ECONOMIC ANALYSIS OF THE PROPOSED PYRAMIND/CROSSGATES SHOPPING CENTER, GUILDERLAND, NEW YORK

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June 17, 1980

Revised

June 22, 1980

Revised

July 9, 1980

Revised

July 14, 1980

Addendum

July 26, 1981

Marketing/Econometrics

The Marketing/Econometrics sections of the draft Environmental Impact
Statement, together with appendices, annexes, and later submissions by the applicant, attempted to establish the following four points:

- 1. There is a "gap" in the Albany-Schenectady-Troy region in shoppers goods sales;
- Presently, the "so-called gap" is filled by outof-region purchases (out-shopping) by residents of this region;
- 3. Prospectively, the "so-called gap" will be recovered by the stores in the Pyramid/ Crossgates shopping center; and
- 4. The Pyramid/Crossgates shopping center will not cause a negative net economic impact on the region.

The applicant (Pyramid/Crossgates) utterly failed to prove these contentions—largely because the data used by the applicant was inappropriate to the task, the methodology used by the applicant was simplistic and without a theoretical base, and therefore, the conclusions drawn by the applicant failed to consider other more likely explanations for the ratios calculated. If there is recoverable out-shopping it is not known, nor is it knowable given the methodology followed by the applicant; and there are good reasons to doubt that it exists in anything like the amount which the applicant claims.

The "Gap": Does it Exist

The "so-called gap" was estimated by the applicant as follows: (1) a population estimate times a per capita income estimate was used to derive a total income estimate; (2) an estimate of shoppers goods sales in the region was made, using retail trade statistics; (3) the ratio of shoppers goods sales to total income was developed for the region and seven other SMSA's; and (4) the arithmetic difference between the ratio of shoppers goods sales to total income for Albany and the

other seven SMSA's was computed and then multiplied times Albany's total income to compute the dollar value of the "gap."

The estimates of an area's income, population, and retail sales requires a large number of calculations, approximations, and definitions: It is not prudent to conclude that a simple arithmetic exercise will give an accurate and unambiguous result. Independent evidence need be developed, alternate hypotheses need be pursued, and careful field studies need be made by the applicant before it can be claimed that the measured arithmetic differences between Albany's shopper goods sales and those of other regions are due to "out-shopping."

November 19, 1979 Letter

Exhibit A-1 of the November 19, 1979 letter from Barss to Kenan shows for Providence (column 15) \$183,210,000 in sales for furniture (SIC 57). The estimate was made by Barss and is unreasonable and shows reluctance by the applicant to use an established/normal methodology. Most of the following data are from Exhibit A-1 of the November 19, 1979 letter.

SIC 57/1977/(000)

	Census of Retail Trade	Merchandise- line Sales	Percent MLS/CRT
Albany	\$94,386	\$85,381	90.5
Hartford	105,390	95,167	90.3
Richmond	96,458	90,188	93.5
Nashville	124,565	113,129	90.8
Oklahoma City	150,216	136,129	90.6
Salt Lake	173,767	160,925	92.6
Sacramento	197,343	178,003	90.2
Sub-total	942,125	858,858	91.2
Providence (Corrected)	104,976	183,210 95,738	174.53 91.2
TOTAL	1,047,101	954,596	91.2
Exhibit A-2, Row Change in estima			11.08 vs. 11.50 \$30,659 million

This relatively small correction in estimated sales changes the resulting estimated "gap" sales by more than a minor amount. While it is not claimed that the revised estimate for Providence is the best possible estimate, it is far better than that which the applicant submitted, for his was based on only Providence and only for the year 1972, a year for which strange data were published for Providence. A broader-based estimate needed to be developed. This the applicant did not do, either for the Providence estimate for SIC 57 for 1977, or for the "so-called gap" sales, or for out-shopping.

This error in procedures strikes at the credibility of the documents and that of the applicant—and this discussion attempts to make the point more clearly:

That simple arithmetic exercises do not lead to reasonable conclusions unless there is correlative evidence, alternative hypotheses have been pursued and refuted, and the data has been scrutinized as to its reasonableness. The applicant undertook none of these actions to correct the Providence data or to compute out—shopping.

Review of the "Gap" Estimates

The various exhibits provided during the hearing contain the following estimates of the "gap" for 1977 (data in thousands of dollars) for the Albany SMSA:

	Shopping Goods Stores All SGS Sales	Shopping Goods Stores SGS Sales	Department Stores and Specialty Stores Sales
Econometric Report			
August 1979, III-7	\$134,618	\$94,711	\$77, 152
(decimal difference)	(.0253)	(.0178	(.0145)
Exhibit A-3*			
November 19, 1979	373,993	280,495	258,751
(decimal difference)	(.0516)	(.0387)	(.0357)
January 11, 1980 letter* (decimal difference)	149,600 (.0264)	N/A	N/A

Ron Miller's table* Spring 1980 (decimal difference)	226,662 (.0451)	164,945 (.0328)	152,281 (.0303)
Barss table*	(.0431)	(.0320)	(:0303)
Spring 1980	(a) 197,240 (.0413)	N/A	N/A
(decimal difference)	(b) 180,620 (.0386)	,	,
	(c) 168,310 (.0365)		
Child's paper	N/A	108,	,300
May 1980		(.0]	L98)

*Numerators are the same in each case. Decimal differences are relative to income. The range of estimates are from \$77 million to \$374 million for 1977 prices.

Clearly, there is something amiss about an analytical method when it yields such a wide range of estimates, even though each of the three researchers involved followed essentially the same method—the method which was developed by Pyramid/Crossgates.

In all likelihood, the method is flawed: Small arithmetic differencies in the ratio of shoppers goods sales to income lead to large differences in estimated gap sales.

Given the quality of the income and sales data, the method is unjustified when used by itself.

Quality of the Income Data

The income estimates used by the applicant were for the years 1972, 1977, 1982, 1983, 1984, and 1985. If income estimates are to be used at all, they should have been for the project lifetime, that is roughly 1985-2035. The other data used, retail sales, shoppers goods, population, should have been for like years, i.e., 1985-2035. There is no justification for estimating the economic impact only on the basis of two past years' information-1972 and 1977.

Secondly, if Albany's income was over-estimated relative to its shopper goods sales and relative to the income estimates and shoppers goods estimates for the other SMSA's used in the applicant's submission, then the measured "so-called

gap" for Albany would be inflated. There are good reasons for believing that this in fact did happen!

Albany-Schenectady-Troy SMSA personal income is probably over-estimated, partly because income is a very complex concept, it is difficult to estimate, and for the Albany SMSA, there are unique characteristics of the region which tend to result in over-estimation of Albany's income vis-a-vis those of the SMSA's used for comparison purposes by the applicant.

There are four commonly used concepts of income--personal income and disposable personal income (from the U.S. Department of Commerce, Bureau of Economic Analysis), money income (also from the Department of Commerce, but the Census Bureau), and effective buying income (from Sales and Marketing Management Magazine).

Money income is the result of a census question, and therefore not cross-checked and of unknown content in a specific local area. The Census Bureau cannot know what is being included or left out when it gets its responses. The Census hopes that the income estimate includes wages and salary income and self-employment income (before taxes and Social Security deductions), and other income (transfer payments received, net rents received, interest, dividends, and insurance policy receipts). Appendix Table II provides a reconciliation of personal income and census money income: Please note that there are 27 items, in summary form, which need be included or excluded to get reconciliation at the national level—the twenty—seventh item being a \$54 billion error (the difference between \$691,348 and \$637,934 millions). There is no known systematic relationship between money and personal income on a county—by—county basis.

Personal income is greater than disposable personal income because the personal income tax (federal, state, and local), estate and gift taxes, motor vehicle licenses, miscellaneous permits and licenses, and non-tax payments are subtracted from personal income to arrive at the disposable personal income

from personal income because such homes are treated as a quasi-business. Both social security contributions and property taxes on owner-occupied dwellings are deducted from the raw data before the calculation of either personal income or disposable personal income.

Other non-taxes subtracted from personal income to arrive at disposable personal income are: fines, hospital charges, penalties, donations, and other such payments to general government.

Obviously, disposable personal income is a more proximate concept to that which is available for discretionary spending than is either personal income or money income. But even disposable personal income need be reduced by personal savings, interest paid, and personal income transfers to foreigners before an amount is reached which is identical to that amount spent on personal consumption. But this is true only for the nation (and after adjusting for consumption by visitors to the nation and travel consumption by Americans abroad.)

For a region, the amount spent on retail goods and services need not be identical to local personal income--because not all income earned locally is received by residents (there is out-commuting and in-commuting)--because there are visitors to the area who may make local purchases--because money gifts are received by local residents and money gifts are sent by local residents to non-residents--because not all consumption is out of income (people do go into debt or reduce savings to buy goods and services)--because not all locally sold goods and services are for household consumption (governments sometimes buy through retailers as do other employers)--and--the one reason isolated by the applicant--because some residents travel elsewhere to make purchases.

Pyramid/Crossgates, of course, made no adjustment for any of these, nor did the applicant make sophisticated (complex) adjustments to estimate disposable personal income. See Table 2 of the Barss table, spring 1980 version, where an

average state-wide tax estimate was used to reduce local personal income to disposable personal income-this implies in New York that Albany has a local personal income tax, like that (in part) of the New York City SMSA.

But even before disposable personal income can be adequately estimated, there must first be an adequate measurement of personal income: And for Albany's SMSA, that is somewhat more difficult than for most areas.

Personal income is composed by the BEA of five parts--wage and salary receipts, proprietor's income, property income, other labor income, and transfer payments. These each need be estimated from components--several hundred for each county's personal income estimate.

Wage and salary receipts are estimated from unemployment insurance tax payments made by employers. The error here is possibly from three sources: (1) not all employers are required to pay unemployment compensation (UI) taxes, and the coverage is neither identical among the states nor constant over time; (2) employers report on the basis of the location of employment, and therefore an adjustment for the location of residence is necessary. The 1977 residence location adjustment was done using the 1970 Census of Population commuting information and the 1972 U.S.

Treasury tax return data without regard for trend or cyclical changes in the regions. And, (3) government wages and salaries, both military and civilian (federal, state, and local) are difficult to allocate to specific regions unless the governments involved provide information on the location of their employees since their UI payments are made from a central treasury. New York State is one of the few states which provides minimal data to the federal government on the location of its state government employees.

Possibly the most significant difficulty in measuring wages and salaries in the Albany SMSA is that of government. New York, with its two de facto state

capitals—New York City and Albany, with its well-staffed Legislature (where some of its employees work in local legislative districts though they are paid out of Albany), with its state—operated court system (based in Albany, but which work from local courts), possibly has more confusion over the location of state government employment than do the seven SMSA's which the applicant used for comparisons. It is, of course, well—known to many, though possibly not to the applicant, that the Legislature has historically operated on a three—day a week schedule for the session and that 270 Broadway, 2 World Trade Center, and the Harlem Office Building are large state office buildings in New York City. There is nothing that Pyramid can do to make either the legislators or their employees, or the courts and their employees, do all of their work (and shopping) in the Albany SMSA. The budget for the Legislature is some \$77 million, that for the Office of the Governor is over \$10 million, and that for the courts is more than \$360 million. The leakage of this income from Albany must be very high indeed. Additionally, the state operating budget is over \$4 billion.

Other labor income and wages-in-kind are especially difficult to estimate for the counties. Wages-in-kind are important for the military and a few other employee groups. Other labor income receipts are mostly employer contributions to pensions, health, and welfare funds and are estimated on the basis of wages and salary data. Errors in the estimation of the location of wage and salary workers are reflected therefore in errors in the location of other labor income.

Proprietors income is mostly farmers' incomes (in some regions) and independent professionals' incomes (lawyers, doctors, consultants) in other regions. The accuracy of income data for each category is highly questionable, due in each case to non-reporting and confusion between business expenses and the household expenses. Where county data on farms is generally not available, state estimates are allocated on the basis of historic benchmark data. Non-farm proprietors' income data are allocated among the counties on the basis of 1962 benchmark estimates.

Dividends, interest, rental incomes, and royalties have a low order of reliability. For example, imputed rent data are developed from average state-to-county data on house values taken from the Census of Population, with extrapolation from the nearest preceding census year.

Transfer payments received by individuals are composed of data from some fifty separate programs; about one-half of the county allocations are based on local fiscal records. Transfer payments are some 14 percent of personal income and 23 percent of disposable personal income nationally.

The local fiscal records tend to consist of the ZIP code of the recipient as of December 31 of the preceeding year, and not the actual county of residence of the recipient. For example, Social Security recipients temporarily residing in Naples, Florida whose checks are deposited in Albany accounts (through direct deposit) or are sent to an Albany ZIP code address, would be added to Albany's personal income, rather than to Naples, Florida's personal income.

Transfer payments to institutions—for example federal payments to universities to aid graduate students—are added to the county's personal income in which the institution is located, and not the county's income where the graduate student resides. State retirement benefits, veterans' aids, AFDC, SSI, general assistance, and other state transfer payments are based on data provided by the states—most often using ZIP code information relating to the address of the recipient at the time of qualification for the benefits.

Business transfer payments are allocated among the counties using indirect information, historic benchmark data, and in relationship to population totals.

There is little direct information available on the location of either disability payments from businesses or retirement benefits from businesses.

Contributions for Social Security, similarly to wages and salaries, are based on employers' records. However, for the self-employed and for some state

and local government employees and for those in the military, apportionment is made among the counties by use of population ratios. Here again, the existence of several large New York State offices in New York City may cause some over-estimation of Albany's personal income.

There is no easy way to guess what is the total error in the personal income estimates. It is possible to declare that while the personal income estimate is by far the best understood and most thoroughly researched income concept relating to small local areas, it is not likely to be sufficiently precise to be able to be used by itself to measure small differences between counties or SMSA's. it is nearly certain that Alaska's personal income per capita is greater than that of Vermont's, and likewise for Juneau and Montpelier; it is not as certain that the business transfer payments received per capita in Juneau are greater than those of Montpelier, or that interest income is greater, or other small components. Bureau of Economic Analysis tends to use their data to indicate trends -- that per capita personal incomes among the states as measured by the co-efficient of dispersion, have become more similar, for example. They do not publish disposable personal income estimates for counties because of their low order of reliability and do not publish distribution of household incomes for small areas annually for the same reason. Neither does the BEA publish consumption data for all small areas -- nor does any other federal agency, and again for the same reason. It is just not reasonable to stretch the very good data, for example, that on unemployment compensation taxes paid by employers, into estimates of consumption and savings by local residents.

The lack of a constant relationship between various components of personal income and consumption makes data on each difficult to provide and interesting. For many years, there was no data available on the difference between income-by-place-of work and income-by-place-of-residence. The data below implies the reason--lack of constancy.

	Ratio of Income-by- Residence to Income- by-Work-Place (Percent)	1975 Wages and Salaries (\$ Billions)
Albany	91.9	\$3.251/3.537
Hartford	90,9	5.203/5.726
Providence	97.9	3.382/3.454
Richmond	92.7	2.959/3.192
Nashville	93.2	3.176/3.409
Oklahoma City	92.3	3.142/3.405
Salt Lake	92.4	3.139/3.395
Sacramento	93.4	3.645/3.903
Average w/o	Albany 93,3	الله يشتر بشتر شدر الله المدر الله

The very lack of constancy of the ratio of in-and-out commuting implies that there is a lack of constancy in other even smaller components of personal income. Errors in estimation of personal income, therefore, make it impossible to use personal income estimates to make derivative estimates of small components of personal income or of relationships among small residuals derived through the use of personal income estimates, without careful analysis of other data.

Retail Sales Data

The United States Census of Retail Trade was done by mailed questionnaire for larger firms, and by field workers for some smaller firms. The latter are defined as those with either no paid employees or no more than three employees; only those smaller firms with at least \$2,500 in annual sales were surveyed by field workers.

Moreover, for sporting goods stores and a few others, there was a change in definition for the SIC classification between the 1972 and 1977 censuses. The SIC classification of a retail business is determined from information concerning the stores "merchandise lines." The 1972 Census of Retail Trade included the sales taxes in the reported sales data, but the reports obtained from the stores tended

to report sales net of sales taxes. The 1977 census data defined retail sales net of sales tax receipts. There is no easy way to adjust retail trade data for sales taxes: There is presently a large study in this state attempting to do just that. As nearly everyone knows, the sales tax is not a simple tax—it does not apply to all apparel in Connecticut or in New Jersey, but the items exempted in each are not the same. The applicant probably should have ignored the confusion surrounding the sales tax and used the 1977 data as it was reported, rather than inflating it by the statutory sales tax rate (rather than the correct effective sales tax rate). The effective sales tax rate is never equal to the statutory rate.

It is sometimes believed by those who do not use the Census of Retail Trade data that all retail sales, with the exception noted above, that is, sales taxes, are included in the census. That, of course, is not correct. (See Appendix II.) A comparison of the United States total for the Census of Retail Trade for 1977 (\$723,134,221,000) to that of total consumption out of personal income (\$1,206,5000,000,000) clearly reveals that the Retail Census excludes from its coverage some \$488,365,779,000 in consumption. This is vitally important in understanding the claims of the applicant. That is, what the Retail Census shows as not being spent is not saved, but is in all likelihood spent in the region and for other goods and services not surveyed by the Retail Census. A 1.0 percent "socalled gap" may be nothing more than 1.0 percent increased spending for local medical services, one of the items of consumer expenditures that is but partly covered by the Retail Census. In addition to medical care (only optical care and drug stores are included in the Retail Census), some of the other items of consumer expenditure not covered by the Retail Census are taxi, bus, train, and airplane fares, insurance for autos and homes, rents for apartments, hotel expenditures, private education expenditures [remember Albany's parochial schools], welfare and religious contributions, gas, electricity, telephone, telegraph expenditures, foreign travel, and

expenditures for babysitting/domestic help, and company fees, property taxes, individual contributions for retirement, and some housing costs.

Since not spending on Retail Census goods is not identical to <u>not spending</u> locally, there can be no substance to the claim by the applicant that <u>there is outshopping</u>. We do not know from the applicant's data that anyone in Albany ever goes on an out-shopping trip. The applicant has made the leap of faith that a lower percentage of total income spent on shoppers' goods is identical with out-shopping for those items. Out-shopping cannot be presumed to be identical with a lower ratio of Retail Census items to personal income unless well-developed independent data establishes such a claim.

The following table is illustrative of the naivete of the applicant's claim:

U.S. Retail Census, 1977, Percent of Personal Income Spent on the Ten Retail Classes Reported in the Retail Census

	U.S.	Albany SMSA	Difference
Bldg. Mtl.	2.6	2.0	-0.6
General Mrch.	6,2	5.8	-0.4
Food Stores	10.4	10.7	+0.3
Auto Dealers	9.9	8.3	-1.6
Gas/Service	3.7	3.4	-0.3
Apparel	2.3	2.4	+0.1
Furniture	2.2	1.7	-0.5
Eat/Drink	4.2	4.2	0.0
Drug Stores	1.5	1.4	-0.1
Misc. Retail Stores	4.7	5.7	+1.0
TOTAL	47.7	45,6	-2.1

Possibly the difference of 2.1 percentage points is due to statistical error or because of what was not included in the Retail Census.

The applicant, when making a claim about out-shopping based on the Retail Census, did not bother to inform us that there is over-spending at food stores for example. Obviously, the most significant conclusion from this table is that while there are a large number of small differences between Albany and the United States, the largest differences are for auto dealerships, where Albany spends less than the U.S. average, and food stores and miscellaneous where Albany spends a higher proportion of its income on these items.

For example, the ratio of auto dealers sales to personal income does not indicate anything specifically about local purchases by residents or total purchases by residents. Conclusions concerning such must be made only after analysis of specific data which describes the consumption behavior of local residents. If there is out-shopping for autos, auto supplies, and miscellaneous vehicles, that can be determined, but not by the methodology followed by the applicant. For automotive dealers (SIC 55 except 554) ownership of the vehicles can be determined through analysis of licenses for example. Purchases of automotive services, locally and elsewhere, can be derived through surveys of the population. In order to reconcile local sales of automotive services to total consumption by residents, you would need to subtract local purchases by truckers, local purchases by non-residents, and purchases by other non-households, and add in non-local purchases by local households. Having made these adjustments, any excess or deficiency in automotive service sales could only be judged to be recoverable if supplementary data were developed which behaviorally explains the excess or deficiency, and then relates the proposed actions to the behavioral equation. This is bothersome, but it is orderly and is quite commonplace. Such marketing studies are fully documented in the literature. Shortcuts, such as the one used by the applicant, in which local sales are compared to residential personal income, will likely yield only confusion and waste a great deal of everyone's time.

Travel

There are few reliable data, and none provided by the applicant, on inter-SMSA shopping. However, the United States Census of Transportation does contain shopping data for inter-SMSA's--really shopping trips which are greater than 100 miles in length each way. A shopping trip greater than 100 miles need not be to an SMSA, though it is unlikely that many shopping trips of that or greater length would not be to an SMSA--and shorter shopping trips could be to SMSA's but again, if they are much shorter, then it is likely that the trip does not cross an SMSA boundary line. The Census of Transportation defines inter-city as greater than 100 miles, and provides the following data:

Purpose of Trip	Percent o	f Trips
Visit Relatives	32.1	8
Business	25.4	6
Family Affairs/Medical/		
Personal	11.5	4
Outdoor Recreation	11.4	6
Entertainment	7.2	3
Other NEC	4.6	3
Sightseeing	4.5	8
Conventions	2.2	8
Shopping	0.6	4
TOTAL	100,00).

Shopping trips rank last and account for only 0.64 percent (0.0064) of all household trips which were 100 miles in length or more in 1977.

New York City, Philadelphia, and Boston are each more than 100 miles from Albany. Using the national averages, as developed by the Census of Transportation, that only .0064 of all household trips of more than 100 miles are for shopping; and that but 72 percent of all households make such trips; and that for those households making such long trips, each household tends to make 5.8 such trips; then for the Albany SMSA there would have had to be, in 1977 (the same year as the U.S. Retail

Census) about \$15,000 spent on each trip if \$108 million were to be spent through outshopping on shopping trips. (The \$108 million is the lowest 1980 estimate on pp. 3 and 4.)

There must be something wrong! Either there is not nearly as much spent on out-shopping as claimed by the applicant, or much of the out-shopping is not recoverable because it is secondary to other trip purposes. Even if there were three times as many out-shopping trips from Albany as in the nation generally, that would still require each shopping trip to spend about \$5,000. If the 261,282 Albany SMSA households take 6,983 shopping trips and two-thirds of these trips are eliminated by the availablility of Pyramid, then each of the 4,651 trips at, as a guess, \$1,500 a trip, would possibly lead to \$6.9 million in recoverable out-shopping for all consumption. That proportion that is shoppers goods sales is probably not in excess of \$1.4 million spent of total out-shopping.

Jobs - Impacts

The job impact of the applicant's proposal obviously depends on the existence of recoverable out-shopping—if there is none, or if it is quite small, then any jobs (construction or retail) located in the Crossgates/Pyramid shopping center will necessarily be offset by job losses at other shopping centers, in other retail stores, and at other construction sites, assuming that each of these places pay about the same hourly wage per unit of sales. The inability of the applicant to prove that there is recoverable out-shopping requires that I conclude that there would be no net job or income expansion for the Capital District by the construction and operation of the applicant's shopping center.

Moreover, the negative impact on jobs in other stores by the construction and operation of Crossgates/Pyramid could well spread beyond like-merchandise stores--to food stores, if some people reduce their food consumption to shop "at the bright lights" of the new shopping center, or possibly a reduction in hospital employment, or other non-identical retail stores.

Business will not invest in retail stores which are not rented; vacant stores will reduce construction/maintenance by about the same amount as the proposed Crossgates/Pyramid construction, if it is assumed that the Crossgates/Pyramid shopping center will generate no new business for the Capital District and that there is a fixed ratio between the value of buildings and value of retail sales in those buildings—most reasonable assumptions (a given production function is the assumption as usually stated in economics). Therefore, a decline in retail sales in downtown Troy, for example, will lead to reduced construction/maintenance expenditures on downtown Troy's buildings: The reduced retail sales should bear the same proportion to annual construction value as did the previous retail sales to the earlier construction rate.

The loss in construction spending in older areas may cause a greater job loss in construction than the new construction jobs generated by Crossgates/Pyramid. Rehabilitation work, because it involves the use of a smaller dollar volume of materials, generates more jobs per dollar of total expenditure than new construction where steel, cement, and other raw materials need be imported into the area.

The sales which will be lost at each of the major shopping centers in the Albany SMSA by the construction/operation of the Pyramid/Crossgates shopping center have been estimated as follows:

	Percent Shopping Center Losses with Crossgates Development
Guilderland	12.64
Colonie	28.06
Behlehem	6.38
Albany City	9.45
Montgomery County	2.29
Rensselaer County	11.13
Saratoga County	8.25
Schenectady County	14.79
Other	7.01
TOTAL	100.0

Obviously these are quite serious impacts—in the range of 7 to 28 percent of total sales by the Crossgates shopping mall, if all of the sales at the new mall are competitive sales (not recovered sales from outside the state). Each of these local government areas should be warned that they may well have abandoned shopping centers in their areas if the Pyramid/Crossgates project is built.

Ron Miller and Lindsay Childs

Ron Miller and Lindsay Childs presented testimony concerning the economics of the proposed shopping center. Miller used "effective buying income" and found, using Barss retail sales data, a so-called gap of some \$152 to \$227 million--which he termed more than his professional judgment deemed to be accurate.

Childs undertook a multiple regression of shoppers goods per capita, defining shoppers goods by the U.S. Census of Retail Trade definition (SIC 53, 56, 57, and 594). He found that shoppers goods sales per capita are not uniquely related to state capitals. The six most significant variables were found to be: per capita personal income, degree days, migration rates, new housing units, dollar sales of hotel services, and regional location. Three of these were found to be significant for both the 44 and 27-region sample, while the 27-region sample found in addition to the three variables, state and local taxes, and capacity of the largest stadium to be significant. The lack of completely consistent results for the 44 and 27 models is bothersome: But what is clear from this analysis is that the variables are not under the control of Crossgates/Pyramid. The applicant cannot appreciably change degree days, the size of the stadium, hotel services, personal income, migration rates, regional location, or new housing starts. Childs, moreover, specifically tested to see if the development of a new super-regional mall did add appreciably to shoppers goods sales: He found scant reason to believe that the development of a super-regional mall will add to shoppers goods sales per capita.

Out-shopping Once Again

The applicant, Crossgates/Pyramid, has presumed that a low ratio (their definition) of shoppers goods to personal income must mean out-shopping! It does not mean anything other than a low ratio, unless convincing evidence is presented from some other source that there is a correlation between the SGS/income ratio and measured out-shopping.

The applicant also presumes that the low ratio signifies that the outshopping from Albany takes place in Boston, Montreal, New York City, and Philadelphiathe nearby fashion centers. Therefore, the shoppers goods personal income ratio for
these areas should, by inference, be relatively high.

The shopping goods sales to personal income ratios were computed for three of these centers--Boston, Philadelphia, and New York. The Montreal data is not available. The data for New York pertains to the consolidated area which is composed of eleven SMSA's centered on Manhattan. The Boston data pertains to the Boston consolidated area, and consists of four SMSA's centered on the city of Boston. Philadelphia data pertains to the Philadelphia consolidated area which consists of three SMSA's centered on Philadelphia. The New York and Boston and Philadelphia data, therefore, include all of the shopping centers which surround each of these giant cities. It is inconceivable that residents of these giant regions need travel outside for their shopping goods purchases. Therefore, it is expected that the shopping goods sales to personal income ratio should be high, and much higher than for Albany or the other SMSA's used by the applicant, if the applicant's methodology does provide an accurate estimate of shoppers goods out-shopping. Moreover, the SGS/income ratio should be higher for Boston, Philadelphia, and New York standard consolidated areas than for the nation, again presuming that the methodology which the applicant invented measures what it purports to measure--out-shopping of shoppers goods. If the SGS/income ratio is not higher, this does not imply that there is no

out-shopping for shoppers goods, but rather that the methodology developed and used by the applicant is without merit.

Three Standard Consolidated Areas, 1977 Boston, New York, and Philadelphia (000, except percents)

	Boston	New York	Philadelphia
52 (Bldg.)	422,657 ⁽¹⁾	1,548,864	613,360
531 (Dept.)	1,284,655	3,798,038 ⁽³⁾	2,055,521
533 (Variety)	89,997	454,819	114,271 (3)
539 (Misc.)	193,597	462,692	123,118
553 (T.B. Auto)	104,316	496,226	229,145
56 (Apparel)	719,871	3,691,660	1,018,040
56 (Furniture)	456,433 ⁽²⁾	2,490,892	812,796
594 (Misc. Shopping)	410,143	2,075,975	585,902
Sub-total (SGS) (4)	3,398,075	14,099,655	5,314,764
Sub-total (SGS) (5)	3,154,696	12,962,417	4,709,648
Personal Income (1977)	29,585,000	140,321,000	42,158,000
SGS/PI (4)	11.486%	10.048%	12.607%
SGS/PI ⁽⁵⁾	10.663%	9.238%	11.171%

- (1) Sixty-three hardware stores w/o payrolls not included.
- (2) Approximately two hundred TV/music stores w/o payrolls not included.
- (3) Estimated from number of stores data.
- (4) Definition using Barss definition of shoppers goods, SIC 52, 531, 553, 56, 57, 594, comparable SGS/income ratio for six SMSA's is 13.838 percent.
- (5) Definition using SIC 53, 56, 57, and 594 per 1972 and 1977 U.S. Retail Census defined shopping goods stores.

York, and Philadelphia, shows quite clearly that in each case, using the same definition as does the applicant for shopping goods stores, that there is a "so-called gap" when compared with the SGS/income ratio for the six SMSA's used for the base of comparison by the applicant. Boston's ratio of SGS/income is 11.486,

New York's is 10.048, and Philadelphia's is 12.607. Each of these are less than the 13,838 computed for the six SMSA's used by the applicant, i.e., Providence, Richmond, Nashville, Oklahoma City, Salt Lake City, and Sacramento. The lower rate for Boston, New York, and Philadelphia certainly cannot imply that these giant regions have enormous (relatively) out-shopping for shoppers goods. The lower ratios need to be explained on other bases, namely that the ratio does not measure out-shopping but relative costs and prices and tastes for all uses of income and wealth and credit. The ratio of SGS/income is claimed by the applicant to measure local consumption of shoppers goods or even local purchases by residents of shoppers goods. The ratio measures a nearly non-definable duo-sales by local shoppers goods stores (and this misdefined by the applicant) as a proportion to locally received personal income. What results is certainly not local consumption of shoppers goods by residents and cannot imply anything clearly about out-shopping. The New York, Boston, and Philadelphia data, by yielding a lower ratio than for the six SMSA's used by the applicant, does provide strong evidence that the SGS/income ratio is not an indicator of out-shopping.

Using the more well-established definition of shoppers goods, that used by the United States Bureau of the Census, the data indicates that for each of these giant regions, Boston, New York, and Philadelphia, the SGS/income ratios are lower than that for the six SMSA's used by the applicant: Respectively the data are 10.663 percent, 9.238 percent, 11.171 percent, and 14.024 percent. The United States ratio of SGS/income is 12.078 percent, again using the census definition of SGS.

The ratio of SGS/income does not measure out-shopping--the contrary data from Boston, New York, and Philadelphia clearly demonstrate this. If out-shopping is to be measured, it must be cone through the use of a more conventional approach, i.e., a market survey coupled with the type of analysis done herein and that done by Childs, Miller, Fogerty, and Kalish.

The applicant's "gap" analysis may have been only to convince this hearing that there is a "gap" and that there are potential benefits from the construction of the Pyramid Mall. The potential stores, whether they be Penny's, Wards, Caldors, or Fay's Drug Stores, do not care if there is a "gap." Stores are only interested in their profits, regardless of whether the customers supplying the profits come from out-of-town, or from across the street at another store. New shopping centers, as abandoned shopping centers clearly indicate, are quite willing to cause the abandonment of older shopping centers. It is of small importance to most shopping center builders, like Pyramid, that their shopping center will cause enormous dis-economies and social costs to be borne by the local communities. That is the reason that we need "environmental protection legislation"--with it, businesses like Pyramid are now forced to consider the social costs of their actions. The transfer of profits from Colonie Center to Pyramid/Crossgates shopping center yield no net benefits to anyone besides the owners of Pyramid/Crossgates. As one local businessman said at a public meeting, the only thing worse than a successful Crossgates/Pyramid Mall are the effects of the failed malls: The ones which the Pyramid development will bankrupt. The social costs from the continuing operation of a closed shopping center probably increase with the length of its abandonment: Fire, malicious damage, general deterioration on the neighborhood, etc. And the social costs of the new shopping center continue to rise as new roads need to be constructed and the neighborhood around it adapts to the noise, filth, and commercialization which result from relocated businesses. Because the "gap" is, in all likelihood very small, the community is being asked to absorb high social costs for Pyramid's profits. That is unfair and inequitable: Society must benefit from profits, or there is no reason to permit profits.

Within the New York SMSA is Bergen County, New Jersey, the home of Paramus. The methodology used by the applicant was applied to census data once

again to see if a "gap" in shoppers goods exists for this very famous shopping mall county in New Jersey. As you probably know, Paramus is located at the western end of the George Washington Bridge, and at the intersection of Route 17, the Garden State Parkway, and has a boundary with the Hudson River on the west and New York State on the north. Its population is about that of the Capital District. The computed SGS/income ratio for Bergen County for 1977 is 11.559. This is lower than 12.0779, the United States ratio. If the SGS/income ratio measures what the applicant claims it measures, shoppers good sales, then we should be willing to conclude that there are fewer sales of shoppers goods in Paramus/Bergen County, New Jersey than there is in the nation, fewer sales relative to personal income. This must be wrong. Retail centers must sell more shoppers goods relative to their residential population than non-retail centers. Therefore, the simple-minded SGS/income ratio does not measure shoppers goods sales to local residents and a more conventional methodology must be used to measure shoppers goods sales, out-shopping, and recoverable out-shopping. (See page 24.)

Conclusion

The applicant, Pyramid/Crossgates, has not proven that there is outshopping for shoppers goods from the Albany region, or that any of the out-shopping which may exist is recoverable. Without such convincing evidence developed through the judicious application of readily available methodologies to available data, it is necessary to conclude that the proposed development will bring enormous social costs to the Capital District—social costs without redeeming social benefits—only private profits to Robert Congel and the Pyramid Company. The imagery of thousands of dollars being spent daily by out—shoppers from the Albany SMSA is false, given the best data available. There is very little out—shopping, in fact, and even that may not be recoverable.

SHOPPERS GOODS SALES IN THE UNITED STATES, THE ALBANY SMSA, BERGEN COUNTY, AND FOR SIX OTHER SMSA'S, 1977* (000 except for the percents)

	United States	Albany SMSA	Paramus and Bergen County	Average of Six SMSA's
SIC 53	\$93,947,773	\$318,902	\$483,702	\$404,403
SIC 56	35,564,433	129,330	228,152	136,906
SIC 57	33,176,312	94,386	171,270	141,224
SIC 594	20,882,102	73,862	126,177	88,803
Total, All Retail Census Sales	723,134,221	2,496,129	3,513,554	2,897,913
Total, SIC 53, 56, 57, and 594	183,570,620	616,480	1,009,301	771,336
Personal Income	1,519,893,000	5,470,000	8,732,000	5,500,000
SGS/Income	12.0779%	11.2702%	11.559%	14.024%

^{*}Sources: The data in this and previous tables, unless otherwise noted, are taken from United States government publications: The <u>Survey of Current Business</u> and other publications of the U.S. Department of Commerce.

The applicant has failed to prove the economic necessity for the project—largely because the applicant used a simple-minded short-cut methodology for estimating shoppers goods sales. The applicant may have done so knowing full-well that the correct use of established methodology would not provide the conclusion that the applicant needs for this hearing. But whatever was the reason, the applicant failed to prove that there are good economic reasons for the development of yet another shopping center.

TAXES/ECONOMIES

The Fiscal Impact Report/Cost-Benefit Analysis sections of the draft Environmental Impact Statement, together with exhibits, attachments, and other submissions, attempted to establish the following four points:

- Sales tax receipts to Guilderland town government would be large from the Crossgates/Pyramid project;
- 2. Property tax receipts to Guilderland town government and the Guilderland School District would be large from the Crossgates/Pyramid project;
- 3. Other local governments, including the Westmere Fire Department, the Water District, and the Guilderland Sewer Improvement District would receive large tax/fee payments; and
- 4. The costs imposed on each of the above local governments are low relative to taxes/fees to be paid by Crossgates/Pyramid.

The applicant (Crossgates/Pyramid) utterly failed to prove these contentions, largely because the methodology used was simplistic and neither the tax base nor the costs to local government were well defined or analyzed.

TAXES AND COSTS

The taxes and costs to the Guilderland (town, school district, water district, fire district, sewer district) were estimated by the applicant to be (in millions of dollars):

	Taxes	Costs	Net
Guilderland Planning Board Submission, June 22, 1978	\$0.839		\$0.839
Appendix K, April 19, 1979	\$2.759	\$0.062	\$2.697
Appendix L, June 19, 1979	\$0.472 \$4.274	\$0.233 \$0.569	\$0.239 (a) \$3.705 (b)
Vlasto Submission, February 1980	\$3.988	\$0.061	\$3.927
Podwal May 16, 1980	\$4.350 \$2.394	\$0.587 \$0.308	\$3.963 (c) \$2.085 (d)

⁽a) and (b) apply only to the values for land improvement. (a) is the base value. (b) is the annual present value using 6 percent inflation rate and 10 percent discount rate.

None of these estimates take into account the possible lack of "gap" filling sales, the phased opening of the project, the negative effects on nearby properties (including McKownville Reservoir), or the competitive reactions of other malls.

SALES TAXES

Sales taxes to be generated by Crossgates/Pryamid were estimated by multiplying 3 percent times \$94.7 million times 9 percent for a yield of \$85,000 for Guilderland. The presumption is that the \$94.7 million are new sales to Albany County, the so-called "gap" sales. The previous pages have established that the existence of the "gap" is highly uncertain. Nothing that Crossgates/Pyramid has submitted proves that there is any significant amount of recoverable outshopping (gap sales). Without recoverable out-shopping, there can be no new sales

⁽c) and (d) are the annual present value for land improvements, with (c) using a 6 percent inflation rate and a 10 percent discount rate, while (d) is the annual present value using 0 percent inflation rate and a 10 percent discount rate.

tax receipts. Guilderland will not receive \$85,000 more in sales tax receipts from the development unless Crossgates/Pyramid is able to attract new shoppers to the county. [Earlier data indicates that Crossgates/Pyramid may attract customers from Saratoga, Montgomery, and Schenectady counties, each of which have lower sales tax rates. The earlier table, page 17, did not include sales tax differentials as an allocating factor. If they were included, the negative impact on Guilderland, Colonie, Bethlehem, and other Albany County areas would have been greater and less on low sales tax areas.]

The Guilderland schools, of course, do not share in the sales tax distribution.

GUILDERLAND TOWN TAXES/COSTS

The applicant used \$4.2 million as the estimated assessed value for the completed project, and \$2.0 million in an earlier submission (April 19, 1979 and June 22, 1978, respectively). At a 12.95 equalization rate, the full-value assessment is either \$30.9 million or \$15.4 million. The \$30.9 million figure was arrived at, according to the applicant, by using the standard three methods (capilization of income, bricks and mortar, and comparible project) for assessing commercial property. Comparison with Stuyvesant Plaza, made by myself, indicates that \$30.9 million is a reasonable estimate of the assessable (full market) value for the Crossgates/Pyramid project, if it is a success, and after it is operating. (The \$30 million estimate for the project is net of the present value of the site—some \$800,000 at market values according to the applicant. This estimate is certainly low, given the prices reported for the Methodist Church property and the funeral home property.)

Phased opening of the Crossgates/Pyramid project is planned by the applicant, with 65 percent opened in 1981, 23 percent added in 1982, 3 percent added in 1983, 3 percent added in 1984, and the remaining 6 percent in 1985.

The earlier plan (September 1980) indicated a considerably slower rate of opening. The June 22, 1978 presentation to the Guilderland Planning Board and Conservation Advisory Council indicated a two-phase opening: the first phase opening in 1979 (with four department stores) and the second phase (two additional department stores) opening before 1984.

Whatever the future be, the opening dates of the project will not be any of the above. If construction begins in late 1982, then property taxes for the first phase will be paid to the town in 1984 at the earliest, since the first phase of construction won't be occupied until 1982-1983 and be on the tax rolls of 1983 for tax bills in 1984. The phased property tax payments could be as follows:

Taxes Payable Each Year

<u>Year</u>	<u>Total</u>	Town	Highway Fund
1984	\$170 , 565	\$25,036	\$44,670
1985	230,919	33,895	60,476
1986	238,791	33,050	62,538
1987	246,663	36,206	64,560
1988	262,408	38,517	68,723

Given the difficulty the applicant has in obtaining the air quality permits, the opening dates are likely to be extended yet further into the future, delaying still further the property tax payments.

Moreover, the above data implies the best case: That all of the leasable space is occupied. This is not usually the case: Witness nearly all of the shopping centers.

Crossgates/Pyramid in its June 22, 1978 presentation estimated sales of \$200 million. That was revised by the applicant to \$140 million of shoppers goods sales, of which some \$94.7 million would be non-competitive (new customers).

Only the "gap" sales are relevant.

There is grave doubt that the project can capture any significant amount of new sales. While this excludes any possibility of (new) added sales tax receipts, it also makes more likely that there will be leasable space vacancies and, pari passu, reduced property tax receipts. The assessed value of vacant (new) commercial buildings is certainly not easily ascertained: For (vacant) Korvettes in Northway Mall, the assessment being petitioned for is about one-third of the assessment when occupied. If that be the "worst case" scenario, then the following property tax data are relevant.

Taxes Payable Each Year

Year	<u>Total</u>	Town	Highway Fund
1984	\$56 , 798	\$8,337	\$14,875
1985	76,896	11,297	20,138
1986	79,517	11,672	20,825
1987	82,139	12,056	21,498
1988	87,382	12,826	22,885

In all likelihood, the existence of vacant stores would cause the applicant to lengthen the construction process so that the "worst case" may have yet a "worseworse case" of extended and diminished property tax payments.

The costs to the town need not match the taxes either in total or in phasing (year). The town service cost estimates made by the applicant were \$31,531 for the town, \$8,068 for the highway fund (\$13,346 for water, sewer and fire services). Given these estimates (and the lack of new sales taxes), the receipts from the project to the town would be significantly less than costs under

the "worst" case (\$12,826 versus \$31,531 for the town) and nearly less than the "best" case. But these cost estimates are suspect.

Local government fiscal impact studies are a traditional part of the economic literature, but they are, like most analyses, laborious. The applicant used a very simple approach which allocates costs according to the proportion of land use values (e.g., if residential is one-fifth of property values, it must be responsible for one-fifth of the costs).

The "employment anticipation" method, a more rigorous approach, uses statistical (probability) techniques in a multi-regression model to relate costs to changes in employment. Using such, it was found that anticipated costs at build-cost would be \$153,112.50--nearly twice as much as total revenues in the "worst" case and only \$100,000 less than total revenues in the "best" case.

There is yet a more rigorous approach--but that was not done here, due to lack of critical information concerning the project.

Crossgates/Pyramid has not proven that it will be a net fiscal benefit to Guilderland, either the town, the highway fund, or the special districts (fire, water, sewer). Only under one set of special assumptions is it a producer of tax surpluses. The lack of proven fiscal benefits to the town makes this project unacceptable unless it has great environmental or other benefits. None have been claimed and none exist.

SCHOOL TAXES

Guilderland schools will have increased enrollment from the Crossgates/
Pyramid project: The applicant assumes that the enrollment increase would be
about 127 children. While it is true that the Guilderland schools have excess
physical capacity, the schools have not retained excess teachers and other
personnel. Therefore, an expansion in school enrollment will expand operating

costs. The June 23, 1978 submission, the June 19, 1979 submission (Appendix K), and the February 1980 submission of the applicant each indicate zero added costs for the schools. This is an error.

For the "best" case and the "worse" case (where the project is valued at one-third of its fully occupied space), the tax data below are relevant for the school system:

School Taxes

<u>Year</u>	Best Case	Worse Case
1984	\$478,075	\$159,090
1985	647,240	215,384
1986	669,305	222,727
1987	691,370	230,069
1988	735.500	244.755

At 127 students at an average cost of \$2,500 per student (1978) the school "worse case" would be in deficit from the Crossgates/Pyramid project by nearly \$60,000 per year in the built-out year. Moreover, the applicant's estimate of increased school enrollment is unacceptable. Estimation of induced school enrollment must be made through surveys of employees at large shpping centers and retail districts. This is the only known reliable technique. The present estimate by the applicant is the result of, first, an estimate of managerial employees, then an estimate of children of these managerial employees. The applicant presumed that none of the other employees would move into homes in the Guilderland school district. Again, this must be wrong.

PROPERTY VALUE IMPACTS

The applicant does not provide any estimates of the negative impact of the traffic, noise, air pollution, and other changes caused by Crossgates/Pyramid

on land and building values in the market area.

The economic literature is replete with studies of such negative impacts from highway and other developments.

The U.S. Department of Housing and Urban Development in its The Determinations of Neighborhood Quality (1979) lists the following factors as being related (statistically) to neighborhood quality. They are ranked by their "beta" coefficients (relative importance): Crime; trash and litter; rundown houses; street noise; streets impassable; heavy traffic; industrial activities; poor street lighting; abandoned structures; airplane noise; odors and smoke; streets need repair. Five the these factors can be expected to occur because of Crossgates/Pyramid. Therefore, Crossgates/Pyramid will lead to lessened neighborhood values, though the amount of the decrease in neighborhood values cannot be ascertained from the data provided by Crossgates/Pyramid.

Increased traffic, quate rightly so, has been estimated by the applicant to yield a greater site value for the applicant's site. The one induces the other. But what losses in residential values will result from the increased traffic, air pollution, and noise? The fact that the development meets federal or state standards does not eliminate negative effects on property values.

There is a U.S. Department of Transportation study indicating that in four communities studied, the average residential property value loss was \$1,120 from added noise, air pollution, etc., with losses being greater (up to \$4,522) for abutting properties and decreasing with distance from the highway. While data were not made available by the applicant to estimate the loss in residential values in the immediate area, it should be remembered that 44 percent of the population of Guilderland and residential property values are east of Route 155 and directly impacted by the applicant's proposal. The loss due to the diminished growth in the

value of these properties could greatly exceed the added value to the applicant's site (about \$7 million, according to Section B, page 52, Appendix L, June 19, 1979).

CONCLUSION

The economic benefits, if any, of the Crossgates/Pyramid mall stem entirely from the claimed existence of "gap" sales. If they don't exist there are neither significant economic nor fiscal benefits, though there are significant fiscal and social costs. The project must be stopped.

Without Crossgates/Pyramid, population growth will be accommodated incrementally: In the downtown of Troy, Saratoga Springs, Schenectady, Albany, Gloversville, and in the existing smaller shopping areas. Wolf Road, which is better designed to fit hotels and office buildings than either Rapp Road or Washington Avenue Extension, will continue to expand, undoubtedly, as will the malls in Clifton Park and Saratoga County where the population growth is greatest. If this happens, Guilderland receives the same sales tax receipts without the fiscal and social costs. That is certainly desirable,

Travel

There are few reliable data, and none provided by the applicant, on inter-SMSA shopping. However, the Census of Transportation does contain shopping data for inter-SMSA's -- really shopping trips which are greater than 100 miles in length each way. A shopping trip greater than 100 miles need not be to an SMSA, though it is unlikely that many shopping trips of that or greater length would not be to an SMSA -- and shorter shopping trips could be to SMSA's but again, if they are much shorter, then it is likely that the trip does not cross an SMSA boundary line. The Census of Transportation defines inter-city as greater than 100 miles, and provides the following data:

Purpose of Trip	Percent of	Trips
Visit Relatives	32.18	
Business	25.46	
Family Affairs/Medical/Person	nal 11.54	
Outdoor Recreation	11.46	
Entertainment	7.23	
Other NEC	4.63	
Sightseeing	4.58	
Conventions	2.28	
Shopping	0.64	

Shopping trips rank last and account for only 0.64 percent (0.0064) of all household trips which were 100 miles in length or more in 1977.

New York City, Philadelphia, and Boston are each more than 100 miles from
Albany. Using the national averages, as developed by the Census of Transportation,
that only .0064 of all household trips of more than 100 miles are for shopping,
and that but 72 percent of all households make such trips, and that for those
household making such long trips, each household tends to make 5.8 such trips,
then for the Albany SMSA there would had to be, in 1977 (the same year as the
U.S. Retail Census) about \$15,000 spent on each trip if \$108 millions were te-be spent

through outshopping on shopping trips.

There must be something wrong! Either there is not nearly as much spent on outshopping as claimed by the applicant, or much of the outshopping is not recoverable because it is secondary to other trip purposes. Even if there were three times as many outshopping trips from Albany as in the nation generally, that would still require each shopping trip to spend about \$5000. If the 261,282 Albany SMSA households take 6983 shopping trips and two-thirds of these trips are eliminated by the availability of Pyramid, then each of the 4651 trips at, as a guess, \$1500 a trip, would possibly lead to \$6:9 millions in recoverable out shopping for all consumption. Their proportion that is shoppers goods sales is probably not in excess of 20 percent of this.