

Foothill Circulation Phasing Plan: An Innovative Public-Private Financing Strategy

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In an effort to alleviate the problems associated with past and future development, the Orange County Board of Supervisors and 13 of the county's major landowners have joined forces to create a program to finance the construction of regional roadways and infrastructure before additional development. This program, the Foothill Circulation Phasing Plan (FCPP), is an unprecedented \$250 million public-private venture designed to help phase development with transportation improvements in southeast Orange County, California. The FCPP includes the improvement of 40 intersections and construction of 133 lane-miles of new roads. Development in the area is tied to roadway construction via building permit phasing, thereby guaranteeing that roads will be built first. The FCPP construction is being financed through a combination of Community Facilities District bonds secured by the landholdings of the participating landowners and a major thoroughfare and bridge fee program that generates funds from fees placed on new building permits. The program is divided into county construction and private construction projects with the majority of the design for both types of projects being completed by the private sector. The design and the construction projects are then acquired (purchased) by the county for their cost or value. The FCPP is a classic example of an extensive program with significant goals that can be accomplished in a short time frame when the public and private sectors work together to facilitate financing and expedite design, plan approvals, construction, and acquisition of the improvements.

The Foothill Circulation Phasing Plan (FCPP) is an unprecedented \$250 million public-private venture designed to help integrate development with transportation improvements in southeast Orange County, California. The FCPP includes the improvement of 40 intersections and construction of 133 lane-miles of new roads, as shown in Figure 1.

Known as the "roads-first program," this venture is being administered by the Orange County Environmental Management Agency and assisted by FCPP Inc., a partnership of 13 major landowners in southeast Orange County. Construction of the FCPP roadways began in May 1988. The entire FCPP program was originally intended, and is on target, for completion in the early 1990s.

The FCPP roadway construction is being financed through a combination of Community Facilities District (CFD) bonds secured by landholdings of the participating landowners and a major thoroughfare and bridge fee program that generates funds from fees placed on new building permits. A special

tax will be levied on the land within the CFDs to help retire the bonds within 20 to 30 years.

BACKGROUND

The Foothill Area of southeastern Orange County has been experiencing rapid growth in recent years, and although an adequate road system is planned for buildout, imbalances currently exist and were projected to exist throughout the interim (construction) stages of this area's development. Public concern regarding the ability of the existing road system to meet the transportation demands of the expanding population was heightened by the landowners' proposals for additional development in this area.

In analyzing the public concerns in relation to the Land Use Element Amendment, county staff found that the existing circulation system was indeed inadequate to serve the additional traffic forecast to be generated by the proposed Foothill Area projects. Therefore, the FCPP was conceived and implemented to ensure that an acceptable roadway circulation system would be constructed to accommodate the traffic generated by future development. The FCPP further serves to address the concerns of the antigrowth movement, which has used the probability of increased traffic and congestion in the area as a rallying issue to oppose new development.

In January 1987, the Orange County Board of Supervisors approved an agreement on the development of the FCPP financing and implementation program between the county and 11 original landowners involved in the FCPP. Six months later, the board of supervisors approved the financing and implementation program in principle and set county staff to the task of preparing refinements. The comprehensive plan of coordinated roadway construction and tract development was approved in September 1987. A month later the major thoroughfare and bridge fee program was adopted. These programs laid the foundation on which the FCPP was eventually built.

The FCPP was specifically designed to facilitate the development of the regional road network, to provide relief for existing transportation deficiencies, and to provide a balance between development and the availability of highway capacity to meet the transportation demands of that development.

The FCPP ties the availability of building permits to the completion of defined roadway construction milestones. To

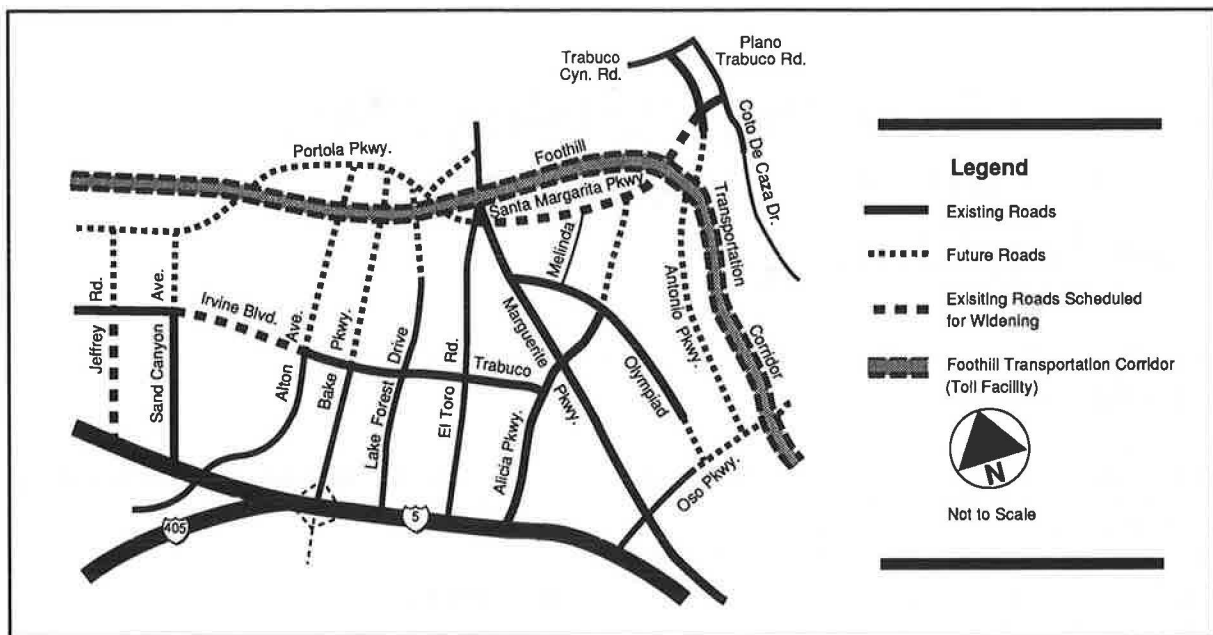


FIGURE 1 Location map.

create a more equitable jobs-to-housing balance, there was no cap, or phasing milestones, related to nonresidential development. The residential development, however, is limited to approximately 77 percent of the existing County General Plan approvals.

The development of the regional road network has been divided into three categories, or priorities, for purposes of phasing and financing plans. The first set of priority projects comprises several roadway segments and a portion of a proposed toll road (the Foothill Transportation Corridor) scheduled for early completion. The FCPP intends that the design of these roadway improvements will be accomplished by the developers and that the county will be responsible for the construction of the projects.

The second set of priority projects includes an additional segment of the proposed toll road and funding earmarked for intersection improvements. The additional segment of the proposed toll road was chosen as a secondary project because of specific long lead time construction issues and the limited debt burden that could be placed on the landholdings during the early years of the program. The additional toll road construction and the intersection improvements do not affect the building permit phasing plan.

The remaining roadway projects were included to close gaps in the arterial network, complete construction of major or primary roadways as identified in the county's Master Plan of Arterial Highways, or provide access to multiple landholdings.

The phasing portion of the FCPP process ties the release of building permits to the accomplishment of specific program milestones. To initiate the process, a number of dwelling unit permits were released to the participating landowners when the FCPP was officially adopted in September 1987. The initial release was intended to allow the development to proceed at a reasonable rate while the CFDs were being formed. Ad-

ditional dwelling unit permits were released upon certification of the FCPP Environmental Impact Report and commencement of design efforts, and after the implementing agency was formed and the first bonds were sold. The remainder and majority of the dwelling unit permits are being released upon subsequent award of construction contracts for specific roadway segments.

FEE PROGRAM

Once the FCPP's comprehensive plan was adopted it took approximately 1 month to formalize the means of financing the roadway design and subsequent construction. The financing plan was primarily based on a fee program. The county established the FCPP major thoroughfare and bridge fee program, which requires all new development to pay for its share of the necessary roadway improvements.

The initial tasks in establishing the fee program were to quantify the currently proposed and long-range development opportunities in the Foothill Area and to determine the requirements for an adequate circulation plan that accommodates the existing traffic and the additional traffic generated by the proposed growth.

To accomplish these tasks, the county required a detailed traffic analysis, to be used as the basis for the fee program. Upon completion of the traffic analysis, an area of benefit was defined and trips per day generated from the proposed development were calculated. Based on these estimated traffic volumes, the effect on the current roadway system was analyzed and necessary improvements were identified. With the required improvements identified, cost estimates were prepared for the construction of these new improvements. The total improvements are estimated to cost \$250 million to design and construct. The cost of these roadway improvement

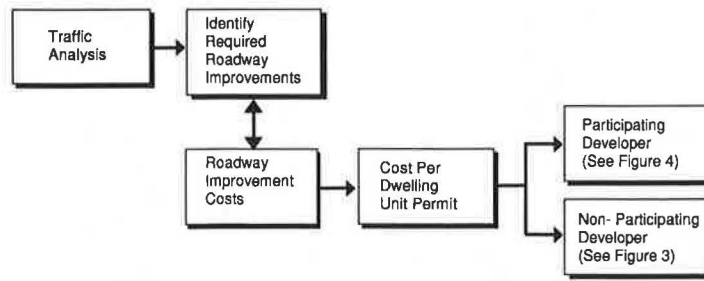


FIGURE 2 Fee program.

projects range from less than \$1 million to more than \$20 million. The roadway projects represent a significant portion of the arterial network in the Foothill Area.

By identifying the required improvements, the cost of the improvements, and the trip-ends per each proposed development, the county established a fee program. The fees are levied on new residential and commercial development only and are collected when a developer or builder pays for the building permit. The basic process for the development of the fee program is illustrated in Figure 2.

Because the FCPP's area of benefit was relatively large, the cost for roadway improvements and the benefits from the roadway system within a localized area was not evenly distributed. Therefore eight analysis zones were established.

In order to calculate the fee per zone, the county determined a methodology for equating different types of developments. The equivalent dwelling unit (EDU) concept was formulated to equate multiple-family units and commercial properties to single-family units. The following conversion factors are multiplied by the number of dwelling units (or square footage for commercial) to determine number of EDUs for each type of construction:

Type of Construction	Factor
Single-family unit	1.00
Multiple-family unit	0.80
Commercial (per 1,000 ft ²)	0.90

The allowable number of EDUs per zone was derived from demographics and proposed land use data. The total fee for each zone is the allocated cost for improvements based on the trip-ends generated within that zone, divided by the EDUs. The fees for the FCPP range from \$2,600 to \$7,300 per EDU, depending on which zone the development is in.

FINANCING PROGRAM

Because collection of the funds for the fee program would be based on the developers' building rate, the county envisioned that the FCPP would use a bond financing program to raise funds to begin improvements immediately. The fee program provides for a limited number of developers (largest landowners in the area of benefit) to participate in a bond financing program and receive credits to pay for their FCPP fees. This option essentially divided the FCPP program into two distinct elements: the nonparticipating and participating developers.

Nonparticipating Developers

The nonparticipating developers are considered to be the developers and builders who are not directly participating in the bond financing portion of the FCPP. These developers and builders finance their portion of the roadway improvements through the fee program. Fee monies collected through building permit sales are allocated by the county directly into the program to finance necessary improvements. The county applies these funds to the appropriate design and construction costs depending on the zone. The process for the nonparticipating developers is illustrated in Figure 3.

Participating Developers

Participating developers are major landowners within the defined area of benefit who have entered into development agreements with the county to:

- Allow the county to establish special taxing districts, called Mello-Roos Community Facilities Districts, to sell bonds using the developers' land as collateral. These bonds are used

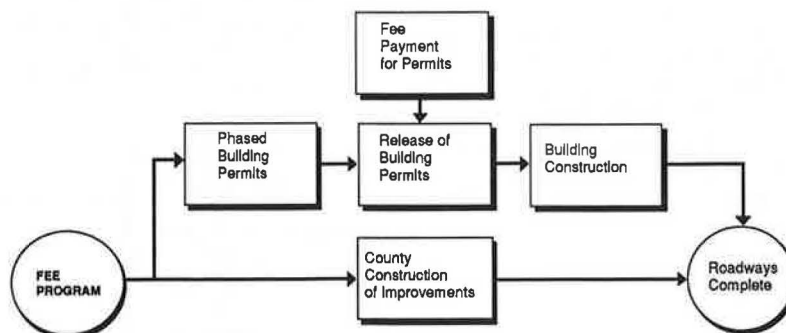


FIGURE 3 Nonparticipating developers.

to finance the regional roadway improvements identified in the FCPP program. For the bond money, the developers are in turn given credit against their obligation to the fee program.

- Provide construction financing for design and construction of improvements. The amount of credit given to the developer is calculated to offset the cost of short-term construction financing.

- Construct program roadway improvements as identified within the agreement for the county's acquisition. These acquisition projects are "purchased" by the county for the cost of construction, in accordance with the Mello-Roos law.

- Donate all rights of way required for roadway improvements.

- Agree to phase development to coincide with completion of major roadway segments.

The bond funds collected by the participating developers are the key to the success of the FCPP. Without these funds roadway improvements would be dependent on fee monies trickling in over the next 20 to 30 years, forcing roadway construction to take place after the developments are in place. By using Mello-Roos CFD bonds, as described in the following section, the participating developers and the county are able to raise approximately \$217 million in 3 years, allowing roadway construction to proceed in advance of the development. The participating developers follow the guidelines outlined in Figure 4.

MELLO-ROOS COMMUNITY FACILITIES ACT

The Mello-Roos Community Facilities Act of 1982, as amended, made the sale of bonds and the financing of the roadway improvements possible. The Mello-Roos law allows CFDs to be established in a manner and purpose similar to that of an assessment district. CFDs offer the following advantages: they can be used to pay for any facilities or pieces of equipment (or improvements) with a design life in excess of 5 years; the improvements do not have to be physically located within the district boundaries; and the district may authorize a person or entity to build or buy the improvements and then acquire (purchase) the improvements from that person or entity.

The Mello-Roos law provides the county with a means of financing roadway and storm drain improvements, new li-

braries, park improvements, and sheriff and fire stations. Each of the participating developers formed CFDs with enough bonding capacity to finance the required local (within the CFD) and regional (outside the CFD) improvements, thereby making the FCPP financially solvent and allowing the county and developers to begin facility design and construction on an accelerated schedule. The accelerated schedule allowed development to occur sooner than it could have if only the fee program was used to finance the FCPP. This element is the key to the roads-first program.

PROGRAM SCHEDULE

The FCPP process was designed and implemented expressly for the purpose of meeting the immediate need for new and improved roadways and intersections in southeast Orange County. With the appropriate attention to details, and coordinated and aggressive teamwork by all participants, the FCPP objectives could be met. Figure 5 illustrates the numerous roadway projects involved and the accelerated time frames required to design, approve, bid, and construct these projects within the 3-year time frame originally envisioned. Because of this aggressive work, more of the backbone transportation system has been made available to the public sooner than if conventional public works processing and funding were relied on. Since implementation in 1988, over \$90 million of roadway construction contracts have been awarded or completed.

As shown in Figure 5, many of the projects are progressing concurrently. This is the cornerstone of the FCPP process. Each project must be attended to so that potential schedule impacts can be identified and resolved before the schedules are affected. Open lines of communications and a well-defined design-build process are essential to achieve such ambitious successes.

ROADWAY DESIGN-BUILD PROCESS

Through close coordination and a spirit of cooperation between projected proponents, design teams, and county agencies, FCPP roadway segments have been accelerated through

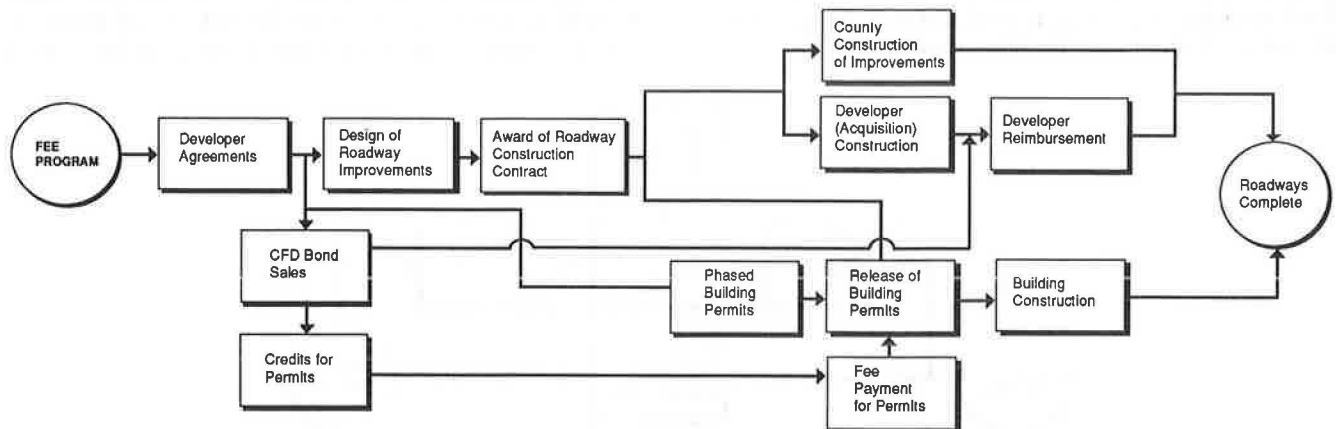


FIGURE 4 Participating developers.

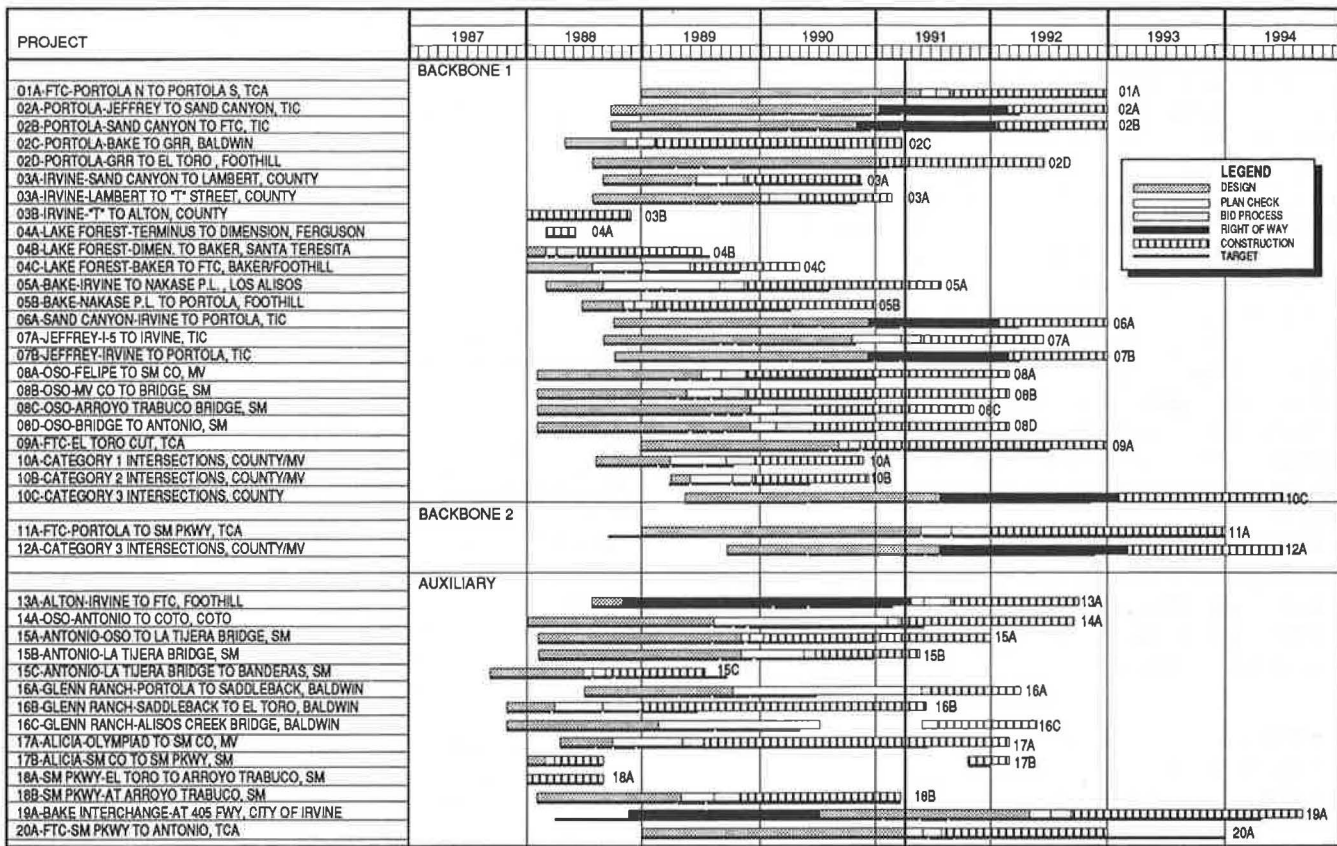


FIGURE 5 Master schedule summary.

the governmental review process and have been able to reach project construction award within the time frames required to meet the ambitious overall FCPP schedule. As a priority program within Orange County, review schedules and the associated review duration goals were established up front, along with submittal requirements. This program informed all FCPP participants of their roles and responsibilities, allowing a smooth coordination process to develop (1).

In order to accomplish the design of the 39 roadway segments and 40 intersection improvements, either an adjacent landowner or a division within the county was assigned as the project proponent for each project. The project proponent then solicited proposals from various engineering firms for the design of the segment or project. Final selection of the design team involved review of the engineering proposals by the FCPP program manager (Parsons Brinckerhoff Quade & Douglas Inc.) and county staff. The FCPP is set up to follow normal project stages with all designs meeting or exceeding

county design standards. The primary deviation from the norm is the time requirements placed on each of the various stages. This process has been fit into two categories for processing, as illustrated in Figure 6.

The first step undertaken within the design phase is the preparation of a project report. This report addresses the project features, including project design standards, constraints, right-of-way requirements, preliminary geometrics, constructibility, and cost estimates. The project reports are then submitted to a thorough review process. A design seminar is subsequently conducted by the design engineer to review the highlights of the project with key staff members and to discuss comments raised during the review of the project report. Once the project report is approved, the design team is notified to proceed with final designs.

Depending on the method of construction for the roadway project, the preparation of the final plans, specifications, and estimate (PS&E) takes one of two different approaches, the

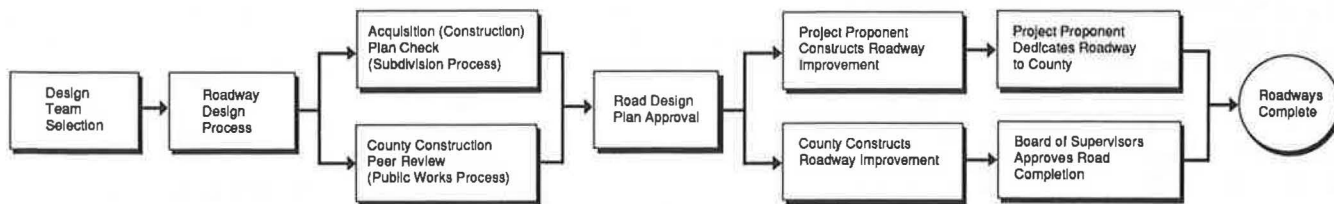


FIGURE 6 Design-build process.

county construction process or the acquisition process, as shown in Figure 6.

The county construction method involves the standard Public Works design and construction process with modifications to reduce the required design and review times. Upon resolving all design issues and obtaining 100 percent design, the project, along with a brief executive summary outlining the project's development, is submitted to the county for a peer review. The peer review was established to ensure public safety, ability to measure payment quantities, maintainability of the project, and structural integrity of the proposed construction. The peer review process is given a 20-day time frame with the engineer's resolution of comments generated within a subsequent 20 days. Upon acceptance of the completed PS&E package, the project moves into the 12-week advertising, bid, and contract award process. To date, 12 of the 39 roadway improvement projects have completed this process.

In the second approach, the acquisition process, the project proponent processes the plans through the "normal" subdivision system. This normal flow was also provided with accelerated time frames to substantially reduce the normal processing time. Standard goals for reviewing final plans include:

- First check: 20 working days,
- Second check: 10 working days, and
- Third check: 5 working days.

The design engineers and county staff have made every effort to minimize the need for additional plan checks. The key to achieving this goal is the requirement for complete submittals. Once all required permits are obtained, the plans are advertised and awarded by the project proponent. In order to maintain eligibility for reimbursement of the construction costs, the project proponent is required to adhere to standard public bid procedures. For the FCPP, the construction contracts have typically been awarded 6 weeks after final plans were approved.

Once the project is through the design phase and is approved by all affected public agencies, the construction process offers the same options as the design phase (see Figure 6).

The county construction process simply follows the normal public works construction method with the county providing its own resident engineer and construction management staff.

Through the acquisition process, the project proponent performs the required construction management services with close coordination with the county's construction and inspection staff. Upon completion of the project's construction, the project proponent dedicates the roadway right of way to the county and the improvements can then be acquired by the county through the reimbursement process.

As a roads-first program, the FCPP has met the milestones established for the design and construction processes of the program. This success is directly attributable to the close coordination, expediting efforts, and support of all divisions of county and the engineering design teams. Addressing conflicts quickly and working together to find solutions to situations as they arise have enabled the private and public engineers

to achieve safe, economical, and complete designs within schedule and budget.

REIMBURSEMENTS

A number of the FCPP roadway facilities are being designed and constructed via the acquisition process. The project proponent (i.e., landowner or developer) may choose the acquisition method for any of a number of reasons: to expedite the construction of particular roadways, to provide access to tract developments, or to construct a FCPP roadway segment within, or adjacent to, a specific development. For any of these reasons, the project proponent chooses to design and construct the project and allow the county to acquire the completed components upon completion (2).

For the FCPP, the acquisition process is initiated with the establishment of a CFD and an associated Acquisition, Funding, and Disclosure Agreement (AFDA). A district engineer is assigned by the county to monitor the construction and finances for the CFD as an independent agent. The AFDA between the CFD and the developer allows the CFD to acquire certain facilities from the developer.

With the CFD established, district engineer assigned, and necessary AFDA in place, the developer commences efforts to design and construct the prescribed facilities. A design engineer is commissioned, under contract to the developer, to design the roadway following the subdivision procedures previously described.

Once the design efforts are complete, the developer is eligible to be reimbursed for the design services in accordance with the process illustrated in Figure 7. The entire reimbursement process is designed to be completed in approximately 49 days; extra time is typically required to respond to additional information requests during the review process.

Typically, construction is started as soon as possible after finalization of the PS&E package. Construction typically proceeds concurrently with the design reimbursement process. The roadway bidding and construction contract award process for acquisition projects is very similar to the county construction process. Several steps must be taken to fulfill the requirements for expenditures of the CFD bond monies:

- Pre-advertisement. During this period final plans are approved, construction project schedules and bidding documents are submitted for review, necessary permits and bonds are obtained, plan check and inspection fees are paid, and the engineer's detailed cost estimate is prepared.
- Advertisement and Bid Opening. The project is advertised for bid after final plans and bidding documents have been approved by the district engineer in accordance with Public Works law.
- Acquisition Project Award. After bid opening, the developer submits a bid summary to the district engineer with a recommendation for award. Within 5 working days, the district engineer either concurs or provides notification for additional review time. When the developer receives concurrence from the district engineer, the developer has 60 days to award the contract and a subsequent 60 days to provide authorization to proceed.
- Construction. Following a preconstruction meeting with the contractor, district engineer, all involved county divisions,

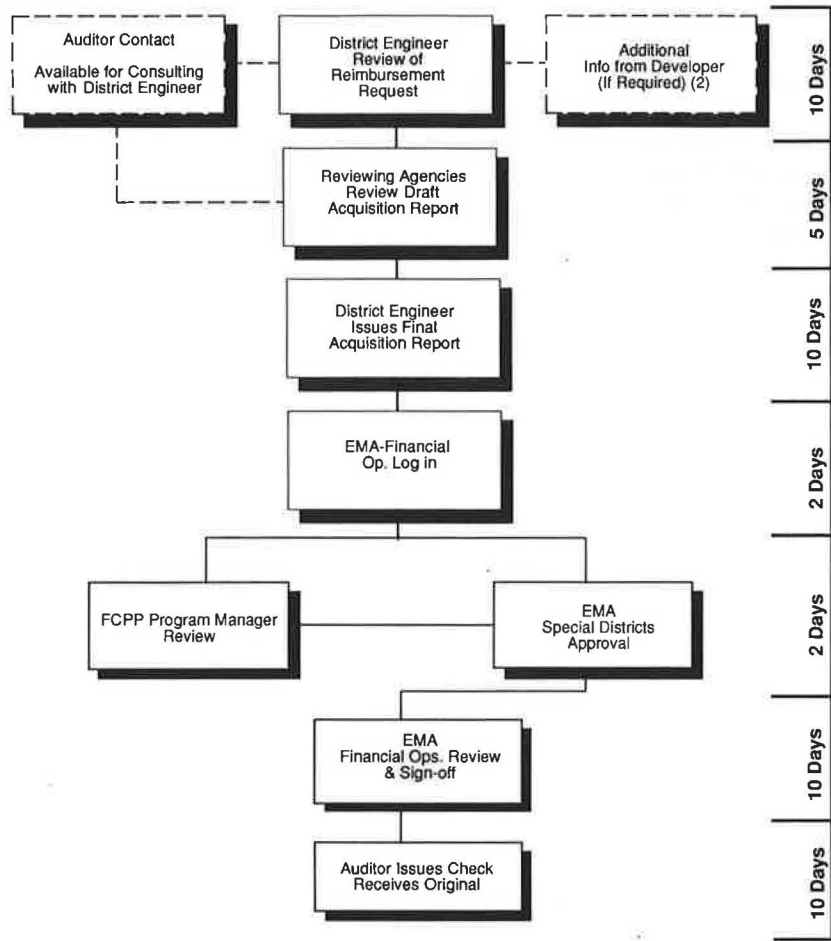


FIGURE 7 Reimbursement flowchart.

and program management staff, construction efforts proceed in accordance with the project specifications.

• **Reimbursement.** The construction reimbursement procedures follow the steps outlined in Figure 7, with the additional requirements for certification of the final construction pay quantities and approval of any contract change orders. The required certificates of compliance and completion must be provided before the project can be accepted and the developer is reimbursed for the construction of the facility.

With close coordination between all participants, an efficient reimbursement and review process has evolved. The results are that the FCPP provides a means for the developers to receive fair consideration for their expenditures and for the county to receive facilities with high-quality design and construction.

APPLICABILITY

Developers in Orange County realized that traffic congestion can be detrimental to future development when combined

with an antigrowth movement. Positive steps to relieve the traffic congestion in an area growing at such a steady pace will prevent the developers from having to suffer the consequences of an antigrowth movement. An antigrowth movement can be fueled by the prospect of current residents having to pay for a substantial amount of road construction in a newly developed area. By selling bonds and paying fees, developers can take responsibility for the traffic generated by their development and help themselves as well as the community.

The FCPP concept could be implemented in any growth area where a need exists and can be clearly defined. The basic steps to implement such a program include

- Identifying the growth areas and the needed facility improvements and associated costs;
- Defining the program’s overall objectives;
- Developing procedures to finance, design, and construct the needed improvements;
- Instigating the legislative actions required to enable the program to proceed; and
- Initiating the processes.

The success of a program of this nature and scope depends on public acceptance, coordinated efforts between the development community and the local government, and the ambitious desires to "do what it takes" to get the job done. The program offers the serendipitous benefits of improved public facilities constructed at accelerated schedules to improve existing deficiencies while providing additional capacity to accommodate future development.

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