

GRADING PLAN FOR COMPONENT BAR PRODUCTS BUILDING EXPANSION

GBA GEORGE BUTLER ASSOCIATES, INC. Engineers / Architects Kansas City, Mo. / Lenexa, Ks. / O'Fallon, Mo. / Wichita, Ks.		DATE: SEPTEMBER 2007	
		DESIGN BY: JJC	DRAWN BY: MSA
COMPONENT BAR BUILDING EXPANSION		PROJECT NO.: 11333	
		SHEET NO.	TOTAL SHEETS
		4	11

SEEDING RATES:

PERMANENT:
TALL FESCUE - 30 LBS./AC.
SMOOTH BROME - 20 LBS./AC.
COMBINED: FESCUE @ 15 LBS./AC. AND BROME @ 10 LBS./AC.

TEMPORARY:
WHEAT OR RYE - 150 LBS./AC. (3.5 LBS./1000 SQ.FT.)
OATS - 120 LBS./AC. (2.75 LBS./1000 SQ.FT.)

SEEDING PERIODS:

FESCUE OR BROME - 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:

100 LBS. PER 1,000 SQ.FT. (4,356 LBS./AC.)

FERTILIZER RATES:

NITROGEN - 30 LBS./AC.
PHOSPHATE - 30 LBS./AC.
POTASSIUM - 30 LBS./AC.
LIME - 600 LBS./AC. ENM Ψ

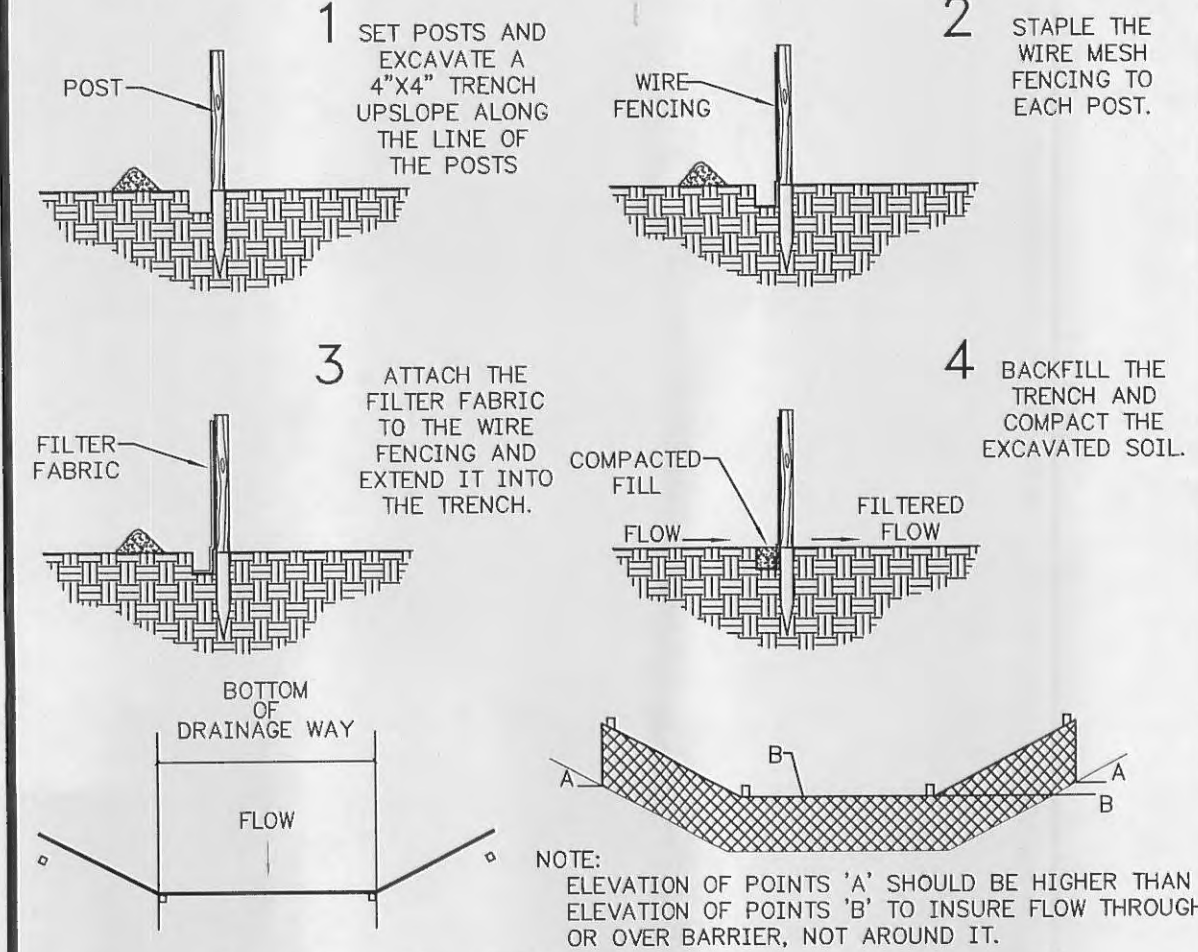
Ψ ENM = EFFECTIVE NEUTRALIZING MATERIAL AS PER STATE EVALUATION OF QUARRIED ROCK.

WHEN GRADING OPERATION IS COMPLETED, ALL DISTURBED AREAS SHALL BE SEEDED, FERTILIZED, LIMED, MULCHED AND TACKED AS PER THE ABOVE APPLICABLE PERMANENT RATE.

WHEN GRADING OPERATIONS ARE CEASED FOR 14 DAYS OR MORE ALL DISTURBED AREAS WILL BE SEEDED AS PER THE ABOVE APPLICABLE TEMPORARY RATE.

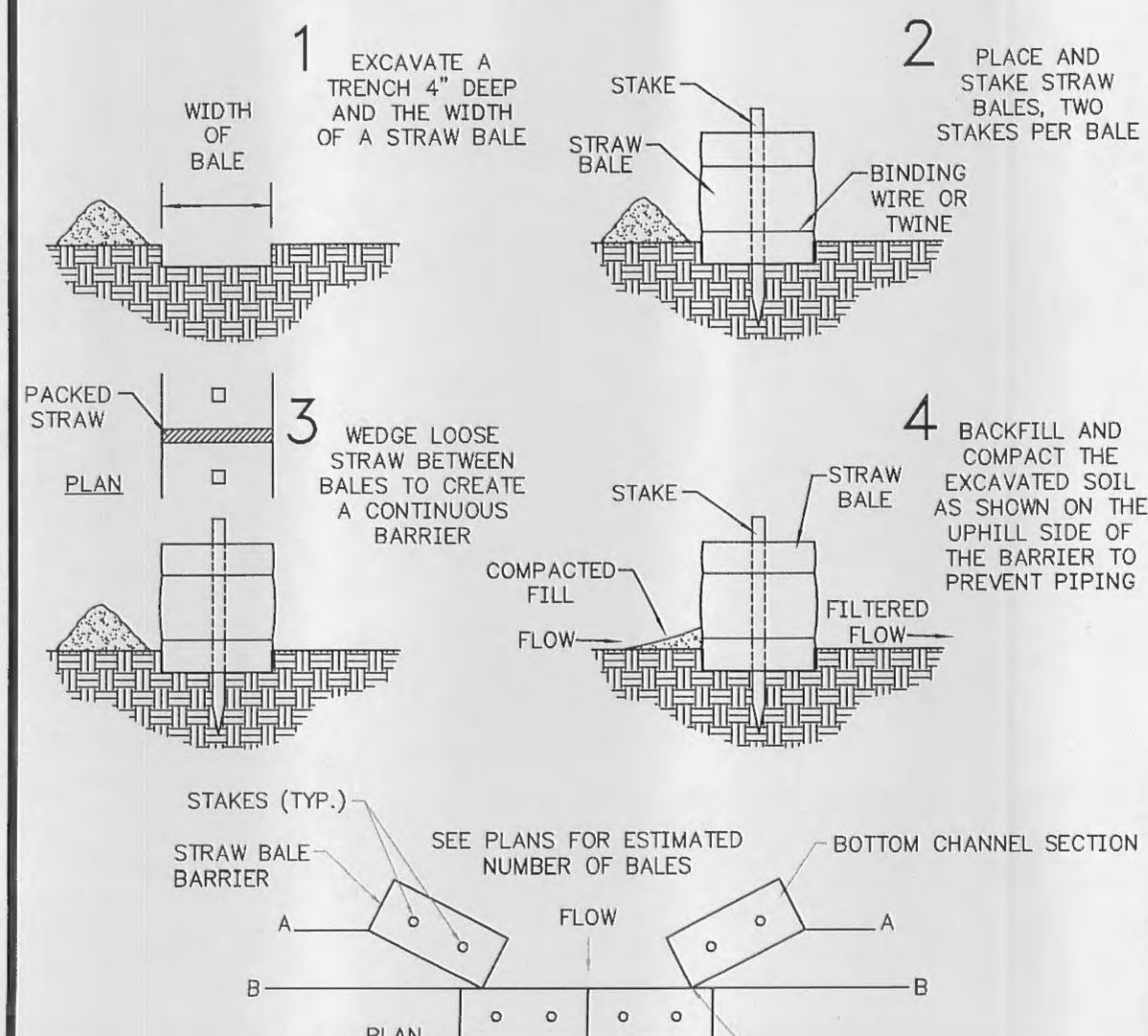
Vegetative Establishment

- MAINTENANCE**
- Filter barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.
 - Should the fabric decompose or become ineffective prior to the end of the expected usable life and the barrier still be necessary, the fabric shall be replaced promptly.
 - Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately half the height of the barrier.
 - Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required shall be dressed to conform with the existing grade, prepared and seeded.



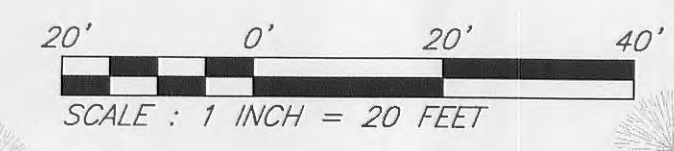
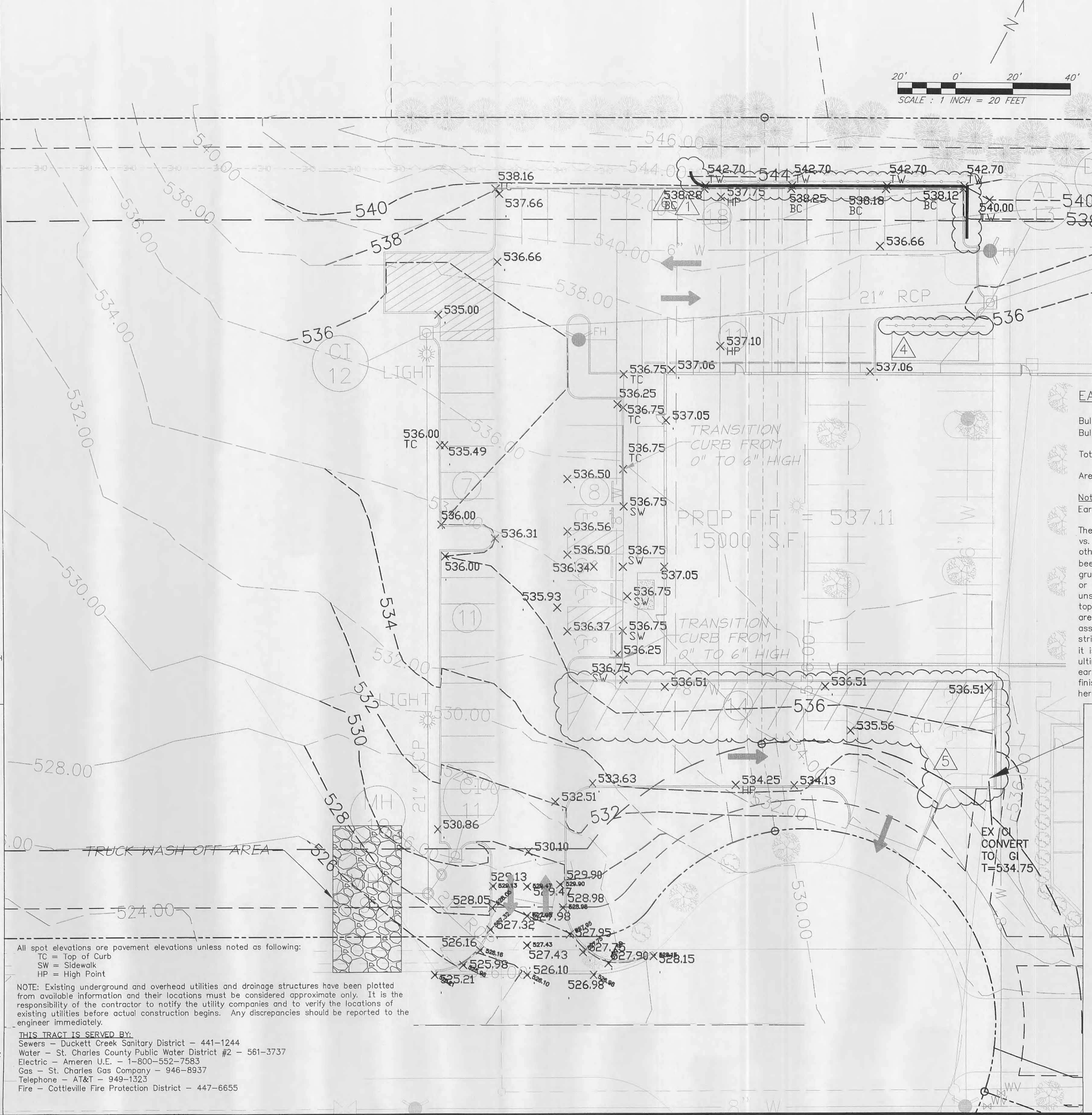
Synthetic Filter Barrier Detail

NO SCALE



Straw Bale Barrier Detail

NO SCALE



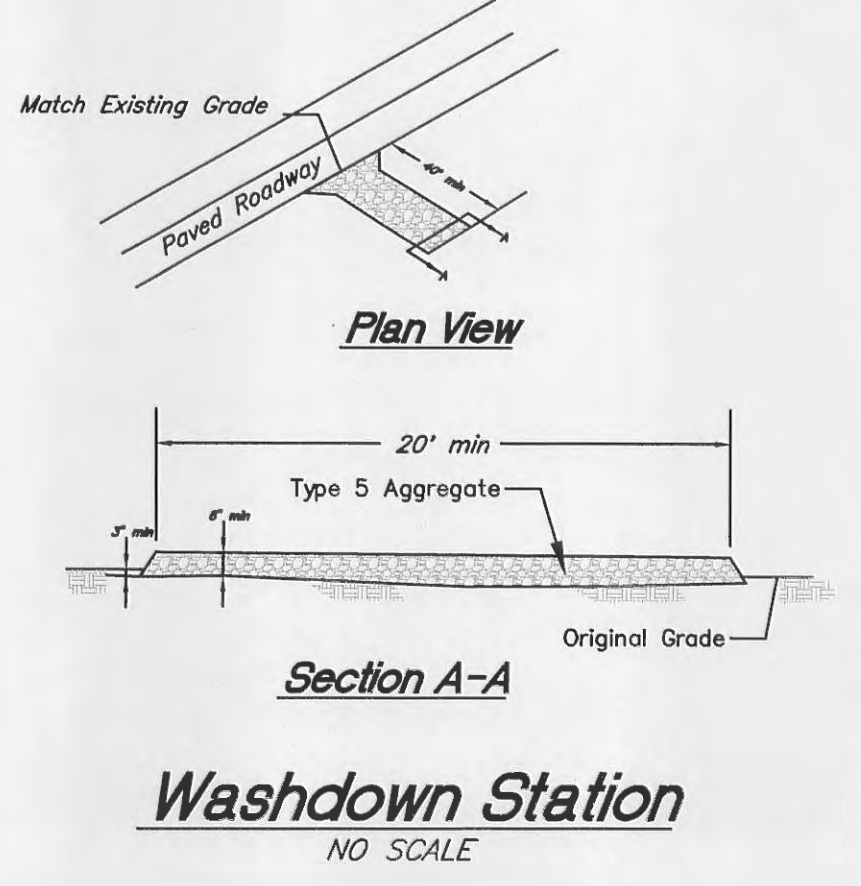
EARTHWORK QUANTITIES

Bulk Cut (Unadjusted)	1378 C.Y.
Bulk Fill (Unadjusted)	2195 C.Y.
Total Fill	817 C.Y.

Area to be Disturbed = 1.70 acres

Note:
Earthwork calculations do not consider shrinkage (swell may occur as well).

The earthwork quantities listed herein were calculated based on the existing vs. proposed grades indicated on the site and grading plan. Unless otherwise noted, the quantities are to finish grade, and no adjustment has been made to accommodate topsoil stripping/stockpiling or clearing & grubbing operations; installation of underground utilities; foundation, footing, or other improvement related excavations; removal or treatment of unsuitable soils; subgrade for pavements, curbs, sidewalks, etc.; or topographic variations not indicated on the drawings. The quantities listed are estimates only and the engineer assumes no liability for any costs associated with overruns of any kind. Any reference to shrinkage or swell is strictly an estimate based on available information or past experience and it is the contractor's responsibility to independently verify the values. It is ultimately the sole responsibility of the contractor to include in his bid the earthwork quantities necessary to complete the grading that will result in finish grades as shown on the drawings regardless of the quantities shown herein.



All spot elevations are pavement elevations unless noted as following:
TC = Top of Curb
SW = Sidewalk
HP = High Point

NOTE: Existing underground and overhead utilities and drainage structures have been plotted from available information and their locations must be considered approximate only. It is the responsibility of the contractor to notify the utility companies and to verify the locations of existing utilities before actual construction begins. Any discrepancies should be reported to the engineer immediately.

THIS TRACT IS SERVED BY:
Sewers - Duckett Creek Sanitary District - 441-1244
Water - St. Charles County Public Water District #2 - 561-3737
Electric - Ameren U.E. - 1-800-552-7583
Gas - St. Charles Gas Company - 946-8937
Telephone - AT&T - 949-1323
Fire - Cottleville Fire Protection District - 447-6655