**PHYSICAL DEMANDS DESCRIPTION (PDD)**

<table>
<thead>
<tr>
<th>Date</th>
<th>June 16, 2006</th>
<th>Analyst</th>
<th>Jennifer Yorke  B. Sc. (Hons Kin)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department</td>
<td>High Rise Residential</td>
<td>Job Title</td>
<td>Electrician</td>
</tr>
</tbody>
</table>

**PHYSICAL DEMANDS**

<table>
<thead>
<tr>
<th>PHYSICAL DEMANDS</th>
<th>Not Component</th>
<th>*FREQUENCY</th>
<th>LOAD (object/tool)</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Seldom</td>
<td>Minor</td>
<td>Required</td>
<td>Major</td>
</tr>
</tbody>
</table>

**STRENGTH**

- **Lifting**
  - x 20 5
  - Comments: Lifting materials off floor; Loads above 23 Kg lifted by 2 workers
- **Carrying**
  - x 20 5
  - Comments: A tool belt is worn to carry tools – hammer, drill (approx. 5Kg); carrying conduit
- **Pushing**
  - x
- **Pulling**
  - x
- **Handling**
  - x 20 1.5
  - Comments: Materials and tools handling (eg. Cordless drill)
- **Throwing**
  - x
- **Gripping**
  - Power Grasp
  - x
  - Comments: Drilling; Tying conduit to rebar
  - Pinch Grasp
  - x
  - Comments: Gripping wires; picking up small materials
- **Reaching**
  - Above Shoulder
  - x
  - Comments: Overhead work
  - Below Shoulder
  - x
  - Comments: Plug installations; wire pulling
  - To the Side
  - x
  - Comments: Awkward positions during overhead installations

**POSTURES**

- **Shoulder**
  - Abduction
  - x
  - Comments: Overhead work; Wire pulling
  - Flexion
  - x
  - Comments: Used for balance during slab work
- **Hip**
  - Abduction
  - x
  - Comments: Slab work (attaching conduit to rebar), installation of plugs
  - Flexion
  - x
  - Comments: Slab work, installing plugs & low level work
  - Extension
  - x
  - Comments: Overhead installation of conduit, lighting fixtures
  - Side Bend
  - x
  - Comments: Overhead work; ladder work
  - Twist
  - x
  - Comments: Overhead work; ladder work
- **Trunk**
  - Flexion
  - x
  - Comments: Overhead work; ladder work
  - Extension
  - x
  - Comments: Overhead work; ladder work
  - Side Bend
  - x
  - Comments: Overhead installation of conduit, lighting fixtures
  - Twist
  - x
  - Comments: Overhead work; ladder work
- **Neck**
  - Flexion
  - x
  - Comments: Overhead work; ladder work
  - Extension
  - x
  - Comments: Overhead installation of conduit, lighting fixtures
  - Side Bend
  - x
  - Comments: Overhead work; ladder work
  - Twist
  - x
  - Comments: Overhead work; ladder work
- **Sitting**
  - x
  - Comments: Work is performed standing, crouching or kneeling
- **Standing**
  - x
- **Walking**
  - x
- **Climbing**
  - x
  - Comments: Climbing stairs & ladders
- **Crawling**
  - x
- **Crouching**
  - x
  - Comments: Putting in plug fixtures; low level finishing
- **Kneeling**
  - x
  - Comments: Installation of plugs
- **Balancing**
  - x
  - Comments: Ladder use, carrying things up stairs, uneven terrain on slab
- **Foot Action**
  - One Foot
  - x
  - Comments: Kneeling & slab work
  - Feet
  - x
- **Fine Finger Movements**
  - x
  - Comments: Selection & insertion of wire into switches, plugs, etc.

**FREQUENCY**

- **Seldom** = Not always performed during completion of job
- **Major** = Frequent Repetition for 50-75% of job
- **Minor** = Performed less than 25% of job
- **Required** = Frequent Repetition for 25%-50% of job
- **Major** = Frequent Repetition for more than 50% of job
# PHYSICAL DEMANDS DESCRIPTION (PDD)

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<th>Seldom</th>
<th>Minor</th>
<th>Required</th>
<th>Major</th>
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<tbody>
<tr>
<td><strong>Hearing</strong></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conversations</td>
<td></td>
<td>x</td>
<td></td>
<td>During initial organization &amp; to organize fixture &amp; conduit layout</td>
<td></td>
</tr>
<tr>
<td>Other Sounds</td>
<td></td>
<td>x</td>
<td></td>
<td>Sound of overhead crane movement; emergency alarms</td>
<td></td>
</tr>
<tr>
<td><strong>Vision</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Far</td>
<td>x</td>
<td></td>
<td>Past 5 feet; seeing potential obstacles, conduit layout</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Near</td>
<td>x</td>
<td></td>
<td>Rough-in &amp; finishing of fixtures; conduit installation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td>x</td>
<td></td>
<td>Used in installation of plugs switches, wire identification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth</td>
<td>x</td>
<td></td>
<td>Used in installation of plugs, switches &amp; lighting fixtures</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Perception</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spatial – organization</td>
<td>x</td>
<td></td>
<td>Conduit &amp; fixture layout during slab work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Form - recognition</td>
<td>x</td>
<td></td>
<td>Distinguishing plug fixtures from switch fixtures, etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Feeling</strong></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Reading</strong></td>
<td>x</td>
<td></td>
<td>Initial layout of fixtures during slab</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Writing</strong></td>
<td>x</td>
<td></td>
<td>Used to mark out layout of fixtures during slab</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Keying/Typing</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Speech</strong></td>
<td>x</td>
<td></td>
<td>Communicating work accomplished and work to be done</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Outside Work</strong></td>
<td>x</td>
<td></td>
<td>Slab work &amp; work on unfinished floors</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hot</strong></td>
<td>x</td>
<td></td>
<td>Average max. temp. (for the GTA) in July is 29C. Work continues during hot weather.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cold</strong></td>
<td>x</td>
<td></td>
<td>Work continues during the winter months – extreme cold limits ability to work</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Humid</strong></td>
<td>x</td>
<td></td>
<td>Usually the weather is humid during the summer months – work continues during humid weather</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dry</strong></td>
<td>x</td>
<td></td>
<td>Outdoor slab work stops during heavy rain; work mostly in dry weather/environments</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dust</strong></td>
<td>x</td>
<td></td>
<td>Construction site; drywall dust</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vapour Fumes</strong></td>
<td>x</td>
<td></td>
<td>Oil spray used during slab work, paint</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Noise</strong></td>
<td>x</td>
<td></td>
<td>Construction equipment, drilling, sawing, crane movement</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vibration</strong></td>
<td>Whole Body</td>
<td>x</td>
<td></td>
<td>Drilling</td>
<td></td>
</tr>
<tr>
<td>Upper Extremity</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Contact Stress</strong></td>
<td>x</td>
<td></td>
<td>Drilling, wire pulling, etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Striking with Hand/Fist</strong></td>
<td>x</td>
<td></td>
<td>Striking is accomplished with hand tools (eg. Hammer)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Moving Objects</strong></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hazardous Machines</strong></td>
<td>x</td>
<td></td>
<td>Tools used are safe with proper protocol</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Electrical</strong></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sharp Tools</strong></td>
<td>x</td>
<td></td>
<td>Conduit cutters</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Radiant/Thermal Energy</strong></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Slippery</strong></td>
<td>x</td>
<td></td>
<td>The slab can become slippery when it rains</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Congested Worksites</strong></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Chemical Irritants</strong></td>
<td></td>
<td></td>
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## SENSORY/PERCEPTUAL

- **Speech**: Communicating work accomplished and work to be done
- **Outside Work**: Slab work & work on unfinished floors
- **Cold**: Work continues during the winter months – extreme cold limits ability to work
- **Humid**: Usually the weather is humid during the summer months – work continues during humid weather
- **Dry**: Outdoor slab work stops during heavy rain; work mostly in dry weather/environments
- **Dust**: Construction site; drywall dust
- **Vapour Fumes**: Oil spray used during slab work, paint
- **Noise**: Construction equipment, drilling, sawing, crane movement
- **Vibration**: Whole Body, Upper Extremity
- **Contact Stress**: Drilling, wire pulling, etc.
- **Striking with Hand/Fist**: Striking is accomplished with hand tools (eg. Hammer)
- **Moving Objects**: Tools used are safe with proper protocol
- **Hazardous Machines**: Conduit cutters
- **Electrical**: Conduit cutters
- **Sharp Tools**: Conduit cutters
- **Radiant/Thermal Energy**: Ongoing
- **Slippery**: The slab can become slippery when it rains
- **Congested Worksites**: Ongoing
- **Chemical Irritants**: Ongoing

## WORK ENVIRONMENT

- **Works Independent but in Group**: Work is primarily in at least groups of 2
- **Operate Equipment/Machinery**: Drills
- **Machine Paced**: Depends on work rate of other trades (eg. Iron workers)
- **Production Quotas**: Work must be done in a specific timeframe
- **Deadline Pressures**: Fairly quick, continuous work rate
- **Irregular/Extended Hours**: Ongoing

## PREPARED BY

<table>
<thead>
<tr>
<th>Prepared by:</th>
<th>Jennifer Yorke  B. Sc. (Hon. Kin.)</th>
</tr>
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<tbody>
<tr>
<td>Supervised by:</td>
<td>Syed Naqvi, PhD, CCPE (Ergonomist, OHCOW Inc.) &amp; Gary Majesky (IBEW L.U. 353)</td>
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*FREQUENCY

- **SELDOM** = Not always performed during completion of job
- **MINOR** = Performed less than 25% of job
- **REQUIRED** = Frequent Repetition for 25%-50% of job
- **MAJOR** = Frequent Repetition for more than 50% of job