

Public Housing – Work Order:

Overview

The BHA maintains a decentralized work order system, which is currently generating approximately 7,300 work orders per month at 36 different site locations. Currently, the system is paper based and does not interface with inspections, inventory or payroll. By interfacing directly with inventory and by maintaining an inventory of the types of fixtures in each unit, the BHA can reduce the number of times a staff person needs to return to the unit to complete the job (hopefully reducing time lags and increasing customer satisfaction). The BHA is also considering the possibility of interfacing with handhelds to allow certain staff members to generate work orders and review availability of inventory quicker. In addition, the BHA would like to monitor customer satisfaction through random surveys.

Future Workflow Process Maps:

WORK ORDER FUTURE PROCESS

Receiving a Work Order:

- System should identify units by last name of occupant, by property or other user defined
- System should maintain a history of open work orders by user defined criteria (craft, unit, resident, date, type, reprinted, etc)
- System should be able to generate work orders for a building and / or for a development
- System should be able to generate work orders for a tenant and for a unit
- System should maintain up to date contact information for residents
- System should maintain a last contact number which does not change the lease information (this number should be for work orders only and default from the last work order generated for the resident)
- System should display all contact numbers from lease data
- System should allow last contact phone #'s and access information to be updated through the work order system
- System should maintain access information (ex: big dog)
- System should flag any pending work orders whenever a unit, building or property location is accessed by date, by craft, by resident, by address, by development.

ASSIGNING & APPROVING

- System should have the ability to code work orders as pending until supervisor reviews online and assigns
- System should continue to flag supervisor about pending work orders until they are assigned
- System should have the ability to sort unassigned work orders by user-defined categories (HID, emergency, routine, etc)
- System should have the ability to assign a work order to multiple employees
- System should have the ability to assign a work order to multiple trades

HANDHELD SPECIFICATIONS:

- Handheld should display standard stock items required to complete request for a specific unit
- Handheld allows travel time to be tracked separately from time spent on actual work order
- System sends wireless communication to Manager when access is unavailable for certain reasons
- System should allow any work order change to be made via handheld with appropriate security
- Handheld should allow printing device to be attached in order to give resident copy of completed work order
- Handheld should display stock available on-site
- Handheld should display stock available at central stores
- Handheld should display stock available at other developments
- Handheld should have the ability to accept electronic signatures

SERVICE CONTRACTS:

- System should flag employee when requested work is under a service contract
- System should track the start and end date of service contracts
- System should flag supervisors when contracts are about to expire
- System should allow users to assign a work order to a third-party vendor
- System should automatically route work orders via e-mail or fax to third-party vendors

PAPER WORK ORDERS:

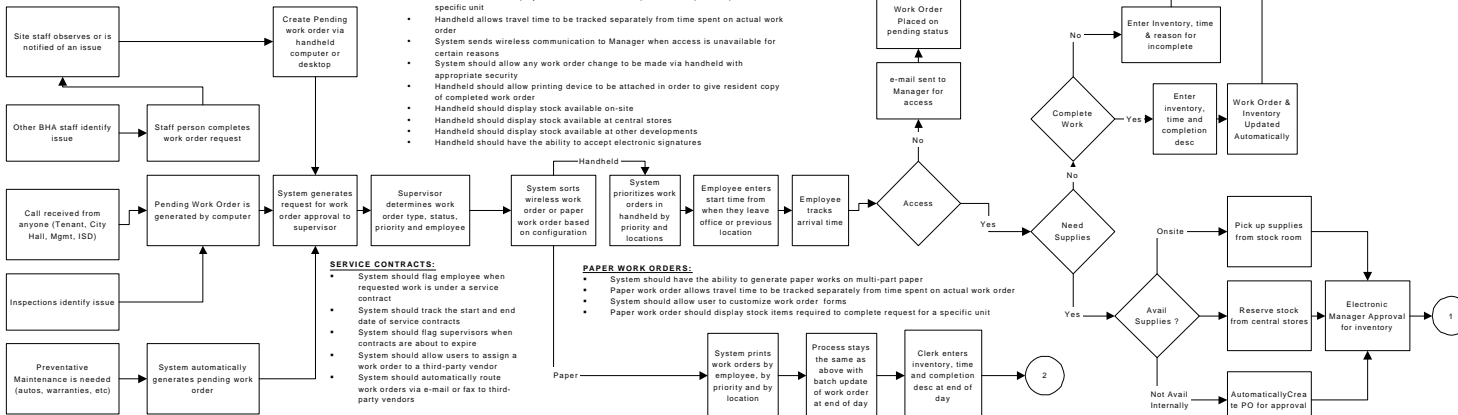
- System should have the ability to generate paper works on multi-part paper
- Paper work order allows travel time to be tracked separately from time spent on actual work order
- System should allow user to customize work order forms
- Paper work order should display stock items required to complete request for a specific unit
- System prints work orders by employee, by priority and by location
- Process stays the same as above with batch update of work order at end of day
- Clerk enters inventory, time and completion desc at end of day

General Specifications

- System must be easy to use and enter information (ex: few key strokes, menu driven, limit typing codes/categories to classify work performed)
- System should maintain multiple statuses: Open, Incomplete, Closed, Pending Supplies, Etc
- System should share data with rent collection to identify payment information versus last time a work order was completed, etc
- Handhelds should allow a resident electronically sign and check a box if the work order was completed satisfactorily
- System should use the employee number to track assignment/completion of work order
- System should link to payroll for pay rates to calculate automatic billings
- System should link to inventory for inventory costs to calculate billings
- System should link to time-tracking system (payroll)
- System should maintain a table of billable charges (lock change is \$100, etc)
- System should generate weekly, monthly and annual cost reports because on work done in a unit or a building
- Handheld should not allow data to be changed once the work order has been transmitted back to the system
- System should interface with purchasing / inventory system based on supply used in the work order
- System should maintain status of all work orders (ex: tasks completed, in progress, incomplete, etc.) and report on it at any time
- System should automatically flag supervisor to order supplies
- System should maintain an inventory of assets/items within units, such as type of faucets, refrigerator, door knobs, fixtures, etc
- System should allow users to review work order history, tenant history, review time and money spent and average time to complete different jobs/tasks for a particular unit for a particular time period.
- System should allow users to print work order and summary reports
- System should maintain all work orders and archive work orders as needed based on defined/flexible time periods
- System and process should route all work orders to supervisor for review and final close

UPDATING & CLOSING WORK ORDERS:

- System should have the ability to close a work order
- System should automatically calculate and bill residents when applicable and by work order line item
- System should generate a pending charge on the resident's ledger and flag the development manager for approval
- System should automatically update of stock inventory used
- System should maintain a listing of all non-stock inventory used
- System should allow user to create an item (without an assigned number) for the purpose of recording a non-inventory item
- System should maintain information related to how a stock or non-stock item was purchased including the purchase order and vendor contact information
- System should automatically flag employees to re-order stock when minimums are reached
- System should have the ability to re-assign work order without closing
- System should limit the number of work orders to be closed per development in a user-defined period
- System should maintain security levels for the types of information that each user can change
- System should maintain security levels for users to delete work orders



Generating Work Orders:

- System should allow work orders to be generated and updated via a wireless handheld device or via a computer
- System should allow Work Orders request to be generated by multiple departments based on security
- System should only create a actual work order when request has been reviewed and approved by appropriate staff
- System should allow pending (unassigned) work orders to be generated by anyone in the operations department
- System should allow work orders to be assigned and prioritized by a supervisor via computer or handheld device
- System should maintain both supervisor's handheld and computer with up to the minute information about pending work orders for all employees
- System should maintain rules for assigning neutral tasks to specific trades-persons
- System should prompt supervisor when they can take advantage of neutral tasks because trades-persons is scheduled in a particular unit
- System should not commit assignment of neutral tasks without approval of the supervisor
- System should maintain a history of all changes to a work order (including re-printing)
- System should maintain a listing of all of the users who made changes to the work order
- System should maintain the date work order was originally generated
- System should flag any re-printed work order with the original generate date
- System should allow work order to be reprinted on-demand without changing any data

REPORTING:

- System should allow all users to create ad hoc reporting queries
- System should have the ability to send copies of completed work orders with rent statements
- System should have the ability to automatically send closed work order to resident
- System should flag employees when work order could impact 5-Year capital plan (ex: roof leak work orders on a building which is scheduled for roof replacement)
- System should have the ability to randomly select a set percentage of work orders to audit
- System should automatically send Customer surveys on certain % of work orders by trade
- System should allow users to turn survey functions off and on
- System should maintain results of customer surveys
- System should automatically generate a letter to the resident (upon work order completion) informing resident of completed work
- System should link to Risk Management for warranty and insurance work
- System should allow multiple users to run the same report at the same time
- System should flag manager when multiple work orders have been created with the work order description, date and location (regardless of status)
- System should allow user to flag work order with # of repeat calls from the requester (staff person, resident, etc)

No.	Process	Requirement Description	P*	Comments
1.	Receiving a Work Order:	System should identify units by last name of occupant, by property or other user defined	1	
2.	Receiving a Work Order:	System should maintain a history of open work orders by user defined criteria (craft , unit, resident, date, type, reprinted, etc)	1	
3.	Receiving a Work Order:	System should be able to generate work orders for a building and / or for a development	1	
4.	Receiving a Work Order:	System should be able to generate work orders for a tenant and for a unit	1	
5.	Receiving a Work Order:	System should maintain up to date contact information for residents	1	
6.	Receiving a Work Order:	System should maintain a last contact number which does not change the lease information (this number should be for work orders only and default from the last work order generated for the resident	1	
7.	Receiving a Work Order:	System should display all contact numbers from lease data	1	
8.	Receiving a Work Order:	System should allow last contact phone #'s and access information to be updated through the work order system	1	
9.	Receiving a Work Order:	System should maintain access information (ex: big dog)	1	
10.	Receiving a Work Order:	System should flag any pending work orders whenever a unit, building or property location is accessed by date, by craft, by resident, by address, by development.	1	
11.	Assigning & Approving:	System should have the ability to code work orders as pending until supervisor reviews online and assigns	1	
12.	Assigning & Approving:	System should continue to flag supervisor about pending work orders until they are assigned	1	
13.	Assigning & Approving:	System should have the ability to sort unassigned work orders by user-defined categories (HID, emergency, routine, etc)	1	
14.	Assigning & Approving:	System should have the ability to assign a work order to multiple employees	1	

Legend:

P*riority	1 = Mandatory	2 = Important	3 = Nice to Have
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No.	Process	Requirement Description	P*	Comments
15.	Assigning & Approving:	System should have the ability to assign a work order to multiple trades	1	
16.	Handheld Specifications:	Handheld should display standard stock items required to complete request for a specific unit	2	
17.	Handheld Specifications	Handheld allows travel time to be tracked separately from time spent on actual work order	2	
18.	Handheld Specifications	System sends wireless communication to Manager when access is unavailable for certain reasons	2	
19.	Handheld Specifications	System should allow any work order change to be made via handheld with appropriate security	2	
20.	Handheld Specifications	Handheld should allow printing device to be attached in order to give resident copy of completed work order	3	
21.	Handheld Specifications	Handheld should display stock available on-site	2	
22.	Handheld Specifications	Handheld should display stock available at central stores	2	
23.	Handheld Specifications	Handheld should display stock available at other developments	3	
24.	Handheld Specifications	Handheld should have the ability to accept electronic signatures	1	
25.	Paper work orders:	System should have the ability to generate paper works on multi-part paper	1	
26.	Paper work orders:	Paper work order allows travel time to be tracked separately from time spent on actual work order	2	
27.	Paper work orders:	System should allow user to customize work order forms	1	
28.	Paper work orders:	Paper work order should display stock items required to complete request for a specific unit	2	
29.	Generating Work Orders:	System should allow work orders to be generated and updated via a wireless handheld device or via a computer	1	
30.	Generating Work Orders:	System should allow Work Orders request to be generated by multiple departments based on security	2	

Legend:

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No.	Process	Requirement Description	P*	Comments
31.	Generating Work Orders:	System should only create a actual work order when request has been reviewed and approved by appropriate staff	2	
32.	Generating Work Orders:	System should allow pending (unassigned) work orders to be generated by anyone in the operations department	1	
33.	Generating Work Orders:	System should allow work orders to be assigned and prioritized by a supervisor via computer or handheld device	1	
34.	Generating Work Orders:	System should maintain both supervisor's handheld and computer with up to the minute information about pending work orders for all employees	2	
35.	Generating Work Orders:	System should maintain rules for assigning neutral tasks to specific trades-persons	1	
36.	Generating Work Orders:	System should prompt supervisor when they can take advantage of neutral tasks because trades-persons is scheduled in a particular unit	1	
37.	Generating Work Orders:	System should not commit assignment of neutral tasks without approval of the supervisor	1	
38.	Generating Work Orders:	System should maintain a history of all changes to a work order (including re-printing)	1	
39.	Generating Work Orders:	System should maintain a listing of all of the users who made changes to the work order	1	
40.	Generating Work Orders:	System should maintain the date work order was originally generated	1	
41.	Generating Work Orders:	System should flag any re-printed work order with the original generate date	1	
42.	Generating Work Orders:	System should allow work orders to be reprinted on-demand without changing any data	1	
43.	Updating & Closing Work Orders:	System should have the ability to close a work order	1	
44.	Updating & Closing Work Orders:	System should automatically calculate and bill residents when applicable and by work order line item	1	

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No.	Process	Requirement Description	P*	Comments
45.	Updating & Closing Work Orders:	System should generate a pending charge on the resident's ledger and flag the development manager for approval	1	
46.	Updating & Closing Work Orders:	System should automatically update of stock inventory used	1	
47.	Updating & Closing Work Orders:	System should maintain a listing of all non-stock inventory used	2	
48.	Updating & Closing Work Orders:	System should allow user to create an item (without an assigned number) for the purpose of recording a non-inventory item	2	
49.	Updating & Closing Work Orders:	System should maintain information related to how a stock or non-stock item was purchased including the purchase order and vendor contact information	2	
50.	Updating & Closing Work Orders:	System should automatically flag employees to re-order stock when minimums are reached	1	
51.	Updating & Closing Work Orders:	System should have the ability to re-assign work order without closing	1	
52.	Updating & Closing Work Orders:	System should limit the number of work orders to be closed per development in a user-defined period	2	
53.	Updating & Closing Work Orders:	System should maintain security levels for the types of information that each user can change	1	
54.	Updating & Closing Work Orders:	System should maintain security levels for users to delete work orders	1	
55.	Reporting:	System should allow all users to create ad hoc reporting queries	1	
56.	Reporting:	System should have the ability to send copies of completed work orders with rent statements	2	
57.	Reporting:	System should have the ability to automatically send closed work order to resident	3	

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No.	Process	Requirement Description	P*	Comments
58.	Reporting:	System should flag employees when work order could impact 5-Year capital plan (ex: roof leak work orders on a building which is scheduled for roof replacement)	2	
59.	Reporting:	System should have the ability to randomly select a set percentage of work orders to audit	1	
60.	Reporting:	System should automatically send Customer surveys on certain % of work orders by trade	2	
61.	Reporting:	System should allow users to turn survey functions off and on	2	
62.	Reporting:	System should maintain results of customer surveys	2	
63.	Reporting:	System should automatically generate a letter to the resident (upon work order completion) informing resident of completed work	3	
64.	Reporting:	System should link to Risk Management for warranty and insurance work	2	
65.	Reporting:	System should allow multiple users to run the same report at the same time	1	
66.	Reporting:	System should flag manager when multiple work orders have been created with the work order description, date and location (regardless of status)	2	
67.	Reporting:	System should allow user to flag work order with # of repeat calls from the requestor (staff person, resident, etc)	3	
68.	General Specifications:	System must be easy to use and enter information (ex: few key strokes, menu driven, limit typing codes/categories to classify work performed)	1	
69.	General Specifications:	System should maintain multiple statuses: Open, Incomplete, Closed, Pending Supplies, Etc	1	
70.	General Specifications:	System should share data with rent collection to identify payment information versus last time a work order was completed, etc	2	
71.	General Specifications:	Handhelds should allow a resident electronically sign and check a box if the work order was completed satisfactorily	2	

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No.	Process	Requirement Description	P*	Comments
72.	General Specifications:	System should use the employee number to track assignment/completion of work order	1	
73.	General Specifications:	System should link to payroll for pay rates to calculate automatic billings	2	
74.	General Specifications:	System should link to inventory for inventory costs to calculate billings	2	
75.	General Specifications:	System should link to time-tracking system (payroll)	2	
76.	General Specifications:	System should maintain a table of billable charges (lock change is \$100, etc)	1	
77.	General Specifications:	System should generate weekly, monthly and annual cost reports because on work done in a unit or a building	1	
78.	General Specifications:	Handheld should not allow data to be changed once the work order has been transmitted back to the system	1	
79.	General Specifications:	System should interface with purchasing / inventory system based on supply used in the work order	1	
80.	General Specifications:	System should maintain status of all work orders (ex: tasks completed, in progress, incomplete, etc.) and report on it at anytime	1	
81.	General Specifications:	System should automatically flag supervisor to order supplies	1	
82.	General Specifications:	System should maintain an inventory of assets/items within units, such as type of faucets, refrigerator, door knobs, fixtures, etc	1	
83.	General Specifications:	System should allow users to review work order history, tenant history, review time and money spent and average time to complete different jobs/tasks for a particular unit for a particular time period.	1	
84.	General Specifications:	System should allow users to print work order and summary reports	1	
85.	General Specifications:	System should maintain all work order history, and archive work orders as needed based on defined/flexible time periods	1	

Legend:

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No.	Process	Requirement Description	P*	Comments
86.	General Specifications	System and process should route all work orders to supervisor for review and final close	1	
87.	Service Contracts:	System should flag employee when requested work is under a service contract	2	
88.	Service Contracts:	System should track the start and end date of service contracts	2	
89.	Service Contracts:	System should flag supervisors when contracts are about to expire	2	
90.	Service Contracts:	System should allow users to assign a work order to a third-party vendor	2	
91.	Service Contracts:	System should automatically route work orders via e-mail or fax to third-party vendors	2	
92.	Service Contracts:	System should treat warranty work on capital projects as service contracts with the vendors	2	

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