Lee County Board Of County Commissioners
Agenda Item Summary **Blue Sheet No. 20020255**

1. REQUESTED MOTION:

ACTION REQUESTED: Adopt an amendment to Administrative Code AC-3-10, External Fees and Charges Manual, to add a new fee to the Development Services Fee Schedule for commercial mining excavations. Fee would be 2.2 cents per cubic yard. .

WHY ACTION IS NECESSARY: To establish a fee to provide for the additional costs inherent in the maintenance and operation of roadways impacted by excavation/mining operations in lieu of adopting a Roads Impact Fee for Excavation/Mining.

WHAT ACTION ACCOMPLISHES: Establishes a new fee, payable at time of issuance of a Development Order for an excavation/mining project, to provide the additional funds necessary to maintain and strengthen roadway segments impacted by mining/excavation projects.

2. DEPARTMENTAL CATEGORY: 04 A4A
COMMISSION DISTRICT #

3. MEETING DATE: 04-23-2002

4. AGENDA:
- ___ CONSENT
- X ADMINISTRATIVE
- ___ APPEALS
- ___ PUBLIC
- ___ WALK ON
- ___ TIME REQUIRED:

5. REQUIREMENT/PURPOSE: *(Specify)*
- ___ STATUTE
- ___ ORDINANCE
- ___ ADMIN.
- X CODE
- ___ OTHER

6. REQUESTOR OF INFORMATION:
- A. COMMISSIONER ___
- B. DEPARTMENT Community Dev.
- C. DIVISION Development Services

BY: _____ 4/03/02
Peter J. Eckenrode
Director, Development Services

7. BACKGROUND: The External Fees and Charges Manual establishes the fees for the Department of Community Development. The fees are to be set by the Board of County Commissioners. This request proposes a new fee for excavation/mining projects to address impacts of heavy truck traffic on the County road pavements.

At the August 2001 Management and Planning meeting the Board directed staff to pursue the implementation of a roads impact fee for excavation/mining projects. Upon further review, Development Services, along with the County Attorney Office and the Department of Transportation, concluded that a maintenance and operation fee was the best method to address the impacts generated by excavation/mining operations.

The Lee County Department of Transportation prepared a report (attached as "Exhibit A") which provides a method and the associated costs to address the impacts on roadway pavement structure created by high volumes of heavy trucks. The report further provides a method to assess a fee for excavation/mining truck traffic. Based upon the report's conclusions staff recommends the adoption of a fee of 2.2 cents per cubic yard to be assessed prior to issuance of a Development Order for new excavation/mining projects and at time of permit renewals for existing projects.

8. MANAGEMENT RECOMMENDATIONS:

9. RECOMMENDED APPROVAL:

A Department Director	B Purchasing or Contracts	C Human Resources	D Other	E County Attorney	F Budget Services				G County Manager
					OA/OM/Risk/GC 4/11				
	N/A	N/A	N/A	4-8-02	OA 4/9/02	OM 4/11/02	Risk 4/11	GC 4/11	

10. COMMISSION ACTION:
- ___ APPROVED
- ___ DENIED
- ___ DEFERRED
- ___ OTHER

RECVD. by CO. ATTY. 4/5/02 4:30 pm
CO. ATTY. FORWARDED TO: Co. Admin. 4/8/02 10:30am

RECEIVED BY COUNTY ADMIN. 4/8/02 10:30am
COUNTY ADMIN FORWARDED TO: 4/11 4:30

PJE/pkh S:\DCD\Eckenrode\Blue Sheets\Mining Fees.wpd.doc

"Exhibit A"

LEE COUNTY
SOUTHWEST FLORIDA

-DEPARTMENT OF TRANSPORTATION

Memo

To: Peter Eckenrode
Development Services Director

From: Scott M. Gilbertson, P.E.
LDOT Director

Date: March 13, 2002

Re: Heavy Vehicles and Road Maintenance Costs

As requested, the Department of Transportation has evaluated the possible share of road maintenance costs that may be generally attributed to use of roadways by heavy vehicles such as dump trucks. It is our understanding that one possible application is the establishment of a maintenance cost amount that may be assessed to a mining operation.

The criteria in the Florida Department of Transportation (FDOT) for design of pavement cross-sections are primarily based on truck volumes on a roadway. These are expressed in terms of the number of 18,000-pound equivalent single axle loadings a pavement design can withstand.

The typical cross-section for an arterial roadway specified in the current Land Development Code is: 1 inch of friction course, 2-1/2 inches of Type "S" asphalt, 8 inches of limerock base and 12 inches of stabilized subgrade. This road section performs well when subjected to moderate truck volumes. However, FDOT is now using an improved pavement design, called SUPERPAVE, on high volume arterials such as I-75 and U.S. 41 that carry high truck volumes. We recommend use of the SUPERPAVE pavement design on County roads with a high truck volume. Alico Road and Burnt Store Road would be an example of County roadways where SUPERPAVE would be appropriate due to high truck volumes. SUPERPAVE cross-sections were evaluated by the consulting firm of Pitman-Hartenstein & Associates in an August 2001 Technical Report titled "Flexible Pavement Design Summary".

The SUPERPAVE cross-section recommended for resurfacing high truck volume roadways is: 1 inch of friction course, 4 inches of Type "S" asphalt, 8 inches of reworked limerock base and 12 inches of stabilized subgrade. While costing 50 percent more than simple resurfacing of an existing arterial pavement section meeting the LDC pavement design, the number of axle loadings the SUPERPAVE pavement section can withstand is nearly three times that of the LDC

section. This appears to be a more cost-effective resurfacing section on arterial roadways with high truck volumes.

We have estimated the average cost attributed to resurfacing for the SUPERPAVE section on a 12 foot lane with a 2 foot paved shoulder to be $120,000 per lane mile. This section can withstand approximately 9,000,000 equivalent single axle loadings. On this basis, the average cost of resurfacing per axle load per mile is 1.333 cents.

The typical dump truck has three or four axles. For purposes of this discussion we assume that the loaded dump truck would have three equivalent 18,000 pound axles loading on the roadway. Simply multiplying the average cost of resurfacing per axle load per mile of 1.33 cents by three axles per dump truck yields an average cost for resurfacing of 4.0 cents per dump truck per mile.

However, the dump truck does pay gas taxes and some gas taxes are spent on resurfacing. According to the Lee County Revenue Manual, $21,289,000 in gas taxes were collected in the Year 2000 at 15 cents per gallon. The annual expenditure in CIP #204683, the Countywide Resurface/Rebuild Program, is $3,200,000. Therefore, approximately two cents per gallon of gas tax are collected for the purpose of resurfacing and rebuilding of county roadways. Estimating that dump trucks would average five miles per gallon, a gas tax credit of 0.4 cents per truck per mile would be appropriate. Subtracting the gas tax credit of 0.4 cents per truck per mile from the average cost for resurfacing of 4.0 cents per dump truck per mile leaves a net cost per dump truck of 3.6 cents per mile.

It is estimated by Development Services staff that the average dump truck drives eleven miles per load. Multiplying eleven miles by 3.6 cents per mile per dump truck yields a net cost of 39.6 cents per dump truck. The average load for a dump truck is 18 cubic yards. Dividing 39.6 cents per dump truck by 18 cubic yards per truck would yield a net road maintenance cost per cubic yard of 2.2 cents that may be attributable to mining operations. A summary of the calculation is attached.

AJG/SMG/mlb

cc: Administrative File

CALCULATION OF MINING OPERATION SHARE OF ROADWAY MAINTENANCE COST

DATE: 03/13/02

STRUCTURAL NUMBER		4.9	BASED ON PITMAN-HARTENSTEIN AUGUST 2001 REPORT
TOTAL 18k ESAL		9000000	18K ESAL CALCULATION BASED ON PITMAN HARTENSTEIN FLEXIBLE PAVEMENT DESIGN RANGE
RESURFACING COST PER LANE MILE	$	120,000	($14.5/CY * (12 FT ROAD + 2 FT SHLDR) / (9 SF/CY) * 5280 LF/MILE)
COST PER AXLE PER MILE		$0.0133	(COST PER MILE / TOTAL 18k ESAL)
AXLES PER DUMP TRUCK PER MILE		3	ASSUMED
COST PER TRUCK PER MILE		$0.0400	(COST PER AXLE * AXLES PER DUMP TRUCK)
GAS TAX CREDIT		$0.0044	GAS TAX CREDIT $0.022/GAL / 5 MPG
NET COST PER TRUCK PER MILE		$0.0356	(COST PER TRUCK PER MILE - GAS TAX CREDIT)
AVERAGE MILES		11	DETERMINED BY DEVELOPMENT SERVICES
NET COST PER TRUCK		$0.3916	NET COST PER MILE * #MILES
CUBIC YARDS PER TRUCK		18	ASSUMED
NET COST PER CUBIC YARD		$0.0218	

NOTES
18k ESAL = 18,000 POUND EQUIVALENT SINGLE AXLE LOADS
SUPERPAVE RESURFACING SECTION BASED ON 1" S-III FRICTION COURSE, 4" TYPE S ASPHALT, REWORKED BASE SURFACE ON EXISTING 12" STABILIZED SUBGRADE
CURRENT COUNTY LDC SECTION ARTERIAL 1" S-III FRICTION COURSE, 2/1-2" TYPE S ASPHALT, 8" LIMEROCK AND 12" STABILIZED SUBGRADE