

## REINFORCED CONCRETE PILE BASES

#### 2.0 CONCRETE BASES

- 1. MATERIALS FOR CONCRETE PILES SHALL BE AS SPECIFIED ON THE DRAWING & IN ACCORDANCE WITH CW 2160-R4 OF THE CITY OF WINNIPEG STANDARD CONSTRUCTION SPECIFICATIONS.
- 2. EXCAVATION FOR PILES SHALL BE DONE BY AUGERING TO SIZES SHOWN. CASING SHALL BE TO PREVENT THE SIDES OF THE AUGERED HOLE FROM SLOUGHING IN, CASING SHALL BE SUPPLIED & INSTALLED BY THE CONTRACTOR. THE CASING DIAMETER SHALL NOT BE LESS THAN 3/4" SMALLER THAN THE PILE EXCAVATION.
- 3. MATERIALS FOR CONCRETE PILES SHALL BE AS SPECIFIED ON THE DRAWING & IN ACCORDANCE WITH CW 2160-R4 OF THE CITY OF WINNIPEG STANDARD CONSTRUCTION SPECIFICATIONS.
- 4. THE CONCRETE PILE SHALL BE EXCAVATED & PLACED WITH CONCRETE ON THE SAME DAY
- PILE REINFORCEMENT SHALL BE SUPPLIED & INSTALLED IN ACCORDANCE WITH THE CONSTRUCTION DRAWING DETAIL
- 6. THE PILE EXCAVATION SHALL BE KEPT DRY AT ALL TIMES & WATER PUMPED OUT IF IT ACCUMULATES.
- CONCRETE PLACING SHALL BE CONTINUOUS FROM TOP OF PILE & PUDDLING OR RODDING CARRIED CONSTANTLY TO BRING AIR BUBBLES TO THE SURFACE & PRODUCE A UNIFORM STRUCTURE. REMOVE SONOTUBE AFTER CURING OF CONCRETE.
- 8. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 36 HOURS (WORKING DAYS) NOTICE TO THE CONTRACT ADMINISTRATOR PRIOR TO ANY CONCRETE PLACEMENT TO ALLOW FOR THE INSPECTION OF PILE DEPTHS & DIAMETERS, STEEL REINFORCING SIZES & LOCATIONS TO ENSURE ALL PILE HOLES ARE DRY. IF NECESSARY, PUMP HOLES DRY PRIOR TO CONCRETE PLACEMENT.
- 9. THE PORTION OF THE PILE TO BE EXPOSED ABOVE THE FINISHED GRADE SHALL BE FORMED WITH SONOTUBE. THE TOP OF THE PILE SHALL BE FINISHED TO A FLAT SMOOTH SURFACE TO THE DESIGN ELEVATION.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING GOOD ALL AREAS DAMAGED BY HIS OPERATIONS IN CONNECTION WITH THIS CONTRACT.
- THE CONTRACTOR SHALL SUBMIT FOR REVIEW COPIES OF THE PILE INSPECTION REPORT FOR THE CONCRETE PILING WITH A REGISTERED PROFESSIONAL STRUCTURAL ENGINEERS STAMP TO THE CONTRACT ADMINISTRATOR.

## NOTES:

- 1. CONCRETE BASES SHALL BE TYPE 50 SULPHATE RESISTANT HAVING A 28 DAY COMPRESSIVE STRENGTH OF 30MPa & IN ACCORDANCE WITH CW 2160-R4, ANCHOR PLATES & BASE PLATES SHALL BE STANDARD STRUCTURAL STEEL SECTIONS MEETING THE CURRENT CITY OF WINNIPEG STANDARDS & OF THE DIMENSIONS AS INDICATED ON THE DRAWINGS & DETAILS.
- 2. BACKFILL TRENCH WITH CLEAN EARTH FILL TO 4" BELOW THE SURFACE. BACKFILL WITH 3" TOPSOIL & SOD TO MATCH SURFACE
- BACKFILL TRENCH AT ASPHALT SURFACE WITH 3/4" DOWN CRUSHED LIMESTONE COMPACTED @ 6" LIFTS. TOP WITH 2" ASPHALT SURFACE TO MATCH EXISTING
- 4. REMOVAL AND DISPOSAL OF EXISTING POLES AND FIXTURES

# **ELECTRICAL WORK:**

- 1. ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE CANADIAN ELECTRICAL CODE, PROVINCIAL, MUNICIPAL & OTHER CODES, RULES & REGULATIONS.
- 2. PREPARE & SUBMIT TO THE PROPER AUTHORITIES ALL NECESSARY PERMITS & PAY ALL APPLICABLE
- UPON COMPLETION & BEFORE FINAL PAYMENT IS MADE, PRESENT TO THE CONTRACT ADMINISTRATOR A CERTIFICATE OF APPROVAL FOR ALL ELECTRICAL WORK FOR THE INSPECTION DEPARTMENT HAVING JURISDICTION.
- 4. ELECTRICAL WORK: SUPPLY & INSTALL (2) 4 POLE CONTACTORS WITH RATING TO SUIT LIGHT FIXTURES, (2) CONTACTOR COILS IN NEMA 1 ENCLOSE C/W (2) - 2 SINGLE POLE TOGGLE SWITCH (SPEC, GRADE) & A 24 HOUR, 7 DAY TIMER CLOCK TO OPERATE CONTACTORS, WHICH SWITCHES RINK LIGHTS (RECOMMENDED MANUFACTURERS: ALLEN-BRADLEY, SQUARE D, SIEMENS OR APPROVED EQUAL).

#### 5. LIGHT FIXTURES:

LED FIXTURES MUST BE ON MB HYDRO POWERSMART COMMERCIAL LIGHTING PROGRAM ELIGIBLE PRODUCT LIST:

- 1) STANDARD OF ACCEPTANCE CREE MODELOSQ-HO-A-AA-4ME-65L-57K-U 120V-277V : ADJUSTABLE MOUNT ARM, ASYMMETRIC, TYPE IV MEDIUM DISTRIBUTION, 550 WATTS, 5700K. 70CRI, 68,691 LUMENS SHOP DRAWINGS MUST BE SUBMITTED TO CONTRACT ADMINISTRATOR FOR APPROVAL.
- 2) FIXTURE COLOUR TO MATCH POLE.
- FIXTURE MOUNTING:
  - 1) SINGLE FIXTURE POLE MOUNT BRACKET REQUIRED FOR SINGLE FIXTURE.
  - 2) DOUBLE FIXTURE POLE MOUNT BRACKET REQUIRED FOR DOUBLE FIXTURE.
  - 3) TRIPLE FIXTURE POLE MOUNT BRACKET REQUIRED FOR TRIPLE FIXTURE.
  - 4) FIXTURE POLE MOUNT BRACKETS COLOUR TO MATCH POLE.
- SAFETY LIGHTING:
  - 1) WEATHERPROOF PHOTOCELL INSTALLATION PER FIXTURE
  - 2) LED FIXTURE MUST BE ON MB HYDRO POWERSMART COMMERCIAL LIGHTING PROGRAM ELIGIBLE PRODUCT LIST
  - 3) STANDARD OF ACCEPTANCE -120V-277V: -40 DEGREE FLOOD OPTIC, 25,000 LUMENS OR GREATER. SHOP DRAWINGS MUST BE SUBMITTED TO CONTRACT ADMINISTRATOR FOR APPROVAL 4) FIXTURE COLOUR TO MATCH POLE.
- 8. ALL NEW LIGHT FIXTURES SHALL BE AIMED TO SUIT SITE CONDITIONS.

## LIGHT POLE SYSTEMS:

- SHALL BE 30 FOOT, 2 3/8" TENON 7GAUGE NOVA POLE STRAIGHT TAPER PART NUMBER 101-70-1 NST 30-F. IT SHALL INCLUDE, INTERNAL CANISTER DAMPER, TOP MOUNT DAMPER AND TAMPERPROOF CUPWASHER IN ACCORDANCE WITH ASTM 3209 GRADE 300B-H14. THE COVER SHALL BE SECURED TO THE ACCESS PANEL BY 2 3/8" X 2 1/2" LONG FULLY THREADED HEXAGONAL HEAD TYPE 316 STAINLESS STEEL BOLTS. EACH BOLT COMPLETE WITH TAMPER PROOF CUPWASHER WITH AN INTERNAL DIAMETER OF 13/16".
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW & APPROVAL OF POLE INCLUDING INTERNAL CANISTER DAMPER AND TOP MOUNT DAMPER, FIXTURES, CONCRETE BASES & ANCHOR DETAILS TO CONTRACT ADMINISTRATOR.
- POLES SHALL BE LOCATED AS PER THE CONTRACT ADMINISTRATOR. EXACT LOCATIONS OF THE LIGHT POLES SHALL BE INSPECTED & APPROVED BY THE CONTRACT ADMINISTRATOR PRIOR TO EXCAVATION FOR NEW CONCRETE PILES.
- MOUNT POLES ON CONCRETE BASES PLUMB & TRUE, UTILIZING METAL SHIMS AS REQUIRED. ENSURE COMPLETE ELECTRICAL CONNECTION & SECURELY ANCHOR POLES TO CONCRETE PILES.

