

May 16, 2017

HOUSING AUTHORITY OF THE CITY OF PUEBLO
and El Centro Pueblo Development Corporation, Inc.
201 S. Victoria Avenue, Pueblo, CO 81003

ADDENDUM 2

BID NUMBER: I.F.B. 17-524-RAD
PROJECT: Infrastructure & New Construction of 72 Units
LOCATION: Uplands Townhomes, Pueblo, Colorado

THIS ADDENDUM CONTAINS 3 PAGES, 4 ATTACHMENTS, 23 DRAWINGS

This Addendum is issued by the Owner for all known bidders. Bidders shall attach this Addendum to the Scope of Work and acknowledge receipt on the Bid Proposal Forms. All information and instructions given herein shall become a part of the Contract documents.

SPECIFICATIONS ITEMS

Item No. 1

INVITATION FOR BIDS

Modify the following to read:

Bids will be received until **Thursday June 1, 2017 at 11:00 a.m.** Mountain Time at the Owner's chosen location at 201 S. Victoria Avenue, Pueblo, Colorado. All bids received by the date and time of receipt specified will be publicly opened and read.

Item No. 2

DIVISION 2
SITWORK
SITE UTILITIES
Section 02080

Add the following:

Section 02080 Site Utilities, (SEE ATTACHMENT NO. 1)

Item No. 3

DIVISION 2
SITWORK
SITE CLEARING
Section 02230

Add the following:

Section 02230 Site Clearing, (SEE ATTACHMENT NO. 2)

Item No. 4

DIVISION 2

SITEWORK

Fencing, Gates and Operators
Section 02230

Add the following:

Section 02820 Fences, Gates and Operators, (SEE ATTACHMENT NO. 3)

Linear Low Density Polyethylene Plastic (LLDPE) fencing is to be installed as per drawing sheet C3.1R, where privacy is a requirement.

Item No. 4

DIVISION 2

SITEWORK

Chain Link Fencing
Section 02830

Add the following:

Section 02830, Fences, Chain Link Fencing (SEE ATTACHMENT NO. 4)

Galvanized chain link fencing is to be installed as per drawing sheet C3.1R, where privacy is not a requirement.

DRAWING ITEMS

Item No. 1

SHEETS- C1.0, C2.0, C3.0, C3.1, C3.2, C3.3, C3.4, C3.5, C3.6, C4.0, C4.1, C4.2, C4.3, C4.4, C5.0, C5.1, C5.2, C5.3, C5.4, C5.5, C5.6, C6.0, C6.1

Modify the following to read: Civil Engineering drawings, C1.0, C2.0, C3.0, C3.1, C3.2, C3.3, C3.4, C3.5, C3.6, C4.0, C4.1, C4.2, C4.3, C4.4, C5.0, C5.1, C5.2, C5.3, C5.4, C5.5, C5.6, C6.0, and C6.1 shall be **deleted in their entirety and be replaced with** C1.0R, C2.0R, C3.0R, C3.1R, C3.2R, C3.3R, C3.4R, C3.5R, C3.6R, C4.0R, C4.1R, C4.2R, C4.3R, C4.4R, C5.0R, C5.1R, C5.2R, C5.3R, C5.4R, C5.5R, C5.6R, C6.0R, and C6.1R. The drawing are provided via an email

Dropbox Link: <https://www.dropbox.com/sh/eak7txahizkg468/AACFkqzMs-0hc8l6K2rd8lUza?dl=0>

Item No. 2

SHEET A1.2A:

Refer to Drawing No. 3 – Roof Plan – Building A

Delete the following:

- Interior Elevation Key referencing Sheet A3.1D – BLDG D TYP 3. BDRM. UNIT INT.ELEV at 1st Floor Stair
- Interior Elevation Key referencing Sheet A3.1E – BLDG E TYP.2. BDRM. UNIT SLOPED WALL INT. ELEV. At 1st Floor Stair

Item No.3

SHEETS A1.1A, A1.1B, A1.1C,
A1.1D, A1.1E, A1.1F, A1.1G

Wall Types –Type Marks 6, 7 and 10

Modify the Following to Read:

Previously noted on Addendum #1, Drawing item #2.

2 x 4 studs @ 24" o.c. with 5/8" type "X" gyp bd.

Note: The specification Section 06100 Rough Carpentry, III Execution, D. Stud Framing, 3. For interior walls install 2-inch by 4-inch wood studs spaced 24 inches on center. Wall Types other than #6, 7, and 10 shall remain as shown on the drawings. **Stud spacing as shown at 16" on center, at shower wall assemblies for cement board shall also remain as shown.**

**I.F.B. 17-524-RAD
DIVISION 2
SECTION 02080
SITE UTILITIES**

I. GENERAL

A. DESCRIPTION

1. Scope: includes all layout, trenching, piping, backfill, and compaction for the systems following. Work shall extend from a point approximately 5'-0" outside the building exterior wall to the point of connection or termination indicated on the drawings or specified herein.
2. Systems: include storm drain, sanitary sewer, fire lines, natural gas lines, domestic water lines, and perforated perimeter drains.

B. REGULATIONS, REFERENCES, AND STANDARDS

1. Applicable sections and referenced sections of the following standards, latest edition in effect on date of Invitation for Bids, shall form a part of these specifications.
 - a. American Society for Testing and Materials (ASTM)

II. PRODUCTS

A. MATERIALS

1. USE PIPE MATERIALS REQUIRED BY APPLICABLE CODES AND ORDINANCES, AND AS INDICATED ON THE DRAWING.
 - a. Viterous clay tile: Comply with C-13
 - b. PVC: Schedule 40
 - c. PVC: SDR 35, ASTM D3035
 - d. Copper: Type K soft
 - e. Concrete: Type V, Reinforced Concrete Pipe (RCP)
 - f. Ductile: Iron pipe
 - g. Black steel pipe
 - h. PVC: Class 200 psi

III. EXECUTION

A. LAYOUT

1. Locate: existing utility lines. Stake out, establish, and maintain grades and elevation as required. Check and verify accuracy.

B. EXCAVATION, TRENCHING, AND BACKFILL

1. Comply: with requirements of Earthwork Section; provide compaction tests.
2. Keep: excavation and trenching free of water. Grade adjacent surface area to prevent surface water from entering. Provide pumping if required.

C. INSTALLATION OF PIPE

1. Lay pipe: true to established lines and grades with bells or groove end upgrade.
2. Lay pipe: on properly prepared foundation bed providing support for full length of pipe.
3. Remove: all dirt and foreign matter from pipe as work progresses.
4. During work stoppage periods: provide plugs or covers for open ends of pipe to prevent foreign matter from entering.
5. Test pipe: for leaks prior to backfilling.
6. Provide Identification: tape for all non-metal, underground utilities for future underground detection of piped utilities.

D. COMPLETION

Backfill: and compact trenching per requirements of Section 02205; provide compaction tests.

Repair: any cuts made in asphalt paving, concrete walks, etc., in accordance with the requirements of the applicable sections of the specifications.

**I.F.B. 17-524-RAD
DIVISION 2
SECTION 02230
SITE CLEARING**

I. GENERAL

A. RELATED DOCUMENTS

1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

B. SUMMARY

1. This Section includes the following:
 - a. Protecting existing trees to remain.
 - b. Removing existing plants and grass.
 - c. Clearing and grubbing.
 - d. Stripping and stockpiling topsoil.
 - e. Removing above and below-grade site improvements.
 - f. Disconnecting, capping or sealing, and removing existing utilities as shown.
 - g. Temporary erosion and sedimentation control measures.
2. Related Sections include the following:
 - a. Division 1 Section "Temporary Facilities and Controls" for temporary utilities, temporary construction and support facilities, temporary security and protection facilities, and temporary erosion and sedimentation control procedures.
 - b. Division 2 Section "Earthwork" for soil materials, excavating, backfilling, and site grading.

C. DEFINITIONS

1. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than two (2) inches (50 mm) in diameter and free of subsoil and weeds, roots, toxic materials, or other non-soil materials.

2. Tree Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction, and defined by the drip line of individual trees or the perimeter drip line of groups of trees, unless otherwise indicated.

D. MATERIAL OWNERSHIP

1. Except for stripped topsoil or other materials indicated to remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

E. SUBMITTALS

1. Photographs or videotape, sufficiently detailed, of existing conditions of trees and plantings, adjoining construction, and site improvements that might be misconstrued as damage caused by site clearing.
2. Record drawings, according to Division 1 Section "Project Record Documents," identifying and accurately locating capped utilities and other subsurface structural, electrical, and mechanical conditions.

F. QUALITY ASSURANCE

1. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

G. PROJECT CONDITIONS

1. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
 - a. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 - b. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
2. Improvements on Adjoining Property: Authority for performing site clearing indicated on property adjoining Owner's property will be obtained by Owner before award of Contract.
 - a. Do not proceed with work on adjoining property until directed by Architect.
3. Salvable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises where indicated.

ADDENDUM #2
ATTACHMENT #2

4. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing.
5. Do not commence site clearing operations until temporary erosion and sedimentation control measures are in place.

II. PRODUCTS

A. SOIL MATERIALS

1. Satisfactory Soil Materials: Requirements for satisfactory soil materials are specified in Division 2 Section "Earthwork."
 - a. Obtain approved borrow soil materials off-site when satisfactory soil materials are not available on-site.

III. EXECUTION

A. PREPARATION

1. Protect and maintain benchmarks and survey control points from disturbance during construction.
2. Locate and clearly flag trees and vegetation to remain or to be relocated.
3. Protect existing site improvements to remain from damage during construction.
 - a. Restore damaged improvements to their original condition, as acceptable to Owner.

B. TEMPORARY EROSION AND SEDIMENTATION CONTROL

1. Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to the State of Colorado requirements for site (1) acre or more.
2. Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
3. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

C. TREE PROTECTION

1. Erect and maintain temporary fencing around tree protection zones before starting site clearing. Remove fence when construction is complete.
 - a. Do not store construction materials, debris, or excavated material within fenced area.
 - b. Do not permit vehicles, equipment, or foot traffic within fence area.
 - c. Maintain fenced area free of weeds and trash.
2. Do not excavate within tree protection zones, unless otherwise indicated.

D. UTILITIES

1. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed.
 - a. Arrange with utility companies to shut off indicated utilities.
 - b. Owner will arrange to shut off indicated utilities when requested by Contractor.
2. Excavate for and remove underground utilities indicated to be removed.

E. CLEARING AND GRUBBING

1. Remove obstructions, trees, shrubs, grass, and other vegetation to permit installation of new construction.
 - a. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
 - b. Cut minor roots and branches of trees indicated to remain in a clean and careful manner where such roots and branches obstruct installation of new construction.
 - c. Grind stumps and remove roots, obstructions, and debris extending to a depth of eighteen (18) inches (450 mm) below exposed subgrade.
 - d. Use only hand methods for grubbing within tree protection zone.
2. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork in indicated.
 - a. Place fill material in horizontal layers not exceeding a loose depth of eight (8) inches (200 mm), and compact each layer to a density equal to adjacent original ground.

F. TOPSOIL STRIPPING

1. Remove sod and grass before stripping topsoil.
2. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.
 - a. Remove subsoil and non-soil materials from topsoil, including trash, debris, weeds, roots, and other waste materials.
3. Stockpile topsoil materials away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - a. Limit height of topsoil stockpiles to 72 inches (1800 mm).
 - b. Do not stockpile topsoil within tree protection zones.
 - c. Dispose of excess topsoil as specified for waste material disposal.
 - d. Stockpile surplus topsoil to allow for re-spreading deeper topsoil.

G. DISPOSAL

1. Disposal: Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.
 - a. Separate recyclable materials produced during site clearing from other non-recyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities.

**I.F.B. 17-524-RAD
DIVISION 2
SECTION 02820
FENCES, GATES & OPERATORS**

I. GENERAL

A. SUMMARY

1. Section includes Linear Low Density Polyethylene Plastic (LLDPE) fences and swing gates.
2. Related Sections:
 - a. Section 03300 – Cast-in-Place Concrete (concrete for post footings)
 - b. Section 02205 – Earthwork (for filling and grading work)

B. PERFORMANCE REQUIREMENTS

1. Structural Performance: Fence and gate framework shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated according to ASCE/SEI 7.
 - a. Minimum and Maximum Spacing:
 - i. Panel height of 6' will withstand wind speeds of 110 mph.
 - ii. Panel width: 6 feet and 8' as shown on the drawings.

C. REFERENCES

1. American Society for Testing and Materials (ASTM):
 - a. ASTM E 90, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.

D. ACTION SUBMITTALS

1. Product Data: For each type of product indicated.
 - a. Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of postconsumer and pre-consumer recycled content. Include statement indicating cost for each product having recycled content. "Laboratory Test Reports for Credit IEQ 4" Subparagraph below applied to LEED for Schools.

- b. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work. First paragraph below assumes manufacturer's standard-size.
- c. Samples: For each polymer-coated product and for each color and texture specified, in 6-inch (150 mm) lengths for components and on full-sized units for accessories according to Section 01300 Submittals.

E. INFORMATIONAL SUBMITTALS

- 1. Product Certificates.
- 2. Product Test Reports.
- 3. Sample of Special Warranty.

F. CLOSEOUT SUBMITTALS

- 1. Operation and maintenance data.

G. WARRANTY

- 1. Special Warranty: Manufacturer's standard form agrees to repair or replace components of the fences and gates that fail in materials or workmanship within specified warranty period.
 - a. Failures include, but are not limited to: materials beyond normal weathering.
- 2. Warranty Period: Five (5) years from the date of Substantial Completion.

II. PRODUCTS

A. MANUFACTURER

- 1. SimTek Fence.
- 2. Approved equal according to Section 01320 Substitutions.

B. PANELS

- 1. General: Provide Linear Low Density Polyethylene Plastic (LLDPE) containing UV-12 Inhibitors.
- 2. Panel Width: Six (6) Feet (1829 mm), Eight (8) Feet (2438 mm) or as indicated on the drawings.
 - a. Color: Faux Stone (as selected by Architect from manufacturer's full range).

3. Single Panel Height: Six (6) Feet (1829 mm).
 - a. Color: Faux Stone (as selected by Architect from manufacturer's full range).

C. FENCE FRAMING - POSTS

1. Line Post: Impact resistant, rotational molded, made with linear low density polyethylene plastic (LLDPE), shell containing UV inhibitors and with a rigid recycled polyethylene foam core.
 - a. Internal eleven (11) gauge (.114) galvanized Z-Beam (2 legs x 3.56 web) reinforcement steel, 144" long.
 - b. Posts shall be 5' x 5' – "H" section, 144" long with two 2" x 2" channels on opposite sides to receive panels. Approximate weight is 56 lbs.
2. Corner Post: Impact resistant, rotational molded, made with linear low density polyethylene plastic (LLDPE), shell containing UV inhibitors and with a rigid recycled polyethylene foam core.
 - a. Internal eleven (11) gauge (.065) galvanized box-tube 2" x 2" reinforcement steel, 144" long.
 - b. Posts shall be 5' x 5' – "L" section, 144" long with two 1" x 2" channels on adjacent sides to receive panels. Approximate weight is 56 lbs.
3. End Post: Impact resistant, rotational molded, made with linear low density polyethylene plastic (LLDPE), shell containing UV inhibitors and with a rigid recycled polyethylene foam core.
 - a. Internal eleven (11) gauge (.065) galvanized box-tube 2" x 3" reinforcement steel, 144" long.
 - b. Posts shall be 5' x 5' – "C" section, 144" long with two 2" x 2" channels on one side to receive panels. Approximate weight is 56 lbs.
4. Gate Post: Impact resistant, rotational molded, made with linear low density polyethylene plastic (LLDPE), shell containing UV inhibitors and with a rigid recycled polyethylene foam core.
 - a. Internal eleven (11) gauge (.125) galvanized box-tube 2" x 3" with two each 1/8" x 2" flat stock reinforcement steel, 144" long.
 - b. Posts shall be 5' x 5' – "C" section, 144" long with two 2" x 2" channels on one side to receive panels. Approximate weight is 82 lbs.
 - a. Color: Faux Stone (as selected by Architect from manufacturer's full range – match fence panel.)

D. GATE

1. Sizes: 72” High x 48” Wide (1829 mm High x 1219 mm Wide.
2. Color: Faux Stone (as selected by Architect from manufacturer’s full range – match fence panel.)
3. Hardware:
 - a. Spring Loaded Hinge: Stainless Steel; Black
 - b. Heavy Duty Latch: Stainless Steel; Black
 - c. Heavy Duty Stricker Rod: Stainless Steel; Black
 - d. Drop Rod: Stainless Steel; Black

E. ACCESSORIES

1. Post Caps: Impact resistant, rotational molded, made with linear low density polyethylene plastic (LLDPE), shell containing UV inhibitors.
 - a. Single:
 - i. Dimension - 6.5 inches x 6.5 inches (165 x 165 mm)
 - ii. Approximate weight: 0.4 lbs. (181 g)
 - b. Double Inline:
 - i. Dimension – 11.5 inches x 6.5 inches (292 x 165 mm)
 - ii. Approximate weight: 0.7 lbs. (318 g)
 - c. Double 45 Degree:
 - i. Approximate weight: 0.7 lbs. (318 g)
2. Filler Panel - Impact resistant, rotational molded, made with linear low density polyethylene plastic (LLDPE), shell containing UV inhibitors.
3. Cover Skirt - Impact resistant, rotational molded, made with linear low density polyethylene plastic (LLDPE), shell containing UV inhibitors.
 - a. Color: Faux Stone (as selected by Architect from manufacturer’s full range – match fence panel.)
4. Cast-in-Place Anchors in Concrete: Either threaded type or wedge type unless otherwise indicated; galvanized ferrous castings, either ASTM A 47/A 47M malleable iron or ASTM A 27/A 27M cast steel. Provide bolts, washers, and shims as needed, all hot-dip galvanized per ASTM F 2329.
5. Material for Exterior Locations and Where Stainless Steel is Indicated: Alloy Group 1 (A1) stainless-steel bolts, ASTM F 593 (ASTM F 738M) and nuts, ASTM F 594 (ASTM F 836M).

III. EXECUTION

A. EXAMINATION AND PREPARATION

1. Verify that survey in first paragraph below is specified in Division 01 Section "Execution" or is otherwise available. Consider using sleeves to leave voids in new concrete substrates.
 - a. Examine areas and conditions, with Installer present, for compliance with requirements for a verified survey of property lines and legal boundaries, site clearing, earthwork, pavement work, and other conditions affecting performance of the Work.
 - b. Do not begin installation before final grading is completed unless otherwise permitted by Architect.
2. Proceed with installation only after unsatisfactory conditions have been corrected.
3. Stake locations of fence lines, gates, and posts. Do not exceed intervals of 500 feet (152.5 m) or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.
4. Post Excavation: Drill or hand-excavate holes for posts to diameters and spacings indicated, in firm, undisturbed soil.

B. INSTALLATION

1. Post Setting: Set posts in concrete at indicated spacing into firm, undisturbed soil, **with mechanical anchors**, at indicated spacing, into firm, undisturbed soil.
 - a. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.
 - b. Install brackets for panel installation before setting posts.
2. Concrete Fill: Place concrete around posts to dimensions indicated and vibrate or tamp for consolidation. Protect above ground portion of posts from concrete splatter.
 - a. Exposed Concrete: Extend two (2) inches (50 mm) above grade; shape and smooth to shed water.

3. Retaining Wall and Flat Concrete Installation:
 - a. Concrete Mounting Brackets are manufactured with a heavy steel plate with vertical members attached to concrete with anchors and bolts to the post.
 - b. Post shall be cut to required height and to accommodate changes in elevation. (Cut bottom of post to retain factory finished post top.)
 - c. The Panels will set directly on the concrete surface and shall not require panel support brackets.
4. Line Posts: Space line posts uniformly as per Manufacturer's recommendations.

C. PANEL INSTALLATION

1. Single Height Panel:
 - a. Panels are universal with no front or back and no top or bottom.
 - b. Verify that brackets have been installed correctly. Adjust as required.
 - c. Install panels and secure to posts according to manufacturer's written instructions.
 - i. Never attach both edges of any panel to posts to allow for expansion and contraction.
2. Cutting Panels:
 - a. Remove steel stiffeners from panels. Determine the exact width between post channels. Mark and cut stiffeners to that width with a metal cutting blade.
 - b. Mark and cut the panel to the stiffener width, minus 1/2" to allow for thermal expansion and contraction of the panel. Make certain panels are cut accurately with edges parallel.
 - c. If a cut panel is used with an end or corner post, use the factory edge for attachment to the post.

**I.F.B. 17-524-RAD
DIVISION 2
SECTION 02830
CHAIN LINK FENCING**

I. GENERAL

A. RELATED DOCUMENTS

1. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to work of this section.

B. DESCRIPTION OF THE WORK

1. Extent of chain link fences and gates is indicated on drawings.

C. QUALITY ASSURANCE

1. Provide chain link fences and gates as complete units controlled by a single source including necessary erection accessories, fittings, and fastenings.

D. SUBMITTALS

1. Product Data
 - a. Submit manufacturer's technical data, and installation instructions for metal fencing, fabric, gates and accessories.

II. PRODUCTS

A. GENERAL

1. Dimensions indicated for pipe, roll-formed, and H-sections are outside dimensions, exclusive of coatings.
2. Available Manufacturers
 - a. Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:
 - b. Galvanized Steel Fencing and Fabric
 - i. Allied Tube and Conduit Corp.
 - ii. American Fence Corp.
 - iii. Anchor Fence, Inc.

B. STEEL FABRIC

1. Fabric

- a. No. 9 ga. (0.148" + 0.005") size steel wires, 2" mesh, with top selvages knuckled for fabric 60" high and under, and both top and bottom selvages twisted and barbed for fabric over 60" high.

C. FRAMING AND ACCESSORIES

1. Steel Framework, General

- a. Galvanized steel, ASTM A 120 or A 123, with not less than 1.8 oz. zinc per sq. ft. of surface.
b. Fittings and accessories – galvanized, ASTM A 153, with zinc weights per Table I.

2. End, Corner and Pull Posts

- a. Minimum sizes and weights as follows:
b. Up to 6' fabric height, 2.375" OD steel pipe, 3.65 lbs. per lin. ft., or 3.5" x 3.5" roll-formed sections, 4.85 lbs. per lin. ft.
c. Up to 6' fabric height, 2.875" OD steel pipe, 5.79 lbs. per lin. ft., or 3.5" x 3.5" roll-formed sections, 4.85 lbs. per lin. ft.

3. Line Posts

- a. Space 10" o.c. maximum, unless otherwise indicated, of following minimum sizes and weights.
b. Up to 6' fabric height, 1.90" OD steel pipe, 2.70 lbs. per lin. ft. or 1.875" x 1.625" C-sections, 2.28 lbs. per lin. ft.

<u>Leaf Width</u>	<u>lbs./lin. ft.</u>
Up to 6'	4.85
Over 6' to 13'	9.11
Over 13' to 18'	18.97
Over 18'	28.55

4. Top Rail

- a. Manufacturer's longest lengths, with expansion type couplings, approximately 6" long, for each joint. Provide means for attaching top rail securely to each gate corner, pull and end post.
b. 1.66" OD pipe, 2.27 lbs. per ft. or 1.625" x 1.25" roll-formed sections. 1.35 lbs. per ft.

5. Post Tops

- a. Provide weathertight closure cap with loop to receive tension wire or top rail; one cap for each post.

III. EXECUTION

A. INSTALLATION

1. Do not begin installation and erection before final grading is completed, unless otherwise permitted.
2. Excavation
 - a. Drill or hand excavate (using post hole digger) holes for posts to diameters and spacings indicated, in firm, undisturbed or compacted soil.
 - b. Excavate holes for each post to minimum diameter recommended by fence manufacturer, but not less than 4 times largest cross section of post.
 - c. Unless otherwise indicated, excavate hole depths approximately 3" lower than post bottom, with bottom of posts set not less than 36" below finish grade surface.
3. Setting Posts
 - a. Set posts 18" into retaining wall.
 - b. Place concrete around posts and vibrate or tamp for consolidation. Check each post for vertical and top alignment, and hold in position during placement and finishing operations.
 - c. Whenever shown on the drawings, all posts to be in place prior to pouring of concrete sidewalks.
4. Tie Wires
 - a. Use U-shaped wire, conforming to diameter of pipe to which attached, clasp pipe and fabric firmly with ends twisted at least two (2) full turns. Bend ends of wire to minimize hazard to persons or clothing.
 - b. Tie fabric to line posts, with wire ties spaced 12" o.c. Tie fabric to rails and braces, with wire ties spaced 24" o.c. Tie fabric to tension wires, with hog rings spaced 24" o.c.