

Date: March 11th 2011

RE: City of Duluth Bid #10-4401 (New Passenger Terminal Bid Package 2A)

Addendum No. 6

TO: Prospective Bidders

This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated February 3, 2011. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

1.0 PROJECT MANUAL

Section 347716 – Baggage Handling System

- Paragraph B under Article 1.04 shall be revised to state:
 - B. System Description
 - 1. The Baggage Handling System (BHS) to be provided is illustrated on the accompanying Drawing Package (Ref. Drawing Number BG.001 for a complete listing of drawings).
 - 2. Ticket Counter Subsystems: TC1-1 through TC1-7
 - a. A single ticket counter will be installed to transport all baggage from the ticketing area to the CBIS area. All bags inducted at the ticket counter will be read by a baggage measuring array located on the TC1-5 queue belt as they enter the CBIS area. All in gauge bags will be diverted to an open screening line (SS1 or SS2) which feed one of two (2) inline CT-80DR screening devices. All bags that exceed the allowable dimensions of the CT-80DR (as determined by the measuring array) will bypass both screening line diverters (SS1-DV and SS2-DV) and be transported to the out of gauge screening area.
 - 3. Out of Gauge Subsystem: **OG1-1 through OG1-2**
 - a. All bags determined to exceed the size parameters set by Revel (CT-80DR) will be transported to the out of gauge screening area. A head and tail end photocell will be provided on the OG1-2 conveyor to provide indexing functionality with the ability to queue multiple out of gauge bags. An ADVANCE pushbutton control will be provided at the adjacent control station near the OOG ETD table to call a staged bag to the discharge end of the conveyor where it will trigger the head end "stop" photocell for TSA to safely transfer the out of gauge bag down an adjacent transfer slide onto the ETD screening table. A second transfer slide will be affixed to the table to allow a no-lift transfer of the bag to the outbound make-up once it has been screened.
 - 4. CBIS Operation: SS1-1 through SS1-7 and SS2-1 through SS2-7
 - a. The CBIS consists of two (2) inline CT-80DR screening devices with a designed throughput of 180 bags per hour. The system will feed bags to the

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CT-80DR devices in a round robin and first available mode depending on the baggage demand input into the system. Each SS subsystem upstream of the CT-80DR has the ability to queue three (3) bags during the peak processing duration to buffer surged demand.

- b. Each SS screening line has two (2) Level 3 ETD station adjacent to an alarmed bag removal conveyor. Both CT-80DRs will be networked to a single BVS (Baggage Viewing Station) to review Level 2 alarmed bag images. Each ETD workstation will have a dedicated RRS (Remote Resolution Station) that will display the alarmed bag image during the Level 3 screening. Each ETD removal queue conveyor will have two baggage status displays (BSDs); one per each adjacent ETD station.
- c. All cleared Level 3 bags from the SS1 ETD area will be re-inserted downstream of the ETD removal queue on gravity roller conveyor onto the CB1-2 conveyor. All Cleared Level 3 bags from the SS2 ETD area will be manually transported directly to the make-up device by gravity roller conveyor.
- 5. Oversize Transport Subsystem: **OS1-1 through OS1-3**
- a. An oversize transport conveyor will be installed to provide transportation of oversize items to the oversize screening area just west of the CBIS. Typically these bags will be too long or misshapen to effectively be processed through the CBIS conveyor system or the EDS devices. An over length and over height photocell will be installed at the discharge end of the ticketing conveyor prior to entering the CBIS to measure any bags that are too long to be transported by the conveyor system. The last conveyor on the OS line will be provided with indexing functionality to allow the system to stage multiple oversize bags for screening.
- b. The BHSC is to provide hinged gravity roller sections to allow a no-lift transfer of the oversize bags to the ETD screening table. An additional gravity roller conveyor is provided to transfer the screened bag from the table to the oversize chute where screened bags will be staged until picked up by the respective airline.
- c. A photocell shall be installed on the unload side of the chute; when blocked shall trigger an amber light to be installed in the tugway visible to all user airlines making up flights to alert airline personnel to pick up an oversize bag.
- 6. Flat Plate Make-Up : **MU1**
- a. A new 194 linear ft. flat plate make-up device will be installed to circulate all cleared checked bags from airlines to make-up flights in process.
- 7. Inbound OS and Outbound Recheck conveyor: RC/OS1-1 through RC/OS1-3
- a. A new straight subsystem will be provided to transport all inbound oversize baggage near the claim hall from the ramp. These conveyors will be reversible to also allow for the transport of rechecked baggage from the FIS facilities out to airside. RCOS1-01 and RCOS1-03 will be provided with indexing functionality. An overheight photocell will be installed at the discharge end of load conveyors.

• Paragraph C under Article 1.04 shall be revised to state:

C. New System Requirements

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- 1. Ticketing Conveyors: New ticket counter conveyors as shown in the contract drawings with stainless steel to transport bags to the CBIS area just north of the ticketing lobby. The BHSC is to provide all stainless steel back guarding and fill between the conveyor and the adjacent wall.
- 2. Pre-EDS Transport Conveyors: New conveyors with related components for transport and queuing outbound baggage to the two (2) Level 1 Reveal CT-80DR EDS machines located in the CBIS area.
- 3. Diverters: New High Speed Diverters for sortation, load balancing and redundancy on the input lines to the CT-80DR screening devices.
- 4. EDS Installation: Provision for the transport and rigging of two (2) EDS machines to their permanent location located on BHS Contractor supplied CT-80DR elevating pads for Level 1 screening of Outbound bags, with associated input / output conveyors and all required interfaces between the BHS and EDS. The uncrating, leveling, calibration and final installation of the EDS machines in their permanent locations is NIC.
- 5. EDS Integration: Integration of the two (2) CT-80DRs with the BHS system controls.
- 6. Alarm Bag Removal Conveyor BSDs: Provide two 15" BSD HMIs installed above the removal conveyor of each SS screening line.
- 7. CBRA Printers: Provide two (2) Dymo type thermal tag printer to be installed adjacent to each alarm bag removal queue conveyor.
- 8. Post-EDS Conveyors: Conveyors as required for transport and queuing of suspect/alarmed bags from the Level 2 processing conveyor lines to the Level 3 ETD area.
- Post-ETD Gravity Roller Conveyors: Non-powered gravity roller conveyor between the Level 3 ETD inspection tables (staffed by TSA) to provide return transport of cleared bags to the clear bag take-away conveyor and the outbound make-up device.
- 10. Reversible Inbound OS/Recheck Conveyor: Conveyors with appropriate reverse functionality, to provide a method for domestic inbound oversize bags to be transported from airside to landside and to transport any international outbound recheck baggage from the DLH re-check screening to the airside.
- 11. CT-80DR Image Quality Test Locations: Provide conveyors immediately upstream of the CT-80DRs with 2" high sideguards to assist TSA personnel in performing Image Quality Testing of the CT-80DR machines.
- 12. Removable Conveyors: The conveyor sections located at the input/output ends of the EDS machines, and the conveyors in the immediate EDS removal path detailed on drawing sheet B6102 shall be designed with "quick-disconnect" type electrical connections, and installed on lockable casters to aid in the removal of conveyor segments/components in the event of CT-80DR machine replacement.
- 13. Control Systems: New control systems shall be provided, including MCPs, PLCs, and BHS Computer Servers, workstations and all required communication cabling, networking and component wiring as required, to accommodate the specified functionality.
- 14. Fire/Security Doors: Provide, install and integrate all BHS fire/security doors as

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illustrated on the contract drawings. Also, provide and install all draft curtains at all new fire/security door locations.

- 15. Maintenance and TSA Access Platforms: Provide and install all BHS related maintenance platforms, ladders and cross-overs as illustrated in the contract drawings. Ensure all access ladders, platform widths, and stair rise is OSHA compliant and per code for the occupancy and typical access throughout the CBIS.
- 16. New Mini In-Line EDS and ETD Equipment Installation
 - a. Coordinate with the TSA's Contractor during the site planning and layout, phased implementation, required testing (i.e., SAT and ISAT) and all interface requirements between the security screening equipment (i.e., EDS Level 1 machines, Level 2 workstations and ETD stations) and the BHS for all of the conveyor lines as they relate to this project.
 - b. The new EDS and ETD equipment, which will be provided by the TSA, shall be installed (e.g., EDS internal system wiring, networking and related controls) at their permanent location by the TSA's contractor.
- 17. Provide additional components, equipment and systems as required and specified to fulfill the scope of work as described herein.
- Paragraph D.1.a under Article 1.04 shall be revised to state:
 - a. Allowance 1: \$50,000 to purchase from the estimated spare parts list developed by the BHSC for review by DLH.
- Paragraph E.2.b under Article 1.09 shall be revised to state: "removal queue conveyor" where it reads "removal/reinsert queue conveyor".
- Paragraph R.4.d under Article 1.09 shall be revised to state "at the CBRA removal conveyor" where it reads "at the CBRA removal/reinsert conveyor"
- Paragraph A under Article 2.01 shall be revised to state:
 - A. BHS Contractors
 - 1. Subject to compliance with requirements, the following firms are qualified to perform as BHS Contractors for this Project:
 - a. Automatic Systems, Inc., Kansas City, MO
 - b. Diversified Conveyors, Inc., Memphis, TN
 - c. Equipment Erectors, Inc., Somerset, NJ
 - d. G & T Conveyor Company, Inc., Tavares, FL
 - e. Glidepath LLC, Grand Prairie, TX
 - f. Jervis B. Webb, Inc., Farmington Hills, MI
 - g. Logan Teleflex, Inc., Louisville, KY
 - h. Pteris Global (USA), Inc., Littleton, CO
 - i. Siemens Airport Logistics, DFW Airport, TX
 - j. The Horsley Company, Ogden, UT
 - k. Vanderlande Industries, Inc., Marietta, GA

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• New Paragraph C under Article 2.01 shall be added to state:

- C. BHS Controls Subcontractors
 - 2. Subject to compliance with requirements, the following firms qualified to perform as BHS control subcontractors for this project include, but are not limited to the following:
 - a. Alliant Technologies, Louisville, KY
 - b. Brock Solutions, Kitchener, ON
 - c. Control Touch Systems, Louisville, KY
 - d. G & T Conveyor Company, Inc., Tavares, FL
 - e. Glidepath LLC, Grand Prairie, TX
 - f. Jervis B. Webb, Inc., Farmington Hills, MI
 - g. Pteris Global (USA), Inc., Littleton, CO
 - h. Siemens Airport Logistics, DFW Airport, TX
 - i. The Horsley Company, Ogden, UT
- Paragraph C "BHS Equipment" under Article 2.01 shall be revised to show paragraph D "BHS Equipment".
- **Paragraph D.2.i)** "For Flat Plate Make-Up Devices" **under Article 2.01** "BHS Equipment" **shall be revised to include** "Glidepath LLC".
- **Paragraph D.2.j)** "For High Speed Vertical Paddle Diverters" **under Article 2.01** "BHS Equipment" **shall be revised to include** "Vanderlande Industries, Inc.".
- New paragraph D.2.k shall be added under Article 2.01 to state:
 - k. For 45 Degree Merges:
 - 1.) G&T Conveyor Company.
 - 2.) Jervis B. Webb, Inc.
 - 3.) Siemens Airport Logistics
 - 4.) Transnorm Systems
- New paragraph C.2.b shall be added under Article 2.07 to state:
 - b. Coordinate with Reveal to provide the lowest allowable exit belt speed to gain the maximum amount of OSR travel time prior to the alarm bag removal conveyor. Ensure the belt speed changes do not impede tracking accuracy of the system.
- Paragraph C.2.b under Article 2.07 shall change to C.2.c.
- Paragraph I under Article 2.08 shall be revised to state:
 - I. Non Powered Portable Gravity Roller Bed Conveyor
 - 3. The following locations will require gravity roller conveyors to be installed by the BHS Contractor:
 - a. Provide a 42" width hinged gravity roller section as illustrated in the Contract Documents to assist in the transportation of oversize bags from the oversize

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bag removal belt onto the oversize screening table.

- b. Provide a 30" fixed section of non-hinged gravity roller conveyor to aid in the transfer of the oversize bags from the screening table to the oversize chute.
- c. Provide a 30" fixed section of non-hinged to span the width of the ETD screening tables along the SS1 screening line (ETD station 1 and 2). Provide a 30" width hinged section to bridge the gap between the adjacent table section and the clear bag take-away conveyor. Ensure the hinged portion allows for 3' of clearance for TSA to access their working zone.
- d. Provide a 30" fixed section of hinged roller conveyor to transport bags from the south ETD station along the SS2 screening line. Ensure the hinged portion allows for 3' of clearance for maintenance access to the conveyors.
- e. Provide a 30" fixed section of hinged roller conveyor to transport bags from the north ETD station along the SS2 screening line. Ensure the hinged portion allows for 3' of clearance for maintenance access to the conveyors.
- 4. Construct the gravity roller bed sections using 3-1/2" inch steel channel. Cross bracing shall be 1-1/2" angle stiffeners welded to the underside of the bed at a maximum center distance of 2' 3'.
- 5. Provide 1.9" diameter spring loaded return idler rollers equipped with hex shafts to be located on 2" centers. Idler rollers shall be equipped with sealed, permanently lubricated, caged, semi precision type ball bearings.
- 6. Ensure all hinged gravity roller gates are spring loaded and have adequate handles on both sides of the gate to assist in lifting the hinged section.
- 7. Ensure all gates have safety latches to allow the locking of the gate in the fixed up position.
- Paragraph J "Non Powered Ball Transfer Tables" under Article 2.08 shall be deleted.
- Paragraph A.1 under Article 2.13 shall be revised to state:
 - 1. There shall be a control room located between gridline 7 and 8 as shown in reference drawing B2102 that houses one BHS workstation, the BHS Sortation Control Servers, Reveal Multipexing Control Computer and the Field Data Reporting Computer. These consoles shall be designed to reduce worker's fatigue.
- Paragraph A.3 under Article 2.14 shall be revised to state:
 - 3. The design philosophy adopted for the control system is one of hierarchical control. Centralized supervisory and maintenance control shall be accomplished by a single client MDS/MIS workstation computer and a fully redundant BHS server. All the DAA's outbound conveyor subsystems shall be controlled by centralized programmable logic controllers (PLCs) with Hot Back-up for redundancy purposes. De-centralized programmable logic controllers shall control all inbound subsystems. The outbound and inbound system status will be monitored by the MDS workstation.
- Paragraph A.4 under Article 2.14 shall be revised to state:
 - 4. Baggage tracking shall start at the BDD and end after the failsafe photocell at the queue conveyor downstream of the TSA removal queue conveyor.
- Paragraph A.9 under Article 2.14 shall be revised to state:

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9. Control System Elements

- a. The control system (comprised of the High Level Controls and Low Level Controls) shall comprise (as a minimum) the following elements:
 - 1.) BHS Server Computer which allow for the following functions:
 - a.) Automatic switching to a "hot back up" fully redundant server.
 - b.) Collect and store data from the field PLCs to include in reports and status displays at the BHS MDS/MIS workstation.
 - c.) Software program(s) as required to accomplish the functions specified herein.
 - 2.) BHS workstation which allow for the following functions:
 - a.) Software program(s) as required to accomplish the functions specified herein.
 - b.) Keyboard units for command and data input to the sortation BHS control system.
 - c.) Video Display Units (VDU) for data output.
 - d.) High-speed line and laser printers.
 - e.) Laser Printer for reports
 - f.) Communication modems.
 - g.) Transfer switches/interface modules/selector switches.
 - 3.) Communications highways
 - 4.) Local Area Networks (LANs)
 - 5.) VPN capabilities for the DAA to access all reports, and maintenance information remotely.
- b. The new control system shall comprise (as a minimum) the following elements which are considered to be a part of the Low Level Network:
 - 1.) Subsystem MCPs
 - 2.) Programmable Logic Controllers (PLCs), which control the BHS by communicating with the device, level equipment (photocells, motor starters, encoders, etc.)
 - 3.) Remote I/O located in the subsystem MCPs grouped by mainline.
- New Paragraph A.14.a under Article 2.14 shall be added to state:
 - a. Supply and install all Baggage Handling Control Room and Control System hardware. This includes control consoles and mounting structures for the monitors, CPUs and ancillary hardware.
- Paragraph B.1.d under Article 2.14 shall be revised to state: "The <u>BHS Server</u> <u>Computers</u>" where it reads "BHS Computers"
- Paragraph B.1.e under Article 2.14 shall be revised to state: "The <u>BHS Server</u> <u>Computers</u>" where it reads "BHS Computer
- Paragraph B.2.h under Article 2.14 shall be deleted.

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- Paragraph title B.3 under Article 2.14 shall be revised to state: "BHS Server and MDS Workstation Computers"
- **Paragraph B.3.b under Article 2.14 shall be revised to state:** "BHS/MDS Computer" where it reads "sortation control system"
- Paragraph B.3.e under Article 2.14 shall be revised to state:
 - e. The following applications, as a minimum, shall have their own redundant set of servers:
 - 1) BHS Server Computer
- Paragraph B.3.f under Article 2.14 shall be revised to state:
 - f. The servers shall be located in the baggage control room (BCR). These servers form a redundant arrangement with direct link data communication through the redundant arrangement such as Marathon with a heartbeat connection. Each set of servers keep identical data so that in the event of a server failure, all data for operations are already resident and up to date with virtually no break except for time required for re-configuration. Failure of either main or backup server shall initiate a critical alarm (consisting of an audible alarm at the Workstation and text/visual alarm annunciated on the Workstation).
- Paragraph title B.3.i.3) under Article 2.14 shall be revised to state:
 - 3.) Monitor: One –(1) 15" Flat Panel LCD Monitors
- **Paragraph B.4.f under Article 2.14 shall be revised to state:** "The Workstation computer" where it reads "The MDS computer"
- Paragraphs B.6.d.3).f) and B.6.d.3).g) under Article 2.14 shall be deleted.
- **Paragraph B.6.d.5).a).(1) under Article 2.14 shall be revised to state:** "the BHS Servers," where it reads "the sortation controller(s)"
- Paragraph B.6.d.5).a).(6) under Article 2.14 shall be deleted.
- Paragraph B.6.d.8).d) under Article 2.14 shall be revised to add a new subparagraph that shall state: "EDS Communication Failure"
- Paragraph D.2 under Article 2.14 shall be deleted.
- Paragraph E.10 under Article 2.14 "and oddsize" shall be deleted.
- Paragraph H.3.I.1) under Article 2.14 shall be revised to read "communication cable" where it reads "optic fiber cable".
- Paragraph I under Article 2.14 shall be revised to state "Maintenance Diagnostic System (MDS) Application"
- Paragraph I.4.e.1) under Article 2.14 shall be revised to state:
 - 1.) The BHS Contractor shall provide as a minimum, 2 wall mounted "flat screen" video monitors, one will be installed in the BHS control room, the other to be installed in an area visible to the CBRA Operations. Coordinate with local TSA and the DAA for installation location of the CBRA system display. The size of each screen shall be 40-inch minimum (measured diagonally) and will be adequate to ensure

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legibility of screen contents from all viewing locations within the control room. The monitors can be either burn-in resistant LCD or Plasma with burn-in protection. The monitors shall display in real time, dynamic pictorial format, the operational status of the conveyors for the entire Duluth Outbound, and Inbound Baggage Handling Systems (no zoom capability).

- Paragraph I.9.p under Article 2.14 shall be revised to state: "A system Upset Condition is defined for use in evaluation of <u>BHS</u> computer performance" where it reads "A system Upset Condition is defined for use in evaluation of sort computer performance".
- **Paragraph I.9.s under Article 2.14 shall be revised to state:** "The <u>BHS</u> computers must correctly follow the calendar date. The date keeping function shall incorporate leap year dates." where it reads "The sort computers must correctly follow the calendar date. The date keeping function shall incorporate leap year dates".
- Paragraph title J. under Article 2.14 shall be revised to state: "Maintenance Information System (MIS) Application".
- Paragraph J.3 under Article 2.14 shall be revised to state in the last table row and column: "Access to all TSA only operational modes and all SSI reports".
- Paragraph J.9 under Article 2.14 shall be deleted.
- Paragraph J.14 under Article 2.14 shall be deleted.
- Paragraph J.15.i.11) under Article 2.14 shall be revised to reflect the deletion of : "(if available to the BHS)"
- Paragraph J.15.i.12) under Article 2.14 shall be revised to reflect the deletion of : "(if available to the BHS)"
- Paragraph K.1.b under Article 2.14 shall be deleted.
- Paragraph B.1 under Article 3.06 shall be revised to add new subparagraph B.1.i: "CBRA alarm bag control on the removal queue conveyor"
- Paragraph B.6 under Article 3.06 shall be revised to state:
 - 6. Over-Height Detection
 - a. Provide over-height detection photocells at every baggage input to the system (both inbound and outbound) to detect bags that are too high to clear the lowest downstream obstruction for all possible routes. This photocell shall be set at 36" above the top of the conveyor belt unless otherwise stated.
 - b. As soon as the photocell is interrupted, stop the conveyor.
 - c. Provide jam indication signal at the MDS, and MCP Touch Screen Terminals.
 - d. Provide an oversize indicator lamp in the <u>adjacent</u> control station; this lamp may be the same unit as that for over-length detection. Illuminate the oversize indicator lamp in the control station if an over-height bag is detected.
 - e. Program the over-height circuit to require the following sequence to reset:
 - 1.) Actuate associated E-stop
 - 2.) Clear the photocell by removing or re-positioning the over-height bag, the

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oversize indicator lamp shall extinguish once the over height PE becomes unblocked.

- 3.) Press the start push-button.
- 4.) Clear the fault on the MDS, and MCP Touch Screen Terminal.
- Paragraph B.8.a.4) and B8.a.5) under Article 3.06 shall be revised to state:
 - 4.) Downstream of EDS (single bag): If already screened and downstream of the EDS, any security status assigned to the bag will no longer be considered valid and the bag shall be stopped at the CBRA removal conveyor.
 - 5.) Downstream of EDS (multiple bags): If multiple bags are involved and tracking windows have been infringed, then the CBIS shall be capable of detecting this and stop the bags at the CBRA removal conveyor.
- Paragraph B.8.b.4) and B8.b.5) under Article 3.06 shall be revised to state:
 - 4.) Downstream of EDS: If the addition occurs downstream of the EDS and only the added bag itself is affected (added bag does not infringe on the tracking window of another bag) then the added bag shall be stopped at the CBRA removal queue conveyor.
 - 5.) Downstream of EDS: If the addition occurs downstream of the EDS and the added bag infringes on the tracking window of another bag, then the CBIS shall be capable of detecting this and stop the bag at the CBRA removal queue conveyor.
- Paragraph B.2.b.2).a); B2.b.2).b) and B2.b.2).c) under Article 3.08 shall be revised to state: "TC1-07" instead of "TC1-06".
- Paragraph C.3.b under Article 3.08 shall be revised to reflect the deletion of: "as shown on contract drawings at a minimum)".
- Paragraph C.4.1).g) under Article 3.08 shall be revised to state:
 - g.) "Suspect" Level 1 bags shall be held at the alarm bag removal conveyor downstream of the CT-80DR until a decision is made by the Level 2 OSR operator, the 45 30 second OSR decision time expires, or the TSO chooses to print a tag associated with that bag and remove the bag prior to an OSR decision. The tag will contain the bag ID, time, date, bag status at time of removal (in this instance tag should read "Pending"), and CT-80DR number corresponding to the prematurely removed bag.
- Paragraph C.4.1)i) and C.4.1)j) under Article 3.08 shall be revised to state: "removal point" where it reads "removal/reinsertion point"
- Paragraph C.4.2) under Article 3.08 shall be revised to state:
 - 2.) Level 2 OSR Operator
 - g.) Level 2 shall refer to the process whereby the images/information acquired by the Level 1 EDS machine is presented to TSA personnel at the baggage viewing station for manual review and subsequent resolution.
 - h.) When the CT-80DRs are in Hold Outside mode, each Level 1

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alarmed bag will stage at the removal queue conveyor until the Reveal network provides a screening status for that bag. If the removal queue is currently locked out due to both associated ETD stations screening bags, the pending decision bag will queue at the first upstream queue conveyor.

- i.) When a pending decision bag is staged at a removal position the associated BSD will indicate that that the bag is being processed by Level 2 OSR to alert and the TSA agent occupying that screening position not to manipulate or move the bag until a Level 2 decision is sent from the Reveal network to that bag.
- j.) The system shall be capable during a peak baggage demand surge, of allowing the TSA agent to press a "PRINT TAG" softkey on the BSD which will print the bag ID and current bag status of OSR Pending Bag. This will allow TSA to stage the bag if necessary and pull up the relative bag information using the Reveal hand scanner. If the bag was given a Level 2 clear decision after being removed, the TSA agent will induct the bag onto the clear bag line utilizing the gravity roller conveyors.
- k.) The Level 2 OSR operator will view the image in the display for a configurable duration utilizing TSA protocols to determine if the bag is "Clear" or "Suspect". If the allocated GOVT period expires (to be determined by local TSA staff minimum of 15 seconds), and no decision has been rendered, the image and relevant bag status will be updated to "Suspect" Level 2 status and transitioned to the CBRA removal queue for Level 3 review and appropriate handling. "Clear" Level 2 bags will be not be held on the removal queue and will merge onto the CB1 subsystem and out the make-up device.
- I.) Unknown, Lost or Faulted Bags are to stop at the Level 3 removal queue in the CBRA where the BSD will provide the appropriate corresponding information.
- m.) The Level 2 OSR operator will press the 'Clear' button, or similar function as designed and provided by Reveal, for resolved alarms.
 - (1.) These bags will be assigned a 'Clear' Level 2 status.
 - (2.) The information will be transmitted to the BHS via the EDS/BHS interface.
 - (3.) The BHS will update the information referenced to the Bag Security ID, illuminate the GREEN lamp on the stack light (installed adjacent to the associated removal position) and then automatically convey the Level 2 cleared bag to the next downstream clear bag conveyor (either CB1-1, or CB2-1 depending on which screening line the bag was processed by).
- n.) A Level 2 OSR operator will press the "Alarm" button for images that cannot be resolved in this process.
 - (1.) These bags will be assigned an "Alarm" Level 2 status.
 - (2.) The information will be transmitted to the BHS via the EDS/BHS interface.

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- (3.) The BHS will update the information referenced to the Bag Security ID and continue to track the bag to the Level 2 decision point (CBRA removal queue).
- o.) In the absence of a Level 2 decision, the BHS control system shall automatically default a "pending" status at the Level 3 removal queue, this shall remain as pending until a decision is made (i.e., OSR operator (clear/alarm), bag time out, or a bag tag is printed and the bag is removed). Pending decision status will be indicated with the WHITE light on the associated ETD removal station stacklight.
 - (1.) During peak times the TSA may choose to remove bags, utilizing the PRINT TAG function, that take too long to make a Level 2 decision.
 - (2.) A bag that has a "pending" status that is printed and removed, that is later cleared by the TSA will no longer have an image to reconcile; therefore, the TSA may choose to manually re-induct bags removed with a "pending" status printed on the tag.
 - (3.) Provide a "no decision/time out" status to indicate a GOVT timeout. No decision status will be indicated with the RED light on the removal point stacklight and on the local BSD at the removal station.
- Paragraph C.4.3) under Article 3.08 shall be revised to state:
 - 3.) Level 3 ETD Operator(s)
 - a.) Bags will stop at the CBRA removal queue if they have the following status: Level 2 Suspect, EDS Unknown, Pending/No Decision, EDS Error, or Lost (BHS Unknown).
 - b.) Each SS screening line has two Level 3 ETD station adjacent to the alarmed bag removal conveyor that shall each have a RRS (Remote Resolution Station) that will display the alarmed bag image during the Level 3 screening.
 - c.) Level 3 ETD operations are necessary on all bags that arrive at the CBRA (i.e., bags not re-inducted to a Level 1 machine).
 - d.) Cleared Level 3 bags will be manually transported along the provided gravity roller conveyors onto the clear bag mainline or the make-up device depending on the ETD station.
 - e.) "Failed" Level 3 bags shall be handled per the local EOD protocol.
- Paragraph C.5 under Article 3.08 shall be revised to state:
 - 5. Positive Bag Tracking Requirements
 - a. Added, Missing, Accelerated or Delayed Bags
 - 1.) Refer to the most current TSA PGDS for description and procedure of tracking Added, Missing, Accelerated or Delayed Bags.
 - 2.) Added Bag Functionality
 - a.) The BHS shall be capable of detecting when a bag has been added between the EDS device and the Clear Bag diversion points as long

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as that bag is added anywhere other than on top of, underneath, or directly beside another bag. If the bag is added in front of, between, behind or directly against the leading or trailing edge of another bag than the system shall detect this addition.

- b.) If the addition occurs downstream of the EDS machines and only the added bag itself is affected, the system shall treat the bag as "Lost in Tracking" and the BHS shall ensure that the bag is sent to.
- c.) If the addition occurs downstream of the EDS and the added bag infringes on the tracking of another bag, then both bags shall be declared "Lost in Tracking" and the BHS shall ensure that the bag is sent to Level 3 ETD screening.
- d.) The BHS shall measure the bag as it exits the EDS device and as the bag approaches the Clear Bag diversion points to determine if there has been an "Added Bag" fault.
- b. Unknown/Lost-in-Track Bags
 - 1.) Bags can be result in the status of "unknown" or lost-in-track from any number of failures; such failures include but are not limited to: power outages, EDS device faults/resets, bag mistracking or misreading, diverter malfunctions, and bag jams.
- c. Missing Bag Jam
 - 1.) If three (3) consecutive bags have been successfully tracked but fails to appear at any downstream tracking photocell, that bag shall be identified as a missing bag by the BHS Controls System. When this bag is not verified to be received at a downstream tracking photocell, stop the conveyor the tracking photocell is mounted on and the immediate downstream conveyor and raise a distinctive alarm at the MDS (i.e., different from other audible alarm sounds at the BHS Control Room & TSA Satellite Workstation) identifying a missing bag jam and include the bag ID for the bag in the alarm (to assist staff in finding the bag that failed to track). Conveyors upstream of the conveyors stopped due to the missing bag jam condition. Reset of the missing bag jam fault condition shall be cleared according to local TSA protocols. Throughput Sortation Priority
- d. The BHS contractor shall provide programming to prioritize baggage throughput through the ED SS lines with the following functionality:
- e. Round Robin (Non-Peak Only)
 - 1.) During non-peak operations, in-spec bags that are routed to the CT-80DRs will be diverted using a round robin prioritization.
- f. First Available (Peak Only)
 - 1.) During peak operations as the queue capacity upstream of one CT-80DR machine diminishes in-spec bags that are routed to the CT-80DRs will be diverted using a "first available" prioritization.
- Paragraph C.6 through C.14 (last paragraph before new paragraph D under Article 3.08 shall be revised to state:

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- 6. Fail Safe Accurate Routing
 - a. Through appropriate fail-safe interlocks, the BHS Controls Functionality shall ensure that unscreened bags, bags that lost tracking or bags identified as suspect baggage are not transported to the clear bag lines.
 - b. The controls system shall provide for fail-safe controls at the last conveyor of the ETD subsystems and the first conveyor of the CB subsystems to ensure that all bags routing is performed according to the bag's security status.
 - c. Failsafe conditions: If the system detects and unknown bag at the next downstream photocell after the decision point suspect bag removal conveyor the system will stop both that associated conveyor and the clear bag takeaway conveyor that the failsafe queue is merging onto.
 - d. The baggage failsafe detection shall be activated by less than 0.5% of the total bag volume as measured by the number of individual bags causing the failsafe fault.
- 7. EDS Start Sequence
 - a. The Level 1 EDS device(s) shall be activated as detailed in the Reveal CT-80DR operations and maintenance guide and per local TSA protocol. This start up shall be independent of the baggage system at the beginning of the day to allow for sufficient warm-up time. As a minimum, the associated EDS conveyor lines (SS lines) must be running for the EDS device to start up or as required by the EDS device. Also refer to the EDS "TEST" mode of operation outlined in the following paragraphs.
- 8. EDS Stop Sequence
 - a. The Level 1 EDS device (s) shall be shut down as required by Reveal's operation and maintenance and by local TSA protocol independently of the baggage system at the close of the day.
 - b. The SS, CB, OG, and TC conveyor lines shall have an auto-stop function. Photocells located upstream on the outbound mainline (TC1) shall be on a 5 -30 minute timer (adjustable), if no bags are sensed all conveyors in the respective matrix shall shut down. If an Emergency Stop push button is activated or a jam occurs at any point during operation, the timers shall reset to zero.
- 9. E-Stop Functionality
 - a. Activation of any EDS machine e-stop will stop the interfaced upstream and downstream conveyors.
 - b. Activation of a SS conveyor subsystem E-stop will not E-stop the EDS machine scanning gantry, but shall stop the exit belt to prevent the unsafe condition of an active upstream belt and an inactive downstream belt.
- 10. IQ Test Functionality
 - a. A control station shall be installed at charge end of the last BHS conveyor prior to the EDS device entrance conveyor. The location of these control stations shall be coordinated with the Construction Manager and TSA. The control station shall contain the following operators/control devices:
 - 1.) START-INSERT: green pushbutton, used to insert the IQ test bag when

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in IQ mode

- 2.) E-STOP: red Illuminated, maintained contact, lockable pushbutton
- 3.) JAM: amber illuminated pushbutton
- 4.) IQ INSERT/AUTO: Selector Switch used to place the ED line in IQ test mode
 - a.) The TSA staff shall wait for an available window and place the IQ INSERT/AUTO selector to INSERT mode (left hand position). This shall stop the last BHS conveyor prior to the EDS device's entrance conveyor.
 - b.) The TSA staff shall place the bag on the conveyor and press the START-INSERT pushbutton; the bag shall then be automatically transported into the EDS device. After processing through the CT-80DR, if the station is still in IQ INSERT mode the bag will stop at the decision point conveyor for removal. Upon completion of the Insert Mode operation, the selector switch shall be positioned to the right hand AUTO mode to place the system back to the automated mode of operation.
- b. Coordinate with the EDS Contractor the necessary EDS/BHS interface, and provide the required BHS controls and exit interface conveyor BHS control station requirements for the EDS TEST mode of operation.
- 11. Decision Point Control Station
 - a. A control station shall be installed adjacent to the removal CBRA queue conveyor (as shown in contract drawings B7100 series). The location of these control stations shall be coordinated with the TSA and the Construction Manager. The control station shall contain the following operators/control devices:
 - 1.) E-STOP: red Illuminated, maintained contact, lockable pushbutton
 - 2.) Start Alarm: Sonalert warning device
 - b. A stack light shall be installed adjacent to the BSD installed above the alarm bag removal point. The location of these control stations shall be coordinated with the TSA and the Construction Manager. The control station shall contain the following operators/control devices:
 - 1.) Lighted green "Clear"
 - 2.) Lighted red "Alarm" "Time Out"
 - 3.) Lighted white "Pending"
 - 4.) Lighted blue " EDS Error, BHS Unknown"
 - c. A 15 inch touch screen <u>BSD</u> HMI will be installed above the removal conveyor (reference drawings B7100 series) to display the information associated with the staged bag. The following information will be displayed per PGDS:
 - 1.) "EDS Machine ID" (serial number) that shall display the identification of the CT-80DR machine that screened the bag.
 - 2.) "Bag ID" that shall display the BHS assigned bag ID.

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- 3.) "Bag Status" as described elsewhere in this document (AL Alarm bags, ER – Error bags from CT-80DR, CL – Cleared Bag, UNK - BHS Unknown).
- 4.) "Transfer Image" that represents the input to transfer the bag information/image to the adjacent RRS
- 5.) "Print Bag Tag", an HMI input to print a tag with the bag information stated above.
- 6.) "Bag Cleared", an HMI input to both time stamp a Level 3 searched bag and to re-activate the ETD station for the next alarm bag removal.
- 12. Contingencies
 - a. The BHS Contractor shall present as part of the functional specification submission a detailed matrix clearly identifying all the possible security screening failure scenarios and the fallback action to be initiated (manually by the control room operator or automatic by the BHS Computer system).
- 13. Maintenance Access
 - a. The BHS Contractor shall be responsible for the design, provision and installation of maintenance platforms and access ladders required to allow easy access to all EDS machines. Access is required by TSA agents who are responsible to both test the EDS machines and clear bag jams within the machines. The BHS Contractor as part of the submittal processes shall provide to the Engineer, TSA and Construction Manager the design of the platform and access ladders for review and approval.
 - b. BHS Contractor is responsible for coordinating access provisions for TSA operators so as to minimize obstructions. Locations of control stations and electrical boxes are to be coordinated to support unrestricted access by TSA staff to the input/output EDS interface positions. The provisions of the conveyor supports; drive configurations, personnel guarding and side guards shall allow for maximum TSA operator accessibility.
- 14. EDS Reporting
 - a. The BHS reporting system shall provide for report generation of the security subsystem activities, in addition to the reports identified elsewhere in these specifications. Reports will need to reflect EDS activity, it shall be the BHS contractor's responsibility to provide a daily log of all bags processed at the EDS machines with appropriate filtering provisions to allow for sort by bag ID specifics, EDS device, decision rendered and lost tracking etc.
 - b. As a fault finding diagnostics tool, the BHS operator shall have (via a pull down screen at the MDS workstation) the ability to monitor the status of all EDS/BHS handshake/interface signals (per device) in real time. The BHS Contractor shall provide to Construction Manager a sample of the diagnostic status screen.
 - c. The BHS Contractor shall monitor the following EDS/BHS operations and generate fault messages both graphically and in text at the MDS and stop directing bags to the faulted ED line until the issue has been resolved:
 - 1.) Multiple baggage IDs lost at the EDS
 - 2.) Loss of communications between the EDS and BHS

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- 3.) Multiple bags in a row with an "unknown" or "no" status (these are unknown/no bags not generated as a result of an EDS fault reset)
- 4.) Loss of bag tracking through the EDS line

• New paragraph D under Article 3.08 shall be added to state:

- D. CBRA Description of Operation
 - 1. The BHSC is to provide a 15" touch screen CBRA BSD at each removal point (ETD 1, 2, 3, and 4).
 - 2. The display will consist of the following at a minimum (ensure display is configured per the most recent PGDS requirements):
 - a. **ENABLE / DISABLE –** HMI input to enable or disable the BSD/ETD station.
 - b. **EDS MACHINE ID (serial number)** identification of the CT-80DR machine that has screened the bag.
 - c. **BAG ID** The BHS assigned bag ID
 - d. BAG STATUS
 - 1.) Alarm Bags (AL) RED Bags that were not cleared by the Level 2 decision either due to the inability to clear the bag image, or because the maximum OSR view time had elapsed.
 - 2.) Error Bags / EDS Unknown YELLOW Bags that receive and error status from the CT-80DR devices.
 - 3.) Cleared Bags GREEN Clear bags will be conveyed directly past the removal conveyor, but in the event the system is cascaded back to the Level 3 ETD station, a clear bag that is staged on the removal/reinsert conveyor will be indicated at the HMI and at the removal point stack light that it is a clear bag.
 - 4.) **BHS Unknown BLUE** Bags that have become lost in tracking between the exit of the CT-80DR and the removal/reinsert conveyor.
 - 5.) **Decision Pending RED** Bags that during high peak volumes are not held on the first queue downstream of the CT-80DR and are instead still in OSR review when they reach the CBRA removal queue conveyor.
 - 6.) OSR Time Out RED If the 30 second OSR review time has expired these bags will continue to the CBRA removal queue conveyor and will display this status.
 - e. **TRANSFER IMAGE** HMI Input to transfer the bag information / image to the adjacent RRS.
 - f. **PRINT BAG TAG** HMI Input to print a tag with the bag information stated above.
 - 3. Provide multiple screen display configurations for the following situations:
 - a. BSD Disabled Display screen when BSD is inactive
 - b. BSD Enabled Display screen when BSD is active
 - c. BSD Waiting for bag ID Display screen when no bag is staged at the removal queue

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- d. Pending decision bag Show OSR countdown to alert the TSA agent of the remaining OSR time.
- e. TSA Action Required Provide this warning when a bag has been removed from the removal photocell but TSA has not provided input to the HMI by pressing either TRANSFER IMAGE or the PRINT TAG soft keys. This will ensure the removal queue will start back up and not impede the screening line throughput.
- 4. CBRA Description of Operations for ETD Station 1 and ETD Station 2
 - a. ETD stations ETD 1 and ETD 2 are located downstream of the SS1 screening line CT-80DR. ETD station 1 is the furthest screening table downstream on the conveyor subsystem. Reference the detailed CBRA drawing in the contract documents for detailed locations of the ETD 1 and ETD 2 screening stations and associated BHS and Reveal equipment.
 - b. Both ETD 1 and ETD 2 will remove alarm bags from the same alarm bag removal conveyor SS1-7.
 - c. The system shall be configured to allow either ETD 1 or ETD 2 to be disabled. Alarm bags will then only stop at the active ETD station.
 - d. The BHS system shall be configured to allow for the following single alarm bag procedure at ETD 1:
 - 1.) A Level 2 alarm bag will stop at SS1-7 after blocking the associated head end photocell. This will populate, and lock, the associated bag data at BSD 1 located directly above the bag just south of the ETD 1 screening table.
 - 2.) A pending decision bag will also stop in the same manner, but BSD 1 will indicate to the operator that the bag is pending and a Level 2 OSR decision has yet to be assigned. Once the BHS system has received the status from the Reveal network, the BSD will either revert back to its "awaiting bag" state in the case of a Level 2 clear decision, or populate the bag data if the Level 2 decision came back alarmed, or if the bag has timed out due to no Level 2 decision.
 - 3.) Once the alarmed bag is stopped at the ETD 1 removal position, TSA can remove the bag by sliding the bag in a "no-lift" process over to the ETD 1 screening table. The removal conveyor SS1-7 will not re-activate until the TSA agent presses the TRANSFER IMAGE softkey on the BSD 1 touchscreen. This will transfer the bag data via serial connection and populate the alarmed bag image from the Reveal network to the RRS located at ETD 1.
 - 4.) Only after the TRANSFER IMAGE key has been pressed and the SS1-7 head end photocell is unblocked will the SS1-7 removal conveyor reactivate after a 3 second delay.
 - 5.) Ensure the restart timer on SS1-7 restarts if the photocell becomes reblocked during the removal process after the TRANSFER IMAGE key has been pressed to ensure the belt will not active while the agent is attempting to manipulate the bag to the ETD 1 screening table.
 - 6.) The current bag information will remain locked on the BSD 1 station until the bag has been screened, at which point the TSA agent will manually

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transport the Level 3 clear bag on adjacent gravity rollers to the CB1-2 conveyor. TSA will then have to re-enable the ETD 1 station by pressing a BAG CLEARED key on the BSD 1 touch screen.

- e. The BHS system shall be configured to allow for the following single alarm bag procedure at ETD 2:
 - 1.) ETD 2 shall be utilized if ETD 1 is currently screening a bag and has bag information locked on BSD 1, or if the ETD 1 station has been disabled (via a DISABLE/ENABLE key on BSD 1).
 - 2.) The SS1-6 head end photocell will be utilized to stop the alarm bag on the SS1-7 removal conveyor.
 - 3.) Stop SS1-7 after a set time based on the SS1-7 conveyor speed so that the bag has fully transitioned off the SS1-6 queue belt and onto the SS1-7 removal queue. Ensure the tail end of the alarm bag does not pass the leading edge of the ETD 2 screening table to provide an ergonomic sliding motion for the TSA agent working that station.
 - 4.) After the SS1-6 head end photocell has become unblocked, and the alarm bag is stopped on the SS1-7 removal queue, populate the bag data on the BSD 2 touch screen monitor.
 - 5.) Bag removal procedures will be the same as with the ETD 1 screening station and will utilize a TRANSFER IMAGE and PRINT TAG key on the BSD.
- f. If both ETD 1 and ETD 2 are not available, the next bag destined to stop on the SS1-7 removal queue will cascade at the SS1-6 queue.
- g. Ensure the system only allows one bag onto the SS1-7 removal queue at a time to ensure tracking accuracy is maintained.
- 5. CBRA Description of Operations for ETD Station 3 and ETD Station 4
 - a. ETD stations ETD 3 and ETD 4 are located downstream of the SS1 screening line CT-80DR. ETD station 3 is located south of the SS2-7 removal conveyor, while ETD station 4 is located north of SS2-7. Reference the detailed CBRA drawing in the contract documents for detailed locations of the ETD 3 and ETD 4 screening stations and associated BHS and Reveal equipment.
 - b. Both ETD 3 and ETD 4 will remove alarm bags from the same alarm bag removal conveyor SS1-7.
 - c. If both ETD 3 and ETD 4 stations are available, when the first bag assigned to be removed at the removal queue (alarm, unknown etc.) both BSD 3 and BSD 4 will populate with that bags information. The first BSD to actively TRANSFER IMAGE to the RRS will remain locked with that bags data. The other BSD will revert to its awaiting bag display.
 - d. The system shall be configured to allow either ETD 3 or ETD 4 to be disabled. Alarm bags will then only stop at the active ETD station.
 - e. The BHS system shall be configured to allow for the following single alarm bag procedure at ETD 3:
 - 1.) A Level 2 alarm bag will stop at SS2-7 after blocking the associated head

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end photocell. This will populate, and lock, the associated bag data at BSD 3 located directly above the SS2-7 removal queue.

- 2.) A pending decision bag will also stop in the same manner, but BSD 3 will indicate to the operator that the bag is pending and a Level 2 OSR decision has yet to be assigned. Once the BHS system has received the status from the Reveal network, the BSD will either revert back to its "awaiting bag" state in the case of a Level 2 clear decision, or populate the bag data if the Level 2 decision came back alarmed or if the bag has timed out due to no Level 2 decision.
- 3.) Once the alarmed bag is stopped at the SS2-7 removal position, TSA can remove the bag by sliding the bag in a "no-lift" process over to the ETD 3 screening table. The removal conveyor SS2-7 will not re-activate until the TSA agent presses the TRANSFER IMAGE softkey on the BSD 3 touchscreen. This will transfer the bag data via serial connection and populate the alarmed bag image from the Reveal network to the RRS located at ETD 3.
- 4.) Only after the TRANSFER IMAGE key has been pressed and the SS2-7 head end photocell is unblocked will the SS2-7 removal conveyor reactivate after a 3 second delay.
- 5.) Ensure the restart timer on SS2-7 restarts if the photocell becomes reblocked during the removal process after the TRANSFER IMAGE key has been pressed to ensure the belt will not active while the agent is attempting to manipulate the bag to the ETD 3 screening table.
- 6.) The current bag information will remain locked on the BSD 3 station until the bag has been screened, at which point the TSA agent will manually transport the Level 3 clear bag on adjacent gravity rollers to the CB1-2 conveyor. TSA will then have to re-enable the ETD 3 station by pressing a BAG CLEARED key on the BSD 3 touch screen.
- f. The BHS system shall be configured to allow for the following single alarm bag procedure at ETD 4:
 - 1.) ETD 4 shall be utilized if ETD 3 is currently screening a bag and has bag information locked on BSD 3, or if the ETD 3 station has been disabled (via a DISABLE/ENABLE key on BSD 3).
 - 2.) The SS2-7 head end photocell will be utilized to stop the alarm bag on the SS2-7 removal conveyor.
 - 3.) After the alarm bag is stopped on the SS2-7 removal queue, populate the bag data on the BSD 4 touch screen monitor.
 - 4.) Bag removal procedures will be the same as with the ETD 3 screening station and will utilize a TRANSFER IMAGE and PRINT TAG key on the associated BSD.
 - 5.) All Level 3 cleared bags from ETD 4 will be manually transitioned directly onto the make-up device utilizing gravity rollers.
- g. If both ETD 3 and ETD 4 are not available and bag data is populated on both BSD 3 and BSD 4, ensure the next bag destined to stop on the SS2-7 removal queue will cascade at the SS2-6 queue.

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- h. Ensure the system only allows one bag onto the SS2-7 removal queue at a time to ensure tracking accuracy is maintained.
- New paragraph E under Article 3.08 shall be added to state:
 - E. Out of Gauge
 - 1. To prevent "Out of Gauge" items (verify the EDS specification for maximum bag sizes) being introduced into the Level 1 EDS device the BHS Contractor shall provide a means to monitor for "out of gauge" items utilizing a BMA. "Out of gauge" items result in both increased downtime due to EDS device reset/restarts time and purged bags. The "out of gauge" monitoring should take place prior to the diverter into the EDS machine(s) line from the matrix. "Out of gauge" items shall be transported directly via OG conveyors to a dedicated Level 3 ETD station.
 - 2. Bags on the TC1 outbound mainline will be scanned by a BMA and the out-ofgauge bags shall be transported by OG1 to the oversize ETD screening station. Upon detection of a bag destined for the OG line, the OG line shall start using the standard "auto-start" functionality described above, if timed-out.
 - 3. Bags at the last conveyor on the OG line shall index and a control station will be located at the head end of the indexing conveyor to advance a staged bag to the removal point of the conveyor. This station will have the following controls:
 - a. START/ADVANCE: green illuminated pushbutton This only needs to be pressed once. Once the furthest downstream bag on the indexing belt reaches the head end photocell, the conveyor will stop to allow TSA to remove the bag. While the head end PE is blocked, the conveyor will not index.
 - b. E-STOP: illuminated Push-Pull (Lockable) E-Stop
 - c. START ALARM: Sonalert warning device

• New paragraph F under Article 3.08 shall be added to state:

- F. Outbound Make Up Device
 - 1. Provide auto-start photocell controls to ensure the make-up device when the SS lines become active.
 - 2. Provide "Start" Pushbutton control stations as shown in contract drawings for Manual Start-up operation of the make-up device; In case the flat plate make-up device times-out before all baggage has been sorted, activation of any start button on the flat plate make-up device shall cause the device to run for an additional twenty (20) minutes (adjustable) without the feed conveyors operating.
 - 3. Provide a start up warning beacon installed on a stanchion to alert any nearby personnel of the make-up unit start up.
 - 4. Maintenance Controls.
 - a. In addition to the control station mentioned elsewhere in this document install a single maintenance control station in an accessible location next to the motor.
 - 1.) START: green pushbutton
 - 2.) E-STOP: illuminated Push-Pull (Lockable) E-Stop

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3.) AUTO/MAINT./JOG: Three position selector switch with the AUTO and MAINT. Positions as fixed contact positions and the JOG position as momentary to actuate the claim device intermittently for maintenance purposed.

2.0 DRAWINGS

Replace drawings listed below with sheets included with this Addendum No. 6

2.1 Volume 2 – Architectural

Sheet A210:	Enlarged First Floor Reflected Ceiling Plan Area A – Claim unit feed
	conveyor enclosures added.
Sheet A601:	Interior Elevations – Elevation Detail of claim unit feed conveyor enclosure added.
Sheet A602:	Interior Elevations – Elevation Detail of claim unit feed conveyor enclosure added.

2.2 Volume Baggage

Sheet BG001: Sheet B2101:	BHS Legend Symbols and Abbreviations- Miscellaneous Revisions. BHS Plan Inbound Claim Hall – Miscellaneous Revisions
Sheet B2102:	BHS Plan Ticketing and CBIS – Outbound CBIS layout revised.
Sheet B2103:	BHS Plan CBIS Enlarged Plan – Outbound CBIS lavout revised.
Sheet B3101:	BHS Sections – Added note to call out stainless steel requirements by BHSC. Added claim device back stop adjacent to discharge
Sheet B3102	BHS Sections – Modified sections per the Outbound CBIS layout
Sheet D3102.	change.
Sheet B3103:	BHS Sections – Modified sections per the Outbound CBIS layout change.
Sheet B3104:	BHS Sections – Added sections per the Outbound CBIS layout change.
Sheet B3105:	BHS Sections – Relocated section detail to this new sheet.
Sheet B6101:	BHS Detail Plans – Modified CBRAs per CBIS layout change.
	Added an enlarged control room view.
Sheet B6102:	BHS CBIS TSA Egress and EDS Removal Paths – Egress and EDS removal path modified.
Sheet B7001:	BHS Control Station Details – Miscellaneous revisions.
Sheet B7002:	BHS Control MCP and Power Requirements – Updated power based on CBIS layout change.
Sheet B7102:	BHS Controls Ticketing and CBIS – Miscellaneous revisions.
Sheet B8106:	Indicated BHSC to provide the CT-80DR elevated support pedestal.
Sheet B8108:	BHS Details 90 Degree Merge – Removed details based on CBIS
	layout change.
Sheet B8111:	BHS Details Ladders, Stairs, and Slides – New sheet for vertical
	ladder, TSA access stair, and outbound oversize chute.



3.0 OTHER:

3.1 Responses to Bidder Questions:

See attached Appendix A.2 for Responses to Bidder Questions.

END OF ADDENDUM NO. 6

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DULUTH INTERNATIONAL AIRPORT NEW PASSENGER TERMINAL BID PACKAGE 2A – ADDENDUM 6

Item	Drwg. or Spec. Sect. No.	Bidder Questions	Responses
	0001. NO.		
VanD	erLande Indu	ustries – March 1, 2011	
1.		Consequential Damages: Because there is not a mutual waiver for consequen- tial damages in the bid documents, will the Duluth Airport Authority accept the following verbiage to be incorporated in the terms and conditions? "Except for losses covered by insurance required by the Contract Documents, the Owner and Contractor agree to waive all claims against each other for any consequential damages that may arise out of or re- lated to this Agreement."	No.
2.	A601; A602; B2101; B3101; B3103; Sect. 347716/ 2.05.h	Stainless Steel Requirements: Please provide further details of the stainless steel requirements on the inbound carousel claim unit feeds. Per the referenced drawings, there appears to be a possible doghouse design built around the claim feed line and up to the ceiling, however, a si- deview of the design cannot be found. Furthermore, please clarify who will be responsible for each por- tion of the work. For example, if there is a doghouse design that is built up to the ceiling, will the GC be responsible for this along with any associated stain- less steel? Will the BHSC only be responsible for the stainless steel surrounding the carousel and claim feed exit area?	Further details clarifying the scope of the stainless steel shrouds surrounding the in- bound claim feeds is included in this Addendum. The BHSC is responsible for all stainless steel cladding of all BHS equipment as well as any necessary framing for support.
3.	Sect. 347716/ 2.01j	High Speed Diverters: Please approve Vanderlande High Capacity Diver- ters.	Vanderlande is added to the listed manufacturers for High Speed Vertical Paddle Diverters in this Addendum.



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KRAUS-ANDERSON CONSTRUCTION COMPANY

ADDENDUM NO. 6 March 14, 2011

Duluth International Airport New Passenger Terminal 4701 Grinden Drive Duluth, MN 55811 Bid Package 2A

TO ALL CONTRACTORS:

The following are clarifications and/or changes to the Plans and Specifications, dated February 3, 2011, to be Bid on March 29, 2011, for the above named Project. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disgualification.

1. Section 00305 Bid Form

A. Delete and replace existing Bid Form with Bid Form incorporated by this Addendum.

2. Section 01014 Work Scope Descriptions

A. Work Scope Index

1. Work Scope No. 14.21A, Baggage Handling Systems: Add Section number 34 77 16 under Spec #.

B. Work Scope 14.21A Baggage Handling Systems

1. Under 1.01 A. 1. Specific Specification Sections: Add Section number 34 77 16 to the Baggage Handling Systems Specifications.

3. Bid Form Packet

- A. Replace City of Duluth Request for Bid with form incorporated by this Addendum.
- B. Replace the Bid Form incorporated by this Addendum into your Bid Form Packet.

END OF ADDENDUM NO. 6

DULUTH INTERNATIONAL AIRPORT NEW PASSENGER TERMINAL BID PACKAGE 2A ADDENDUM NO. 6



REQUEST FOR BID 2/3/2011 11-4401

RETURN BY BID OPENING TIME TO:

PURCHASING DIVISION 100 CITY HALL Duluth, MN 55802 Buyer: Dennis Sears PHONE: 218-730-5340 FAX: 218-730-5921

NEW PASSENGER TERMINAL BUILDING BID PACKAGE 2A

BID OPENING AT 2:00 PM on TUESDAY, MARCH 29, 2011

Note: all bids must be written, signed and transmitted in a sealed envelope, plainly marked with the bid number, subject matter and opening date. The City of Duluth reserves the right to split award where there is a substantial savings to the City, waive informalities and to reject any and all bids. Bidder should state in proposal if bid price is based on acceptance of total order. Sales tax shall be included in the unit price. Bidder to state freight charges if the proposal F.O.B. is shipping point, freight not allowed. Low bid will not be the only consideration for award of bid. All pages shall be signed or initialed by authorized bidder's representative as indicated at the bottom of the page(s) of the request for bid form.

RETURN BID IN DUPLICATE WITH DUPLICATE DESCRIPTIVE LITERATURE FOR BID RESULTS, ENCLOSE A SELF-ADDRESSED, STAMPED ENVELOPE WITH BID

BID DEPOSIT REQUIREMENTS: 5% OF BID AMOUNT Deposit shall mean cash, cashier's check or corporate surety bond payable to or in favor of the City of Duluth.

A PERFORMANCE BOND AND A PAYMENT BOND shall be required of the successful bidder, BOTH in the full amount of the bid.

INSURANCE CERTIFICATE required per attached requirements. Designated F.O.B. Point: Jobsite

Account No. 41-74-00)56 K
FREIGHT CHARGE	\$ <u>N/A</u>
OTAL BID PRICE	# See attached.
TO INCLUDE ANY ADDITIONAL PAGES.	
	FREIGHT CHARGE

BY:		PAYMENT TERMS	\$ N/A
(Print)	(Title)	F.O.B. POINT	Duluth Airport
		DELIVERY DATE	N/A
(Signature)	(Tele. #)	:	

The City of Duluth is an Equal Opportunity Employer.

DULUTH AIRPORT AUTHORITY DULUTH INTERNATIONAL AIRPORT NEW PASSENGER TERMINAL **BID PACKAGE 2A** ISSUED FOR BID

(Bidder may copy this form on his own letterhead) SUBMIT IN DUPLICATE

BID FORM

BID TO: Duluth Airport Authority; By the City Purchasing Agent Room 100 City Hall Duluth, MN 55802

BID FROM:

In accordance with the Invitation to Bid and the proposed Contract Documents prepared by Reynolds, Smith and Hill, relating to the construction of:

Duluth International Airport New Passenger Terminal Bid Package 2A Duluth, Minnesota

the undersigned, having visited the site of proposed construction and having become thoroughly familiar with local conditions affecting the cost and performance of the Work and with all requirements of the Contract Documents and related Addenda, hereby proposes and agrees to provide all labor, materials, equipment, applicable permits and taxes required to construct and complete the Work in accordance with the Contract Documents and Addenda for the following amounts:

Base Bids:

Instructions for Submitting Base Bids:

- For bidders wishing to submit bids on more than one Work Scope, space has been provided to submit bids for Multiple Work Scopes on the same Bid Form.
- State Base Bid in both words and figures in spaces provided.
- Bidders submitting bids for more than one Work Scope are invited to submit a combined bid for work included under all Work Scopes for which Bidder is submitting a bid.

1. Base Bid for Work Scope No. <u>14.21A</u> Title <u>Baggage Handling Systems</u>			
Big Amount.		\$	
A. WS 14.21A price breakout for ba coordinate gridlines 7 to 12. This break ou	aggage handling s it is for the entire Ou Labor: \$	systems itbound s	within building ystem:
	Material: \$		
	Equipment: \$		
	Freight: \$		
Combined Base Bid:			
Work Scope Numbers and Titles on which Cor	nbined Bid is based	:	
Work Scope No Title:			
Work Scope No Title:			
Combined Bid Amount:		\$	· · · · · · · · · · · · · · · · · · ·
<u>Unit Prices</u> :			
Refer to Section 01014 individual Work Scope	s for complete desc	ription of	Unit Prices.
	ADD		DEDUCT
Unit Price No. <u>9</u> to Work Scope <u>14.20A</u>	\$/	\$	/
Unit Price No to Work Scope	\$/	\$	/
<u>Alternates</u> :			
Refer to Section 01230 for complete descriptio	on of Alternates.		
	ADD		DEDUCT
Alternate No to Work Scope	\$. \$	
Alternate No to Work Scope	\$. \$	

SECTION 00305 - 2

<u>Addenda</u>: Receipt of the following Addenda to the Contract Documents and their costs being incorporated into the Bid is acknowledged (provide Addenda numbers below):

<u>Addenda No.</u>	Dated	<u>Addenda No.</u>	<u>Dated</u>
			<u></u>

<u>Bid Acceptance</u>: If written notice of the acceptance of this Bid is received by the undersigned within 90 days after date set for opening of this Bid, or at any other time thereafter before Bid is withdrawn, the undersigned agrees to enter into and execute a Contract with the Owner in accordance with this Bid as accepted and in a form acceptable to Owner, and to furnish and deliver to the Construction Manager the Performance Bond, Payment Bond, and proof of insurance coverage, all within 10 days after notice of acceptance of this Bid.

Execution of Proposal: The entity(ies) signing this proposal is fully authorized to sign on behalf of the named firm and to fully bind the named firm to all of the conditions and provisions of the Contract. This proposal shall remain valid and not be withdrawn for 90 calendar days after bid due date.

Submitted this	day of		20
Name of Firm:			
Street Address:			
City:	State:	Zip: _	
Phone Number:	Fax N	umber:	<u>,</u>
Bidder is: (check one)			
Individual	Partnership	Γ	Corporation
If Bidder is a corporation, g names of president and s partners composing the firn	ive legal name of corpor ecretary. If a partnersh n. If an individual, give fir	ation, state where inc ip, give names of al rst and last name in fu	orporated, and I individual co- III.
Name (typed or printed):			
Signature:			
Title:			
	END OF DOCUME	:NT	
DULUTH INTERNATIONAL NEW PASSENGER TERM BID PACKAGE 2A	. AIRPORT NAL	SECT	FION 00305 - 3

ADDENDUM NO. 6