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Recommendation

Maintenance Recommendation
for Traffic Poles

TTR 805.300
January 2012

1.0   Pole Maintenance

(a)   Check for excessive denting, damaged anchor bolts, missing handhole cover, missing pole cap, plumbness of pole. Make immediate repairs or report any damages for scheduled repairs.

(b)   Retorque anchor nuts to 150 Nm (110 foot pounds), replumb pole if required.

(c)   Lubricate anchor bolts.

(d)   Check that water is not getting into the ducts.

(e)   Inspect concrete footings for vehicle damage, frost heaves, major cracks, water entering ducts.

(f)   Note and report major cracks and spalling in concrete or excessive frost heaving for footing replacement.

2.0   Anchor Assembly Replacement

2.1   Replacement of Pole Anchor Assembly Type I

- Remove (chip-out) base to the existing anchorage depth).

- Maintain the structural integrity of the existing base reinforcement ties and vertical bars.

- Caution should be taken not to damage the existing electrical duct sleeves or replace if damaged.

- Provide a bonding agent between the existing and new concrete. Place as per manufacturer's specification.

- Ensure existing surface is cleaned prior to bonding agent.

- Provide fibre tubing (as required) for new concrete pour and remove 150mm from top after new concrete hardens.

- Provide template and set new anchor assembly per MTTD 807.015.

- Concrete compressive strength to be 30mPa minimum.

2.2   Replacement of Pole Anchor Assembly Type II

Remove (chip-out) concrete around the damage anchor(s).

- Maintain the structural integrity of the existing concrete base reinforcement ties and vertical bars.

- Caution should be taken not to damage the existing electrical duct sleeves or

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replace if damaged.

- Cut out damaged threaded rebar anchor(s) and provide tension splice sleeves (e.g. malleable or metal filled sleeve) between the existing anchors (rebar) and the new threaded one-end rebar. Size of rebar to match existing.

- Provide a bonding agent between the existing and new concrete. Place as per manufacturer's specification.

- Ensure existing surface is cleaned prior to bonding agent.

- Provide fibre tubing (as required) for new concrete pour and remove 150mm from top after new concrete hardens.

- Provide template and set new anchor assembly per MTTD 807.016.

- Concrete compressive strength to be 30mPa minimum.

3.0   Pole Replacement Procedure

3.1   Initial Site Visit

.1   If the pole is damaged such that immediate replacement is required go to step 3.2.

.2   If pole damage is sufficient to warrant replacement at a later date then the following steps should be taken:

- Remove any debris from the roadway/boulevard and make the area safe.

- Ensure pole is secure, plumb pole if necessary.

- Relamp all signal indications.

- Inspect head(s) and wiring connections. Make repairs as required.

- Attach approved marker to pole to note that it has been inspected.

- Note the equipment which needs replacement.

- Report damage to Toronto Transportation

3.2   Pole Replacement

.1   Prior to replacing the pole, the following should be done:

- Remove any debris from the roadway and make the area safe.

- Check wiring and determine if pole is "live".
- If pole "live", either isolate the pole wiring or with the assistance of a police officer to direct traffic de-energize the signals.

.2   Removal of the damaged pole:

- Disconnect the pole wiring.

- Remove the anchor bolts or nuts and extract the pole.

- Strip the damaged pole of all hardware and inspect hardware, salvage any reusable items.

- If feeder cable is OK, strip cable back 300mm or far enough to ensure conductors are intact.

3.   If required, install temporary stand and ensure stand is secure and properly weighted down.

4.   Install new pole and plumb pole as per MT 805-M.

5.   Reinstall salvaged equipment or install new replacements per MT 808-M.

6.   Energize pole and inspect signal displays for proper alignment and operation.