Community & Economic Development Department www.adcogov.org



4430 South Adams County Parkway 1st Floor, Suite W2000 Brighton, CO 80601-8204 PHONE 720.523.6800 Fax 720.523.6998

### **Re-submittal Form**

Case Name/ Number: A Better Place Conditional Use Permit / RCU2022-00018

### Case Manager: Brayan Marin

### **Re-submitted Items:**

Χ

Development Plan/ Site Plan

Plat



Parking/ Landscape Plan



Χ

Engineering Documents

Subdivision Improvements Agreement (Microsoft Word version)

Other: Comment Letter addressing all comments provided by Staff

\* All re-submittals must have this cover sheet and a cover letter addressing review comments.

### Please note the re-submittal review period is 21 days.

The cover letter must include the following information:

- Restate each comment that requires a response
- Provide a response below the comment with a description of the revisions
- Identify any additional changes made to the original document

For County Use Only: Date Accepted: \_\_\_\_\_\_ Staff (accepting intake): \_\_\_\_\_ Resubmittal Active: Addressing, Building Safety, Neighborhood Services, Engineering Environmental Parks, Planner ROW, SIA - Finance, SIA - Attorney

October 18, 2023

Brayan Marin Case Manager, Planner II Adams County <u>Bmarin@adcogov.org</u> 720-523-6977

### RE: RCU2022-00018 A Better Place Conditional Use Permit

Dear Brayan Marin,

Thank you for the comments on April 14, 2023 for the above-mentioned project. In an effort to address your comments concisely and simplify your review, we have summarized your comments and our responses below.

## COMMENT RESPONSE LETTER: ADAMS COUNTY A BETTER PLACE - CONDITIONAL USE PERMIT

### DEVELOPMENT REVIEW TEAM COMMENTS DEVELOPMENT SERVICES – Brayan Marin

- 1. PLN01: Please provide the following information in a revised site plan:
  - 1. width of the site in your revised site plan.
  - 2. Setback for the dwelling at the front of the property.
  - 3. Northern setback of the proposed crematory from property line
  - Response: The following information is provided in a revised site plan.
- PLN02: Applicant is looking to obtain a crematory air permit from the Colorado Department of Health & Environment.

- Applicant will need to provide this approved permit prior to scheduling this application for public hearing.

- Response: Acknowledge, the client will be applying and obtaining this permit prior to building permit release.
- 3. PLN03: The current site plan proposes 4 parking spaces and 1 ADA compliant parking space. Will additional parking be required as part of the crematorium use? Will the proposed structure have a loading zone? If so, please include the location in a revised site plan.
  - Response: 6 standard and 1 ADA stall is being proposed, and the proposed structure has loading zones inside the crematorium located at the pull in entrances shown on the site plan.
- 4. PLN04: Please include the landscape that was approved for this site as part of permit BDP22-1125.
  - Response: Approved landscaping has included on the site plan.
- PLN05: The current location of the trash enclosure could lead to unforeseen accidents. A more suitable are for the enclosure would be in the rear of the property and away from constant traffic of the site.

- Response: The trash enclosure relocated to the north side of the site and is out of the way but still accessible. No longer adjacent to constant traffic.
- 6. PLN06: Please provide elevations for the proposed crematorium and trash enclosure to review compliance with Height of structure.
  - Response: Elevations for proposed crematorium and trash enclosure are provided.
- 7. PLN07: Please review all comments by County Staff and outside agencies as well as citizen comment regarding your proposed project and address them accordingly.
  - Response: All comments are reviewed and addressed accordingly in this letter.

### **DEVELOPMENT SERVICES, ROW AGENT – David Dittmer**

- ROW1: A Minor Subdivision Plat is required to bring the lot into compliance. The parcel was created 8/28/1992 in Book 3946, page 776 of the Adams County Public Records. Per CRS regulations, any parcel under 35 acres created after 5/5/1972 must be within a subdivision. The CUP cannot be approved until this is completed.
  - Response: Noted and we are working with the County on the subdivision plat.

### DEVELOPMENT SERVICES, ENGINEERING – Steve Krawczyk

- ENG1: Traffic Analysis: The analysis is acceptable in addressing any off-site improvements that may be necessary to mitigate traffic impacts from the proposed development and address the access onto Washington Street.
  - Response: Acknowledged, thank you.
- 3. ENG2: Plat and Engineering Review: The applicant needs to be aware that prior to building permit and/or lot sale a Plat and Engineering Review is required in conformance with the Adams County Development Regulations. The Applicant will be required to addressed access, drainage, and parking. Improvements of the existing sidewalk/Handicap Ramps along Washington Street to the current standard template and dedication of Right-of-way along the street frontage if needs to be addressed.
  - Response: Acknowledged, thank you.

#### **DEVELOPMENT SERVICES, ENVIRONMENTAL – Megan Grant**

- 4. ENV1: For projects that require an air permit, the applicant shall contact the APCD at (303) 692-3100 for information about the process. Additional information is available at: https://www.colorado.gov/pacific/cdphe/categories/services-and-information/environment/airquality/air-emissions-business-and-industry.
  - Response: Acknowledged, thank you.
- 5. ENV2: If the company employs fewer than 100 employees and releases less than 75 tons/year of regulated pollutants, the applicant may qualify for the Colorado Department of Public Health and the Environment (CDPHE) Air Pollution Control Division's (APCD) Small Business Assistance Program. For assistance with air quality requirements and pollution prevention practices, the applicant should call 303-692-3175 or visit https://www.colorado.gov/pacific/cdphe/small-business-assistance-program-sbap.
  - Response: Acknowledged, thank you.

- 6. ENV3: The subject parcel is located within the Adams County Mineral Conservation Overlay (MCO) district, the purpose of which is to establish reasonable and uniform limitations, safeguards, and controls for the conservation and wise utilization of natural resources and for rehabilitation of excavated land. Land within this classification is designated as containing commercial mineral deposits in sufficient size parcels and in areas where extraction and rehabilitation can be undertaken while still protecting the health, safety, and welfare of the inhabitants of the area and the County. Although this parcel is located within the MCO district, the parcel is less than 5 acres and previously developed; therefore, the MCO restrictions are not applicable in this case.
  - Response: Acknowledged, thank you.
- 7. ENV4: Exposure to air pollution is associated with numerous health problems including asthma, lung cancer, and heart disease. Construction and traffic in unpaved areas may contribute to increased fugitive dust emissions. Adams County recommends the applicant utilize all available methods to minimize fugitive dust during all phases of construction.
  - Response: All available methods to minimize fugitive dust during construction will be utilized.

### BUILDING SAFETY COMMENTS

### BUILDING SAFETY – Heath Whitaker

- 8. BSD1: A building permit would be required for each structure. Engineered plans will be required to obtain permits.
  - Response: Acknowledged, thank you.
- BSD2: Applicant should refer to commercial and industrial submittal requirements. Here is a link for your reference https://epermits.adcogov.org/sites/default/files/Commercial\_Industrial%20Submittal%20Requirem ents\_20\_0.pdf.
  - Response: Acknowledged, thank you.
- 10. BSD3: Current adopted codes are the 2018 International Building Codes and the 2017 National Electrical Code.
  - Response: The constriction documents adhere to current adapted codes.
- 11. BSD4: Applicant should contact Fire Department for their requirements. This is a separate permit, review, and inspection with your local fire department. Plan review approval from the fire department will be required at time of building permit.
  - Response: Fire Department has been contacted and plan review approval will be obtained before release of building permit.

### REGIONAL TRANSPORATION DISTRICT COMMENTS

#### ENGINEER III - Scott Woodruff

- 12. The RTD engineering Review team has no exceptions to this project at this time.
  - This review is for Design concepts and to identify any necessary improvements to RTD stops and property affected by the design. This review of the plans does not eliminate the need to acquire, and/or go through the acquisition process of any agreements, easements or permits that may be required by the RTD for any work on or around our facilities and property.

Response: Acknowledged, thank you.

### COLORADO DEPARTMENT OF TRANSPORTATION COMMENTS

### PERMIT UNIT – REGION 1 – Aaron Eyl

- CDOT has reviewed the referral for project number RCU2022-00018, A Better Place conditional use permit and have the following comments: No objection to the conditional use permit as CDOT does not comment on land use decisions.
  - Response: Acknowledged, thank you.
- 14. Any work in the CDOT Right-of-Way will require a permit from our office. This includes, but is not limited to survey, landscaping, or utility work.
  - Response: Acknowledged, thank you. It is anticipated that a CDOT permit will be submitted along with the future engineering plans.
- **15**. Any signing that will be visible to a CDOT Highway must comply with all applicable State rules governing outdoor advertising per 2 CCR 601-3. All signing must be on private property.
  - Response: Acknowledged, thank you.
- **16**. With the work being adjacent to the State Highway we request to review a Drainage Report. The following are comments from our Hydraulic Engineer:
  - The 9,000 sf increase in impervious area must be tributary to CDOT right-of-way and may not exceed historic, undeveloped rates.
  - Drainage Report with calculations supporting the design.
  - Historic Basin map showing historic flow patterns and a table containing historic, undeveloped flow rates.
  - Proposed Basin map with a table containing proposed flow rates. Make sure the historic & proposed basin maps contain a design point(s) at the CDOT right-of-way for comparison.
  - Response: We will prepare a drainage report at the time of engineering plan review and will submit to CDOT.

### XCEL ENERGY COMMENTS

### **RIGHT OF WAY AND PERMITS – Violeta Ciocanu**

17. Public Service Company of Colorado's (PSCo) Right of Way & Permits Referral Desk has reviewed the Conditional Use Permit for A Better Place. Please be aware PSCo owns and operates existing underground natural gas on the south side and electric distribution facilities on the east side of the property line. The property owner/developer/contractor must complete the application process for any new natural gas or electric service, or modification to existing facilities via xcelenergy.com/InstallAndConnect. It is then the responsibility of the developer to contact the Designer assigned to the project for approval of design details.

Additional easements may need to be acquired by separate document (i.e. transformers) – be sure to ask the Designer to contact a Right-of-Way & Permits Agent in this event.

As a safety precaution, PSCo would like to remind the developer to call the Utility Notification Center by dialing 811 for utility locates prior to construction.

 Response: The application will be completed for any new natural gas or electric service, or modification to existing facilities and submitted with the Engineering plans. Other comments acknowledged, thank you.

### **CITIZEN COMMENTS**

### James C. Saccomano

- 18. I am in opposition to the cremation of bodies at this location, which is near my own home as well as companies that serve and prepare food, as well as to other retail locations. I feel that the cremation of bodies is not compatible with both my own residential property and with these existing businesses. In fact, I suspect that these businesses would suffer a loss of revenue as a result. This particular business does not reflect either the spirit or intention of the recently completed Welby Subarea Plan, and I respectfully ask the commissioners to either deny the application or add the restriction of cremating bodies to the 1-1 zone approval or change in the use permit. Thank you for your consideration in the matter.
  - Response: Comment acknowledged, thank you.

### Linette Brozovich

- 19. We appreciate the important service that the funeral home is giving to the community. However, we absolutely and vehemently oppose the cremation of bodies at this location, which is adjacent to public retail, food production and food service. The cremation/burning of bodies is not a compatible or harmonious use with these existing businesses and would cause irreparable damage to revenue. This type of industrial process can be considered unclean, by the emission or the perceived emission of bi-products from the process of cremation. Although I-1 is permitted and welcomed, in regard to the comp-plan and subarea-plan, because the plans allow for an array of commercial uses, this particular industrial use does not reflect the spirit or intention of Welby Subarea Plan. I would ask the commissioners either deny the application for the I-1 zoning, or add the restriction of cremating bodies to the I-1 zone approval or change in use permit.
  - Response: Comment acknowledged, thank you.

### MAPLETON PUBLIC SCHOOLS

### SENIOR DEPUTY SUPERINTENDENT - Mike Crawford

20. We are in receipt of ABP Investments' request for an Impact Analysis regarding the potential funeral home/mortuary/crematorium on the property at 7261 Washington St, Denver, CO 80229. Typically, the District performs impact analyses for developments that are residential in nature to determine if the District has the ability and infrastructure to absorb the potential students. The proposed development appears to be commercial in nature and therefore will not generate any potential students that would need to be considered or absorbed by the District. While the District does not typically take an official position on proposed construction projects, we pay close attention to the impacts development projects have on our community. In general, Mapleton Public Schools is in favor of new development that renders our community a more healthy and supportive place for student learning, and which does not tend to make school district operations, such as transportation of students, more difficult. With that said, it has come to our attention that there are currently at least three other crematoriums within a few blocks of 7261 Washington Street: Kramer Family Funeral & Cremation Center, Stork-Bullock Family Mortuary, as well as Colorado Mortuary Services. With very little effort, it is easy to find significant information about the process of corpse cremation. Some websites report that cremation generates numerous harmful air pollutants, including particulate matter (PM), sulfur dioxide (SO2), nitrogen oxides (NOx), volatile organic compounds (VOCs), and heavy metals. Articles further state that these pollutants could have severe effects on the surrounding environment and human health. We strongly encourage Adams County to seek input from the Health Department to determine if a fourth crematorium within such

a small footprint is safe for the surrounding community. Having so many of these services concentrated in one area raises significant concerns for the health and safety of the students and families living in this area and across our school district.

Response: Comment acknowledged, thank you.

#### MAIKER HOUSING PARTNERS VICE PRESIDENT OF REAL ESTATE DEVELOPMENT – Steve Kunshier

- 21. The Adams County Housing Authority d/b/a Maiker Housing Partners ("Maiker") is responding to the Request for Comments dated March 15, 2023, regarding the A Better Place Conditional UsE Permit case, project number RCU2022-0018 (the "Permit"). Maiker is an interested, concerned, and relevant party in this Permit Case. Maiker is under contract to purchase the property at 7295 North Washington Street, which is the neighboring parcel of the subject property. 7295 Holdina Company LLC-being the seller and current owner of 7295 North Washington---has provided Maiker with the aforementioned Request for Comments, and has authorized Maiker to issue additional input for the owner's benefit. Maiker intends on developing this parcel into a mixed-use building to provide affordable housing units for gualified residents of Adams County. The future building is also planned by Maiker to consist of a new coffee shop for the historic Bovers Coffee Company, as well as additional commercial space uniquely utilized for public meeting places. Maiker has been in direct conversations with the County regarding our plan for this parcel that is consistent with the future land use. The adoption of the Permit risks detriment to the future development of the area. The subject parcel is located within the "Welby Area" and incorporated into The County's Welby Neighborhood Plan. The future land use for the immediate surrounding area is specified as Mixed Use Employment. This land use accommodates supporting retail and community facilities particularly along the Washington Street corridor. If the area intends to grow and attract future businesses, a crematorium may reduce the area's appeal and desirability along Washington Street for future commercial opportunities. The Welby Plan encourages residential opportunities near primary transportation corridors, specifically Washington Street and near Regional Transit Districts and the commuter rail stations at East 72nd Avenue. There are currently two existing residential and agricultural use parcels within a 500' radius of the subject parcel. Being located on Washington Street, the Permit and the nature of a crematorium could restrict and reduce any future opportunities in the vicinity. This could impede the County's plans and further impact the County's desire for increased walkability and less reliance on vehicles.
  - Response: Comment acknowledged, thank you.

### LUNA GOURMET COFFEE & TEA COMPANY

### MANAGEMENT

22. Luna Gourmet Coffee & Tea Company (dba Boyer's Coffee) is in receipt of the letter your office sent, dated 3/15/23, seeking comments on a Conditional Use Permit for the neighbors that share our north property line, A Better Place Funeral Home. Since 1970, Boyer's Coffee has been a long-standing property owner and business operator at 7295Washington Street, and our 2.2 Acres directly shares the northern property line with A Better Place Funeral Home. We strongly oppose the Conditional Use for installing and operating a crematorium onsite at 7261 Washington Street for health & safety reasons, future property use reasons, property devaluation reasons, and we believe that is incongruent with the future revitalization goals that the community has for Washington Street as a gateway to Adams county. We have had an amicable yet silent relationship with A Better Place since they purchased the property a few years ago, and we do not oppose their existing business operation as we understood it to be. We understood that the location was only a funeral home office where A Better Place officed out of, and also met with families to plan funerals and cremations; and a showroom for caskets, urns and other appropriate items for their business.

We have been under the understanding that no deceased were kept onsite, and that A Better Place used a larger crematorium for cremation services, as they did not provide those onsite. In receiving the letter your office sent, we are now being made aware of the property not being properly zoned, which is of concern to us. We do not fully understand what business operations have been taken place that would not be suitable for the zoning, which is an uncomfortable feeling for our employees and customers. We support the owners in fixing the illegal aspects of the land that are not in compliance; However we do not support the Conditional Use to add a crematorium or cold storage for the deceased. We do not believe that having a crematorium or cold storage on a main street like Washington Street is in line with the community's desire to grow mixed use density in this exact area which would be highly beneficial to elevating Adam's County vision for the next 20 years. Instead, this type of Conditional Use should be permitted in different and more appropriate areas of the county. If a crematorium is installed next to our property, the future use of our property will be significantly limited and compromised. Initial research suggests that no residential housing can be within 500ft of a crematorium. If this holds true, by permitting this Conditional Use, the County would be limiting the ability to create other uses on our property next door that are directly in line with maturing our community's master plans, with mixed-use development. In addition, by installing a crematorium on this site, several other businesses around will have possible limitations of future use and redevelopment imposed on their property as well. If a crematorium is installed next to our property, and if it limits the use of our property as a result, the domino effect is more Industrial type businesses operating on Washington Street, instead of Retail, Restaurants, Apartments, Light Commercial, and other appropriate businesses that would foster a main street setting. As a business, we have been invited to participate in brainstorming sessions by the County around a revitalization of Washington Street. Adding a crematorium in this specific location would not be in line with this revitalization of Washington Street. We have operated a coffee business for decades next door, and from a health and safety perspective, in addition to a customer desirability perspective, adding a crematorium would make using our outdoor patio space highly unattractive. and possibly a health risk. From a health and safety perspective, our initial research shows that even the most current technology for cremating bodies, leaves some harmful opacity in the air, creating air quality concerns. Specifically, mercury and other metals found in dental work do not fully break down during the cremation process and as a result is left in the air. The financial impact by devaluing the use of our 2.2 Acre site needs to be considered. Adding a crematorium next door will limit our use of the land, and therefore limit the marketability and value of the land. If this would financially jeopardize our company's asset values, which is an unacceptable consequence, then we would have to seek compensation for financial losses. Furthermore, if there was a negative stigma that was associated with our coffee company due to a crematorium next door, the damages to a 55 year old consumer brand could be detrimental. We have current plans and high expectations to rezone and redevelop our 2.2 acre land into a mixed-use project that will directly benefit the community at large with housing, a coffee shop and retail. By permitting a crematorium next door, the county may inadvertently prohibit the mixed-use development being planned. In 2023 we are in a unique position to begin the lengthy process of truly revitalizing Washington Street by focusing on zoning and permits that directly support the Welbly and Adams County Economic growth plans. Reserving Washington Street for the most accretive businesses and mixed-use projects is paramount to revitalizing what has been plagued with too many industrial and off-putting businesses that face a very important Gateway into Adams County. We strongly oppose this Conditional Use for adding a crematorium, and we hope that the county agrees that the negative implications far outweigh the positive benefits of adding another crematorium to our neighborhood, directly on Washington Street.

Response: Comment acknowledged, thank you.

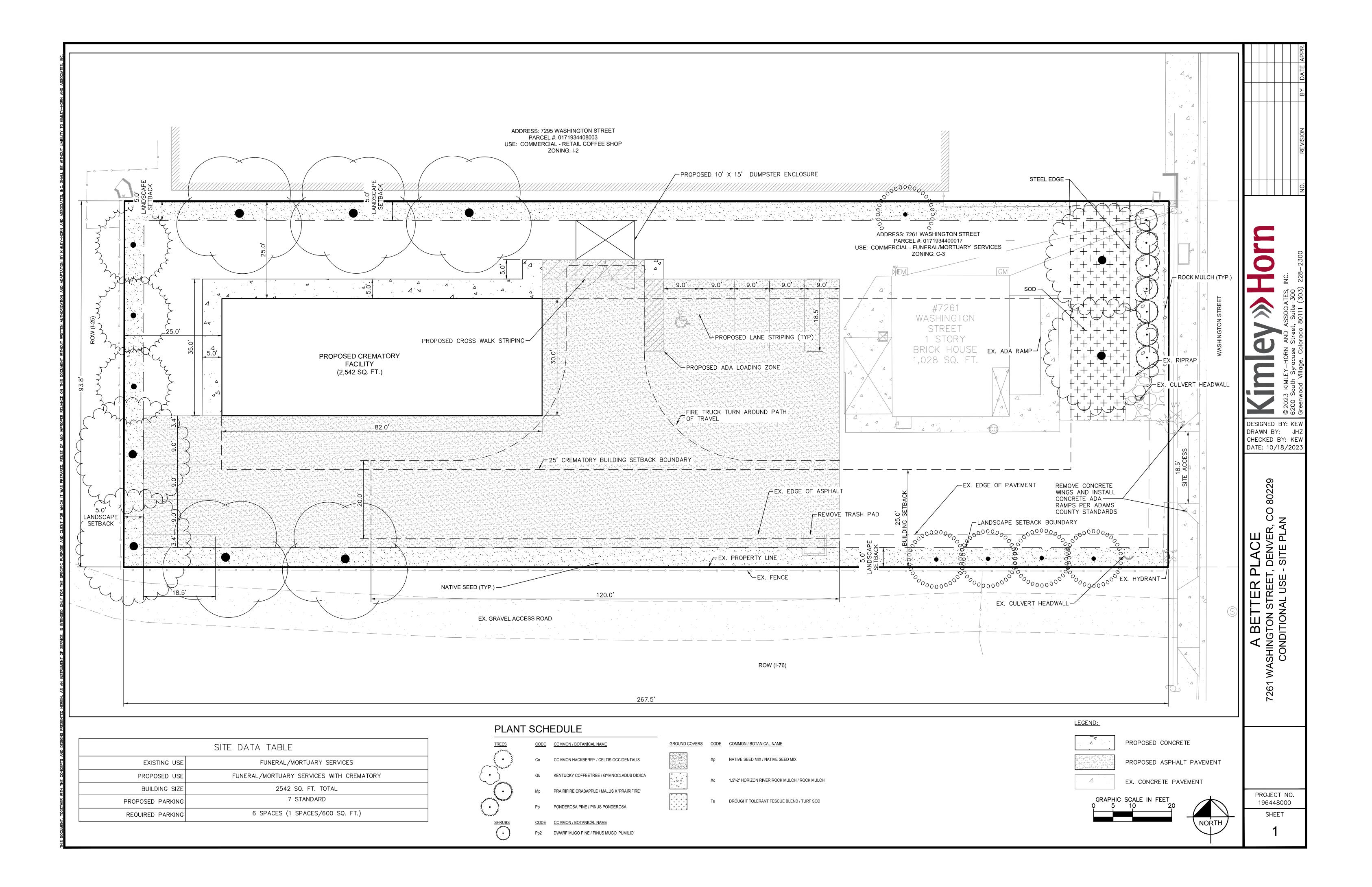
## Kimley *Whorn*

We appreciate your review and approval of these plans. Please contact me at 720-943-5665 or at <u>kyle.watson@kimley-horn.com</u> should you have any questions.

Sincerely,

/, ##

Kyle Watson KIMLEY-HORN AND ASSOCIATES, INC.



# Metal Building Crematory Design

## from Cremation Systems

### Human Cremation Facilities

Installation by our factory-trained technicians





CFS-2300 Human Cremation Chambers



Arrive **Tuesday** morning with retort and crane, retort installed, stack erected, decorative cover installed.

**Wednesday** — Connect the utilities, run the chamber, teach operation and maintenance procedures.

**Thursday** — Perform the first cremations. If no case is available, we provide guidance via our internet based Tek Marshal.

If you have a building or are considering a structure, give us a call and we can establish if it is suitable for a crematory and if it is properly zoned.



For many cremation locations in America, a prefabricated metal building is the most economical type of structure available. Typically, a metal building can be built with office and bathroom facilities for \$100/ ft<sup>2</sup>. Generally a 30' x 40' crematory office floor plan can accommodate a Human and Pet retort or two Human chambers. Site conditions and utility access can be variable, but a 1,200 ft<sup>2</sup> crematory typically will cost \$120,000. Cremation Systems normally delivers a Human retort and accessories, installs the equipment, fires the chamber, and trains your cremationists, for approximately \$150,000. Total cost for a suitable metal building\* and cremation equipment in most U.S.A. markets is normally less than \$270,000.

Metal components delivered –	\$40/ft <sup>2</sup>
Metal building construction —	\$20/ft <sup>2</sup>
Concrete slab –	\$20/ft <sup>2</sup>
Interior walls, bathroom, utilities —	\$20/ft <sup>2</sup>

**\$120K** building, **\$150K** Human retort, delivery, installation, and accessories.

### All for about \$270K

\* Metal building supplied and installed by others.



Division of Armil CFS, Inc.

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- Electric hydraulic lift table with digital scale
- Processing station
- Decorated stack
- Viewing window

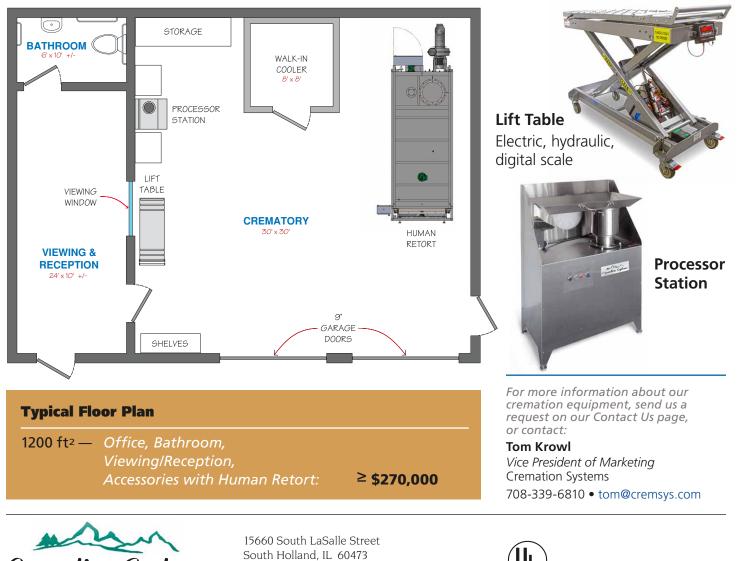
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- Quick Change Hearth System
- Fire Marshal crematory monitoring system
- Floor plans are fully reversible





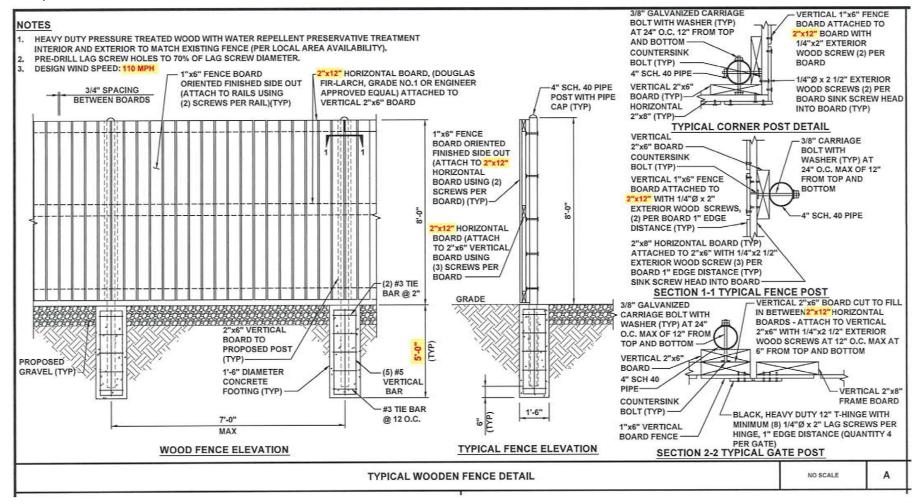
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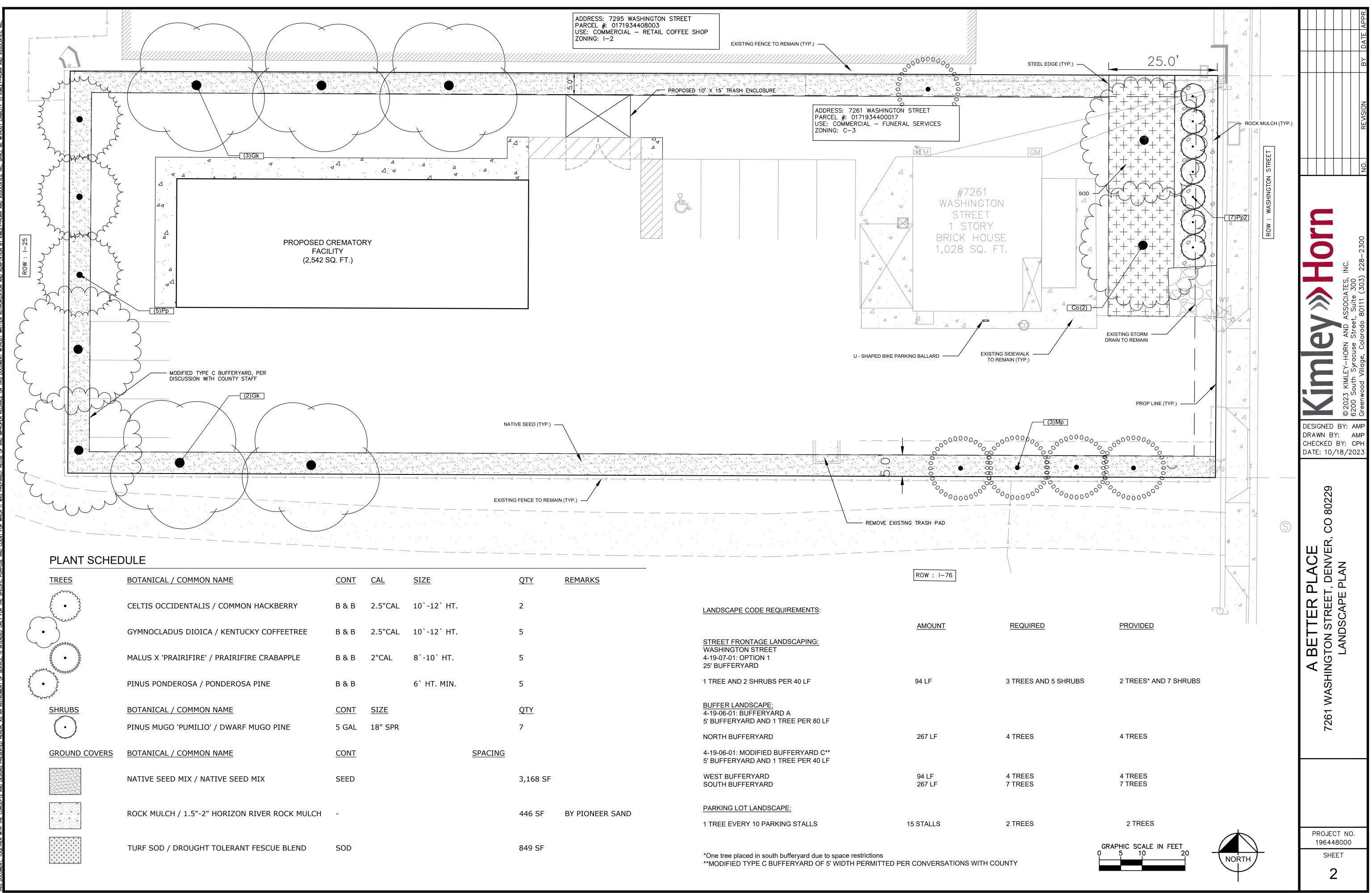
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#### **Dumpster Enclosure Fence Detail**





## **GENERAL LANDSCAPE SPECIFICATIONS**

- A. SCOPE OF WORK
- 1. THE WORK CONSISTS OF: FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT AS SHOWN ON THE DRAWINGS AND AS SPECIFIED HEREIN.
- 2. WORK SHALL INCLUDE MAINTENANCE AND WATERING OF ALL CONTRACT PLANTING AREAS UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER.
- PROTECTION OF EXISTING STRUCTURES
- 1. ALL EXISTING BUILDINGS, WALKS, WALLS, PAVING, PIPING, OTHER SITE CONSTRUCTION ITEMS, AND PLANTING ALREADY COMPLETED OR ESTABLISHED AND DESIGNATED TO REMAIN SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL DAMAGE RESULTING FROM NEGLIGENCE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER, AT NO COST TO THE OWNER.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL NECESSARY BEST MANAGEMENT PRACTICES (BMP) DEVICES ACCORDING TO ALL REGULATORY AGENCY'S STANDARDS THROUGH THE DURATION OF ALL CONSTRUCTION ACTIVITIES.
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MAINTENANCE OF TRAFFIC (MOT) THAT MAY BE REQUIRED FOR THE PROJECT.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PUBLIC OR PRIVATE, PRIOR TO EXCAVATION. THE OWNER AND DESIGN PROFESSIONAL SHALL NOT BE RESPONSIBLE FOR THE ACCURACY AND COMPLETENESS OF ANY SUCH INFORMATION OR DATA. THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR; REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA; LOCATING ALL UNDERGROUND FACILITIES DURING CONSTRUCTION; THE SAFETY AND PROTECTION THEREOF; REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK. THE COST OF ALL WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. THE CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES IN WRITING AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
- C. PROTECTION OF EXISTING PLANT MATERIALS
- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNAUTHORIZED CUTTING OR DAMAGE TO TREES AND SHRUBS EXISTING OR OTHERWISE, CAUSED BY CARELESS EQUIPMENT OPERATION, MATERIAL STOCKPILING, ETC... THIS SHALL INCLUDE COMPACTION BY DRIVING OR PARKING INSIDE THE DRIP-LINE AND SPILLING OIL, GASOLINE, OR OTHER DELETERIOUS MATERIALS WITHIN THE DRIP-LINE. NO MATERIALS SHALL BE BURNED ON SITE. EXISTING TREES KILLED OR DAMAGED SO THAT THEY ARE MISSHAPEN AND/OR UNSIGHTLY SHALL BE REPLACED AT THE COST TO THE CONTRACTOR OF FOUR HUNDRED DOLLARS (\$400) PER CALIPER INCH ON AN ESCALATING SCALE WHICH ADDS AN ADDITIONAL TWENTY (20) PERCENT PER INCH OVER FOUR (4) INCHES CALIPER AS FIXED AND AGREED LIQUIDATED DAMAGES. CALIPER SHALL BE MEASURED SIX (6) INCHES ABOVE GROUND LEVEL FOR TREES UP TO AND INCLUDING FOUR (4) INCHES IN CALIPER AND TWELVE (12) INCHES ABOVE GROUND LEVEL FOR TREES OVER FOUR (4) INCHES IN CALIPER.
- 2. SEE TREE MITIGATION PLAN AND NOTES, IF APPLICABLE
- D. MATERIALS
- 1. GENERAL
- MATERIAL SAMPLES LISTED BELOW SHALL BE SUBMITTED FOR APPROVAL, ON SITE OR AS DETERMINED BY THE OWNER. UPON APPROVAL, DELIVERY OF MATERIALS MAY COMMENCE.
- MATERIAL SAMPLE SIZE MULCH ONE (1) CUBIC FOOT
  - ONE (1) CUBIC FOOT ONE (1) OF EACH VARIETY (OR TAGGED IN NURSERY)
- 2. PLANT MATERIALS

TOPSOIL MIX

PLANTS

- a. FURNISH NURSERY-GROWN PLANTS TRUE TO GENUS, SPECIES, VARIETY, CULTIVAR, STEM FORM, SHEARING, AND OTHER FEATURES INDICATED IN PLANT SCHEDULE SHOWN ON DRAWINGS AND COMPLYING WITH ANSI Z60.1 AND THE COLORADO NURSERY ACT; 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.
- b. TREES FOR PLANTING IN ROWS SHALL BE UNIFORM IN SIZE AND SHAPE.
- c. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN PERMISSION FROM THE PROJECT LANDSCAPE ARCHITECT. ANY ROW TREES MUST BE APPROVED BY OFFICE OF THE CITY FORESTER.
- d. PROVIDE PLANTS OF SIZES, GRADES, AND BALL OR CONTAINER SIZES COMPLYING WITH ANSI Z60.1 AND COLORADO NURSERY ACT FOR TYPES AND FORM OF PLANTS REQUIRED. PLANTS OF A LARGER SIZE MAY BE USED IF ACCEPTABLE TO PROJECT LANDSCAPE ARCHITECT WITH A PROPORTIONATE INCREASE IN SIZE OF ROOTS OR BALLS.
- e. PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, OR UPON DELIVERY TO THE SITE, AS DETERMINED BY THE OWNER, FOR QUALITY, SIZE, AND VARIETY. SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION AT THE SITE DURING PROGRESS OF THE WORK OR AFTER COMPLETION FOR SIZE AND CONDITION OF ROOT BALLS OR ROOTS, LATENT DEFECTS OR INJURIES. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE. NOTICE REQUESTING INSPECTION SHALL BE SUBMITTED IN WRITING BY THE CONTRACTOR AT LEAST ONE (1) WEEK PRIOR TO ANTICIPATED DATE.
- f. 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 <sup>3</sup>/<sub>4</sub> INCH (19 MM) IN DIAMETER; OR WITH STEM GIRDLING ROOTS WILL BE REJECTED.
- g. FURNISH TREES AND SHRUBS WITH ROOTS BALLS MEASURED FROM TOP OF ROOT BALL, WHICH SHALL BEGIN AT ROOT FLARE ACCORDING TO ANSI Z60.1 AND COLORADO NURSERY ACT. ROOT FLARE SHALL BE VISIBLE BEFORE PLANTING.
- h. LABEL AT LEAST ONE 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 AS SHOWN ON DRAWINGS.
- i. IF FORMAL ARRANGEMENTS OR CONSECUTIVE ORDER OF PLANTS IS SHOWN ON DRAWINGS, SELECT STOCK FOR UNIFORM HEIGHT AND SPREAD, AND NUMBER THE LABELS TO ASSURE SYMMETRY IN PLANTING.
- E. SOIL MIXTURE
- CONTRACTOR SHALL TEST EXISTING SOIL AND AMEND AS NECESSARY IN ACCORDANCE WITH THE GUIDELINES BELOW:
   SOIL MIXTURE SHALL CONSIST OF TWO PARTS OF TOPSOIL AND ONE PART SAND, AS DESCRIBED BELOW. CONTRACTOR TO
- SUBMIT SAMPLES AND PH TESTING RESULTS OF SOIL MIXTURE FOR OWNER'S REPRESENTATIVE APPROVAL PRIOR TO PLANT INSTALLATION OPERATIONS COMMENCE.
- a. TOPSOIL FOR USE IN PREPARING SOIL MIXTURE FOR BACKFILLING PLANT OPENINGS SHALL BE FERTILE, FRIABLE, AND OF A LOAMY CHARACTER; REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH WEEDS AND OTHER LITTER; FREE OF ROOTS, STUMPS, STONES LARGER THAN 2" IN ANY DIRECTION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH. IT SHALL CONTAIN THREE (3) TO FIVE (5) PERCENT DECOMPOSED ORGANIC MATTER, HAVE A PH BETWEEN 5.5 AND 8.0, AND SOLUBLE SALTS LESS THAN 3.0 MMHOS/CM. SUBMIT SOIL SAMPLE AND PH TESTING RESULTS FOR APPROVAL.
- b. SAND SHALL BE COARSE, CLEAN, WELL-DRAINING, NATIVE SAND.
- 3. TREES SHALL BE PLANTED IN THE EXISTING NATIVE SOIL ON SITE, UNLESS DETERMINED TO BE UNSUITABLE AT WHICH POINT THE CONTRACTOR SHALL CONTACT THE PROJECT LANDSCAPE ARCHITECT TO DISCUSS ALTERNATE RECOMMENDATION PRIOR TO PLANTING.
- F. WATER
- 1. WATER NECESSARY FOR PLANTING AND MAINTENANCE SHALL BE OF SATISFACTORY QUALITY TO SUSTAIN ADEQUATE PLANT GROWTH AND SHALL NOT CONTAIN HARMFUL, NATURAL OR MAN-MADE ELEMENTS DETRIMENTAL TO PLANTS. WATER MEETING THE ABOVE STANDARD SHALL BE OBTAINED ON THE SITE FROM THE OWNER, IF AVAILABLE, AND THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ARRANGEMENTS FOR ITS USE BY HIS TANKS, HOSES, SPRINKLERS, ETC.... IF SUCH WATER IS NOT AVAILABLE AT THE SITE, THE CONTRACTOR SHALL PROVIDE SATISFACTORY WATER FROM SOURCES OFF THE SITE AT NO ADDITIONAL COST TO THE OWNER.
- \* WATERING/IRRIGATION RESTRICTIONS MAY APPLY REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.
- G. FERTILIZER
- 1. CONTRACTOR SHALL PROVIDE FERTILIZER APPLICATION SCHEDULE TO OWNER, AS APPLICABLE TO SOIL TYPE, PLANT INSTALLATION TYPE, AND SITE'S PROPOSED USE. SUGGESTED FERTILIZER TYPES SHALL BE ORGANIC OR OTHERWISE NATURALLY-DERIVED.
- \* FERTILIZER RESTRICTIONS MAY APPLY REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.

### H. MULCH

1.

1. MULCH MATERIAL SHALL BE MOISTENED AT THE TIME OF APPLICATION TO PREVENT WIND DISPLACEMENT, AND APPLIED AT A DEPTH OF THREE (3) INCHES. CLEAR MULCH FROM EACH PLANT'S CROWN (BASE) OR AS SHOWN IN PLANTING DETAILS. UNLESS OTHERWISE NOTED ON PLANS, MULCH SHALL BE DOUBLE SHREDDED HARDWOOD MULCH DARK BROWN FINES BY MOUNTAIN HIGH SAVATREE OR APPROVED EQUAL. DYED MULCH IS NOT ACCEPTABLE. SUBMIT SAMPLES TO PROJECT LANDSCAPE ARCHITECT FOR APPROVAL. MULCH SHALL BE PROVIDED OVER THE ENTIRE AREA OF EACH SHRUB BED, GROUND COVER, VINE BED, AND TREE RING (6' MINIMUM) PLANTED UNDER THIS CONTRACT, AS WELL AS FOR ANY EXISTING LANDSCAPE AREAS AS SHOWN ON PLANS.

## DIGGING AND HANDLING

1. ALL TREES SPECIFIED SHALL BE BALLED AND BURLAPPED (B&B) UNLESS OTHERWISE APPROVED BY PROJECT LANDSCAPE ARCHITECT.

2. PROTECT ROOTS OR ROOT BALLS OF PLANTS AT ALL TIMES FROM SUN, DRYING WINDS, WATER AND FREEZING, AS NECESSARY UNTIL PLANTING. PLANT MATERIALS SHALL BE ADEQUATELY PACKED TO PREVENT DAMAGE DURING TRANSIT. TREES TRANSPORTED MORE THAN TEN (10) MILES OR WHICH ARE NOT PLANTED WITHIN THREE (3) DAYS OF DELIVERY TO THE SITE SHALL BE SPRAYED WITH AN ANTITRANSPIRANT PRODUCT ("WILTPRUF" OR EQUAL) TO MINIMIZE TRANSPIRATIONAL WATER LOSS.

3. B&B, AND FIELD GROWN (FG) PLANTS SHALL BE DUG WITH FIRM, NATURAL BALLS OF SOIL OF SUFFICIENT SIZE TO ENCOMPASS THE FIBROUS AND FEEDING ROOTS OF THE PLANTS. NO PLANTS MOVED WITH A ROOT BALL SHALL BE PLANTED IF THE BALL IS CRACKED OR BROKEN. PLANTS SHALL NOT BE HANDLED BY STEMS.

### CONTAINER GROWN STOCK

1. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE OF GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION.

2. AN ESTABLISHED CONTAINER GROWN PLANT SHALL BE TRANSPLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG ENOUGH FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER. CONTAINER GROWN STOCK SHALL NOT BE HANDLED BY THEIR STEMS.

3. ROOT BOUND PLANTS ARE NOT ACCEPTABLE AND WILL BE REJECTED.

### K. MATERIALS LIST

1. QUANTITIES NECESSARY TO COMPLETE THE WORK ON THE DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR. QUANTITY ESTIMATES HAVE BEEN MADE CAREFULLY, BUT THE LANDSCAPE ARCHITECT OR OWNER ASSUMES NO LIABILITY FOR OMISSIONS OR ERRORS. SHOULD A DISCREPANCY OCCUR BETWEEN THE PLANS AND THE PLANT LIST QUANTITY, THE PLANS SHALL GOVERN. ALL DIMENSIONS AND/OR SIZES SPECIFIED SHALL BE THE MINIMUM ACCEPTABLE SIZE.

### FINE GRADING

1. FINE GRADING UNDER THIS CONTRACT SHALL CONSIST OF FINAL FINISHED GRADING OF LAWN AND PLANTING AREAS THAT HAVE BEEN DISTURBED DURING CONSTRUCTION.

2. THE CONTRACTOR SHALL FINE GRADE THE LAWN AND PLANTING AREAS TO BRING THE ROUGH GRADE UP TO FINAL FINISHED GRADE ALLOWING FOR THICKNESS OF SOD AND/OR MULCH DEPTH.

3. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED FOR POSITIVE DRAINAGE TO SURFACE/SUBSURFACE STORM DRAIN SYSTEMS. AREAS ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM THE BUILDINGS. REFER TO CIVIL ENGINEER'S PLANS FOR FINAL GRADES, IF APPLICABLE.

### M. PLANTING PROCEDURES

1. THE CONTRACTOR SHALL CLEAN WORK AND SURROUNDING AREAS OF ALL RUBBISH OR OBJECTIONABLE MATTER DAILY. ALL MORTAR, CEMENT, BUILDING MATERIALS, AND TOXIC MATERIAL SHALL BE COMPLETELY REMOVED FROM PLANTING AREAS. THESE MATERIALS SHALL NOT BE MIXED WITH THE SOIL. SHOULD THE CONTRACTOR FIND SUCH SOIL CONDITIONS IN PLANTING AREAS WHICH WILL ADVERSELY AFFECT THE PLANT GROWTH, THE CONTRACTOR SHALL IMMEDIATELY CALL IT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. FAILURE TO DO SO BEFORE PLANTING SHALL MAKE THE CORRECTIVE MEASURES THE RESPONSIBILITY OF THE CONTRACTOR.

2. VERIFY LOCATIONS OF ALL UTILITIES, CONDUITS, SUPPLY LINES AND CABLES, INCLUDING BUT NOT LIMITED TO: ELECTRIC, GAS (LINES AND TANKS), WATER, SANITARY SEWER, STORMWATER SYSTEMS, CABLE, AND TELEPHONE. PROPERLY MAINTAIN AND PROTECT EXISTING UTILITIES. CALL COLORADO (811) TO LOCATE UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

3. CONTRACTOR IS RESPONSIBLE TO REMOVE ALL EXISTING AND IMPORTED LIMEROCK AND LIMEROCK SUB-BASE FROM ALL PLANTING AREAS TO A MINIMUM DEPTH OF 36" OR TO NATIVE SOIL. CONTRACTOR IS RESPONSIBLE TO BACKFILL THESE PLANTING AREAS TO ROUGH FINISHED GRADE WITH CLEAN TOPSOIL FROM AN ON-SITE SOURCE OR AN IMPORTED SOURCE. IF LIMEROCK OR OTHER ADVERSE CONDITIONS OCCUR IN PLANTED AREAS AFTER 36" DEEP EXCAVATION BY THE CONTRACTOR, AND POSITIVE DRAINAGE CAN NOT BE ACHIEVED, CONTRACTOR SHALL UTILIZE POOR DRAINAGE CONDITION PLANTING DETAIL.

4. FURNISH NURSERY'S CERTIFICATE OF COMPLIANCE WITH ALL REQUIREMENTS AS SPECIFIED HEREIN. INSPECT AND SELECT PLANT MATERIALS BEFORE PLANTS ARE DUG AT NURSERY OR GROWING SITE.

5. COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK. UPON ARRIVAL AT THE SITE, PLANTS SHALL BE THOROUGHLY WATERED AND PROPERLY MAINTAINED UNTIL PLANTED. PLANTS STORED ONSITE SHALL NOT REMAIN UNPLANTED OR APPROPRIATELY HEALED IN FOR A PERIOD EXCEEDING TWENTY-FOUR (24) HOURS. AT ALL TIMES WORKMANLIKE METHODS CUSTOMARY IN ACCEPTED HORTICULTURAL PRACTICES AS USED IN THE TRADE SHALL BE EXERCISED.

 WORK SHALL BE COORDINATED WITH OTHER TRADES TO PREVENT CONFLICTS. COORDINATE PLANTING WITH IRRIGATION WORK TO ASSURE AVAILABILITY OF WATER AND PROPER LOCATION OF IRRIGATION APPURTENANCES AND PLANTS.
 ALL PLANTING OPENINGS SHALL BE EXCAVATED TO SIZE AND DEPTH IN ACCORDANCE WITH ANSI Z60.1-2014 AMERICAN

STANDARD FOR NURSERY STOCK.
8. TEST ALL TREE OPENINGS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE PERCOLATION IS AVAILABLE. NO

ALLOWANCE WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER DRAINAGE. IF POOR DRAINAGE EXISTS, UTILIZE "POOR DRAINAGE CONDITION" PLANTING DETAIL.

9. TREES SHALL BE SET PLUMB AND HELD IN POSITION UNTIL THE PLANTING MIXTURE HAS BEEN FLUSHED INTO PLACE WITH A SLOW, FULL HOSE STREAM. ALL PLANTING SHALL BE PERFORMED BY PERSONNEL FAMILIAR WITH PLANTING PROCEDURES AND UNDER THE SUPERVISION OF A QUALIFIED LANDSCAPE FOREMEN.

10. PRIOR TO EXCAVATION OF TREE OPENINGS, AN AREA EQUAL TO TWO TIMES THE DIAMETER OF THE ROOT BALL SHALL BE ROTO-TILLED TO A DEPTH EQUAL TO THE DEPTH OF THE ROOT BALL.

11. EXCAVATION OF TREE OPENINGS SHALL BE PERFORMED USING EXTREME CARE TO AVOID DAMAGE TO SURFACE AND SUBSURFACE ELEMENTS SUCH AS UTILITIES OR HARDSCAPE ELEMENTS, FOOTERS AND PREPARED SUB-BASES.

12. IN CONTINUOUS SHRUB AND GROUND COVER BEDS, THE ROTO-TILLED PERIMETER SHOULD EXTEND TO A DISTANCE OF ONE FOOT BEYOND THE DIAMETER OF A SINGLE ROOT BALL. THE BED SHALL BE TILLED TO A DEPTH EQUAL TO THE ROOT BALL DEPTH PLUS 6".

 TREE OPENINGS FOR WELL DRAINED SOILS SHALL BE DUG SO THAT THE BOTTOM OF THE ROOT BALL WILL REST ON UNDISTURBED SOIL AND THE TOP OF THE ROOT BALL WILL BE FLUSH WITH FINISH GRADE. IN POORLY DRAINED SOILS THE TREE OPENING SHALL BE DUG SO THAT THE ROOT BALL RESTS ON UNDISTURBED SOIL AND THE TOP OF THE ROOT BALL IS 1" ABOVE FINISH GRADE. PLANT PIT WALLS SHALL BE SCARIFIED PRIOR TO PLANT INSTALLATION.
 TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO BUILDINGS AND BUILDING STRUCTURES WHILE INSTALLING

### 15. SOIL MIXTURE SHALL BE AS SPECIFIED IN SECTION 'E'.

16. TREES AND SHRUBS SHALL BE SET STRAIGHT AT AN ELEVATION THAT, AFTER SETTLEMENT, THE PLANT CROWN WILL STAND ONE (1) TO TWO (2) INCHES ABOVE GRADE. EACH PLANT SHALL BE SET IN THE CENTER OF THE PIT. SOIL MIXTURE SHALL BE BACK FILLED, THOROUGHLY TAMPED AROUND THE BALL, AND SETTLED BY WATER (AFTER TAMPING).

17. AMEND PINE AND OAK PLANT OPENINGS WITH ECTOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. ALL OTHER PLANT OPENINGS SHALL BE AMENDED WITH ENDOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. PROVIDE PRODUCT INFORMATION SUBMITTAL PRIOR TO INOCULATION.

- 18. FILL HOLE WITH SOIL MIXTURE, MAKING CERTAIN ALL SOIL IS SATURATED. TO D TO SOAK MINIMUM TWENTY (20) MINUTES, STIRRING IF NECESSARY TO GET SOI FEET, ADD MORE WET SOIL MIXTURE. DO NOT COVER TOP OF BALL WITH SOIL M
- 19. ALL BURLAP, ROPE, WIRES, BASKETS, ETC.., SHALL BE REMOVED FROM THE SIDE SHALL BE PULLED FROM UNDERNEATH.
- 20. TREES SHALL BE PRUNED, IN ACCORDANCE WITH ANSI A-300, TO PRESERVE THE SOFT WOOD OR SUCKER GROWTH AND ALL BROKEN OR BADLY DAMAGED BRAN CUT. ALL PRUNING TO BE PERFORMED BY CERTIFIED ARBORIST.
- 21. SHRUBS AND GROUND COVER PLANTS SHALL BE EVENLY SPACED IN ACCORDAN ON THE PLANT LIST. MATERIALS INSTALLED SHALL MEET MINIMUM SPECIMEN RE PLANS, WHICHEVER IS GREATER. CULTIVATE ALL PLANTING AREAS TO A MINIMU DEBRIS. MIX TOP 4" THE PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. TH INSTALLATION.
- 22. TREE GUYING AND BRACING SHALL BE INSTALLED BY THE CONTRACTOR IN ACC STABILITY AND MAINTAIN TREES IN AN UPRIGHT POSITION. IF THE CONTRACTOR GUYING AND BRACING, THE OWNER SHALL NOTIFY THE PROJECT LANDSCAPE A INDEMNIFY AND HOLD HARMLESS THE PROJECT LANDSCAPE ARCHITECT IN THE UNDER THIS CONTRACT FALL AND DAMAGE PERSON OR PROPERTY.
- 23. ALL PLANT BEDS SHALL BE KEPT FREE OF NOXIOUS WEEDS UNTIL FINAL ACCEP OWNER, "ROUND-UP" SHALL BE APPLIED FOR WEED CONTROL BY QUALIFIED PE APPLICATIONS PER MANUFACTURER'S RECOMMENDATIONS. PRIOR TO FINAL IN AN APPROVED PRE-EMERGENT HERBICIDE AT AN APPLICATION RATE RECOMME ALLOWED BY JURISDICTIONAL AUTHORITY)

## LAWN SODDING

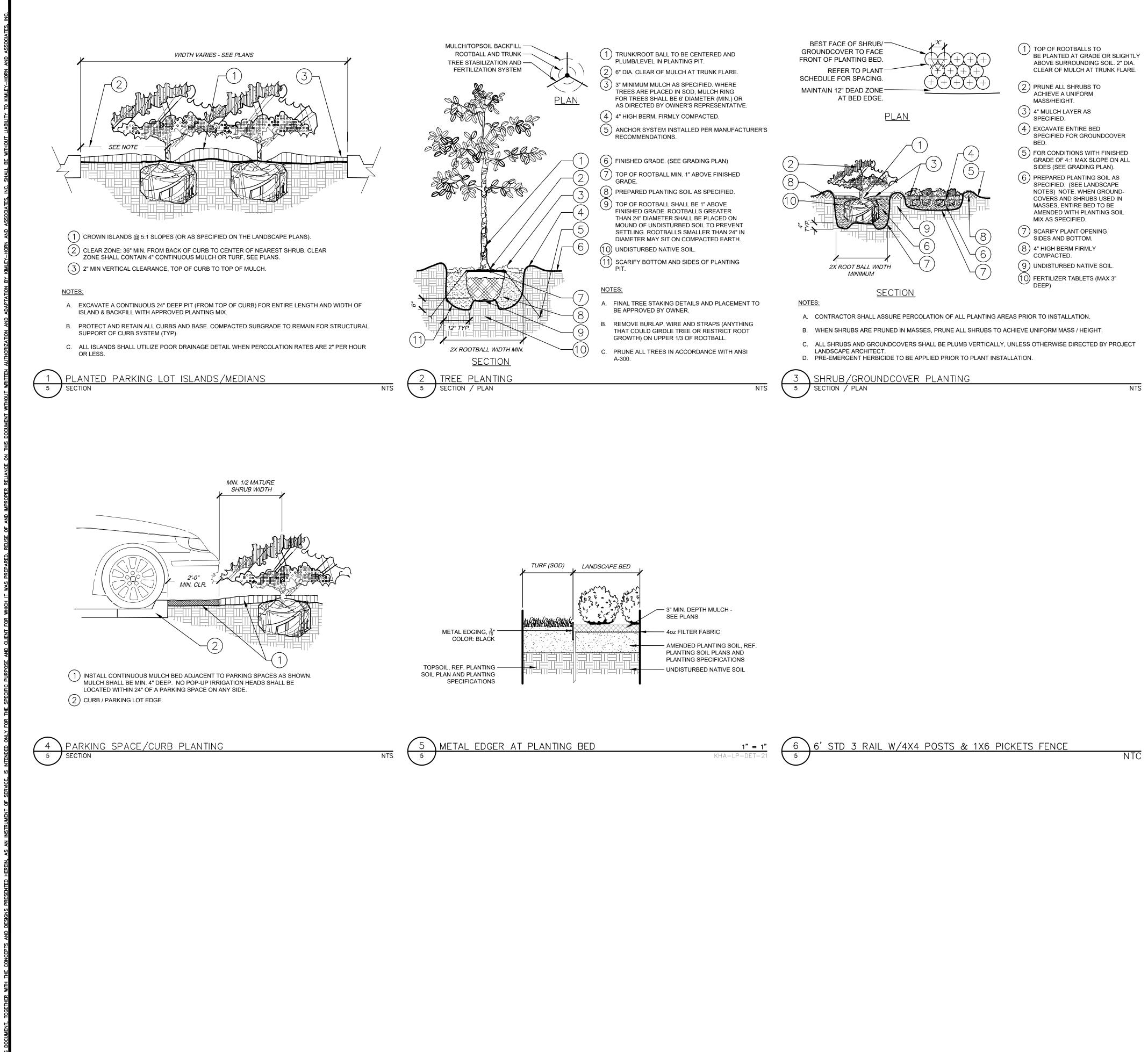
- 1. THE WORK CONSISTS OF LAWN BED PREPARATION, SOIL PREPARATION, AND SC WITH THE SPECIFICATIONS AND THE APPLICABLE DRAWINGS TO PRODUCE A TU OWNER.
- 2. ALL AREAS THAT ARE TO BE SODDED SHALL BE CLEARED OF ANY ROUGH GRASS CUTTER TO A DEPTH OF THREE (3) INCHES, AND THE GROUND BROUGHT TO AN E BE ROLLED WITH A ROLLER WEIGHING NOT MORE THAN ONE-HUNDRED (100) POI ROLLING, ALL DEPRESSIONS CAUSED BY SETTLEMENT SHALL BE FILLED WITH AE BE REGRADED AND ROLLED UNTIL PRESENTING A SMOOTH AND EVEN FINISH TO
- PREPARE LOOSE BED FOUR (4) INCHES DEEP. HAND RAKE UNTIL ALL BUMPS AND PREPARED AREA THOROUGHLY.
   SODDING
- a. THE CONTRACTOR SHALL SOD ALL AREAS THAT ARE NOT PAVED OR PLANTED A THE CONTRACT LIMITS, UNLESS SPECIFICALLY NOTED OTHERWISE.
- b. SOD PANELS SHALL BE LAID TIGHTLY TOGETHER SO AS TO MAKE A SOLID SODDI UNIFORMLY AGAINST THE EDGES OF ALL CURBS AND OTHER HARDSCAPE ELEMI ADJACENT TO BUILDINGS, A 24 INCH STONE MULCH STRIP SHALL BE PROVIDED. LAWN AREAS SHALL BE ROLLED WITH A LAWN ROLLER CUSTOMARILY USED FOR IRRIGATED. IF, IN THE OPINION OF THE OWNER, TOP-DRESSING IS NECESSARY A THE SOD PANELS AND TO EVEN OUT INCONSISTENCIES IN THE SOD, CLEAN SANI REPRESENTATIVE, SHALL BE UNIFORMLY SPREAD OVER THE ENTIRE SURFACE OF FERTILIZE INSTALLED SOD AS ALLOWED BY PROPERTY'S JURISDICTIONAL AUTHOR
- 5. DURING DELIVERY, PRIOR TO, AND DURING THE PLANTING OF THE LAWN AREAS PROTECTED FROM EXCESSIVE DRYING AND UNNECESSARY EXPOSURE OF THE STACKED SO AS NOT TO BE DAMAGED BY SWEATING OR EXCESSIVE HEAT AND
- 6. LAWN MAINTENANCE
- a. WITHIN THE CONTRACT LIMITS, THE CONTRACTOR SHALL PRODUCE A DENSE, V SHALL BE RESPONSIBLE FOR THE REPAIR AND RE-SODDING OF ALL ERODED, SI 12"X12") UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTA ACCOMPLISHED AS IN THE ORIGINAL WORK, INCLUDING REGRADING IF NECESS
- b. CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING S OWNER'S REPRESENTATIVE. PRIOR TO AND UPON ACCEPTANCE, CONTRACTOR SCHEDULE TO OWNER. OBSERVE ALL APPLICABLE WATERING RESTRICTIONS A JURISDICTIONAL AUTHORITY.

### O. EDGING

a. CONTRACTOR SHALL INSTALL 4"X<sup>1</sup>/<sub>8</sub>" ROLLED TOP STEEL EDGING BETWEEN ALL S P. CLEANUP

- 1. UPON COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM CONTRACTORS WORK. A THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE O
- Q. PLANT MATERIAL MAINTENANCE
- ALL PLANTS AND PLANTING INCLUDED UNDER THIS CONTRACT SHALL BE MAINT SPRAYING, PRUNING, AND ALL OTHER OPERATIONS (SUCH AS RE-STAKING OR F INSURE A HEALTHY PLANT CONDITION BY THE CONTRACTOR UNTIL CERTIFICAT REPRESENTATIVE.
- R. FINAL INSPECTION AND ACCEPTANCE OF WORK
- FINAL INSPECTION AT THE END OF THE WARRANTY PERIOD SHALL BE ON PLANT INCIDENTAL WORK PERTAINING TO THIS CONTRACT. ANY REPLACEMENT AT THI ONE (1) YEAR WARRANTY (OR AS SPECIFIED BY THE LANDSCAPE ARCHITECT OF TIME OF REPLACEMENT AND ENDING WITH THE SAME INSPECTION AND ACCEPT
- S. WARRANTY
  - . THE LIFE AND SATISFACTORY CONDITION OF ALL PLANT MATERIAL INSTALLED ( CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF THE TIME OF CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTAT
- 2. ANY PLANT NOT FOUND IN A HEALTHY GROWING CONDITION AT THE END OF THE FROM THE SITE AND REPLACED AS SOON AS WEATHER CONDITIONS PERMIT. AL SAME KIND AND SIZE AS SPECIFIED IN THE PLANT LIST. THEY SHALL BE FURNISH AT NO ADDITIONAL COST TO THE OWNER.
- 3. IN THE EVENT THE OWNER DOES NOT CONTRACT WITH THE CONTRACTOR FOR THE CONTRACTOR SHOULD VISIT THE PROJECT SITE PERIODICALLY DURING TH EVALUATE MAINTENANCE PROCEDURES BEING PERFORMED BY THE OWNER. CO WRITING OF MAINTENANCE PROCEDURES OR CONDITIONS WHICH THREATEN V

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## SCHEMATIC IRRIGATION NOTES

1. CONTRACTOR TO MODIFY / ADJUST EXISTING IRRIGATION SYSTEM OR INSTALL NEW SYSTEM COMPONENTS AS NECESSARY TO PROVIDE 100% HEAD TO HEAD COVERAGE OF ALL NEW PLANT MATERIAL AND MAINTAIN CURRENT IRRIGATION COVERAGE OF EXISTING MATERIAL TO REMAIN.

- 2. IRRIGATION CONTRACTOR IS RESPONSIBLE TO INSPECT EXISTING THE COMPLETE EXISTING IRRIGATION SYSTEM AND INSPECT FOR ALL NECESSARY MODIFICATIONS REQUIRED TO MEET THE SCHEMATIC INTENT OF THESE PLANS PRIOR TO SUBMITTING PROPOSAL. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE FOLLOWING BUT NOT LIMITED TO AVAILABLE FLOW, AVAILABLE PRESSURE, CONNECTION ASSEMBLY, CAPACITY OF EXISTING CONTROLLER(S).
- 3. IRRIGATION SHALL NOT BE COMBINED ON A SINGLE ZONE AND SHALL BE ZONED ACCORDING TO IRRIGATION TYPE AND THE SYSTEM'S AVAILABLE WATER / PRESSURE. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO OWNER FOR REVIEW PRIOR TO INSTALLATION.
- 4. VERIFY LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF IRRIGATION SYSTEM. ALL UTILITIES AND STRUCTURES MAY NOT BE SHOWN ON THESE PLANS-CONTRACTOR SHALL FIELD VERIFY. 5. CONTRACTOR TO FIELD VERIFY ALL POINT OF CONNECTION SOURCE INFORMATION INCLUDING PSI AND
- GPM PRIOR TO CONSTRUCTION. 6. INSTALLATION OF WORK SHALL BE COORDINATED WITH OTHER CONTRACTORS IN SUCH A MANNER AS TO
- ALLOW FOR A SPEEDY AND ORDERLY COMPLETION OF ALL WORK ON-SITE. 7. CONTRACTOR SHALL COORDINATE WITH THE PLANTING PLAN FOR PLANTER BED AND TREE LOCATIONS TO
- ENSURE ALL PLANT MATERIAL IS COVERED BY 100% HEAD-TO-HEAD IRRIGATION. 8. CONTRACTOR SHALL PROVIDE "AS-BUILT" DRAWINGS OF THE FINAL INSTALLATION TO OWNER AT
- SUBSTANTIAL COMPLETION BEFORE RECEIVING FINAL PAYMENT. 9. IRRIGATION CONTRACTOR SHALL SECURE ANY AND ALL NECESSARY PERMITS FOR THE WORK PRIOR TO COMMENCEMENT OF HIS OPERATIONS ON-SITE. COPIES OF THE PERMITS SHALL BE SENT TO THE OWNER/GENERAL CONTRACTOR. WORK IN THE R.O.W. SHALL CONFORM TO THE STANDARDS AND
- SPECIFICATIONS OF LOCAL AND/OR STATE JURISDICTION. 10. LOCATE ALL IRRIGATION LINES WITHIN LANDSCAPED AREAS WHENEVER POSSIBLE. ALL LINES UNDER PAVEMENT MUST BE SLEEVED. ALL VALVES SHALL BE LOCATED WITHIN LANDSCAPED AREAS.
- 11. MAINLINE SHALL NOT BE LOCATED WITHOUT PRIOR APPROVAL OF THE OWNER'S REPRESENTATIVE.
- 12. THE IRRIGATION CONTRACTOR SHALL BE DIRECTLY RESPONSIBLE FOR SLEEVING AND DIRECTIONAL BORES.
- 13. ALL SLEEVES UTILIZED BY THE IRRIGATION CONTRACTOR WHETHER INSTALLED BY HIM OR NOT, SHALL BE LOCATED ON THE "AS-BUILT" DRAWINGS. THE DEPTH BELOW FINISH GRADE, TO THE NEAREST FOOT OF EACH END OF THE SLEEVE SHALL BE NOTED AT EACH SLEEVE LOCATION ON THE "AS-BUILT" DRAWINGS. ALL SLEEVES ON PLAN FOR WALL PENETRATIONS AND UNDER SIDEWALKS SHALL BE SIZED TWO PIPE SIZES GREATER THAN THE PIPE IT CARRIES.
- 14. ALL PRESSURIZED MAINLINES AND LATERALS UNDER PAVEMENT SHALL BE WITHIN SLEEVES AS NOTED. WHERE ELECTRIC OR HYDRAULIC VALVE CONTROL LINES PASS THROUGH A SLEEVE WITH OTHER MAIN OR LATERAL LINES THEY SHALL BE CONTAINED WITHIN A SEPARATE, SMALLER CONDUIT.
- 15. SLEEVES UNDER EXISTING PAVEMENT MUST BE DIRECTIONAL BORE. OPEN CUT IS NOT AN OPTION. 16. NUMBER THE TOP OF ALL VALVE BOX LIDS WITH MINIMUM 1" HEIGHT BLACK LETTERS TO CORRESPOND TO AUTOMATIC AND GATE VALVE DESIGNATIONS. ALL HOSE BIBB VALVE BOXES SHALL BE LABELED IN A SIMILAR MANNER WITH THE DESIGNATION "HB". LETTER OUTSIDE OF TIME CLOCK CABINETS TO CORRESPOND WITH IRRIGATION CLOCK PROGRAM DESIGNATION.
- 17. THE IRRIGATION CONTRACTOR SHALL INSTALL A COLOR CODED METAL DETECTABLE MARKING TAPE WHICH CLEARLY NOTES: "CAUTION: IRRIGATION LINE BURIED BELOW." THE TAPE SHALL BE INSTALLED THE FULL LENGTH OF THE IRRIGATION MAINLINE.
- 18. ALL VALVES, SPLICES WITHIN CONTROL LINES, AND QUICK COUPLERS SHALL BE LOCATED WITHIN NDS VALVE BOXES AS FOLLOWS: -RECTANGULAR 12"X17" HEAVY DUTY BOX. (PURPLE COVER FOR REUSE TO BE PROVIDED WHERE APPROPRIATE).
- 19. ALL IRRIGATION HEADS/DRIP TUBING SHALL BE LOCATED ONE (1) FOOT FROM BACK OF CURB WHEN NEXT TO A ROADWAY. (THIS SHALL NOT INCLUDE PARKING AREAS OR DRIVE AISLES). 20. LOCATE ALL VALVES IN PLANTING BEDS WITH A MINIMUM OF 3'-0" FROM BACK OF CURB OR EDGE OF
- PAVEMENT, UNLESS OTHERWISE NOTED. PIPE SIZES ON EITHER SIDE OF SECTION VALVES CONNECTING MAINLINE TO SECTION LATERAL SHALL BE ONE (1) PIPE SIZE LARGER THAN VALVE SIZE. WHERE MAINLINES RUN PARALLEL TO PAVEMENT OR CURBING, THE MAINLINE SHALL BE OFFSET 2'-0" FROM THE EDGE OF PAVEMENT OR CURB.
- 21. IRRIGATION ZONES SHALL BE SEPARATED FOR HIGH AND LOW WATER USE REQUIREMENTS AND OPERATED ON DIFFERENT WATERING CYCLES TREE RINGS DRIPLINE AND ROTARY HEADS SHALL B SEPARATED ON DIFFERENT VALVES. AT NO TIME SHALL MULTIPLE IRRIGATION HEAD TYPES BE LOCATED ON THE SAME VALVE.
- 22. ALL DRIP ZONES SHALL BE INSTALLED WITH A FLUSH VALVE AND AIR RELIEF VALVE. IN THE EVENT THAT A DRIP ZONE HAS MORE THAN ONE HIGH OR LOW POINT, MORE THAN ONE AIR RELIEF VALVE OR FLUSH VALVE WILL BE REQUIRED FOR THAT ZONE. DRIPLINE SHALL PROVIDE 0.9 GPH EMITTERS, 18" O.C. WITH 18" LINE SPACING AT A MINIMUM.
- 23. ALL WIRING FOR CONNECTION OF THE VALVES TO THE CONTROLLER SHALL FOLLOW MANUFACTURERS SPECIFICATIONS IF REQUIRED ALL WIRING FOR A TWO WIRE PATH SHALL BE WITH RED/BLUE TWISTED PAIR 14 AWG. ELECTRIC CONTROL LINES FROM THE DECODER TO THE SOLENOID VALVES SHALL BE TWISTED PAIR 18 AWG. ALL DECODERS SHALL BE GROUNDED EVERY 1,000 L.F. OR EVERY 10 DEVICES. ALL WIRE SHALL BE FURNISHED IN MINIMUM 2,500' REELS AND SPLICING SHALL BE MINIMIZED. BURY SPLICE KIT. ALL 24 VOLT WIRING SHALL BE DONE IN ACCORDANCE WITH EXISTING CODES. SPLICING SHALL BE IN VALVE BOXES OR CONTROLLERS ONLY, IRRIGATION SYSTEM CONTROL SHALL BE TWO WIRE PATH, CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S REQUIREMENTS FOR THIS INSTALLATION. TWO WIRE SYSTEM SHALL HAVE 2-WAY COMMUNICATIONS FIELD PROGRAMMABILITY, STATION SPECIFICATIONS AND INTEGRATED SURGE PROTECTION.
- 24. ALL CONTROL WIRE SHALL BE INSTALLED IN A 1  $\frac{1}{4}$ " ELECTRICAL CONDUIT.
- 25. CONTRACTOR TO MINIMIZE IRRIGATION OVERTHROW TO IMPERVIOUS AND NATURAL AREAS THROUGH FIELD ADJUSTMENTS TO INDIVIDUAL HEADS.
- 26. ALL UNIMPROVED AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR.

