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| **Department:** | **Public Works** | **Safework Procedure** |  |
| **Subject:** | **Crane Operation (Unit #411,416)** | |

**CRANE OPERATION (UNIT #411,416)**

**PURPOSE:**

City of Nanaimo Units #411 and #416 are equipped with AutocraneTM Mobile Cranes. These cranes are an effective means oflifting a variety of objects in or around specific job sites. The crane on Unit #411 is used primarily for removing and replacing submersible pumps from our sewer pump stations.

**HAZARDS:**

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| * Working around overhead hazards | * Working near energized equipment | * Working around traffic and mobile equipment. |
| * Working around biohazards | * Working in a confined space |  |

**PPE:**

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| * Hardhat | * Eye protection | * Hearing protection (when required) |
| * Gloves | * Safety boots | * High -visibility vest or coveralls |

*\*\*Note: Make sure that operating manual has been thoroughly read by all crane operation personnel and supervisors*

**Pre-Setup:**

* Set-up safe work zone
* Use traffic control when required
* Park truck to allow safe and easy operation of crane
* Install wheel chocks on rear wheels

**Setup:**

* With vehicle in park and emergency brake applied, engage P.T.O
* Lower stabilizers to steady and level truck (use stabilizer pads when required.)
* Be sure swing area around crane is clear of obstructions

**Procedure:**

* Remove transmitter from cab or storage area and power transmitter on
* Open passenger side rear compartment and engage hydraulic lever for crane and stabilizer controls.
* Detach hook from deadman, crane is now ready for operation.
* Always boom up before rotating so the boom will clear boom support
* Be sure to maintain clearance between boom crane and hoist hook when extending boom.
* Commence lifting operations

*\*\*Operate crane within specified load limits while watching for and maintaining required clearances for overhead hazards.*

Submersible Pump Removal:

* Refer to steps 1.0 through 3.0 for crane set-up and procedure
* Open appropriate pump well lid and do confined space air quality test
* Open kiosk and turn off pump control
* De-energize pump isolation switch and lock-out with approved lock-out device
* Operate crane in accordance with crane operation guide to remove, repair and replace pump
* Remove lock-out device and re-energize pump isolation switch
* Return pump control to automatic position
* Close and lock pump well

**Post Set Up:**

* Return Crane and hook to travel position
* Return outriggers to travel position
* Disengage P.T.O
* Tear down safe work zone

**Summary:**

* Keep vehicle in as level position as possible while loading or unloading
* **Always** set vehicle emergency brake before beginning crane operations
* **Always** use outriggers during crane operations
* Keep objects and personnel clear of crane path during operation
* Keep load as close to ground as possible
* Crane and hook inspections should be done on a regular basis and recorded in inspection log
* **Never** exceed load capacities and always refer to rigging guide for awkward lifts.

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| Date written: 2010-Mar-30  Revision Date | Written by: Riley St. Luke  Manager’s Approval: John Elliot |