

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Decorative 3-Rail Aluminum Picket Fence.
- B. Related Requirements:
 - 1. Section 03 30 00 "Cast-in-Place Concrete" for concrete.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings Required:
 - 1. Include plans, elevations, sections, post spacing, mounting/ attachment details and locking mechanisms for the following:
 - a. Decorative Aluminum Fence.
 - b. Decorative Picket Fence.
- C. Samples: For each fence material and for each color specified.
 - 1. Provide Samples 300 mm in length for linear materials.
 - 2. Provide Samples 300 mm square for bar grating and sheet or plate materials.
- D. Product Schedule: For site metal fencing.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For site furnishings to include in maintenance manuals.

1.6 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: Fabricator of products.

- B. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for fabrication and installation. Mockups may form a part of the completed work.
 - 1. Include 1 panel of fence complying with requirements.
 - 2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.8 WARRANTY

- A. Manufacturer's Warranty: Provide manufacturer's standard limited warranty against defects in materials and workmanship for a period of 5 Years.

PART 2 - PRODUCTS

2.1 DECORATIVE 3-RAIL ALUMINUM FENCE

- A. Manufacturer: Knotwood Aluminum Fencing – Knotwood, 404 – 12914 Anvil Way, Surrey, BC V3W 8E7, (604) 501-0151, ext 311/316.
- B. Product:
 - 1. Material: Aluminum.
 - 2. Style: Manufacturer's standard with 3 rails.
 - 3. Length: As indicated in the drawings.
 - 4. Overall Height: As indicated in the drawings.
 - 5. Overall Width: As indicated in the drawings.
 - 6. Overall Depth: As indicated in the drawings.
 - 7. Accessories: Manufacturer's standard components.
 - 8. Fasteners: Manufacturer's standard hardware.
 - 9. Installation Method: Embedded in concrete footings as indicated in the drawings.
 - 10. Finish: Black Ash simulated wood pattern.

2.2 DECORATIVE ALUMINUM FENCES - FENCES MADE FROM ALUMINUM EXTRUSIONS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. Iron Eagle Industries, Inc.
- B. Product:
 - 1. Material: Aluminum.
 - 2. Style: Manufacturer's standard 'Iron Eagle II' Series.
 - 3. Length: As indicated in the drawings.
 - 4. Overall Height: As indicated in the drawings.
 - 5. Overall Width: As indicated in the drawings.
 - 6. Overall Depth: As indicated in the drawings.
 - 7. Post Cap: As indicated in the drawings.
 - 8. Installation Method: Embedded in concrete retaining wall or surface mounted on concrete paving as indicated in the drawings.
 - 9. Finish: Black Powder Coat.

2.3 ALUMINUM

- A. Aluminum, General: Provide alloys and tempers with not less than the strength and durability properties of alloy and temper designated in paragraphs below for each aluminum form required.
- B. Extrusions: ASTM B 221M, Alloy 6063-T5.
- C. Tubing: ASTM B 429/B 429M, Alloy 6063-T6.
- D. Plate and Sheet: ASTM B 209M, Alloy 6061-T6.
- E. Die and Hand Forgings: ASTM B 247M, Alloy 6061-T6.
- F. Castings: ASTM B 26/B 26M, Alloy A356.0-T6.

2.4 COATING MATERIALS

- A. Polyurethane Intermediate Coat and Topcoat: Complying with MPI #72 and compatible with undercoat.

2.5 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
 - 1. For aluminum, provide type and alloy as recommended by producer of metal to be welded and as required for strength and compatibility in fabricated items.
- B. Concrete: Normal-weight, air-entrained, ready-mix concrete complying with requirements in Section 033000 "Cast-in-Place Concrete" with a minimum 28-day compressive strength of 20 MPa, 75-mm slump, and 25-mm maximum aggregate size or dry, packaged, normal-weight concrete mix complying with ASTM C 387/C 387M mixed with potable water according to manufacturer's written instructions.
- C. Nonshrink Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107/C 1107M and specifically recommended by manufacturer for exterior applications.

2.6 ALUMINUM FINISHES

- A. Baked-Enamel or Powder-Coat Finish: AAMA 2603 except with a minimum dry film thickness of 0.05 mm. Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.
 - 1. Color and Gloss: As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for site clearing, earthwork, pavement work, construction layout, and other conditions affecting performance of the Work.
- B. Do not begin installation before final grading is completed unless otherwise permitted by Architect.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 152.5 m or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.

3.3 DECORATIVE FENCE INSTALLATION

- A. Install fences according to manufacturer's written instructions.
- B. Install fences by setting posts as indicated and fastening rails and infill panels to posts. Peen threads of bolts after assembly to prevent removal.
- C. Post Setting: Set posts in concrete footing at indicated spacing.
 - 1. Posts Set into Voids in Concrete: Form or core drill holes not less than 20 mm larger than outside diagonal dimension of post.
 - a. Extend posts at least 125 mm into concrete.
 - b. Clean holes of loose material, insert posts, and fill annular space between post and concrete with non-shrink, waterproof grout, mixed and placed to comply with grout manufacturer's written instructions. Finish and slope top surface of grout to drain water away from post.
 - 2. Space posts uniformly at standard manufacturers panel size.

3.4 PROTECTION

- A. Clean and protect products in accordance with the manufacturer's recommendations.
- B. Touch-up, repair or replace damaged products before substantial completion.
 - 1. Touch-up any necessary areas by following the manufacturer instructions.
 - 2. Touch-up paint available from the manufacturer.
- C. Level uneven areas due to excavations created by fence installation.

END OF SECTION