

Date: 11/10/17

Addendum Number: ADDENDUM NO. 1

Project Name: Chester W. Ditto Golf Clubhouse

Project Number: 21538.00

Issued By: Mike Sparkman

Issued To: Bidders

Ditto Clubhouse Questions Received from Bidder:

1. **Question:** Sheet C10.04 it's calling out for a 1" x 1/8" thick picket with 2" x 3" x 3/16" rails and the panels are to be 10'W. I don't know of any manufacturer that will make this type of fence panel. Please confirm.

Response: Montage II by Ameristar is an acceptable substitution.
2. **Question:** Are there specifications for the Design Master fence option? I have not been able to locate them. Drawing detail 3/C10.06 shows an 8' tall design master fence which I believe should be 6' tall according to all of the Alternate Specifications Section 01 1030.

Response: The Design Master Fence specification is attached. The revised detail 3/C10.06 is attached.
3. **Question:** Are there specifications for the Base Bid Ornamental Fence? The title of detail 1/C10.04 labels it as 8' Ornamental and Stone Columns, but the drawing shows 7' columns and 6' ornamental fence.

Response: The revised detail 1/C10.04 is attached.
4. **Question:** Are there specifications for the black vinyl chain link fence that is required? Alternate section and drawing detail 1/C10.06 call for a black vinyl chain link fence. The chain link specification section 32 3110 that is provided is for a Galvanized Chain Link fence that seems to be for a baseball field with windscreen and foul poles in specifications.

Response: The specifications for vinyl coated and powder coated chain link fencing are attached. The attached chain link fence specification has been revised.
5. **Question:** Spec alternate Section 01 1030 calls for 8 alternates, but bid form only lists 6 alternates. Can you please clarify?

Response: Please refer to the attached revised bid form and revised attached Section 01 1030. There are now 9 alternates listed on the bid form and in Section 01 1030.

6. **Question: Specification for cash allowance 01 1020 – 1.02 call for \$600,000 for owner's contingency. However, the bid form only calls for \$400,000. Can you please clarify the exact amount to be carried for Owner's contingency?**
Response: The Owner's contingency shall be \$400,000 as shown in the bid form. Refer to attached revised Section 01 1020.
7. **Question: Concrete paving details on 2/C10.02 call out for the subgrade to be scarified to min. depth of 8", conditioned and compacted. The Geotech Report calls for 6" of lime and cement stabilized subgrade. Can you please provide clear direction as to which one should we price?**
Response: Paving shall be installed as per 2/C10.02. In lieu of lime and cement stabilized subgrade, the concrete was thickened 1" as shown on the drawings and as allowed per the Geo-Tech report.
8. **Question: Floor finish plan show Wood Flooring and Broad loom carpet, but no specifications were provided. Can you please issue specifications needed?**
Response: The Wood Flooring is the following, as shown in the finish schedule: New Life Hardwoods, Antique Pine, 3/8" Engineered Hardwood, Glue Down, Stained, with Oil-Rubbed Finish, Contact: April Little, New Life Hardwoods, 469-630-1508. Install with Low VOC glue as per manufacturer's recommended instructions. The cost for Carpet is per Section 01 1020 – Cash Allowances. All carpet is direct glue. Refer to Section 01 1020 – Cash Allowances. Installation shall be with Low VOC glue and per manufacturer's instructions.
9. **Question: Reclaimed wood is to be provided in the Restaurant. Is this reclaimed wood to be pre-finished or is it raw wood?**
Response: Per the finish schedule, the following is specified: New Life Hardwoods, Reclaimed Wood, Dirty Top, Rough-sealed, Random Sizes, Contact: April Little, New Life Hardwoods, 469-630-1508. The "Rough-sealed" as shown in the finish schedule is by the manufacturer.
10. **Question: Detail 3/I-103 shows a 2 1/4" reducer between the concrete floor and wood flooring. ADA only allows for 1/2" flooring change between surfaces for chair accessibility. Please clarify intent.**
Response: The reducer is provided by New Life Hardwoods, Ph: 460.630.1508 (refer to finish schedule) and is 2 1/4" wide by 3/8" thick to match the wood floor thickness.
11. **Question: Is threshold 6 the material or similar to Threshold 4?**
Response: There are two types of thresholds from the exterior to interior. Note number 4 on Sheet I-103 is for an aluminum saddle type threshold that transitions concrete to concrete. Note number 5 on Sheet I-103 is for an aluminum square back type threshold that will transition from concrete on the exterior to carpet or tile on the interior.
12. **Question: Is Threshold 7 the same material or similar to Threshold 4?**
Response: Refer to question 11 above.
13. **Question: I noticed waterproofing was on called for rooms 139-143, but from experience, should we also provide waterproofing to rooms 116, 117, 122 and 126?**
Response: Install waterproofing in rooms 116, 117, 122 and 126. Install crack suppression membrane at **all** tile areas that do not get waterproofing.
14. **Question: Please advise Wilson Art Laminate color.**
Response: All Laminate colors will be selected by Architect in Wilson Art "Standard Laminate" color.
15. Refer to Drawings. Delete existing Sheets C10.04, C10.05 and C10.06. Add the attached revised Sheets C10.04, C10.05 and C10.06.

16. Refer to Drawings. Delete existing Sheet S-304. Add the attached revised Sheet S-304.
17. Refer to Drawings. Delete existing Sheets A-111, A-531, A-532, A-701, A-713, I-201, I-202 and I-203. Add the attached revised Sheets A-111, A-531, A-532, A-701, A-713, I-201, I-202 and I-203.
18. Refer to Drawings. Delete existing Sheets E-102 and E-302. Add the attached revised Sheets E-102 and E-103.
19. Refer to the Project Manual. Delete existing Section 00 1030 – Bid Form. Add the attached revised Section 00 1030 - Bid Form.
20. Refer to the Project Manual. Delete existing Section 01 1020 – Cash Allowances. Add the attached revised Section 00 1020 – Cash Allowances.
21. Refer to the Project Manual. Delete existing Section 01 1030 - Alternates. Add the attached revised Section 01 1030 - Alternates.
22. Refer to the Project Manual. Add the following Specification Sections: 32 3110 – Galvanized Chain Link Fencing, 32 3115 – Vinyl Coated Chain Link Fencing, 32 3120 – Powder Coated Chain Link Fencing and 32 3130 – Design Master Fencing.

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END OF ADDENDUM NO. 1

**SECTION 00 1030
Bid Form**

Date: _____ Bidder: _____

City of Arlington
Municipal Office Building (City Hall)
Public Works and Transportation Conference Room 2
101 W. Abram Street
Arlington, Texas, 76010

The undersigned, having examined the Bid Documents, comprising the Project Manual, Drawings and Specifications, being sufficiently familiar with the site of the proposed Work, and being familiar with the conditions of this Contract, hereby proposes to furnish all labor, materials, equipment and services, in accordance with all Contract Documents, necessary to complete the project:

**CHESTER W. DITTO GOLF COURSE
CLUB HOUSE FACILITY
801 Brown Boulevard
Arlington, Texas 76011**

A. BASE BID: _____
_____ DOLLARS (\$ _____).

NOTE: Bid amounts shall be shown in words and numbers. In case of ambiguity or conflict, the amount shown in words shall prevail.

B. TIME: The undersigned agrees, if awarded the Contract, to commence the Work within ten (10) days of receipt of the Notice to Proceed and to achieve Substantial Completion for the Work required in the Base Bid and any selected Alternates within _____ calendar days following receipt of the Notice to Proceed.

C. ALLOWANCES: The Base Bid shall include a lump sum cash allowance for items as described below:

1. Owner's construction contingency - \$400,000.00
2. Acknowledge Cash Allowances as defined in Section 01 1020, Article 1.08, items A - F are included: _____ (Y/N).

D. ALTERNATES: The Owner reserves the right to include into the Work any combination of the items listed as described below as Alternates, or to decline any or all of these items. (Refer to Allowances as described in Section 01 1020 – Cash Allowances of the Project Manual)

1. Alternate No. 1 –

ADD or DEDUCT _____ dollars (_____).

2. Alternate No. 2 –

ADD or DEDUCT _____ dollars (_____).

3. Alternate No. 3 –

ADD or DEDUCT _____ dollars (_____).

4. Alternate No. 4 –

ADD or DEDUCT _____ dollars (_____).

5. Alternate No. 5 –

ADD or DEDUCT _____ dollars (_____).

6. Alternate No. 6 –

ADD or DEDUCT _____ dollars (_____).

7. Alternate No. 7 –

ADD or DEDUCT _____ dollars (_____).

8. Alternate No. 8 –

ADD or DEDUCT _____ dollars (_____).

9. Alternate No. 9 –

ADD or DEDUCT _____ dollars (_____).

E. UNIT PRICES: NOT APPLICABLE

G. ADDENDA: Bidder acknowledges receipt of Addenda as follows:

No. _____ Date _____

No. _____ Date _____

No. _____ Date _____

H. BID SECURITY: Enclosed with this Bid Form is Bid Security as follows: (Check One)

() Cashier's Check or Certified Check

() Bid Bond

in the amount of at least 5% of the greatest amount bid, payable to the Owner, as a guarantee that if awarded the Contract, the undersigned will, within ten (10) days after receiving notice of acceptance of this bid, execute the Contract and required Surety Bonds on the forms provided, with Corporate Surety satisfactory to the Owner.

I. EXTENDED PROPOSAL: Bidder agrees that this bid shall be valid and may not be withdrawn for a period of sixty (60) calendar days after the closing time for receiving bids.

I. LIQUIDATED DAMAGES FOR SUBSTANTIAL COMPLETION: The Undersigned agrees that, from the compensation otherwise to be paid, the Owner may retain the sum of Five Hundred Dollars (\$500.00) for each calendar day after the agreed Date of Substantial Completion that the Work remains not substantially complete, which sum is agreed upon as the proper measure of liquidated damages which the Owner will sustain per diem by the failure of the Undersigned to complete the work at the time stipulated in the Contract. This sum is not to be construed in any sense a penalty.

J. BUILDING PERMIT FEES: The Owner will pay permit related fees in accordance with the fee schedule provided in Section 00 5010 of the Project Manual.

K. ATTACHMENT TO THIS BID FORM:

1. SECTION 00 1040 BIDDER'S QUALIFICATIONS
2. SECTION 00 3080 MWBE FORM

Submitted by:

SEAL: (If bid is by a corporation)

Contractor

By:

Title

Business Address

City, State, Zip Code

Telephone

END OF BID FORM

SECTION 01 1020

CASH ALLOWANCES

PART 1 GENERAL

1.01. SECTION INCLUDES

- A. General Construction Contingency.
- B. Testing and inspection allowances.
- C. Miscellaneous Allowances.

1.02. CONTINGENCY ALLOWANCES

- A. Include in the Contract, a stipulated sum/price of
 - 1. Owner's Contingency Allowance in the amount of \$400,000.00 for use upon Owner's written Allowance Expenditure Authorization.
- B. Contractor's costs for products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit will be included in Allowance Expenditure Authorization of funds from this Contingency Allowance.
- C. Funds will be drawn from the Contingency Allowance only by Allowance Expenditure Authorization.
- D. At closeout of Contract, funds remaining in Contingency Allowance will be credited to Owner by Change Order.

1.03. TESTING AND INSPECTION ALLOWANCES

- A. Not Used

1.04. MISCELLANEOUS ALLOWANCES

- A. Not Used.

1.05. COSTS INCLUDED IN ALLOWANCES

- A. Cost of product to Contractor or subcontractor, less applicable trade discounts.
- B. Delivery to site.
- C. Labor required under allowance, only when labor is specific to be included.
- D. Applicable taxes.

1.06. CONTRACTOR COSTS INCLUDED IN CONTRACT SUM

- A. Products handling at site, including unloading, uncrating and storage.
- B. Protection of products from elements and from damage.
- C. Labor for installation and finishing, except when installation is specified as part of allowance.
- D. Other expenses required to complete installation.
- E. Contractor overhead and profit.

1.07. ADJUSTMENT OF COSTS

- A. Should the net cost be more or less than the specified amount of the allowance, the Contract Sum will be adjusted accordingly by Change Order.
- B. Submit any claims for anticipated additional costs at the site, or other expenses caused by the selection under the allowance, prior to execution of the work.
- C. Submit documentation for actual additional costs the site, or other expense caused by selection under the allowance, prior to execution of the Work.
- D. Failure to submit claims within the designated time will constitute a waiver of claims for additional costs.

1.08 LIST OF ALLOWANCES

A. **Natural Stone:** Contractor shall include in his bid a cost of Two Hundred and Twenty Five Dollars (\$225.00) per ton for the purchase only of natural stone.

B. **Carpet:**

CPT-1 - Contractor shall include in his bid a cost of Thirty Five Dollars (\$35.00) per square yard for the purchase only of carpet.

CPT-2 – Contractor shall include in his bid a cost of Twenty-Five Dollars (\$25.00) per square yard for the purchase only of carpet.

CPT-3 – Contractor shall include in his bid a cost of Twenty Dollars (\$20.00) per square yard for the purchase only of carpet.

C. **Hardware:**

Interior Doors - Contractor shall include in his bid a unit price of Four Hundred and Fifty Dollars (\$450.00) per leaf for the purchase only of hardware.

Exterior Doors –Contractor shall include in his bid a unit price of Eight Hundred and Fifty Dollars (\$850.00) per leaf for the purchase only of hardware.

D. **Decorative Lighting Fixtures** - Contractor shall include in his bid a unit price of the following for the purchase only of light fixtures:

Type K - \$4,000.00
Type L - \$650.00
Type SJ - \$750.00
Type SJ-1 - \$1,300.00
Type Y - \$3,800.00
Type Y-1 - \$4,800.00
Type BB - \$6,000.00
Type CC - \$2,800.00
Type DD - \$450.00
Type T - \$700.00

E. **Interior and Exterior Signage** - Contractor shall include in his bid an allowance of \$30,000.00 purchase and installation of interior and exterior signage.

F. **Attic HVAC** – Contractor shall include in his bid an allowance of Two Thousand Five Hundred Dollars (\$2,500.00) for the purchase and installation of additional air grills attached to the base bid ductwork for climate control of the enclosed attic spaces. The exact number and location will be determined during the submittal process.

END OF SECTION

SECTION 01 1030

ALTERNATES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Provisions established within the General and Supplementary Conditions of the Contract, Division 1-General Requirements, and the Drawings are collectively applicable to this Section.

1.02 REQUIREMENTS INCLUDED

- A. Identification and description of alternate work.
- B. The amount shown in the bid form for each alternate shall include all overhead, profit, insurance and other costs incidental to the performance under the alternate.

1.03 RELATED REQUIREMENTS

- A. Bid Form: Quotation of cost of each alternate.
- B. Contract Form: Alternates by Owner for incorporation into the work.
- C. Sections of specifications identified in each alternate.

1.04 PROCEDURES

- A. Bidders are required to submit Alternate Bids to add work or to deduct work from the Base Bid as described below. Failure to submit Alternate amounts in spaces provided on Bid Form shall be basis for disqualification of Bid.
- B. The successful Bidder shall not modify, withdraw or cancel any of the Alternate Bids or any part thereof for 60 days after date of receipt of Bids, unless specifically noted otherwise.
- C. Contractor shall be responsible for any changes in the Work affected by acceptance of Alternates. Claims for additional costs or time extensions resulting from changes to the Work as a result of the Owner's election of any or all of the Alternates will not be allowed.
- D. Refer to Drawings and Technical Specifications Sections for items of work affected by Alternates.
- E. Election of alternates will be exercised at the option of Owner.
- F. Coordinate related work and modify surrounding work as required to complete the Work, including changes under each Alternate, when acceptance is designated in Owner-Contractor agreement.
- G. Indicating "No Bid" as an alternate is unacceptable and is reason for rejection of bid.

1.05 SCHEDULE OF ALTERNATES

- A. ALTERNATE NO. 1: All work associated with removal of the existing fencing and installation of 6' tall vinyl coated chain link fencing along Brown Boulevard. Alternate NO. 1 shall include clearing of existing brush, trees, etc. required to install the fence.
- B. ALTERNATE NO. 2: All work associated with removal of the existing fencing and installation of 6' tall vinyl coated chain link fencing along Lincoln Drive. Alternate NO. 2 shall include clearing of existing brush, trees, etc. required to install the fence.
- C. ALTERNATE NO. 3: All work associated with removal of the existing fencing and installation of 6' tall vinyl coated chain link fencing along N. Collins Street. Alternate NO. 3 shall include clearing of existing brush, trees, etc. required to install the fence.
- D. ALTERNATE NO. 4: All work associated with removal of the existing fencing and installation of 6' tall vinyl coated Design Master fencing along Brown Boulevard. Alternate NO. 4 shall include clearing of existing brush, trees, etc. required to install the fence.

- E. ALTERNATE NO. 5: All work associated with removal of the existing fencing and installation of 6' tall vinyl coated Design Master fencing along Lincoln Drive. Alternate NO. 2 shall include clearing of existing brush, trees, etc. required to install the fence.
- F. ALTERNATE NO. 6: All work associated with removal of the existing fencing and installation of 6' tall vinyl coated Design Master fencing along N. Collins Street. Alternate NO. 6 shall include clearing of existing brush, trees, etc. required to install the fence.
- G. ALTERNATE NO. 7: All work associated with removal of the existing fencing and installation of 6' tall vinyl coated chain link fencing along Green Oaks Road. Alternate NO. 7 shall include clearing of existing brush, trees, etc. required to install the fence.
- H. ALTERNATE NO. 8: All work associated with removal of the existing fencing and installation of 6' tall vinyl coated Design Master fencing along Green Oaks Road. Alternate NO. 8 shall include clearing of existing brush, trees, etc. required to install the fence.
- I. ALTERNATE No. 9: Refer to Drawings. Provide an alternate to delete the R-38 batt insulation installed and suspended 2" below the roof deck at all sloped standing seam metal roof locations that occur above the **conditioned space** areas throughout the clubhouse. Delete the standing seam roof ridge vent at these locations and delete the soffit vents at these locations. **Add** installation of R-25 rigid insulation on top of the roof deck at all these locations in lieu of the R-38 batt insulation below the deck. The standing seam roof shall be installed over the rigid insulation. Self-adhering underlayment as specified in Section 07 6100 – Metal Roof Panels shall remain the same but shall be installed over the rigid insulation in lieu of directly to the roof deck.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTIONS (NOT USED)

END OF SECTION

SECTION 32 3110

GALVANIZED CHAIN LINK FENCING

PART 1 - GENERAL

1.01 SCOPE

- A. This section covers the furnishing of all labor and materials necessary to install all chain link fencing as shown on the plans.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 32 1310 - Concrete Formwork.
- B. Section 32 1320 - Concrete Reinforcement.
- C. Section 32 1330 - Site Concrete Paving.
- D. Section 32 3115 - Vinyl Coated Chain link Fencing.

1.03 SUBMITTALS

- A. Shop drawings shall be furnished on all fencing and gates to be installed, and the Contractor shall submit samples of each component part of the various fencing if so required by the Owner.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Provide chain link fences and gates as manufactured by one of the following:
 - 1. Allied Tube & Conduit Corp.
 - 2. American Chain Link Fence Company.
 - 3. American Tube Company.
 - 4. Anchor Fence, Inc.
 - 5. Capitol Wire & Fence Company, Inc.
 - 6. Century Tube Corp.
 - 7. Cyclone Fence Div./USX Corp.

2.02 FABRIC

- A. All chain link fabric shall be zinc or aluminum coated steel wire with a minimum tensile strength of 75,000 psi.
 - 1. Zinc-coated: Minimum 1.2 ounces of zinc coating per square foot of coated surface area (ASTM A392).
 - 2. Aluminum-coated (6 or 9 gauge): Minimum 0.40 ounces of aluminum coating per square foot of coated surface area (ASTM A491).
- B. Fabric shall be helically wound and interwoven into a diamond mesh in the following gauges and mesh sizes determined by measuring the clear distance between parallel sides of the mesh.

No. 6 gauge - 0.192" dia. 2" mesh
No. 9 gauge - 0.148" dia. 2" mesh & 1-3/4" mesh

- C. All fabric shall have knuckled top and bottom selvage.
- D. The Contractor shall submit a manufacturer's certified test result that the zinc and aluminum coatings meet specified standards.

2.03 POSTS

- A. All line and terminal fence posts shall be Schedule 40 steel pipe.
- B. Terminal posts shall be defined as end, pull, corner and gate posts, and line posts defined as the vertical posts installed between terminal posts.
- C. All posts shall be hot-dip zinc coated on all surfaces after fabrication with a minimum of 1.8 ounces of zinc per square foot of coated surface area, conforming to ASTM A120.
- D. All posts shall conform to the following sizes as called for on the plans:

2-3/8" o.d.	3.65 lbs. per foot
2-7/8" o.d.	5.79 lbs. per foot
4" o.d.	9.11 lbs. per foot
6-5/8" o.d.	18.97 lbs. per foot
- E. Spacing for line posts shall be as shown on the plans.
- F. All exposed ends of fence posts shall be fitted with a formed steel, malleable iron, or aluminum hot-dip galvanized alloy cap. All line posts shall be fitted with a cap suitable for passage of the continuous top rail. All terminal posts shall be capped with a domed terminal top.

2.04 RAILS

- A. All chain link fencing shall have a 1-5/8" o.d. (2.27 lbs. per foot) continuous top rail. Outside sleeve-type couplings 7" long, spaced at 16' or 20' intervals depending on post spacing (8' or 10' o.c. spacing), of the same material as the rail. Every fifth coupling shall have a spring to take up rail expansion or contraction.
- B. Middle and bottom rails will be installed as shown on the plans and attached to the line and terminal posts with galvanized end, corner, and line rail clamps.
- C. All rails shall be Schedule 40 steel pipe hot-dip zinc coated after fabrication with a minimum of 1.8 ounces of zinc per square foot of coated surface area.

2.05 WIRE TIES

- A. Wire ties shall be used to attach fence fabric to rails and line posts. Wire tie gauge size shall not be less than gauge of the fence fabric. Spacing for wire ties along rails shall not be greater than 24" and shall not exceed 15" when attaching to line posts. Ties shall be aluminum or zinc coated steel.

2.06 TENSION BARS

- A. All fence fabric shall be tied to terminal posts with tension bars and tension bands. All tension bars shall be galvanized steel strip 3/16" thick and 3/4" wide. Tension bar shall be threaded through the chain link fabric and attached to the terminal post with 1" wide, No. 9 gauge, tension bands at 15" intervals or less. Tension bands shall be closed with 3/8" x 1-1/4" galvanized carriage bolt and nut.

2.07 TENSION WIRE

- A. Bottom tension wire shall be used on all chain link fences without a bottom rail and shall be No. 7 gauge crimped coil spring hard tempered carbon steel wire. Tension wire shall be zinc coated with not less than 1.2 ounces of zinc per square foot of coated surface or aluminum coated with not less than 0.40 ounces of aluminum per square foot of coated surface. Attach fabric to tension wire with No. 11 gauge hog rings at 24" intervals.

2.08 TRUSS RODS

- A. For all fencing a 3/8" diameter galvanized steel truss rod and tightener will be installed between each terminal post and each adjacent line post.

2.09 FITTINGS

- A. All fittings to be hot-dip zinc coated malleable cast iron or pressed steel conforming to ASTM A153. Hot-dip zinc coating shall be 1.2 ounces of zinc per square foot of coated area.

2.10 STEEL BOLLARDS

- A. All permanent bollards shall be eight (8") inch o.d. galvanized Schedule 40 steel pipe as per the detail.

2.11 CONCRETE POST FOOTINGS

- A. All concrete used shall be 3,000 psi at twenty-eight (28) days using five (5) sacks of cement per cubic yard of mix with a maximum of seven (7) gallons of water per sack. Concrete work shall conform to Section 32 1330, "Site Concrete Paving."

PART 3 - EXECUTION

3.01 ERECTION

- A. All fencing shall be installed by skilled and experienced fence erectors to the lines and grades shown on the drawings.

3.02 COORDINATION

- A. Fence erectors shall coordinate work with the concrete subcontractor for the placement and location of fence post footings, bollard sleeves, and fence post sleeves in the concrete wall. Fence post erectors shall coordinate with the Owner and Construction Manager in locating all existing underground utilities prior to drilling holes for fence post footings and bollard sleeves.

3.04 FABRIC CLEARANCE

- A. All fence fabric shall have a one (1") inch clearance from the bottom of the fence fabric to the finish grade. Fence fabric shall extend above the top of top rail no more than one and one-half (1-1/2") inches.

3.05 CLEANUP

- A. Upon completion of the fence installation, any splattered concrete shall be removed from fence posts, all wire ties and fence hardware shall be picked up, and all excess fence fabric and equipment removed from the construction site.

END OF SECTION

SECTION 32 3115

VINYL COATED CHAIN LINK FENCING

PART 1 - GENERAL

1.01 SCOPE

- A. This section covers the furnishing of all labor and materials necessary to install all chain link fence and gates as shown on the plans.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 32 3110 – Galvanized Chain Link Fencing.
- B. Section 32 3120 – Powder-coated Chain Link Fencing.

1.03 SUBMITTALS

- A. Shop drawings shall be furnished on all fencing to be installed, and the Contractor shall submit samples of each component part of the fence.

PART 2 - PRODUCTS

2.01 GENERAL

- A. All fencing fabric shall be vinyl coated galvanized steel of the height overall when erected as noted on the drawings.
 - 1. Color: Black.
 - 2. Vinyl Coating Thickness: 15 mil.
 - 3. Manufacturer: Colorbond or approved equal.

2.02 FABRIC

- A. All chain link fabric shall be vinyl coated galvanized steel chain link wire which shall stand a minimum tensile strength of 90,000 psi, based upon cross sectional area of wire. The fabric shall have a vinyl coating, minimum wall thickness of 0.020" bonded to the galvanized substrate.
- B. Fencing shall be No. 9 gauge wire woven in a two (2") inch mesh. All fencing shall have knuckled selvage at top rail.
- C. Weight of Coating: Galvanized coating shall be a minimum of 0.3 oz. per square foot of wire surface, conforming to ASTM A 392 Class II. The vinyl coating thickness over the galvanized steel wire shall be in accordance with U.S. Government Specifications RR-F-191/1C, Type IV, galvanized core with a permissible diameter variation of plus or minus 0.005 mils. The wire shall be vinyl-clad before weaving and shall be free and flexible at all joints.
- D. Vinyl Wire Coating: Plasticized polyvinyl chloride (PVC) with low temperature (-20 degrees C.) plasticizer, no fillers, extenders, or extraneous matter, other than the necessary stabilizers and pigments that shall withstand a minimum WEATHER-O-METER exposure of 1,500 hours without any deterioration (Test Equipment Operating Light and Water Exposure Apparatus Carbon-Arc Type) ASTM D 1499.E 42, Type E. The vinyl covering

shall, in addition, resist attack from prolonged exposure to dilute solutions of most common mineral acids, sea water, and dilute solutions of most salts and alkali.

- E. Fabric Test: The Contractor shall submit a manufacturer's certified test result that zinc coating material is a minimum of 1.2 oz. per square foot of wire.

2.03 TOLERANCE

- A. Standard mill tolerance on all framework members and chain link fabric will apply. Any post, rail, fitting, or fabric with visible blisters, scratches, or other surface flaws in the vinyl will be rejected.

PART 3 - EXECUTION

3.01 ERECTION

- A. All fence shall be installed by skilled and experienced fence erectors and on lines and grades as shown on the drawings. All posts shall be set per details on the drawings.

3.02 COORDINATION

- A. The Fence Contractor shall coordinate the location, grade, and installation of posts with the concrete contractor to make sure all posts are installed properly, and with the Owner and Construction Manager in locating all existing underground utilities prior to drilling holes for fence post footings.

3.03 FABRIC

- A. All fabric shall be placed on the inside of posts (field-side).
- B. All fabric shall have a one (1") inch clearance from the bottom of the fence fabric to the finish grade, and shall extend above the top of the top rail no more than one and one-half (1 ½") inches.

3.04 WELDING

- A. No welding will be permitted on the exposed vinyl coated posts, fabric, or appurtenances.

END OF SECTION

SECTION 32 3120

POWDER COATED CHAIN LINK FENCING

PART 1 - GENERAL

1.01 SCOPE

- A. This section covers the furnishing of all labor and materials necessary to install all chain link fencing, foul poles, bollards and gates as shown on the plans.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 32 3115 - Vinyl Coated Chain link Fencing.
- B. Section 32 3110 - Galvanized Chain Link Fencing.

1.03 SUBMITTALS

- A. Shop drawings shall be furnished on all fencing to be installed, and the Contractor shall submit samples of each component part of the various fencing if so required by the Owner.

PART 2 - PRODUCTS

2.01 GENERAL

- A. All fencing posts, rails, fittings and gates shall be powder coated steel of the height overall when erected as noted on the drawings.
 - 1. Color: Black

2.02 POSTS

- A. All line and terminal fence posts shall be Schedule 40 steel pipe.
- B. Terminal posts shall be defined as end, pull and corner posts, and line posts defined as the vertical posts installed between terminal posts.
- C. All posts shall be powder coated on all surfaces after fabrication, conforming to ASTM D3451.
- D. All posts shall conform to the following sizes as called for on the plans:

2-3/8" o.d.	3.65 lbs. per foot
2-7/8" o.d.	5.79 lbs. per foot
4" o.d.	9.11 lbs. per foot
6-5/8" o.d.	18.97 lbs. per foot
- E. Spacing for line posts shall be as shown on the plans.
- F. All exposed ends of fence posts shall be fitted with a formed steel, malleable iron, or aluminum alloy powder coated cap. All line posts shall be fitted with a cap suitable for passage of the continuous top rail. All terminal posts shall be capped with a domed terminal top.

2.03 RAILS

- A. All chain link fencing shall have a 1-5/8" o.d. (2.27 lbs. per foot) continuous top rail. Outside sleeve-type couplings 7" long, spaced at 16' or 20' intervals depending on post spacing (8' or 10' o.c. spacing), of the same material as the rail. Every fifth coupling shall have a spring to take up rail expansion or contraction.
- B. Middle and bottom rails will be installed as shown on the plans and attached to the line and terminal posts with galvanized end, corner, and line rail clamps.
- C. All rails shall be Schedule 40 steel pipe powder coated after fabrication, conforming to ASTM D3451.

2.04 WIRE TIES

- A. Wire ties shall be used to attach fence fabric to rails and line posts. Wire tie gauge size shall not be less than gauge of the fence fabric. Spacing for wire ties along rails shall not be greater than 24" and shall not exceed 15" when attaching to line posts. Ties shall be black aluminum or zinc coated steel.

2.05 TENSION BARS

- A. All fence fabric shall be tied to terminal posts with tension bars and tension bands. All tension bars shall be powder coated steel strip 3/16" thick and 3/4" wide. Tension bar shall be threaded through the chain link fabric and attached to the terminal post with 1" wide, No. 9 gauge, tension bands at 15" intervals or less. Tension bands shall be closed with 3/8" x 1-1/4" powder coated carriage bolt and nut.

2.06 TRUSS RODS

- A. For all fencing a 3/8" diameter powder coated steel truss rod and tightener will be installed between each terminal post and each adjacent line post.

2.07 FITTINGS

- A. All fittings to be powder coated malleable cast iron or pressed steel conforming to ASTM D3451.

2.08 CONCRETE POST FOOTINGS

- A. All concrete used shall be 3,000 psi at twenty-eight (28) days using five (5) sacks of cement per cubic yard of mix with a maximum of seven (7) gallons of water per sack.

PART 3 - EXECUTION

3.01 ERECTION

- A. All fencing shall be installed by skilled and experienced fence erectors to the lines and grades shown on the drawings.

3.02 COORDINATION

- A. Fence erectors shall coordinate work with the concrete subcontractor for the placement and location of fence post footings, bollard sleeves, and fence post sleeves in the concrete wall. Fence post erectors shall coordinate with the Owner and Construction Manager in

locating all existing underground utilities prior to drilling holes for fence post footings and bollard sleeves.

3.03 FABRIC CLEARANCE

- A. All fence fabric shall have a one (1") inch clearance from the bottom of the fence fabric to the finish grade. Fence fabric shall extend above the top of top rail no more than one and one-half (1-1/2") inches.

3.04 CLEANUP

- A. Upon completion of the fence installation, any splattered concrete shall be removed from fence posts, all wire ties and fence hardware shall be picked up, and all excess fence fabric and equipment removed from the construction site.

END OF SECTION

SECTION 32 3130

DESIGN MASTER FENCING

PART 1 - GENERAL

1.01 SCOPE

- A. This section covers the furnishing of all labor and materials necessary to install all Designmaster fencing as shown on the plans.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 32 1310 - Concrete Formwork.
- B. Section 32 1320 - Concrete Reinforcement.
- C. Section 32 1330 - Site Concrete Paving.

1.03 SUBMITTALS

- A. Shop drawings shall be furnished on all fencing to be installed, and the Contractor shall submit samples of each component part of the various fencing if so required by the Owner.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Provide fence panels and posts as manufactured by one of the following:
 - 1. Deacero

2.02 PANELS

- A. Panels shall be Contempo 868 Series.
 - 1. Panels shall be 8'-3" wide X 6'-0" tall.
 - 2. Manufactured from recycled steel conforming to ASTM A510.
 - 2. Wire shall have a breaking load between 75,000 and 105,000 psi and shall conform to ASTM A510.
 - 3. All posts shall be hot-dip zinc coated on all surfaces after fabrication with a minimum of 0.3 ounces of zinc per square foot of coated surface area, conforming to ASTM A641.
 - 4. Completed wire panels shall be powder coated.

2.03 POSTS

- A. All posts shall be 2 ½" X 1 ½", 14 gauge, conforming to ASTM A513.
- B. All posts shall be hot-dip zinc coated on all surfaces after fabrication with a minimum of 0.8 ounces of zinc per square foot of coated surface area, conforming to ASTM A653.
- C. Spacing for line posts shall be as shown on the plans.

2.04 FITTINGS

- A. Provide all fittings such as the polypropylene spacer, plastic cap, one-way bolt, flat bar, etc. necessary to install the fence per the manufacturer's recommendations. Provide fittings for both 45 degree and 90 degree corners.

2.5 CONCRETE POST FOOTINGS

- A. All concrete used shall be 3,000 psi at twenty-eight (28) days using five (5) sacks of cement per cubic yard of mix with a maximum of seven (7) gallons of water per sack. Concrete work shall conform to Section 32 1330, "Site Concrete Paving."

PART 3 - EXECUTION

3.01 ERECTION

- A. All fencing shall be installed by skilled and experienced fence erectors to the lines and grades shown on the drawings.

3.02 COORDINATION

- A. Fence erectors shall coordinate work with the concrete subcontractor for the placement and location of fence post footings, bollard sleeves, and fence post sleeves in the concrete wall. Fence post erectors shall coordinate with the Owner and Construction Manager in locating all existing underground utilities prior to drilling holes for fence post footings and bollard sleeves.

3.03 FABRIC CLEARANCE

- A. All fence fabric shall have a one (1") inch clearance from the bottom of the fence fabric to the finish grade.

3.04 CLEANUP

- A. Upon completion of the fence installation, any splattered concrete shall be removed from fence posts, all wire ties and fence hardware shall be picked up, and all excess fence fabric and equipment removed from the construction site.

END OF SECTION