Logistics Warehouse Facility Utilization Study
Vehicle Processing Support Area (VPSA)
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About Me
Bethune-Cookman University
Bachelor of Science in Mathematics  Summa Cum Laude  May 2013
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VPSA Overview
- **Purpose:** Provide conditioned storage for flight hardware materials and temperature-sensitive ground support hardware.
- **Specifications:**
  - Over 11,000 items stored in 30,765 square feet
  - 4 storage columns for very small materials
  - Internal truck well serviced by two 5-ton bridge cranes
- **Significance:** Provide storage options for large/oversized items requiring AC

Duties
- Develop alternate options for optimizing warehouse space-VPSA
  - Study VPSA floorplan
  - Warehouse walk-downs to map inventory
  - Review VIS lab model
  - Calculate current percentage of available warehouse space
  - Compile findings and recommendations
  - Collaborate with VIS Lab personnel to show potential future options
- Complete Logistics Engineering On-The-Job-Training package

Table 1. Available Warehouse Space (3/25/19)

<table>
<thead>
<tr>
<th>Space Available in VPSA SQ FT</th>
<th>Total Pallets Open</th>
<th>Overall SQ FT</th>
<th>Total Percentage Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>13068</td>
<td>981</td>
<td>26437</td>
<td>49.4%</td>
</tr>
</tbody>
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Milestones
- Review VIS Lab model of VPSA 02/15/19
- Calculate current percentage of available space 03/25/19
- Compile findings and recommend options 05/23/19
- Work with VIS Lab personnel to model potential options 06/13/19
- Deliver formal presentation to EOS Program Logistics Chief and the TOSC Logistics Director TBD

Stakeholders
- NASA
- Test and Operations Support Contractor (TOSC)
- Design Visualization Group
- Future customers (SLS, Orion, etc.)

Skills & Competencies
- Teamwork
- Communication
- Problem solving
- Adaptability
- Share drive
- Warehouse Processes
- Safety procedures (PPE)

Figure 1. VIS Lab Model of VPSA
Figure 2. Bulk Area FireX Model
Figure 3. Rows 30-33
Figure 4. FireX Model Rows 20-25

Accomplishments
- Identified inconsistencies within PeopleSoft Inventory System and physical locations in the warehouse
- Created a plan to optimize warehouse space

Future Research
- Investigate costs associated with enlarging or adding additional roll-up door

K6-1547 Warehouse VPSA

Automatic Guided Vehicle (AGV)
Fork Lift
Crown Man-a-board

https://ntrs.nasa.gov/search.jsp?R=20190027543 2020-01-18T05:52:48+00:00Z