



- GENERAL GRADING NOTES:**
- Underground facilities, structures and utilities have been plotted from available surveys, records and information, and, therefore, do not necessarily reflect the actual existence, non-existence, size, type, depth, number or location of these facilities, structures and utilities. The contractor shall be responsible for verifying the actual location of all underground facilities, structures and utilities, either shown or not shown on these plans. The underground facilities, structures and utilities shall be located in the field prior to any grading, excavation or construction of improvements. These provisions shall in no way absolve any party from complying with the Underground Facility Safety and Damage Prevention Act, Chapter 319, RSMo.
 - Contractor to notify Engineer as soon as possible if conditions on ground differ from those shown on plans.
 - Contractor shall be responsible for determining the amount of excavation and fill needed to bring the site to the proposed grades.
 - Prior to mass grading, the construction area shall be cleared of trees and vegetation. Topsoil shall be stockpiled for later distribution in landscaped areas.
 - Areas disturbed by grading operations shall be protected by seeding and mulching as soon as possible.
 - A fast germinating annual such as ryegrasses or sudan grasses shall be seeded in graded areas within one week of rough grading the site.
 - The upper 8" of landscaped berms and garden areas shall be graded using stockpiled topsoil. This work shall be performed immediately after rough grading the site. Southwest detention basin shall be sodded below elevation 554.00, south detention basin below 548.00.
 - Grading shall be performed to proposed grades shown within a tolerance of +0.10 foot. Grades shown are finish grades. Contractor shall deduct 1.0 foot for pavement areas and 0.67' for building slabs and sidewalk.
 - No slope shall exceed 3 horizontal to 1 vertical.
 - All grading and excavation work shall adhere to the recommendations of the geotechnical engineer as described in the "Exploration of Subsurface Conditions and Foundation Recommendations" prepared by Shannon & Wilson for Delmar Gardens dated September, 2001.
 - Curb heights are 6" above pavement except where noted by specific top of curb (TC) and curb flowline (FL) spot elevations. Curb heights at handicap paving stalls to be transitioned to zero.
 - Grading is limited to the project site, except along the north property line where grading should extend into Missouri Dept. of Transportation right of way for Page Avenue sufficient to provide the specified elevations along the propertyline. Rough grading this area is the responsibility of Phase 2 grading contractor, finish grading is the responsibility of Phase 3 grading contractor.
 - Cut areas shall be scarified to a depth of 8", compacted, and proof rolled with a fully-loaded tandem axle truck immediately prior to placing additional fill or placing aggregate base course. Proof rolling will be for the purpose of locating any soft areas requiring further remediation. Fill material shall be spread in horizontal layers not to exceed 8", loose measure, and compacted to 92% of maximum dry density as determined by AASHTO Modified Proctor Test (ASTM D1557).
 - Site Benchmark Elevation: 544.92' (USGS)
Top of sanitary manhole, 40 feet northwest of rear lot corner 46B/47B, Twin Chimneys "Lindenwood Village B" per Duckett Creek as-built.
 - Grading work is broken into three phases. Phase 1 includes rough grading the portion of the site labeled as "Phase One" on sheet C-2 of these plans. This work was awarded to Nor-Vel Construction Co. in 2001, and except for minor rough grading along Twin Chimneys Blvd, this work has been completed. Phase 2 will consist of clearing, grading, seeding and mulching, and installation of siltation control devices for that portion of the site labeled as Phase 2 on Sheet C-2, C-4, and C-5 of these plans. Phase 3 will consist of importing topsoil and finish grading the area shown as Phase 1 on Sheet C-3 of these plans. In Phase 1 building and pavement areas, Phase 3 grading contractor shall bring grades to subgrade. Excess materials shall be transported to Phase 2 area and distributed in a manner acceptable to the Phase 2 contractor in a timely manner such that it can be incorporated in the Phase 2 work. In Phase 1 landscaped areas, Phase 3 grading contractor shall grade to finish elevations minus 6". Once sewers, utilities, pavement, curbing, and building has been completed, Phase 3 contractor shall import suitable topsoil and finish grade.

Construct new detention basin as first order of work and redirect stormwater into basin. Basin will function as siltation control basin during construction and shall be mucked out and sodded once vegetation has been established on all graded areas. In his bid contractor shall quote an allowance to return at later date to muck and sod detention basin.

VEGETATIVE ESTABLISHMENT:
For Urban Development Sites
APPENDIX A

Seeding Rates:
The seed mixture application rate for final seeding is as follows:

Turf Fescue	40 lbs./Ac.
Kentucky Bluegrass	25 lbs./Ac.
Perennial Ryegrass	40 lbs./Ac.
Annual Rye, Wheats, or Oats	50 lbs./Ac.

Temporary:
The seed mixture application rate for temporary/interim seeding for slope stabilization is as follows:

Tall Fescue	50 lbs./Ac.
Timothy or Redtop	25 lbs./Ac.
Lespedeza	15 lbs./Ac.
Annual Rye or Oats	50 lbs./Ac.

Seeding Periods:

Fescue, Timothy, Redtop	March 1 to June 1
	August 1 to October 1
Wheat or Rye	March 15 to November 1
Oats	March 15 to September 15

Mulch Rates: 5,000 lbs. per acre

Fertilizer Rates:

Nitrogen	48 lbs./Ac.
Phosphate	48 lbs./Ac.
Potassium	100 lbs./Ac.
Lime	1200 lbs./Ac. ENM*

*ENM = effective neutralizing material as per State evaluation of quarried rock.

The original of this drawing is on file at the office of the Clayton Engineering Company. Any modifications to this drawing shall release said Clayton Engineering Company, the Engineer and/or Surveyor whose seal appears hereon from any liability resulting from said unauthorized modifications.

REVISIONS	
1	8-7-02 KRF Revisions per City and Duckett Creek Sewer District reviews

PHASE 2 ROUGH GRADING PLAN
DELMAR GARDENS
Highway N and Twin Chimneys Boulevard
City of St. Louis, Missouri 63106

Prepared for:
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Designed	KRF
Drawn	KRF
Checked	MCH
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Project Number	00228.1
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