

SECTION 01 50 00 – TEMPORARY FACILITIES, ACCESSES AND CONTROLS

1.01 ^{A16}**SCOPE.**^{A16} ^{A9}This Section provides requirements for the location, construction, setup, and use of temporary facilities.^{A9} It includes, but is not limited to, the furnishing and installation of temporary utilities, temporary construction, support facilities, and security and protection facilities.

1.02 ^{A16}**REFERENCES:** ^{A16}

A. **Autoridad del Canal de Panamá (ACP) Documents:** ^{A7}

^{A17}2600SEG-121(R3) Norma de Seguridad de Señalización y Barricadas.

2600SEG-285(R4) Norma de Orden y Saneamiento de los Sitios de Trabajo.

2600SEG-293(R2) Norma de Iluminación.^{A17}

B. **U.S. Department of Transportation:**

Manual of Uniform Traffic Control Devices, 2003 Edition, Revision 1.

C. **Institute Electrical and Electronics Engineers (IEEE):**

C2-07 National Electrical Safety Code.

D. ^{A9}**Autoridad Nacional de los Servicios Públicos (ASEP) Regulation:**

PNAF-2006 Plan Nacional de Atribución de Frecuencias (PNAF)
(National Frequency Assignment Plan) – see website
www.asep.gob.pa/Telecom/pnaf.pdf.^{A9}

^{A10}E. **Ministerio de Obras Públicas (MOP) Specifications:**

Especificaciones Técnicas Generales para la
Construcción y Rehabilitación de Carreteras y Puentes

F. **American Association of State Highway and Transportation Officials (AASHTO) Standards** ^{A10}

1.03 ^{A16}**GENERAL REQUIREMENTS:** ^{A17}The Contractor's areas are indicated on Drawings 5802-27 and 5803-54 in Volume II, Part 4.^{A17} The Contractor shall submit the plan and the programme described below with the Accepted Baseline Programme — see Sub-Clause 8.3 (*Programme*) of the Conditions of Contract and Section 01 31 00 (*Project Management and Coordination*).^{A16}

1.04 ^{A9}**SUBMITTALS:**

A. **Site Plan:** As required in Paragraph 1.03, the Contractor shall submit to the Employer's Representative, for his approval, a fully detailed Site plan to indicate the proposed location and dimensions of any area to be fenced and used by the Contractor, the buildings and trailers to be used, avenues of ingress and egress to fenced areas, and details of the fence installation. Proposed locations for the Contractor's offices, accommodations, compounds, Plant areas, and facilities shall be included, along with

details concerning access to and egress from local highways, delivery points, storage areas, storage and disposal sites for hazardous and non-hazardous waste, ^{A13}lay-down areas, ^{A13} and any other similar areas. Details on related matters affecting the day-to-day running of the Works shall also be provided. ^{A10}Any areas that may have to be graveled, decked, or paved to prevent the tracking of mud shall be identified. ^{A17}The Contractor shall comply with ACP 2600SEG-285. ^{A17A10} Specific matters to be addressed in the Site plan shall include, but shall not be limited to: ^{A9}

1. Temporary access roads;
 2. ^{A9}Traffic-maintenance plan (including coordination with the authorities having jurisdiction), ^{A9}
 3. Contractor’s temporary facilities and Temporary Works, e.g., offices, workshops, warehouses and storage areas, medical and first-aid centers, and other welfare facilities;
 4. Storage areas;
 5. ^{A9}Spoil areas, borrow areas, and areas to stockpile materials; ^{A9}
 6. Concrete batching plants and aggregate processing plants, including cement silos;
 7. Water-cooling plants and ice-making plants;
 8. ^{A9}Storage area for explosives magazines, refer to Section 31 23 16.26 (*Drilling and Blasting*), ^{A9}
 9. Staging areas;
 10. Wharfs;
 11. ^{A16}Employer’s Representative facilities (include the location of the Contractor’s Project Integration Office, refer to Section 01 31 00 (*Project Management And Coordination*), Paragraph 1.04);
 12. Existing Employer’s and third party facilities (if any); ^{A16}
 13. Security fences and lighting systems;
 14. ^{A9}Temporary electrical distribution systems (including semi-permanent, skid-mounted, or trailer-mounted generators or similar power production systems);
 15. Temporary water-supply systems; ^{A9}
 16. Temporary fire-protection systems;
 17. ^{A9}Communications systems; ^{A9}
 18. Relocation of existing facilities.
 19. ^{A9}Temporary sanitary facilities, including collection and disposal systems;
 20. Storm-water management systems; and
 21. Groundwater management systems. ^{A9}
- B. ^{A16}**Programme:** The Contractor shall include in the Accepted Baseline Programme dates for implementation and termination of each temporary utility. ^{A16}
- C. **Security Submittals:** Prior to the performance of any work and no later than 42 days after the Commencement Date, the Contractor shall submit, to the Employer’s Representative for approval, 2 copies of a security plan commensurate with the needs of the Contract. The security plan shall be signed by the security officer of the Contractor.

Adequacy of the security plan is the responsibility of the Contractor. The security plan shall:

1. Include an employee Site security orientation program.
2. ^{A9}Include security measures to protect Contractor's Personnel and other third-party personnel authorized by the Contractor.^{A9}
3. Cover security procedures related to Contractor tools and equipment that shall be mobilized for the Works.

1.05 ^{A7}AVAILABILITY AND USE OF UTILITY SERVICES:^{A7} Refer to Sub-Clause 4.19 (*Electricity, Water and Gas*) of the Conditions of the Contract.

- A. **Availability and Use:** ^{A9}The Contractor shall be responsible for providing all utilities required for the construction of the Works. The Contractor shall pay all costs associated with the provision of such utilities, including, but not limited to, connecting, converting, generating, and/or transferring the utilities to the work sites.^{A9} The Contractor shall be responsible for keeping temporary services and facilities clean and neat in appearance, operating them in a safe and efficient manner, relocating them as the work progresses, and taking the necessary fire-prevention measures in accordance with NFPA standards.^{A16}The Contractor **shall also be** responsible for not overloading facilities or permitting them to interfere with progress of the Works.^{A16}
- B. ^{A16}**Installation:** The Contractor shall use qualified personnel for installation of temporary utility services; locate them where they will serve the Works adequately and result in minimum interference with performance of the Works; relocate, maintain, and modify temporary utility services as required; and make each temporary utility service ready for use when needed to avoid delays.^{A16} For installation purposes, the Contractor shall provide compatible materials and equipment and comply with ^{A9}the provider's requirements, as well as with all applicable Employer's Requirements and recommendations from the Employer's Representative. The Contractor shall coordinate with the provider for a time when service can be interrupted, if necessary, to make connections for temporary services. The Contractor shall keep the Employer's Representative informed about these details and **shall provide the Employer's Representative with copies of all related** communications.^{A9} The Contractor shall be responsible for providing adequate capacity at each stage of construction.
- C. ^{A9}(Reserved)^{A9}
- D. **Area Lighting:** A lighting plan for use during periods of darkness shall be submitted by the Contractor for approval by the Employer's Representative at least 14 days prior to such usage. ^{A9}The Contractor shall provide area lighting that complies with Employer's Requirements for nighttime work and site operations and, thereby, allows for the Works to proceed safely and efficiently during hours of darkness.^{A9} Lights at the Site shall be shielded to prevent interference with the night vision of Employer's Personnel (e.g., pilots and tugboat captains), transiting vessels, and floating equipment in Canal waters.^{A17}The Contractor shall comply with ACP 2600SEG-293.^{A17}

E. ^{A9}**Communication:**

1. The Contractor shall provide data, video, and voice communication system(s) as required for the execution of the Works. He may contract existing communication-service provider(s), provide his own system(s), or both.
2. The Contractor's own communication systems, if used, may be subject to concession fees and shall comply with applicable ASEP requirements, rules, and regulations. All radio frequency assignments shall be in accordance with ASEP PNAF.
3. The communication systems shall cover all areas within the Site, including, but not limited to, offices, first-aid stations, access-control and security stations, batching plants, borrow areas, quarry areas, and all areas related to the construction of the Works.
4. The Contractor shall provide the radio frequencies for the Works to the Employer’s Representative. Security shall have a dedicated frequency. ^{A16}Also, the Contractor shall provide the Employer’s Representative with one of his security radios for each part of the Site. ^{A16}

F. ^{A7}**Raw Water:** The Contractor will be allowed to tap raw water free of charge from the Culebra Cut, Cocoli River, Miraflores Lake, and Gatun Lake, but only for the performance of the Works. ^{A16}The Contractor will also be allowed to drill wells and extract underground water that may be available within the Site. In the case of the Cocoli River, the Contractor shall only tap water from the parts of the river located within the Site. ^{A16}

1. ^{A16}Unlimited amounts of water may be tapped, but all of it shall be used within the Site; it shall not be distributed, piped, or transported from the Site to other locations. The Contractor shall handle and use the raw water in an efficient manner, thereby preventing undue waste. ^{A16}
2. Prior to extracting any water, developing the Site, or piping water to designated areas within the Site, the Contractor shall request permission from the Employer’s Representative by submitting the Employer’s Standard Form 787 (EAC), “Solicitud para Permiso de Uso de Agua.” ^{A16}This is the form that is used specifically to request authorization for this type of water usage. To accompany the form, the Contractor shall submit drawings reflecting pipe alignment for approval by the Employer’s Representative. ^{A16}
3. The Contractor shall not sell, distribute, commercialize in any way or form, or otherwise use or allow others to use the tapped water for any purpose other than the Works.
4. ^{A17}The Contractor shall locate any raw-water extraction points in Culebra Cut or in Miraflores or Gatun lakes within areas designated for such purpose by the Employer and in such a manner as not to interfere with the Employer’s Transit or dredging operations. ^{A17} Also, the Contractor shall be responsible for the routing of piping and the location of other installations that may be required for tapping, distributing, and storing raw or processed water in such a manner so as not to interfere with other contractors’ operations or areas that have been assigned to other contractors by the Employer.

5. The Employer assumes no responsibility for the quality of the water or its suitability for the Contractor's intended purposes.
6. The Contractor shall be responsible for extracting, pumping, piping, processing, and storing any water that may be tapped. ^{A9}The Contractor shall process the raw water as necessary to have it meet the water-quality requirements for any application used within the Works.^{A9}
7. ^{A17}At least 42 days before the expected date for starting work, the Contractor shall submit, for the Employer's approval, an Extraction and Operational Plan describing the following:^{A17}
 - a. operational procedures for extraction, treatment, pumping, and delivery systems;
 - b. chemicals to be used;
 - c. handling and disposal of containers and effluents (refer to ^{A9}Paragraphs 1.05 H. and 1.12^{A9} of this Section);
 - d. equipment mobilization and installation;
 - e. maintenance of pumping and delivery equipment;
 - f. ^{A9}clearing that may be necessary in areas adjacent to the lakes in order to reach water tap locations;^{A9}
 - g. road or access requirements for initial set up and for operation and maintenance (refer to ^{A9}Paragraph 1.09^{A9} of this Section); and
 - h. clearing and grubbing, if required.
8. Similar requirements apply for well boring, specifically for drilling equipment and access to the specified or approved location.
9. The water-extraction, distribution, and storage systems used by the Contractor shall comply with the environmental provisions and requirements set forth in this Contract, including, but not limited to, the technical regulations listed in Section 01 57 19, Paragraph 1.02 D.
10. Unless the Employer's Representative indicates otherwise, all piping, access roads, and other Site-development works shall be removed upon completion of the Contractor's use of the Site and the area returned to its original state, as previously agreed upon with the Employer's Representative. (Refer to Section 01 57 19, Paragraph 1.09.)^{A7}

^{A9}G. (Reserved)^{A9}

- H. **Toilet Facilities:** The Contractor shall provide and maintain toilet facilities for the use of all personnel at the Site in open areas. The type, quantity, and location of these facilities shall be reviewed by the Employer's Representative. The Contractor shall maintain the toilet facilities in a clean and sanitary condition at all times. ^{A16}Upon completion of the Works at the Site, the Contractor shall remove the toilet facilities at his own expense. On each part of the Site, the Contractor shall furnish a minimum of 1 portable toilet,

including service, for each sex, with additional toilets (including service) for every 20 persons of the same sex.^{A16} The service will include, but is not limited to, removal of waste and recharging with chemicals, cleaning and disinfecting, and supply of toilet paper. Service will be performed to guarantee good conditions at all times, but no less than 2 times per week, depending upon conditions. ^{A9}The Contractor may propose any other system that satisfies at least the above-mentioned requirements. ^{A16}All temporary toilet facilities shall be removed by the date of issue of the Taking-Over Certificate.^{A16} In addition, the Contractor shall provide shower and washing facilities for his personnel, where required by the nature of the Works.^{A9}

^{A9}I. **Sewage Treatment and Disposal:** The Contractor shall provide sewage (wastewater) treatment for all sanitary sewage generated on the Site, including treatment of wastes collected in portable toilets, either directly or by contracting out this responsibility.^{A9} Contractor's sewage treatment facilities shall be designed, constructed, and operated to consistently remove a minimum of 85 percent of the solids in the raw sewage influent flow and to disinfect the influent before discharge to remove pathogenic bacteria and viruses. In addition to the performance standards described in this Subparagraph, the Contractor shall be responsible for meeting all sanitary sewage treatment standards in effect in the Republic of Panama and for obtaining any permits or approvals required to construct or operate a sewage-treatment plant. ^{A7}Furthermore, the Contractor shall comply with the applicable regulations in Section 01 57 19 (*Temporary Environmental Controls*) with respect to wastewater and water discharges resulting from any treatment process or similar activity.^{A7} The Contractor shall monitor treated sewage discharged from treatment facilities to verify the level of treatment and residual levels of disinfectant agents and shall report this information to the Employer's Representative on a monthly basis.

1.06 ^{A7}**TEMPORARY DRAINAGE:** ^{A7} ^{A17}The Contractor shall provide temporary drainage for the Site, commensurate to the local meteorological conditions (refer, for information only, to Part 7 of Volume VI, and see also Sub-Clause 5.1 of the Conditions of Contract), to properly and expeditiously drain the Site.^{A17} Ditches and culverts shall be provided to direct runoff toward natural drainage channels and to avoid the stagnation of water. The temporary drainage system shall include appropriate erosion-protection and contamination-prevention measures. The Contractor shall adequately adapt the temporary drainage system as the Works progress.

1.07 ^{A16}**BORROW MATERIAL AND AVAILABLE AGGREGATES:** These are free-issued materials as per Sub-Clause 4.20 (*Employer's Equipment and Free-Issue Material*) of the Conditions of the Contract. ^{A16}

A. ^{A9}**General:**

1. ^{A16}^{A17}Borrow and accumulated materials within areas under the Employer's Responsibility, whether identified in Volume VI, Part 1, Drawing 5803-57 or not shall be used only within the Site; they shall not be sold or transferred or transported from the Site to other locations.^{A17} The Contractor shall handle and use these materials in an efficient manner, thereby preventing undue waste. ^{A16}
2. Borrow and accumulated material areas shall be managed by the Contractor so as not to affect the stability of nearby structures and facilities, belonging either to the Employer or third parties, and to ensure that any such structures and facilities are protected from damages that could result from the Contractor's operations. ^{A9}

3. ^{A13A17}Quarries to be developed shall be located as far as possible from the Canal shoreline to avoid interference with the Employer's and other Operations; shall comply with requirements specified under Section 01 14 00 (*Work Restrictions*), Paragraph 1.02; and shall comply with all other Contract requirements. ^{A17}Quarries shall be designed and excavated in accordance with Section 31 23 00 (*Excavation and Fill*) to ensure stability of slopes. Special attention shall be given to areas that could possibly create a hazard to Canal slopes to avoid a landslide towards the Canal; in these cases, slope design shall be subject to the approval of the Employer's Representative. ^{A13}

B. Borrow Material:

1. The Contractor shall select and process borrow material in a manner that is adequate and meets ^{A9}the ^{A9} Employer's Requirements, i.e., meets all the design and environmental requirements with respect to the specific conditions of the ^{A9}site on ^{A9} which it will be used and the purpose for which it will be used. ^{A17}If the area is under the responsibility of the Employer, the Employer will coordinate the preparation of an ^{A17} [environmental impact study](#). ^{A9}The Contractor shall perform all clearing and grubbing, ^{A9} removal of organic matter, waste disposal, dewatering of the selected borrow areas, and other work necessary to adequately manage borrow material.
2. ^{A17}The Employer in no way guarantees that the material at the borrow areas indicated on the drawings in Subparagraph 1.07 A.1. is adequate or meets the requirements for the Contractor's proposed design or is suitable for the Works; moreover, the Contractor may procure borrow material from other sources or propose other sources within the areas under the responsibility of the Employer. ^{A17} In the latter case, the Contractor shall submit the areas for approval by the Employer Representative.
3. The Contractor shall coordinate access to the Employer borrow areas indicated on the drawings with the Employer's Representative. ^{A17}The Contractor shall coordinate access to the borrow areas indicated on the drawings in Subparagraph 1.07 A.1. ^{A17} ^{A9}that are in concession to others with the corresponding organizations holding concessionary rights and shall keep the Employer's Representative informed. ^{A9}
4. ^{A9}The Contractor shall prepare and segregate the material from the borrow areas so it is adequate, at no additional cost to the Employer. ^{A9} Borrow areas shall be excavated ^{A9}and maintained ^{A9} by the Contractor so that they are properly drained and so that overburden is not placed on unapproved locations. ^{A9}Unless otherwise approved by the Employer's Representative, borrow areas shall, upon completion of use, be closed and finish-graded to drain with no standing water evident within 30 minutes of a rainfall and shall also be sodded and landscaped. Borrow areas shall be left clean and in conditions satisfactory to the Employer's Representative. ^{A9}

C. Accumulated Material:

1. ^{A16}As a result of the work executed under separate third-party excavation contracts for the Pacific approach channel (PAC) and the dredging to be carried out both by Employer and under contract by others, material will be accumulated

at sites indicated on the drawings and will be made available to the Contractor for the execution of the Works. The Contractor shall be free to select and process the accumulated material in a manner that it is adequate and meets the Employer's Requirements, i.e., meets all the design requirements and specific conditions for the Site at which it will be used and the purpose for which it will be used.^{A16}

2. ^{A17}The Employer in no way guarantees that the material at the accumulated material sites indicated on the drawings mentioned in Subparagraph 1.07 A.1. is adequate or meets the requirements for the Contractor's proposed design or is suitable for the Works; moreover, the Contractor may procure material from other sources.^{A17}
3. The Contractor shall coordinate access to the Employer's accumulated material sites indicated on the drawings with the Employer's Representative. It shall be the Contractor's responsibility to prepare and segregate the material from the accumulated material sites so it is adequate, at no additional cost to the Employer. ^{A9}Accumulated material areas shall be excavated and maintained by the Contractor so that they are properly drained, to ensure^{A9} that overburden is not placed on unapproved locations, and so they are left clean and in conditions satisfactory to the Employer's Representative. ^{A9}Upon completion of use, these areas shall be closed and finish-graded to drain with no standing water evident within 30 minutes of a rainfall and shall also be sodded and landscaped and left in a clean and orderly condition satisfactory to the Employer's Representative.^{A9}

D. Employer Identified Alternatives:

1. ^{A16}**Aggregate for the Atlantic and Pacific Locks:** A potential source of aggregates for the Atlantic and Pacific Sites may be the rock coming from the excavation at the Pacific site and sand that may be manufactured from that rock. The Employer in no way guarantees that such aggregate is adequate or meets the requirements for the Contractor's proposed design or is suitable for the Works.^{A16} The Contractor may wish to consider other options; however, the Contractor should be aware that the areas of the Chagres River upstream from the Gamboa Bridge cannot be used for supply of aggregates.
2. The Employer considered three alternatives to furnish/transport aggregate for the Atlantic Locks. These alternatives are described below, along with applicable restrictions. ^{A16} All costs for transportation shall be borne by the Contractor. The Contractor may wish to consider other options for transportation means.^{A16}
 - a. **Panama Canal Railway Company (PCRC):** The Employer contacted PCRC to appraise material transportation overland from the Pacific locks and Pacific Approach Channel.
 - b. **Barges:** This alternative involves the use of barges to transport material from the Pacific locks and Pacific Approach Channel.
 - c. **Atlantic Sites:** This alternative involves the use of borrow areas on Atlantic side.

d. **Restrictions:**

- 1) **PCRC:** This alternative requires access across the Miraflores Swing Bridge, which would need to be rehabilitated and its track would need to be modified. Furthermore, this alternative shall be contingent upon non-interference with the Employer's Operations, especially the Employer's Operations at Miraflores Locks. ^{A13}Refer to Section 34 01 43.71 (*Miraflores Swing Bridge and Access*) and Volume VI, Part 17. ^{A13}
- 2) ^{A9}**Barges:** This alternative shall be contingent upon non-interference with the Employer's Operations, especially in Gaillard Cut. ^{A17}Refer also to Section 01 14 00 (*Work Restrictions*), Paragraph 1.06. ^{A17} The Contractor will be allowed to use the Borinquen Road to transport materials from the lock construction site to a barge station at the Y that will be formed in the cut for the new Pacific access channel. However, since this alternative involves moving dump trucks back and forth between the southern and northernmost ends of the Pacific access channel, the Contractor shall be solely responsible for the maintenance of the stretch of Borinquen Road that is used for this purpose. ^{A9}
- 3) **Atlantic Sites:** Borrow material from the Atlantic areas may require additional processing to make it adequate, as compared with Pacific materials. Furthermore, ^{A9}this alternative could be ^{A9}adversely affected by the lack of satisfactory road infrastructure and the traffic congestion problems on the Atlantic side.

1.08 ^{A9}**ACCESSES:** Refer to Sub-Clause 4.13 (*Rights of Way and Facilities*) and Sub-Clause 4.15 (*Access Route*) of the Conditions of the Contract. ^{A9}

A. **Land Access:**

1. **Atlantic:** ^{A9}The Contractor may access the Site through Bolivar Highway. ^{A9} Access through Gatun Locks will not be permitted.
2. **Pacific:** ^{A9}The Contractor may access the Site through Brujas Road, which can be reached on the west side from the Pan-American Highway. ^{A9} Access through Miraflores Locks will not be permitted.

B. **Floating Equipment:** The Contractor shall use the sites approved by the Employer's Representative for loading and unloading Goods from land to floating equipment and vice versa.

C. ^{A9}**Controls and Arrangements:**

1. **Contractor's Checkpoints:** Contractor's Personnel shall access the Site in a disciplined and orderly fashion, using pre-established departure/arrival points. Primary access to construction sites shall be through checkpoints controlled by the Contractor.

2. **Employer-Controlled Checkpoints:** In cases when access is required to other areas within Employer-controlled checkpoints, the Contractor shall make arrangements to use trucks, vans, buses, or other multiple personnel vehicles that have been pre-approved by the Employer's Representative. The Contractor shall notify and get approval from the Employer's Representative for any changes to such arrangements.^{A9}

1.09 ^{A7}PROTECTION AND MAINTENANCE OF TRAFFIC AND EXISTING FACILITIES: ^{A7}
Refer to Sub-Clause 4.15 (*Access Route*) of the Conditions of the Contract.

- A. **General:** During construction, the Contractor shall provide access and temporarily relocate roads and bridges as necessary to maintain traffic. The Contractor shall maintain and protect traffic on all affected roads and bridges during the construction period, except as otherwise specifically directed by the Employer's Representative.

1. ^{A16}The Contractor may use existing roads and bridges, but shall be responsible for the provision of routine maintenance required for such use. All infrastructure that is used by the Contractor, as well as the surrounding associated or affected areas, shall be restored to a condition equal to or better than the condition existing at the Commencement Date, as agreed to by the Employer's Representative.^{A16}
 - a. The Contractor shall document the existing condition of any and all areas and infrastructure to be used prior to such use with photographs and/or video recordings meeting the requirements of Section 01 33 00 (*Submittal Procedures*). The evidence shall be submitted to the Employer's Representative for review in order to obtain an agreement on the existing conditions.
 - b. ^{A10}Existing and temporary roads and bridges shall be maintained in a state that provides safe traffic movement without presenting a hazard to vehicles. Potholes, damaged pavement, deteriorated road crossings, ruts, and similar conditions shall be repaired within 7 days to restore roads to a safe condition acceptable to the Employer's Representative and at no additional expense to the Employer.

2. **Pacific Roads:**

- a. ^{A16}**Areas within the Site:** The section of Brujas Road, and the Miraflores Bridge access road, and other roads within the Site shall be available for use by the Employer Personnel requiring access to areas within the Site or to access areas to the east of the Site.^{A16} Third parties requiring access to infrastructure within the Site shall previously coordinate with the Employer's Representative. Once coordination with the Employer's Representative has occurred, the Contractor shall allow third parties access to the Site.
 - 1) ^{A16}**Outages:** When outages are required for these roads, alternate routes shall be made available by the Contractor at all times and any interruptions in traffic will only be allowed during specific planned outage periods that have been approved by the Employer's Representative.^{A16} To obtain such approval, the

Contractor shall request the outage at least 14 days in advance. Outages will require an alternate route of the same or better conditions that can handle the same or a greater level of traffic.

- 2) ^{A16}**Damage:** Refer to Subparagraph 1.09 A.1.b. above. ^{A16}
- b. ^{A16}**Areas Outside the Site:** The requirements for roads and bridges are stated in Paragraph 1.09 A. ^{A16}
3. **Atlantic Roads:**
 - a. ^{A16}**Areas within the Site:** The section of Thelma King Road located within the Site, and other roads within the Site shall be available for use by the Employer Personnel requiring access to areas within the Site or to access areas to the west of the Site. Access will also be required for third parties requiring access to the west side of the Site. ^{A16}
 - 1) ^{A16}**Thelma King Road:** Thelma King Road is the Employer's only means of access to facilities on the west of the Site, and for the general public to areas to the west of Gatun Locks. ^{A16} When an alternate route is required due to removal of the north plug, rerouting of this road over the south plug will not be allowed.
 - 2) **Outages:** Refer to Subparagraph 1.09 A.2.a.1) above.
 - 3) ^{A16}**Damage:** Refer to Subparagraph 1.09 A.1.b. above. ^{A16}
 - b. ^{A16}**Areas Outside the Site:** The requirements for roads and bridges are stated in Paragraph 1.09 A. ^{A16}
4. The Contractor's traffic on roads and bridges selected for hauling material to and from the Site shall interfere as little as possible with public traffic. The Contractor shall investigate the adequacy of existing roads and bridges and the allowable load limits on these roads. The Contractor shall be responsible for the repair of any damage to roads and bridges caused by his operations. ^{A9}

^{A9}B. **Safety Warning Signs, Signals and Precautions:**

1. The Contractor shall erect and maintain sufficient barricades and bilingual warning signs for the protection of the public, Contractor's Personnel, and Employer Personnel in the vicinity of the work. The traveling public shall be protected from personal injury and property damage through the provision of all required safeguards. Also, during blasting operations, audiovisual warning signals shall be provided, as specified in Section 31 23 16.26 (*Drilling and Blasting*). ^{A16}The Contractor shall comply with all applicable Laws, including, but not limited to, speed limits. ^{A16}
2. ^{A16A17}The Contractor shall comply with ACP 2600SEG-121. ^{A17} The Contractor shall provide temporary guides and safeguards, as required, when the Works impose restrictions on traffic. ^{A16} This shall include flagmen, traffic cones, delineators, barricades, lanterns, flashers, torches, and similar devices placed around and in front of equipment and the work, as well as the erection and maintenance of adequate warning, danger, and direction signs. Contractor's

Personnel, such as watchmen and flagmen, engaged in work near public roads shall wear approved safety jackets. The Contractor shall remove and protect existing traffic signs in the construction area and reinstall them upon completion of the work. All procedures regarding traffic control and temporary measures for construction shall conform to the Manual of Uniform Traffic Control Devices, U.S. Department of Transportation, 2003 Edition, Revision 1, URL: <http://mutcd.fhwa.dot.gov/>.

3. The Contractor should be aware that perpendicular traffic from other excavation and dam contracts will be crossing and entering Borinquen Road. There will be loaded dump trucks running downhill in this area, and they will not be able to stop as easily as other traffic. Therefore, the traffic signaling and control system should be set up to give preference to this traffic and minimize the potential risks in this area.^{A9}

C. Temporary Access Roads and Bridges:

- ^{A10}1. The Contractor's drawings shall include the location and details of all temporary access roads and bridges, including the foreseen loads and vehicle/lane widths.
 - a. Minimum requirements for Bruja Road and Thelma King Road relocation or reconstruction are:
 - 1) Minimum shoulder width: 2.0 meters
 - 2) At least double bituminous surface treatment for shoulders
 - 3) Two-way road with a minimum width of 4 meters per lane for a total width of 8 meters.
 - 4) A minimum of 20 cm thick concrete surface pavement with a flexural strength of no less than 4.5 MPa (650 psi).
 - b. Minimum requirements for the relocation or reconstruction of other roads shall match existing conditions.
2. Ditches and culverts shall be provided for all temporary access roads and bridges, and the runoff shall be directed toward the natural drainage channels and shall prevent the stagnation of water.
3. Any change or variation in the temporary roads and bridges required by the Contractor shall be submitted to the Employer's Representative.
4. The temporary access roads and bridges shall be maintained in good condition at all times and shall be provided with suitable lighting, signs, signals and accessories to ensure the safe traffic flow of all types of vehicles, in accordance MOP specifications and AASHTO standards.^{A10}

- D. ^{A16}Haul and/or Access Roads:** Should it be necessary for the Contractor to construct haul or access roads within the operational area of the Canal in conjunction with work to be performed hereunder, the haul or access road layout (location, grade, width, and alignment) shall be previously submitted for approval to the Employer's Representative.
- ^{A16} Haul ^{A7} or access ^{A7} roads shall have safe widths, grades, and sight distances for the

equipment to be used; sharp curves, blind corners, and dangerous cross traffic shall be avoided. Arbitrary cutting of trees will not be allowed.

1. ^{A7}**General:** ^{A7} The Contractor shall, at his own expense, construct access ^{A7}or ^{A7}haul roads necessary for ^{A7}the ^{A7}proper execution of the ^{A7}Works ^{A7}under this Contract. Haul ^{A7}or access ^{A7} roads shall be free draining. The roads shall also have electrical clearances to existing lines according to IEEE C2. The roadways may be constructed from materials removed from the required excavation and shall be subject to the approval of the Employer's Representative.
 - a. The Contractor shall provide necessary lighting, signs, barricades, and distinctive markings for the safe movement of traffic. The Contractor shall pay particular attention to signage and safe sight distances at all locations where construction vehicles will enter or exit access roads. The method of dust control shall be adequate to ensure safe operation at all times. Lighting shall be adequate to ensure full and clear visibility for the full width of the haul ^{A7}or access roads ^{A7} and work areas during any night work operations.
 - b. ^{A16} Unless otherwise instructed by the Employer's Representative, haul or access roads and storm drainage structures shall be removed upon completion of the Works and the ground surface left in a satisfactory condition to avoid water puddles. ^{A16}
 2. **Benches:** If the Contractor plans to use benches that have reached the final elevation as hauling roads, he shall submit the following information to the Employer's Representative for approval.
 - a. Nature of the material that the bench consists of.
 - b. Contractor's proposed plan to stabilize the bench, material to be used as base, drainage, and other measures he deems necessary. Stabilization measures shall be adequate for the type of hauling equipment to be used.
 - c. Shop drawings showing road width, thickness of base material, and any other dimensions or appropriate details.
- E. ^{A16}**Barricades:** The Contractor shall erect and maintain temporary barricades in compliance with Section 01 35 23. These barricades shall limit public access to hazardous areas. They shall also be required whenever safe public access to paved areas such as roads, parking areas, or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic. ^{A16} Barricades shall be securely placed and clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.
- F. ^{A16}**Ditch Maintenance:** Existing ditches around the Site shall be cleaned at the beginning of the Works and shall be kept clean during the Works. ^{A16} ^{A9} Ditches to be cleaned and kept clean shall include both new and existing ditches that are affected by the execution of the Works, whether inside or beyond the work area or next to or along Borinquen Highway, Brujas Road, Thelma King Road, or other roads. ^{A9}

1.10 ^{A7}CONTRACTOR'S TEMPORARY FACILITIES:^{A7}

A. General Requirements:

1. ^{A16A17}The Contractor shall confine temporary facilities to the areas indicated on Drawings 5802-27 and 5803-54 in Volume II, Part 4.^{A17} The Contractor may arrange with third parties the use of areas outside the Site or outside the areas that are under the responsibility of the Employer. In that case, the Contractor or his Personnel shall comply with all applicable local Laws and obtain the required permits.^{A16}
2. Temporary facilities shall be constructed of non-combustible material or of material having a fire-resistance capability of not less than one hour.
3. Temporary facilities shall not be located where they impede or hinder personnel exit from or entrance into, or within, other facilities or structures.
4. Temporary facility locations shall meet the following criteria for emergency response.
 - a. The locations shall permit emergency vehicles to operate within 100 feet of the facilities.
 - b. The facilities shall not block fire-fighting equipment.
 - c. The facilities shall not impede or hinder the access of emergency-response vehicles to other facilities or structures.
 - d. The space between the structure and the road shall be free of natural obstructions that would prevent or restrict access by emergency responders.
 - e. Security barriers shall be designed to allow emergency access.
 - f. Landscaping and other obstructions shall not restrict emergency access.
5. ^{A9}The temporary-facility locations shall be evaluated for grassland-fire exposure and precautions shall be taken in areas where a significant risk exists.^{A9}
6. ^{A9}All vegetation other than trees and shrubs located within the boundaries of the Site shall be mowed for the duration of the Contract.^{A9} Grass and vegetation along fences, buildings, under trailers, and in areas not accessible to mowers shall be edged or trimmed neatly.

B. Administrative Field Offices: The Contractor shall provide and maintain administrative field office facilities within the construction area at sites reviewed by the Employer's Representative. The ^{A9}Contractor's office shall include a conference room suitable for seating at least 20 persons and shall be equipped with projectors and screens. The room shall be made available for progress meetings.^{A9}

C. Parking: The Contractor shall control and assign the parking of vehicles on-Site.

1. **Visitor Parking:** Visitor parking shall be in designated marked spaces only and shall be in ^{A9}a safe and secure area, ^{A9}away from construction activities and subject to the Employer's Representative's review and acceptance.
 2. **Employer's Representative's Parking:** The Contractor shall provide at least 3 ^{A9}safe and secure ^{A9}24-hour accessible parking spaces next to the main entrance of the Contractor's administrative field offices solely for use by the Employer's Representative and his assistants. These parking spaces shall be designated marked spaces and subject to the Employer's Representative's review and acceptance.
- D. ^{A9}**Appearance of Buildings and Trailers:** As specified in Subparagraph J., the Contractor may use existing buildings on the Site. Any buildings and trailers utilized by the Contractor for administrative or material storage-purposes shall present a clean and neat exterior appearance and shall be in a state of good repair. The Contractor shall coordinate with the Employer's Representative before bringing any trailer onto the Site. Trailers that, in the opinion of the Employer's Representative, require exterior painting or repair will not be allowed on the Site. ^{A9}
- E. **Storage Area:** ^{A9}The Contractor ^{A13}shall ^{A13}designate a storage area, which ^{A13}shall ^{A13}be located so as to not interfere with ongoing activities at the Site. ^{A9} The Contractor may store Materials and equipment at the storage area so that, once started, the work can be completed without interruption.
- F. **Atlantic Campsite:** The Employer has obtained the required land-use rights to have a camp set up for workers in the Atlantic area, if required by the Contractor. The chosen location is an area of approximately 13.9 hectares, located in Mindi along Via Bolivar (refer to Sketch N° SK-437-1 in Volume II, Part 4).
1. The Employer will submit to the National Environmental Authority (ANAM) a conceptual environmental-impact study based on standard construction characteristics and practices applicable to this type of facility and on an estimated work force of 2,500 employees. The Employer expects to have the study approved by the Commencement Date.
 2. The use of the area by the Contractor is optional. If it is used, it shall be utilized exclusively as a camp for the Atlantic work force. Workers' families shall not be allowed to lodge within the campsite.
 3. If the Contractor exercises the option to have a campsite in the area, he shall be responsible for:
 - a. Its design, construction, and operation in conformance with the conceptual design and with the environmental management plan required in the environmental-impact study and the resolution approving the study, as well as in compliance with all other applicable regulations.
 - b. Providing all required utilities, accesses, and safety and security measures for the site and its operation. The Contractor shall contact the utility provider to obtain information about the location of the utilities in the campsite area. The provisions outlined for providing utilities for the construction of the Works in paragraphs 1.05.A and B of this section shall also apply for the utilities to be provided for the campsite.

- c. **The post-operation dismantling and the revegetation of the area after the issuance of the Taking-Over Certificate.**
- G. **Maintenance of Storage Area:** Fencing shall be kept in a state of good repair and proper alignment. Should the Contractor elect to traverse, with construction equipment or other vehicles, grassed or unpaved areas that are not established roadways, such areas shall be covered with a layer of gravel as necessary to prevent rutting and the tracking of mud onto paved or established roadways; gravel gradation shall be at the Contractor’s discretion.
- H. ^{A9}(Reserved)^{A9}
- I. **Trailer-Type Mobile Office or Storage Buildings:** ^{A9}Subject to the approval of the Employer’s Representative, trailers or storage buildings will be permitted where space is available, provided, as a minimum, the requirements specified above are met.^{A9} The trailers or buildings shall be in good condition, free from visible rust damage and deterioration, and meet all applicable safety requirements. ^{A9}Trailers shall be roadworthy and comply with all appropriate local vehicle requirements.^{A9} Failure to maintain storage trailers or buildings to these standards shall result in the removal of non-complying units at the Contractor’s expense. Trailers shall be anchored to the ground at all four corners to resist high winds and must meet applicable local standards for anchoring mobile trailers.
- J. **^{A16}Existing Buildings:** ^{A17}The Contractor may use existing buildings within the Site, as shown in Drawings 5802-27 and 5803-54 in Volume II, Part 4.^{A17} The Contractor shall set up these buildings at no additional cost to the Employer. The Employer has designated Building No. 206 in Gatun as a building with historical value because of its architecture. The Contractor shall not alter the facade of this building. The Contractor may use this building until the issue of the Taking-Over Certificate; however, before taking-over, the Contractor shall return it to the same or better conditions documented during a joint (Contractor/Employer) visual inspection to be held after the Commencement Date.^{A16} ^{A5}After this visual inspection and while he is using it, the Contractor shall be responsible for this building and its adequate maintenance.^{A5}
- K. **^{A16}Eating Facilities:** The Contractor may designate one or several areas within the Site for the specific and particular purpose of allowing food distribution, preparation, handling, and consumption activities.^{A16} These areas shall be free of contamination. Both the areas and the services provided shall be made, without limitation, accessible and available to all people duly authorized to enter the Site. These facilities shall be used exclusively for the activities stated in this Subparagraph, and activities other than those established shall be banned including, but not limited to, gambling, product retail sales or vending machines, political campaigning and/or advertising of any type, etc. ^{A17}The Contractor shall be responsible for procuring the established activities and ensuring that they and the personnel and vehicles involved comply with ACP 2600SEG-285 and other applicable regulations issued by authorities having jurisdiction, including the “Ministerio de Salud”.^{A17} The Contractor shall present any proof deemed necessary for auditing purposes. The Employer shall not be held responsible for these activities and may order, at any time, that they be suspended and the facilities removed as a result of the failure to comply with stipulations of this Contract, its references, or applicable sanitary regulations.
- L. **Disposal of Organic Waste:** The Contractor shall provide disposal canisters for organic waste. The location of these canisters shall be within the designated area assigned by the

Employer's Representative. Refer to Section 01 74 19 (*Construction Waste Management and Disposal*).

M. **Contractor's Docks:** The Employer has identified potential areas on each side of the Isthmus — refer to Drawings 5802-27 and 5803-54 in Volume II, Part 4 (*Requirement Drawings*) — where the Contractor may construct docks (at his own expense) as part of the Works. The Pacific area is near the Y intersection north of Pedro Miguel Locks on the west bank of the Gaillard Cut; the Atlantic area is on Gatun Lake, adjacent to the Site.

1. The Contractor shall incur all expenses for the design and construction of the docks he may elect to build.
2. The docks shall be located outside the navigation line (prism line). The Contractor shall obtain approval for their specific locations from the Employer's Representative prior to initiating construction. The Employer will review the designs to ensure that they meet ACP requirements. Refer also to paragraph 1.06.G. in Section 01 14 00 (*Work Restrictions*).
3. As part of the Panama Canal Expansion Program, the Employer expects to execute land dredging operations that will affect the area marked "Pacific 1" on Drawing 5803-54. The Contractor may use "Pacific 1" area after these land dredging operations are complete. The operations are currently in the preliminary planning stage, and the Employer expects to have the preliminary design by January 2009. The Contractor shall coordinate with the Employer's Representative after January 2009 to determine when the Contractor may have access to the "Pacific 1" area.

1.11 ^{A7}**SECURITY:** ^{A7} Refer to Sub-Clause 4.22 (*Security of the Site*) of the Conditions of the Contract.

A. ^{A16}**Physical Security:** The Contractor shall confine the Works to the Site. ^{A16} ^{A9}The Contractor shall:

1. Evaluate barrier and fencing needs for the construction sites and properly secure the sites as required to provide for adequate personnel and project security.
2. Evaluate lighting requirements for security needs and controlling access to the sites. ^{A9}
3. Establish access-control points to the construction areas.
4. Submit sketches that indicate fences, barriers, and access points to the Employer's Representative for review no less than 28 days prior to ^{A9}installation. ^{A9}

B. **General Requirements:**

1. The Contractor shall protect the Site, including all field office and storage trailers and their contents, from theft, losses, vandalism, and unauthorized entry or use — at all times once construction works commence.
2. The Contractor shall be responsible at all times for security of any storage compound and lay-down areas and for all Contractor Plant, shops, Materials, equipment, and tools, as well as for those belonging to Subcontractors.

3. At least 28 days prior to mobilization onto the Site, the Contractor shall submit, to the Employer's Representative for review, a Site security system and program, in order to provide adequate security for all related Site stored and installed Goods. Considerations for the security program shall include, but not be limited to, the following.
 - a. Maintain security logs and reports of Contract activity and submit them to the Employer's Representative whenever required.
 - b. ^{A16} Implement access-control measures for Contractor's Personnel, Contractor partners, visitors, and Contractor-related vehicles ^{A16}.
 - c. ^{A16} Arrange for security guard services with communication capability 24 hours a day at the Site. ^{A16}
 4. ^{A16} The Contractor shall maintain the security plan throughout the Works. ^{A16}
 5. The Contractor shall provide the Employer's Representative with a list of 24-hour emergency contact telephone numbers.
 6. ^{A16} **Weapons:** It shall be forbidden to introduce and bear weapons in the Site, except that the Contractor may allow the security guards mentioned in Subparagraph B.3.c. to bear arms, provided that the specifics of any such an arrangement have been previously approved by the Employer's Representative. ^{A16}
 7. ^{A16} **Alcohol and Drugs:** The Contractor shall develop and implement a program that establishes and maintains a drug- and alcohol-free environment at the Site. Immediately after any person is caught using, selling, or otherwise handling illegal drugs or alcohol, the Contractor shall remove the person from the Site and, if the person is a Contractor employee, shall initiate employment-termination proceedings. The Employer's Representative is not responsible for any situation arising out of the handling of illegal substances or alcohol. ^{A16}
 8. **Cash Payments:** Cash payroll payments in areas within Employer's ^{A9}responsibility shall ^{A9}be forbidden.
 9. **Commercialization of Products:** The commercialization of products in areas within Employer's responsibility shall be forbidden.
 10. **Forbidden Activities:** Swimming, diving, fishing, hunting ^{A9}or any other related water sports shall be ^{A9}forbidden at the Site.
- C. **Entry Control:**
1. The Contractor shall restrict entry of unauthorized personnel and vehicles onto the Site.
 2. The Contractor shall maintain copies of vehicle insurance cards or other proof of insurance for vehicles permitted on the Site.
 3. The Contractor shall require vehicle passes when vehicles are on Site.
 4. ^{A9}Reserved. ^{A9}

5. The Contractor shall give jobsite security orientation ^{A9}training to all employees, ^{A9}including Subcontractor employees. Employee participation in the security orientation ^{A9}shall be demonstrated by having the individual employees sign an orientation roster. ^{A9}
6. The Contractor shall enforce use of a security badge system ^{A9}as specified in Subparagraph D. below. ^{A9}
7. The Employer's Representative shall have the right to refuse access to the Site or request that a person or vehicle be removed from the Site if found violating any security rules.

D. ^{A9}**Listing and Identification Procedures for Contractor's Personnel and Visitors:**

1. **Contractor's Personnel Listing:**

- a. ^{A17}The Contractor shall develop, maintain, update, and provide to the Employer's Representative, for review, within 21 days of the Commencement Date, and then on a monthly basis, a complete list of Contractor's Personnel or working at the Site. ^{A17}
- b. The list shall be in alphabetical order and shall contain the employee's full name, "cédula" or passport number, social security number, and the assignment (craft/site) in which the employee will be working under this Contract.

2. **Contractor's Personnel Database Report:**

- a. ^{A16}The Employer's Representative will provide the Contractor with the form and format for the database report created with Microsoft Access software. The Contractor shall use this form and format to report his employee information, including every employee and Subcontractor under his supervision who is working within the Site. ^{A16}
- b. In order to fulfill the previous requirement, the Contractor must have Office 2003 or a later software version. If the Contractor uses a later version of the software, he shall coordinate with the Employer's Representative to ensure that the Employer's system is capable of recognizing the version used.
- c. The Contractor shall deliver the database application using a computer magnetic medium (CD or USB memory stick) each time an update is required.
- d. ^{A16}This database record may be consistent with the Contractor's hiring records, but shall also contain information for all personnel working at the Site, whether they are Contractor's Personnel or Subcontractors. ^{A16}
- e. The database shall also contain the information identified in Subparagraph 5. (*Identification Procedures for Entering Site*) below.

- f. ^{A16}The Contractor shall coordinate development of the database with the Employer's Representative prior to initiating hiring activities or work on the Site, whichever occurs first. ^{A16}
 - g. ^{A16}The Contractor shall retain a printed and signed (by the employee) original version of the information for each worker on the site. Each form shall be kept on file until issue of the Performance Certificate. ^{A16}
- 3. **Visitor's Log:** Visitors shall be recorded in a log, which shall contain, as a minimum, the visitor's full name, "cédula" or passport number, and motive for the visit.
- 4. **Employer's Rights to Reject Access:** The Employer's Representative reserves the right to reject access to the Site or to Employer's restricted areas to specific individuals who may be employed by or otherwise associated with the Contractor.
- 5. **Identification Procedures for Entering the Site:**
 - a. ^{A16}The part of the Site at the Pacific side is located within a restricted area of the Employer. The Contractor's Personnel accessing the part of the Site at the Pacific side shall hold valid Contractor-issued photo identification (ID) badges to gain access to the Site. The part of the Site at the Atlantic side does not require Contractor photo identification to gain access unless deemed necessary by the Contractor. ^{A16} However, the Contractor may choose to implement the same identification practice at both locations.
 - b. **ID Badge System:** The Contractor shall establish the database identified in Subparagraph D.2. above, optimized to produce and issue photo identification badges for his employees.
 - c. ^{A16}The ID badge system shall be operational once mobilization and work activities commence at the Site. ^{A16}
 - d. ^{A16}The Contractor shall submit, to the Employer's Representative for review, details on the initial database ID badge system, with monthly updates as the system is enlarged and maintained. ^{A16}
 - e. The information shall include a cumulative record of all badges issued and the status/disposition of all badges over time.
 - f. ID cards shall show relevant details for the card holders, e.g., full name and other pertinent data as required by the Employer below. ^{A16}The Contractor shall be accountable and fully responsible for issuing and managing appropriate control over these document emissions throughout the performance of the Contract. All costs of equipment and supplies required to accomplish this logistical task are the Contractor's responsibility. ^{A16}
 - g. The minimum ID card features required by the Employer for Contractor-furnished photo identification badges are:
 - 1) Standard PVC tamper-resistant card (8.5 mm x 5.4 mm).

- 2) Advanced chroma key and ghosting features for pictures.
 - 3) Security laminate on front of ID.
- h. The following information is required on the front side of IDs:
 - 1) Contractor's company name or logo.
 - 2) Employee's full name.
 - 3) Color picture of employee (equivalent to a passport photo, 30mm by 25mm).
 - 4) Employee's cedula or passport number.
 - 5) ID issuance and expiration dates.^{A9}
6. **Contractor's Responsibility:** The Contractor is responsible for all Contractors' Personnel to whom ^{A9}an identification card has been issued by the Contractor.^{A9}
^{A16}The Contractor shall ensure that Contractor's Personnel restrict their activities specifically within the Site, except as noted in Subparagraph 1.11 D.8.^{A16}
^{A17}During the execution of this Contract, the Employer's Representative is entitled to request the removal from the Site and/or Canal operating areas and/or facilities (and the Contractor shall comply with such request at his cost and responsibility) of any Contractor's Personnel whose actions may endanger or impact the Employer's or other Operations, provoke a security breach, or be directly or indirectly tied to criminal activities.^{A17}
7. **ID Card Procedures:** ^{A17}All Contractor's Personnel and visitors shall adhere to the following procedures.^{A17}
 - a. **Issuance:** ^{A17}In accordance with Subparagraphs 1.11 D.1., 2., and 5., identification cards for work on this Contract shall be issued by the Contractor to each of the Contractor's Personnel.^{A17} Temporary passes may be used to control access by visitors.
 - b. ^{A16}**Use:** The cards issued by the Contractor shall be worn by all personnel on an upper garment or above the waist in such a manner to be visible at all times during performance of the Works. The card as worn shall not impose a safety hazard on the bearer. Entry onto the Site will be denied to persons who do not bear or refuse to show their Contractor-issued identification card.^{A16} The use of the identification card shall be strictly limited to the assigned recipient and shall not be transferred to another employee or person.
 - c. **Return:** The Contractor shall immediately retrieve Contractor-issued identification cards from employees who cease working on this Contract. The Contractor shall log and destroy all returned identification cards.^{A9}
8. ^{A16}**Restricted-Access Identification Cards:** If Contractor's Personnel should require access to restricted areas of the Employer that are outside the Site, installation clearance will be processed by the Employer. Vehicles will also be processed for installation clearance if needed. (See related requirements in 1.08 C. and 1.11 G.) In such a case, Contractor's Personnel shall adhere to the following procedures.^{A16}
 - a. ^{A16}**Acquiring Restricted-Access Identification Cards:** Contractor's Personnel who have been approved to access restricted areas of the

Employer that are outside the part of the Site where construction is being performed shall obtain Contractor’s identification cards from the Employer. To get their pictures taken, those on the part of the Site at the Pacific side shall go to Room 202 of Building 706, “Centro de Capacitación Ascanio Arosemena” (former Balboa High School). Those on the part of the Site at the Atlantic side may go to Building 215, Gatun.^{A16}

- b. **Use of the Identification Card:** The procedures are identical to those outlined in Subparagraph 1.11 D.7.b., except that a charge of \$10.25 will be made for every identification card reissued to the Contractor by the Employer because of loss, destruction, or other causes attributable to the Contractor.^{A9}
- c. ^{A16}**Return of the Identification Card:** The Contractor shall immediately retrieve the Contractor’s restricted-access identification cards from employees who cease working in restricted areas of the Employer that are outside the part of the Site where construction is being performed.^{A16} The Contractor shall return all issued restricted-access identification cards to the Employer’s Representative. The Contractor will be charged \$25.00 for each unreturned identification card.

E. **Security Services:** The Employer cannot guarantee the security of the Contractor’s property. The Contractor is, therefore, required to provide the necessary surveillance to avoid loss or theft of property. As required by the “Ministerio de Gobierno y Justicia,” private security services ^{A9}to be provided by the Contractor (either directly or through a Subcontractor) shall^{A9} comply with the requirements established by the DIASP (Dirección Institucional de Asuntos de Seguridad Pública) for companies duly registered under the “Registro de Empresas de Seguridad” for the Republic of Panama. Requirements for registration of private security companies in the Republic of Panama can be found online at the address: http://www.panamatramita.gob.pa/tramite_req.php?id_tram=2246.

1. The Contractor shall provide plant security services to control entry ^{A9}into and exit from^{A9} the Site.
2. New guards shall not commence duties on the Site before receiving the safety and security orientation, ^{A9}as specified under Subparagraph 1.11 C.5. All guards shall be trained to comply with vehicle-flagging procedures.^{A9}
3. Upon the request of the Employer’s Representative, ^{A9}the Contractor’s security guards, as appropriate,^{A9} shall assist the Contractor to remove personnel from the Site for violation of regulations ^{A9}or safety and security requirements. (The Employer’s Representative right to deny access to the Site has been addressed in Subparagraphs C.7. and D.4. of Paragraph 1.11.)^{A9}

F. **Contractor-Provided Facilities and Equipment:**

1. The Contractor shall provide all portable self-contained security booths and offices to be placed at the entrances to the Site as required.
2. Each security booth and office shall have communication equipment.

3. Each security booth and office shall be provided with fire-protection equipment per 29 CFR 1926.150; as a minimum, each booth shall be provided with two fire extinguishers.
4. Each security booth and office shall be equipped with interior and exterior lights.
5. A portable toilet with an external hand-washing station shall be provided and maintained by the Contractor in the vicinity of each security booth and office for the use of the security guards.

G. **Administrative Security Requirements^{A9} for Access to Employer's Restricted Areas:^{A9}**

1. **^{A16}Listing of Contractor Vehicles:** The Contractor shall submit a list (in duplicate), for review, of all vehicles he intends to use that will need access to Employer's restricted areas.^{A16} The list shall include the vehicle^{A9} license plate number,^{A9} insurance policy number, make, and model.
2. **^{A16}Vehicle Logos:** All vehicles used by the Contractor for the Works shall carry a logo affixed to their doors for easy identification at all times.^{A16} These logos shall be 280 mm x 215 mm (11 inches x 8.5 inches) in size and shall indicate the Contractor's name and vehicle license plate number.^{A9}
3. **Updates to the Vehicle Lists:** Vehicle lists shall be updated as soon as any change takes effect. Updates to the vehicle listing shall be made by resubmitting the complete list highlighting the addition or additions and crossing out the deletion or deletions.

H. **^{A16}Hard Hat Identifiers for Contractor's Personnel:** The hard hats worn by the Contractor's Personnel shall have distinctive labels that identify them as Contractor personnel.^{A16} These labels shall be attached to^{A9} the back of their helmets.^{A9} Labels shall be sized 50 mm x 127 mm (2 inches x 5 inches), have reflective^{A9} red backgrounds,^{A9} and have the legend "CONTRATISTA". The legend shall be printed in uppercase black^{A9} letters,^{A9} 21 mm (13/16 inch) high,^{A9} with letter-trace widths of^{A9} 4 mm (3/16 inch).

I. **^{A9}Security Officer:**

1. **Requirements Concerning the Security Officer:**

- a. **Work Experience:** Nine years of security *experience*, including at least 3 years in a position with *responsible charge* over a *security function*.
- b. **Definition of Terms:**
 - 1) *Experience* is *defined* as being personally engaged in security or loss prevention on a full-time basis or as a primary duty. Included is:
 - a) Experience as a security professional in the public or private sector, criminal-justice system, government intelligence, or investigative agencies, with responsibility for the protection of property or personnel.

- b) Experience in the private or public sector with companies, associations, government, or other organizations, including consulting firms, provided that the duties and responsibilities substantively relate to the design, evaluation, and application of systems, programs, or equipment or to the development and operation of services for property or personal protection.
- 2) *Responsible charge* means the responsibility exercised in a management position in making decisions for the successful completion of objectives without reliance upon directions from a superior as to specific methods or techniques. However, an applicant need not have held a supervisory position, as long as the positions held have specifically included responsibility for independent decisions or actions.
- 3) *Security function* refers to the protection of people and property and the application of security principles and practices employed to prevent physical and intellectual loss, unauthorized use of property, and danger or harm, within the private or public sector.

2. **Responsibilities of the Security Officer:**

- a. Conducting an initial comprehensive security survey of the temporary facilities and assessing the security-related needs and issues to be taken into account;
- b. Developing and administering a security plan for the temporary facilities;
- c. Implementing and monitoring the security plan;
- d. Undertaking regular security inspections of the temporary facilities to ensure the application of appropriate security measures;
- e. Enhancing security awareness and vigilance among all Contractor's Personnel;
- f. Providing the Employer's Representative with details concerning the security plan and vigilance procedures and coordinating other security issues with the Employer's Representative, as appropriate; and
- g. Ensuring that security equipment is properly installed, operated, tested, calibrated, and maintained, as applicable.^{A9}

1.12 ^{A7}**CLEANUP:** ^{A7} Waste materials, packaging material, and the like shall be removed from the Site daily. Any dirt or mud which is tracked onto paved or surfaced roadways shall be cleaned away. Dry mechanical sweeping shall not be permitted. Stored waste material awaiting removal shall be neatly stacked within the designated area approved by the Employer's Representative.

1.13 ^{A7}**RESTORATION OF STORAGE AREA:** ^{A7} Upon completion of the Works and after removal of trailers, Materials, and equipment from within the fenced areas, the fencing shall be removed and will become the property of the Contractor. Areas used by the Contractor for the storage of equipment or Materials or for other uses shall be restored to the original or a better

condition. The original condition is to be agreed to by the Employer's Representative prior to any disturbance. Gravel used to traverse grassed areas shall be removed and the area restored to its original condition, including top soil and seeding, as necessary.

END OF SECTION

PANAMA CANAL AUTHORITY			
Application for Personnel Identification / Access to Canal Operating Areas			
Contract Information			
1. Name of company/supplier		2. RUC No.	
3. ACP supplier number		4. Contract number	
5. Contract name			
6. Date of award (d/m/yr)		7. Order to proceed (d/m/yr)	
8. Date of contract completion (d/m/yr)		9. Place of work <input type="checkbox"/> ON SITE <input type="checkbox"/> REMOTE SUPPORT	
10. Contract execution site			
Applicant's Personal Information			
11. Position held under this contract			
12. First name:		13. Middle name:	
14. Surname:		15. Mother's maiden name:	
16. Cedula/Passport number:		17. Social Security No.:	
18. Gender: <input type="checkbox"/> FEMALE <input type="checkbox"/> MALE		19. Civil status: <input type="checkbox"/> SINGLE <input type="checkbox"/> MARRIED <input type="checkbox"/> OTHERWISE COMMITTED	
20. Date of birth (dd/mm/yr):		21. Age:	
22. Children: <input type="checkbox"/> YES <input type="checkbox"/> NO		23. How many?	
24. Place of birth: <div>CityCountryProvince</div>		25. Citizenship:	
26. Home address:		27. Home phone:	
28. Mobile phone:		29. Other contact numbers:	
30. If foreigner, immigration status:		31. Expiration date:	
32. Work permit No.:		33. Expiration date:	
Education			
34. Education		35. Certifications:	
36. Elementary <input type="checkbox"/> COMPLETE <input type="checkbox"/> INCOMPLETE UNTIL:			
37. High School <input type="checkbox"/> COMPLETE <input type="checkbox"/> INCOMPLETE UNTIL:			
38. Technician:			
39. University <input type="checkbox"/> COMPLETE <input type="checkbox"/> INCOMPLETE UNTIL:		40. University degree(s), Technical degree(s) or other(s)	
41. Are you certified: <input type="checkbox"/> YES <input type="checkbox"/> NO		BY: _____ EXPIRES: _____	
41a. Registration or authorization issued by the EATB No.:		EXPIRES: _____	
41b. License issued by the EATB:		EXPIRES: _____	
42. Master's Degrees/Others:			
43. Where did you train for your position or trade:		<input type="checkbox"/> INADEH <input type="checkbox"/> UNIVERSITY OF PANAMA <input type="checkbox"/> PANAMA TECHNOLOGICAL UNIVERSITY <input type="checkbox"/> PRIVATE INSTITUTION	
44. Other(s)			
Work Information (Include information from last two jobs)			
45. Company name:		46. Position:	
47. Name of supervisor:		48. Supervisor's telephone number:	
49. Termination date (dd/mm/yr):			
50. Company name:		51. Position:	
52. Name of supervisor:		53. Supervisor's telephone number:	
54. Termination date (dd/mm/yr):			
Background			
Statements of terminations, contraventions of the law or any other background references do not imply express denial of employment by the Contractor. Provide all the requested information since any false statements could result in the prohibition to enter Canal operating areas.			
	YES	NO	
55. Have you ever been investigated, arrested or charged with any crime or administrative fault at your place of work?	<input type="checkbox"/>	<input type="checkbox"/>	
56. Do you currently face any charges for breaching the law?	<input type="checkbox"/>	<input type="checkbox"/>	
57. Were you ever fired by the Panama Canal Authority or the Panama Canal Commission?	<input type="checkbox"/>	<input type="checkbox"/>	
58. Within the last five years have you been fired from a job or presented your resignation after having been informed that you would be fired, or quit a job by mutual agreement due to specific problems?	<input type="checkbox"/>	<input type="checkbox"/>	
59. Have you ever failed a physical test for employment with any company or with the Panama Canal Authority due to evidence of alcohol abuse or consumption of illegal drugs or have you ever been removed from your position after failing a physical test due to the above-mentioned reasons?	<input type="checkbox"/>	<input type="checkbox"/>	
60. Within the last 10 years, have you been withdrawn from eligible records in any company or the Panama Canal Authority due to false statements made intentionally in your job application, deceit or fraud in a test or in the hiring process?	<input type="checkbox"/>	<input type="checkbox"/>	
I hereby certify that, to the best of my knowledge and understanding, all statements made by me in this document are true and thorough and have been documented in good faith. I understand that a false statement or answer to any part of this application may result in prohibition or restriction of access to ACP operating areas even after having been hired. I also understand that any information I provide may be investigated to determine my eligibility to enter Canal operating areas. I grant my authorization to previous employers, schools, police agencies and other individuals and organizations for to disclose information on my employment capabilities to researchers, human resources specialists and other authorized Panama Canal Authority employees.			
Applicant's signature		Date (dd/mm/year)	
APPROVAL SECTION (TO BE COMPLETED BY THE ACP)			
Reviewer's name and signature Hiring Administrative Unit	Department/Division/Unit	<input type="checkbox"/> APPROVED Date: (dd/mm/yr)	<input type="checkbox"/> DENIED Date: (dd/mm/yr)
Reviewer's name and signature Research Unit	Division/Unit	<input type="checkbox"/> APPROVED Date: (dd/mm/yr)	<input type="checkbox"/> DENIED Date: (dd/mm/yr)
OBSERVATIONS			

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