Board of County Commissioners
Workshop

Workshop for: February 25, 2003

To: Honorable Chairman and Members of the Board

From: Parwez Alam, County Administrator
Tony Park, P.E., Public Works Director

Subject: Utilization of Open Graded Cold Mix Asphalt for 2/3-2/3 Paving Projects

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Statement of Issue:

Board consideration of allowing roads maintained with Open Graded Cold Mix Asphalt (OGCM) to be accepted into the County Maintained Roads System (the System) by way of the County's 2/3-2/3 Paving Program.

Background - OGCM Program:

In 1987 the Board authorized the SAFE Program, the goal of which was to pave all of the County maintained unpaved roads existing at that time. The SAFE Program was limited by the requirements that: No Right-of-Way was to be purchased; all work was to be performed by in-house County staff using County equipment; and funding was limited to annual appropriations through the budget process.

The SAFE program succeeded in completing the paving of 74.385 miles of County roads. In 1999 the SAFE Program was terminated. Ongoing projects at the time of termination were targeted for completion through the Capital Improvements Program of the County Budget. As of January 2001 Leon County maintained 74.751 miles of dirt roads that could not be paved as a part of the SAFE Program.

On January 30, 2001 the Board, in recognition that the objectives of the SAFE Program had not been fully met, approved the implementation of an unpaved road maintenance program utilizing OGCM where possible and chemical stabilization elsewhere to maintain the unpaved roads in the County's Maintained Roads System (roads for which the County is obligated to provide maintenance). At that time, a prioritized list of roads was established for the orderly placement of these stabilizing materials within future year budgets.

On February 20, 2001 the Board approved modifications to the Leon County Code of Laws to allow for the utilization of OGCM as a maintenance material for unimproved roads within the County's Maintained Roads System. This change in the Code also established the criteria by which private road owners could also utilize OGCM for maintenance of their roads.

The maintenance of County roads using OGCM has proceeded subsequent to those authorizations and, to date, 17.994 miles of roadway have been paved with OGCM, including all or part of: Ellis Road; Autumn Lane; Back Forest; Center Drive; Eastern; Jewell Drive; Old Woodville; Starnes; Sunnyhill; Oleander; Rose; Road to the Lake; Miles Johnson; Bradley; Old Centerville; Jefferson; Old St. Augustine; Lake Hall Road; Stoutamire; Bethel Church; Hannon Mill; Highland; Houston; and Wadesboro. During this time period, one privately owned road has also been paved using OGCM material, Millstone Road.

The OGCM Program has been quite successful to date, resulting in previously dirt roads being brought to a level of maintenance that strongly resembles paved roads. As a result of this success, the concept of using OGCM in lieu of conventional asphalt for roads entering the County Maintained Roads System has been suggested on numerous occasions.

Background - 2/3-2/3 Paving Project Program:

Leon County Code of Laws, Chapter 16, Article II provides the basis, authority and process for the program whereby owners of land abutting non-County maintained roads may petition the County to make improvements to their road and drainage systems, at the property owner's expense, and accept those roads and drainage systems into the County's maintained system. This program is generally referred to as the "2/3-2/3 Program".

Since 1985, eighteen (18) 2/3-2/3 Programs have been developed to completion at costs ranging from $17,436 to $1,103,700. The majority of these projects were completed prior to 1992 when the County enacted new regulations for construction of these types of improvements. Currently, there are six 2/3-2/3 Paving Projects in development and several are preparing to enter the 2/3-2/3 Program process.

From January 1989 through October, 2002, 96 groups in addition to the current and completed projects have approached County staff and expressed an interest in participating in the program. In addition, many of these groups have repeated their expressions of interest, many on several occasions. Staff response to these expressions of interest includes providing a Preliminary Cost Estimate (or an updated estimate) and, in many cases, attending homeowner meetings to explain the process. On average, staff processes approximately 4 expressions of interest each month.

Preliminary Cost Estimates are generated by Public Works staff in response to these requests. These estimates are typically based on no more than a drive-through of the roads in question and a subjective evaluation of the needed improvements. Without detailed measurements and investigations, these estimates may vary dramatically from actual final costs.

The County Standards on which the design of 2/3-2/3 Paving Projects are based differ from those applied to new roads being built as a part of subdivisions and other projects in the County. The primary standard enforced for 2/3-2/3 Paving Projects is that the road and drainage system must be of the integrity of the existing roads in the County's maintained system. Typically, the applied standards for all projects, 2/3-2/3 or traditional, include stormwater systems conforming to current regulations. Other aspects of 2/3-2/3 road construction may vary from traditional requirements in an effort to make the project affordable for the residents. One over-riding consideration is that it is in the public benefit to convert as many roads as possible from private to public if it can be done without excessive costs to the citizens of the County. Variations from traditional design standards are listed as follows:

County Standards	Traditional	2/3-2/3 Project
Sidewalks	Required	Not Required
Lane Width	10 - 11 Feet	9 - 10 Feet*
Road Shoulder	6 Feet Wide	2 - 6 Feet Wide*
Right-of-Way (Swales)	60 Feet Wide	50 - 60 Feet Wide*
Right of-Way (Piped)	45 Feet Wide	40 - 45 Feet Wide

* Typically as wide as possible within available right-of-way

It has been the experience of staff that the general public does not understand the benefits of the opportunity offered by the Board via the 2/3-2/3 Program. The typical misunderstanding is that citizens do not understand why they should have to pay large sums of money to have their roads brought up to County standards so that the roads can be taken over by the County. Generally, they assert that they already pay taxes for the roads and should not have to pay any more. Staff tries to explain that the taxes pay for the maintenance of the roads, but that the initial cost of the roads is paid for by developers who pass the costs on the residents when they sell the lots or homes within subdivisions. Since the roads subject to the 2/3 Program were not initially built to County standards, it is the responsibility of the homeowners to pay that cost, just as the other citizens have done. Unfortunately, this logic is usually lost on residents who are desperate to have their roads improved.

In recent years there have been several 2/3-2/3 Projects that have encountered the situation where early cost estimates are exceeded by 2 or 3 times the original estimate. In some cases this has been due to the fact that the residents got an estimate and then waited 4 or 5 years to ask the County to make the improvements. In some cases it is simply because the original estimate was too low due to reasons cited above. In other cases, the estimates provided the homeowners is simply more than they want to pay. In most of these cases, the homeowners have resorted to direct appeals to Commissioners to have the work done for less cost.

Being aware of the recent success of using OGCM for road maintenance, and in an effort to find a less expensive means of bringing these roads into the County System, Commissioners and residents alike have begun to consider the possibility of using OGCM in lieu of conventional asphalt pavement for these 2/3-2/3 Projects.

Background - Acceptance of Roads Into the County Maintained Road System:

At present, the primary means by which new roads are brought into the County Maintained Road System is via the subdivision development and platting process. This is a tightly regulated process that ensures that roads are designed and constructed in accordance with County Standards and the County's environmental regulations. Current County Policy regarding the construction of new roads within the County is set forth in Leon County Code, Chapter 10, Section 1527, Paragraph (l) wherein it states:

> *"...(1)All streets, whether public or private, shall be paved within the Urban Services Area and designed in accordance with Green Book standards for pavement and base specifications. (2) Pavement widths, median strips, sidewalks and other traffic engineering features shall be constructed, unless otherwise herein specified, in accordance with adopted policies and guidelines of the Board of County Commissioners..."*

Although not specifically stated, it has been the policy of Leon County that all new roads accepted into the System from new construction or existing private roads taken into the System must meet the following criteria:

1. Have roads paved using conventional pavement design criteria appropriate for expected traffic volumes and loadings.
2. Have sufficient right-of-way width.
    a. 60 feet preferred where open drainage system is used
    b. 45 feet plus 10 foot drainage and utility easements (minimum) on each side where curb and gutter and a piped drainage system is used.
3. Have an adequate stormwater conveyance and treatment system conforming with regulatory requirements for such facilities.

Other methods by which new roads currently enter the County System are transfer of roads from other governmental entities, such as FDOT or the City or by the construction of entirely new roads in new rights-of-way.

Background - Current Land Development Regulations and the Ongoing Creation of New, Privately Maintained Roads, in Leon County

Current Leon County Land Development Regulations allow new developments to create ingress and egress access systems (roads) which are unimproved. These roads are not subject to County Standards and are not under the review of the Public Works Department. Recent Code Revisions have allowed the environmental regulators of the County to require stabilization of a single lane of these roads, but many miles of unimproved dirt roads exist in Leon County as a result of past and current regulations which allow them.

The Limited Partition Process and the 2.1.9. Process allow a single parcel of land to be developed into up to ten lots without road improvements. When large parcels are developed using this process, significant mileage of unimproved roads can result. This process has become popular with developers due to the low cost of infrastructure associated with lots of otherwise high value. Staff is beginning to see an increase in owners of Limited Partition lots coming forward to explore the 2/3-2/3 Process.

Private subdivisions located outside of the Urban Services Area are required, by County Code, to develop roads to County Standards. However, the Code allows that they do not have to install asphalt pavement on the roads. The result of this process is the creation of new gravel roads. Although Public Works has review authority over these road standards and has the authority to require asphalt pavement on roads expected to have high traffic levels, a significant amount of gravel roads are being created in Leon County by this process.

Analysis:

With this workshop, the Board is considering the possibility of modifying County Standards to allow the use of OGCM in lieu of conventional pavement for roads being improved via the 2/3-2/3 Process for acceptance into the County maintained road system. To assist in this decision making process, the following discussion attempts to address the various issues and ramifications associated with that decision.

Limitations on the eligibility of roads to be allowed to use OGCM may need to be considered. Current code limits eligibility for OGCM to roads created on or before January, 2002. The Board's decision may be to conform to that date or to set new parameters for inclusion or exclusion.

Policy Change. Since an unimproved (dirt) road which is being maintained using OGCM ,or by conventional routine grading, is not equivalent to a road paved using conventional pavement design criteria and is not equivalent to a road designed in accordance with Green Book standards, such roads have not previously been considered for acceptance into the County System. Accordingly, the Board is considering a major change in policy and design standards that could have far reaching impacts.

Increases in 2/3-2/3 Projects should be anticipated. Reductions in the County Standards will probably prove to be very popular, particularly with the many Limited Partition roadway system now in place.

OGCM versus Paved Roads. It should be noted that many of the road systems which have been presented for 2/3-2/3 Process consideration have been paved roads. Although many of these roads require reconstruction, it is not likely that the County would consider removing a paved road and installing an OGCM maintained unimproved road. In such cases, it would probably be better to accept a substandard and failing paved road directly into the system with only the resurfacing of the failing roadway.

Potential Double Standard. Since some 2/3-2/3 Projects could be accepted based on OGCM improvements, and other roads can not, there will be in effect a double standard whereby some residents will benefit and others will not. The possibility for citizen dis-satisfaction exists.

The cost of a policy change of this type should be considered. Initially, the cost of accepting newly OGCM'ed roads into the System will be negligible if notable at all. Within five to ten years, however, the costs of having assumed responsibility for these roads will start becoming more evident. The success of the new policy will greatly impact the degree to which new costs for road maintenance are realized. If large numbers of roads enter the System via this policy, costs could be significant.

The County Code of Laws may need to be modified to enable the execution of the new policy by staff. Chapter 10, Section 1527 may need to be modified to reflect the acceptability of OGCM maintained roads into the System. Sections in Environmental Code may need to be addressed also. There is potential for modifications to the 2/3-2/3 Ordinances also.

Drainage problems are typically the main reason that citizens come forward to utilize the 2/3-2/3 process of having their roads and drainage systems taken over by the County. Experience to date has revealed that in most cases, proper construction of a roadway and its drainage system will solve the drainage problems. Under current County practice, utilization of OGCM on existing County maintained roads bypasses the drainage improvements associated with new road construction. There is a strong potential for the County to find itself in the situation of having accepted a road for pavement maintenance purposes only to find that it also accepted significant drainage problems at the same time. The budgetary impact of such a situation could be significant.

The right-of-way width required for OGCM maintained roads is typically less than that for conventional road construction, primarily because of reduced road shoulder width and only small roadside swales (no treatment facilities) are constructed when OGCM is used. Accepting OGCM maintained roads with restricted rights-of-way could potentially impact the County in maintenance efforts and will certainly have negative impacts to utilities which use the rights-of-way to provide services to the citizens of Leon County.

The usage of the OGCM maintained road being considered for acceptance into the system is critical, also. High volume roads traveled by heavy trucks and equipment will be prone to shorter life expectancies and increased maintenance costs. The Board should consider limiting this option to local or residential roads, where development is essentially built out, if possible.

Environmentally sensitive areas near a road should also be considered in accepting an OGCM Maintained road into the System. Such circumstances could result in requirements for maintenance in excess of normal projections.

Criteria for Utilization of OGCM as a part of 2/3-2/3 Paving Projects:

If it is the determination of the Board that OGCM maintained roads are acceptable for acceptance into the County System by way of the 2/3-2/3 Program, criteria should be established to control the process. The current criteria established in the environmental regulations of Leon County are contained in Leon County Code, Section 10-208, Paragraph 19:

> *(19) Pervious pavement for pre-existing unstabilized roads. Pre-existing unstabilized roads which are proposed for stabilization with pervious surfacing treatments such as hard gravel, porous concrete, or Open Grade Cold Mix Asphalt shall be eligible for a permit if all of the following conditions are demonstrated by the applicant to the satisfaction of the director:*
>
> *a. The road was in existence and had active use prior to the adoption of this section.*
> *b. The road is available without having to obtain the permission of any property owner or group of property owners to access or use the road.*
> *c. The road is a source of sediment or turbidity that discharges to water courses, water bodies, wetlands, or other offsite areas and such discharge results in environmental degradation.*
> *d. There is insufficient property or right-of-way associated with the road to construct water quality treatment facilities as required by code or it will not be possible to obtain such property or right-of-way.*
> *e. Engineering specifications and typical cross-sections for the proposed pervious surfacing treatment must be submitted and approved by the division of environmental compliance.*
> *f. The applicant provides assurance in an operating permit that periodic maintenance to retain the pervious nature of the surface treatment will be performed.*

This is the criteria by which the Leon County OGCM program has been guided and was also utilized for the private project where OGCM was used on Millstone Road. This criteria limits the option for OGCM to Roads that were in existence prior to February 2001. It is recommended that additional criteria be applied by the Board for 2/3-2/3 Projects utilizing OGCM, those suggested criteria being as follows:

1. Proposed 2/3-2/3 Paving Projects in areas of known drainage or flooding problems will include drainage improvements sufficient to rectify those problems. Once drainage improvements are in place, the project will not be eligible for OGCM consideration.

2. Subdivisions or roads requesting 2/3-2/3 Paving Projects should be essentially built out (50 to 65% of lots have been built on).

3. Roadway configuration should be such that traffic volumes are or are expected to be low, serving only local residential or low traffic commercial properties.

4. Roadway gradients must be within tolerances for OGCM placement and function, typically less than 2%.

5. Roads proposed for OGCM treatment must provide a right of way having a minimum of 40 feet in width.

6. Proposed 2/3-2/3 Paving projects where existing roads are paved are not eligible for OGCM consideration.

If it is the Board's desire to create a new Policy providing for the use of OGCM for 2/3-2/3 Paving Projects based on the above criteria, as amended by the Board, staff will bring to a future Board Meeting a proposed New Policy for the Board's consideration.

Options:

1. No action - leave existing standards and regulations intact.
2. Direct staff to bring back a new Board Policy to allow the use of OGCM on roads to be accepted into the County maintained road system via the 2/3-2/3 Paving Process.
3. Board Direction.

Recommendation:

Board Direction.

Attachments:
1. None

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February 20, 2003 (11:19am)