164. We decide to eliminate the financial qualification requirement currently in the Commission's rules. Our current financial qualification requirements have not proven to be determinative of whether a licensee implements its system. Our experience has shown that financially qualified licensees have chosen not to go forward, while other licensees who could not have met the requirement but were awarded a license because we waived the requirement, have successfully built and launched systems. We note that we have decided not to apply the current financial qualification requirements to mobile satellite service (MSS) operators in the 2 GHz band, in part because strict enforcement of milestone requirements would ensure timely system construction and service deployment,[387] and have often granted waivers of this rule in cases where all the pending satellite license applications could be accommodated. We conclude that strictly enforcing our milestone schedule provides more certainty that systems will be timely built, while allowing smaller or start-up companies an opportunity to succeed or fail in the marketplace. Our milestone policy will also allow us to reclaim unused spectrum in a timely manner, and to assign that spectrum immediately to those licensees that are proceeding (in the NGSO-like context) or quickly to new applicants (in the GSO-like context).

165. We also decide not to revise the current financial qualification requirement as commenters propose. By eliminating the requirement, we facilitate new entry more effectively than the relaxed financial qualifications would. In addition, relaxing the financial qualification requirement would not make it a better predictor of whether the licensee will construct its satellite system in a timely manner. Instead, we adopt a new financial qualification requirement proposed by commenters, posting bonds, as set forth below.

2. Posting of Bonds

166. *Background.* In the *Notice*, the Commission invited interested parties to suggest alternatives to its proposal to eliminate the current financial qualification requirement,[388] and in general to recommend other ways to reform the satellite licensing process.[389] Intelsat argues that the existing policy is insufficient to deter the filing of frivolous applications.[390] Intelsat proposes that the Commission require applicants to execute a bond in the amount of $10 million, to be included in their applications. Those bonds would be payable to the U.S. Treasury upon license revocation if the licensee has not yet incurred ten percent of their costs at the time the license is revoked.[391] Intelsat argues that a $10 million bond would be sufficient to discourage speculative applications, but would not discourage legitimate applicants because the bond would be payable only if the licensee does not make a good faith effort to proceed with construction of its satellite.[392] Intelsat claims that the Commission has previously adopted a bond requirement in

387 *Space Station Reform NPRM*, 17 FCC Rcd at 3881 (para. 103), *citing 2 GHz Order*, 15 FCC Rcd at 16150-51 (para. 48).

388 *Space Station Reform NPRM*, 17 FCC Rcd at 3883 (para. 108).

389 *Space Station Reform NPRM*, 17 FCC Rcd at 3897 (para. 147).

390 Intelsat Comments at 10-12.

391 Intelsat Comments at 10-11.

392 Intelsat Comments at 11-12.

another service.[393] SES Americom argues that a $10 million bond would unreasonably discourage new entry and innovative new services.[394] PanAmSat also opposes a bond requirement as excessive.[395]

167. *Discussion.* We adopt Intelsat's proposal, as modified below, and replace our existing financial qualification requirements with a bond requirement. By requiring satellite licensees to make a financial commitment to construct and launch their satellites, we help deter speculative satellite applications, and help expedite provision of service to the public. Moreover, replacing our current financial qualification requirement with a bond requirement will result in the financial community determining whether the licensee is likely to construct and launch its satellite system. Thus, financial qualifications will become a market-driven rather than a regulatory determination. We will apply this bond requirement to new satellite licensees only, not replacement satellites. Once a licensee has begun to provide service, we are confident that its replacement satellite application will be intended to continue service, and would not be filed for speculative purposes. The bond will be payable upon missing a milestone without providing an adequate justification for extending the milestone. Licensees will be allowed to reduce the amount of the bond upon meeting each milestone.

168. We are concerned, however, by Intelsat's proposed bond amount of $10 million. The bond amount should help deter speculation, without deterring legitimate satellite applications. While Intelsat argues that a $10 million bond requirement meets these standards, SES Americom and PanAmSat disagree, and we do not have an adequate basis in the record at this time for resolving this issue. Accordingly, on an interim basis, we will set the required bond amount at $5 million for GSO-like satellite licensees, and $7.5 million for NGSO-like satellite system licensees. A higher amount for NGSO-like satellite system licensees is reasonable because a greater commitment is required to implement a multiple-satellite system. Below, we adopt a Further Notice of Proposed Rulemaking inviting parties to comment on a long-term bond requirement.

169. Furthermore, to the extent that SES Americom is correct that a bond requirement may discourage legitimate satellite operators from applying, we do not want this to affect public safety services. Accordingly, we will consider requests for complete or partial waivers of the bond requirement for satellite operators proposing satellites designed to provide public safety services. The Commission's rules provide for waivers of any rule, provided that the petitioner can show good cause for its waiver request.[396] We would consider things such as public safety intent in deciding whether a waiver is warranted.

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[393] Intelsat Reply at 4-6, *citing* Amendment of the Commission's Rules to Provide Channel Exclusivity to Qualified Private Paging Systems at 929-930 MHz, *Report and Order*, PR Docket No. 93-35, 8 FCC Rcd 8318, 8325-27 (paras. 22-23) (1993) (*Private Paging Exclusivity Order*). In that Order, the Commission adopted a bond requirement for paging companies seeking an extension of their milestones.

[394] SES Americom Reply at 16-17.

[395] PanAmSat Reply at 3.

[396] 47 C.F.R. § 1.3. For more on the meaning of "good cause" for purposes of waivers of Commission rules, see WAIT Radio v. FCC, 418 F.2d 1153 (D.C. Cir. 1969) (*WAIT Radio*); Northeast Cellular Telephone Co. v. FCC, 897 F.2d 1166 (D.C. Cir. 1990) (*Northeast Cellular*).

170. As proposed by Intelsat, and as the Commission did in the *Private Paging Exclusivity Order*, we require licensees to execute performance bonds payable to the U.S. Treasury.[397] We require a licensee to obtain this bond within 30 days of grant of their license, as a condition of its license. Otherwise, its license will be null and void. Thus, the bond requirement is in effect an additional milestone requirement. We intend this bond requirement to provide assurance that the licensee is fully committed at the time its license is granted to construct its satellite facilities, not committed merely to spend up to ten percent of the construction costs of the satellite. Therefore, we will not adopt Intelsat's proposal to make the bond payable only if the licensee has not incurred ten percent of its costs at the time the license is revoked.[398] Instead, the bond will be payable upon failure to meet any milestone, without providing adequate justification for extending that milestone. The bond would not be payable if the licensee missed a milestone because of circumstances beyond its control that warrant a milestone extension. By making the bond payable upon failure to meet any milestone based on circumstances within the licensee's control, we require licensees to commit to construct and launch its satellite system, and so we further strengthen our protections against speculation and warehousing.

171. If a licensee transfers or assigns its license, the purchaser of the license will be required to assume the bond. The bond will also be payable if the licensee surrenders its license voluntarily before a milestone date. Again, the purpose of the bond is to require the licensee to commit at the time the license is granted to construct and launch a satellite system. The purpose of the commitment is to ensure that the service is provided to the public as soon as possible. Allowing a licensee to avoid paying the bond by merely selling or surrendering its license substantially reduces the licensee's commitment to construct and launch the satellite, and so increases the likelihood that service to the public would be delayed until the license is surrendered and we reassign the license to another party.

172. In the *Private Paging Exclusivity Order*, the Commission allowed paging licensees to reduce the outstanding principle on their bonds as they progressed on the construction of their networks.[399] Intelsat did not include this in its proposal, however.[400] We adopt a similar provision in this Order. Below, we revise our milestone requirements to establish a total of five milestones for NGSO-like licensees, and four for GSO-like licensees.[401] Accordingly, NGSO-

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397 *Private Paging Exclusivity Order*, 8 FCC Rcd at 8326 n.45; Intelsat Comments at 10-11. The surety on the bond must be a surety company deemed acceptable within the meaning of 31 U.S.C. § 9304, *et seq*. This requirement is also consistent with the *Private Paging Exclusivity Order*, 8 FCC Rcd at 8326 n.45.

398 Intelsat Comments at 10-11. Further, we reject proposals below for basing milestones on payment of certain percentages of the construction cost of a satellite system, because it would encourage applicants to project unreasonably low satellite costs. Section VII.C.12. The same reasoning weighs against Intelsat's proposal to make the bond payable upon failure to spend ten percent on the construction of the satellite.

399 *Private Paging Exclusivity Order*, 8 FCC Rcd at 8326-27 (para. 23).

400 Intelsat Comments at 10-12.

401 The NGSO-like milestones are: (1) contract execution; (2) critical design review; (3) commencement of construction; (4) launch; and (5) bring entire system into operation. The GSO-like milestones are (1) contract execution; (2) critical design review; (3) commencement of construction; and (4) launch. *See* Section VII.C.2. below.

like licensees will be allowed to reduce the amount of the bond by 20 percent of the original bond amount upon meeting each milestone after they post their bonds, and GSO-like licensees will be allowed to reduce the amount of the bond by 25 percent of the original bond amount upon meeting each milestone after they post their bonds.

C. Milestone Requirements

1. Background

173. Milestones are intended to ensure that licensees provide service to the public in a timely manner, to prevent warehousing of scarce orbit and spectrum resources. Such warehousing could hinder the availability of services to the public at the earliest possible date by blocking entry by other entities willing and able to proceed immediately with the construction and launch of their satellite systems.[402] Currently, we require licensees to execute a construction contract within one year of the license grant, and to launch and begin operation of all of their authorized satellites within five to six years, depending on the type of satellite. We include these requirements as conditions in satellite licenses.

174. In the *Notice*, we proposed to adopt generic milestone requirements for all satellite services. We also invited comment on adding a milestone for completion of Critical Design Review (CDR), or in other words, completion of the design phase of implementation and commencement of physical construction.[403] We noted that we adopted this requirement for mobile satellite service (MSS) operators in the 2 GHz band.[404] In addition, the Commission invited comment on whether we should apply the milestones adopted in the *2 GHz Order* to all satellite services,[405] including a "Commence Construction" milestone for beginning the physical construction of the satellite.[406]

	NGSO	GSO
Contract Execution[407]	1	1
CDR	2	2

[402] *PanAmSat Ka-Band License Revocation Review Order*, 16 FCC Rcd at 11537-38 (para. 12), *citing Nexsat Order*, 7 FCC Rcd at 1991 (para. 8); *MCI Order*, 2 FCC Rcd at 233 (para. 5); *First Columbia Milestone Order*, 15 FCC Rcd at 15571 (para. 11).

[403] *Space Station Reform NPRM*, 17 FCC Rcd at 3881 (para. 103). We discuss these milestones in more detail in this Order below.

[404] *Space Station Reform NPRM*, 17 FCC Rcd at 3881 (para. 103), *citing 2 GHz Order*, 15 FCC Rcd at 16178-79 (para. 108).

[405] *Space Station Reform NPRM*, 17 FCC Rcd at 3881 (para. 103), *citing 2 GHz Order*, 15 FCC Rcd at 16177-78 (para. 106).

[406] *See 2 GHz Order*, 15 FCC Rcd at 16177-78 (para. 106).

[407] In the past, we have used the term "construction commencement" for the first milestone, to mean executing a non-contingent construction contract. In this Order, we adopt the term "contract execution" for the first milestone, and define "construction commencement" to mean the beginning of the physical construction of a satellite.

Commence Construction	2.5	3
Launch[408]	3.5	
Bring Entire System Into Operation	6	
Launch and Operate		5

(Milestones are stated in number of years after authorization.)

Further, we invited comment on whether we should adopt interim or additional milestone requirements.[409]

175. We adopt the milestones proposed in the *Notice*, in addition to the 30-day bond-posting requirement adopted above. Milestones remain an important tool to prevent warehousing of scarce orbit and spectrum resources. In addition, strict enforcement of milestones will help safeguard against speculative satellite applications, because the value of the license decreases as the contract execution milestone approaches.[410] Moreover, licensees must work with the financial community to find the financing necessary to enter a contract to construct a satellite system within one year of the grant of the license. Therefore, licensees must develop a viable business plan to obtain that financing, and so milestones introduce a market-based mechanism into our licensing process. Our reasons for adopting the milestones proposed in the *Notice* are explained in more detail below.

2. General Comments on Milestone Proposals

176. *Background.* Teledesic proposes that, rather than relying solely on "generic" milestones, the Commission should develop milestones for each service and licensee.[411] SES Americom opposes Teledesic's proposal, claiming it could create uncertainty and the potential for litigation.[412] Teledesic also opposes the Commission imposing stricter milestone requirements on NGSO than on GSO satellites.[413]

177. *Discussion.* We adopt our proposal to establish generic milestones in our rules. As an initial matter, although we have adopted milestone schedules on a case-by-case basis in the past, we have generally adopted contract execution and launch milestones consistent with those

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408 Non-geostationary satellite systems must launch their first two satellites within 3.5 years of authorization. Geostationary satellite systems must launch their first satellite within 5 years of authorization. *2 GHz Order*, 15 FCC Rcd at 16177-78 (para. 106).

409 *Space Station Reform NPRM*, 17 FCC Rcd at 3882 (para. 104).

410 *Space Station Reform NPRM*, 17 FCC Rcd at 3886 (para. 116).

411 Teledesic Comments at 43-44.

412 SES Americom Reply at 13.

413 Teledesic Comments at 43.

previously used, which track those we proposed in the *Notice*.[414] Moreover, the milestone schedule we include in each license has generally not varied from license to license. Thus, codifying generic milestones is not a great departure from our current practice. Alternatively, Teledesic's proposal to adopt different milestones for each service would be a departure from current practice, and Teledesic does not provide an adequate justification for such a departure.

178. We disagree with Teledesic that longer milestone deadlines for NGSO licenses are warranted. As an initial matter, both NGSO licensees and GSO licensees are required to meet the same milestone schedule, except for commencement of physical construction and launch. Therefore, the NGSO milestone schedule is not substantially stricter than the GSO schedule. Further, the NGSO milestones that we proposed in the *Notice* are consistent with those the Commission adopted for NGSO licenses in the *2 GHz* Proceeding,[415] which are similar to the schedules established for previously licensed NGSO satellite systems.[416] Moreover, the Commission observed that GSO satellite licensees need a longer period in which to launch their first satellite because individual GSO satellites may take more time to construct than an NGSO satellite within a larger constellation of technically identical satellites.[417] Thus, we see no reason to extend the milestones for other NGSO licenses in this proceeding.

3. Contract Execution Milestone

179. *Background.* CTIA recommends setting the contract execution milestone at nine months after the license is issued, rather than one year.[418] SES Americom replies that nine months does not take into account the need to mesh satellite design with business plans.[419]

180. *Discussion.* We will not adopt CTIA's proposal to set the contract execution milestone at nine months. The Commission has historically set this milestone at one year after the license is granted. Our experience has shown that this time period represents a reasonable balance between ensuring that licensees are moving forward with their business plans and allowing licensees adequate time to negotiate satellite construction contracts with manufacturers. CTIA has not provided sufficient reason at this time to question the reasonableness of this balance. We may revisit this issue in the future, however, if our experience shows that a more stringent contract execution milestone is warranted.

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[414] PanAmSat Licensee Corp., *Memorandum Opinion and Order, Order and Authorization*, 13 FCC Rcd 1405 (Int'l Bur. 1997) (*PanAmSat Second Round Ka-band Authorization Order*).

[415] *See 2 GHz Order*, 15 FCC Rcd at 16177 (para. 106).

[416] *See 2 GHz NPRM*, 14 FCC Rcd at 4881 (para. 85) (discussing milestone schedules for Big LEO and NVNG MSS systems).

[417] *2 GHz NPRM*, 14 FCC Rcd at 4881-82 (para. 85).

[418] CTIA Comments at 5.

[419] SES Americom Reply at 22.

4. Standard for Determining Compliance with Contract Execution Milestone Requirement

181. *Background.* The Commission invited comment on several issues related to enforcement of its milestones.[420] First, the Commission explained that the test it now uses for determining whether a licensee has met its contract execution milestone is whether the licensee has a binding, non-contingent satellite construction contract with the manufacturer.[421] We have defined "non-contingent contract" as one where there will be neither significant delays between the execution of the contract and the actual commencement of construction, nor conditions precedent to construction.[422] The Commission noted that this test can require interpretation of construction contracts, and so can take time to administer, and can raise issues regarding requests for confidential treatment of construction contracts.[423] The Commission invited proposals for streamlining our enforcement of contract execution milestones.[424] It also invited proposals for bright-line, easily administered tests for other milestones.[425]

182. *Pleadings.* Teledesic asserts that basing the contract execution milestone on a "non-contingent contract" is problematic because all contracts include some contingencies.[426] SES Americom replies that the concept of "non-contingent contract" is not as difficult as Teledesic asserts.[427]

183. SIA criticizes the Commission for alleged delay in enforcing contract execution milestones in the past, and recommends establishing fixed procedures for contract execution inquiries and a set time limit for the submission of copies of non-contingent satellite construction contracts.[428] Similarly, PanAmSat suggests requiring that licensees submit their construction

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420 *Space Station Reform NPRM*, 17 FCC Rcd at 3882-83 (paras. 105-06).

421 *Space Station Reform NPRM*, 17 FCC Rcd at 3882-83 (para. 105), *citing* PanAmSat Licensee Corp. *Memorandum Opinion and Order*, 15 FCC Rcd 18720, 18723 (para. 9) (Int'l Bur. 2001) (*PanAmSat Ka-band License Cancellation Order*).

422 *Space Station Reform NPRM*, 17 FCC Rcd at 3882-83 (para. 105), *citing* Norris Satellite Communications, Inc., *Memorandum Opinion and Order*, 12 FCC Rcd 22299, 22303-04 (para. 9) (1997) (*Norris Review Order*), *PanAmSat Ka-band License Cancellation Review Order*, 16 FCC Rcd at 11539 (para. 16).

423 *Space Station Reform NPRM*, 17 FCC Rcd at 3882-83 (para. 105).

424 *Space Station Reform NPRM*, 17 FCC Rcd at 3882-83 (para. 105).

425 *Space Station Reform NPRM*, 17 FCC Rcd at 3882-83 (para. 105).

426 Teledesic Comments at 42-43.

427 SES Americom Reply at 12-13, *citing* PanAmSat Licensee Corp. Application for Authority to Construct, Launch, and Operate a Ka-Band Communications Satellite System in the Fixed-Satellite Service at Orbital Locations 58° W.L. and 125° W.L., *Memorandum Opinion and Order*, 15 FCC Rcd 18720 (Int'l Bur. 2000), *aff'd* 16 FCC Rcd 11534 (2001).

428 SIA Comments at 30-32.

contracts, rather than simply certifying that they have entered into non-contingent contracts.[429] Intelsat proposes that the Commission require licensees to certify under penalty of perjury that they have entered into a binding, non-contingent construction contract by the milestone date, or provide a copy of the contract.[430] Teledesic proposes that, instead of requiring licensees to submit confidential corporate information, the Commission should require licensees to certify that they have met each of their milestones.[431]

184. *Discussion.* As an initial matter, we retain our practice of requiring a "non-contingent contract" to demonstrate compliance with the one-year contract execution milestone. This does not mean that the contract cannot contain *any* contingencies. Rather, a "non-contingent contract" is one that allows neither significant delays between the execution of the contract and the actual commencement of construction, nor conditions precedent to construction.[432] We have also held that a sufficient contract is one that contains no unresolved contingencies that could preclude construction of the satellite.[433] In addition, a contract that allows the licensee to cancel construction of the satellite without significant penalty is not sufficient to meet the construction commencement milestone.[434]

185. We adopt SIA's and PanAmSat's proposal to require satellite licensees to submit their contracts to the Commission on or before the date of the contract execution milestone. In particular, by placing this requirement in our rules, we will eliminate the need to send a letter to licensees requesting them to submit their contracts, and so we will be able to begin review of those contracts sooner. We have found that the contracts are needed to allow us to determine whether the licensee has met the milestone. The licensee's certification has not always proven to be dispositive in the past.[435]

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429 PanAmSat Comments at 45-46.

430 Intelsat Comments at 20.

431 Teledesic Comments at 42-43.

432 *Space Station Reform NPRM*, 17 FCC Rcd at 3882 n.142, *citing* Norris Satellite Communications, Inc., *Memorandum Opinion and Order*, 12 FCC Rcd 22299, 22303-04 (para. 9) (1997) (*Norris Review Order*), *PanAmSat Ka-band License Cancellation Review Order*, 16 FCC Rcd at 11539 (para. 16).

433 Tempo Enterprises, Inc., *Memorandum Opinion and Order*, 1 FCC Rcd 20, 21 (para. 7) (1986) (*Tempo Order*). Although the Commission used this standard to review DBS due diligence requirements, it is also applicable to FSS contract execution determinations.

434 Furthermore, a contract to construct only part of a satellite system, by itself, cannot satisfy the construction commencement milestone. In cases where a licensee chooses not to construct the satellite system as licensed, we expect the licensee to file a modification application prior to the date of the construction commencement milestone, rather than simply submitting a contract to construct a different satellite system.

435 *See* Mobile Communications Holdings, Inc., *Memorandum Opinion and Order*, 17 FCC Rcd 11898, 11901 (paras. 9-10) (Int'l. Bur., Sat. Div., 2002). In this proceeding, the licensee was required to commence construction of the first two satellites in a 16-satelite Big LEO system by July 1998, and the remaining satellites by July 2000. The licensee asserted that its contract to construct the first two satellites together with testing plans for the remaining 14 satellites constituted a non-contingent construction contract for all 16 satellites. *See also* Morning Star Satellite Company, L.L.C., *Memorandum Opinion and Order*, 15 FCC Rcd 11350, 11352 (para. 6) (Int'l. Bur. 2000). In this Order, the licensee's president submitted an

5. Confidential Information

186. Teledesic opposes submission of construction contracts in part because it claims that the Commission's procedures for protection of confidential commercial information in those contracts, including our procedures for protective orders, are inadequate.[436] Teledesic does not make any concrete proposals for improving our procedures, nor does it explain how any greater protection could be extended to construction contracts within the bounds of the Freedom of Information Act (FOIA).[437] These comments lack specificity and do not provide a reasonable basis for rejecting SIA's proposal to require submission of construction contracts. As noted, we cannot necessarily rely on a licensee's assessment of its contract as proof that it has met the required milestone.

187. We take this opportunity, however, to explain generally how we plan to treat requests for confidential treatment of satellite construction contracts on a going-forward basis. If a licensee seeks confidential treatment of its construction contract, we will require it to submit an unredacted version of their contracts, and as well as a redacted version to be made publicly available. In addition, we will expect it to provide all the information needed to justify that request for confidentiality, including the information specified in Section 0.459(b) of the Commission's rules.[438] Generally, we have recognized that specific dollar amounts and some of the detailed technical specifications of satellites warrant confidential treatment.[439] We anticipate continuing that policy.

6. Critical Design Review

188. *Background.* SIA questions the benefits of adding a milestone date for CDR.[440] If the Commission decides to adopt such a milestone, SIA and Intelsat encourage the Commission to allow licensees to develop their own CDR deadlines, based upon the licensee's submission of a reasonable CDR completion date.[441] PanAmSat generally opposes the proposal to add a new milestone for CDR.[442]

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affidavit representing that its construction contract was sufficient to meet the construction commencement milestone, even though the contract contained no terms governing construction schedules, payment schedules, or any other evidence of a binding commitment to build a satellite. *See also* EchoStar Satellite Corporation, *Memorandum Opinion and Order*, 17 FCC Rcd 8827, 8829 (para. 7) (Int'l. Bur. 2002) (documents submitted by licensee purporting to show compliance with Ka-band milestone did not include any commitment to construct a satellite with Ka-band capacity).

436 Teledesic Comments at 42-43.

437 5 U.S.C. § 552.

438 47 C.F.R. § 0.459(b).

439 We note, however, that certain technical details are required to be included in an application for a Commission space station license. *See* 47 C.F.R. § 25.114(c). We do not believe that information of this general nature should be routinely withheld from public inspection.

440 SIA Comments at 32-33.

441 SIA Comments at 32-33; Intelsat Comments at 21.

442 PanAmSat Comments at 17-18.

189. *Discussion.* We conclude that we should apply the milestone schedule we adopted for licensees in the *2 GHz* proceeding, including the CDR milestone requirement, to all satellite licensees on a going-forward basis. Without a CDR milestone, there would be an unacceptable amount of time for scarce orbit and spectrum resources to lie fallow in cases where the existing licenses is not proceeding and the spectrum could be reassigned to an entity willing and able to construct a satellite system in a timely manner.[443] The *2 GHz* proceeding concluded that a CDR milestone will aid us in determining whether licensees are taking immediate, concrete steps toward system implementation after meeting the first milestone, and allows us to identify any failure in system progress.[444] We have not found anything in our experience with 2 GHz licensees that would weigh against applying that milestone schedule to all satellite licensees.

190. Further, we will not set CDR milestones on a case-by-case basis in individual licenses. Making those determinations on a case-by-case basis would add to the time needed to process satellite applications. Furthermore, neither Intelsat nor SIA explain why licensees should be given more flexibility than is included in the CDR milestone requirement we adopt here. Specifically, nothing precludes a licensee from meeting the CDR milestone earlier than the deadline we adopt in this Order, and we know of no reason why a licensee that is committed to constructing and launching its satellite system would not be able to commit to completing the spacecraft CDR within the time provided in the milestone schedule.

191. In the *2 GHz Order*, we defined "CDR" as the stage in the spacecraft implementation process at which the design and development phase ends and the manufacturing phase starts.[445] Generally, well before the CDR stage, the licensee should not anticipate making any modifications to its spacecraft design that would require Commission approval, absent unusual circumstances. We will not prescribe a particular method for licensees to show that they have met their milestone, but emphasize that licensees will bear the burden of demonstrating that they have met this milestone. Evidence of compliance with this milestone may include: (1) evidence of a large payment of money, required by most construction contracts at the time of the spacecraft CDR; (2) affidavits from independent manufacturers; and (3) evidence that the licensee has ordered all the long lead items needed to begin physical construction of the spacecraft. Finally, it may be necessary or appropriate to supplement the record on occasion. In such cases, the Commission retains discretion to require licensees to provide further information, or to conduct physical inspections.

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[443] *See 2 GHz Order*, 15 FCC Rcd at 16179 (para. 108) (noting concerns about three-year gap between first and second milestones). *See also* National Exchange Satellite, Inc., *Memorandum Opinion and Order*, 7 FCC Rcd 1990, 1991 (para. 8) (Com. Car. Bur. 1992) (*Nexsat Order*); MCI Communications Corporation, *Memorandum Opinion and Order*, 2 FCC Rcd 233 (1987) (*MCI Order*); Columbia Communications Corporation, *Memorandum Opinion and Order*, 15 FCC Rcd 15566, 15571 (para. 11) (Int'l Bur. 2000) (*First Columbia Milestone Order*); PanAmSat Licensee Corp., Application for Authority to Construct, Launch, and Operate a Ka-Band Communications Satellite System in the Fixed-Satellite Service at Orbital Locations 58° W.L. and 125° W.L., *Memorandum Opinion and Order*, 16 FCC Rcd 11534, 11537-38 (para. 12) (2001) (*PanAmSat Ka-Band License Revocation Review Order*) (noting that milestones are intended to limit warehousing).

[444] *2 GHz Order*, 15 FCC Rcd at 16179 (para. 108).

[445] *2 GHz Order*, 15 FCC Rcd at 16178 (para. 108).

7. Commencement of Physical Construction

192. The *Notice* observed that the milestone schedule adopted in the *2 GHz Order*, included a separate milestone for the physical construction of the satellite, and invited comment on including this milestone for all future licensees.[446] No one commented on this proposal. We conclude that this milestone will provide additional assurance that licensees are making adequate progress towards constructing and launching their satellite systems, and so protects against warehousing. Accordingly, we adopt it.

193. Neither the *Notice* nor the *2 GHz Order* specified in detail what showing would be required to demonstrate compliance with this milestone. Therefore, we will not establish a specific test in this Order. Rather, we will require licensees to provide sufficient information to demonstrate to a reasonable person that they have commenced physical construction of their licensed spacecraft. We emphasize that, as with other milestones, the burden of proof for this showing is with the licensee.

8. Milestones for Satellite Systems Using Feeder Links

194. Above, we establish licensing procedures for systems using feeder links and intersatellite links, that may result in issuing operating authority for parts of a satellite system at different times.[447] In those cases, we will apply the milestone schedule included in the first grant of authority to the entire satellite system. In the past, the Commission determined that requests for ISL authority and feeder link authority do not warrant a milestone extension.[448] There is nothing in the *Notice* to suggest that we would revisit those conclusions in this proceeding.

9. Other Interim or Additional Milestones

195. *Background.* CTIA also states that the Commission should adopt other, interim milestones based on six-month intervals, but does not make any specific recommendations for these milestones.[449] SES Americom replies that constructing a satellite system is more technically complex than constructing a terrestrial wireless network, and cannot be tied to a strict schedule.[450]

196. *Discussion.* By adopting new CDR and physical construction commencement milestones, we find that we will have sufficient assurance throughout the construction stage that the licensee is building its system. We see no reason to adopt additional six-month milestones, nor do we wish to limit licensees' flexibility to negotiate manufacturing contracts that best serve their needs within our general milestone framework. Furthermore, CTIA does not provide sufficient detail for its six-month milestone suggestion to enable us to adopt it here.

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[446] *Space Station Reform NPRM*, 17 FCC Rcd at 3881 (para. 103), *citing 2 GHz Order*, 15 FCC Rcd at 16177-78 (para. 106).

[447] Section VI.E.1.f.

[448] *See, e.g., PanAmSat Ka-Band License Revocation Review Order*, 16 FCC Rcd at 11541 (para. 21); *Space Station Reform NPRM*, 17 FCC Rcd at 3860-61 (para. 38).

[449] CTIA Comments at 5-6.

[450] SES Americom Reply at 21-22.

10. Enforcement of Milestone Requirements

197. *Background.* The Commission also proposed several measures, in addition to its current milestone policies, to strengthen its milestone requirements. Currently, failure to meet a milestone results only in cancellation of the license.[451] The Commission sought comment on imposing forfeiture penalties for failure to meet milestones.[452] It also sought comment on whether, and to what extent, we should prohibit licensees who miss a milestone from applying for other satellite licenses.[453] For example, the Commission invited comment on prohibiting the licensee from applying for another satellite license, or applying for a license to operate a space station in that band, or to operate at that orbit location in the case of GSOs, either permanently, for a certain number of years, or until the licensee has shown that it would meet all its milestone requirements if it were granted another space station license.[454]

198. *Discussion.* SIA claims that imposing penalties other than the loss of the license in question on licensees that fail to meet their milestones could discourage applicants from filing licenses for new or innovative satellite systems.[455] Intelsat opposes prohibiting a licensee from applying for another satellite license in the same band or orbital location if a milestone is missed, and it argues that such a penalty would discourage licensees from taking necessary risks and could overly penalize such licensees.[456]

199. We are sensitive to SIA's and Intelsat's concerns. Accordingly, we will not impose additional penalties on all satellite licensees who miss milestones. Nevertheless, we believe that such penalties might be warranted in possible cases of speculation. In this Order below, we eliminate the satellite anti-trafficking rule, and adopt new safeguards against speculation. One of those safeguards is a limit on the number of pending applications and unbuilt satellites an applicant may have. That limit is five GSO-like satellites and one NGSO-like satellite system in any frequency band.[457] For the reasons discussed below, we find that our proposed limits, in addition to the milestone revisions and bond requirement we adopt here, will be adequate to discourage speculation in most cases.[458] In unusual cases in which the limits do not discourage an applicant from filing speculative applications, however, those speculative filings could lead to "warehousing" orbital locations.[459] In warehousing cases, we have removed authority from

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451 *Space Station Reform NPRM*, 17 FCC Rcd at 3883 (para. 106), *citing*, Morningstar Satellite Company, L.L.C., *Memorandum Opinion and Order*, 15 FCC Rcd 11350 (Int'l Bur., 2000); *PanAmSat Ka-band License Cancellation Order*, 15 FCC Rcd 18720.

452 *Space Station Reform NPRM*, 17 FCC Rcd at 3883 (para. 106).

453 *Space Station Reform NPRM*, 17 FCC Rcd at 3883 (para. 106).

454 *Space Station Reform NPRM*, 17 FCC Rcd at 3883 (para. 106).

455 SIA Comments at 33.

456 Intelsat Comments at 21.

457 Section VII.E.3.

458 Section VII.E.3.

459 Section VII.E.3., Pegasus Comments at 5.

licensees who have not met their satellite construction and launch schedules, so that those licensees are not permitted to waste scarce orbital locations and channels.[460] In other words, warehousing occurs when a licensee has not shown an adequate commitment to move forward with its business plan.[461] Warehousing prevents other potential licensees willing and able to move forward with their business plans from attempting to provide service to the public in a timely manner. Therefore, ensuring that we have adequate means to prevent warehousing is crucial to achieving the goals of this proceeding. As a logical outgrowth of the Commission's proposal to prohibit a licensee from filing future satellite applications upon failure to meet a milestone, we will apply a more strict limit on the number of pending applications and unbuilt satellites for a licensee that has established a pattern of failure to meet milestones.

200. This stricter limit should enable us to address instances of warehousing, while also addressing SIA's and Intelsat's concern about discouraging parties from applying for satellite licenses regardless of their intent to proceed with their business plans. We base this more strict limit on a variation of Pegasus's proposal of two unbuilt satellites.[462] We will apply this limit to both GSO-like and NGSO-like systems, in all frequency bands. In other words, applicants who have established a pattern of missing milestones with two or more applications pending, or with two licensed-but-unbuilt satellite systems of any kind, will not be permitted to file another GSO-like application or NGSO-like application in any frequency band.[463] We adopt a presumption that missing three milestones in any three year period would constitute a "pattern of failure to meet milestones" for these purposes. At the time any licensee misses three milestones in three years, we will presume that the licensee's applications were speculative, and the lower limit on pending applications and unbuilt satellites will remain in effect unless and until the licensee provides adequate information to rebut that presumption, or to demonstrate that it is very likely to construct its licensed facilities if it were allowed to file more applications.

201. We have ample authority for adopting this additional milestone enforcement measure. The *Notice* advised interested parties that the Commission was contemplating an additional sanction of this kind.[464] In addition, the Communications Act gives the Commission authority to establish qualification requirements for license applicants.[465] By applying for a

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[460] *See* Advanced Communications Corporation, *Memorandum Opinion and Order*, 10 FCC Rcd 13337, 13342 (para. 19) (Int'l Bur. 1995), *aff'd* 11 FCC Rcd 3399 (1995); Volunteers in Technical Assistance, *Order and Authorization*, 11 FCC Rcd 1358, 1363 (para. 15) (Int'l Bur. 1995); Norris Satellite Communications, Inc., *Order*, 11 FCC Rcd 5402 (Int'l Bur. 1996).

[461] *Nexsat Order*, 7 FCC Rcd at 1991 (para. 8), *citing* MCI Communications Corporation, *Memorandum Opinion and Order*, 2 FCC Rcd 233 (1987).

[462] Pegasus Comments at 5.

[463] We will also presume that a licensee that creates a pattern of obtaining licenses and then surrendering them before a milestone deadline is also engaging in speculative activity, and will impose the stricter limits unless and until the licensee rebuts this presumption.

[464] *Space Station Reform NPRM*, 17 FCC Rcd at 3883 (para. 106).

[465] Section 308(b) of the Communications Act, 47 U.S.C. § 308(b): "All applications for station licenses, or modifications or renewals thereof, shall set forth such facts as the Commission by regulation may prescribe as to the citizenship, character, and financial, technical, and other qualifications of the applicant to operate the station; ...."

satellite license, an applicant implicitly states that it does not intend to hold the license merely to preclude others from going forward with their business plans. It is reasonable to impose a sanction on licensees that do not meet this implicit promise.

202. In light of our decisions to establish milestones for spacecraft CDR and commencement of physical construction of a spacecraft, to include milestone requirements in the rules, to require licensees to post bonds, and to limit the right to file applications of parties who establish a pattern of missing milestones, we find that rules specifying additional forfeiture penalties are not warranted at this time. Section 1.80 of the Commission's rules already provides adequate authority for the Commission to impose forfeiture penalties upon failure to comply with a rule or a license condition.[466] Accordingly, in the event that a party applies for satellite licenses without the intent to construct or launch a satellite, we will determine whether starting a proceeding to consider forfeiture penalties is warranted.

11. Incentives for Early Launch

203. *Background.* We sought comment on establishing incentives for implementing satellite systems before the launch milestone deadline, such as extending the satellite license term by two years if the licensee launches its first satellite by at least a certain number of months before the applicable launch milestone.[467] We invited parties to propose other incentives.[468]

204. *Discussion.* No one commented on this proposal. We find that the other proposals we adopt in this proceeding should be sufficient to ensure compliance with milestone requirements in most cases. We may consider revisiting this proposal if our experience reveals that additional incentives to comply with milestone requirements are necessary.

12. Alternative Milestone Mechanism

205. *Background.* As an alternative to the milestone requirements proposed in the *Notice*, the Commission invited comment on requiring that licensees spend a certain amount of money on the construction of its satellite system each year.[469]

206. *Discussion.* CTIA supports this proposal.[470] Teledesic agrees that the proposal to require expenditure of a certain amount of money each year would improve the current system, but it encourages the Commission to entertain other, more creative, improvement options.[471] On

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466 "A forfeiture penalty may be assigned against any person found to have: (1) Willfully or repeatedly failed to comply substantially with the terms and conditions of any license, permit, certificate, or other instrument of authorization issued by the Commission; (2) Willfully or repeatedly failed to comply with any of the provisions of the Communications Act of 1934, as amended; or of any rule, regulation, or order issued under that Act by the Commission ..." 47 C.F.R. § 1.80(a)(1), (2).

467 *Space Station Reform NPRM*, 17 FCC Rcd at 3883 (para. 107).

468 *Space Station Reform NPRM*, 17 FCC Rcd at 3883 (para. 107).

469 *Space Station Reform NPRM*, 17 FCC Rcd at 3882 (para. 104).

470 CTIA Comments at 6.

471 Teledesic Comments at 44.

the other hand, Hughes criticizes mandatory expenditure milestones as having the potential to encourage licensees to project unrealistically low total costs.[472] Hughes and SES Americom also worry that such a milestone could alter the relationship between operators and manufacturers.[473] SES Americom also asserts that this proposal would limit operators' flexibility to allocate resources among different projects during the construction period.[474]

207. We decide against replacing milestones with a requirement that licensees spend a certain amount of money on the construction of their satellite systems each year. We agree with Hughes that mandatory expenditure milestones could encourage licensees to project unrealistically low costs. In those cases, meeting cost-based milestones would not necessarily show that the licensee is progressing towards implementation of its system. In addition, to protect against this possibility, we would need to develop methods for determining whether a licensee's cost projections are reasonable, which could prove overly complex. On the other hand, the milestones we adopt in this Order will provide a reasonable basis for assessing progress of system implementation. Moreover, to a certain extent, the payment of money is already a factor in our milestones, in that we examine the payment schedule to determine whether payments are spread evenly throughout the term of the contract term rather than deferred to the end of the term.[475] Mandating a payment schedule with any more specificity might not reflect the best schedule for the particular satellite being built.

13. On-site Inspections

208. CTIA proposes that the Commission make on-site inspections to verify milestone completion.[476] SES Americom maintains that this would delay the satellite licensing process.[477] We believe that the milestone rule revisions we adopt in this Order should be sufficient in most cases to determine whether a licensee has met a particular milestone. In particular, in cases where a licensee has not adequately demonstrated that it has met a milestone, we have authority to revoke the license without inspecting an on-site facility. Nevertheless, an on-site inspection of manufacturing facilities is one reasonable method to supplement the record in a milestone review proceeding, in cases where it may be necessary or appropriate to supplement the record. The Commission retains discretion to make such inspections.

D. Trafficking in Licenses

1. Elimination of Satellite Anti-Trafficking Rule

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472 Hughes Comments at 45-46.

473 Hughes Comments at 45-46; SES Americom Reply at 13.

474 SES Americom Reply at 22.

475 *See Tempo Order*, 1 FCC Rcd at 21 (para. 7).

476 CTIA Comments at 6.

477 SES Americom Reply at 22.

209. *Background.* The Commission prohibits licensees from selling "bare" satellite licenses for profit.[478] This "anti-trafficking rule" is intended to discourage speculators and prevent unjust enrichment of those who do not implement their proposed systems.[479] On the other hand, the existing satellite anti-trafficking rules may prevent a satellite license from being transferred to the entity that would put it to its highest valued use in the shortest amount of time.[480] Accordingly, the *Notice* invited comment on whether we should eliminate the anti-trafficking rule for satellite licenses.[481]

210. The Commission adopted this restriction on sales of licenses to address two concerns. First, an entity might obtain a license without any intention of building facilities or providing service, but rather only to sell the license for profit. This would benefit the seller, but would not necessarily provide any benefit to the public.[482] Another concern is that, if a licensee directs its attention to selling its license to the exclusion of constructing facilities, the spectrum assigned through the license would not be put to any use until after the license were sold. In this case, during the time before the sale, the public would be deprived of whatever valuable service might have otherwise been provided by some other entity.[483]

211. On the other hand, the Commission noted that there may be many situations in which it would be efficient to allow an entity that applied for and received a satellite license to resell that license at any time, provided that the purchaser meets the milestones in the original license.[484] In particular, allowing a licensee whose business plan is no longer viable to sell its license to another entity with another business plan or adequate financial resources would benefit the public by putting scarce orbit and spectrum resources sooner than would be possible otherwise.[485] In addition, allowing the sale of licenses would reduce the risk associated with constructing and launching a satellite system, by giving licensees the option of selling their licenses if they find that their business plans are not viable, and so could encourage satellite deployment.[486] These factors weigh in favor of removing the restriction on sales of licenses.

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478 *Space Station Licensing Reform NPRM*, 17 FCC Rcd at 3883-84 (paras. 109-10). *See also, e.g.*, Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, *Third Report and Order*, CC Docket No. 92-297, 12 FCC Rcd 22310, 22339-40 (para. 74) (1997) (*Ka-Band Service Rules Order*). A "bare" license is a license to operate a communications facility when no facility has been constructed. *Space Station Licensing Reform NPRM*, 17 FCC Rcd at 3883 n.144.

479 *Ka-band Service Rules Order*, 12 FCC Rcd at 22339 (para. 74).

480 *Space Station Reform NPRM*, 17 FCC Rcd at 3884 (para. 111).

481 *Space Station Reform NPRM*, 17 FCC Rcd at 3883-86 (paras. 109-17).

482 *Space Station Reform NPRM*, 17 FCC Rcd at 3884 (para. 110).

483 *Space Station Reform NPRM*, 17 FCC Rcd at 3884 (para. 110).

484 *Space Station Reform NPRM*, 17 FCC Rcd at 3884 (para. 111).

485 *Space Station Reform NPRM*, 17 FCC Rcd at 3884 (para. 111).

486 *See Space Station Reform NPRM*, 17 FCC Rcd at 3884-85 (paras. 112-13).