ARMED SERVICES BOARD OF CONTRACT APPEALS

Appeal of --	)	
	)	
Imperial Construction & Electric, Inc.	)	ASBCA No. 54175
	)	
Under Contract No. NAFDS3-99-C-0029	)	

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OPINION BY ADMINISTRATIVE JUDGE REED

This appeal involves a nonappropriated fund instrumentality (NAFI) design/build contract. Appellant claims that it was delayed and then accelerated by the NAFI thereby causing additional labor costs for increased work time, lost productivity, and overtime differential pay, work in winter conditions involving extra labor, equipment, and materials costs, and extended field and home office overhead costs. The NAFI asserts that delays were contractor-caused, labor was understaffed in mild weather, the contractor scheduled weather-sensitive work in winter, and made a unilateral business decision to finish early.

The Board considered entitlement only. The appeal is sustained in part.

FINDINGS OF FACT

The Solicitation and the Contract

1. On or about 20 November 1998, the U.S. Army Engineer District, Seattle (the Seattle District) issued Request for Proposals (RFP) No. NAFDS3-99-R-0004 on behalf of the U.S. Army Morale, Welfare and Recreation Fund (the NAFI or the MWR Fund). The solicitation asked for proposals for a design-build contract. The project was to design and to construct an outdoor aquatic park, a revenue-producing recreational facility

(essentially a water park), to be located at Picatinny Arsenal, New Jersey (the installation). The RFP made clear that "No appropriated funds of the United States are involved in this project. No appropriated funds of the United States shall become due, or be paid, to the Contractor by reason of this contract." (Joint Stipulations (stip.), ¶ 2; hearing transcript, volume 1, pages 1-8, 1-9, 1-189, and 1-190 (tr. 1/8-9, 189-90), NAFI's Board Rule 4 appeal file (R4), tab 43 at 501, 529-33, § C-1, ¶¶ 1-5(a), 2-1(k), at 626, ¶ I-2) The NAFI's financial partner was Rockaway Township, Morris County, New Jersey (appellant's Board Rule 4 appeal file supplement (app. supp. R4), tab A2 at 102); however, there is no evidence that the Township was to be a party to the contract.

2. Based on competitive pre-qualification, technical, pricing, and time for performance submittals, Contract No. NAFDS3-99-C-0029 (the contract) was awarded to Imperial Construction & Electric, Inc. (ICE or the contractor). The best and final offer, consisting of five lump sum, fixed-price payment items totaling $3,578,210.00, was signed on or about 14 April 1999 by Lou R. Fernandez, Executive Vice President, Division of Sales & Contract Administration (erroneously dated "4/14/98"). Three of the payment items, totaling $3,442,595.00 were accepted for the MWR Fund on or about 28 April 1999 by Susan K. Sherrell, a contracting officer (CO) with the Seattle District. The accepted items require design of the aquatic center, construction of the aquatic center, and construction of an additional parking lot. Among other features, the aquatic park included two water slides. (Stip., ¶¶ 1-2; tr. 1/30-37; app. supp. R4, tab A1 at 89-90; R4, tab 43 at 501-08)

3. The time schedule offered by ICE and accepted by the NAFI was in two segments. The design segment consisted of two parts: 55 calendar days (hereinafter "days;" if workdays are indicated, we will specifically note that) from design notice to proceed (DNTP) to complete, to review, and to submit a 50% design and 55 days to complete, to review, and to submit (to finalize) the design from 50% to 100%. The total design time of 110 days included 4 weeks of NAFI review time (2 weeks in each phase of design). The construction segment was 300 days after receipt of limited NTP (LNTP) for construction of the aquatic center. To be included in the construction time were "normal weather delays" (a reference to the MONTHLY ANTICIPATED ADVERSE WEATHER (CALENDAR DAYS)). (Stip., ¶ 3; tr. 1/30-37, 2/91-92; R4, tab 43 at 509, 601, ¶ H-2, subparagraph 2-3, chart)

4. Among other GUIDANCE TO CONTRACTORS was the statement that "Construction may be authorized prior to completion of design on project segments provided that the [CO] considers that design of the segment of construction to be started is sufficient to permit the construction start . . . ." Concerning liquidated damages (LD), the contract provided that "[t]he first . . . (NTP) for construction (whether limited or full) shall start the construction schedule." (R4, tab 43 at 529, § C-1, ¶ 1-5(a), at 598, § F, ¶ F-2) We construe these provisions to mean that LNTP for construction could be issued

in one or more iterations to allow construction of specific work activities or features. These provisions, the contract performance time provisions described above, and the fact that this was a fast-track project (refer to contract ¶ H-14(a), finding 9 below; tr. 3/46, 224), indicate that the contract performance period was not necessarily 410 days (110 days + 300 days). The completion date could be dependent on whether construction would be allowed to start before the completion of the design, in which case the 300-day construction period could run from that date independently of completion of the 110-day design period. Inherent in fast-track, design-build projects is that construction may begin while design is being finalized (tr. 3/224). The performance time provisions of the contract also indicate that a design delay would not necessarily cause a construction delay.

5. The contract included a specific LD provision, as follows:

> (a) If the Contractor fails to complete the work *within the time specified in the contract*, or any extension agreed upon through bilateral modification, the Contractor shall pay to the NAFI as [LD], the sum of **SEE BELOW** for each day of delay.
>
> (i) **$400.00 per day** until May 29, 2000.
>
> (ii) After May 29, 2000 the [LD] will be assessed at the rate of **$2,123 per day** due to lost revenue, for each day of delay.

(R4, tab 43 at 622 (italics added), ¶ H-30, at 650, ¶ I-51)

6. ICE was obliged to formulate an "outline" schedule for design and construction as a part of its pre-award proposal. The contract further required ICE, during performance, to "develop and maintain an up-to-date construction progress schedule integrating design and construction activities . . . ." Actual progress was to be tracked by the contractor on its schedule. (R4, tab 43 at 509, **NOTE TO OFFEROR**, at 530-31, § C-1, ¶ 1-6, at 621-22, ¶ H-27, at 649-50, ¶ I-48)

7. The contract, at § C-1, ¶ 1-5(a), provided that ICE, as the design-build contractor, would bear the "full responsibility for development of the final facility architectural/engineering designs and construction of a complete and usable facility." The design-build contractor's architect/engineer would bear full responsibility for the design. Contract ¶ H-14 contained similar requirements. (R4, tab 43 at 529, 610-11) ICE consulted pre-award and later subcontracted with Aquatic Development Group, Inc. (ADG) for the design (tr. 1/31-36, 213; app. supp. R4, tab A4 at 284; R4, tab 43 at 505).

8. Contract ¶ H-3, **CONTRACT QUALITY CONTROL/QUALITY ASSURANCE**, required ICE to establish and maintain "an effective quality management system" (subparagraph 3-2) which would allow the contractor to assure that the design and construction complied with the contract requirements. Subparagraph 3-3, "Design Build Contractor Kick-off Meeting," provided that "[a]s soon as practicable after contract award, the Contractor shall meet with the [CO] and review and discuss the details of Contractor's quality control [QC] system . . . [develop] a mutual understanding of the . . . (QC) system . . . [and coordinate] the interrelationship of Contractor [QC] system and [the NAFI's] quality assurance" (QA) program. (R4, tab 43 at 602-07) Subparagraph 3-3 said nothing about design review or comments by users and other interested parties. Subparagraph 3-7(a) designated the contractor's "Architect of Record" as "the final approval authority for shop drawings and any other tests and submittals affecting the final design" (*id*. at 603-04).

9. Design submittal requirements were specified in the contract, in pertinent part, as follows:

> **H-13. RESPONSIBILITY OF THE CONTRACTOR**
>
> (a) All design documents shall be prepared and seals affixed thereto by architect-engineers registered or temporarily authorized to practice in the professional discipline involved in the State where the project is located.
>
> (b) The Contractor shall be responsible for the professional quality, technical accuracy and the coordination for all design, drawings and specifications furnished by the Contractor under this contract. The Contractor shall, without additional compensation, correct or revise any errors or deficiencies in his designs, drawings and specifications. . . .
>
> **H-14. DESIGN SUBMITTAL REQUIREMENTS BY THE CONTRACTOR AFTER AWARD**
>
> (a) The Contractor shall make two design submittals for this project in addition to any required by the [CO] for fast track approval. The first submittal will be at the 50% design stage and the second at the 100% stage. . . . Designs will be reviewed by the [CO] for compliance with contract requirements but not for design validity. The Contractor remains fully responsible for the design. Any portions of the

overall design submitted must be sufficient in detail to permit professional evaluation as to the extent that the elements to be constructed meet contract requirements. . . .

. . . .

(e) Drawings . . . shall include as a minimum:

(1) Site area plans showing all exterior improvements and building areas, layout of major utility lines (including location of valves, hydrants, etc.), streets, driveways, parking, sidewalks, location of all buildings, existing and finished grade contours and drainage.

(2) Floor plans for buildings showing overall dimensions, room dimensions, typical layouts, plumbing fixtures, door swings, location of electrical lights, switches, outlets, fans, etc., heating and air conditioning diagrammatic layout, equipment, and the calculated gross and net floor area.

(3) All exterior and necessary interior elevations.

(4) Building cross sections.

(5) Typical wall, foundation, floor and roof sections indicating design, materials, insulation, etc., for the building.

(6) Plans, elevations, sections and details shall indicate complete construction methods. Complete door, window, hardware and finish schedules shall be included on the plans.

(7) Structural drawings shall include foundation and framing plans and details identifying sizes and shapes of structural members. Type and depth of foundation shall be clearly indicated.

(8) Mechanical drawings shall include, in addition to layout drawings for all systems, single line diagrams of each type of piping system. Type and capacity of all mechanical equipment shall be clearly indicated including necessary schedules listing operating data.

(9) Electrical, Interior: The electrical drawings shall include all power and lighting circuits. Panels

and circuits for the various pieces of equipment and lighting system shall be properly identified on the drawings. One-line diagram shall be provided for each system such as power, fire alarm, telephone, etc. Panel schedules for lighting, power and distribution panelboards shall be provided on drawings.

(10) Electrical, Exterior: The electrical drawings shall include all exterior distribution transformers, primary electrical service, telephone, street/parking area and exterior sign lighting and fire alarm systems where required. Drawings shall also show all underground electrical, concrete encased ducts, manholes and details of all new construction.

(11) Site utility drawings shall include details for paving, manholes and other utility structures. Drawings will also include profiles of sanitary, drainage, and water lines, cross section of ducts, conduits, pavements and walks, complete grading contours (both existing and proposed) clearly indicating drainage patterns, location and detail of street/parking area and sign lighting.

(12) Pool layout drawings shall include layouts of all equipment and fixture location including piping, pumps, support systems, foundations, waterproofing systems, etc. Drawings shall include plans, elevations, details, diagrams of sufficient detail to indicate design intent.

. . . .

(l) Design reviews will be held . . . . The [CO] will review the Contractor's submittal for compliance with the contract requirements and the proposal on which the award was based. If the submittal is not approved, the Contractor shall make the necessary corrections or revisions and submit a completed corrected design . . . .

(1) **Minimum requirements for 50% design submittal**: All drawings see [¶] (e) and other items required to support the design developed to approximately 50[%] completion, except that all Civil

> and Structural drawings shall be developed to approximately 75[%] completion. A fully developed site drawing will be required before consideration of advance (or limited) [construction] . . . (NTP).
>
> (A) A preliminary color schedule and color board showing colors, materials, textures, finishes, etc. (interior and exterior) proposed for the project.
>
> (B) Specifications for site work and site utilities and a draft of the specifications for the remaining work, including index, general conditions, and technical sections.
>
> (C) Design analysis developed to the extent required to support the design or that portion of utility distribution, structural, electrical, and mechanical systems included in this submittal.
>
> (D) Additional soils report and topographical survey (if completed or required).

(R4, tab 43 at 610-15)

10. The contract included a provision entitled CHANGES CONSTRUCTION (APRIL 1987) that is substantively identical to the standard CHANGES provision that was then in effect (FAR 52.243-4 (AUG 1987); R4, tab 43 at 626-27, ¶ I-4).

11. Under the payments provision, "if satisfactory progress has not been made," during a period for which the contractor requests a progress payment, the CO "may retain a maximum of 10 percent of the payment until satisfactory progress is achieved" (R4, tab 43 at 637, PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS (APRIL 1987), ¶ I-20(c)).

12. The DISPUTES (APRIL 1987) provision in the contract stated that the contract was not subject to the Contract Disputes Act of 1978, that claims exceeding $50,000.00 required certification by the contractor, that a CO final decision could be appealed to this Board within 90 days of receipt of such decision, and that decisions of this Board would be "final and . . . not subject to further appeal" (R4, tab 43 at 639, 641, ¶ I-25).

13. DEFAULT (FIXED-PRICE CONSTRUCTION) (APRIL 1987), included in the contract, is substantively identical to the standard DEFAULT (FIXED-PRICE CONSTRUCTION) provision that was then in effect (FAR 52.249-10 (APR 1984); R4, tab 43 at 642-43, ¶ I-29).

14. As part of its pre-award proposal, ICE submitted a "schedule . . . for presentation purposes only . . . based on preliminary conceptual drawings . . . not intended for construction use" (note at bottom of schedule; hereinafter "the outline schedule," finding 6). The outline schedule, dated 31 March 1999, projected (late finish dates are used unless otherwise specified) contract award on 17 May 1999, DNTP on 31 May 1999, substantial construction completion on 11 May 2000, followed by final cleanup, punchlist, and project turnover on 24 May 2000. For purposes of analysis, we adopt the scheduled date for completion of the pools or buildings, whichever is later, as the substantial completion date. With the design effort projected to begin on 31 May 1999, conceptual (50%) drawings were to be completed (NAFI review) not later than 9 July 1999 (a duration of 39 days after DNTP) and design and development drawings (100%) not later than 3 September 1999 (95 days after DNTP). The outline schedule does not show a separate construction NTP but implies construction NTP by projected early and late start dates for mobilization: 23 August and 5 October 1999. ICE made its offer based on a construction period of 300 days; however, the projected mobilization and completion dates, as of the 31 March 1999 outline schedule, indicate a construction time of between 219 and 262 days to achieve substantial completion and between 232 and 275 days for project turnover. Construction activities involving earthmoving were scheduled to start as early as 7 September 1999 and as late as 20 October 1999 (early and late start, respectively for clearing and grubbing), indicating the possibility of concurrent design and construction, as allowed by the contract. Excavation for utilities was planned during November 1999-January 2000, with backfilling scheduled for December 1999-February 2000. Foundation, concrete, and masonry work (early start and late finish dates) for buildings was scheduled in November 1999-February 2000 (foundations), December 1999-February 2000 (floor slabs), and December 1999-March 2000 (block walls). Excavation and concrete work for pools was scheduled in November 1999-January 2000 (excavation) and February-March 2000. (Findings 2-3; stip., ¶ 2; R4, tab 44A, activities 1, 4, 7, 9, 23, 26, 30, 33, 39, 44-46, 54, 56-58, 75-77) We find this schedule to be the best evidence of appellant's as-planned schedule at time of offer. However, we note that DNTP was issued earlier than projected and that the 50% and 100% design durations are shorter than appellant's offer allowed (findings 3, 15, below). Adjusting the schedule for earlier DNTP (minus 25 days) indicates a projected early finish (substantial completion) of 16 April 2000 (a Sunday, hereafter we use 17 April 2000 as the next business day). However, we again note that design and construction may be accomplished concurrently; therefore, a 25-day early start on design would not necessarily mean that construction could be substantially completed 25 days earlier.

Design Work

15. The NAFI issued and ICE received the DNTP on 6 May 1999 (stip., ¶ 4; R4, tab 5). ICE was required by the contract to commence work within 7 days of receipt of NTP (R4, tab 43 at 650, ¶ I-52(a)). The 50% design, if timely, would be completed within 55 days, *i.e.*, on or before 30 June 1999 (finding 3).

16. After 6 May 1999 but prior to 4 June 1999, appellant submitted a single drawing (May-June 1999 drawing) showing a general layout of the project site including how the water park would be situated. A similar drawing "submitted with the [pre-award proposal] was very close to that [but the May-June 1999 drawing] was a little bit more developed . . . . It was dressed up." The general layout of the water park, as-built, is the same as depicted on the May-June 1999 drawing with the exception of a parking area. (App. supp. R4, tab A29; R4, tab 74; tr. 1/40-42, 133-36, 154)

17. Contract award occurred 19 days earlier than projected in the outline schedule (findings 2, 14). After 6 May 1999 and probably at or near the end of May 1999, ICE developed a schedule for internal use (hereinafter "the internal baseline schedule"). This schedule showed the actual DNTP date of 6 May 1999, 25 days earlier than projected in the outline schedule. (Tr. 1/175, 198, 223; app. supp. R4, tab A17, activity 3) The schedule projected substantial completion on 28 March 2000, followed by final cleanup, punchlist, and project turnover on 10 April 2000 (app. supp. R4, tab A17, activities 54, 75-77). These dates are 44 days earlier than projected in the outline schedule and may reflect a cumulative application of the earlier than projected award (19 days) and DNTP (25 days). If so, schedule logic alone does not support such application, since the actual schedule for the latest actual activity, DNTP, at the time of the internal baseline schedule was only 25 days ahead of the outline schedule, not 44 days. There is no record evidence of proposal preparation documents or other working papers that support the validity of the internal baseline schedule. The undated copy of this schedule presented by appellant was not in the same format as other schedules presented by the NAFI. No submitted document or cover letter by appellant appears in the record. There is no contemporaneous evidence of receipt by the NAFI. Richard Briggs, an ICE vice president, testified based on the actual DNTP date of 6 May 1999, that the schedule "would have been submitted, probably at the end of the month;" however, we do not understand this to be testimony that it was submitted in fact. His testimony is, if the internal baseline schedule was submitted, it would have been submitted at the end of the month. Mr. Briggs did not become involved in day-to-day project management until January 2000. We conclude that appellant has not proved that it provided this schedule to the NAFI at the time. (Finding 60, below; tr. 1/223-24)

18. According to the internal baseline schedule, finalization of the 50% design was projected for completion (NAFI review) not later than 26 May 1999 (20 days after

DNTP) and 100% design (NAFI review) not later than 21 July 1999 (76 days after DNTP) (refer to finding 27, below; app. supp. R4, tab A17, activities 4, 6, 8-9). The durations for 50% design and 100% design are less than offered by ICE (55 and 110 days, respectively) (finding 3). Relying on the NAFI's expert witness in construction scheduling and construction contract administration, Sam Grubb, we find the duration for 50% design, including NAFI review of up to 14 days, leaving 6 days for ICE's 50% design work, to be unrealistic (tr. 3/179-200). The total duration for design work is 19 days less than and concludes 44 days earlier than projected in the outline schedule (compare finding 14).

19. The internal baseline schedule does not show a separate construction NTP but implies construction NTP by projected early and late start dates for mobilization: 27 May and 20 August 1999. These dates are 88 and 46 days earlier than projected in the outline schedule even though DNTP occurred only 25 days earlier. (Findings 14, 17; app. supp. R4, tab A17, activity 23) We find the early start date for mobilization to be unrealistic. Construction activities involving earthmoving were scheduled to start as early as 11 June 1999 and as late as 6 September 1999 (early and late start, respectively for clearing and grubbing), indicating the possibility of concurrent design and construction. The shift to earlier dates, when compared with the outline schedule, is 88 days for early start and 44 days for late start without the 25-day adjustment. (Finding 14; tr. 3/230; app. supp. R4, tab A17, activity 26) We find the early start date for clearing and grubbing to be unrealistic. Excavation and backfilling for utilities was schedule for August-November 1999 and October-December 1999 (early start and late finish dates). Excavation, concrete, and masonry work (early start and late finish dates) for buildings was scheduled in September 1999-January 2000 (foundations), October 1999-January 2000 (floor slabs), and October 1999-February 2000 (block walls). Excavation for pools was set for August-December 1999. Concrete work for pools was scheduled in January-February 2000. (Tr. 3/200-02; app. supp. R4, tab 17, activities 30, 33, 39, 44-46, 56-58) Construction time for substantial completion, based on the internal baseline schedule, was between 221 and 306 days (20 August 1999-28 March 2000; 27 May 1999-28 March 2000) and between 234 and 319 days (20 August 1999-10 April 2000; 27 May 1999-10 April 2000) for project turnover (finding 17). The durations are longer by 2 and 44 days when compared with the outline schedule (finding 14). The changes in dates and durations are not explained in the record.

20. After receipt of the DNTP, consistent with their design responsibilities, ICE and ADG met and determined what portions of the design work could move forward. The contractor and design subcontractor worked on the design but could not complete the 50% design because a comprehensive meeting or meetings with the NAFI had not occurred and the overall layout had not yet been reviewed and commented upon by the NAFI, although some discussions had been conducted. (Findings 7, 16; tr. 1/43-45, 3/223-28) However, no evidence explains what design and site survey or examination

activities could or could not be undertaken by ICE and ADG. We are not told, in the record, the extent of the discussions with the NAFI or what additional information was needed to move forward with the design. Appellant does not prove when it would have been ready to provide a design submittal to the NAFI absent any delay to the design kick-off meeting.

21. Owena O. Yang-Totorica (Ms. Yang), an employee of the Seattle District, was the project manager (PM) on behalf of the NAFI. This project was her first experience with a design-build endeavor. She was responsible for planning the "Design Build Contractor Kick-off Meeting." John Llewellyn, PM for ICE, inquired more than once of Ms. Yang, starting within less than a week after contract award, concerning scheduling a meeting with the NAFI sooner rather than later. However, ICE made no direct assertion, at that time, that its design effort was being delayed by the meeting schedule. (Tr. 1/26-28, 2/90, 3/7, 21-22, 44, 76-78; R4, tab 6 at 26, ¶ 4.d.) Scheduling the "Design Build Contractor Kick-off Meeting" took longer than two weeks on account of the number of participants (finding 8; tr. 3/44, 53). Rather than a straightforward meeting to discuss and coordinate the contractor's QC system and the NAFI's QA program, the meeting became a 6-hour conference involving a large number of participants to "Understand roles and responsibilities; discuss groundbreaking plans, design-build process, design submittals, [installation] requirements, contract clauses, responsibilities of the contractor, and inspection/reviews." Each person to be introduced "was requested to voice his/her concerns and/or observations." The meeting was attended by representatives of the three installation offices, the Township and its "Pool Committee," the architect/engineer that developed the NAFI's RFP (the NAFI's A/E), ICE, ADG, NAFI policy and finance offices (the U.S. Army Community Family Support Center or CFSC located in Alexandria, Virginia), the Seattle District, including CO Sherrell, and a field office of the U.S. Army Engineer District, New York (the New York District) that was located at the installation. (Finding 8; tr. 1/47, 2/123-24, 138, 3/13-14, 22, 46; app. supp. R4, tab A2; R4, tab 6 at 25-26, ¶¶ 1.-3.) For its part, the contractor's designer, ADG, continued to discuss a "wave pool" that had not been accepted by the NAFI at award (tr. 3/128; app. supp. R4, tab A2 at 103; R4, tab 6 at 27-28, ¶ 7.). The NAFI and other "users met with the design team to further clarify user needs" and provided a "Design Feedback" document to ICE that included 14 items related to the design (tr. 1/50-54, 2/138, 3/14, 46-48; R4, tab 6 at 29, ¶ 9. at 30). There is no contemporaneous evidence that any specific aspect of the design work was being impeded by the scheduling and conduct of the meeting.

22. The "Design Build Contractor Kick-off Meeting" was conducted on 4 June 1999 (R4, tab 6). The outline schedule projected design concept meetings not later than 7 days after DNTP. The internal baseline schedule showed design concept meetings concluding not later than 6 days after DNTP. We find 2 weeks from DNTP to be reasonable and note than some discussions with the NAFI were conducted (findings 8,

20). There is no slack indicated for the design concept meetings activity on either schedule. (Tr. 3/227-29; app. supp. R4, tab A17, activity 3, actual dates, activity 5, late finish, 12 May 1999; R4, tab 44A, activity 3, early start, activity 5, late finish, 4 June 1999, adjusted to 10 May 1999) If the design concept meetings are considered the same as the "Design Build Contractor Kick-off Meeting," then that activity finished a maximum of 15 days late on paper (20 May 1999 to 4 June 1999) (tr. 2/90-91, 3/238-39). A schedule indicating no slack time and an activity delay of 15 days would otherwise show a delay to the overall project. However, appellant has produced no convincing evidence of a causal connection between this delay of the kick-off meeting and a delay of the overall project.

23. Listed in the "Design Build Contractor Kick-off Meeting" minutes and discussed during the introduction to the meeting was that "Open Memorial Day 2000 is key" (R4, tab 6 at 26, ¶ 3.e.). Memorial Day 2000 was observed on Monday, 29 May 2000. There is no record indication that ICE objected to that discussion.

24. The NAFI did not intend to make changes to the design or the contract based on the comments at the "Design Build Contractor Kick-off Meeting." The comments were more of a "checklist for the contractor than anything else" and likely affected the completion of 100% design more than completion of the 50% design. However, ICE and ADG were obliged to consider the comments from the "Design Build Contractor Kick-off Meeting" to determine whether any design action would need to be taken. (Finding 8; tr. 1/54-55, 2/138, 151-52, 3/11-14, 47-51, 135-36; R4, tab 6 at 27, ¶ 7.d.) No evidence has been cited to us that changes to the design were made based on the comments from the "Design Build Contractor Kick-off Meeting." We find no such changes. (Tr. 3/221-23) No evidence shows that specific aspects of appellant's design or site survey and examination efforts were delayed.

25. ICE continued to receive comments and have discussions with the NAFI related to the early stages of the design until 24 June 1999. The comments had to be considered to determine whether any design action was necessary. ICE's work to develop the 50% design could not be completed until the comments were considered. To some extent, comments resulted from the contractor's proposal for a wave pool that had been rejected and the additional design work that would have been required to add a wave pool. (Finding 21; tr. 1/55-62, 3/14-21, 48-52; app. supp. R4, tab A3 at 113-16) No evidence has been cited to us that changes to the design were made based on the comments generated through 24 June 1999. We find no such changes. Appellant provided no probative evidence that its wave pool suggestions did not delay design or generate NAFI design comments. No evidence shows that specific portions of appellant's design were being delayed, what design activities were being accomplished at this time, or how much earlier appellant would have submitted its 50% design submittal. We are not told the amount of time or effort necessary to check the NAFI's design review

comments. The record does not establish a reasonable or expected time, according to appellant, for resolution of design comments that are inherent in design work.

26. The next two design activities, "Conceptual Drawings" (projected duration, 19 days) and "Government [NAFI] Review" (14 days), as indicated on the outline schedule, are sequential. The schedule logic is that ICE had to develop the conceptual drawings and only then could the NAFI review them starting the day after completion of the conceptual drawings. (R4, tab 44A, activities 6-7) The internal baseline schedule shows these two activities as "**50% Drawings**" and "[NAFI] Review," and indicates concurrent performance during the 14-day period of 13-26 May 1999 (app. supp. A17, activities 6-7). This is a mistake, a scheduling logic error, or is unrealistic since a complete review of the drawings could not be accomplished until the drawings were completed.

27. ICE submitted its 50% design submission and the NAFI received it on 13 July 1999, consisting of one drawing and 7 pages of abbreviations, symbols, and specifications. The drawing differed little from the drawings submitted by ICE prior to award but included a general site plan with topographic elevations. (Stip., ¶ 6; tr. 1/63-64; app. supp. A3 at 117; R4, tabs 7, 72 at 1-8) The outline schedule projected this activity for 25 June 1999, 18 days earlier than 13 July 1999; the internal baseline schedule showed 26 May 1999, 48 days earlier (app. supp. R4, tab A17, activity 6; R4, tabs 7, 44A, activity 6).

28. On or about 13 July 1999, ICE requested a LNTP from the NAFI to allow clearing and grubbing to proceed (tr. 1/64-65). The NAFI did not agree that the 50% design drawings complied in every respect with the contract requirements for the 50% design submittal and did not issue a LNTP for clearing and grubbing only. The information on the drawings may have been sufficient from a technical perspective to allow clearing and grubbing (tr. 1/65-73, 2/141-45, 3/54, 141-42); however, the drawings submitted on 13 July 1999, specifically including the site drawing, were not signed by the ICE/ADG "Architect of Record" (findings 8, 29, below; R4, tab 72). For those reasons, it was not unreasonable, as a matter of contract administration, for the NAFI to withhold LNTP at that time. The outline schedule projected a late start date of 20 October 1999 (25 September 1999 with the 25-day adjustment) for this activity; the internal baseline schedule planned late start for 6 September 1999 (findings 14, 19). Based on ICE's schedules, clearing and grubbing was not yet on the critical path; therefore, no critical path delay had occurred as of 13 July 1999.

29. On or about 19 July 1999, the NAFI completed its review of the 50% design submittal and provided a written response to ICE by a letter of that date from Kelly V. Lie, a CO's Representative (COR) with the Seattle District (stip., ¶ 7; R4, tab 7). We find that COR Lie correctly determined, pursuant to contract language, that the submittal

was incomplete because it lacked evidence of an internal design QA review (not signed or sealed by the design architect-engineer), a design analysis, and a preliminary color schedule and color board. (Finding 9, ¶ H-13(a), ¶ H-14(l)(1)(A), (C); tr. 1/66-69, 132; R4, tab 7) Ms. Lie also asserted that the submittal was missing a geotechnical investigation; the contract calls for a "soils report" (finding 9, ¶ H-14(l)(1)(D); R4, tab 7). She further opined that the submittal included insufficient construction specifications for site work and site utilities and implied that the civil and structural drawings were not developed to approximately 75% completion (finding 9, ¶ H-14(l)(1)(B); tr. 1/67; R4, tab 7). The observations as to the sufficiency of the specifications and the completeness of the civil drawings are, to an extent, subjective and, in some instances, based on requirements that are not in the contract (*e.g.*, "a demolition plan," tr. 2/135). COR Lie relied on the experience of CFSC engineer Joseph M. Bloomer, Jr. His testimony at the hearing was conclusory but was not rebutted by specific, detailed evidence from appellant. (Tr. 1/63-65, 131-32, 2/123-35; R4, tab 7). No draft structural or electrical drawings were submitted as required by the contract (finding 9, ¶ H-14(l)(1); R4, tab 72). COR Lie, in her letter dated 19 July 1999, also called for a site grading plan, site utility plan, site clearing plan, storm drainage plan, proposed soil erosion and sedimentation control plans, and temporary survey controls. The contract called for "Site area plans," *i.e.*, a drawing or drawings "showing all . . . finished grade contours and drainage." The drawing or drawings were to show "layout of major utility lines (including location of valves, hydrants, etc.)." (Finding 9, ¶ H-14(e)(i)) Paragraph H-14(e)(ii) of the contract required considerable additional detail on a site utility drawing or drawings (finding 9). These items of the design were to be developed to 75% completion at the 50% design stage. It follows that soil erosion and sedimentation control plans as well as survey controls would be necessary even though the contract is not explicitly worded in that manner. (Finding 9, ¶ H-14) The contract calls for a fully developed site drawing before construction NTP will be considered by the NAFI (finding 9, ¶ H-14(l)(1); R4, tab 7). We find that the 50% design submittal received by the NAFI on or about 13 July 1999, did not comply with the contractual requirements for that submittal.

30. More detailed written review comments dated 23 July 1999 were supplied to ICE (app. supp. R4, tab A3 at 123-32). The comments had to be considered to determine whether any design action was necessary. (Finding 24) No evidence has been cited to us that changes to the design were made based on the comments generated through 23 July 1999. We find no such changes.

31. In response to the NAFI's comments dated 19 and 23 July 1999, ICE submitted a preliminary geotechnical report and a more complete site plan and specifications as well as plumbing, mechanical, and electrical drawings on 28 July 1999 (stip., ¶ 8; tr. 1/70-71, 2/144-45, 3/100; app. supp. R4, tab A3 at 135-51). On or about that date, Mr. Llewellyn renewed ICE's request to COR Lie for a LNTP for clearing and grubbing only (tr. 1/72-74). On 5 August 1999, ICE and the NAFI held an informal

meeting to review the 50% design submittal and an LNTP for clearing and grubbing. The review meeting continued in a more formal setting on 6 August 1999. (Stip., ¶ 9; tr. 1/77-91, 220-21, 3/80; app. supp. R4, tab A3 at 187-89; R4, tab 41A1)

32. ICE maintained an ongoing request for a LNTP. As of 6 August 1999, the NAFI declined to issue a LNTP based on the quality and completeness of ICE's 50% design effort. (Tr. 1/76-84, 92, 120-21, 221) Based on ICE's schedules, clearing and grubbing was not yet on the critical path; therefore, no critical path delay had occurred as of 6 August 1999 (finding 28).

33. In a 10 August 1999 written summary of the meetings on 5-6 August 1999 addressed to ICE, NAFI PM Yang generally expressed the NAFI's "very serious concern" with "the quality of the design documents submitted to date." However, the NAFI confirmed its acceptance of ICE's 50% design and a fully developed site plan by writing:

> A revised submittal to correct the deficiencies in the revised 50% design submittal submitted on 28 July will not be submitted in two weeks as previously discussed. Instead, a 100% design [submittal] will be provided which will address the comments made during the 50% design review, sealed drawings, complete grading plan for the entire site, final design analysis, color boards, equipment schedules, completed specifications, and shop drawing submittal register.

In addition, ICE was to make another submittal of their QA/QC plan and an updated schedule for design and construction. (Tr. 1/94-97, 131, 3/62-63, 80-83; R4, tab 41A1) Accordingly, the 50% design was completed 92 days after DNTP (finding 15), *i.e.*, 37 days longer than the contractual completion time for that activity (finding 3). It is clear that both parties may have had some part in the extended 50% design performance period. Appellant has provided no proof showing that its incomplete 50% design submittal had no role in that extended performance period. We have not been shown any causal connection between this apparent delay and the date for overall completion of construction. On paper, these activities may seem to be critical to completion; however, if construction has not been shown to be delayed, delay is not critical (or not yet critical) in fact. Without detailed proof by appellant, based on this record, we are unable to determine the as-built critical path or the scope of the alleged delays and which party is responsible in whole or part.

34. ICE submitted an updated schedule dated 13 August 1999. This schedule did not show early and late start and finish dates or predecessor and successor activities,

making it more difficult to determine whether an activity had slack or was on the critical path. The actual finish for 50% design (NAFI review) was indicated as 28 July 1999, 28 days late based on the 55-day contract period and appellant's schedule entries. Completion of 100% design (NAFI review) was projected for 22 September 1999, 56 days after 28 July 1999. Mobilization was projected for 19-20 August 1999, followed by survey and layout, 23-27 August 1999, clearing and grubbing, 30 August-3 September 1999, strip and stockpile topsoil, 6-17 September 1999, and excavation of site, 20 September-15 October 1999. Common sense would indicate that these activities are on the construction critical path. The graphical depiction on the schedule drawing supports that judgment. Concrete and masonry work for buildings was scheduled in December 1999 (foundations and floor slabs) and December 1999-January 2000 (block walls). Concrete work for pools was scheduled in March-April 2000. Substantial completion and project turnover were projected to conclude on 18 May and 31 May 2000, respectively. (Findings 3, 15; stip., ¶ 10; R4, tab 44B, activities 7, 9, 23-24, 26-28, 44-46, 54, 56-58, 77)

35. Concerning design work, the updated schedule dated 13 August 1999, compared with the internal baseline schedule, indicates a delay in completing the 50% design of 63 days which is then projected as a delay of 63 days in completing the 100% design (compare findings 18, 34; 26 May 1999, an unrealistic date, to 28 July 1999 and 21 July to 22 September 1999, respectively).

36. In the updated schedule dated 13 August 1999, compared with the internal baseline schedule, construction mobilization is shown 1 day earlier and start of clearing and grubbing is 7 days earlier (compare findings 18, 34; 19 instead of 20 August 1999 and 30 August instead of 6 September 1999). This indicates that design delay did not necessarily delay construction. However, delays in substantial completion and project turnover of 51 days are indicated (compare findings 17, 34; 28 March to 18 May 2000 and 10 April to 31 May 2000, respectively). Construction was projected to be substantially complete in 273 days and fully turned over in 286 days, compared with 219-262 days and 232-275 days in the outline schedule (finding 14). We cannot find that, as of 13 August 1999, delay to the critical path had occurred (findings 4, 14, 22, 24-25, 32-33).

37. The updated schedule dated 13 August 1999, compared with the outline schedule, indicates a delay in completing the 50% design of 28 days and projected delays in completing the 100% design of 19 days (compare findings 14, 34; 9 to 28 July 1999 and 3 to 22 September 1999, respectively). If we adjust the dates in the outline schedule in consideration of the actual DNTP that was 25 days earlier than projected by that schedule (findings 14-15), the 50% design delay becomes 53 days.

Concurrent Design and Construction Work

38. By letter dated 13 August 1999, appellant requested a LNTP to allow commencement on 23 August 1999 of soil erosion work, clearing and grubbing, bulk excavation, and security fencing (R4, tab 8). COR Lie responded in a letter dated 16 August 1999 with a list of requirements and setting a tentative date of 20 August 1999 for the pre-construction conference (precon) (R4, tab 9). The precon was conducted and the contractor's QC plan was approved on 20 August 1999. The precon agenda recites the completion date as Memorial Day weekend 2000. (Findings 3-4; stip., ¶ 11; R4, tabs 10-11) There is no proof that appellant's QC plan should have been approved earlier; therefore, the NAFI was not shown to be unreasonable in withholding LNTP prior to 20 August 1999.

39. By letter dated 24 August 1999, received by ICE on that date, the NAFI issued a LNTP for security fencing, soil erosion work, and clearing and grubbing. The LNTP letter incorrectly recites the completion date as 410 days from receipt of the DNTP on 6 May 1999, *i.e.*, 19 June 2000. (Finding 15; stip., ¶ 12; tr. 2/145, 3/103-07; R4, tab 12) Presumably, this was the CO's interpretation. However, based on the contract, the completion date was 300 days from receipt of the LNTP, which also happens to be 19 June 2000 (findings 3-4).

40. ICE continued to discuss, with the NAFI, an expansion of the LNTP to allow follow-on construction activities (tr. 1/110-12). The updated schedule dated 13 August 1999 shows construction activities for mobilization through clearing and grubbing projected for a total of 16 days during 19 August-3 September 1999 (finding 34). By that schedule, the LNTP was issued 5 days after the start date for mobilization. Based on the outline schedule or the internal baseline schedule, either there is no delay (late start after 24 August 1999) or a 4-day delay (late start on 20 August 1999), respectively (findings 14, 19).

41. If timely performed, pursuant to activity durations in the 13 August 1999 schedule update, but based on the actual LNTP date, mobilization through clearing and grubbing would be completed on 8 September 1999, 15 days after receipt of the LNTP on 24 August 1999. Construction work to clear and to layout fencing was started by ICE on 24 August 1999. Work was disrupted for at least part of the day on 25 August and 29 September 1999 for lack of safety equipment. No work was performed on Thursday-Friday, 26-27 August 1999. Work continued on 30 August-2 September 1999. The Labor Day holiday was 6 September 1999. Clearing work was next performed on Monday, 20 September 1999. Rain disrupted work on 21, 29, and 30 September and 5 and Saturday, 9 October 1999. No construction work was performed on 22 September 1999. Clearing continued to completion on weekdays during 23 September-13 October 1999, and on Saturday, 9 October 1999. Soil sampling was started on 30 September

1999. (Tr. 3/106-07; R4, tabs 13, 42 at 219-69) Mobilization through clearing and grubbing was performed over a period of 51 days, indicating a 35-day extended duration of these activities. There is no record evidence of NAFI-caused delay to construction activities during this time. Based on the outline schedule (late finish date for clearing and grubbing, 1 October 1999 as adjusted), there is a delay to construction activities of 12 days as of 13 October 1999 (R4, tab 44A, activity 26).

42. On 27 September 1999, the NAFI's A/E was required to attend an extra design review meeting following additional review effort of ICE's post-50% design submittal. In bilateral Modification No. P00001 to the contract (mod 1), signed by Mr. Llewellyn on 10 November 1999 and by CO Sherrell on 12 November 1999, the parties agreed to a credit from ICE to the NAFI as reimbursement for the costs of the extra effort by the NAFI's A/E. Mod 1 included language agreeing that the modification was a "complete and equitable adjustment" that released the NAFI "from any and all liability under this contract for further equitable adjustments attributable to [the] facts and circumstances giving rise to this modification." (Stip., ¶ 20; tr. 3/82-83; R4, tab 21)

43. By letter dated 28 September 1999, confirming a conversation on 27 September 1999, ICE's president, Frank Dominguez, was informed by CO Sherrell that she considered "the lack of adequate project progress a condition that is endangering performance of the contract . . . . [U]nless such condition is appropriately addressed as indicated herein within . . . (10) days after receipt hereof, the [NAFI] may consider more stringent means of contract enforcement." More specifically, the letter addressed the progress of the overdue 100% design. CO Sherrell wrote that the LNTP would be expanded "for additional site work if civil and structural drawings are at 100%, stamped by a registered engineer, and construction ready as required by the contract." (Stip., ¶ 13; R4, tab 14) No provision of the contract was cited in support of the latter statement concerning "100%" and "construction ready" in connection with an LNTP and none has been cited to us.

44. By letter dated 28 September 1999, ADG wrote to CO Sherrell directly concerning a number of topics. Among them was a request that ADG be allowed to meet with the users directly to clarify certain aspects of the design. ADG asserted in the letter that it had been given insufficient direction by ICE concerning the buildings included with the water park. (App. supp. R4, tab A4 at 284-85)

45. On 29 September 1999, appellant requested and the government granted an expanded LNTP to allow all cuts, fills, and excavation construction work. The requested expansion did not include placement of footings, foundations, or concrete. ICE received the expanded LNTP on 30 September 1999. (Stips., ¶¶ 14-15; tr. 1/123; R4, tabs 15-16) The scheduled activities following clearing and grubbing and that would be allowed by the expanded LNTP begin with stripping and stockpiling topsoil. The 13 August 1999

updated schedule indicates start and finish dates of 6-17 September 1999 for that work (R4, tab 44B, activity 27), indicating a 24-day delay to the start of that activity based on receipt of the expanded LNTP. However, ICE would not have been in a position to fully perform or complete that activity since clearing and grubbing did not finish until 13 October 1999 (finding 41, finding 48, below). We find that, as of 30 September 1999, contractor construction delays are driving the schedule.

46. ICE responded by letter dated 1 October 1999 from Mr. Dominguez to CO Sherrell. The letter provides comments that mirror the CO's expressed concerns in her letter dated 28 September 1999, and commits to completion of certain design work by specified dates. With regard to the overall completion date, Mr. Dominguez wrote:

> One important aspect of this design/build project, which makes it different from the norm, is the amount of individuals and organizations involved. Taking this complexity issue into account, the Corps of Engineers acknowledged its need to partner and generate some latitude in expediting the process to facilitate the completion of the Aquatic Center by Memorial Day.
>
> [ICE] feels that the current review process is one-sided causing an adverse condition instead of one of collaboration in line with the goals and objectives of this project. . . .

(R4, tab 17)

47. ICE submitted its final geotechnical report on or about 6 October 1999 and its final design/construction documents on or about 27 October 1999 (stip., ¶ 16; tr. 1/124-25; app. supp. R4, tab A4 at 294-323). Appellant has not explained how the timing of these documents impacted construction work, if they did.

48. To commence other construction activities, all clearing and grubbing work did not require completion. However, sufficient work had to be completed to allow start of subsequent activities and all preceding work had to be completed to allow certain subsequent activities to be completed. (Finding 45; tr. 1/104-13) Survey work for excavation began on 12 October 1999, one day before clearing was completed. Mass excavation (cuts and fills) commenced on 14 October 1999. As of 22 October 1999, excavation had reached rock. Additional equipment was needed to remove the rock but was not mobilized to the site until 27 October 1999. The schedule update dated 13 August 1999 projected completion of cuts and fills by 29 October 1999. (Finding 41; R4, tab 42 at 266-93, tab 44B, activities 27-29) There is no record evidence of NAFI-caused delay to construction activities during this time.

49. On 3 November 1999, the contractor encountered an underground concrete bunker at the site. Bilateral mod 2 was signed for ICE by Mr. Fernandez on 5 July 2000 and for the NAFI by successor CO Cheryl A. Anderson on 6 July 2000. Among other provisions in mod 2, the parties agreed to "no time extension" and language agreeing that the modification was a "complete and equitable adjustment" that released the NAFI "from any and all liability under this contract for further equitable adjustments attributable to [the] facts and circumstances giving rise to this modification." (Stip., ¶ 17; R4, tabs 20, 70, contractor QC reports for 3-10 November 1999)

50. On November 8, 1999, the contractor requested and the NAFI granted an unlimited NTP (UNTP) for "the remaining work covered" by the contract. ICE received the UNTP on that date. As of that date, cuts and fills had not been completed. In the UNTP letter, CO Sherrell again asserted that the contract completion date was 410 days after 6 May 1999. (Finding 39; stip., ¶¶ 18-19; R4, tabs 18-19, 70, contractor QC reports for 3-10 November 1999) By issuing the UNTP, the NAFI effectively accepted the completed design as submitted on or about 27 October 1999.

51. The updated schedule dated 13 August 1999 projected completion of design by 3 November 1999, indicating no delay in final design completion. The contractor submitted an updated schedule dated 14 December 1999. It also does not show early and late start and finish dates. Completion of design (final construction drawings) is shown as actually finished on 3 November 1999. (Finding 34; R4, tab 44C, activity 10, final construction drawings)

Ongoing Construction Work

52. ICE's blasting plan was approved by the NAFI on 18 November 1999 and blasting operations began on 19 November 1999 (stip., ¶ 21). The updated schedules dated 13 August 1999 and 14 December 1999 do not indicate a separate activity for blasting (R4, tabs 44B-C). Appellant does not show the impact of completion of its final geotechnical report, if any, on the preparation and submittal of the blasting plan (finding 47). We are not informed of the date on which appellant determined that blasting would be required or whether blasting was unexpected work. Appellant did not show when the blasting plan was submitted.

53. By letter dated 22 November 1999, ICE requested permission to work on Friday, 26 November 1999, the day after Thanksgiving Day, and Saturday, 27 November 1999 on account of "[t]he tightness of the schedule [which] makes it imperative that we try to use warm work days as much as we can" (R4, tab 64). Through 27 November 1999, all or part of 5 work days were impacted by precipitation. Anticipated adverse weather days, as agreed in the contract for September-November, totaled 17, not

including a portion of the 5 agreed days for August. Temperatures recorded by ICE reached freezing on 1 work day but warmed above freezing on that day. The contractor had worked on some Saturdays and on the Columbus Day and Veterans Day holidays. There is no record that ICE worked on 26-27 November 1999. (Finding 41; R4, tabs 42, 43 at 601, tab 70) We find that construction delays had created the schedule tightness about which ICE was concerned (tr. 3/204-06, 216-21). There is no evidence of NAFI-caused construction delays as of 22 November 1999.

54. Other site work and installation of sanitary sewers continued through December 1999 (stip., ¶ 21). The updated schedule dated 13 August 1999 shows finish dates of 22 and 28 December 1999 for installation of underground piping and backfilling utilities (R4, tab 44B, activities 31, 33).

55. The updated schedule dated 14 December 1999, compared with the 13 August 1999 updated schedule, concerning sitework, indicates an actual timely finish on 20 August 1999 for mobilization indicating no actual delay to mobilization (finding 40), an actual 4-day early finish for survey and layout, a 6-day early start and an 18-day late finish for soil conservation controls, a 25-day late start (on 24 September 1999) and a 35-day late finish for clearing and grubbing, a 75-day late finish for stripping and stockpiling topsoil, a 25-day late start for site excavation, and a 28-day delay to start of site filling (R4, tab 44B, activities 23-29, tab 44C, activities 24-30). No evidence has been cited to support a finding that the NAFI delayed these construction activities after the LNTP was received by ICE on 24 August 1999 (findings 39-40; tr. 3/203-07, 216-21). We find no NAFI-caused construction delay.

56. The 14 December 1999 updated schedule projects substantial completion on 16 May 2000 and project turnover on 20 June 2000 (R4, tab 44C, activities 79, 88). Compared with the schedule dated 13 August 1999, this indicates no delay in substantial completion (actually 2 days earlier) and a 20-day delay in project turnover (finding 34). There is no evidence that this projected delay was NAFI-caused.

57. By letter dated 15 December 1999, ICE forwarded a list of 7 outstanding items of alleged extra work, including the underground concrete bunker, and 3 proposed credit items. The letter requested contract price increases for the alleged extra work items but did not assert delay or request any time extension. (Finding 49; R4, tab 65)

58. By letter dated 27 December 1999, ICE notified the NAFI that the wrong water slides had been included in the construction documents generated by ICE and that "new drawing[s] will be forwarded for review as soon as they are complete." In a letter dated 6 January 2000, NAFI COR Kathleen J. Postol, a project engineer stationed at the installation and employed by the New York District, noted that the NAFI was entitled to the water slides included in the contractor's best and final offer. Following additional

correspondence and discussions between the parties, the NAFI agreed, in a letter dated 20 January 2000, signed by COR Postol, to accept one water slide as proposed by the contractor and tentatively to accept the second water slide, pending resubmission of construction drawings by ICE. The resubmitted water slides were accepted by the NAFI pursuant to a letter from COR Postol dated 9 February 2000. (Stip., ¶¶ 23-24, 27; tr. 3/95-96, 120; app. supp. R4, tab A6, at 395-96, ¶ 5, at 404-05; R4, tabs 22-25)

59. In the updated schedule dated 14 December 1999, foundations for the water slides were projected for completion on 10 January 2000, the slide tower was to be finished on 10 April 2000, and the slides were to be installed not later than 24 April 2000. An updated schedule was submitted by ICE dated 11 January 2000. That schedule once again showed projected early and late start and finish dates. It projected an early start of 24 January 2000 for the first work activity related to the water slides, installing slide foundations, indicating a potential construction delay for the start of slide work. Late finish is projected for 7 April 2000 and 29 days of slack are planned. The slide tower is shown to be finished not later than 28 April 2000 and install slides not later than 12 May 2000. Both dates are later, by 18 days, than in the previous schedule update. Late finishes for substantial completion of the entire project and project turnover were projected for 23 May and 5 June 2000, 7 days later and 15 days earlier than the previous schedule. (Findings 34, 51, 56; stip., ¶ 25; R4, tab 44C, activities 51-53, tab 44D, activities 51-54, 88) The changed completion dates are not explained in the record.

60. By letter dated 17 January 2000 from COR Postol, the NAFI informed ICE that it intended to withhold 10% retainage from the contractor's then current invoice. According to COR Postol, the contractor's 14 December 1999 schedule update indicated that ICE should have completed 35% of all work but had actually completed 22%. She asserted that the contractor had experienced contractor-caused construction delays that were "jeopardizing the turnover date of 25 May 2000." A copy of the letter was sent to CO Sherrell. (Finding 11; stip., ¶ 28; R4, tab 26) At about this time, Mr. Briggs took over day-to-day project management from Mr. Llewellyn (tr. 1/223-24). In a rebuttal letter dated 19 January 2000, Mr. Briggs challenged the withholding by, among other things, reciting actions being taken to work in winter conditions and to overcome delays. He neither spoke directly to COR Postol's assertion as to the turnover date nor specifically requested a time extension on account of alleged delay; however, Mr. Briggs was of the opinion that "we were doing everything we could to get it done for them. We [knew] that [the NAFI] needed [the facility] open for Memorial Day, even though we thought the schedule should go further" (tr. 1/230). In pertinent part, Mr. Briggs wrote in the rebuttal letter:

> We feel that although we have a tough battle ahead of us due to weather and the like, we are confident on [sic] our schedule. We have already put into action ways to keep the

> project moving forward, such as implementing cold weather concrete procedures, extended work hours, changing the scheduled sequences of work items to expedite production and have started numerous tasks ahead of schedule to make full use of available manpower. Some of the items we are placing into action include, ordering of temporary garage structures so that we can create an indoor environment for outdoor work in order to keep production at its peak and to help avoid weather delays, having a crew start earlier than others in order to warm the excavation equipment to keep the fuel from gelling and becoming inoperable when the temperatures plunge to extremes. The masonry crews will be ready to mobilize within a few days to start the masonry retaining walls and then moving onto building structures. Now that we are well under way in placing the footings for both the masonry and concrete retaining walls, we are mobilizing additional concrete crews to work on placing of forms for the concrete walls. . . . As you are aware we have already encountered some not so visible, but nevertheless time consuming obstacles such as the moving and leveling of this site . . . , the uncovering of an unknown abandoned ammunition bunker, unsuitable soil conditions and the need to mobilize blasting crews to achieve the required elevations.

(Tr. 1/208-10, 229-32; R4, tab 41B2)

61. An updated schedule was submitted by ICE dated 18 January 2000. It projected an early start of 24 January 2000 for the first work activity related to the water slides, installing slide foundations, indicating no change from the schedule dated 11 January 2000. Late finish for installing water slide foundations was projected for 24 April 2000 with 45 days of slack, indicating the potential for additional delay of 17 days in that activity when compared with the schedule dated 11 January 2000. The slide tower is shown to be finished not later than 15 May 2000 and install slides not later than 29 May 2000. Both dates are later, by 17 days, than in the previous schedule update. Late finishes for substantial completion of the entire project and project turnover were projected for 7 and 20 June 2000, respectively, 15 days later than projected in the schedule dated 11 January 2000. (Finding 59; stip., ¶ 25; R4, tabs 44E, activities 51-54, 88)

62. Based on the schedule dated 18 January 2000, concrete for retaining walls was shown to have started timely on 30 December 1999 and was projected to finish (late finish with 16 days of slack) on 24 March 2000. Foundations for buildings were

scheduled to start on 21 January 2000, followed by placement of floor slabs starting on 22 February 2000. These activities show no slack; therefore, they are on a critical path. Late start for concrete work in the pools was projected not later than 27 March 2000. This activity shows no float time but has different early and late start and finish dates, indicating 34-35 days of slack. The discrepancy is not explained in the record. (R4, tab 44E, activities 45-47, 60, 66-67)

63. On or about 20 January 2000, the NAFI issued an Interim Unsatisfactory Performance Evaluation to ICE. The document was signed by COR Postol and CO Sherrell. Of two major complaints by the NAFI, the first listed is untimely performance. The evaluation form shows the contract completion date as 20 June 2000; however, it refers to the occupancy (substantial completion) date as 25 May 2000. Of five rated areas under timely performance, two are rated marginal and three are rated unsatisfactory. The cover letter signed by COR Postol, with a copy to CO Sherrell, states that the "scheduled turnover date for this project is 25 May 2000." The letter further stated that ICE's performance would be re-evaluated in 30 days and, if unsatisfactory, would result in a "cure letter." The interim unsatisfactory performance evaluation was intended by the NAFI to put pressure on ICE because they were thought to be behind schedule. (Stip., ¶ 30; tr. 3/145; R4, tab 27)

64. The contractor responded to the evaluation by letter dated 27 January 2000, signed by Mr. Dominguez. Concerning delays, Mr. Dominguez asserted that the contractor was not behind schedule, writing "Imperial is confident in [its] progress schedule and [believes] that [it] can still complete this project within our contractual deadline." He specified no particular delays and contended that "Any delays experienced in this project have been dealt with in a timely manner. We have . . . plans to accelerate the project." (Tr. 3/203-07, 216-21; R4, tab 41B4) In connection with acceleration and the interim unsatisfactory performance evaluation, Mr. Briggs was concerned about the evaluation because of the effect it could have on ICE's bond. Based on discussions with NAFI personnel, including CO Sherrell and COR Lie, Mr. Briggs believed that substantial completion of the project so that it could open by the Memorial Day Weekend was mandatory. For the NAFI, Ms. Yang held the view that the "goal" of substantial completion by Memorial Day was well known by all, including contractor personnel. (Tr. 1/238-39, 247-51, 255-60, 3/66)

65. At a monthly progress review meeting on 20 January 2000, COR Postol informed Mr. Briggs: "that the crew size was too small to complete the necessary concrete work by the new scheduled date. And that the progress schedule was now 'extremely aggressive' and would require extended hours. . . . if the [NAFI] did not grant extended work hours [ICE] would not finish by the agreed turnover date of 25 May 2000." Ms. Postol's use of the term "agreed" with respect to the completion date reflects only the NAFI's position. Mr. Briggs did not agree that the project was behind schedule

and did not agree that 25 May 2000 was a contractual requirement. A copy of the meeting minutes was provided to CO Sherrell. (App. supp. R4, tab A6 at 395-96) By letter dated 28 January 2000, Mr. Briggs responded for ICE to the minutes of the 20 January 2000 meeting that had been distributed by COR Postol, writing, in pertinent part:

> Our current schedule shows us completing the project within our contractual boundaries. The minutes state that our crew size is not large enough to complete on time within the contract work hours, we had stated that we were adding additional crews. . . . Without the cooperation of the [NAFI] granting us extra work hours, it would be very difficult to complete this project. However, [ICE is confident] that we can complete this project within the contractual deadline. [ICE] has never agreed to a turnover date of May 25, 2000. Our only contractual obligation to a date is the contractual deadline. We at [ICE] are making every possible effort to turn the project over sooner. In expediting a project, additional costs are encountered. We are willing to entertain [a request for proposal] to change our contractual deadline.

(App. supp. R4, tab A6 at 401)

66. Our review of the most recent schedule dated 18 January 2000 (finding 62) shows that foundations for buildings, a critical path activity, would experience a late start if not started the next day after the meeting, 21 January 2000. However, the activity was not yet late as of 20 January 2000, based on the most recent schedule update.

67. A minimal amount of work, concrete work in particular, was accomplished during the last 2 weeks of January 2000 on account of extreme weather conditions, including wind chill temperatures below zero. However, it was typical weather for the location and time of year; the contract indicated a typical loss of 9 days during January for inclement weather. Concrete work could be performed; the contractor's next schedule update, dated 11 April 2000, reports that foundations for buildings were actually started and finished timely on 21 January 2000 and 14 February 2000. In anticipation of milder weather and "to keep the Memorial Day occupancy day," ICE's project manager requested permission, in a letter to COR Postol dated 28 January 2000, to work on Saturdays and Sundays. By 7 February 2000, milder weather arrived. The contractor worked extended hours and tripled the number of work crews. (Stip., ¶ 31; tr. 3/147-48, 201; app. supp. R4, tab A6 at 402; R4, tab 43 at 601, ¶ H-2, subparagraphs 2-3, chart, tabs 41B6, 44F, activity 66) There is no record evidence that the contractor requested a time extension on account of bad weather.

68. The parties held a progress review meeting on 17 February 2000. The meeting minutes, prepared by COR Postol, state in relevant part, that ICE:

> achieved at least 6 weeks worth of progress from receipt of the [interim unsatisfactory performance] evaluation [on or about 20 January 2000] to present. . . . Imperial reaffirmed their commitment to open the facility on Memorial Day. Work crews have increased, work hours are increased to include Saturday's [sic], 7:30 a.m. to 7:30 p.m., portable tents have been erected on site, additional heaters were purchased and run when necessary to ensure proper curing of concrete and continuation of work under inclement weather, concrete strength, in some situations, has been increased to 5000 psi to expedite backfilling procedures, and soil excavation for building footings was overly excavated, thus requiring additional fill, to expedite work and eliminate thawing time.

The NAFI provided a warehouse for storage of temperature-sensitive materials and in which certain work could be performed out of the weather. Placement of high strength concrete was not directed by the NAFI. (Finding 63; stip., ¶ 32; tr. 3/115, 147-49; app. supp. R4, tab A-6 at 406-07)

69. In a letter dated 2 March 2000, Mr. Briggs wrote COR Postol concerning a "comment" made by an unidentified person. The letter stated, in pertinent part:

> I have just been informed that there may be a discrepancy in the way that we understand our contractual obligations are [sic] with respect to the contract deadline and the [LD] clause.
>
> It is our understanding that our contract deadline has always been and still remains June 20th, 2000. . . . We have no documentation of having a modification to the contract that states otherwise.
>
> If the Army Corps has a different understanding of our contractual obligations, please inform us immediately so that we are all in agreement of our obligations.
>
> It is also a possibility that the comment was misinterpreted. If it was meant to inform us that you were accelerating the project, please let us know so that we are all working to

> achieve the same goal. We at [ICE] are spending enormous amounts of money to adhere to our contractual deadline. If you would like to partner together to accelerate the project, please request so quickly so that we can take the appropriate action.

(App. supp. R4, tab A6 at 408)

70. By letter dated 7 March 2000, Mr. Briggs again wrote COR Postol, commenting on the minutes of the 17 February 2000 progress review meeting (finding 68). He stated in the letter, as stated at the meeting by ICE:

> . . . it is our goal to open on Memorial Day. We are doing everything possible, financially, in management, and in the field to make that happen. We are accelerating this project at great cost. We are currently predicting a cost in excess of $250,000.00 above the contract price to make this happen.

(App. supp. R4, tab A6 at 412)

71. In response to Mr. Briggs' letter dated 2 March 2000 (finding 69), CO Sherrell wrote a letter dated 13 March 2000, addressed to Mr. Briggs. The letter provides, in part, the following:

> The [NAFI] agrees that the contract completion date is June 20, 2000, . . . Please note that there are two rates of LD's, one is centered around contract completion and the second is a loss of revenue damage. [NAFI] contracts . . . are revenue generating contracts. The second damage entitled "loss of revenue" will be assessed if the [NAFI] cannot occupy and use the facility by May 29, 2000. . . . The [NAFI] has based all budgets and operating costs on an occupancy date of May 29, 2000; thus [ICE] may be required to compensate the [NAFI] with the agreed LD's if the facility is not usable on the agreed date of May 29, 2000.
>
> . . . the period between May 29 and the contract completion date would not involve significant construction tasks. It is not the [NAFI]'s intent to accelerate the project, but merely to enforce the contract completion and LD's as stated in the contract. The [NAFI] does not intend to issue a modification to accelerate the schedule for occupancy prior to May 29th.

(R4, tab 51) COR Postol, with CO Sherrell's knowledge and direction, administered the contract under the interpretation that "everyone agreed the substantial completion date would be Memorial Day weekend. . . . The contractor was committed to it. It was always finish by Memorial Day, finish by Memorial Day weekend. But, in my opinion, from reading the contract, the official completion date was June 20th." (Tr. 3/174)

72. In a letter dated 17 March 2000, Mr. Briggs responded to CO Sherrell's letter dated 13 March 2000:

> . . . [ICE] is still of the opinion that [LD] can be assessed only after the contractor fails to complete the work within the time specified in the contract. . . . We also respect your authority with this project and have accelerated the project to meet your interpretive date of May 29, 2000. This escalation has already placed an unexpected additional financial burden on [ICE].
>
> In the spirit of partnering, we will continue to accelerate this project to meet the May 29th goal.

(App. supp. R4, tab A6 at 413)

73. At a progress review meeting on 15 March 2000, the beneficial occupancy date was scheduled for 25 May 2000; a "VIP ceremony" was set for 26 May 2000; and the "Grand Opening for the Public" was set for 11:00 a.m., 27 May 2000. According to the NAFI, the contractor was about 8-10% behind schedule, the equivalent of about 2 weeks. (Stip., ¶ 33; app. supp. R4, tab A6 at 415-17, 425)

74. The contractor's updated schedule dated 11 April 2000 again omits early and late start and finish dates. It projects substantial completion no later than 6 June 2000 and project turnover no later than 28 June 2000. This indicates one day earlier substantial completion and an 8-day delay for project turnover when compared with the contractor schedule dated 18 January 2000. (Finding 61; stip., ¶ 34; R4, tab 44F, activities 54, 88) There is no record evidence that the 8-day projected delay was NAFI-caused.

75. At a progress review meeting on 13 April 2000, according to the NAFI, the contractor was about 10% behind schedule. The timing for painting the pools was a concern. One option was to delay the "grand opening" by a week. However, the matter was tabled until 25 April 2000 while ICE researched a paint product that was suitable. (Stip., ¶ 35; tr. 3/115-25; app. supp. R4, tab A6 at 431; R4, tab 29 at 78)

76. In a letter dated 17 April 2000, the contractor's project manager notified COR Postol, among other things, that concrete curing for the purposes of painting the pools would be accelerated by covering and heating it. The letter also stated that the labor force had been increased and was working "from sun-up to sundown six days a week and plan to work Sundays and nights, if necessary in order to complete this project for your planned start-up of Memorial Day Weekend." Mr. Dominguez, by letter to COR Postol dated 18 April 2000, asserted that the goal of 25 May 2000 would be reached by implementing the above-described measures as well as additional payment for acceleration of pool slide equipment manufacturing. (App. supp. R4, tab A6 at 437-39)

77. Heavy rain was experienced at the site during 15-21 May 2000. The contract anticipates 8 days of inclement weather in May. Other adverse weather in May 2000, if any, has not been proved. In any event, the NAFI was prepared to consider a time extension but no compensation; however, no contract modification to that effect was issued. At a progress review meeting in May, prior to 16 May 2000, according to the NAFI, the contractor was about 4% behind schedule. The NAFI status report confirmed that ICE had increased work crews and hours, had worked on Saturdays and Sundays, had increased concrete strength to expedite backfilling, and had expedited materials ordering and delivery. (App. supp. R4, tab A6 at 441-42; R4, tab 67)

78. The facility was substantially completed and beneficially occupied on 26 May 2000, 276 days after receipt of LNTP (finding 39; stip., ¶ 36; R4, tab 46).

Claims and Appeal

79. The parties agreed that incomplete work, not necessary for beneficial occupancy, could be completed later (tr. 3/127-28; R4, tab 48). Bilateral mod 3, signed for ICE on 5 July 2000 by Mr. Fernandez and on 6 July 2000 by successor CO Anderson, agreed to a net increase in the contract price of $50,233.00, as compensation for 17 line items of both additional work and deletions. The parties agreed that the period of contract performance would remain unchanged. Mod 3 included language agreeing that the modification was a "complete and equitable adjustment" that released the NAFI "from any and all liability under this contract for further equitable adjustments attributable to [the] facts and circumstances giving rise to this modification." (Stip., ¶ 37; R4, tab 31) Bilateral mod 4, signed for ICE on 7 July 2000 by Mr. Dominguez and on 10 July 2000 by CO Anderson, agreed to a completion date of 28 July 2000 for work related to only one of the items included in mod 3 (one plumbing fixture), but agreed to no additional monetary compensation. Mod 4 included language agreeing that the modification was a "complete and equitable adjustment" that released the NAFI "from any and all liability under this contract for further equitable adjustments attributable to [the] facts and circumstances giving rise to this modification." (R4, tab 32)

80. ICE and ADG disputed matters related to the design work and amounts owed by the contractor to the design subcontractor. By letter dated 2 August 2000, ADG stated that it was cancelling its warranty and service obligations for the water park because ICE had failed to pay about 2/3 of the amount due under the subcontract. In a letter dated 10 August 2000, ICE informed ADG that it had "designed this project at an estimated cost overrun of $800,000," that ADG, as "lead designer . . . was responsible for all design coordination efforts" and that ADG had "failed in this effort as stated by the other design team members resulting in substantial additional cost to" the contractor and had caused the contractor "loss of time" and substantial additional unplanned costs for labor and materials not accounted for in the original budget. (Stip., ¶¶ 38-39; R4, tab 49) No witness from ADG testified at the hearing.

81. In a letter dated 27 April 2001, the contractor submitted a request for equitable adjustment (REA) in the amount of $1,409,751.21, plus unstated additional amounts for interest and attorneys' costs and fees incurred in preparation and pursuit of the REA. ICE asserted suspension of work, constructive changes, and "constructive" delays in convening the design kick-off meeting, review of the design, and issuance of the LNTP which subsequently delayed construction work unexpectedly into winter months. ICE further contended that the completion date was accelerated from 19 June 2000 to 29 May 2000, causing additional costs to perform construction work during winter months unexpectedly. No supporting documentation was provided and the request was not certified as required by the Disputes provision of the contract. (Finding 12; stip., ¶ 42; R4, tab 34)

82. By letter dated 22 June 2001, CO Sherrell requested additional detailed information and noted that the REA was not certified in accordance with the contract Disputes provision (Stip., ¶ 43; R4, tab 35)

83. By letter dated 13 May 2002, certified on 14 May 2002, the contractor submitted its claims in the amount of $1,278,945.54. Extensive backup documentation was included. The claims alleged delays to the design kick-off meeting, to design reviews of the 50% and 100% design submissions, and to the LNTP. According to ICE, these delays pushed excavation and concrete work from planned dates in Fall 1999 to Winter 1999-2000. Because the delays were not acknowledged by the NAFI, ICE contends that acceleration resulted. The contractor further asserted that it planned to finish early on 10 April 2000, that additional work, differing site conditions, and winter weather also delayed construction, that these delays were not acknowledged by the NAFI, and that constructive acceleration resulted to allow completion by 29 May 2000 instead of September 2000 if all allowable delays had been added to the performance time. (Finding 17; stip., ¶ 44; R4, tab 36) Implicit in the detailed justification for one of the contractor's claims, "Issue No. 5 – Acceleration during construction due to

compressed schedule," is the notion that the NAFI accelerated the completion date by insisting on completion by 29 May 2000. (R4, tab 36 at 134-37)

84. CO Sherrell issued a final decision dated 13 March 2003 denying the claims (Stip., ¶ 45; R4, tab 2). She described the NAFI's position, in part, as agreeing with ICE that the "goal" was "to complete the project construction activities in time for a Memorial Day, 2000, grand opening." This theme is further developed in the decision as a basis for denial of the claims. (R4, tab 2 at 13, ¶ h.4., at 16-17)

85. ICE filed a timely appeal to the Board by forwarding a letter to CO Sherrell dated 16 April 2003. In the letter, among other things, the contractor requested that "you forward this matter to Armed Services Board of Contract Appeals." (Stip, ¶ 46; R4, tab 1 at 2) By letter dated 25 April 2003, CO Sherrell forwarded the contractor's notice of appeal letter to the Board. The Board docketed the appeal on 1 May 2003. (Stip., ¶ 47; R4, tab 1)

Delay Analysis

86. Mr. Anwar Hafeez testified for appellant as an expert witness in the areas of construction claims and scheduling (tr. 2/60-68; app. supp. R4, tab A26). Mr. Hafeez opined that the internal baseline schedule was the most appropriate to use for delay analysis because it was the initial schedule developed by appellant after DNTP. Accordingly, his analysis proceeded from the notion that appellant planned to and could have completed the project on 10 April 2000. To test the reasonableness of that completion date, Mr. Hafeez started from the DNTP date of 6 May 1999, added 5 days for the design concept meetings, added 41 days for appellant to submit its 50% design (55 days to complete the design minus 14 days for NAFI review), then added 300 days for construction. (Findings 3, 17, 22; tr. 2/68-82, 117)

87. Mr. Hafeez does not address, to our satisfaction, the problems with schedule logic and realism that we find in the internal baseline schedule, the lack of support in the record for convincing explanations for those problems, or a probative rationale for why the internal baseline schedule dates and durations were changed as noted above. The witness made no comprehensive delay analysis. He failed to explain how or the extent to which a delay in design would necessarily delay construction of a fast track project. He did not address appellant's design activities or their timing insofar as appellant may not have performed design and site survey work timely and was pursuing additional award of a wave pool. Mr. Hafeez did not demonstrate what design work was delayed. He did not address appellant's delay in obtaining approval of its QC plan or any construction delay by appellant. (Findings 4, 14, 17-19, 20-22, 25-26, 28-29, 32, 34-36, 38, 40, 45, 56, 59, 61, 74; tr. 3/202-03, 231-33)

88. John Steven Grigorian testified for appellant as an expert witness in the area of scheduling. Mr. Grigorian employed the internal baseline schedule to analyze delay impacts. (Tr. 2/5-14, 41-45, 56) Except for the overlap of the 50% drawings and the NAFI review time (finding 26; tr. 2/9-10), he made no other critical examination of that schedule. With regard to that schedule anomaly, Mr. Grigorian made an adjustment and testified that the adjustment made no difference in his delay analysis. This was not persuasive. (Tr. 2/10, 39-40)

89. Messrs. Grigorian and Hafeez both opined that critical path delays occurred in conducting design kick-off meetings, in completion of the 50% design, and in completion of the 100% design. Mr. Grigorian's analysis purports to track these delays through all design and construction activities to conclude that 73 workdays of delay were NAFI-caused and that the contract completion date should have been extended from 10 April 2000 to 20 July 2000. (Tr. 2/9, 25-29, 73; app. supp. R4, tab A19; R4, tab 36 at 152)

90. Mr. Grigorian's analysis, on which Mr. Hafeez relied in developing the claim, while it does note use of float time in some instances of alleged delay, takes no cognizance of the fact that construction and design were, during 24 August-27 October 1999, being performed concurrently and that separate running times for design and construction govern their contractual completion dates (findings 3, 15, 47; tr. 2/97-98, 114-15; app. supp. R4, tab A19). Having found that, we also note that Mr. Grigorian opined that the alleged delay to completion of the 100% design delayed the overall project by 26 days as of September 1999, but by October 1999 was no longer a delaying factor. His assumption was that construction activities had become critical. (Tr. 2/46-47) His analysis neither examined other contractor-caused delays during construction nor attempted with one minor exception to segregate any delays attributable to the NAFI from those attributable to ICE or to weather. Mr. Grigorian's analysis relied, without critical evaluation, on delay events identified by others. (Findings 28-29, 31-45, 48-61, 67, 74; tr. 2/15-36)

Alleged Increased Costs

91. Included in appellant's documents supporting the REA and claims are invoices and payment vouchers for alleged extra labor, payrolls and payroll summaries indicating overtime and weekend labor hours, invoices and accounting entries for equipment rental, and invoices for materials. The earliest entries asserting compensable labor costs are dated in late October 1999. (App. supp. R4, tabs A7-A10, A12, A15).

92. By responses to appellant's requests for admission, the NAFI admitted that "ICE increased hours and worked additional days in order to complete the Project within

the contract period" and that "ICE used additional means to complete the Project within the contract period" (app. supp. R4, tab A24 at ¶¶ 15-16).

DECISION

Law Applicable to the Claims

The claims to be decided here include allegations of directed changes and constructive changes that caused delays and/or acceleration. Appellant asserts that it planned to complete the project early, that NAFI-caused delays in the design phase of the project caused later construction delays, but that the NAFI would not allow time extensions for those delays and, by other actions, directed acceleration. The NAFI contests all liability.

Pursuant to the Changes provision of the contract, authorized representatives of the NAFI may direct changes; however, when such changes are directed, an equitable adjustment in the terms of the contract becomes due. Directed changes include "Directing acceleration in the performance of the work." (FAR 52.243-4 CHANGES (AUG 1987); finding 10)

According to *Fraser Construction Co. v. United States*, 384 F.3d 1354, 1360-61 (Fed. Cir. 2004):

> A claim of acceleration is a claim for the increased costs that result when the [NAFI] requires the contractor to complete its performance in less time than was permitted under the contract. The claim arises under the changes clause of a contract; the basis for the claim is that the [NAFI] has modified the contract by shortening the time for performance, either expressly (in the case of actual acceleration) or implicitly through its conduct (in the case of constructive acceleration), and that under the changes clause the [NAFI] is required to compensate the contractor for the additional costs incurred in effecting the change. . . .

A constructive change results when a contractor performs work that differs from the contract requirements, not as a volunteer, without a formal directive, under the Changes provision of the contract, due either to an informal order from, or as a consequence of action or inaction by the NAFI CO or other authorized person. *Ets-Hokin Corp. v. United States*, 420 F.2d 716, 720 (Ct. Cl. 1970); *M.A. Mortenson Co.*, ASBCA No. 53229, 05-1 BCA ¶ 32,837 at 162,469. In the event of a constructive change, the contractor is entitled to an equitable adjustment (finding 10).

To establish entitlement to a performance time extension based on excusable delay, appellant must show that the delay resulted from "unforeseeable causes beyond the control and without the fault or negligence of the Contractor" (FAR 52.249-10 DEFAULT (FIXED –PRICE CONSTRUCTION) (APR 1984); finding 13), that it took reasonable action to perform the contract notwithstanding the occurrence of the delay, and that the delay extended overall contract completion, *i.e.*, the critical path. *Sauer, Inc. v. Danzig*, 224 F.3d 1340, 1345 (Fed. Cir. 2000); *Roy McGinnis & Co.*, ASBCA Nos. 28338, 29094, 86-3 BCA ¶ 19,165 at 96,876. In addition, to recover extra costs for a delay, appellant must demonstrate that delays of a specific length were caused by the NAFI, that such delays were not concurrent with delays within appellant's control, and that the overall completion date was extended, *i.e.*, that harm resulted from the delay. *Essex Electro Engineers, Inc. v. Danzig*, 224 F.3d 1283, 1295 (Fed. Cir. 2000); *C.H. Hyperbarics, Inc.*, ASBCA Nos. 49375 *et al.*, 04-1 BCA ¶ 32,568 at 161,149-50. Finally, to the extent that appellant and NAFI delays may be concurrent or intertwined, appellant has the burden to prove that the delays can be segregated and assigned to one party or the other. *Essex Electro Engineers*, *supra*, 224 F.3d at 1292; *Donohoe Construction Co.*, ASBCA Nos. 47310, 47312, 99-1 BCA ¶ 30,387 at 150,190.

Appellant's Claims

We examine appellant's claims in the order presented in its post-hearing brief. Any claim not addressed in the brief, we consider abandoned.

a. Planned Early Finish

As a preliminary matter, appellant asserts that it planned to turn over the project on 10 April 2000 (appellant's post-hearing brief (app. br.) at 47). To sustain a construction contract compensable delay claim based on a planned early completion, appellant must prove (1) that it intended to complete the contract early, (2) that it had the capability to do so and (3) that it actually would have completed early, but for the NAFI's actions. *Interstate General Government Contractors, Inc. v. West*, 12 F.3d 1053, 1058-59 (Fed. Cir. 1993); *Frazier-Fleming Co.*, ASBCA No. 34537, 91-1 BCA ¶ 23,378 at 117,287-88.

Appellant's outline schedule indicates the project would be finished prior to the contract completion date, although not by 10 April 2000 (finding 14). That schedule indicated that appellant could be substantially complete in no more than 262 days from mobilization. In fact, appellant was substantially complete with construction in 276 days. (Findings 14, 78)

Assuming that the outline schedule was reliable, we are unable to conclude that appellant could have finished earlier. As will be discussed in more detail below, any plan to finish early would not have been fulfilled on account of delays that were the contractor's responsibility, have not been shown to be attributable to the NAFI, and did not exceed expected adverse weather days.

b. Design Delays

(i) Design Kick-Off Meeting Delay

Appellant contends that the interval between the 6 May 1999 issuance of the DNTP and the date of the design kick-off meeting, 4 June 1999, delayed its design work by 23 workdays (app. br. at 50-53). We assume, for the sake of argument, that the design concept meetings and the design kick-off meeting have the same purposes, at least in part. The contract provides that the design kick-off meeting would be conducted as soon as practicable after award. We found that the practicable time was 14 days after DNTP. Instead, for reasons attributable to the NAFI, the meeting was delayed until 4 June 1999, which is 15 days later than was practicable and reasonable. (Findings 8, 20-22) Accordingly, the initiation of the design concept meetings activity was delayed by NAFI.

Appellant gave no written contemporaneous indication however, that the delay to the initiation of the kick-off meeting was impacting its design work. There is no evidence of the time that a 50% design submittal could have been made absent this delay. We conclude that appellant has not proved that the NAFI-caused delay to the design concept and/or design kick-off meetings, taken alone, delayed the overall project. In other words, appellant has not proved that the design concept meetings activity in fact was on the project's critical path. We do not find the contractor's generalized presentation that this delay had a day-for-day impact to be reasonable or reliable. (Findings 20-22, 24-25, 27)

(ii) 50% Design Completion Delays

Appellant next asserts that there were delays in receiving design comments and delays to approval of the 50% drawings/LNTP. Appellant summarizes this portion of its argument by listing three separate delays. First, according to ICE, the internal baseline schedule showed the start of 50% design on 13 May 1999, after conclusion of the design concept meetings, but appellant was not able to start until after the 4 June 1999 design kick-off meeting. We addressed this period of alleged delay above. Second, appellant was provided additional design comments until 24 June 1999, thereby delaying finalization of the 50% design until those comments were considered. Third, the overall 50% design was delayed until 10 August 1999 by NAFI extra-contractual requirements. Appellant states that these three delays resulted in a compensable time extension of 21

workdays, citing the matrix in its REA. We note that the total delay argued for apparently should be 44 workdays (23 workdays plus 21 workdays). (App. br. at 53-61; R4, tab 36 at 152, items 1-3, 5-6)

(a) 50% Design Delays to 24 June 1999

Appellant argues that it did not have the information it needed to finalize the 50% design until all design comments were received and that some of those comments were received during 4-24 June 1999. We found that appellant and its design subcontractor could make some progress on but could not finalize the 50% design until all NAFI comments were received. Even though no changes were evidenced by the comments, appellant had to consider the comments to determine whether design components had to be revised or changed. (Findings 20, 24-25)

Appellant's evidence has not proved that delay in receiving design comments through 24 June 1999, in fact delayed the overall project. No as-planned/as-built comprehensive delay analysis has been presented. Therefore, we are unable to find that the delays here, of necessity, delayed downstream activities. In addition, we found that some design activity by appellant related to a wave pool proposed by the design subcontractor (findings 21, 25). That proposed feature had not been accepted by the NAFI at award. Therefore, any additional design work by appellant in that regard was in the nature of an unsolicited proposal and such time and effort cannot be charged to the NAFI. Appellant made no effort to segregate any design delays related to the wave pool from design work dedicated to the awarded features of the water park. Based on this record, we are unable to determine the impact of those efforts. There is no evidence of the time that a 50% design submittal could have been made absent this delay. As of 24 June 1999, any NAFI-caused delays have not been shown to have delayed the overall project. (Findings 16, 20-22, 24-25, 27)

(b) 50% Design Delays from 24 June to 10 August 1999

On 13 July 1999, after the 30 June 1999 date for completion of the 50% design, appellant submitted its 50% design to the NAFI (finding 27). The 50% design effort fell short of the contract's requirements for that submission, generated more design comments from the NAFI that had to be considered, and caused appellant to revise and resubmit, on 28 July 1999, a more compliant 50% design submission. The NAFI accepted that submission, on 6 August 1999 (confirmed on 10 August 1999), as satisfactory for the 50% design product and released appellant to develop the 100% design. Appellant has proved no NAFI-caused delays during the period 24 June to 6 August 1999. (Findings 27, 29-31, 33)

(iii) 100% Design Completion Delays

Appellant contends that delays to the 100% design effort caused a compensable time extension of 29 workdays (app. br. at 61-63). The planned completion date for the 100% design effort, without consideration of delays to the 50% design effort, was 3 September 1999, adjusted to 9 August 1999 (findings 14-15). Even if the 37 days of delay in completion of the 50% design (finding 33) are added, the completion date becomes 15 September 1999. The 13 August 1999 schedule submitted by appellant projected completion of 100% design (NAFI review) on 22 September 1999 (finding 34), indicating a projected delay of only 7 days.

Appellant supplied a post-50% design or interim 100% design submittal which drew additional design comments from the NAFI and its A/E. Appellant agreed to allow a credit for an extra design review meeting, which indicates to the Board that the 100% design effort was lacking in certain respects on account of appellant's shortcomings. Correspondence between the NAFI and appellant, from the design subcontractor directly to the NAFI, and between appellant and its design subcontractor provides further evidence supporting that view. (Findings 42-44, 46, 80)

The 100% design was completed no later than 27 October 1999, a delay of, at most, 42 days from the planned date of 15 September 1999 (findings 34, 47). By 15 September 1999, construction was underway (findings 39, 41, 45, 48). Therefore, the efforts to complete the 100% design have not been shown to have delayed the start of construction. We have found no design delay by the NAFI during the 100% design effort. We conclude that no recovery is due for 100% design delays.

c. Construction Delays

Appellant argues that issuance of the initial LNTP was delayed, that the second LNTP was delayed, that discovery of an underground bunker delayed construction, and that various items of additional work totaling $50,233.00 delayed construction (app. br. at 55-60, 62-63, 65, 69-70).

(i) Initial LNTP Delay

The initial LNTP for construction activities through clearing and grubbing was not issued until 24 August 1999. However, schedules devised by appellant at that time plan a critical start date for mobilization, at the earliest, of 19 August 1999, as planned in the appellant's schedule dated 13 August 1999. The outline schedule planned mobilization as late as 5 October 1999 adjusted to 10 September 1999. (Findings 14, 19, 28, 34, 39) As explained above, we rely on that schedule as the plan at time of offer.

Appellant's schedule dated 14 December 1999 showed a timely start and finish (20 August 1999) for mobilization (finding 55). Without further explanation in the record, we surmise that ICE, anticipating LNTP after receipt of COR Lie's letter dated 16 August 1999 (findings 38, 55), actually mobilized prior to receipt of the initial LNTP. The NAFI was reasonable in not allowing construction work to proceed prior to approval of ICE's QC plan on 20 August 1999 (finding 38). There is no demonstrated NAFI delay to LNTP or start of construction.

(ii) Second LNTP Delay

The second LNTP was issued and received on 29 September 1999. The second LNTP expanded the work with which appellant could proceed to include activities following clearing and grubbing, specifically, mass excavation work but not including excavation for structures (footings, foundations, concrete). Clearing work continued until 13 October 1999. Survey work for mass excavation did not begin until 12 October 1999. Mass excavation began on 14 October 1999. (Findings 41, 45, 48)

The timing of these activities indicates that the expanded second LNTP did not delay excavation activities. Otherwise, those activities would have started soon after receipt of the second LNTP. Appellant's schedule dated 13 August 1999 does not support the claims here. First, the projected dates for excavation activities after clearing and grubbing were no longer valid given the contractor's delays after the initial LNTP (finding 41). Second, mass excavation was set to start 17 days after completion of clearing and grubbing and 3 days after stripping and stockpiling topsoil. In fact, mass excavation started one day after completion of clearing work. (Findings 34, 41, 48) The timing of the second LNTP did not delay construction work.

Concerning delays, appellant's expert scheduling evidence was particularly deficient. The experts made little critical evaluation of the internal baseline schedule upon which appellant focuses and made little attempt to evaluate delays other than those attributed to the NAFI. (Findings 86-90)

(iii) Underground Bunker and Various Items of Additional Work Delay

Appellant did not present evidence of delay in connection with these two events. In connection with the bunker and the various items of additional work, ICE signed bilateral modifications to the contract by which the parties agreed that no delay to the overall project was experienced. Only one work activity, related to one item, was later allowed additional time for performance; however, the parties signed a bilateral modification that agreed to no contract price increase. All of the modifications included comprehensive release language. (Findings 49, 79) Nothing further is due appellant in connection with the underground bunker and the various items of additional work. To

the extent these items may have delayed the overall completion of the project, by signing the bilateral modifications, appellant assumed the risk of delay.

d. Acceleration

Appellant argues that the project was accelerated by the NAFI's insistence on completion by Memorial Day weekend ahead of the completion date specified in the contract (app. br. at 63-77).

From the outset of the project, the NAFI and its financial partner planned to commence revenue-generating operations on or about Memorial Day 2000. The NAFI's contract interpretations concerning the substantial completion date proceed from that goal. The LD provision of the contract was drafted around that goal and caused the NAFI to ignore certain language in the LD provision as well as the contract completion time provision in favor of a substantial completion date of 29 May 2000. The subjective intent of the NAFI, not supported by contract language, was substantial completion by that date. (Findings 1, 3, 5) The NAFI's interpretation is unreasonable.

The contract is clear that substantial completion of construction is to be achieved 300 days after construction NTP. That date is 19 June 2000. (Findings 3, 39) The LD provision does not set the performance period but is operative "within the time specified in the contract" (finding 5).

Appellant was consistently and persistently directed to attain substantial completion, such that revenue-generating operations could begin, not later than 29 May 2000 (findings 23, 38, 46, 60, 63-65, 67-73, 75, 78). The NAFI directed appellant to complete its substantial performance in less time than was permitted under the contract and thereby directed acceleration. To the extent that this directive caused appellant to incur additional costs, it is entitled to an equitable adjustment under the Changes provision of the contract (finding 10). *Advanced Engineering & Planning Corp., Inc.*, ASBCA Nos. 53366, 54044, 05-1 BCA ¶ 32,806 at 162,321, *modified in part on recons. on other grounds*, 05-1 BCA ¶ 32,935.

Appellant began accelerating for the purpose of complying with the NAFI's direction to open on or before Memorial Day 2000, as provided in appellant's notice letters in January – March 2000. (Findings 64-65, 69-70, 72) Sufficient evidence, for purposes of entitlement, of extra costs attributable to acceleration, has been entered into the record (findings 76, 91-92). Appellant is entitled to costs caused by that acceleration as opposed to extra costs related to items such as water slides and other costs that may have been related to appellant's own delays. We note that appellant's outline schedule planned performance of work that was sensitive to winter weather starting in November 1999 and continuing to March 2000 (finding 14).

The NAFI's brief speaks only to the theory of constructive acceleration. Its argument continues to downplay if not ignore that the NAFI directed appellant to put the water park into operation for revenue-generating activities by Memorial Day weekend.

The NAFI also contends that appellant made a business decision to accelerate. We agree that appellant was obligated to comply with the direction of the CO to accelerate (finding 10 (FAR 52.243-4), finding 72). The NAFI submits that it had "exerted pressure on [appellant] to get the job done, but the pressure was reasonable under the circumstances" (NAFI br. at 103), by which the NAFI means that it was reasonable to expect the water park to be open for revenue-generating operations by Memorial Day weekend or as soon thereafter as possible. There was no agreement by appellant to achieve substantial completion by Memorial Day weekend, as contended by the NAFI. The facts are to the contrary. (Findings 23, 38-39, 60, 64-65, 67, 69-73, 75-76, 78) Opening day was appellant's goal because the CO directed that it was the NAFI's goal.

SUMMARY

The appeal is sustained in part. Appellant is entitled to an equitable adjustment for acceleration on account of the NAFI's direction that the project achieve substantial completion on or before Memorial Day 2000. This issue is remanded to the parties for determination of quantum. In all other respects, the appeal is denied.

Dated: 3 May 2006

STEVEN L. REED
Administrative Judge
Armed Services Board
of Contract Appeals

I concur

PAUL WILLIAMS
Administrative Judge
Chairman
Armed Services Board
of Contract Appeals

I concur

EUNICE W. THOMAS
Administrative Judge
Vice Chairman
Armed Services Board
of Contract Appeals

I certify that the foregoing is a true copy of the Opinion and Decision of the Armed Services Board of Contract Appeals in ASBCA No. 54175, Appeal of Imperial Construction & Electric, Inc., rendered in conformance with the Board's Charter.

Dated:

CATHERINE A. STANTON
Recorder, Armed Services
Board of Contract Appeals