

PART 1 - GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS .1 Work of this contract comprises removal of existing fences and construction of new chain-link and wildlife fences, 6 swing gates, 1 motorized cantilevered gate and enclosure. Construction of 700 meters ± of gravel access roads.

1.2 WORK SEQUENCE .1 Construct Work in stages to accommodate Owner's continued use of premises during construction.

.2 Co-ordinate Progress Schedule and co-ordinate with Owner Occupancy through Departmental Representative during construction.

1.3 CONTRACTOR USE OF PREMISES .1 Limit use of premises for Work, for storage, and for access, to allow:

.1 Owner occupancy.

.2 Work by other contractors.

.2 Co-ordinate use of premises under direction of Departmental Representative.

.3 Obtain and pay for use of additional storage or work areas needed for operations under this Contract.

.4 Remove or alter existing work to prevent injury or damage to portions of existing work which remain.

.5 Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as directed by Departmental Representative.

.6 At completion of operations condition of existing work: equal to or better than that which existed before new work started.

- 1.4 OWNER OCCUPANCY
- .1 Owner will occupy premises during entire construction period for execution of normal operations.
 - .2 Co-operate with Owner through Departmental Representative in scheduling operations to minimize conflict and to facilitate Owner usage.
- 1.5 EXISTING SERVICES
- .1 Notify, Departmental Representative and utility companies of intended interruption of services and obtain required permission.
 - .2 Where Work involves breaking into or connecting to existing services, give Departmental Representative 48 hours notice for necessary interruption. Minimize duration of interruptions. Carry out work at times as directed by governing authorities with minimum disturbance to pedestrian vehicular traffic and tenant operations.
 - .3 Provide alternative routes for personnel pedestrian and vehicular traffic.
 - .4 Establish location and extent of service lines in area of work before starting Work. Notify Departmental Representative of findings.
 - .5 Submit schedule to and obtain approval from Departmental Representative for any shut-down or closure of active service or facility including power and communications services. Adhere to approved schedule and provide notice to affected parties.
 - .6 Provide temporary services when directed by Departmental Representative to maintain critical building and tenant systems.
 - .7 Provide adequate bridging over trenches which cross sidewalks or roads to permit normal traffic.
 - .8 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.
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| 1.5 EXISTING SERVICES
(Cont'd) | .9 | Protect, relocate or maintain existing active services. When inactive services are encountered, cap off in manner approved by authorities having jurisdiction. |
| | .10 | Record locations of maintained, re-routed and abandoned service lines. |
| | .11 | Construct barriers in accordance with Section 01 56 00 - Temporary Barriers and Enclosures . |

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| 1.6 DOCUMENTS REQUIRED | .1 | Maintain at job site, one copy each document as follows: |
| | .1 | Contract Drawings. |
| | .2 | Specifications. |
| | .3 | Addenda. |
| | .4 | Reviewed Shop Drawings. |
| | .5 | List of Outstanding Shop Drawings. |
| | .6 | Change Orders. |
| | .7 | Other Modifications to Contract. |
| | .8 | Field Test Reports. |
| | .9 | Copy of Approved Work Schedule. |
| | .10 | Health and Safety Plan and Other Safety Related Documents. |
| | .11 | Other documents as specified. |

PART 2 - PRODUCTS

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| 2.1 NOT USED | .1 | Not used. |
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PART 3 - EXECUTION

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| 3.1 NOT USED | .1 | Not used. |
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PART 1 - GENERAL

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| <u>1.1 ACCESS AND
EGRESS</u> | .1 | Design, construct and maintain temporary "access to" and "egress from" work areas. |
| <u>1.2 USE OF SITE AND
FACILITIES</u> | .1 | Execute work with least possible interference or disturbance to normal use of premises. Make arrangements with Departmental Representative to facilitate work as stated. |
| | .2 | Maintain existing services to building and provide for personnel and vehicle access. |
| | .3 | Where security is reduced by work provide temporary means to maintain security. |
| <u>1.3 ALTERATIONS,
ADDITIONS OR
REPAIRS TO EXISTING
BUILDING</u> | .1 | Execute work with least possible interference or disturbance to building operations occupants, public and normal use of premises. Arrange with Departmental Representative to facilitate execution of work. |
| <u>1.4 EXISTING
SERVICES</u> | .1 | Notify, Departmental Representative and utility companies of intended interruption of services and obtain required permission. |
| | .2 | Provide for personnel pedestrian and vehicular traffic. |
| | .3 | Construct barriers in accordance with Section 01 56 00 - Temporary Barriers and Enclosures . |
| <u>1.5 SPECIAL
REQUIREMENTS</u> | .1 | Carry out noise generating Work Monday to Friday from 18:00 to 07:00 hours and on Saturdays, Sundays, and statutory holidays. |
| | .2 | Submit schedule. |
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<u>1.5 SPECIAL REQUIREMENTS</u> (Cont'd)	.3	Ensure Contractor's personnel employed on site become familiar with and obey regulations including safety, fire, traffic and security regulations.
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	.4	Keep within limits of work and avenues of ingress and egress.
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	.5	Ingress and egress of Contractor vehicles at site is limited to; .1 Deliver materials outside of peak traffic hours 17:00 to 07:00 and 13:00 to 15:00 unless otherwise approved by Departmental Representative.
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<u>1.6 SECURITY</u>	.1	Where security has been reduced by Work of Contract, provide temporary means to maintain security.
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<u>1.7 BUILDING SMOKING ENVIRONMENT</u>	.1	Comply with smoking restrictions. Smoking is not permitted.
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PART 2 - PRODUCTS

<u>2.1 NOT USED</u>	.1	Not Used.
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PART 3 - EXECUTION

<u>3.1 NOT USED</u>	.1	Not Used.
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PART 1 - GENERAL

- 1.1 ADMINISTRATIVE
- .1 Schedule and administer project meetings throughout the progress of the work at the call of Departmental Representative.
 - .2 Departmental Representative will prepare agenda for meetings.
 - .3 Distribute written notice of each meeting four days in advance of meeting date to Departmental Representative.
 - .4 Departmental Representative will record the meeting minutes.
 - .5 Representative of Contractor, Subcontractor and suppliers attending meetings will be qualified and authorized to act on behalf of party each represents.
- 1.2 PRECONSTRUCTION MEETING
- .1 Within 15 days after award of Contract, request a meeting of parties in contract to discuss and resolve administrative procedures and responsibilities.
 - .2 Departmental Representative, Senior Representatives of Contractor, major Subcontractors, field inspectors and supervisors will be in attendance.
 - .3 Establish time and location of meeting and notify parties concerned minimum 5 days before meeting.
 - .4 Incorporate mutually agreed variations to Contract Documents into Agreement, prior to signing.
 - .5 Agenda to include:
 - .1 Appointment of official representative of participants in the Work.
 - .2 Schedule of Work.
 - .3 Schedule of submission of shop drawings, samples, colour chips. Submit submittals in accordance with Section 01 33 00 - Submittal Procedures.
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- 1.2 PRECONSTRUCTION MEETING .5 (Cont'd)
- (Cont'd)
- .4 Requirements for temporary facilities, site sign, offices, storage sheds, utilities, fences in accordance with Section 01 52 00 - Construction Facilities.
 - .5 Delivery schedule of specified equipment.
 - .6 Site security in accordance with Section 01 56 00 - Temporary Barriers and Enclosures .
 - .7 Proposed changes, change orders, procedures, approvals required, mark-up percentages permitted, time extensions, overtime, administrative requirements.
 - .8 Owner provided products.
 - .9 Maintenance manuals in accordance with Section 01 78 00 - Closeout Submittals.
 - .10 Take-over procedures, acceptance, warranties in accordance with Section 01 78 00 - Closeout Submittals.
 - .11 Monthly progress claims, administrative procedures, photographs, hold backs.
 - .12 Appointment of inspection and testing agencies or firms.
 - .13 Insurances, transcript of policies.
- 1.3 PROGRESS MEETINGS .1
- During course of Work, schedule progress meetings bi-monthly.
- .2 Contractor, major Subcontractors involved in Work and Departmental Representative and Facilities Maintenance staff are to be in attendance.
 - .3 Notify parties minimum 5 days prior to meetings.
 - .4 Departmental Representative to prepare and circulate minutes of meetings to attending parties and affected parties not in attendance within 3 days after meeting.
 - .5 Departmental Representative to prepare agenda. Agenda shall include the following:
 - .1 Review, approval of minutes of previous meeting.
 - .2 Review of Work progress since previous meeting.
 - .3 Field observations, problems, conflicts.
 - .4 Problems which impede construction schedule.
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1.3 PROGRESS MEETINGS	.5	(Cont'd)
(Cont'd)		
	.5	Review of off-site fabrication delivery schedules.
	.6	Corrective measures and procedures to regain projected schedule.
	.7	Revision to construction schedule.
	.8	Progress schedule, during succeeding work period.
	.9	Review submittal schedules: expedite as required.
	.10	Maintenance of quality standards.
	.11	Review proposed changes for affect on construction schedule and on completion date.
	.12	Other business.

PART 2 - PRODUCTS

<u>2.1 NOT USED</u>	.1	Not Used.
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PART 3 - EXECUTION

<u>3.1 NOT USED</u>	.1	Not Used.
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PART 1 - GENERAL

- 1.1 ADMINISTRATIVE
- .1 Submit to Departmental Representative submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.
 - .2 Do not proceed with Work affected by submittal until review is complete.
 - .3 Present shop drawings, product data, samples and mock-ups in SI Metric units.
 - .4 Where items or information is not produced in SI Metric units converted values are acceptable.
 - .5 Review submittals prior to submission to Departmental Representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and considered rejected.
 - .6 Notify Departmental Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
 - .7 Verify field measurements and affected adjacent Work are co-ordinated.
 - .8 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submittals.
 - .9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative review.
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| <u>1.1 ADMINISTRATIVE
(Cont'd)</u> | .10 | Keep one reviewed copy of each submission on site. |
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| <u>1.2 SHOP DRAWINGS
AND PRODUCT DATA</u> | .1 | The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work. |
| | .2 | Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been co-ordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications. |
| | .3 | Allow 10 business days for Departmental Representative's review of each submission. |
| | .4 | Adjustments made on shop drawings by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work. |
| | .5 | Make changes in shop drawings as Departmental Representative may require, consistent with Contract Documents. When resubmitting, notify Departmental Representative in writing of revisions other than those requested. |
| | .6 | Accompany submissions with transmittal letter, in duplicate, containing:
.1 Date.
.2 Project title and number.
.3 Contractor's name and address.
.4 Identification and quantity of each shop drawing, product data and sample.
.5 Other pertinent data. |
| | .7 | Submissions include:
.1 Date and revision dates.
.2 Project title and number. |
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1.2 SHOP DRAWINGS
AND PRODUCT DATA
(Cont'd)

- .7 (Cont'd)
- .3 Name and address of:
- .1 Subcontractor.
- .2 Supplier.
- .3 Manufacturer.
- .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
- .8 After Departmental Representative's review, distribute copies.
- .9 Submit electronic copy in PDF format of shop drawings for each requirement requested in specification Sections and as Departmental Representative may reasonably request.
- .10 Submit electronic copies of product data sheets or brochures for requirements requested in specification Sections and as requested by Departmental Representative where shop drawings will not be prepared due to standardized manufacture of product.
- .11 Submit electronic copies of test reports for requirements requested in specification Sections and as requested by Departmental Representative.
- .1 Report signed by authorized official of testing laboratory that material, product or system identical to material, product or system to be provided has been tested in accord with specified requirements.
- .2 Testing must have been within 3 years of date of contract award for project.
- .12 Submit electronic copies of certificates for requirements requested in specification Sections and as requested by Departmental Representative.
- .1 Statements printed on manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements.
- .2 Certificates must be dated after award of project contract complete with project name.
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1.2 SHOP DRAWINGS
AND PRODUCT DATA
(Cont'd)

- .13 Submit electronic copies of manufacturers instructions for requirements requested in specification Sections and as requested by Departmental Representative.
 - .1 Pre-printed material describing installation of product, system or material, including special notices and Material Safety Data Sheets concerning impedances, hazards and safety precautions.
- .14 Submit electronic copies of Manufacturer's Field Reports for requirements requested in specification Sections and as requested by Departmental Representative.
- .15 Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.
- .16 Submit electronic copies of Operation and Maintenance Data for requirements requested in specification Sections and as requested by Departmental Representative.
- .17 Delete information not applicable to project.
- .18 Supplement standard information to provide details applicable to project.
- .19 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections are made, transparency copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.
- .20 The review of shop drawings by Public Works and Government Services Canada (PWGSC) is for sole purpose of ascertaining conformance with general concept.

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| 1.2 SHOP DRAWINGS
AND PRODUCT DATA
(Cont'd) | .20 | (Cont'd)
.1 This review shall not mean that PWGSC approves detail design inherent in shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve Contractor of responsibility for errors or omissions in shop drawings or of responsibility for meeting requirements of construction and Contract Documents.
.2 Without restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of Work of sub-trades. |
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| 1.3 SAMPLES | .1 | Submit for review samples in duplicate as requested in respective specification Sections. Label samples with origin and intended use. |
| | .2 | Deliver samples prepaid to Departmental Representative's business address site office. |
| | .3 | Notify Departmental Representative in writing, at time of submission of deviations in samples from requirements of Contract Documents. |
| | .4 | Where colour, pattern or texture is criterion, submit full range of samples. |
| | .5 | Adjustments made on samples by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work. |
| | .6 | Make changes in samples which Departmental Representative may require, consistent with Contract Documents. |
| | .7 | Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified. |

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| <u>1.4 CERTIFICATES
AND TRANSCRIPTS</u> | .1 | Immediately after award of Contract, submit Workers' Compensation Board status. |
| | .2 | Submit transcription of insurance immediately after award of Contract. |

PART 2 - PRODUCTS

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| <u>2.1 NOT USED</u> | .1 | Not Used. |
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PART 3 - EXECUTION

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| <u>3.1 NOT USED</u> | .1 | Not Used. |
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PART 1 - GENERAL

1.1 COORDINATION

- .1 Prior to start of work Departmental Representative will arrange for briefing of all Contractor's personnel by Airport Authority on procedures for movement of equipment and personnel, and work on, or adjacent to active runways, taxiways or parking aprons.
- .2 The Departmental Representative will coordinate a safety and security presentation for Contractor and the Contractor's personnel who will require access on site.
- .3 All Contractor's personnel authorized to use airport for accessing the work site will be issued a special area visitor's pass. This pass must be kept on one person at all times during working hours.
 - .1 All Contractor's personnel will be escorted by a Commissionaire.
- .4 The Contractor must be prepared to evacuate all personnel and equipment from operational surfaces and runway strip on 30 minutes notice to move. Contractor to coordinate with airport operations staff to ensure evacuated areas are approved by Departmental Representative as made safe for air operations within required timeline.

1.2 PROTECTION

- .1 Do not disrupt airport operations except as permitted by Departmental Representative.
- .2 Provide temporary protection to permit safe passage of all personnel, vehicles and aircraft in vicinity of Work.
- .3 Provide barricades and signs, lighted by night or during poor visibility and flags by day where directed by the Departmental Representative. These provisions shall prevent airport personnel from inadvertently crossing into construction areas and construction personnel from crossing into operational areas.
- .4 Provide containers for debris and clean-up is performed as work progresses and at a daily rate to prevent FOD (Foreign Object Damage to Aircraft). Be diligent in preventing refuse, from Work on this project, from being windblown across the airport.
- .5 Provide wetting down of surfaces and areas to prevent FOD or dusting hazards (such as ingestion into the aircraft engine or visibility to aircraft risks).
- .6 Locate all fixed facilities & objects at horizontal distance of not less than 3.0 m from primary security fences on groundside and 1.0 m from security fence on airside.
- .7 Do not park vehicles, construction equipment or stockpile any material within 3.0 metres of any security fence on groundside and within 1.0 metres from security fence on airside when not working on construction of new fences.

1.3 TEMPORARY BARRIERS AND DELINEATORS

- .1 Contractor shall be responsible for supplying all materials, hardware or devices required to delineate the Work Site and various construction phases for safety, security and traffic control requirements, at no additional cost to the Owner. Upon completion of the work, lighted channelizer cones and water ballasted lighted safety barricades will become the property of the Owner. The Contractor will deliver these temporary barriers and delineators to a location within the airport property.

1.4 CLOSURE OF AIRSIDE FACILITIES

- .1 Carry out work requiring interruption of airport operations at time directed, with minimum of disturbance to airport operations.
- .2 Submit schedule to, and obtain approval from Departmental Representative of interruptions or closure of active airport facilities. Adhere strictly to approved schedule.
- .3 Closed facilities cannot be reopened until inspected and approved by the Departmental Representative.

1.5 COORDINATION OF MOVEMENT IN OPERATIONAL AREAS

- .1 Brief Departmental Representative every day prior to starting work in area adjacent to or on active airport facilities.
- .2 Obtain Departmental Representative's approval on scheduling of Work.
- .3 Control movements of equipment and personnel as directed by Departmental Representative.
- .4 Obey signals from Airport Authority Commissionaire immediately.
- .5 Any persons who fail to comply signals from Airport Authority Commissionaire will result in immediately removal of airside access.

1.6 FLIGHT SAFETY

- .1 Prior to permitting personnel to work adjacent to an active runway, taxiways, parking aprons, or working within 91 m from center line of the runway and 6 m the edge of asphalt from other active facilities (taxiway, apron), establish contact with Department Representative and obtain specific clearances. Once established on airport, maintain radio contact on work site with the Commissionaires at all times. Obey all instructions promptly and explicitly.
- .2 The contractor shall obey the direction of the Commissionaires with regards to pullbacks.
- .3 Obey all instructions promptly and explicitly.

- .4 Prior to starting work obtain necessary closure of adjacent facilities.
- .5 During working hours, supply flagmen at crossings of active facilities.
- .6 All Contractor's vehicles used on the airport must be equipped with an orange rotary beacon or must be escorted by a vehicle equipped with a beacon.

1.7 UNSERVICEABLE AREAS

- .1 Mark off areas made unserviceable for aircraft by work of this Contract by providing plainly visible danger markings by day and red lights by night. Open flames in flammable fuels not permitted.
- .2 Coordinate demolition of unserviceable areas in accordance with Phasing Plan over course of construction.
- .3 Park equipment not in use and stockpile materials in areas approved by Departmental Representative so that equipment:
 - .1 Tops are below a 50 (horizontal) to 1 (vertical) ratio from ends of useable landing strip.
 - .2 Is below 20 (horizontal) to 1 (vertical) ratio from sides of aircraft traffic areas.
 - .3 Is outside limits of pullback zones as indicated on Drawings.
- .4 Where directed, mark mobile equipment tops with lights. Mobile objects, excluding aircraft, on the manoeuvring area are lighted to display flashing yellow lights except for vehicles associated with an emergency situation, which display flashing red light, or flashing red and flashing yellow lights. The characteristics are as follows:
 - .1 an effective intensity of the flash ranging between 40 and 400 candelas;
 - .2 360° azimuth (horizontal) coverage;
 - .3 peak intensity from 0° to 10° above the horizontal and reduced intensity to 1/10 of peak intensity from 10° to 15° above the horizontal; and
 - .4 a flash rate of 75 (±15) flashes per minute.

1.8 CLEANING FOD

- .1 Foreign Object Damage (FOD) can occur anytime a foreign object comes in contact with an aircraft. Foreign objects are anything foreign to the airfield, including but not limited to: construction dust, hats, rags, pen caps, paper, rocks or mud from vehicle tires, etc.
- .2 Foreign Object Damage (FOD) control procedures will be enforced by the Departmental Representative at all times in the construction and operational area. Keeping active taxiways and aprons adjacent to the work clean during the Work will be the responsibility of the Contractor.
- .3 The contractor is to routinely inspect the site for FOD during the work shifts.
- .4 Maintain at the construction site a Departmental Representative approved, sufficiently sized and powered:

- .1 Street sweeper tractor with power broom or similar vehicle, fitted with a non-metallic motorized rotary sweeper broom, minimum width 2.4m, for FOD control and clean-up of adjacent operational surfaces affected by construction activities. Site FOD sweeps shall be conducted at the end of each working day and when directed by the Departmental Representative.
- .2 Water truck capable of supplying enough water for dust control as well as construction needs.
- .5 Where access routes cross active runways, taxiways or parking aprons, keep crossings free of FOD mud and debris at all times. Broom clean immediately.
- .6 Routinely inspect and clean equipment as necessary to remove rocks, dirt and mud that may accumulate. Inspection and cleaning of equipment shall occur before equipment enters the airfield and before equipment transitions from airfield soil surfaces to runway, ramp or associated concrete or asphalt surfaces.

PART 2 - PRODUCTS → **NOT APPLICABLE**
PART 3 - EXECUTION → **NOT APPLICABLE**

END OF SECTION

PART 1 - GENERAL

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| <u>1.1 SECTION INCLUDES</u> | .1 | Fire Safety Requirements. |
| | .2 | Hot Work Permit. |
| | .3 | Existing Fire Protection and Alarm Systems. |
| <u>1.2 RELATED SECTIONS</u> | .1 | Section 01 35 29.06 - Health and Safety Requirements. |
| <u>1.3 REFERENCES</u> | .1 | Fire Protection Standards issued by Fire Protection Services, Labour Program Division of Service Canada:
.1 FCC No. 301-June 1982 Standard for Construction Operations.
.2 FCC No. 302-June 1982 Standard for Welding and Cutting. |
| | .2 | FCC Standards may be viewed at:
http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/commissioner/index.html . |
| <u>1.4 DEFINITIONS</u> | .1 | Hot Work defined as:
.1 Welding work.
.2 Cutting of materials by use of torch or other open flame devices.
.3 Grinding with equipment which produces sparks. |
| <u>1.5 SUBMITTALS</u> | .1 | Submit copy of Hot Work Procedures and sample of Hot Work permit to Departmental Representative for review, within 14 calendar days of acceptance of bid. |
| | .2 | Submit in accordance with Section 01 33 00. |
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1.6 FIRE SAFETY
REQUIREMENTS

- .1 Implement and follow fire safety measures during Work. Comply with following:
 - .1 National Fire Code.
 - .2 Fire Protection Standards FCC 301 and FCC 302.
 - .3 Federal and Provincial Occupational Health and Safety Acts and Regulations.
- .2 In event of conflict between any provisions of above authorities the most stringent provision will apply. Should a dispute arise in determining the most stringent requirement, Departmental Representative will advise on the course of action to be followed.

1.7 HOT WORK
AUTHORIZATION

- .1 Obtain Departmental Representative's written "Authorization to Proceed" before conducting any form of Hot Work on site.
 - .2 To obtain authorization submit to Departmental Representative:
 - .1 Contractor's typewritten Hot Work Procedures to be followed on site as specified below.
 - .2 Description of the type and frequency of Hot Work required.
 - .3 Sample Hot Work Permit to be used.
 - .3 Upon review and confirmation that effective fire safety measures will be implemented and followed during performance of hot work, Departmental Representative will give authorization to proceed as follows:
 - .1 Issue one written "Authorization to Proceed" covering the entire project for duration of work or;
 - .2 Subdivide the work into pre-determined, individual activities, each activity requiring a separately written authorization to proceed.
 - .4 Requirement for individual authorization will be based on:
 - .1 Nature or phasing of work;
 - .2 Risk to Facility operations;
 - .3 Quantity of various trades needing to perform hot work on project or;
 - .4 Other situation deemed necessary by Departmental Representative to ensure fire safety on premises.
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1.7 HOT WORK AUTHORIZATION (Cont'd)	.5	Do not perform any Hot Work until receipt of Departmental Representative's written "Authorization to Proceed" for that portion of work.
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1.8 HOT WORK PROCEDURES	.1	Develop and implement safety procedures and work practices to be followed during the performance of Hot Work.
	.2	Hot Work Procedures to include: <ul style="list-style-type: none">.1 Requirement to perform hazard assessment of site and immediate work area beforehand for each hot work event in accordance with Safety Plan specified in Section 01 35 29.06..2 Use of Hot Work Permit system with individually issued permit by Contractor's Superintendent to worker or subcontractor granting permission to proceed with Hot Work..3 Permit required for each Hot Work event..4 Designation of a person on site as a Fire Safety Watcher responsible to conduct a fire safety watch for a minimum duration of 60 minutes immediately following the completion of the Hot Work..5 Compliance with fire safety codes, standards and occupational health and safety regulations specified..6 Site specific rules and procedures in force at the site as provided by the Facility.
	.3	Generic procedures, if used, must be edited and supplemented with pertinent information tailored to reflect specific project conditions. Label document as being the Hot Work Procedures for this contract.
	.4	Procedures shall clearly establish responsibilities of: <ul style="list-style-type: none">.1 Worker performing hot work,.2 Person issuing the Hot Work Permit,.3 Fire Safety Watcher,.4 Subcontractor(s) and Contractor.
	.5	Brief all workers and subcontractors on Hot Work Procedures and of Permit system. Stringently enforce compliance.

- 1.9 HOT WORK
PERMIT
- .1 Hot Work Permit to include the following:
 - .1 Project name and project number.
 - .2 Location of hot work.
 - .3 Date of issue.
 - .4 Description of hot work type needed.
 - .5 Special precautions to be followed, including type of fire extinguishers needed.
 - .6 Name and signature of permit issuer.
 - .7 Name of worker to which the permit is issued.
 - .8 Permit validity period not to exceed 8 hours. Indicate start time/date and termination time/date.
 - .9 Worker's signature with time/date of hot work completion.
 - .10 Stipulated time period of safety watch.
 - .11 Fire Safety Watcher's signature with time/date.
 - .2 Permit to be typewritten form. Industry Standard forms shall only be used if all data specified above is included on form.
 - .3 Each Hot Work Permit to be completed in full, signed and returned to Contractor's Superintendent for safe keeping on site.
- 1.10 FIRE
PROTECTION AND
ALARM SYSTEMS
- .1 Fire protection and alarm systems shall not be:
 - .1 Obstructed.
 - .2 Shut-off, unless approved by Departmental Representative.
 - .3 Left inactive at the end of a working day or shift.
 - .2 Do not use fire hydrants, standpipes and hose systems for purposes other than fire fighting.
 - .3 Costs incurred, from the fire department, Facility Owner and tenants, resulting from negligently setting off false fire alarms will be charged to the Contractor in the form of financial progress payment reductions and hold back assessments against the Contract.
- 1.11 DOCUMENTS ON
SITE
- .1 Keep Hot Work Permits and Hazard assessment documentation on site for duration of Work.
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1.11 DOCUMENTS ON SITE (Cont'd)	.2	Upon request, make available to Departmental Representative or to authorized Safety Representative for inspection.
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PART 2 - PRODUCTS

2.1 NOT USED	.1	Not used.
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PART 3 - EXECUTION

3.1 NOT USED	.1	Not used.
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PART 1 - GENERAL

<u>1.1 SECTION INCLUDES</u>	.1	Procedures to isolate electrical facility and other equipment from energy sources.
<u>1.2 RELATED SECTIONS</u>	.1	Section 01 35 29.06 - Health and Safety.
<u>1.3 REFERENCES</u>	.1	CSA C22.1-2015, Canadian Electrical Code, Part 1, Safety Standard for Electrical Installations.
	.2	CAN/CSA-C22.3 No.1-06, Overhead Systems.
	.3	CSA C22.3 No.7-06, Underground Systems.
	.4	COSH: Canadian Occupational Health and Safety Regulations made under Part II of the Canada Labour Code.
<u>1.4 DEFINITIONS</u>	.1	Electrical Facility: means any system, equipment, device, apparatus, wiring, conductor, assembly or part thereof that is used for the generation, transformation, transmission, distribution, storage, control, measurement or utilization of electrical energy, and that has an amperage and voltage that is dangerous to persons.
	.2	Guarantee of Isolation: means a guarantee by a competent person in control or in charge that a particular facility or equipment has been isolated.
	.3	De-energize: in the electrical sense, that a piece of equipment is isolated and grounded, e.g. if the equipment is not grounded, it cannot be considered de-energized (DEAD).

1.4 DEFINITIONS
(Cont'd)

- .4 Guarded: means that an equipment or facility is covered, shielded, fenced, enclosed, inaccessible by location, or otherwise protected in a manner that, to the extent that is reasonably practicable, will prevent or reduce danger to any person who might touch or go near such item.
- .5 Isolate: means that an electrical facility, mechanical equipment or machinery is separated or disconnected from every source of electrical, mechanical, hydraulic, pneumatic or other kind of energy that is capable of making it dangerous.
- .6 Live/alive: means that an electrical facility produces, contains, stores or is electrically connected to a source of alternating or direct current of an amperage and voltage that is dangerous or contains any hydraulic, pneumatic or other kind of energy that is capable of making the facility dangerous to persons.

1.5 COMPLIANCE
REQUIREMENTS

- .1 Comply with the following in regards to isolation and lockout of electrical facilities and equipment:
 - .1 Canadian Electrical Code.
 - .2 Federal and Provincial Occupational Health and Safety Acts and Regulations.
 - .3 Regulations and code of practice as applicable to mechanical equipment or other machinery being de-energized.
 - .4 Procedures specified herein.
- .2 In event of conflict between any provisions of above authorities the most stringent provision will apply.

1.6 SUBMITTALS

- .1 Submit copy of lockout procedures, sample of lockout permit and lockout tags proposed for use in accordance with Section 01 33 00. Submit within 14 calendar days of acceptance of bid.
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1.7 ISOLATION OF
EXISTING SERVICES

- .1 Obtain Departmental Representative's written authorization prior to working on existing live or active electrical facilities and equipment and before proceeding with isolation of such item.
 - .2 To obtain authorization, submit to Departmental Representative the following documentation:
 - .1 Written request to isolate the particular service or facility and;
 - .2 Copy of Contractor's Lockout Procedures.
 - .3 Make a Request for Isolation for each event, unless directed otherwise by Departmental Representative, as follows:
 - .1 Fill-out standard form in current use at the Facility as provided by Departmental Representative or;
 - .2 Where no form exist, make written request indicating:
 - .1 The equipment, system or service to be isolated and it's location;
 - .2 Duration of isolation period (ie: start time and date and completion time and date).
 - .3 Voltage of service feed to system or equipment being isolated.
 - .4 Name of person making the request.
 - .4 Do not proceed with isolation until receipt of written notification from Departmental Representative granting the Isolation Request and authorization to proceed with the work.
 - .1 Note that Departmental Representative may designate another person at the Facility being authorized to grant the Isolation Request.
 - .5 Conduct safe, orderly shut down of equipment or facility. De-energize, isolate and lockout power and other sources of energy feeding the equipment or facility.
 - .6 Determine in advance, as much as possible, in cooperation with the Departmental Representative, the type and frequency of situations which will require isolation of existing services.
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1.7 ISOLATION OF
EXISTING SERVICES
(Cont'd)

- .7 Plan and schedule shut down of existing services in consultation with the Departmental Representative and the Facility Manager. Minimize impact and downtime of Facility operations. Follow Departmental Representative's directives in this regard.
- .8 Conduct hazard assessment as part of the process in accordance with health and safety requirements specified Section 01 35 29.06.

1.8 LOCKOUTS

- .1 De-energize, and lockout electrical facility, mechanical equipment and machinery from all potential sources of energy prior to working on such items.
- .2 Develop and implement clear and specific lockout procedures to be followed as part of the Work.
- .3 Prepare typed written Lockout Procedures describing safe work practices, procedures, worker responsibilities and sequence of activities to be followed on site by workforce to safely isolate an active piece of equipment or electrical facility and effectively lockout and tagout its sources of energy.
- .4 Include as part of the Lockout Procedures a system of lockout permits managed by Contractor's Superintendent or other qualified person designated by him/her as being "in-charge" at the site.
 - .1 A lockout permit shall be issued to specific worker providing a Guarantee of Isolation before each event when work must be performed on a live equipment or electrical facility.
 - .2 Duties of person managing the permit system to include:
 - .1 Issuance of permits and lockout tags to workers.
 - .2 Determining permit duration.
 - .3 Maintaining record of permits and tags issued.
 - .4 Making a Request for Isolation to Departmental Representative when required as specified above.

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| 1.8 LOCKOUTS
<u>(Cont'd)</u> | .4 (Cont'd) | |
| | .2 (Cont'd) | |
| | .5 | Designating a Safety Watcher, when one is required based on type of work. |
| | .6 | Ensuring equipment or facility has been properly isolated. |
| | .7 | Collecting and safekeeping lockout tags returned by workers as a record of the event. |
| | .5 | Clearly establish, describe and allocate responsibilities of: |
| | .1 | Workers. |
| | .2 | Person managing the lockout permit system. |
| | .3 | Safety Watcher. |
| | .4 | Subcontractor(s) and General Contractor. |
| | .6 | Generic procedures, if used, must be edited and supplemented with pertinent information to reflect specific project requirements. |
| | .1 | Incorporate site specific rules and procedures in force at site as provided by Facility Manager through the Departmental Representative. |
| | .2 | Clearly label the document as being the Lockout procedures applicable to work of this contract. |
| | .7 | Use energy isolation lockout devices specifically designed and appropriate for type of facility or equipment being locked out. |
| | .8 | Use industry standard lockout tags. |
| | .9 | Provide appropriate safety grounding and guards as required. |
| 1.9 CONFORMANCE
<u></u> | .1 | Brief all workers and subcontractors on requirements of this section. Stringently enforce use and compliance. |
| 1.10 DOCUMENTS ON
<u>SITE</u> | .1 | Post Lockout Procedures on site in common location for viewing by workers. |
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| 1.10 DOCUMENTS ON
SITE
<u>(Cont'd)</u> | .2 | Keep copies of Request for Isolation forms and lockout permits and tags issued to workers on site for full duration of Work. |
| | .3 | Upon request, make available to Departmental Representative or to authorized safety representative for inspection. |

PART 2 - PRODUCTS

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| <u>2.1 NOT USED</u> | .1 | Not used. |
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PART 3 - EXECUTION

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|---------------------|----|----------|
| <u>3.1 NOT USED</u> | .1 | Not used |
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PART 1 - GENERAL

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| <u>1.1 REFERENCES</u> | .1 | Province of Newfoundland and Labrador
.1 Occupational Health and Safety Act,
R.S.N. 1990. |
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| <u>1.2 ACTION AND
INFORMATIONAL
SUBMITTALS</u> | .1 | Make submittals in accordance with Section
01 33 00 - Submittal Procedures. |
| | .2 | Submit site-specific Health and Safety Plan:
Within 7 days after date of Notice to Proceed
and prior to commencement of Work. Health and
Safety Plan must include:
.1 Results of site specific safety hazard
assessment.
.2 Results of safety and health risk or
hazard analysis for site tasks and operation
found in work plan. |
| | .3 | Submit 2 copies of Contractor's authorized
representative's work site health and safety
inspection reports to Departmental
Representative and or authority having
jurisdiction, weekly. |
| | .4 | Submit copies of reports or directions issued
by Federal, Provincial and Territorial health
and safety inspectors. |
| | .5 | Submit copies of incident and accident
reports. |
| | .6 | Submit WHMIS MSDS - Material Safety Data
Sheets. |
| | .7 | Departmental Representative will review
Contractor's site-specific Health and Safety
Plan and provide comments to Contractor within
10 days after receipt of plan. Revise plan as
appropriate and resubmit plan to Departmental
Representative within 5 days after receipt of
comments from Departmental Representative. |
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1.2 ACTION AND
INFORMATIONAL
SUBMITTALS
(Cont'd)

- .8 Departmental Representative's review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
- .9 Medical Surveillance: where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of Work, and submit additional certifications for any new site personnel to Departmental Representative.
- .10 On-site Contingency and Emergency Response Plan: address standard operating procedures to be implemented during emergency situations.

1.3 SAFETY
ASSESSMENT

- .1 Perform site specific safety hazard assessment related to project.

1.4 MEETINGS

- .1 PWGSC Health and Safety Officer will schedule and administer Health and Safety meeting with Departmental Representative and Contractor prior to commencement of Work.

1.5 PROJECT/SITE
CONDITIONS

- .1 Work at site will involve contact with:
 - .1 Energized Electrical Equipment.
 - .2 Fuel and Petroleum Products.

1.6 GENERAL
REQUIREMENTS

- .1 Develop written site-specific Health and Safety Plan based on hazard assessment prior to beginning site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.
 - .2 Departmental Representative may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.
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| <u>1.7 RESPONSIBILITY</u> | .1 | Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work. |
| | .2 | Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan. |
| <u>1.8 COMPLIANCE REQUIREMENTS</u> | .1 | Comply with Occupational Health and Safety Act, Occupational Health and Safety Regulations, C. Nfld. Reg. |
| | .2 | Comply with Canada Labour Code, Canada Occupational Safety and Health Regulations. |
| <u>1.9 UNFORESEEN HAZARDS</u> | .1 | When unforeseen or peculiar safety-related factor, hazard, or condition occur during performance of Work, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Province having jurisdiction and advise Departmental Representative verbally and in writing. |
| <u>1.10 POSTING OF DOCUMENTS</u> | .1 | Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Province having jurisdiction, and in consultation with Departmental Representative. |
| <u>1.11 CORRECTION OF NON-COMPLIANCE</u> | .1 | Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Departmental Representative. |
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| <u>1.11 CORRECTION OF
NON-COMPLIANCE
(Cont'd)</u> | .2 | Provide Departmental Representative with written report of action taken to correct non-compliance of health and safety issues identified. |
| | .3 | Departmental Representative may stop Work if non-compliance of health and safety regulations is not corrected. |
| <u>1.12 POWDER
ACTUATED DEVICES</u> | .1 | Use powder actuated devices only after receipt of written permission from Departmental Representative. |
| <u>1.13 WORK STOPPAGE</u> | .1 | Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work. |

PART 2 - PRODUCTS

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|---------------------|----|-----------|
| <u>2.1 NOT USED</u> | .1 | Not used. |
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PART 3 - EXECUTION

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| <u>3.1 NOT USED</u> | .1 | Not used. |
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PART 1 - GENERAL

1.1 GENERAL

- .1 Due to nature of this Facility, and client operations therein, security regulations pertaining to site will be in place during the work resulting in need for:
 - .1 Control and limit movement of construction workers at the site.
 - .2 Escort and continuous supervision of workers by security personnel.
 - .3 Specific rules and regulations as specified in this section and as directed by the Departmental Representative to be stringently followed.
- .2 It is the Contractor's responsibility to:
 - .1 Oversee Day-to-day activities on site during construction.
 - .2 Be familiar with and abide by security rules and regulations.
 - .3 Brief all workers and subcontractors in respect of the security regulations and ensure that they abide by all rules and directives.
- .3 The Departmental Representative will coordinate a pre-construction meeting between Contractor, Facility Management and Security Personnel who will provide details and directives on control and movement on site.
- .4 Any infraction of site security regulations on the part of the Contractor, members of work force or any Subcontractor in his employ, could result in:
 - .1 Immediate removal of offending party from the site.

1.2 CONTRACTOR'S PERSONNEL

- .1 Submit an organization chart to the Departmental Representative prior to commencing Work on site. Chart to identify and give contact information for the following individuals:
 - .1 Site Superintendent/Foreman.
 - .2 Commissionaires.
 - .3 QC Manager
 - .4 Safety Offices
 - .5 Trade Supervisors
 - .6 All Subcontractor Managers

1.3 SECURITY PERSONNEL

- .1 Obtain and pay for the services of security personnel, employed by the Canadian Corps of Commissionaires to provide escort and security supervision of all workers during the work.
- .2 Provide minimum of two (2) Commissionaires to be on site at all times when work is carried out, having the following responsibilities:
 - .1 Limit movement of workers to within the boundaries established by the Departmental Representative for each work phase;
 - .2 Maintain security control list of workers authorized to be on site as determined by Contractor and the Departmental Representative;
 - .3 Manage the distribution and control of worker ID tags;
 - .4 Escort workers who need to circulate on site beyond the established boundaries of work, including the corridors, stairwells and elevators used for access to and from work areas.
 - .5 Escort and supervise short term visitors who need access to the work site such as for material deliveries or to conduct inspections.
- .3 Provide additional commissionaires when required to perform supervision or escort function as may be needed due to Contractor's work operations in order that no worker is left unsupervised on site.
- .4 Ensure Commissionaires are present on site for entire work shift including work breaks and time period after work shifts until all workers have left site.
- .5 Commissionaires must stay within the actual construction area and provide surveillance of all workers ensuring that security rules and requirements are obeyed and to limit movement to approved work areas of site.
- .6 Commissionaires must also escort workers from approved entrances and work area(s).
- .7 Escort and supervision of workers by Commissionaires is required at all times regardless as to whether work shifts are in the daytime or during Facility off hours.

- .9 Commissionaires will report directly to the to the Facility security personnel and ensure that site security directives are obeyed by all workers.
 - .1 Empower Commissionaires with authority to remove any worker deemed non-compliant with security directives.
- .10 Ensure Commissionaires are fitted and wear approved safety hard hat, safety footwear and other personnel protective equipment appropriate to work in accordance with applicable Occupational Health and Safety requirements specified.

1.4 SECURITY PASSES

- .1 Visitor or worker ID Tags are required for all personnel requiring access to airside. Airside is the operational area of the airport contained within the security fence perimeter.
- .2 ID Tags will be provided by the Facility Security, issued to Contractor for distribution to authorized workers and placed on the Security Control List specified below.
- .3 All persons, while on site, must wear the ID Tag issued to him regardless of daytime or nighttime work.
- .4 Be responsible to obtain ID Tags before work commences, including those required by subcontractors, and continually control their distribution and use by workers. Submit request for tags as early as possible prior to commencement of work.
- .5 For the duration of this contract, anyone not in possession of the ID Tag will not be allowed access on site.
- .6 At end of project, return to Departmental Representative all tags issued to workers and to subcontractors.
- .7 Immediately report any lost, stolen or destroyed ID Tags to the Departmental Representative.

1.5 SECURITY CONTROL LIST

- .1 Provide a list of employee names from workforce and from subcontractors who will be present at site during the course of Work.
- .2 List to include each person's name, address and telephone number.
- .3 Submit copy of list to Departmental Representative and to Security Commissionaire for control of workers.

- .4 Update list as work progresses.
- .5 Verify each worker can provide proof of identity upon demand, when requested by Facility's Security Personnel, Departmental Representative or by Facility Management.

1.6 AIRSIDE ACCESS

- .1 Gate keys necessary for access to airside areas may be issued at the discretion of the Departmental Representative. Follow all instructions in regards to use, care and disposition of keys so issued. Key training is a prerequisite.
- .2 Keys and security access cards given to the Commissionaire for his sole possession, as determined by Departmental Representative, shall not under any circumstances be given to any worker or subcontractor.
- .3 Do not, under any circumstances, make or allow workers to make duplicates of keys issued.
- .4 At end of project, return to Departmental Representative all keys and access cards issued.
- .5 Immediately report to Departmental Representative any lost, stolen or destroyed keys.

1.7 SITE SECURITY

- .1 When Work must be carried out during off hours or beyond the work hours previously agreed upon at start of work, provide notice within 48 hours beforehand to allow airside security coordination to be arranged for by Departmental Representative.

PART 2 - PRODUCTS → NOT APPLICABLE

PART 3 - EXECUTION → NOT APPLICABLE

END OF SECTION

PART 1 - GENERAL

- 1.1 INSPECTION
- .1 Allow Departmental Representative access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress.
 - .2 Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by Departmental Representative instructions, or law of Place of Work.
 - .3 If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.
 - .4 Departmental Representative will order part of Work to be examined if Work is suspected to be not in accordance with Contract Documents. If, upon examination such work is found not in accordance with Contract Documents, correct such Work and pay cost of examination and correction. If such Work is found in accordance with Contract Documents, Departmental Representative shall pay cost of examination and replacement.
- 1.2 ACCESS TO WORK
- .1 Allow inspection/testing agencies access to Work, off site manufacturing and fabrication plants.
 - .2 Co-operate to provide reasonable facilities for such access.
- 1.3 PROCEDURES
- .1 Notify appropriate agency and Departmental Representative in advance of requirement for tests, in order that attendance arrangements can be made.
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- 1.3 PROCEDURES
(Cont'd)
- .2 Submit samples and/or materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in orderly sequence to not cause delays in Work.
 - .3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.
- 1.4 REJECTED WORK
- .1 Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by Departmental Representative as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.
 - .2 Make good other Contractor's work damaged by such removals or replacements promptly.
 - .3 If in opinion of Departmental Representative it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, Owner will deduct from Contract Price difference in value between Work performed and that called for by Contract Documents, amount of which will be determined by Departmental Representative.
- 1.5 REPORTS
- .1 Submit 4 copies of inspection and test reports to Departmental Representative.
 - .2 Provide copies to subcontractor of work being inspected or tested manufacturer or fabricator of material being inspected or tested.

PART 2 - PRODUCTS

- 2.1 NOT USED
- .1 Not Used.
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ST. ANTHONY AIRPORT	QUALITY CONTROL	Section 01 45 00
FENCE REHABILITATION		Page 3
PROJECT NO. R.083651.001		2017-01-03

PART 3 - EXECUTION

3.1 NOT USED .1 Not Used.

PART 1 - GENERAL

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| <u>1.1 INSTALLATION
AND REMOVAL</u> | .1 | Provide temporary utilities controls in order to execute work expeditiously. |
| | .2 | Remove from site all such work after use. |
| <u>1.2 DEWATERING</u> | .1 | Provide temporary drainage and pumping facilities to keep excavations and site free from standing water. |
| <u>1.3 WATER SUPPLY</u> | .1 | Departmental Representative will provide continuous supply of potable water for construction use. |
| <u>1.4 FIRE PROTECTION</u> | .1 | Burning rubbish and construction waste materials is not permitted on site. |

PART 2 - PRODUCTS

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|---------------------|----|-----------|
| <u>2.1 NOT USED</u> | .1 | Not Used. |
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PART 3 - EXECUTION

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|---------------------|----|-----------|
| <u>3.1 NOT USED</u> | .1 | Not Used. |
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PART 1 - GENERAL

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| <u>1.1 REFERENCES</u> | .1 | Canadian General Standards Board (CGSB)
.1 CAN/CGSB 1.189-00, Exterior Alkyd Primer for Wood. |
| | .2 | Canadian Standards Association (CSA International)
.1 CSA-A23.1/A23.2-04, Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practices for Concrete.
.2 CSA-0121-08(R2013), Douglas Fir Plywood.
.3 CAN/CSA-S269.2-M1987(R2003), Access Scaffolding for Construction Purposes.
.4 CAN/CSA-Z321-96(R2001), Signs and Symbols for the Occupational Environment. |
| | .3 | U.S. Environmental Protection Agency (EPA) / Office of Water
.1 EPA 832R92005, Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices. |
| <u>1.2 INSTALLATION AND REMOVAL</u> | .1 | Prepare site plan indicating proposed location and dimensions of area to be fenced and used by Contractor, number of trailers to be used, avenues of ingress/egress to fenced area and details of fence installation. |
| | .2 | Identify areas which have to be gravelled to prevent tracking of mud. |
| | .3 | Indicate use of supplemental or other staging area. |
| | .4 | Provide construction facilities in order to execute work expeditiously. |
| | .5 | Remove from site all such work after use. |
| <u>1.3 SITE STORAGE/LOADING</u> | .1 | Confine work and operations of employees by Contract Documents. Do not unreasonably encumber premises with products. |
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<u>1.3 SITE STORAGE/LOADING (Cont'd)</u>	.2	Do not load or permit to load any part of Work with weight or force that will endanger Work.
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<u>1.4 CONSTRUCTION PARKING</u>	.1	Parking will be permitted on site provided it does not disrupt performance of Work.
	.2	Provide and maintain adequate access to project site.

<u>1.5 EQUIPMENT, TOOL AND MATERIALS STORAGE</u>	.1	Provide and maintain, in clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.
	.2	Locate materials not required to be stored in weatherproof sheds on site in manner to cause least interference with work activities.

<u>1.6 SANITARY FACILITIES</u>	.1	Provide sanitary facilities for work force in accordance with governing regulations and ordinances.
	.2	Post notices and take precautions as required by local health authorities. Keep area and premises in sanitary condition.

<u>1.7 CONSTRUCTION SIGNAGE</u>	.1	Provide and erect project sign, within three weeks of signing Contract, in a location designated by Departmental Representative.
	.2	Construction sign 1m x 1m, of wood frame and plywood construction painted with exhibit lettering produced by a professional sign painter.
	.3	Indicate on sign, name of Owner, Consultant and Contractor and Subcontractor, of design style established by Departmental Representative as detailed.
	.4	No other signs or advertisements, other than warning signs, are permitted on site.

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| 1.7 CONSTRUCTION
SIGNAGE
<u>(Cont'd)</u> | .5 | Direct requests for approval to erect Consultant/Contractor signboard to Departmental Representative. For consideration general appearance of Consultant/Contractor signboard must conform to project identification site sign. Wording in both official languages. |
| | .6 | Signs and notices for safety and instruction in both official languages Graphic symbols to CAN/CSA-Z321. |
| | .7 | Maintain approved signs and notices in good condition for duration of project, and dispose of off site on completion of project or earlier if directed by Departmental Representative. |
| 1.8 PROTECTION AND
MAINTENANCE OF
TRAFFIC
<u></u> | .1 | Provide access and temporary relocated roads as necessary to maintain traffic. |
| | .2 | Maintain and protect traffic on affected roads during construction period except as otherwise specifically directed by Departmental Representative. |
| | .3 | Provide measures for protection and diversion of traffic, including provision of watch-persons and flag-persons, erection of barricades, placing of lights around and in front of equipment and work, and erection and maintenance of adequate warning, danger, and direction signs |
| | .4 | Protect travelling public from damage to person and property. |
| | .5 | Contractor's traffic on roads selected for hauling material to and from site to interfere as little as possible with public traffic. |
| | .6 | Verify adequacy of existing roads and allowable load limit on these roads. Contractor: responsible for repair of damage to roads caused by construction operations. |
| | .7 | Construct access and haul roads as necessary. |
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1.8 PROTECTION AND MAINTENANCE OF TRAFFIC
(Cont'd)

- .8 Provide necessary lighting, signs, barricades, and distinctive markings for safe movement of traffic.
- .9 Dust control: adequate to ensure safe operation at all times.
- .10 Location, grade, width, and alignment of construction and hauling roads: subject to approval by Departmental Representative.
- .11 Provide snow removal during period of Work.
- .12 Remove, upon completion of work, haul roads designated by Departmental Representative.

1.9 CLEAN-UP

- .1 Remove construction debris, waste materials, packaging material from work site daily.
- .2 Clean dirt or mud tracked onto paved or surfaced roadways.
- .3 Store materials resulting from demolition activities that are salvageable.
- .4 Stack stored new or salvaged material not in construction facilities.

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED

- .1 Not Used.

PART 1 - GENERAL

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|---------------------------------------|----|--|
| <u>1.1 REFERENCES</u> | .1 | Canadian General Standards Board (CGSB)
.1 CAN/CGSB 1.189-00, Exterior Alkyd Primer for Wood. |
| | .2 | Canadian Standards Association (CSA International)
.1 CSA-0121-08(R2013), Douglas Fir Plywood. |
| <u>1.2 INSTALLATION AND REMOVAL</u> | .1 | Provide temporary controls in order to execute Work expeditiously. |
| | .2 | Remove from site all such work after use. |
| <u>1.3 HOARDING</u> | .1 | Erect temporary site enclosures using 38 x 89 mm construction grade lumber framing at 600 mm centres and 1200 x 2400 x 13 mm exterior grade fir plywood to CSA 0121. |
| <u>1.4 GUARD RAILS AND BARRICADES</u> | .1 | Provide secure, rigid guard rails and barricades around deep excavations. |
| | .2 | Provide as required by governing authorities as indicated. |
| <u>1.5 ACCESS TO SITE</u> | .1 | Provide and maintain access roads, sidewalk crossings, ramps and construction runways as may be required for access to Work. |
| <u>1.6 PUBLIC TRAFFIC FLOW</u> | .1 | Provide and maintain competent signal flag operators, traffic signals, barricades and flares, lights, or lanterns as required to perform Work and protect public. |
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<u>1.7 FIRE ROUTES</u>	.1	Maintain access to property including overhead clearances for use by emergency response vehicles.
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<u>1.8 PROTECTION FOR OFF-SITE AND PUBLIC PROPERTY</u>	.1	Protect surrounding private and public property from damage during performance of Work.
	.2	Be responsible for damage incurred.

<u>1.9 WASTE MANAGEMENT AND DISPOSAL</u>	.1	Separate waste materials for reuse and recycling.
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PART 2 - PRODUCTS

<u>2.1 NOT USED</u>	.1	Not Used.
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PART 3 - EXECUTION

<u>3.1 NOT USED</u>	.1	Not Used.
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PART 1 - GENERAL

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| <u>1.1 REFERENCES</u> | .1 | Owner's identification of existing survey control points and property limits. |
| <u>1.2 EXISTING SERVICES</u> | .1 | Before commencing work, establish location and extent of service lines in area of Work and notify Departmental Representative of findings. |
| <u>1.3 LOCATION OF EQUIPMENT AND FIXTURES</u> | .1 | Location of equipment, fixtures and outlets indicated or specified are to be considered as approximate. |
| | .2 | Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space and in accordance with manufacturer's recommendations for safety, access and maintenance. |
| | .3 | Inform Departmental Representative of impending installation and obtain approval for actual location. |
| | .4 | Submit field drawings to indicate relative position of various services and equipment when required by Departmental Representative. |
| <u>1.4 RECORDS</u> | .1 | Maintain a complete, accurate log of control and survey work as it progresses. |
| | .2 | On completion of foundations and major site improvements, prepare a certified survey showing dimensions, locations, angles and elevations of Work. |
| | .3 | Record locations of maintained, re-routed and abandoned service lines. |
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1.5 ACTION AND
INFORMATIONAL
SUBMITTALS

- .1 Submit name and address of Surveyor to Departmental Representative.
- .2 On request of Departmental Representative, submit documentation to verify accuracy of field engineering work.
- .3 Submit certificate signed by surveyor certifying and noting those elevations and locations of completed Work that conform and do not conform with Contract Documents.

1.6 SUBSURFACE
CONDITIONS

- .1 Promptly notify Departmental Representative in writing if subsurface conditions at Place of Work differ materially from those indicated in Contract Documents, or a reasonable assumption of probable conditions based thereon.
- .2 After prompt investigation, should Departmental Representative determine that conditions do differ materially, instructions will be issued for changes in Work as provided in Changes and Change Orders.

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED

- .1 Not Used.

PART 1 - GENERAL

1.1 ACTION AND
INFORMATIONAL
SUBMITTALS

- .1 Submittals: in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit written request in advance of cutting or alteration which affects:
 - .1 Structural integrity of elements of project.
 - .2 Integrity of weather-exposed or moisture-resistant elements.
 - .3 Efficiency, maintenance, or safety of operational elements.
 - .4 Visual qualities of sight-exposed elements.
 - .5 Work of Owner or separate contractor.
- .3 Include in request:
 - .1 Identification of project.
 - .2 Location and description of affected Work.
 - .3 Statement on necessity for cutting or alteration.
 - .4 Description of proposed Work, and products to be used.
 - .5 Alternatives to cutting and patching.
 - .6 Effect on Work of Owner or separate contractor.
 - .7 Written permission of affected separate contractor.
 - .8 Date and time work will be executed.

1.2 MATERIALS

- .1 Required for original installation.
- .2 Change in Materials: Submit request for substitution in accordance with Section 01 33 00 - Submittal Procedures.

1.3 PREPARATION

- .1 Inspect existing conditions, including elements subject to damage or movement during cutting and patching.
 - .2 After uncovering, inspect conditions affecting performance of Work.
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|------------------------------------|----|--|
| <u>1.3 PREPARATION</u>
(Cont'd) | .3 | Beginning of cutting or patching means acceptance of existing conditions. |
| | .4 | Provide supports to assure structural integrity of surroundings; provide devices and methods to protect other portions of project from damage. |

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| <u>1.4 EXECUTION</u> | .1 | Execute cutting, fitting, and patching including excavation and fill, to complete Work. |
| | .2 | Fit several parts together, to integrate with other Work. |
| | .3 | Uncover Work to install ill-timed Work. |
| | .4 | Remove and replace defective and non-conforming Work. |
| | .5 | Restore work with new products in accordance with requirements of Contract Documents. |

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| <u>1.5 WASTE
MANAGEMENT AND
DISPOSAL</u> | .1 | Separate waste materials for reuse and recycling. |
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PART 2 - PRODUCTS

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| <u>2.1 NOT USED</u> | .1 | Not Used. |
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PART 3 - EXECUTION

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| <u>3.1 NOT USED</u> | .1 | Not Used. |
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PART 1 - GENERAL

1.1 PROJECT
CLEANLINESS

- .1 Maintain Work in tidy condition, free from accumulation of waste products and debris, including other than that caused by Owner or other Contractors.
- .2 Remove waste materials from site at daily regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site, unless approved by Departmental Representative.
- .3 Clear snow and ice from access to building, bank/pile snow in designated areas only remove from site.
- .4 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .5 Provide on-site dump containers for collection of waste materials and debris.
- .6 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .7 Provide adequate ventilation during use of volatile or noxious substances.
- .8 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.

1.2 FINAL CLEANING

- .1 When Work is Substantially Performed remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
 - .2 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.
 - .3 Prior to final review remove surplus products, tools, construction machinery and equipment.
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| <u>1.2 FINAL CLEANING</u>
(Cont'd) | .4 | Remove waste products and debris other than including that caused by Owner or other Contractors. |
| | .5 | Remove waste materials from site at regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site, unless approved by Departmental Representative. |
| | .6 | Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris. |
| | .7 | Sweep and wash clean paved areas. |

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| <u>1.3 WASTE
MANAGEMENT AND
DISPOSAL</u> | .1 | Separate waste materials for reuse and recycling. |
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PART 2 - PRODUCTS

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|---------------------|----|-----------|
| <u>2.1 NOT USED</u> | .1 | Not Used. |
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PART 3 - EXECUTION

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| <u>3.1 NOT USED</u> | .1 | Not Used. |
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PART 1 - GENERAL

- 1.1 REFERENCES .1 Canadian Environmental Protection Act (CEPA)
.1 SOR/2008-197, Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations.
- 1.2 ADMINISTRATIVE REQUIREMENTS .1 Acceptance of Work Procedures:
.1 Contractor's Inspection: Conduct inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
.1 Notify Departmental Representative in writing of satisfactory completion of Contractor's inspection and submit verification that corrections have been made.
.2 Request Departmental Representative inspection.
.2 Departmental Representative Inspection:
.1 Departmental Representative and Contractor to inspect Work and identify defects and deficiencies.
.2 Contractor to correct Work as directed.
.3 Completion Tasks: submit written certificates in English that tasks have been performed as follows:
.1 Work: completed and inspected for compliance with Contract Documents.
.2 Defects: corrected and deficiencies completed.
.3 Equipment and systems: tested, adjusted and balanced and fully operational.
.4 Operation of systems: demonstrated to Owner's personnel.
.5 Work: complete and ready for final inspection.
.4 Final Inspection:
.1 When completion tasks are done, request final inspection of Work by Departmental Representative, and Contractor.
-

PART 1 - GENERAL

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|--|----|---|
| <u>1.1 REFERENCES</u> | .1 | Canadian Environmental Protection Act (CEPA)
.1 SOR/2008-197, Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations. |
| <u>1.2 ADMINISTRATIVE REQUIREMENTS</u> | .1 | Pre-warranty Meeting:
.1 Convene meeting one week prior to contract completion with contractor's representative and Departmental Representative, in accordance with Section 01 31 19 - Project Meetings to:
.1 Verify Project requirements.
.2 Review manufacturer's installation instructions and warranty requirements.
.2 Departmental Representative to establish communication procedures for:
.1 Notifying construction warranty defects.
.2 Determine priorities for type of defects.
.3 Determine reasonable response time.
.3 Contact information for bonded and licensed company for warranty work action: provide name, telephone number and address of company authorized for construction warranty work action.
.4 Ensure contact is located within local service area of warranted construction, is continuously available, and is responsive to inquiries for warranty work action. |
| <u>1.3 ACTION AND INFORMATIONAL SUBMITTALS</u> | .1 | Provide submittals in accordance with Section 01 33 00 - Submittal Procedures. |
| | .2 | Two weeks prior to Substantial Performance of the Work, submit to the Departmental Representative, four final copies of operating and maintenance manuals in English. |
| | .3 | Provide spare parts, maintenance materials and special tools of same quality and manufacture as products provided in Work. |
-

1.3 ACTION AND
INFORMATIONAL
SUBMITTALS
(Cont'd)

- .4 Provide evidence, if requested, for type, source and quality of products supplied.

1.4 FORMAT

- .1 Organize data as instructional manual.
- .2 Binders: vinyl, hard covered, 3 'D' ring, loose leaf 219 x 279 mm with spine and face pockets.
- .3 When multiple binders are used correlate data into related consistent groupings.
.1 Identify contents of each binder on spine.
- .4 Cover: identify each binder with type or printed title 'Project Record Documents'; list title of project and identify subject matter of contents.
- .5 Arrange content by systems, process flow, under Section numbers and sequence of Table of Contents.
- .6 Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
- .7 Text: manufacturer's printed data, or typewritten data.
- .8 Drawings: provide with reinforced punched binder tab.
.1 Bind in with text; fold larger drawings to size of text pages.
- .9 Provide all closeout submittal documents in PDF format as well.

1.5 CONTENTS -
PROJECT RECORD
DOCUMENTS

- .1 Table of Contents for Each Volume: provide title of project;
.1 Date of submission; names.
.2 Addresses, and telephone numbers of Consultant and Contractor Design-Builder with name of responsible parties.
-

- 1.5 CONTENTS -
PROJECT RECORD
DOCUMENTS
(Cont'd)
- .1 (Cont'd)
 - .3 Schedule of products and systems, indexed to content of volume.
 - .2 For each product or system:
 - .1 List names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.
 - .3 Product Data: mark each sheet to identify specific products and component parts, and data applicable to installation; delete inapplicable information.
 - .4 Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.
 - .5 Typewritten Text: as required to supplement product data.
 - .1 Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions specified in Section 01 45 00 - Quality Control.
 - .6 Training: refer to Section 01 79 00 - Demonstration and Training.
- 1.6 AS -BUILT
DOCUMENTS AND
SAMPLES
- .1 Maintain, in addition to requirements in General Conditions, at site for Departmental Representative one record copy of:
 - .1 Contract Drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Change Orders and other modifications to Contract.
 - .5 Reviewed shop drawings, product data, and samples.
 - .6 Field test records.
 - .7 Inspection certificates.
 - .8 Manufacturer's certificates.
 - .2 Store record documents and samples in field office apart from documents used for construction.
 - .1 Provide files, racks, and secure storage.
-

1.6 AS -BUILT
DOCUMENTS AND
SAMPLES

(Cont'd)

- .3 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual.
 - .1 Label each document "PROJECT RECORD" in neat, large, printed letters.
- .4 Maintain record documents in clean, dry and legible condition.
 - .1 Do not use record documents for construction purposes.
- .5 Keep record documents and samples available for inspection by Departmental Representative.

1.7 RECORDING
INFORMATION ON
PROJECT RECORD
DOCUMENTS

- .1 Record information on set of black line opaque drawings, and in copy of Project O&M Manual.
- .2 Use felt tip marking pens, maintainingUse felt tip marking pens, maintaining separate colours for each major system, for recording information.
- .3 Record information concurrently with construction progress.
 - .1 Do not conceal Work until required information is recorded.
- .4 Contract Drawings and shop drawings: mark each item to record actual construction.
 - .1 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - .2 Field changes of dimension and detail.
 - .3 Changes made by change orders.
 - .4 Details not on original Contract Drawings.
 - .5 References to related shop drawings and modifications.
- .5 Specifications: mark each item to record actual construction, including:
 - .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly optional items and substitute items.
 - .2 Changes made by Addenda and change orders.

1.7 RECORDING
INFORMATION ON
PROJECT RECORD
DOCUMENTS

(Cont'd)

- .6 Other Documents: maintain manufacturer's certifications, inspection certifications, field test records, required by individual specifications sections.
- .7 Provide digital photos, if requested, for site records.
- .8 The Consultant is not responsible for confirming As-Built conditions.

1.8 FINAL SURVEY

- .1 Submit final site survey certificate in accordance with Section 01 71 00 - Examination and Preparation, certifying that elevations and locations of completed Work are in conformance, or non-conformance with Contract Documents.

1.9 EQUIPMENT AND
SYSTEMS

- .1 For each item of equipment and each system include description of unit or system, and component parts.
 - .1 Give function, normal operation characteristics and limiting conditions.
 - .2 Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.
 - .2 Panel board circuit directories: provide electrical service characteristics, controls, and communications.
 - .3 Include installed colour coded wiring diagrams.
 - .4 Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences.
 - .1 Include regulation, control, stopping, shut-down, and emergency instructions.
 - .2 Include summer, winter, and any special operating instructions.
-

1.9 EQUIPMENT AND
SYSTEMS
(Cont'd)

- .5 Maintenance Requirements: include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- .6 Provide servicing and lubrication schedule, and list of lubricants required.
- .7 Include manufacturer's printed operation and maintenance instructions.
- .8 Include sequence of operation by controls manufacturer.
- .9 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- .10 Provide installed control diagrams by controls manufacturer.
- .11 Provide Contractor's co-ordination drawings, with installed colour coded piping diagrams.
- .12 Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

1.10 MATERIALS AND
FINISHES

- .1 Building products, applied materials, and finishes: include product data, with catalogue number, size, composition, and colour and texture designations.
.1 Provide information for re-ordering custom manufactured products.
 - .2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
 - .3 Moisture-protection and weather-exposed products: include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
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| 1.10 MATERIALS AND FINISHES
<u>(Cont'd)</u> | .4 | Additional requirements: as specified in individual specifications sections. |
| 1.11 MAINTENANCE MATERIALS
<u></u> | .1 | Spare Parts:
.1 Provide spare parts, in quantities specified in individual specification sections.
.2 Provide items of same manufacture and quality as items in Work.
.3 Deliver to site location as directed; place and store.
.4 Receive and catalogue items.
.1 Submit inventory listing to Departmental Representative.
.2 Include approved listings in Maintenance Manual.
.5 Obtain receipt for delivered products and submit prior to final payment. |
| | .2 | Extra Stock Materials:
.1 Provide maintenance and extra materials, in quantities specified in individual specification sections.
.2 Provide items of same manufacture and quality as items in Work.
.3 Deliver to site location as directed; place and store.
.4 Receive and catalogue items.
.1 Submit inventory listing to Departmental Representative.
.2 Include approved listings in Maintenance Manual.
.5 Obtain receipt for delivered products and submit prior to final payment. |
| 1.12 DELIVERY, STORAGE AND HANDLING
<u></u> | .1 | Store spare parts, maintenance materials, and special tools in manner to prevent damage or deterioration. |
| | .2 | Store in original and undamaged condition with manufacturer's seal and labels intact. |
| | .3 | Store components subject to damage from weather in weatherproof enclosures. |
-

1.12 DELIVERY,
STORAGE AND
HANDLING
(Cont'd)

- .4 Remove and replace damaged products at own expense and for review by Departmental Representative.

1.13 WARRANTIES AND
BONDS

- .1 Develop warranty management plan to contain information relevant to Warranties.
 - .2 Submit warranty management plan, 30 days before planned pre-warranty conference, to Departmental Representative approval.
 - .3 Warranty management plan to include required actions and documents to assure that Departmental Representative receives warranties to which it is entitled.
 - .4 Provide plan in narrative form and contain sufficient detail to make it suitable for use by future maintenance and repair personnel.
 - .5 Submit, warranty information made available during construction phase, to Departmental Representative for approval prior to each monthly pay estimate.
 - .6 Assemble approved information in binder, submit upon acceptance of work and organize binder as follows:
 - .1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.
 - .2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.
 - .3 Obtain warranties and bonds, executed in duplicate by subcontractors, suppliers, and manufacturers, within ten days after completion of applicable item of work.
 - .4 Verify that documents are in proper form, contain full information, and are notarized.
 - .5 Co-execute submittals when required.
 - .6 Retain warranties and bonds until time specified for submittal.
 - .7 Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial Performance is determined.
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1.13 WARRANTIES AND
BONDS
(Cont'd)

- .8 Conduct joint 1 year warranty inspection, measured from time of acceptance, by Departmental Representative.
- .9 Include information contained in warranty management plan as follows:
 - .1 Roles and responsibilities of personnel associated with warranty process, including points of contact and telephone numbers within the organizations of Contractors, subcontractors, manufacturers or suppliers involved.
 - .2 Listing and status of delivery of Certificates of Warranty for extended warranty items, motors, and gate operators.
 - .3 Provide list for each warranted equipment, item, feature of construction or system indicating:
 - .1 Name of item.
 - .2 Model and serial numbers.
 - .3 Location where installed.
 - .4 Name and phone numbers of manufacturers or suppliers.
 - .5 Names, addresses and telephone numbers of sources of spare parts.
 - .6 Warranties and terms of warranty: include one-year overall warranty of construction. Indicate items that have extended warranties and show separate warranty expiration dates.
 - .7 Cross-reference to warranty certificates as applicable.
 - .8 Starting point and duration of warranty period.
 - .9 Summary of maintenance procedures required to continue warranty in force.
 - .10 Cross-Reference to specific pertinent Operation and Maintenance manuals.
 - .11 Organization, names and phone numbers of persons to call for warranty service.
 - .12 Typical response time and repair time expected for various warranted equipment.
 - .4 Contractor's plans for attendance at 1 year post-construction warranty inspections.
 - .5 Procedure and status of tagging of equipment covered by extended warranties.

1.13 WARRANTIES AND BONDS (Cont'd)

.9 (Cont'd)

.6 Post copies of instructions near selected pieces of equipment where operation is critical for warranty and/or safety reasons.

.10 Respond in timely manner to oral or written notification of required construction warranty repair work.

.11 Written verification to follow oral instructions.

.1 Failure to respond will be cause for the Departmental Representative to proceed with action against Contractor.

1.14 WARRANTY TAGS

.1 Tag, at time of installation, each warranted item. Provide durable, oil and water resistant tag approved by Departmental Representative.

.2 Attach tags with copper wire and spray with waterproof silicone coating.

.3 Leave date of acceptance until project is accepted for occupancy.

.4 Indicate following information on tag:

.1 Type of product/material.

.2 Model number.

.3 Serial number.

.4 Contract number.

.5 Warranty period.

.6 Inspector's signature.

.7 Construction Contractor.

PART 2 - PRODUCTS

2.1 NOT USED .1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED .1 Not Used.

PART 1- GENERAL

1.1 ADMINISTRATIVE
REQUIREMENTS

- .1 Demonstrate scheduled operation and maintenance of equipment and systems to Owner's personnel two weeks prior to date of substantial performance.
- .2 Owner: provide list of personnel to receive instructions, and co-ordinate their attendance at agreed-upon times.
- .3 Preparation:
 - .1 Verify conditions for demonstration and instructions comply with requirements.
 - .2 Verify designated personnel are present.
 - .3 Ensure equipment has been inspected and put into operation in accordance with Section.
 - .4 Ensure testing, adjusting, and balancing has been performed and equipment and systems are fully operational.
- .4 Demonstration and Instructions:
 - .1 Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, and maintenance of each item of equipment at scheduled agreed upon times, at the equipment designated location.
 - .2 Instruct personnel in phases of operation and maintenance using operation and maintenance manuals as basis of instruction.
 - .3 Review contents of manual in detail to explain aspects of operation and maintenance.
 - .4 Prepare and insert additional data in operations and maintenance manuals when needed during instructions.
- .5 Time Allocated for Instructions: ensure amount of time required for instruction of each item of equipment or system.

1.2 ACTION AND
INFORMATIONAL
SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit schedule of time and date for demonstration of each item of equipment and each system two weeks prior to designated dates, for Departmental Representative's approval.
- .3 Submit reports within one week after completion of demonstration, that demonstration and instructions have been satisfactorily completed.
- .4 Give time and date of each demonstration, with list of persons present.
- .5 Provide copies of completed operation and maintenance manuals for use in demonstrations and instructions.

1.3 QUALITY
ASSURANCE

- .1 When specified in individual Sections requiring manufacturer to provide authorized representative to demonstrate operation of equipment and systems:
 - .1 Instruct Owner's personnel.
 - .2 Provide written report that demonstration and instructions have been completed.

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not Used.

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FENCE REHABILITATION	TRAINING	Page 3
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PART 3 - EXECUTION

3.1 NOT USED .1 Not Used.

————— END OF SECTION —————