



**Division 32 - Exterior Improvements**

minimum quality requirements' Design Professionals are encouraged to identify and include equivalent products and/or manufacturers offering comparable products to facilitate open bidding environments'

**General Requirements for Exterior Improvements**

Conform with requirements as indicated within this Design and Construction Standard'  
TTU rounds maintenance is the authority having jurisdiction § 8.01 Division 96, Exterior Improvements'

**32 12 16 Asphalt Paving**

Asphalt paving is to be specified, constructed, and tested to meet the following requirements:

1. Not mix with Portland Cement Concrete Pavement ; Texas Department of Transportation § 251(r) 6 . 288047 . 5

Division 32 - Exterior Improvements

Surface shall be a minimum of 6 inches'

Specify to furnish and provide all the submittals, labor, materials, and equipment necessary to deliver, place and compact 18" thick Concrete Slab Pavement including prime coat and tack coats as shown and detailed on the drawings'

Materials, parameters, and methods shall be in basic conformance with the Texas Standard Specifications for Construction of Highways, Streets and Bridges, latest edition, and applicable



Division 32 - Exterior Improvements

1.

Division 32 - Exterior Improvements

7. Compressive Strength Tests: \* ST " C 9B (or @ JL16J cylinders test one cured specimens at seven days (or information only and t )

Division 32 - Exterior Improvements

indicate joints at closer intervals', expansion joints in gutter sections shall be sealed using same material as used for concrete paving'

Contraction joints shall be constructed by means of 10mm thick separators, or a section conforming to cross section of the curb and combination curb and gutter' Contraction joints shall be constructed directly opposite contraction joints in abutting concrete pavement' Where curb, and combination curb and gutter, do not butt concrete pavements, contraction joints shall be so placed the monolithic sections between curb returns will not be less than 6m nor greater than 12m in length, generally 12m is acceptable' Separator shall be removed as soon as practicable after the concrete has set sufficiently to preserve width and shape of joint' After separator plates have been removed, all exposed edges of joints shall be rounded with proper edging tool to a radius of 10mm' Contraction joints may also be formed with 57164(a)11. T v8- .18671(o)0.5

Division 32 - Exterior Improvements

and 7 rout, com#ly ) ith cold and hot ) eather construction re(uiirements contained in \* C-  
G9='10\* SC , @0T " S @=6' o not a##ly mortar to substrates ) ith tem#eratures o! 1== deg F and  
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Division 32 - Exterior Improvements



Division 32 - Exterior Improvements

Traffic shall not be permitted to use the painted areas for a minimum of 30 minutes after painting has been completed.



Division 32 - Exterior Improvements





Division 32 - Exterior Improvements

shall be steel, Carouse ) ith So:stice umbrellas as manu!actured by  
!andscape &or 's, in bron4e' Provisions !or accessible seating is









Division 32 - Exterior Improvements

Trenching shall be at depth to allow main lines minimum 6 inches cover and the lateral lines 1A inches cover. All trenching backfill shall be flooded in order to prevent settling. All settling and low areas that occur within the first twelve (12) months will be the responsibility of the Contractor to fill and level. All trenches shall be examined by the Texas Tech Office of 7 rounds maintenance before backfilling. All trenches shall be backfilled with the material removed elsewhere special backfill specifications of certain pipe may specify otherwise. In this case, the special backfill specifications shall take precedence over this general specification. All trenches backfill shall be flooded in order to prevent alter settling. All settling and low areas that occur within the first twelve (12) months will be the responsibility of the Contractor to fill and level.

Provide drip irrigation near buildings and hardscape areas. Provide a sand filter for systems containing drip irrigation.

Provide seven (7) days written notice in advance of system start up and demonstration. Before final acceptance of the installed system, the Contractor shall make the following tests under the supervision of the Texas Tech Office of 7 rounds maintenance.



Division 32 - Exterior Improvements

Contractor is to provide a one-year replacement warranty of all plant materials' Provide concrete splash block at downspouts along building perimeters inside planter beds and sodded areas here not discharging onto a concrete or asphalt surface'

No more than 1% of the project landscape area shall utilize decomposed granite as a finish material' The areas that will have 7 shall be broken into subareas in some fashion' All 7 solutions shall be approved by the CC of FP5C' 7 shall not be used as an infill between small plantings such as native grasses, shrubs, etc' All landscape architects and architects must indicate the percentage of 7 coverage in S, , and C sets of drawings'

Seed is to be delivered in original sealed, labeled, and undamaged containers' Sod is required, harvest, deliver, store, and handle sod according to requirements in TP-5 MS#ecifications for Turfgrass Sod Materials and MS#ecifications for Turfgrass Sod Transplanting and Installation in its 7 guideline Specifications to Turfgrass Sodding' Deliver sod in time for planting within 6 hours of harvesting' Protect sod from breakage and drying'

Plant during one of the following periods' Coordinate planting periods with initial maintenance periods to provide required maintenance from date of Substantial Completion'

1. May 16th to August 31st for Bermuda seeding'
2. Overseeding ; Annual Ryegrass
  - a. Bermuda seeding cannot be established by September 16, in areas are to be overseeded with annual ryegrass at a rate of 1lb/sq ft' this is required, the Contractor shall maintain the annual grass lawn, as needed, including, but not limited to irrigation and, mowing to maintain a maximum height of 9J, and edging, as required'
  - b. This annual ryegrass maintenance shall be considered as a separate item from the 1day maintenance period specified for the seeded Bermuda grass'
  - c. The Contractor shall apply a minimum of two applications of Roundup herbicide to the annual ryegrass in early spring in preparation for Bermuda grass seeding' The two applications should be separated by a period of 1-11<



Division 32 - Exterior Improvements

9' Granite Truc/ing 1 <http://www.granitetruc/ing.com>  
11106J High Plains Cobble

< 3 others as submitted and approved



Please reference Appendix 2 for the TTU 7 rounds "Maintenance list of preferred plants chosen to be resistant and having the ability to be hardy

Facilities Planning and Construction  
Design and Construction Standards

Division 32 - Exterior Improvement Ex36(i)-1.38777(o)3.63333(n)0.633549( )262]TJPETPQPqP8.33333 0 0 8.2

Division 32 - Exterior Improvements

3. Remove dead exterior plants as directed by the landscape architect. Replace immediately unless required to plant in the succeeding planting season.
4. Replace exterior plants that are more than 60 percent dead or in an unhealthy condition at end of warranty period.
5. \* Limit to one replacement of each exterior plant. It will be required, except for losses or replacements due to failure to comply with requirements.

\* All trees, shrubs, grasses, mulch, and all compost shall be manufactured within 50 miles of the project site from materials that have been extracted, harvested, or recovered, as well as manufactured within 50 miles.

1. Loosen subgrade of planting beds to a minimum depth of 16 inches. Remove stones larger than 4 inch in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them within 30 days.
  - a. \* Apply fertilizer directly to subgrade before loosening.
  - b. Spread to soil, apply soil amendments and fertilizer on surface, and thoroughly blend planting soil mix.
    1. Delay mixing fertilizer with planting soil until planting. It will not proceed within five days.
  - c. Spread planting soil mix to specified depths, but not less than required to meet finish grades after natural settlement. Do not spread if planting soil or subgrade is frozen muddy, or excessively wet.
    1. Spread approximately one-half the thickness of planting soil mix over loosened subgrade. Mix thoroughly into top 4 inches of subgrade. Spread remainder of planting soil mix.
    2. Finish grading: Grade planting beds to a smooth, uniform surface. Plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.
    3. Restore planting beds if eroded or otherwise disturbed after finish grading and before planting.



Division 32 - Exterior Improvements

1. Set balled and burlapped stock lumber and in center of pit or trench with top of root ball 1 inch above adjacent finish grades'
  - a. Remove burlap and wire baskets from tops of root balls and partially form sides, but do not remove from under root balls. Removeallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation'
  - b. Place planting soil mix around root ball in layers, tamping to settle mix and eliminate voids and air pockets. When it is approximately one-half backfilled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed. Water again after placing and tamping final layer of planting soil mix'
2. Set balled and potted and container-grown stock lumber and in center of pit or trench with top of root ball 1 inch above adjacent finish grades'
  - a. Carefully remove root ball from container without damaging root ball or plant'
  - b. Place planting soil mix around root ball in layers, tamping to settle mix and eliminate voids and air pockets. When it is approximately one-half backfilled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed. Water again after placing and tamping final layer of planting soil mix'
3. Set fabric bag-grown stock lumber and in center of pit or trench with top of root ball 1 inch above adjacent finish grades'
  - a. Carefully remove root ball from fabric bag without damaging root ball or plant. Do not use planting stock if root ball is cracked or broken before or during planting operation'
  - b. Place planting soil mix around root ball in layers, tamping to settle mix and eliminate voids and air pockets. When it is approx

Division 32 - Exterior Improvements

5. Drain trees of 6-inch diameter and larger with trunk diameter. Start at base of trunk and spiral cover trunk to height of first branches. Cover diameter, exposing half of diameter, and securely attach without causing girdling. Do not restrict tree trunk or infringe on trunk area.

Division 32 - Exterior Improvements





