

A Primer for Program Managers on Designing and Managing an Effective Construction Program



WELCOME



- Training sponsored by DHCR
- Presented by ICF Consulting
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Who Are You?



- Name
- Organization
- Types of construction activities/responsibilities
- Years of experience in construction
- Years of experience in management

Information



- pjones@icfconsulting.com
- Community Connections
- 1-800-998-9999
- Comcon.org
- www.tdhca.state.tx.us (PMC tab)



-
- HOME Model Programs
 - Owner-occupied Rehabilitation
 - Guide for Determining Income



www.icfhosting.com/hcd/cpd/hcdcpd.nsf/webpages/Welcome.html



Elements of Effective Management



- Program design
- Organization structure
- Staffing
- Systems

Course Objectives



- Discuss key construction related program requirements
- Share management techniques across communities
- Highlight systems and tools
- Practice and evaluate key program aspects

ON SOLID GROUND



Chapter 1: Program Design

Program Planning



- ✓ What are the needs in the community?
- ✓ What are the program rules?
- ✓ What are the political priorities?
- ✓ What's the market?

Designing Your Program



- The type of program a grantee runs will vary with respect to:
 - ✓ Products
 - ✓ Goals
 - ✓ Dollars
- Also look at new options, regulatory structure

Construction Partners & Their Roles



- Development Team
 - ✓ Owner
 - ✓ Developer/Sponsor
 - ✓ Investor
 - ✓ Architects
 - ✓ Construction manager
 - ✓ General Contractor
 - ✓ CHDOs and CBDOs
- Others--HUD, State/regional government, other funders

Construction Partners & Their Roles



- Grantee staff
 - Director
 - Program Manager
 - Construction Manager or Rehabilitation Specialist
 - Code Inspectors
 - Others

Grantee Roles During Construction



- A grantee can act in a variety of roles including:
 - ✓ Contract Administrator
 - ✓ Lender/Approver
 - ✓ Developer
 - ✓ Hands-on Construction Manager



Factors for Measuring Success



- Consider:
 - ✓ Productivity
 - ✓ Quality
 - ✓ Value
 - ✓ Aesthetics
 - ✓ Customer satisfaction



Evaluation



- Individual Project
 - ✓ time line
 - ✓ rule compliance
 - ✓ cost effectiveness
- Program
 - ✓ participant use of program
 - ✓ production output (both quantity and quality)
 - ✓ staff productivity
 - ✓ need and demand of customers met

HOME Rules- Property Value



- For homeowner properties HOME dollars may only be invested if the property value/purchase price \leq 95% of median sales for the area
- This applies to:
 - ✓ Owner rehab
 - ✓ Homebuyer opportunities

HOME Rules- Property Standards



- Property Standards that apply include:
 - ✓ State and Local Standards
 - ✓ Codes
 - ✓ Housing Quality Standards
 - ✓ Rehabilitation Standards
 - ✓ Model Energy Code
 - ✓ Handicapped Accessibility
 - ✓ Site and Neighborhood Standards

HOME Rules- Applicant/Beneficiary



- Income Eligibility- either low- or very-low-income
- Annual Income- 3 definitions:
 - ✓ Section 8 annual income
 - ✓ IRS adjusted gross income
 - ✓ Census long form annual income



HOME Rules- Affordability



- Affordability period based on HOME investment:
 - ✓ Less than \$15,000 per unit = 5 years
 - ✓ \$15,000 - \$40,000 per unit = 10 years
 - ✓ More than \$40,000 per unit = 15 years
 - ✓ New construction of rental housing = 20 years
 - ✓ Refinancing of rental housing = 15 years

HOME Rules- Affordability (cont.)



- Affordability does not apply to homeowner rehabilitation
- Occupancy:
 - ✓ Rental- subsequent tenants must be income-eligible
 - ✓ Homebuyer assistance- resale/recapture applies

Construction Management



Chapter 2: Codes and Standards

How Codes and Standards Apply



- Collectively the codes and standards:
 - ✓ Guide inspections, specifications and quality of work
 - ✓ Provide for safe living environments
 - ✓ Conform to Federal regulations

Types of Codes and Standards



- There are a number of different codes and standards that may apply to your construction program, including:
 - ✓ Housing Code, or Standards
 - ✓ Building Codes
 - ✓ Rehabilitation Code
 - ✓ Rehabilitation Standards
 - ✓ Methods and Materials Specifications

Housing Standards



- Set conditions for health and safety
- Serve as basis of inspection of existing properties
- Are the minimum standard for habitation
 - ✓ HUD Section 8 HQS
 - ✓ Model property standards
 - ✓ Locally developed housing standards

Building Codes



- Used to evaluate:
 - ✓ New construction
 - ✓ Significant changes to existing structures
- Designed for specific trades and systems
 - ✓ Structure, plumbing, electric, HVAC, fire & safety
- Developed by model code organizations
- Adopted locally with modifications

Determining a Rehabilitation Standard



- Standard for items not covered by housing code, or building code
 - ✓ Quality of workmanship
 - ✓ Quality and grade of materials
 - ✓ Level of amenities allowed by program
- Goes beyond code to meet program quality goals / stewardship of federal \$

Methods and Materials



- Usually established for individual projects
- Specify exact standards, styles, cost levels, and often exact brand names and models
- Similar purpose to rehabilitation standards if applied program-wide

HOME Requirements



- Follow state or local housing standards
- Follow local building code or a national model code
- Adopt and use written rehabilitation standards
- Applies to all types of construction projects

Balancing Quality and Cost



- Weigh up-front and back-end costs:
 - ✓ Long-term maintenance
 - ✓ Durability
 - ✓ Installation
 - ✓ Efficiency

Balancing Quality and Cost



- Codes and standards affect long term viability of the housing stock
 - ✓ Grantees should adopt policies that guide the type and quality construction desired
- Durability of repairs affect future client requests for help

Allowing for innovation and cost engineering



- Do not prescribe unnecessarily nor diminish importance of quality
- Prescriptive language can rule out innovation
- Update for new materials and methods

Updating Codes & Standards



- Be aware of needs of clients
- Review periodically
- Shop new products

Other Federal Codes and Standards



- The following may be applicable:
 - ✓ accessibility requirements
 - ✓ environmental review
 - ✓ lead-based paint regulations
 - ✓ historic preservation
 - ✓ energy conservation
 - ✓ manufactured housing standards
- These can be included in Methods and Materials Specifications

On Solid Ground



Chapter 3: Inspections

Types of Inspections



- Initial Inspections/Owner review
- Lead risk assessment
- Site inspections: architect
- Site inspections: engineers

Types of Inspections



- Progress inspections: program
- Progress Inspections: code
- Clearance examination
- Final inspections
- Management inspections

Initial inspections



- ✓ Determine feasibility
- ✓ Inform the owner and obtain input
- ✓ Develop scope and plans
- ✓ Identify environmental issues
- ✓an iterative process

Inspection Types



- Progress inspections:
 - ✓ at prescribed intervals
 - ✓ whenever a change order
 - ✓ complaint by owner/tenant/neighbor
 - ✓ prior to covering over (e.g., wiring and plumbing before drywall)
 - ✓ at all draws
 - ✓ unannounced times

Job Progress Reports



- Work performed
- List trades on site
- Take photos
- Materials delivered
- Delays or problems
- Weather
- Non-conforming work
- Who is present for inspection
- Job site discussions that involve corrective measures
- Any code inspection problems
- Anticipated scheduled deliveries

Inspection Types



- Final inspection
 - ✓ work completed and payment requested
 - ✓ following punch list completion
- Monitoring Inspection
 - ✓ prior to warranty expiration
 - ✓ to assess satisfaction
 - ✓ during HOME period of affordability

Desk Review of Inspections



- Examine inspection procedures and reports
- Inspections should be:
 - ✓ Well documented
 - ✓ Easy to understand
 - ✓ Address issues
- See Checklist at page 3-3

Monitoring Quality of Inspections



- Regularly check project files
 - ✓ detailed notes of inspections
 - ✓ dates and times recorded
 - ✓ signed job cards in file
 - ✓ detailed punch list items
 - ✓ pictures documenting the job

Common Inspection Dilemmas

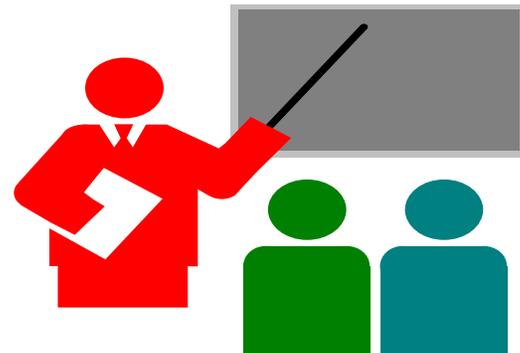


- What do you do when:
 - ✓ The inspector finds incomplete or deficient work
 - ✓ The homeowner is unwilling/unable to make all recommended repairs
 - ✓ The inspection finds issues the program is not designed to address

Inspection Tools



- Portable computers- take notes on-site
- Laser measurement tools
- Tape recorder
- Camera
- Folding ladder
- Others?



Construction Management



Chapter 4: Developing Plans and Specifications

Evaluating Specs



- Clarity
- Measurements and quantities
- Drawings, locations
- Method and conditions
- Line items corresponding to payment schedule
- Address code deficiencies



Evaluating Specs



- Organized by CSI
- Clear responsibilities
- Reference to standards
- Bid alternates and additions



Large Projects: Evaluating Plans and Specs



- Architect's plans should include:
 - ✓ Floor plans
 - ✓ Front, rear and side elevations
 - ✓ Foundation plans
 - ✓ Plot plan, position of structures on lot



Large Projects: Evaluating Plans and Specs (cont.)



- Architect's plans should include:
 - ✓ Typical cross sections
 - ✓ Structural & engineering details
 - ✓ Major systems plans (HVAC, plumbing, electrical)
 - ✓ Detailed written specifications
- Grantee should provide feedback at early stages



Tools Needed



- Staff must be prepared
 - ✓ a thoroughly documented inspection
 - ✓ standardized specifications
 - ✓ a system to evaluate and add appropriate specifications
 - ✓ information about availability and costs of materials

Automated Systems



- Advantages
 - ✓ Consistency and standardization
 - ✓ Easy to retrieve specs
 - ✓ Build knowledge base
 - ✓ Reduction of paperwork
 - ✓ Clear documents
 - ✓ Easily customized
 - ✓ Save time, put staff in the field

Features



- Computerized Work Write-Ups
- Linked Cost Estimates
- Bid Documents, Bid Comparisons and Contracts
- Construction Management Tools

Features



- Trade and Subtrade Table Listing
- Work Item Table Listing
- Inspector Worksheet
- Work Specification Report (by trade)
- In-House Estimate
- Construction Bid Form
- Bidders' List
- Draw Schedule

Automation Action Plan



- Check the web for trial versions
- Make a list of what you must have and what you would like to have
- Talk to current users and providers about experience with support, customization

Sample Providers



- Blaine T. Williams 512-426-9416
- Blainetwilliams (at) msn.com
- Enterprise Foundation
- Housing Developer Pro
- Respec; Diaz Associates
- ABC Specs
- Hometech; Means

On Solid Ground



Chapter 5: Working with Architects

When Is an Architect Needed?



- For new construction or any rehabilitation that requires:
 - ✓ Engineering work
 - ✓ Walls moved
 - ✓ Site evaluation for feasibility
 - ✓ Building conversion

What does an Architect Provide?



- Services include:
 - ✓ Design Schematics
 - ✓ Existing conditions
 - ✓ Zoning Requirements
 - ✓ Detailed plans
 - ✓ Assessing feasibility
 - ✓ Coordinating with contractor during work

Architectural Services



- Service provided throughout project
 - ✓ Design preliminary and final plans
 - ✓ Evaluate existing site and building conditions
 - ✓ Research codes and zoning
 - ✓ Prepare construction documents
 - ✓ Assist with contractor bidding
 - ✓ Reviews change orders
 - ✓ Monitor construction
- Can also be hired for specific tasks

Architect RFP



- RFP should be specific
 - ✓ Description and scope of project
 - ✓ Location and special site considerations
 - ✓ Proposed work schedule- completion date
 - ✓ Sources of financing
 - ✓ Codes and regulations

Architect RFP (continued)



- Architect evaluation criteria:
 - ✓ Firm capacity
 - ✓ Licenses and insurance
 - ✓ Professional and client references
 - ✓ Qualifications of proposed staff
 - ✓ History of litigation
 - ✓ Familiarity with program objectives
 - ✓ Experience with similar projects

Contracting with Architect



- Will the A/E provide all professional services to complete the work?
- Will A/E coordinate other work
- If redesign required who pays?
- Will A/E investigate existing conditions
- Can you rely on the Architect's cost estimate?

Contracting with an Architect



- Use AIA standard forms
 - ✓ Modify for specific project
 - ✓ Form for comprehensive services
 - ✓ Form for select services
- Check fee structure for appropriateness
 - ✓ Percent of total construction cost
 - Small percent for large projects
 - Larger percent for smaller projects

Contracting with an Architect (continued)



- Grantee should review contract to ensure grantee protected
 - ✓ Liability and other insurance
 - ✓ Fixed limit of costs
 - ✓ Ownership of drawings
 - ✓ Schedule- consequences
 - ✓ Termination
 - ✓ Dispute resolution

Architect Contract Forms



- Standard Form for Architectural Services only (B141)
- Std. Form for Architectural and Construction Management (B144)
- Abbreviated Form of Agreement for Limited Scope of Work Projects (B151)
- Std. Form for Architectural Services on Small Projects (B155)

Monitoring Performance



- Grantee monitoring tasks:
 - ✓ Meet with project team members
 - ✓ Review preliminary and final designs
 - ✓ Ensure community review and acceptance
- Developer performs day to day oversight:
 - ✓ Reports to grantee on regular basis
 - ✓ Grantee approves payments

On Solid Ground



Chapter 6: Estimating Costs

What are cost estimates used for?

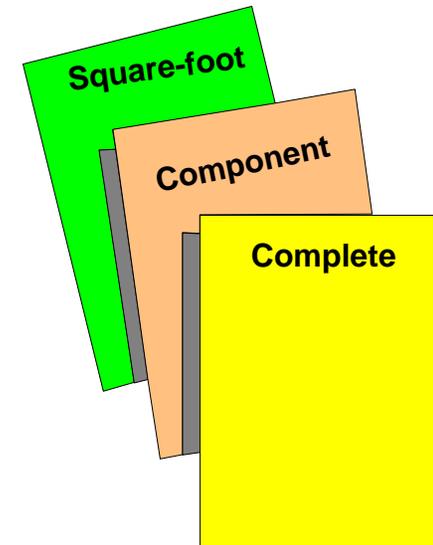


- Cost estimates are used for HOME and CDBG-funded projects
 - ✓ Certify cost reasonableness
 - ✓ Accurately budget program resources
 - ✓ Aid in evaluating contractor bids

Types of Cost Estimates



- Square Foot Estimates
- Line Item Estimates (a.k.a., component or assemblies estimates)
- Quantity Takeoffs



Using Cost Estimating Manuals



- Cost Estimating Manuals provide:
 - ✓ Detailed descriptions/specifications for each element of work
 - ✓ Labor scales adjusted for geographic location
 - ✓ Units of measure for materials included in line item

Using Cost Estimating Manuals (continued)



- Cost Estimating Manuals provide:
 - ✓ Per unit material, labor and overhead expense
 - ✓ Costs for common assemblies and square foot costs
- Linked with databases for updated cost information

Cost Estimating Manuals



- Advantages:
 - ✓ Help with thorough breakdown of unfamiliar jobs
 - ✓ May define standard assemblies
 - ✓ Provide guidelines for a wide range of costs, including profit and overhead
- Disadvantages:
 - ✓ Often not applicable to locality, type of work
 - ✓ Too much detail

Cost Components: Soft Costs



- Developer's fees
- Architect's and engineer's fees
- Environmental impact/soil studies
- Professional services
- Construction management
- Lender fees and construction interest
- Marketing

Cost Components: Soft Costs (continued)



- Appraisals, title searches, transaction fees
- Temporary relocation costs
- Building permits, utility hookups, zoning review
- Syndication costs (LIHTC)
- Cost Contingency
- Worksite security

Other Factors Affecting Costs



- Federal Wage Requirements
- Relocation Costs
- Contingencies and Emergencies
- New Lead-Hazard Reduction Regulations

Features of Good Estimates



- Appropriate level of detail
- Measurable quantities
- Line item estimates - draw schedules
- Unit pricing - well defined
- Estimates for bid alternates/allowances

Effective Estimating Systems



- Timeliness in estimating
- Accurate, relevant, detailed information
 - ✓ Past bids
 - ✓ Vendors, contractors
 - ✓ Other organizations
 - ✓ Localized published database
- Process for updating information
- Estimator skills and knowledge

On Solid Ground



Chapter 7: Contractor Selection and Bid Review

Procurement Requirements



- Requirements depend upon who is responsible
 - ✓ Developer- large projects
 - ✓ Program- rehabilitation
 - ✓ Property owner- rehabilitation
- Rules provided in 24 CFR 85.36

Procurement Requirements



- Who makes critical decisions?
- Grantee bidding- Federal requirements apply
- Developer or property owner- rules do not apply
 - ✓ Grantee can impose requirements
 - ✓ Should follow similar practices

Bidding Procedures



- Formal, sealed bid process
 - ✓ Prepare cost estimate
 - ✓ Publish invitation for bids in local paper
 - ✓ Sealed bids, public bid opening
 - ✓ Select lowest responsible bidder

Bidding Procedures (continued)



- Other procedures
 - ✓ Maintain list of contractors
 - ✓ Seek multiple bids
 - ✓ Compare bids to cost estimate

Developer and Homeowner Bidding



- Developer bidding
 - ✓ Not subject to Federal requirements
 - ✓ Grantee can impose requirements
- Property owner bidding
 - ✓ Not subject to Federal requirements
 - ✓ Grantee may regulate owner involvement
 - ✓ Range of grantee control and responsibility

Common Approach – Small Project



- Grantee:
 - ✓ Prepares cost estimate
 - ✓ Limits bidding to selected contractors
 - ✓ Determines acceptable bid range
 - ✓ Advises during evaluation
- Property owner:
 - ✓ Evaluates bids
 - ✓ Selects contractor

Common Approaches – Large Projects



- Local government sets requirements
 - ✓ Imposed through agreements
- Allow developer to choose
 - ✓ Costs within range
 - ✓ Other federal requirements imposed

Recruiting Contractors



- Advertise
- Word of mouth
- Trade journals
- Yellow pages
- Supplies yard
- Labor unions

Contractor Recruitment



- Seek feedback from participating contractors
- Market to local contractors
- Offer prompt payments and simple procedures

Contractor Recruitment (continued)



- Build contractor capacity
 - ✓ Offer technical and business training
 - ✓ Offer guidance on meeting insurance requirements
 - ✓ Demystify program procedures

Approving Contractors for Small Projects



- May use screening:
 - ✓ Experience
 - ✓ History of work quality
 - ✓ Recent clients satisfaction
 - ✓ Financial capacity
 - ✓ Licensing
 - ✓ Insurance

List of Contractors



- Maintain list of pre-screened contractors
 - ✓ Advertise periodically for new contractors
 - ✓ Bid on rotating basis or invite all
- Limits bidding to quality contractors
- Facilitates evaluation of qualifications

Contractor Evaluation



- Timeliness
- All work completed when payment requested
- Workmanship/ superior craftsmanship?
- Change orders, budget?
- Appearance of worksite
- Communication with staff

Contractor Evaluation, cont.

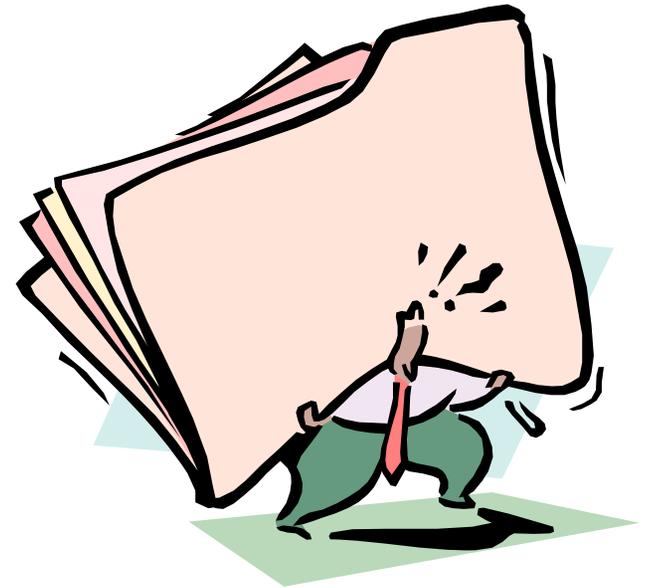


- Clear documentation
- Communication with owner
- Owner evaluation
- Callbacks?
- Warranty done on time
- Durability beyond warranty
- Courteous/ customer service

Evaluating Contractor Proposals



- Costs must be reasonable
 - ✓ Use cost estimate
 - ✓ Prepare independently



Bid Analysis



Common problems

- ✓ Bids outside of acceptable range
- ✓ Only one bid received
- ✓ No responsible bids received
- ✓ Evidence of collusion

Construction Contract



- General requirements
- Responsibility for taxes, permit, fees, notices
- Schedule
- Scope of work
- Payment schedule
- Warranties
- Change orders
- Contractor representative
- Site conditions
- Dispute resolution
- Responsibility for labor and materials

Other Key Requirements



- Conflict of interest
- Bonding or letter of credit
- Equal opportunity
- Labor laws
- Minority/Women-owned businesses
- Section 3

On Solid Ground



Chapter 8: Construction Oversight

What Must Be Done?



- Everyone must be clear on their roles
Pre-construction conference
- Job must officially start
Order to proceed
- Plans must be followed; right materials and methods
Inspections

What Must Be Done?



- Schedule must be met
Approved schedule with mileposts
- Wage and labor rules must be followed
DB and Sec. 3 monitored
- Payments must be made, when appropriate; liens protected against
Draw schedule; lien waiver

What Must Be Done?



- Surprises must be dealt with wisely
Change order processed, or not
- Warranties and information delivered
Packet to owner before final payment

Basic Areas To Monitor



- Key role is always to monitor construction
- Areas to monitor:
 - ✓ Status
 - ✓ Schedule
 - ✓ Quality
 - ✓ Cost/expenditures
 - ✓ People on project
 - ✓ Adherence to monitoring/reporting procedures

Monitoring & Enforcing the Schedule



- Monitor schedule regularly
- Adjust dates as required
 - ✓ Help avoid by setting realistic schedules up front
 - ✓ Use agreement to enforce timeliness
- Inspections provide information on progress v. the schedule

Change Orders



- Observations about Change Orders
 - ✓ Provide flexibility as project moves forward
 - Unforeseen items
 - Improvement in technique or approach
 - ✓ Also sign of problems
 - Poor work write-up or estimates
 - May signal irregularities

Payment Issues



- Whose money?
 - ✓ Grantee or owners
- Who is the contractor's client?
 - ✓ Grantee or developer typically negotiates
- How long does payment take?
 - ✓ Critical concern for contractors
 - ✓ Agree on turn-around at kick-off

Close-Out



- Final inspection for work completion
 - ✓ Prepare punch list if necessary
- Verification of close-out
 - ✓ Cost certifications
 - ✓ Warranties and guarantees
 - ✓ As-built drawings
 - ✓ Owner's manuals
 - ✓ Release of liens
- Final payment when all complete

Common Construction Problems



- Key signs
 - ✓ Job-site tension
 - ✓ Lack of communication
 - ✓ Excessive requests for additional information
 - ✓ Excessive change orders
 - ✓ Delays
 - ✓ Poor quality
 - ✓ Overruns
 - ✓ Theft

Disputes



- Grantee establishes procedures
 - ✓ Explain to contractor and owner early
 - ✓ State in contract
- Professional arbitration
 - ✓ Less expensive than legal action
- Legal action is last resort

Managing Risk



- Bonding provides assurance jobs will be done
 - ✓ Cash bonds
 - ✓ Retainage
 - ✓ Letter of credit
- Grantees require contractors to carry sufficient insurance

Enforcement



- Ensure range of sanctions
 - ✓ Probation
 - ✓ Suspension of payments
 - ✓ Suspension of work
 - ✓ Debarment