

## West Virginia Northern Community College: Parking Lots & Green Space

## RFB: 21060

## ADDENDUM #2

Date: August 25, 2020

## **Attachments:**

- 1) Bid Form (Specification Section 00300): The bid form has been updated to include Allowance #4 and clarification on Alternates 2, 4, and 5.
- 2) ATC Lot As-Built Survey: Attached is the As-Built Survey prepared by Hull & Associates on 8/21/2020. This includes the new topo, edge of adjacent pavements, and (6) monitoring wells located within he project area. This shall be utilized for final cut and fill numbers.
- 3) ATC Lot Conduit Protection Along ATC Building: Attached is a detail for the electrical conduit and safety protection assembly to be installed on the ATC building wall.
- **4) Plants (Specifications Section 329300):** The maintenance period in the specifications has been updated to 12 months proceeding final completion.
- 5) ATC Lot Sidewalk Barricade: The sidewalks along Main and 16<sup>th</sup> Streets will be shut down from the time Construction begins to a date beyond project completion due to unsafe condition and non-compliance for ADA Accessibility. With that, the two (2) jersey barriers that are being removed from the ECS Lot at the intersection of Market and 18<sup>th</sup>, will be relocated and replaced at the ATC Lot. Refer to the attached Site Layout Plan (C-107) for locations.

## **Questions:**

- Question: Are there CAD files available for the job? Answer: Not at this time. Once the successful bidder is selected, CAD files will be prepared by Architect, a waiver release will be signed by Contractor, and the files will be provided.
- 2) *Question:* Does this project have any prevailing wage rates required? *Answer:* No.
- 3) Landscape & Maintenance Terms- Comment: The landscaping and turf maintenance includes two years of full maintenance. Answer: Plants Spec 329300 has been revised to include 12 months of warranty and maintenance, not 24 months. Refer to the attached Plant Spec.

- a) *Question:* Will the contractor be paid in full for the installation upon completion and approval? *Answer:* Yes, the contractor will be paid once the final punch list and closeout documents are completed and approved by Owner and Architect.
- **b)** *Question:* Will the subsequence maintenance be invoiced monthly or annually and does that still go through the general contractor? *Answer:* The maintenance contract would go through the general contractor and invoiced monthly.
- c) **Question:** Do we need to split out the price for maintenance on the bid? **Answer:** Yes. An additional allowance has been added as Allowance #4 to account for the landscape maintenance period. Refer to the attached Bid Form.
- 4) **Question:** Can you identify the work being done on the ECS Lot in Phase 1 & 2? **Answer:** Please refer to the Drawings (ECS Lot Phase 1 and Phase 2) and Specifications for Phasing items.
- 5) *Question:* What is the color, texture, etc of the brick pavers? *Answer:* This is yet to be determined. Please refer to Spec Section 321400 Unit Paving for Action Submittals.
- 6) Question: Are 1/2" Expansion Joints acceptable for Curbs & Sidewalks? Answer: Yes, but no asphaltic joints are acceptable.
- 7) *Question:* Is the B&O Lot included in the base bid or is it an add alternate? *Answer:* The entire B&O Lot is an Alternate to the project. Refer to drawings and specifications.
- 8) Question: <u>Alternate #2</u> ATC Lot Pedestrian Light Poles is a DEDUCT on the bid proposal, but an ADD on the Schedule of Alternates. Answer: The Schedule of Alternates on the Bid Form Section 00300, has be updated to include ADD, not DEDUCT. Refer to attached Bid Form.
- 9) Question: <u>Alternate #4</u> ECS Lot Phase 2 Parking Area is a DEDUCT on the bid proposal, but an ADD on the Schedule of Alternates. *Answer:* The Schedule of Alternates on the Bid Form Section 00300, has be updated to include ADD, not DEDUCT. Refer to attached Bid Form.
- 10) Question: <u>Alternate #5</u> B&O Lot Entire Parking Area is a DEDUCT on the bid proposal, but an ADD on the Schedule of Alternates. Answer: The Schedule of Alternates on the Bid Form Section 00300, has be updated to include ADD, not DEDUCT. Refer to attached Bid Form.
- 11) Question: Is the 5' of Over-Excavated Area & Engineered Fill a part of the BASE BID for the ECS Lot or is it a UNIT PRICE? Please Clarify for Phase 1 & 2 in the ECS Lot. Answer: For Phase 1 of the ECS Lot, the 5' of over-excavation shall be part of base bid. For Phase 2 of the ECS Lot, the 5' of over-excavation shall be part of Alternate #4.
- 12) Question: Due to the timeframe some landscaping contractors are concerned about the planting season restrictions. Is there a milestone that it has to be installed? This year or at the end of the project? Answer: Per the Bid Form Section 00300, the contractor has up to 252 consecutive days for substantial completion of all site improvements other than pavement.
- **13)** *Question:* Are the granite blocks on the ECS Lot part of the Base Bid? *Answer:* Yes, all eight (8) granite blocks shown on the ECS Lot will need to be hand selected by Architect, picked-up at the Material Yard on Peninsula Street in Wheeling, and installed at locations directed by Owner and Architect. Coordinate with City of Wheeling and Architect for pickup time, location, and access.

SECTION 00300 – FORM OF PROPOSAL

| BID TO THE OWNER: | Chief Procurement Officer<br>RFB 21060<br>Community and Technical College System of West Virginia<br>1018 Kanawha Boulevard, East, Suite 700<br>Charleston, WV 25301 |
|-------------------|--|
| PROJECT:          | RFB 21060<br>WEST VIRGINIA NORTHERN COMMUNITY COLLEGE:<br>PARKING LOTS & GREEN SPACE<br>Wheeling, WV   |

Bidder's Name:

The undersigned, hereinafter called "Bidder," being familiar with and understanding the Bidding Documents, and also having examined the site and being familiar with all local conditions affecting the Project, hereby proposes to furnish all labor, material, equipment, supplies and transportation, and to perform all Work in accordance with the Bidding and Contract Documents within the time set forth below for the sum of:

BASE BID: <u>\$</u>\_\_\_\_\_

(Amount to be shown in both words and numbers. In the event of a difference between the written amount and the number amount, the written amount shall prevail.)

The Bidder, if successful and awarded a Contract, agrees that all Work is to be Substantially Complete within the below listed consecutive calendar days following receipt of Owner's written Notice to Proceed and agrees to achieve Final Completion within 30 consecutive calendar days thereafter.

CALENDAR DAYS: <u>Pavement – 70 consecutive calendar days total</u>, All Other Site Improvements – 252 consecutive calendar days total.

#### ALLOWANCES:

The Base Proposal includes the following Allowance which is explained in Section 012100 – Allowances:

<u>Allowance No. 1</u>: ATC Lot – Adjust Existing Sampling Wells to meet finish grade of pavement or landscape, \$2,500

Allowance No. 2: ECS Lot – Selective Tree Pruning and/or Removal, \$ 20,000

Allowance No. 3: Include a Contingency Allowance, \$10,000

| $\wedge$      | A CONTRACTOR CONTRACTO |
|---------------|--|
| <b>′</b> 2∖ ( | Allowance No. 4: 12 Month Landscape Maintenance Period, \$12,000   |
| - \           |  |
|               |  |

#### ALTERNATES:

The following Alternates may be added to the Base Proposal if selected by Owner. All work shown on drawings and/or specified is in Base Bid, except for such work specifically called to be an Alternate. Refer to Section 012300 - Alternates. (NOTE: In event of a discrepancy, amount in words shall govern.)

| =                              |                 | <u>1</u> : ATC Lot – Monument Sign (includes foundation, electrical and lighting, ed components).  |
|--------------------------------|-----------------|--|
|                                | Add:            | <u>\$</u>  |
|                                |                 |  |
|                                |                 | (Amount to be shown in both words and numbers)   |
|                                | Additional Cale | endar Days (if any)  |
| $\sim$                         |                 | <u>2</u> : ATC Lot – Pedestrian Light Poles (includes pole, fixture, electrical nd foundation).  |
| $\zeta^{\prime}/2$             | Add:            | \$   |
|                                | لرر             | (Amount to be shown in both words and numbers)   |
|                                | Additional      | Calendar Days (if any)   |
|                                |                 | <u>3</u> : ECS Lot – Monument Sign & Electrical Connection (includes lectrical and lighting, and associated components).   |
|                                | Add:            | \$   |
|                                |                 |  |
|                                |                 | (Amount to be shown in both words and numbers)   |
|                                | Additional Cale | endar Days (if any)  |
| $\sim$                         | pavement, co    | <u>4</u> : ECS Lot – Phase 2 Parking Area (includes, demolition, bituminous ncrete curbs, concrete sidewalks, site lighting, landscaping, line striping, ada and associated grading).                                    |
| $\epsilon'$                    | Add:            | \$   |
| $\zeta \underline{/}$          | <u>ئے ک</u>     |  |
|                                |                 | (Amount to be shown in both words and numbers)   |
|                                |                 | Calendar Days (if any)   |
| $\sim$                         |                 | <u>5</u> : B&O Lot – Entire Parking Area (includes, demolition, bituminous ncrete paving, exposed aggregate concrete paving, concrete curbs, concrete ndscaping, line striping, ada curb ramps, and associated grading). |
| $\dot{\epsilon}$               | Add:            | \$   |
| $\left\{ \frac{1}{2} \right\}$ | لىر_            | (Amount to be shown in both words and numbers)   |
|                                |                 | (Amount to be shown in both words and numbers)   |

| foundation, el                       | ectrical and lighting, and associated components).  |
|--------------------------------------|---|
| Add:                                 | \$  |
|                                      |   |
|                                      | (Amount to be shown in both words and numbers)  |
| Additional Cale                      | endar Days (if any)   |
| <u>Alternate No.</u><br>components). | <u>7</u> : B&O Lot – Brick Pillars (includes foundation and associated  |
| Add:                                 | \$  |
|                                      | (Amount to be shown in both words and numbers)  |
| Additional Cale                      | endar Days (if any)   |
|                                      | 8: B&O Lot – Brick Paving on Concrete (includes replacing the asphalt, only, with Brick Paving on Concrete Base).   |
| Add:                                 | \$  |
|                                      |   |
|                                      | (Amount to be shown in both words and numbers)  |
| Additional Cale                      | endar Days (if any)   |
| UNIT PRICES:                         |   |
| if accepted by the Own               | es are applicable to various sections of the specifications. Unit Prices will be used er in the event of changes to the scope of work involving increases or decreases in s specified in Section 01240 – Unit Prices. |
| <u>Unit Price No.</u>                | <u>1</u> : ECS Lot – Excavation Basement  |
| Add / Deduct:                        | <u>\$(per CY)</u>   |
|                                      |   |
|                                      | (Amount to be shown in both words and numbers)  |
|                                      | <u>2</u> : ECS Lot – Foundation Wall Demolition-Historic Masonry  |
| Add / Deduct:                        | <u>\$</u> (per SF of Face)  |
|                                      | (Amount to be shown in both words and numbers)  |

| Unit Price No                            | <u>b. 3</u> : ECS Lot – Foundation Wall Dem  | nolition-Concrete            |
|--|--|------------------------------|
| Add / Deduct:                            | \$   | (per SF of Face)             |
| Unit Price No                            | (Amount to be shown in both words and <b>b. 4</b> : <b>ECS Lot – Engineered fill</b> | d numbers)                   |
| Add / Deduct:                            | \$   | (per CY)                     |
|  | (Amount to be shown in both words and  | d numbers)                   |
| RESPECTFULLY SU                          | BMITTED:   |                              |
| SIGNATURE:                               | Signature in Ink   | DATE:                        |
| NAME:                                    | Please Type or Print   | Corporate Seal if Applicable |
| TITLE:                                   |  |                              |
| BIDDERS NAME: _<br>BIDDERS<br>ADDRESS: _ |  |                              |
| TELEPHONE:                               |  |                              |
| EMAIL:<br>CONTRACTOR"S<br>LICENSE NO.:   |  |                              |

#### CONTRACTOR'S LICENSE

West Virginia Code §21-11-2 requires that all persons desiring to perform contractual work in West Virginia must be duly licensed. The West Virginia Contractor's Licensing Board is empowered to issue the contractor's license. Application for a contractor's license may be made by contacting the West Virginia Department of Labor, 1900 Kanawha Boulevard, East, Charleston, West Virginia 25305. Telephone: (304) 558-7890. West Virginia Code §21-11 requires any prospective Bidder to include the contractor's license number on their Bid. Successful Bidder will be required to furnish a copy of their contractor's license prior to issuance of a Purchase Order/Contract.

## AFFIDAVITS (on the following pages) – TO BE SUBMITTED WITH BID OR AS OTHERWISE PERSCRIBED BY LAW

 PURCHASING AFFIDAVIT: West Virginia code §5A-3-10A states that no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or

- prospective vendor is a debtor and the debt owed is an amount greater than \$1,000 in the aggregate. The Bidder (vendor) shall execute and submit with its bid, or as otherwise prescribed by West Virginia Code, the Purchasing Affidavit provided in the Bidding Documents.
- DRUG-FREE WORKPLACE CONFORMANCE AFFIDAVIT: West Virginia Code §21-1D-5 requires each contractor that submits a bid for the work to submit an affidavit that the contractor has a written plan for a drug-free workplace policy prior to being awarded a contract. The contractor (bidder/vendor) shall execute and submit with its bid, or as otherwise prescribed by West Virginia Code, the Drug-Free Workplace Conformance Affidavit provided in the Bidding Documents.

#### CERTIFIED DRUG-FREE WORKPLACE REPORT

In accordance with West Virginia Code §21-1D-7b, no less than once per year, or upon completion of the project, every contractor shall provide a certified report to the public authority which let the contract. That report must include each of the items identified in the Required Report Content section of the Certified Drug-Free Workplace Report Coversheet.

#### DISCLOSURE OF INTERESTED PARTIES TO CONTRACTS

Pursuant to West Virginia Code §6D-1-2, a state agency may not enter into a contract, or a series of related contracts, that has/have an actual or estimated value of \$1 million or more until the business entity submits to the contracting state agency a Disclosure of Interested Parties to the applicable contract. In addition, the business entity awarded a contract is obligated to submit a supplemental Disclosure of Interested Parties reflecting any new or differing interested parties to the contract within 30 days following the completion or termination of the applicable contract.

The Disclosure Form is available at the following URL: <u>http://www.ethics.wv.gov/Pages/forms.aspx</u>

#### VENDOR REGISTRATION AND DISCLOSURE STATEMENT

The successful Bidder must be a registered vendor with the West Virginia Department of Administration, Purchasing Division, prior to receiving a contract/purchase order. Vendor registration information is available at the following URL: <u>http://www.state.wv.us/admin/purchase/vrc/wv1.pdf</u>

#### LIQUIDATED DAMAGES

The Owner will suffer financial loss if the Work is not Substantially Complete within the Contract Time following the date established for commencement of the Work in the notice to proceed and/or purchase order. As liquidated damages, and not as a penalty, the Contractor and the Contractor's surety shall be liable for and shall pay the Owner the sum of \$500 per day until Substantial Completion is achieved.

Allowances may be made for delays due to shortages of materials and/or energy resources, subject to proof by documentation, and for delays due to strikes or other delays beyond the control of the Contractor. All delays and any claim for extension of Contract Time must be properly documented in accordance with the General Conditions of the Contract for Construction, AIA Document A201-2017, and the State of West Virginia Supplementary Conditions to AIA Document A201-2017.

#### ADDENDA ACKNOWLEDGMENT

The undersigned hereby acknowledges receipt of the following Addenda and has taken the information contained therein into full consideration in the formulation of this Bid.

Addenda No. 1 \_\_\_\_\_

No. 2 \_\_\_\_\_

No. 3

Failure to acknowledge receipt of each Addendum may be cause for rejection of the Bid.

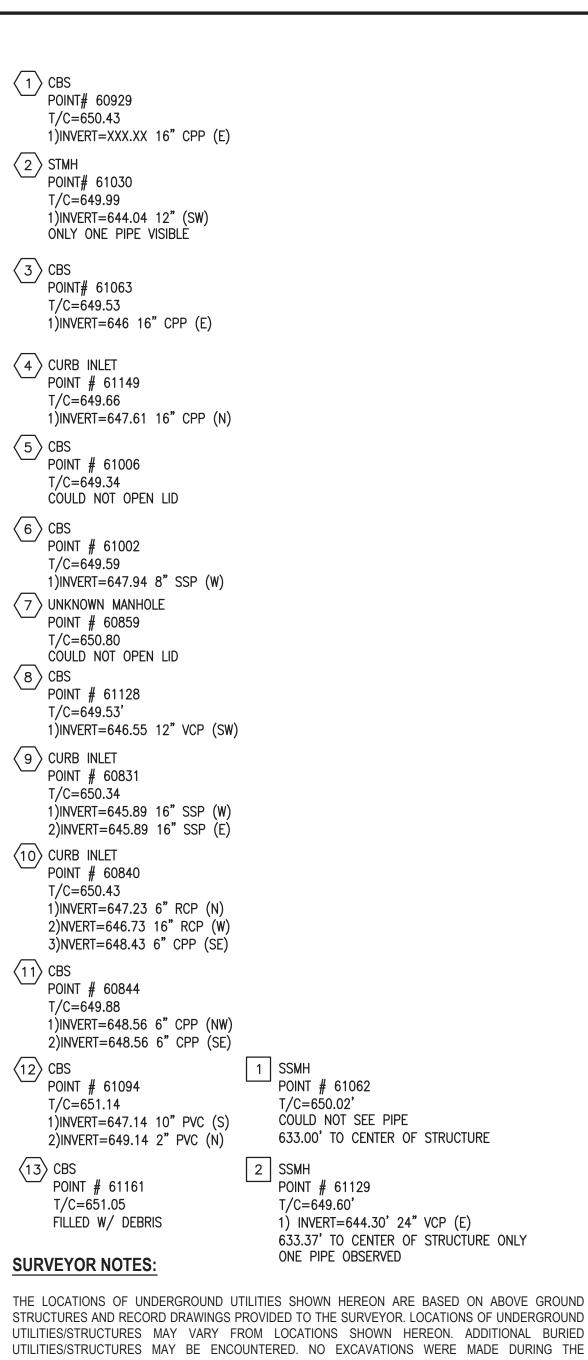
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_ DATE: \_\_\_\_\_

### LIST OF PROPOSED SUBCONTRACTORS (To Be Completed and Submitted with Bid)

List as designated below the proposed subcontractor for each major branch of work for this bid. Also, provide the subcontractor's license number as required by the West Virginia Contractors Licensing Act. If the branch of work is to be completed solely by the Bidder/Contractor, so indicate. If the acceptance of an alternate bid changes a subcontractor, indicate by notation below. The Bidder/Contractor may be requested to change an unsatisfactory subcontractor. The Bidder/Contractor is responsible for selecting or changing subcontractors. The Owner and Architect/Engineer may indicate their concerns about any entity listed which they have reason to believe past experience indicates that poor performance may be expected. The Bidder/Contractor has full responsibility for satisfactory execution of all work in accordance with the Contract Documents. Any change of proposed subcontractors shall be at no additional cost to the Owner, as the Bidder/Contractor has full responsibility for execution of the work. Bidder/Contractor shall have up to two hours after the bid opening to make adjustments if necessary. Owner will suffer loss should Contractor change from those listed beyond the two-hour time stipulated. Please email adjustments/modifications to Chief Procurement Officer at rich.donovan@wvhepc.edu.

| Branch of Work/Material<br>Category |                    | Subcontractor/Supplier | Contractor License No. |
|-------------------------------------|--------------------|------------------------|------------------------|
| 1.                                  | Landscaping        |                        | <br>                   |
|                                     |                    |                        |                        |
|                                     | 0                  |                        |                        |
| 4.                                  |                    |                        |                        |
| 5.                                  | Certified Arborist |                        | <br>                   |
| 6.                                  | Masons             |                        | <br>                   |
| 7.                                  |                    |                        | <br>                   |
|                                     |                    |                        |                        |
| 9.                                  |                    |                        |                        |
|                                     |                    |                        |                        |

#### END OF FORM OF PROPOSAL END OF SECTION 00300



STRUCTURES AND RECORD DRAWINGS PROVIDED TO THE SURVEYOR. LOCATIONS OF UNDERGROUND UTILITIES/STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/STRUCTURES. THIS IS NOT A ALTA/NSPS LAND TITLE SURVEY AS DEFINED BY THE ALTA/NSPS MINIMUM STANDARDS EFFECTIVE FEBRUARY 23, 2016.

LISTED ZONING STANDARDS ARE FROM THE WHEELING CODIFIED ORDINANCES 1339.06 OBTAINED BY THE SURVEYOR

NO EVIDENCE OF EARTH WORK OR CONSTRUCTION DURING THE TIME OF FIELD SURVEY.

NO DELINEATION OF WETLANDS DURING THE TIME OF FIELD SURVEY.

NO TITLE REPORT PROVIDED BY THE CLIENT.

CONTOUR INTERVAL = 1' MINOR AND 5' MAJOR

## DATE OF FIELD WORK: 4/3/2020

EVERY DOCUMENT OF RECORD REVIEWED AND CONSIDERED AS A PART OF THIS SURVEY IS NOTED HEREON.

SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY. NO STATEMENT IS MADE CONCERNING THE EXISTENCE OF UNDERGROUND OR OVERHEAD CONTAINERS OR FACILITIES THAT MAY AFFECT THE USE OR DEVELOPMENT OF THIS TRACT.

## **BASIS OF BEARINGS:**

THE BEARINGS SHOWN HEREIN ARE BASED ON WEST VIRGINIA STATE PLANE COORDINATE SYSTEM. NORTH SYSTEM, NAD83, GEOID12A.

## **BENCHMARKS**:

AS PER THE TOPOGRAPHIC SURVEY PREPARED BY HULL & ASSOCIATES THE CONTRACTOR AND/OR HIS SURVEYOR SHALL BE RESPONSIBLE TO CROSS CHECK ALL CONTROL FOR DISTURBANCE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

BENCHMARK # 502 - CHISELED "X" SET ELEVATION = 650.90'

BENCHMARK # 503 - DRILL HOLE SET ELEVATION = 650.39'

BENCHMARK # 504 - DRILL HOLE SET ELEVATION = 652.78'

FIRM COMMUNITY PANEL No.: 54069C0053D FLOOD ZONE: AE EFFECTIVE DATE: 07/17/2006

#### CONTROL POINTS

BASIS OF BEARING: TRUE NORTH, BASED ON OBSERVATIONS, GPS DATA COLLECTED WITH TRIMBLE R10 UNIT RTK AND TRIMBE S7 ROBOTIC TOTAL STATION CORRECTION ON WEST VIRGINIA STATE PLANE NORTH ZONE COORDINATE SYSTEM, NAD 1983, NAVD 1988, GEOID 12A.

| POINT # | NORTHING   | EASTING     | ELEV.  | DESCRIPT |
|---------|------------|-------------|--------|----------|
| 207     | 571979.461 | 1626282.707 | 651.71 | MAGS     |
| 208     | 571926.594 | 1626119.162 | 650.34 | MAG      |

## ZONING

THE D-2 DISTRICT ALLOWS MEDIUM DENSITY RESIDENTIAL AND COMMERCIAL USES APPROPRIATE TO THE AREA SURROUNDING THE CITY'S COMMERCIAL CORE BUT STILL WITHIN THE DOWNTOWN. IN D-2, LAND AND STRUCTURES MAY ONLY BE USED FOR:

(a) PRINCIPAL PERMITTED USES

ANY NON-RESIDENTIAL PRINCIPAL PERMITTED USE ALLOWED IN D-1. (1) COMMUNITY CENTER. (2)

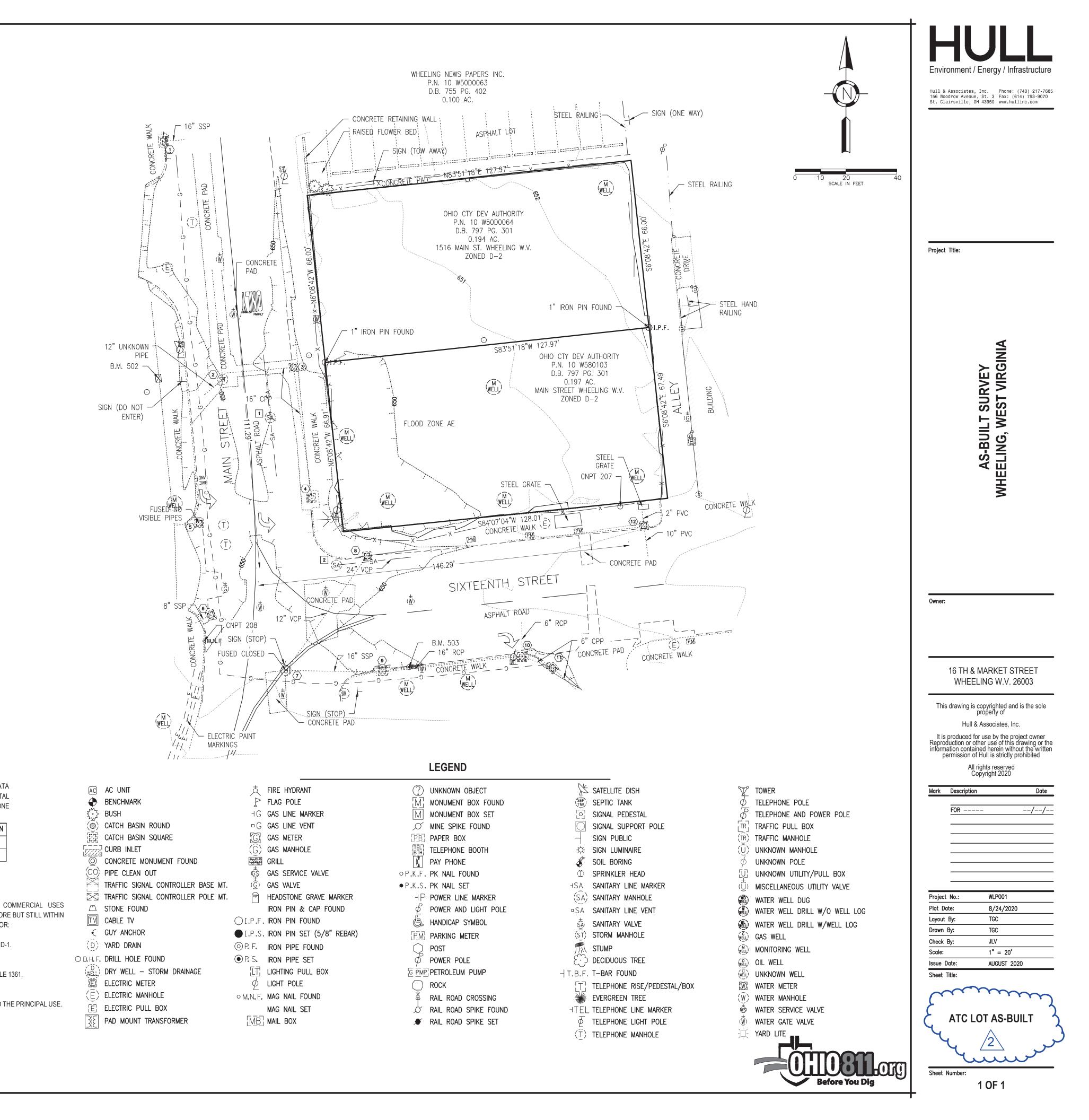
MULTI-FAMILY DWELLING. (3)

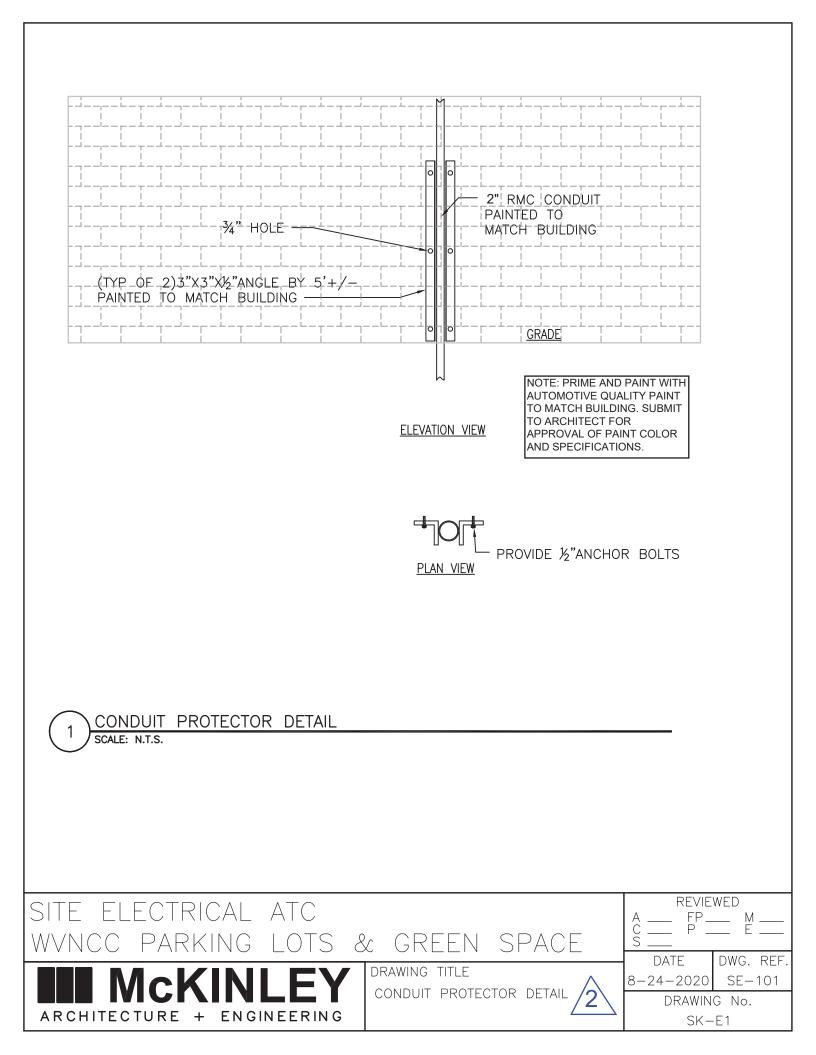
ADULT ESTABLISHMENT, SUBJECT TO THE STANDARDS IN ARTICLE 1361. (4) (ORD. 14993. PASSED 8-15-17.)

(b) ACCESSORY USES

ACCESSORY USES THAT ARE CUSTOMARY AND CLEARLY INCIDENTAL TO THE PRINCIPAL USE. CUSTOMARY HOME OCCUPATION. SEE ARTICLE 1367.

(c) SPECIAL PERMIT USES PARKING GARAGE OR PARKING LOT.





#### SECTION 329300 - PLANTS

#### 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. Plants.
- B. Related Requirements:
  - 1. Section 329200 "Turf and Grasses" for turf (lawn) and meadow planting, hydroseeding, and erosion-control materials.

#### 1.3 DEFINITIONS

- A. Backfill: The earth used to replace or the act of replacing earth in an excavation.
- B. Balled and Burlapped Stock: Plants dug with firm, natural balls of earth in which they were grown, with a ball size not less than [diameter and depth recommended by ANSI Z60.1 for type and size of plant required]; wrapped with burlap, tied, rigidly supported, and drum laced with twine with the root flare visible at the surface of the ball as recommended by ANSI Z60.1.
- C. Container-Grown Stock: Healthy, vigorous, well-rooted plants grown in a container, with a well-established root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to ANSI Z60.1 for type and size of plant required.
- D. Finish Grade: Elevation of finished surface of planting soil.
- E. Planting Area: Areas to be planted.
- F. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth. See [Section 329113 "Soil Preparation"] [Section 329115 "Soil Preparation (Performance Specification)"] for drawing designations for planting soils.
- G. Plant; Plants; Plant Material: These terms refer to vegetation in general, including trees, shrubs, vines, ground covers, ornamental grasses, bulbs, corms, tubers, or herbaceous vegetation.

- H. Root Flare: Also called "trunk flare." The area at the base of the plant's stem or trunk where the stem or trunk broadens to form roots; the area of transition between the root system and the stem or trunk.
- I. Stem Girdling Roots: Roots that encircle the stems (trunks) of trees below the soil surface.
- J. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

## 1.4 COORDINATION

- A. Coordination with Turf Areas (Lawns): Plant trees, shrubs, and other plants after finish grades are established and before planting turf areas unless otherwise indicated.
  - 1. When planting trees, shrubs, and other plants after planting turf areas, protect turf areas, and promptly repair damage caused by planting operations.

## 1.5 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at [Project site].

## 1.6 ACTION SUBMITTALS

- A. Samples for Verification: For each of the following:
  - 1. Mulch: [1-quart (1-L)] volume of each organic mulch required; in sealed plastic bags labeled with composition of materials by percentage of weight and source of mulch. Each Sample shall be typical of the lot of material to be furnished; provide an accurate representation of color, texture, and organic makeup.
  - 2. Amended topsoil: [1-quart (1-L)] volume of each organic mulch required; in sealed plastic bags labeled with composition of materials by percentage of weight and source of mulch. Each Sample shall be typical of the lot of material to be furnished; provide an accurate representation of color, texture, and organic makeup.
  - 3. Bioswale Mix: [1-quart (1-L)] volume of each organic mulch required; in sealed plastic bags labeled with composition of materials by percentage of weight and source of mulch. Each Sample shall be typical of the lot of material to be furnished; provide an accurate representation of color, texture, and organic makeup.
  - 4. Microryzae

## 1.7 CLOSEOUT SUBMITTALS

A. Maintenance Data: Recommended procedures to be established by Owner for maintenance of plants during a calendar year. Submit before expiration of required maintenance periods.

#### 1.8 QUALITY ASSURANCE

A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful establishment of plants.

- 1. Professional Membership: Installer shall be a member in good standing of either the National Association of Landscape Professionals or AmericanHort.
- 2. Experience: [Five] years' experience in landscape installation in addition to requirements in Section 014000 "Quality Requirements."
- 3. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
- 4. Personnel Certifications: Installer's [field supervisor] [personnel assigned to the Work] shall have certification in [one] [all] of the following categories from the National Association of Landscape Professionals:
  - a. Landscape Industry Certified Technician Exterior.
  - b. Landscape Industry Certified Interior.
  - c. Landscape Industry Certified Horticultural Technician.
- B. Provide quality, size, genus, species, and variety of plants indicated, complying with applicable requirements in ANSI Z60.1.
- C. Measurements: Measure according to ANSI Z60.1. Do not prune to obtain required sizes.
  - 1. Trees and Shrubs: Measure with branches and trunks or canes in their normal position. Take height measurements from or near the top of the root flare for field-grown stock and container-grown stock. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip to tip. Take caliper measurements 6 inches (150 mm) above the root flare for trees up to 4-inch (100-mm) caliper size, and 12 inches (300 mm) above the root flare for larger sizes.
  - 2. Other Plants: Measure with stems, petioles, and foliage in their normal position.
- D. Plant Material Observation: Architect may observe plant material either at place of growth or at site before planting for compliance with requirements for genus, species, variety, cultivar, size, and quality. Architect may also observe trees and shrubs further for size and condition of balls and root systems, pests, disease symptoms, injuries, and latent defects and may reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site.
  - 1. Notify Architect of sources of planting materials [seven] <7> days in advance of delivery to site.

## 1.9 DELIVERY, STORAGE, AND HANDLING

- A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws if applicable.
- B. Bulk Materials:
  - 1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
  - 2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.

- 3. Accompany each delivery of bulk materials with appropriate certificates.
- C. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, wind burn, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during shipping and delivery. Do not drop plants during delivery and handling.
- D. Handle planting stock by root ball.
- E. Apply antidesiccant to trees and shrubs using power spray to provide an adequate film over trunks (before wrapping), branches, stems, twigs, and foliage to protect during digging, handling, and transportation.
  - 1. If deciduous trees or shrubs are moved in full leaf, spray with antidesiccant at nursery before moving and again two weeks after planting.
- F. Wrap trees and shrubs with burlap fabric over trunks, branches, stems, twigs, and foliage to protect from wind and other damage during digging, handling, and transportation.
- G. Deliver plants after preparations for planting have been completed, and install immediately. If planting is delayed more than six hours after delivery, set plants and trees in their appropriate aspect (sun, filtered sun, or shade), protect from weather and mechanical damage, and keep roots moist.
  - 1. Heel-in bare-root stock. Soak roots that are in less than moist condition in water for two
  - 2. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
  - 3. Do not remove container-grown stock from containers before time of planting.
  - 4. Water root systems of plants stored on-site deeply and thoroughly with a fine-mist spray. Water as often as necessary to maintain root systems in a moist, but not overly wet condition.

#### 1.10 FIELD CONDITIONS

- A. Field Measurements: Verify actual grade elevations, service and utility locations, irrigation system components, and dimensions of plantings and construction contiguous with new plantings by field measurements before proceeding with planting work.
- B. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.
  - 1. Spring Planting: August 15<sup>th</sup> October 15th.
  - 2. Fall Planting: April 15<sup>th</sup> June 15th.
- C. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions and warranty requirements.

#### 1.11 WARRANTY

- A. Special Warranty: Installer agrees to repair or replace plantings and accessories that fail in materials, workmanship, or growth within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Death and unsatisfactory growth, except for defects resulting from abuse, lack of adequate maintenance, or neglect by Owner.
    - b. Structural failures including plantings falling or blowing over.
    - c. Faulty performance of [tree stabilization].
  - 2. Warranty Periods: From date of [**planting completion**].
    - a. Trees, Shrubs, Vines, and Ornamental Grasses: [12] months.
  - 3. Include the following remedial actions as a minimum:
    - a. Immediately remove dead plants and replace unless required to plant in the succeeding planting season.
    - b. Replace plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.
    - c. A limit of one replacement of each plant is required except for losses or replacements due to failure to comply with requirements.
    - d. Provide extended warranty for period equal to original warranty period, for replaced plant material.

#### PART 2 - PRODUCTS

#### 2.1 PLANT MATERIAL

- A. General: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant List, Plant Schedule, or Plant Legend indicated on Drawings and complying with ANSI Z60.1; and with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, pests, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
  - 1. Trees with damaged, crooked, or multiple leaders; tight vertical branches where bark is squeezed between two branches or between branch and trunk ("included bark"); crossing trunks; cut-off limbs more than 3/4 inch (19 mm) in diameter; or with stem girdling roots are unacceptable.
  - 2. Collected Stock: Do not use plants harvested from the wild, from native stands, from an established landscape planting, or not grown in a nursery unless otherwise indicated.
- B. Provide plants of sizes, grades, and ball or container sizes complying with ANSI Z60.1 for types and form of plants required. Plants of a larger size may be used if acceptable to Architect, with a proportionate increase in size of roots or balls.

- C. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which begins at root flare according to ANSI Z60.1. Root flare shall be visible before planting.
- D. Labeling: Label [each] plant of each variety, size, and caliper with a securely attached, waterproof tag bearing legible designation of common name and full scientific name, including genus and species. Include nomenclature for hybrid, variety, or cultivar, if applicable for the plant.
- E. If formal arrangements or consecutive order of plants is indicated on Drawings, select stock for uniform height and spread, and number the labels to assure symmetry in planting.

#### 2.2 FERTILIZERS

- A. Planting Tablets: Tightly compressed chip-type, long-lasting, slow-release, commercial-grade planting fertilizer in tablet form. Tablets shall break down with soil bacteria, converting nutrients into a form that can be absorbed by plant roots.
  - 1. Size: [**5-gram**] tablets.
  - 2. Nutrient Composition: 20 percent nitrogen, 10 percent phosphorous, and 5 percent potassium, by weight plus micronutrients.

#### 2.3 MULCHES

- A. Organic Mulch: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of one of the following:
  - 1. Type: [Ground or shredded bark]
  - 2. Size Range: [2 inches (76 mm) maximum, 1/2 inch (13 mm) minimum].
  - 3. Color: Natural.
- B. Compost Mulch: Well-composted, stable, and weed-free organic matter, pH of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through a 1-inch (25-mm) sieve; soluble-salt content of [2 to 5] dS/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
  - 1. Organic Matter Content: [50 to 60] percent of dry weight.
  - 2. Type: [Rounded riverbed gravel or smooth-faced stone].
  - 3. Size Range: [4 inches (38 mm) maximum, 1 inch (19 mm) minimum].
  - 4. Color: [Readily available natural gravel color range].

#### 2.4 MISCELLANEOUS PRODUCTS

- A. Antidesiccant: Water-insoluble emulsion, permeable moisture retarder, film forming, for trees and shrubs. Deliver in original, sealed, and fully labeled containers and mix according to manufacturer's written instructions.
- B. Burlap: Non-synthetic, biodegradable.

C. Mycorrhizal Fungi: Dry, granular inoculant containing at least 5300 spores per lb (0.45 kg) of vesicular-arbuscular mycorrhizal fungi and 95 million spores per lb (0.45 kg) of ectomycorrhizal fungi, 33 percent hydrogel, and a maximum of 5.5 percent inert material.

## PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine areas to receive plants, with Installer present, for compliance with requirements and conditions affecting installation and performance of the Work.
  - 1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
  - 2. Verify that plants and vehicles loaded with plants can travel to planting locations with adequate overhead clearance.
  - 3. Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
  - 4. Uniformly moisten excessively dry soil that is not workable or which is dusty.
- B. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Architect and replace with new planting soil.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities and turf areas and existing plants from damage caused by planting operations.
- B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- C. Outline areas, adjust locations when requested, and obtain Architect's acceptance of layout before excavating or planting. Make minor adjustments as required.

#### 3.3 PLANTING AREA ESTABLISHMENT

- A. General: Prepare planting area for soil placement and mix planting soil according to [Section 329113 "Soil Preparation."] [Section 329115 "Soil Preparation (Performance Specification)."]
- B. Placing Planting Soil: [Place manufactured planting soil over scarified subgrade].
- C. Before planting, obtain Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

D. Application of Mycorrhizal Fungi: At time directed by Architect, broadcast dry product uniformly over prepared soil at application rate [according to manufacturer's written recommendations].

## 3.4 EXCAVATION FOR TREES AND SHRUBS

- A. Planting Pits and Trenches: Excavate circular planting pits.
  - 1. Excavate planting pits with sides sloping inward at a 45-degree angle. Excavations with vertical sides are unacceptable. Trim perimeter of bottom leaving center area of bottom raised slightly to support root ball and assist in drainage away from center. Do not further disturb base. Ensure that root ball will sit on undisturbed base soil to prevent settling. Scarify sides of planting pit smeared or smoothed during excavation.
  - 2. Excavate approximately three times as wide as ball diameter for [balled and burlapped] [container-grown] stock.
  - 3. Do not excavate deeper than depth of the root ball, measured from the root flare to the bottom of the root ball.
  - 4. If area under the plant was initially dug too deep, add soil to raise it to the correct level and thoroughly tamp the added soil to prevent settling.
  - 5. Maintain angles of repose of adjacent materials to ensure stability. Do not excavate subgrades of adjacent paving, structures, hardscapes, or other new or existing improvements.
  - 6. Maintain supervision of excavations during working hours.
  - 7. Keep excavations covered or otherwise protected [when unattended by Installer's personnel].
- B. Backfill Soil: Subsoil and topsoil removed from excavations [may] be used as partial backfill soil unless otherwise indicated.
- C. Obstructions: Notify Architect if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.
  - 1. Hardpan Layer: Drill 6-inch- (150-mm-) diameter holes, 24 inches (600 mm) apart, into free-draining strata or to a depth of 10 feet (3 m), whichever is less, and backfill with free-draining material.
- D. Drainage: Notify Architect if subsoil conditions evidence unexpected water seepage or retention in tree or shrub planting pits.

#### 3.5 TREE, SHRUB, AND VINE PLANTING

- A. Inspection: At time of planting, verify that root flare is visible at top of root ball according to ANSI Z60.1. If root flare is not visible, remove soil in a level manner from the root ball to where the top-most root emerges from the trunk. After soil removal to expose the root flare, verify that root ball still meets size requirements.
- B. Roots: Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.

- C. Balled and Burlapped Stock: Set each plant plumb and in center of planting pit or trench with root flare [1 inch (25 mm) above] adjacent finish grades.
  - 1. Backfill: Planting soil. [ For trees, use excavated soil for partial backfill.]
  - 2. After placing some backfill around root ball to stabilize plant, carefully cut and remove burlap, rope, and wire baskets from tops of root balls and from sides, but do not remove from under root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.
  - 3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
- D. [Container-Grown] Stock: Set each plant plumb and in center of planting pit or trench with root flare [1 inch (25 mm) above] adjacent finish grades.
  - 1. Backfill: Planting soil.
  - 2. Carefully remove root ball from container without damaging root ball or plant.
  - 3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
- E. Slopes: When planting on slopes, set the plant so the root flare on the uphill side is flush with the surrounding soil on the slope; the edge of the root ball on the downhill side will be above the surrounding soil. Apply enough soil to cover the downhill side of the root ball.

#### 3.6 TREE, SHRUB, AND VINE PRUNING

- A. Remove only dead, dying, or broken branches. Do not prune for shape.
- 3.7 GROUND COVER AND PLANT PLANTING
  - A. Set out and space ground cover and plants other than trees, shrubs, and vines [as indicated on **Drawings**] in even rows with triangular spacing.
  - B. Use planting soil for backfill.
  - C. Dig holes large enough to allow spreading of roots.
  - D. For rooted cutting plants supplied in flats, plant each in a manner that minimally disturbs the root system but to a depth not less than two nodes.
  - E. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.
  - F. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.
  - G. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

#### 3.8 PLANTING AREA MULCHING.

- A. Mulch backfilled surfaces of planting areas and other areas indicated.
  - 1. Trees[ and Treelike Shrubs] in Turf Areas: Apply [organic] mulch ring of [3-inch] average thickness, with radius around trunks or stems [as indicated on Drawings]. Do not place mulch within [3 inches] of trunks or stems.
  - 2. Organic Mulch in Planting Areas: Apply [3-inch] average thickness of organic mulch [over whole surface of planting area], and finish level with adjacent finish grades. Do not place mulch within [3 inches] of trunks or stems.

#### 3.9 PLANT MAINTENANCE

- A. Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, adjusting and repairing tree-stabilization devices, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings.
- B. Fill in, as necessary, soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.
- C. Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated pest management practices when possible to minimize use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.

## 3.10 REPAIR AND REPLACEMENT

- A. General: Repair or replace existing or new trees and other plants that are damaged by construction operations, in a manner approved by Architect.
  - 1. Submit details of proposed pruning and repairs.
  - 2. Perform repairs of damaged trunks, branches, and roots within 24 hours, if approved.
  - 3. Replace trees and other plants that cannot be repaired and restored to full-growth status, as determined by Architect.
- B. Remove and replace trees that are more than [25] percent dead or in an unhealthy condition [ before the end of the corrections period] or are damaged during construction operations that Architect determines are incapable of restoring to normal growth pattern.
  - 1. Provide new trees of same size as those being replaced for each tree of [4 inches] or smaller in caliper size.
  - 2. Species of Replacement Trees: [Same species being replaced].

#### 3.11 CLEANING AND PROTECTION

- A. During planting, keep adjacent paving and construction clean and work area in an orderly condition. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Remove surplus soil and waste material including excess subsoil, unsuitable soil, trash, and debris and legally dispose of them off Owner's property.
- C. Protect plants from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.
- D. After installation and before [**Substantial Completion**], remove nursery tags, nursery stakes, tie tape, labels, wire, burlap, and other debris from plant material, planting areas, and Project site.

## 3.12 MAINTENANCE SERVICE

A. Trees and Shrubs: Provide maintenance by skilled employees of landscape Installer. Maintain as required in "Plant Maintenance" Article. Begin maintenance immediately after plants are installed and continue until plantings are acceptably healthy and well established, but for not less than maintenance period below:



- 1. Maintenance Period: [12] months from date of [Substantial Completion].
- B. Maintenance Service for Ground Cover and Other Plants: Provide maintenance by skilled employees of landscape Installer. Maintain as required in "Plant Maintenance" Article. Begin maintenance immediately after plants are installed and continue until plantings are acceptably healthy and well established, but for not less than maintenance period below:



1. Maintenance Period: [12] months from date of [Substantial Completion].

END OF SECTION 329300

