TC, enter the TC number. For all classes of rest facilities where the installation approval is under a STC or DER approval, enter the STC or DER approval for that class of rest facility.

4) **M/M/S**: Enter the airplane M/M/S.

5) **Registration No.**: Enter the airplane registration number.

6) **Serial No.**: Enter the serial number of the airplane.

7) **Number of Sleep Surfaces**: Enter the number of sleep surfaces installed in the airplane under the classification for which the rest facility is qualified.

G. **Operation Specification (OpSpec) A117.** OpSpec A117, Use of Onboard Flightcrew Member Rest Facilities, must be issued to the certificate holder prior to conducting augmented flightcrew member operations using the FDP limits prescribed in Table C of part 117. OpSpec A117 serves as the source document identifying each of the certificate holder’s airplanes having installed rest facilities based upon the class of rest facility and the number of sleep surfaces under that classification. This data corresponds to the airplane (M/M/S, registration and serial number) listed in OpSpec A117.

H. **Relationship Between the QAS and OpSpec A117.** The completion of a QAS initiates the issuance of, or update to, the certificate holder’s OpSpec A117. The POI will be responsible for the issuance of OpSpec A117 and, if applicable, the subsequent addition or deletion of the certificate holder’s airplanes having rest facilities. At the conclusion of a satisfactory qualification of Class 1 rest facility, once the AEG has completed the qualification evaluation and prepared the QAS, they will forward a copy to the POI.

NOTE: The certificate holder’s technical report should contain a list of all their airplanes (by M/M/S) that have rest facilities under the same rest facility classification and installation approval. When preparing the certificate holder’s OpSpec A117, the POI should have a copy of the technical report and the completed QAS. Refer to the technical report for a list of all the certificate holder’s airplanes (by M/M/S and registration and serial number) that have the same installation approval and the same class of rest facility qualified by this QAS. Insert each of these airplanes by M/M/S, registration and serial number, class of rest facility, qualification date, and the number of sleep surfaces.

I. **Augmented Operations Procedures.** The certificate holder should develop augmented operations procedures relative to the use of the specific onboard rest facilities and sleep surface. The certificate holder should provide the POI (or AEG inspector) with a copy of their augmentation operating procedures. At a minimum, the certificate holder’s augmented operations procedures should include the following:
1) Specific operating procedures relative to the operation of the rest facility and sleep surface for augmented flightcrew operations,

2) Use of Table C in part 117 to determine a flightcrew member’s maximum applicable FDP limits,

3) Procedures for the loss of cabin altitude while in the rest facility,

4) Emergency communications procedures between the flight deck crew and the flightcrew member(s) in the rest facility,

5) Procedures for smoke in the cabin for flightcrew members in the rest facility, and

6) Procedures for dealing with fires in the rest facility.

3-4630 EVALUATION AND QUALIFICATION.

A. Paths for Evaluation and Qualification of Rest Facilities. Evaluation and qualification of onboard rest facilities will follow one of four paths:

1) Existing rest facilities (adequacy evaluated in accordance with AC 121-31),

2) Newly installed Class 1,

3) Newly installed Class 2 and 3, and

4) Previously qualified rest facilities (Class 1, 2, or 3 in accordance with the criteria established in part 117).

B. Responsibility for Evaluating and Qualifying a Rest Facility. The responsibility for evaluating and qualifying rest facilities is determined by the classification sought by the certificate holder.

1) Class 1 Rest Facilities. Due to the specification and design criteria of a Class 1 facility, the AEG having responsibility of that airplane type will conduct the evaluation and qualification. The AEG will keep the POI having oversight responsibility of that certificate holder involved throughout the process.

2) Class 2 and 3 Rest Facilities. The POI having oversight responsibility of that certificate holder will be responsible for conducting the evaluation and qualification of Class 2 and 3 rest facilities with the AEG serving in an advisory role. The AEG will serve in an advisory role to the POI.

C. The Qualification Process. The classification of the onboard rest facilities (i.e., Class 1, 2, and 3) is one of the three elements used to determine the augmented flightcrew member’s maximum FDP limit. Therefore, it is imperative that the certificate holder’s rest facilities are properly evaluated and qualified as meeting one of the classifications (Class 1, 2
or 3) prescribed in § 117.3 prior to using that airplane in augmented flightcrew member operations.

1) Early identification of the qualification project is essential for ensuring a timely rest facility evaluation. Requests for FAA qualification of the rest facility should be made in a timely manner so that an inspection and evaluation of the rest facility may be scheduled after the installation is complete for newly installed facilities, and for existing facilities. Therefore, the certificate holder should submit their request for rest facility qualification to their POI as early as possible. If the qualification project is for a Class 1, the POI must forward this request to the AEG having responsibility for that airplane type.

2) Requests should also include a technical report (as described in this document) relative to the rest facility being qualified. In the event the design of the rest facility requires some preparation by the crew prior to use, such as expanding sections, the evaluation request should include appropriate preparation procedures, and recommended qualification/training requirements (if applicable).

D. Installation Approval. The data contained in the installation approval specifies the design criteria, operational specifications and materials used along with the layout of the facility as well as its location on the airplane. Each class of rest facility installed under a specific approval should be identical to another under of that same approval. For this reason, when the certificate holder prepares their technical report they should list in the technical report each airplane with rest facilities (M/M/S, registration and serial number) corresponding to its installation approval source for that classification. Therefore, when evaluating a certificate holder’s rest facility, the POI (or AEG) need only inspect one class of rest facility under that installation approval per airplane type. As an example, a certificate holder operates ten (10) Boeing B-767 airplanes, each having two (2) Class 2 rest facilities installed under the same installation approval and the layout is identical. Under this example only one of the certificate holder’s ten (10) B-767’s need to be evaluated as the remaining nine (9) B-767 airplanes will fall under this qualification. The certificate holder’s technical report should reflect ten (10) B-767 (individually listed by registration and serial number, and M/M/S) under the same installation approval, each airplane having two (2) Class 2 rest facilities.

E. Rest Facility Differences. If differences exist in a particular class of rest facility under the same installation approval, these differences must be reflected in the certificate holder’s technical report corresponding to the specific airplane by M/M/S and registration and serial number. Such differences include, but are not limited to, number of sleep surfaces, the sleep surface, sound mitigation data for Class 1 and 2 facilities, design and layout, location of the rest facility and airplane type. The certificate holder should develop a table outlining the rest facility differences applicable to the class of rest facility, the airplane type and the installation approval for that rest facility. The differences table should be incorporated into the certificate holder’s technical report for that class of rest facility and airplane type. The differences table must be evaluated to determine if individual evaluations must be conducted for each of the rest facilities having those differences. If the differences are common to a given number of airplanes of the same type, then only one of those airplane’s rest facilities with common differences needs to be evaluated. Otherwise, each airplane’s rest facilities with differences must be evaluated individually.
F. Conducting the Rest Facility Evaluation and Qualification Inspection. When conducting a rest facility evaluation and qualification inspection:

1) For Class 1 rest facilities, the AEG will review the data in the certificate holder’s technical report and supporting documentation to determine if it supports Class 1 criteria. Using the data in the technical report and conducting a physical inspection of the rest facility, the AEG will complete the Class 1 QAS checklist. If the AEG determines that an item required for the Class 1 qualification does not meet the criteria, the AEG will notify the POI of the findings. The certificate holder will be advised by the POI that they have three options. They can make the necessary corrective actions and reschedule another inspection by the AEG, evaluate the rest facility to a lower class (i.e., Class 1 to a Class 2), or contact the Air Transportation Division, AFS-200, to pursue a Fatigue Risk Management System (FRMS) application. If the certificate holder elects to have the rest facility evaluated to a lower class, that evaluation responsibility rests with the POI. In this case the AEG would serve in an advisory role to the POI. If, however, the AEG qualifies the rest facility as a Class 1, the AEG will forward a copy of the completed Class 1 QAS to the POI.

2) For Class 2 rest facilities, the POI will review the data in the certificate holder’s technical report and supporting documentation to determine it supports Class 2 criteria. Using the data in the technical report and conducting a physical inspection of the rest facility, the POI will complete the Class 2 QAS checklist. If the POI determines that an item required for the Class 2 qualification does not meet the criteria, the POI will advise the certificate holder that they have three options. They can make the necessary corrective actions and reschedule another inspection with the POI, evaluate the rest facility to a lower class (i.e., Class 2 to a Class 3), or contact AFS-200 to pursue an FRMS application. If the certificate holder elects to have the rest facility evaluated to a lower class, that evaluation responsibility rests with the POI. The AEG would serve in an advisory role to the POI, if necessary. If the POI determines the rest facility qualifies as a Class 2, the POI will complete the Class 2 QAS.

3) For Class 3 rest facilities, the POI will review the data in the certificate holder’s technical report and supporting documentation to determine it supports Class 3 criteria. Using the data in the technical report and conducting a physical inspection of the rest facility, the POI will complete the Class 3 QAS checklist. If the POI determines that an item required for the Class 3 qualification does not meet the criteria, the POI will advise the certificate holder that they have two options. They can make the necessary corrective actions and reschedule another inspection with the POI, or contact AFS-200 to pursue an FRMS application. The AEG will serve in an advisory role to the POI, if necessary. If the POI determines that the rest facility qualifies as a Class 3, the POI will complete the Class 3 QAS.

G. Qualifying a Class 1 Rest Facility and Existing Rest Facilities (Adequacy Evaluated in Accordance with AC 121-31). If the request for qualification is for a Class 1 rest facility, the POI will forward that request to the AEG having responsibility for that airplane type. The certificate holder will provide the POI with the instructions for continued airworthiness (ICA), the technical report, approved data and other supporting data relative to the class of rest facility at the time of the qualification request. Along with this request, the POI will forward a copy of the technical report, approved data and other supporting documentation to the AEG. The AEG will coordinate with the POI throughout the evaluation. The AEG will coordinate with the
certificate holder to schedule a time and location to conduct the evaluation. The AEG will conduct an evaluation and qualification to evaluate and inspect the rest facility for compliance with part 117. The qualification is accomplished by use of the Class 1 QAS checklist. If a question in the checklist yields a “NO” response, it means the rest facility is not qualified as a Class 1. Therefore, to be qualified as a Class 1 rest facility, each question in the Class 1 QAS must yield a “YES” response.

1) Once the rest facility has been qualified as meeting the criteria and specifications prescribed in part 117 for a Class 1, the AEG will issue a Class 1 QAS for that rest facility. Once issued, the AEG will forward a copy of the completed Class 1 QAS to the POI to initiate the issuance of OpSpec A117. The AEG will retain a copy of the completed Class 1 QAS.

2) The qualification will remain in effect until a modification to the rest facility or a component of the rest facility renders it noncompliant with the criteria and specifications prescribed in part 117 for that classification, or the FAA determines the rest facility no longer meets the criteria and specification(s) prescribed in part 117 for that classification.

H. Qualifying Class 2 and 3 Rest Facilities. Requests for FAA qualification of the rest facility should be made in a timely manner to the certificate holder’s POI so that an inspection and evaluation of the rest facility may be scheduled after the installation is complete. Class 2 and 3 flightcrew member rest facilities will be inspected and evaluated by the POI having oversight responsibilities of the certificate holder. The AEG responsible for that airplane type will serve in an advisory role to the POI. The POI will confer with the AEG as necessary during this process. The certificate holder will provide the POI with the proposed ICA, technical report, approved data and other supporting data relative to the class of rest facility at the time of the qualification request. Also, in the event the design of the rest facility requires some preparation by the crew prior to use, such as expanding sections or leg and foot support, the evaluation request should include appropriate preparation procedures, and recommended qualification/training requirements.

1) Each rest facility is installed under a specific approval. The data contained in the approval specifies the design criteria, operational specifications material to be used along with the layout of the facility, as well as its location on the airplane. Each rest facility installed under a specific approval should be identical to another under of that same approval. For this reason, when the certificate holder prepares their technical report they should list each airplane with rest facilities (M/M/S, registration and serial number) corresponding to its installation approval source. Therefore, when evaluating a certificate holder’s rest facility, the POI need only inspect one rest facility under that installation approval per airplane type.

2) The certificate holder will provide the POI with a copy of the technical report and other supporting documentation relative to the rest facility to be qualified. The POI will coordinate with the certificate holder to schedule a time and location to conduct the evaluation. They will conduct an evaluation and qualification to evaluate and inspect the rest facility for compliance with part 117. The qualification is accomplished by use of the Class 2 or 3 QAS checklist, as appropriate. Any question in the checklist that yields a “NO” response means the rest facility is not qualified for that classification. Therefore, to be qualified as a Class 2 or 3 rest
facility, as appropriate, each question in the respective QAS must yield a “YES” response. Otherwise, the rest facility is not qualified.

3) If the POI has determined the rest facility meets either the Class 2 or 3 qualification, the POI will issue the appropriate QAS for that rest facility classification. A copy of the QAS will be provided to the certificate holder. The QAS will remain in effect until a modification to the rest facility or a component of the rest facility renders it noncompliant with the criteria and specifications prescribed in part 117 for that classification, or the FAA determines the rest facility no longer meets the criteria and specification(s) prescribed in part 117 for that classification.

I. FRMS Application for Rest Facilities. In the event a certificate holder elects to apply for an FRMS authorization for rest facilities, the POI (or AEG for Class 1) should direct the certificate holder to review the current edition of AC 120-103, Fatigue Risk Management Systems for Aviation Safety, and contact AFS-200 at 202-267-8166. All FRMS applications and authorizations are processed by AFS-200.

J. Modifications and Repairs to Rest Facilities. Modifications and repairs that alter any part of the original specifications of the rest facility may disqualify it from the previously qualified classification.

K. Requalification of Previously Qualified Rest Facilities. Requalification of a previously qualified rest facility is required when an item or component associated with the rest facility is modified or altered in any way, except when an inoperative item or component of the rest facility is covered and properly deferred in accordance with the certificate holder’s FAA-approved MEL and its associated procedures. The purpose for requalifying a previously qualified rest facility is to determine that the modification(s) or alteration(s) have not changed the facility’s physical specifications beyond that classification previously qualified and is in compliance with part 117. If the FAA determines the modified or altered rest facility does not meet the classification previously qualified, the rest facility may be evaluated to a different (lower) classification, if applicable. If the FAA determines that the rest facility does not meet any of the three classifications, the airplane may not be used for augmented flightcrew operations and may not use the augmented FDP limits while operating that airplane. If determined that the rest facility does not meet any of the three classifications, or if a rest facility loses its qualification, the POI must remove the airplane from the certificate holder’s OpSpec A117.

1) The AEG responsible for that airplane type is responsible for inspection, evaluation, and requalification of previously qualified Class 1 rest facilities. Inspection and evaluation of previously qualified Class 2 and 3 onboard rest facilities is the responsibility of the POI. The AEG responsible for that airplane type will serve in an advisory role to the POI. The POI will confer with the AEG as necessary during this process.

2) For requalification of a Class 1 rest facility, the AEG will follow the same process outlined in this document for the qualification of Class 1 rest facilities. For Class 2 and 3 rest facilities, the POI having oversight responsibility of the certificate holder will follow the same process outlined in this document for the qualification of Class 2 and 3 rest facilities, as appropriate.
3) Once the airplane’s onboard rest facility has been satisfactorily requalified, the POI will complete the applicable QAS. The completed QAS will initiate the update to the certificate holder’s OpSpec A117. The qualification will remain in effect until a modification to the rest facility or a component of the rest facility renders it noncompliant with the specifications prescribed in part 117, or the FAA determines the rest facility no longer meets the specification(s) prescribed in part 117 for that classification.

L. Upgrading a Rest Facility. In some cases, the certificate holder may upgrade their rest facility to meet the specifications for a higher rest facility classification, which will require that rest facility to be requalified before using the FDP limits applicable for the higher rest facility classification. If the requalification is satisfactory to a higher classification, prior to using the airplane for augmented operations with the higher FDP limits, the certificate holder’s OpSpec A117 must be updated to reflect the newly qualified rest facility.

M. Downgrading a Rest Facility. If a rest facility is downgraded to a lower classification for reasons other than those identified in the certificate holder’s FAA-approved MEL, the POI must reflect this downgraded status by conducting an evaluation and qualification of the rest facility, complete the appropriate class of QAS, and reissue the certificate holder OpSpec A117 reflecting the new classification of rest facility and number of sleep surfaces under that new classification.

N. FRMS Authorization. In certain cases a certificate holder may elect to apply for an FRMS authorization specific to a rest facility. For example, a certificate holder’s rest facility may not comply with all the criteria and specifications outlined in part 117 for a Class 1. The certificate holder would develop an alternative method of compliance (AMOC) that demonstrates an equivalent level of safety applicable to the safety standards set forth in part 117. All FRMS applications should be submitted to AFS-200 for processing (refer to AC 120-103). AFS-200 will coordinate directly with the certificate holder and involve the POI throughout this process. After completion of the studies and validation of the data collected, if the FRMS application is approved, AFS-200 will provide the POI with an approval memo classifying that rest facility to its demonstrated classification based upon the validated AMOC and associated data. In addition, AFS-200 will provide the POI with an OpSpec A318 (FRMS Authorization) template containing the pertinent data to be populated into the OpSpec, which will include the applicable conditions and limitations for that authorization.

O. Issuance of the QAS and OpSpec A117. Prior to conducting augmented flightcrew operations, and using the augmented flightcrew member FDP limits, the certificate holder must be issued OpSpec A117 reflecting the airplane and the classification of rest facility to be used. The issuance of OpSpec A117 is contingent on the completion of the appropriate QAS qualifying that rest facility under one of the three classifications. The POI should refer to the guidance in Volume 3, Chapter 18, Section 3 for the issuance of OpSpec A117. OpSpec A117 must contain the following information:

1) M/M/S,

2) Airplane registration number,
3) Airplane serial number,

4) Qualification date,

5) Classification of rest facility, and

6) Number of installed sleep surfaces for that classification.
A Class 1 rest facility is defined in Title 14 Code of Federal Regulations (14 CFR) part 117 as a bunk or other surface that allows for a flat sleeping position and is located separate from both the flight deck and passenger cabin in an area that is temperature-controlled, allows the flightcrew member to control light, and provides isolation from noise and disturbance.

Certification of this Qualification Analysis Statement (QAS) qualifies this installed onboard flightcrew member rest facility as a Class 1 rest facility. Unless otherwise authorized by an FAA-approved Fatigue Risk Management System (FRMS), when conducting augmented flightcrew member operations, the certificate holder and the flightcrew members must comply with the maximum flight duty period limits (FDP) prescribed in Table C of 14 CFR part 117 based upon the use of this qualified Class 1 rest facility, the flightcrew member’s time of start and the number of assigned flightcrew members. However, when an augmented flightcrew consisting of four or more pilots using multiple classes of rest facilities installed on a single aircraft, the maximum FDP limits applicable to the lowest classification of installed rest facility (Class 1 is the highest and Class 3 is the lowest classification) apply based upon the number of assigned flightcrew members, start time of the flightcrew member’s FDP, and classification of rest facility.

This qualification will remain in effect until a modification to this rest facility renders it noncompliant with the specifications qualifying it as a Class 1 rest facility, or the FAA determines the rest facility no longer meets the requirements prescribed in 14 CFR part 117 for a Class 1 rest facility.

Modifications and repairs that alter any part of the original specifications for a Class 1 rest facility may disqualify it from its previously qualified classification. If the rest facility classification is disqualified, requalification of the rest facility is required, except when an inoperative item or component associated with this rest facility is covered and deferred in accordance with the certificate holder’s FAA-approved minimum equipment list (MEL).

Prior to conducting augmented flightcrew operations, the certificate holder must be issued OpSpec A117, Use of Onboard Flightcrew Member Rest Facilities, authorizing the use of specific onboard rest facilities.

### Evaluation and Qualification Analysis

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Is the physical location of each rest facility of this classification located in an area other than the economy section of the airplane?</td>
<td></td>
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<tr>
<td>2.</td>
<td>Does the sleeping surface a bunk or other surface allow for a flat sleeping position and is located separate from both the flight deck and passenger cabin in an area that is temperature-controlled?</td>
<td></td>
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<tr>
<td>3.</td>
<td>Are the sleeping surfaces designed so that they are flat and as level as practicable during cruise flight?</td>
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<td>Item No.</td>
<td>Item</td>
<td>YES</td>
<td>NO</td>
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<tr>
<td>4.</td>
<td>Do the dimensions of each sleep surface meet the 30”x78” recommendation and the volume per individual of 1.0 m³ (35 feet³).</td>
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<tr>
<td>5.</td>
<td>Does the rest facility provide a suitable means to ensure occupant privacy for each sleeping surface area, e.g., curtains in an over-and-under arrangement or a divider curtain in a side-by-side arrangement.</td>
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<td>6.</td>
<td>Does the rest facility allow the flightcrew member to control light?</td>
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<tr>
<td>7.</td>
<td>Does the facility provide isolation from noise and disturbance?</td>
<td></td>
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<tr>
<td>8.</td>
<td>Is the rest facility area temperature-controlled?</td>
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<tr>
<td>9.</td>
<td>Is airflow and temperature control available to provide a uniformly well-ventilated atmosphere free from drafts, cold spots, and temperature gradient?</td>
<td></td>
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<tr>
<td>10.</td>
<td>Are suitable personal articles stowage and occupant restraint systems provided to each occupant’s sleeping surfaces as well as each occupant of any seats located in crewmember rest facilities?</td>
<td></td>
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<tr>
<td>11.</td>
<td>Are there one or more operational lighted &quot;FASTEN SEAT BELTS&quot; signs within the view of the occupants of each sleeping surface located within the rest facility? If so, are these lighted signs dimmable for sleeping purposes?</td>
<td></td>
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<td>12.</td>
<td>Is an operational interphone available for the cockpit crewmembers to communicate with the sleeping crewmember(s)? <strong>Note:</strong> The FAA recommends that the public address system or an alternative means should include provisions to provide only relevant information to crewmembers in the crewmember rest facility (e.g., in flight emergencies, aircraft depressurization, preparation of compartment occupants for landing.</td>
<td></td>
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<tr>
<td>13.</td>
<td>Is approved oxygen equipment provided for each crewmember using a sleeping surface, including an aural alert to awaken a sleeping crewmember?</td>
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<tr>
<td>14.</td>
<td>Does the rest facility have operational emergency lighting?</td>
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<tr>
<td>15.</td>
<td>Does this rest facility meet the qualification specifications for a Class 1 rest facility?</td>
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</tbody>
</table>

**Item No.** | **Comments and Remarks**

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**Qualification Conducted By:**

___________________________________ __________________ __________________________

Inspector Date Office Routing Symbol
Figure 3-192. Qualification Analysis Statement Class 2 Rest Facility

QUALIFICATION ANALYSIS STATEMENT
CLASS 2 REST FACILITY

<table>
<thead>
<tr>
<th>Certificate Holder</th>
<th>Certificate No.</th>
<th>STC/DER Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make/Model/Serial</td>
<td>Registration No.</td>
<td>Serial Number</td>
</tr>
<tr>
<td>N</td>
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</tbody>
</table>

A Class 2 rest facility is defined in Title 14 Code of Federal Regulations (14 CFR) part 117 as a seat in an aircraft cabin that allows for a flat or near flat sleeping position; is separated from passengers by a minimum of a curtain to provide darkness and some sound mitigation; and is reasonably free from disturbance by passengers or flightcrew members.

Certification of this Qualification Analysis Statement (QAS) qualifies this installed onboard flightcrew member rest facility as a Class 2 rest facility. Unless otherwise authorized by an FAA-approved Fatigue Risk Management System (FRMS), when conducting augmented flightcrew member operations, the certificate holder and the flightcrew members must comply with the maximum flight duty period limits (FDP) prescribed in Table C of 14 CFR part 117 based upon the use of this qualified Class 2 rest facility, the flightcrew member’s time of start and the number of assigned flightcrew members. However, when an augmented flightcrew consisting of four or more pilots using multiple classes of rest facilities installed on a single aircraft, the maximum FDP limits applicable to the lowest classification of installed rest facility (Class 1 is the highest and Class 3 is the lowest classification) apply based upon the number of assigned flightcrew members, start time of the flightcrew member’s FDP, and classification of rest facility.

This qualification will remain in effect until a modification to this rest facility renders it noncompliant with the specifications qualifying it as a Class 2 rest facility, or the FAA determines the rest facility no longer meets the requirements prescribed in 14 CFR part 117 for a Class 2 rest facility.

Modifications and repairs that alter any part of the original specifications for a Class 2 rest facility may disqualify it from its previously qualified classification. If the rest facility classification is disqualified, requalification of the rest facility is required, except when an inoperative item or component associated with this rest facility is covered and deferred in accordance with the certificate holder’s FAA-approved minimum equipment list (MEL).

Prior to conducting augmented flightcrew operations, the certificate holder must be issued OpSpec A117, Use of Onboard Flightcrew Member Rest Facilities, authorizing the use of specific onboard rest facilities.

Evaluation and Qualification Analysis

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<th>Item No.</th>
<th>Item</th>
<th>YES</th>
<th>NO</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Is the rest facility located in an area other than the economy section of the airplane?</td>
<td></td>
<td></td>
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<tr>
<td>2.</td>
<td>Is the rest facility placarded to designate it as a Class 2 rest facility?</td>
<td></td>
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<tr>
<td>3.</td>
<td>Does the seat (sleep surface) in the rest facility allow for a flat or near flat sleeping position?</td>
<td></td>
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<tr>
<td>4.</td>
<td>Is the rest facility separated from passengers by a minimum of a curtain to provide darkness and some sound mitigation?</td>
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</tbody>
</table>
5. Is the location of the rest facility reasonably free from disturbance by passengers or flightcrew members?

6. Is the rest facility configured so that a passenger may not occupy a seat beside the flightcrew member?

7. With the curtain fully extended around the seat, does the curtain provide darkness?

8. Does this rest facility meet the qualification criteria and specifications for a Class 2 rest facility?

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<tr>
<th>Item No.</th>
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Qualification Conducted By:

__________________________  ______________  ______________
Inspector                        Date            Office Route Symbol
A Class 3 rest facility is defined in Title 14 Code of Federal Regulations (14 CFR) part 117 as a seat in an aircraft cabin or flight deck that reclines at least 40 degrees and provides leg and foot support.

Certification of this Qualification Analysis Statement (QAS) qualifies this installed onboard flightcrew member rest facility as a Class 3 rest facility. Unless otherwise authorized by an FAA-approved Fatigue Risk Management System (FRMS), when conducting augmented flightcrew member operations, the certificate holder and the flightcrew members must comply with the maximum flight duty period limits (FDP) prescribed in Table C of 14 CFR part 117 based upon the use of this qualified Class 3 rest facility, the flightcrew member’s time of start and the number of assigned flightcrew members. However, when an augmented flightcrew consisting of four or more pilots using multiple classes of rest facilities installed on a single aircraft, the maximum FDP limits applicable to the lowest classification of installed rest facility (Class 1 is the highest and Class 3 is the lowest classification) apply based upon the number of assigned flightcrew members, start time of the flightcrew member’s FDP, and classification of rest facility.

This qualification will remain in effect until a modification to this rest facility renders it noncompliant with the specifications qualifying it as a Class 3 rest facility, or the FAA determines the rest facility no longer meets the requirements prescribed in 14 CFR part 117 for a Class 3 rest facility.

Modifications and repairs that alter any part of the original specifications for a Class 3 rest facility may disqualify it from its previously qualified classification. If the rest facility classification is disqualified, requalification of the rest facility is required, except when an inoperative item or component associated with this rest facility is covered and deferred in accordance with the certificate holder’s FAA-approved minimum equipment list (MEL).

Prior to conducting augmented flightcrew operations, the certificate holder must be issued OpSpec A117, Use of Onboard Flightcrew Member Rest Facilities, authorizing the use of specific onboard rest facilities.

### Evaluation and Qualification Analysis

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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Is the rest facility physically located in an area other the economy section of the airplane?</td>
<td></td>
<td></td>
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<tr>
<td>2.</td>
<td>Is the rest facility properly placarded to designate it as a Class 3 rest facility?</td>
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<tr>
<td>3.</td>
<td>Does the seat recline at least 40 degrees?</td>
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<tr>
<td>4.</td>
<td>Does the seat provide leg and foot support?</td>
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<tr>
<td>5.</td>
<td>Does this rest facility meet the qualification specifications for a Class 3 rest facility?</td>
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<tr>
<td>Qualification Conducted By:</td>
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<thead>
<tr>
<th>Inspector</th>
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</table>

**RESERVED.** Paragraphs 3-4631 through 3-4646.