~~CHAPTER~~ Chapter 4
FINAL "As-Built" PLANS PROCESS

4.1 PURPOSE

To define the process for Final "As-Built" Plans and present some standards for their utilization in delineating final quantities, revisions, and changes in the construction that must be reflected in the final estimates for the project.

4.2 AUTHORITY

Section 334.044 (10)(a), Section 20.23 (3)(a) & Section 337.015(3), Florida Statutes (F.S.)

4.3 GENERAL

One complete set of the signed and sealed Contract Plans on 11" X 17" plan sheets shall be maintained as the Final “As-Built” Plans for each construction project completed. This may include the electronic signed and sealed Contract Plans set which will be maintained in a different fashion. If an electronic package is received, then the procedures set forth in the following manuals and their respective chapters will be followed:

Plans Preparation Manual (PPM), Vol. I, Chapters 19 & 20, Topic No. 625-000-007,
CADD Manual, Chapter 5, Topic No. 6625-050-001,
CADD Production Criteria Handbook, Chapters 8 & 21

Contents of the Final “As-Built” Plans will vary, but shall always contain those sheets necessary to completely cover all work performed. The Final “As-Built” Plans shall include all changes, both design and construction, with all shop drawings, including adequate sketches, dimensions, and notes. The Contract Plans including all changes are the Final "As-Built" Plans after construction is complete. All revisions including those occurring during construction will be included in the Final "As-Built" Plans set.

4.4 RECEIVING THE SET OF CONTRACT PLANS

The District Design Project Manager (or designated district person) sends a copy of the Contract Plans to the District Construction Engineer. For electronic delivery of projects, the ***CADD Manual, Chapter 5*** outlines how to follow that process. The District Construction Office will then send a set of Contract Plans to the Resident Engineer (RE).

The sealed set of ***Contract Plans*** will be kept in a place that protects the plans but allows ready access. Any and all changes made to the project will be reflected on these plans. No pages shall be discarded from this set. This set of plans will be the Final "As-Built" Plans and will be made a part of the final estimates package. At the conclusion of the project the Final "As-Built" Plans along with the final estimates package will be sent to the District Final Estimates Office (DFEO) per district policy.

For bridge and other structures, shop drawings should be processed according to ***PPM Vol. I, Chapter 28 Shop and Erection Drawing, Topic No. 625-000-007***.

4.5 UPDATING THE FINAL "AS-BUILT" PLANS AFTER CONTRACT AWARD

When changes to the plans are required after contract award, all final drawings, specifications, plans, reports, computation books, or documents prepared or issued by the responsible Professional Engineer must be signed, dated, and stamped with the engineer's seal as required. The Engineer of Record must be notified also if changes are required under his responsibility. The following steps must be followed in the revision process:

(A) On a federal aid oversight project, FHWA approval must be obtained prior to making revisions.

(B) Depending upon the nature of the changes, design issues would be directed to the District Design Engineer, structural issues would be directed to the District Structures Design Engineer, drainage issues would be directed to the District Drainage Engineer, or the Engineer of Record should be contacted to concur in the proposed revision(s). The Project Manager must be notified of all changes.

(C) The responsible Professional Engineer or the contractor, for contractor initiated revisions, will send a letter addressed to the District Construction Engineer with the signed and sealed ~~bond copies of the~~ revised sheets. This letter will address the reason for the revision, who requested the revision, who approved the revision and if FHWA has concurred. All existing pay items that are affected must also be shown. Copies of the letter will be sent to the District Design Engineer. The District Construction Office shall make the ~~bond copies~~revised sheets part of the Final "As-Built" Plans.

(D) A ~~Field Supplemental Agreement or~~ Work Order may be issued.

When revisions to the specifications package are required after the letting, the following process will apply.

(1) The revision shall be dated, signed, and sealed by the responsible Professional Engineer making the revisions.

(2) Authorization from the Director, Office of Construction is required before changing contract specifications on all projects.

(3) A Supplemental Agreement or Work Order must be issued.

4.5.1 Changes to the Construction Contract

If the revisions to the plans or specifications are minor, a ~~Field Supplemental Agreement/~~***Work Order*** may be required (***see CPAM Section 7.4***). Major changes to the plans or specifications may have to be incorporated by a Supplemental Agreement (***see CPAM Section 7.3***).

4.5.2 By Engineer of Record (EOR)

There are situations when it would be necessary or desirable to require the modification of the plans after a project is awarded: the plans may have contained errors or omissions; field conditions may have changed; or the scope of the project may have been revised.

~~The RE~~All changes made in the field not requiring an engineering analysis will be signed, sealed, and dated by the Professional Engineer (P.E.) in charge of the project. ~~may decide to go to the EOR to have the plans revised~~. If the revisions are due to errors or omissions, the EOR has a professional obligation to correct the plans. ~~The RE may also elect to go to the EOR to have revisions made if the revisions are beyond the capabilities of the District Construction Office or if manpower is not available.~~

If the revisions are due to errors or omissions on the part of an ~~Contracted~~ EOR, no additional compensation shall be made. If changes of another nature are necessary and the EOR is a consultant, then the services requested and payment for the services may be authorized by the Department's Design Project Manager/District Consultant Project Manager through a Supplemental Agreement to the original design contract (post-design services). The consultant's design contracts may be altered by a Supplemental Agreement up to 10 years after the date of execution of the design contract.

The EOR shall sign, date, and emboss with a seal any changes that the EOR has made to revise the original sheet.

"Where changes arise relating to the fact that an engineering engagement to provide "as built" design documents may not be the same professional service as

performing engineering design services. Many PE's design and provide "as built" services for the same project, there is no requirement that the same PE who designs the project must perform the "as built" services. Therefore, since the services being provided are different in each case, a PE who only prepares, seals and signs the "as built" drawings is not a "successor engineer" as discussed in ***Rule 61G15-27.001*** of the ***Florida Administrative Code (FAC)*** and need not follow the provisions of that Rule."

Therefore based on the above statement when a PE is making certain changes that reflect the "as-built" conditions, he would follow the procedures set forth in ***Section 4.5.7*** of this chapter and would not be considered a "successor engineer".

4.5.3 CADD

If CADD is utilized to make changes, the requirements in this chapter, and the ***CADD Manual, Topic No. 625-050-001*** and the ***CADD Production Criteria Handbook*** must be met.

4.5.4 Rapid Response Initiative

(A) **Resident Level Responsibility**

To rapidly address and resolve major unforeseen problems, which have the potential to seriously delay or disrupt construction progress, the RE should convene a field meeting with key technical and project management personnel.

The RE shall sign, date, and seal those changes for which the RE is solely responsible. Sheets that are not modified in any way will not be signed and sealed as part of the changes. The certification stamp on the key sheet will reflect that these plans were built in substantial compliance to the EOR's design.

4.5.5 Consultant Design Liability

Design ~~consultant~~ Consultants are responsible for cost increases to a project if errors and omissions in the design plans or contract documents result in costs above what they would have been if the plans and contract documents had been correct. When there are changes to a project, as evidenced by a Supplemental Agreement or ~~Field Supplemental Agreement~~/***Work Order***, an assessment must be performed to determine the extent of the design Consultant's responsibility for the errors and omissions. ***Identifying and Assigning Responsibility for Errors,***

***Omissions, and Contractual Breaches by PE*, *Procedure No. 375-020-010*,** must be followed when performing this assessment.

(A) **Resident Level Responsibilities**

Whenever a situation occurs in which it appears that an error or omission has occurred, the Construction Resident Engineer/Project Administrator (PA) should notify the Design Project Manager that an error or omission has been tentatively identified. This contact should be made as early as possible so that the Design Project Manager can contact the EOR to assist the Department to mitigate the liability. The initial contact may be by telephone or email, and followed up in writing. In all cases the Construction RE/PA will send a written notification to the Design Project Manager describing the error or omission.

(B) **District Level Responsibilities**

The District Construction Engineer and staff will work with the Design Project Manager to quantify the extent of the Consultant's liability, as per claims against Consultants for substandard work and time overruns, ***Section 337.015(3), F.S.*** The Department is required by law to vigorously pursue claims against contractors and consultants for cost and time overruns and substandard work products.

4.5.6 In-House Engineer's Obligation to Assist

Department employees do not have the same financial liability as consultant engineers, but they do have a responsibility to assist the Department's Construction Office and the Contractor to mitigate the cost that results from any errors and omissions. When notified that a problem has occurred on a construction project, an EOR who is ~~the~~ a Department employee, will make mitigation assistance a high professional priority since the timeliness of assistance will usually impact the final cost of the final solution to the problem.

4.5.7 Revision Process

The Final "As-Built" Plans to be submitted with the final estimates package shall be updated as the project progresses. All additions, deletions, and revisions shall be clearly delineated to reflect the final "as-built" conditions of the completed project. If a plan sheet is revised, the original plan sheet shall have **VOID** written on it and the new plan sheet shall be inserted after the original (old) sheet in the set of Final "As-Built" Plans. All revised sheets will be signed, sealed, and dated by the responsible P~~rofessional. Engineer~~ E. or EOR. All changes made in the field not requiring an engineering analysis will be signed, sealed, and dated by the P.E. in charge of the project.

Exception to the above, only when an item's quantity varies from the projects estimated quantity and no changes are made or no structures are altered, then in this case , the signing and sealing requirements to document the variation from the proposed to the final quantity will not be warranted.

For revisions not made by the EOR, the proper language of qualification is recommended on the cover sheet (the first page of the plans only). This language should note that, by signing the disclaimer, the responsible Professional Engineer is only taking responsibility for the changes in the plans and not the entire set of plans. By sealing the page of the change, the responsible Professional Engineer is taking responsibility for the specific change(s) only, not for the entire page. Language of qualification:

(***"This project was constructed in substantial compliance with these plans as provided by the Engineer of Record. If changes were made, those changes are indicated by black ink revision and bear the seal and signature of the responsible Professional Engineer."***)

Sealing means sheets will be signed, dated, and embossed with a seal. No pages shall be discarded from this set.

If Final "As-Built" Plan sets have no changes, the RE shall **only sign and date** the certification on the key sheet that states:

"This project was constructed in substantial compliance with these plans as provided by the EOR. These plans reflect" as-built" conditions and no changes were made to the plan sheets."

There are three (3) possible ways that the Final "As-Built" Plans may be revised: 1) The following process will be guidance for plan sets that are revised by conventional method (meaning "marked-up" by hand). Plan sets that are "marked-up" by hand will clearly delineate those changes, such as drawing a cloud around the item in question, and/or drawing notes directly on the plans sheets. All those changes will be signed, sealed and dated. 2) Plan sets revised or updated to reflect "as-built" conditions may be prepared electronically. This means that if a Resident's Office wants to make changes electronically to show as-built conditions (ie. field changes such as extended sidewalk or curb and gutter) they may use the cloud revision utility from the Bar Menu in MicroStation. The ***CADD Production Criteria Handbook, Chapter 21*** describes the process of generating the proper naming convention and standards for updating the CADD files electronically. 3) If revisions are performed other than cloud revision, such as completely manipulating the native MicroStation DGN file, all changes will conform to the same procedures and requirements outlined in the ***CADD Production Criteria Handbook, Chapter 8 & 2***, the ***CADD***

Manual, Chapter 5, and the ***PPM, Chapter 19 & 20***. After the native MicroStation DGN file has been revised to reflect "as-built" conditions, then you must re-authenticate the Project CD through Professional's Electronic Data Delivery System (PEDDS). Once the final plans set have been completed to reflect "as-built" conditions whether they are a hard copy, CD/DVD files, the RO must meet the approval of Image API for final output of the plan set. The final plan set shall be in a format that is acceptable for scanning and attributing by Image API in accordance with the ***"As-Built Plans Management System User Guide"***.

4.5.7.1 CHANGES MADE BY OTHERS

Changes made by the Contractor's EOR or Specialty Engineer shall follow the Department's current criteria for revisions. All revised sheets will be signed, sealed, and dated by the Contractor's EOR or Specialty Engineer.

All revisions shall be reviewed for concurrence by the Department EOR and Engineer before the "as-built" is accepted for signing and sealing. Once the changes are reviewed and accepted these plan sheets or final analysis shall be incorporated into the final "as-built" plan set in the appropriate section and indexed by the Project Administrator. For changes to bridge designs deemed major by the Department, the Contractor's EOR shall submit a signed and sealed bridge load rating in compliance with the Department's load rating policies.

If revisions are performed only on a portion or portions of the plan sheet(s), they shall include each change signed, sealed and marked-up in accordance with ***Section 4.5.7*** above. Then the Contractor's EOR or Specialty Engineer may use the Department's language of qualification as outlined in ***Section 4.5.7.*** above. These must be clearly identified, signed, sealed and dated by the responsible P.E. These type revisions will require prior and final consent by the Department's EOR and Engineer before the revised "as-built" is accepted for signing and sealing.

~~4.5.7.1~~4.5.7.2 CHANGES AFTER SUBMITTAL OF FINAL ESTIMATES PACKAGE

Any changes made by the DEFO during their PAR review that may modify the final plans will be the Resident Offices responsibility to make these changes in accordance with ***Section 4.5.7*** of this manual.

The following information shall be considered minimum standard for preparing Final "As-Built" Plans on a typical project.

4.5.8 The Key Sheet

The Key Sheet of the sealed set of Final "As-Built" Plans shall show the following data ***(see Figure No. 4-1):***

(A) Final "As-Built" Plans shall be prominently inked or stenciled across the top of the sheet in place of or above the “Contract Plans” preprinted line and those words shall be lined through or completely deleted.

(B) On the right side and near the lower corner, the following information shall be lettered, stamped, or typewritten on white paper and securely pasted or taped on the ***Key Sheet***:

(1) Name of Contractor

(2) Name of all consultants involved in construction. (If none, so state)

(3) Name of District Secretary, Resident Engineer, and Project Manager

(4) Project Administrator

(5) Date Work Started

(6) Date Work Final Acceptance or Completed

(7) Certification Final "As-Built" Plans signed by Resident Engineer

(C) A complete Index of the Final "As-Built" Plans shall be shown on the left side of the ***Key Sheet***.

(1) A complete list of permanent field books and a general description of their contents shall be shown.

(2) All ***Computation Books*** shall be indexed as to content and cross-referenced on the ***Key Sheet***, as necessary.

(D) All major revisions to the Final "As-Built" Plans during construction shall be added to the revision list on the left side of the sheet below the **Index of *Roadway Plan Sheets***. This information shall be lettered or typewritten on a piece of white paper and securely pasted or taped on the ***Key Sheet***. The information shall include:

(1) Sheet number on which the change is shown in the plans

(2) Effective date of the sheet revision

(3) A brief description of the revision

(E) All project descriptions, Financial Project ID Numbers, length, etc., shown on the ***Key Sheet*** shall be corrected to agree with the actual construction before the Final "As-Built" Plans are submitted.

(F) Additional plans such as shop drawings, working drawings, etc., shall be added to the plan set and shown in the ***Index of Roadway Plan Sheets*** on the ***Key Sheet*** of the Final "As-Built" Plans.

(G) Other Final “As-Built” Plans or Drawings such as Jack & Bore, Plowing, or Signalization shall be included ~~to~~with the Final “As-Built” plan set and ~~shown~~listed in the Index of ***Roadway Plan Sheets*** on the ***Key Sheet*** of the Final “As-Built” Plans. Any Boring Path Reports, Bore Logs associated with these plans shall also be included and scanned with the Final “As-Built” plan set.

4.5.9 Typical Section Sheets

Authorized revisions to the typical section shall be marked on these sheets. Documentation for such revisions shall be included as a part of the final estimates package. Some typical examples include:

(A) An increase or decrease in thickness

(B) A change in type of material

(C) Substitution of pay items

(D) Change in limits of work

(E) Addition/Deletion of items of work

4.5.10 Roadway-As-Built Pavement Data Form

The purpose of the ***Roadway-As-Built Pavement Data***, ***Form No. 700-050-12*** is to record main line pavement data as the pavement operation progresses. This form

is to be updated and maintained throughout paving operations and will provide a complete record of pavement operations at the end of each project. The objective is to provide a Pavement Design Engineer with sufficient information and necessary data that can be used to develop and apply proper engineering practices for future roadway development, maintenance, design, etc. The Project Engineer/Designee will be responsible for recording and entering this information on the form and entering into the ***Laboratory Information Management System (LIMS)*** database.

NOTE: This form will be filled out during the project's paving operations and the information on this form would be entered into LIMS. If the typical section/characteristics changes then you would need to complete another form to reflect those changes. The Roadway - "Verification Technician" will perform this operation and complete the *Roadway-As-Built Pavement Data, Form No. 700-050-12* (***see Figure No 4-2***). This form will be attached to the Final "As-Built" Plans directly behind the ***Typical Section Sheets*** and will be sent to Image API for scanninged and attributing along with the Final "As-Built" plans according to ***As-Built Plans Management System User Guide.*** ~~into the Construction Document Management System (CDMS) for retention~~.

4.5.11 Summary of Pay Items

The original sealed plan summary sheets for each of the major groups of pay items are to be included in the Final "As-Built" Plans.

4.5.12 Plan Sheets

The plan sheet details for all the major groups of plans become the permanent historical record of the construction project. All changes in construction that would constitute a conflict in this record shall be clearly delineated on the ***Final Plan Sheets***. Insert revisions and cross out all incorrect data. The following revisions must be noted:

(A) Revisions to the horizontal and vertical alignments as shown on the original plans.

(B) Stations or equations that have been introduced or revised during construction.

(C) Intersection and crossover details that have been modified or relocated.

(D) Inlets, manholes, box culverts, and end walls that were added, relocated, revised, or deleted.

(E) All sidewalk that was modified in thickness or otherwise, and all curb and gutter, and shoulder gutter, that was added, revised, or deleted.

(F) All driveways that were not shown on the original plans, or were shown but are no longer in existence, or were modified in thickness or otherwise.

(G) All ditch locations and grades that were adjusted during construction.

(H) Changes in fencing items.

(I) Sign locations changed and pavement markings that were modified.

(J) All signal details that change during construction.

(K) All Bridge, Approach Slab, and Lighting details that is different from the actual construction.

(L) Bench Marks (BM) and their descriptions that were set during construction shall be added to the profile portion of the ***Plan Sheets***.

(M) All Utility relocates and/or conflicts shall be reflected on the ***Utility Adjustment Sheets***.

4.5.13 Summary of Drainage Structures, Optional Materials Tabulation and Drainage Structure Sheets

Revisions shall be made on the Final "As-Built" Plans set, to reflect:

(A) Plan lengths changed to reflect the actual construction length when an authorized field change is made or a plan error is noted.

(B) Changes in flow line elevations shall be shown on the plan profile sheets.

(C) Changes in stations or offset dimensions.

(D) Changes in size of structures.

(E) Added/Deleted structures.

(F) Type of pipe material and thickness used at each structure shall be shown on the ***Drainage Structures Sheets*** and the ***Optional Materials***

Tabulation Sheets. The "as-built" column will be checked to indicate what type of pipe material and thickness was used at each structure.

G) Types of inlets and manholes constructed shall be indicated.

(H) When the method of measurement is on the basis of plan quantity for cross drain and storm sewer pipes, plan errors shall be distinguished from field revisions due to different tolerances being applicable.

(I) ***Lateral Ditch Sheets***: All adjustments in horizontal alignment of flow line grade shall be delineated on the plan and profile sheets. The cross section shall be adjusted to reflect the revision if a pay quantity adjustment is required.

4.5.14 Cross Section Sheets

The disposition of the ***Cross Section Sheets*** with regard to a set of Final "As-Built" Plans depends on the method of payment set up for the earthwork items (refer to ***Special Provisions of Each Contract***).

(A) **Excavation Borrow Pits, Excavation Subsoil,** and **Excavation Channel on Cubic Yard Basis**: Final cross section sheets and volumetric computations are to be prepared and included in the Final "As-Built" Plans. They are required to reflect the actual work accomplished and are the basis of final pay quantities. The original plan cross sections shall remain a part of the Final "As-Built" Plans.

(B) **Embankment, Regular Excavation,** and **Lateral Ditch Excavation on Cubic Yard Plan Quantity Basis**: The original design cross sections are used as the basis for both plan and final pay quantities and to control grading operations. They are to be retained as part of the Final "As-Built" Plans. Additional cross sections to correct plan errors and/or to reflect field revisions are prepared and added to the Final "As-Built" Plans. Detailed instructions pertaining to earthwork are included in ***Chapter 8*** *of this manual*.

4.5.15 Final "As-Built" Bridge Plans

This procedure details the process for revising Final "As-Built" Bridge Plans. The following information shall be recorded on the proper matrices, plans sheets, log books, and forms:

(A) Load Ratings, based on "as-built" condition shall be recorded on the appropriate forms and kept with the Final "As-Built" Plans.

(B) Drill Shaft Inspection Records shall be kept with the Final "As-Built" Plans.

(C) Pile Driving Log Books/Pile Driving records shall be recorded and appropriately marked as permanent record and scanned into CDMS.

The electronic design files for the bridge plans (Category II only) will be updated to reflect "as-built" conditions in the native MicroStation DGN format. (**see Figure 4-4 for category definitions**). The Structures Designer and Facilities Engineers need to have accurate bridge records available for inspection, maintenance, rehabilitation, and emergency repair operations and any future widening operations. ~~The~~ At the Department's option the EOR for the Department or the Contractor's EOR as appropriate, or the CEI consultant will perform this CADD service. The consultant contracts scope will require that "~~as~~As-~~built~~Built" ~~bridge~~ Bridge ~~plans~~ Plans (Category II) be prepared and updated electronically (CADD) during the construction process. The plans shall be completed by the time the project is final accepted or shortly thereafter. The districts will have the option to have the appropriate EOR or the CEI consultant perform this CADD service. The districts will ensure that electronic "~~as~~As-~~built~~Built" ~~plans~~ Plans for Category II bridges are provided. ~~The EOR post design services of consultant contracts scope will also require~~The consultant contracts scope shall also require the EOR to update the bridge load ratings ~~be updated~~ near the end of the construction process based on the "as-built" bridge plans~~.~~ or review load ratings submitted by the Contractor's EOR for contractor initiated revisions.

The CEI consultant will sign, seal, and date sheets requiring minor (meaning non-engineering analysis) "as-built" changes. For major changes, the CEI consultant will send these changes back to the appropriate EOR as outlined in ***Chapter 20** of the **PPM***. Any changes made by value engineering decisions will be signed, sealed, and dated by the ~~responsible Professional Engineer~~Contractor's EOR. This may be a Value Engineering Change Proposal (VECP), redesign or an original design of certain components including Shop Drawings. The Contractor's EOR will send the signed, sealed, and dated plans changes back to the CEI consultant for inclusion into the official record set.

Prior to final acceptance of the construction contract, the electronic as-built bridge plans will be secured using ~~Professional's Electronic Data Delivery System (~~PEDDS~~)~~. The CEI consultant will authenticate the electronic plans using PEDDS, generate the hash code on a sheet of paper, and sign, seal, and date the sheet. This will signify the CEI's authentication of the electronic "as-built" bridge plans.

The signed, sealed, and dated sheet with the hash code will be scanned ~~into the CDMS~~along with the Final "As-Built" Bridge Plans in accordance with ***As-Built Plans Management System User Guide***. ~~The electronic plans would also be copied to a tiff format for long term storage in CDMS for the required retention period (99 years) according to Department of State procedures.~~ The Final "As-Built" Bridge Plans set will be sent to Image API for scanning and attributing.

Updating Final "As-Built" Bridge Plans through the electronic deliverables process will be performed according to the ***CADD Production Criteria Handbook***, the ***CADD Manual*** and the ***PPM***.

4.6 FINAL "AS-BUILT" PLANS HANDLING PROCESS

After the final ~~payout~~close-out/Post Audit Reviews(PAR's), the DFEO will mail the Final "As-Built" Plans set to Image API for scanning and attributing in accordance with the ***As-Built Plans Management System User Guide***. It is recommended that projects in pending litigation should be kept available for such purposes. The Department's procedure for Record Retention shall be adhered to as outlined in the ***Records Management ~~and Distribution~~ Procedure~~s~~, Topic No. 050-020-025*** which is also outlined in the ***As-Built Plans Management System User Guide*** (***See Figure 4-3***).

In the event that there becomes a problem with the scanning process, then the Final "As-Built" Plans records set will be retained until further direction from the Director, Office of Construction.

4.7 FINAL FLIGHT AREIAL PHOTOGRAPHS

Many changes, though minor, are of interest to Final Estimates and others who have occasion to use the Final "As-Built" Plans. Aerial photographs have proven to be an ideal way to document changes, especially for surface items on a project. (Refer to ~~***Chapter 10 of this manual***~~*to your local Survey and Mapping Office for support*).

These photos, processed by the Surveying and Mapping Office are usually transmitted directly to the DFEO where they are added to the Final "As-Built" Plans.

Blue line prints of the photos are available by request to project personnel through the District Final Estimates Manager.

4.8 LIST OF FIGURES FOLLOWING THIS CHAPTER

Figure 4-1
KEY SHEET

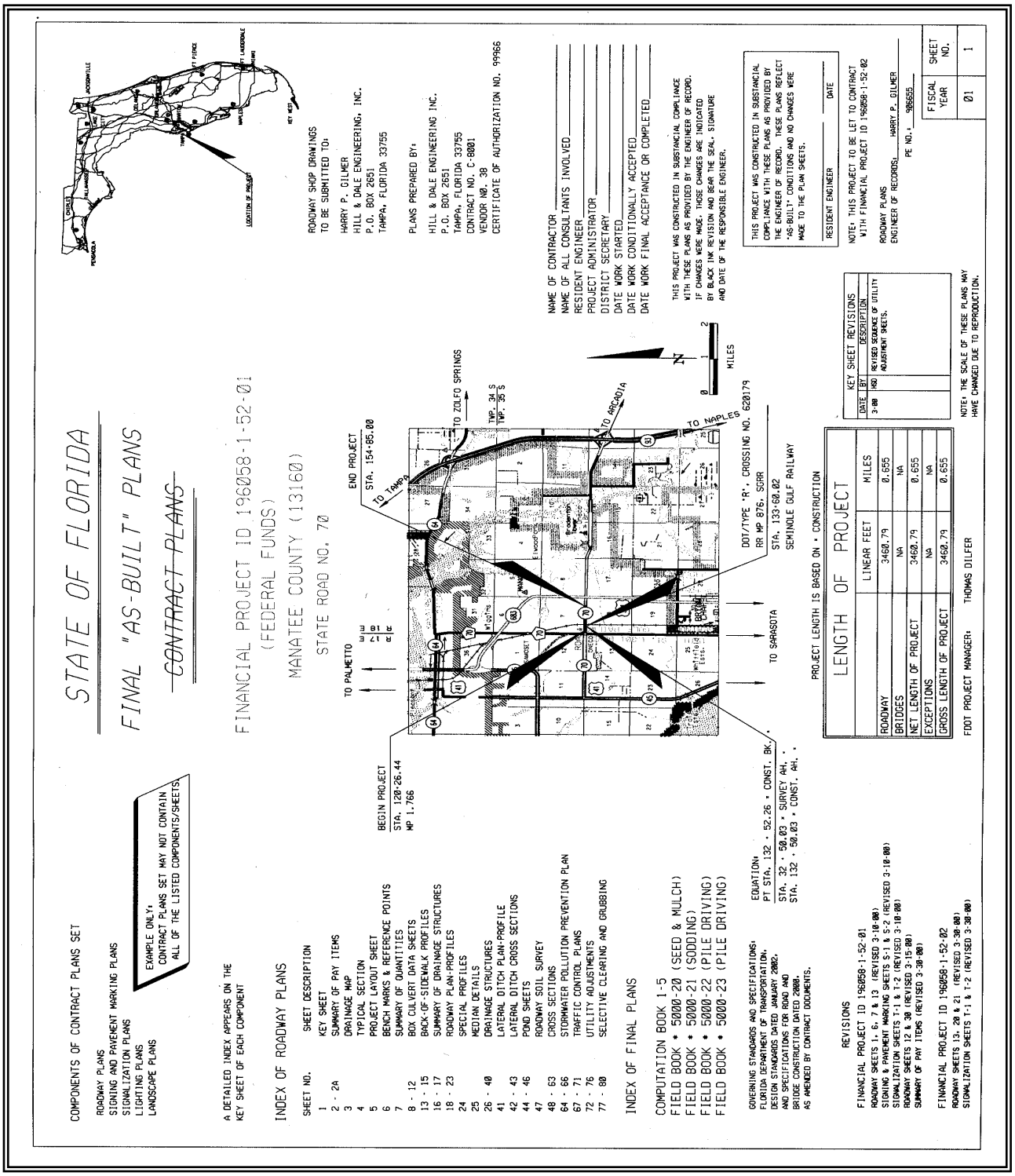

Figure 4-2
ROADWAY AS-BUILT PAVEMENT DATA FORM

State Of Florida Department Of Transportation

700-050-12
CONSTRUCTION
10/08

Roadway - As-Built Pavement Data (LIMS)

Date | Page No. of | LIMS ID

Project ID.: | Pay Item No.: | Material ID.: PROABS

Sample Level: V | Manfr or Prod: | Date Sampled:

Dest. LabID: | Sample No.: | Sampled By:

Sta. From: | Sta. To:

Lane Information

LANE

Pavement Information
(Enter Only New Pavement Layers - Start With First Pavement Layer Placed)

Milling Depth	Layer Number	Subgrade (if new)	Base (if new)	1	2
	Layer Code				
	Approx. Thickness in./mm				

Layer Number	3	4	5	6	7
Layer Code					
Approx. Thickness in./mm					

Remarks:

Figure 4-3
FINAL PLANS PROCESS

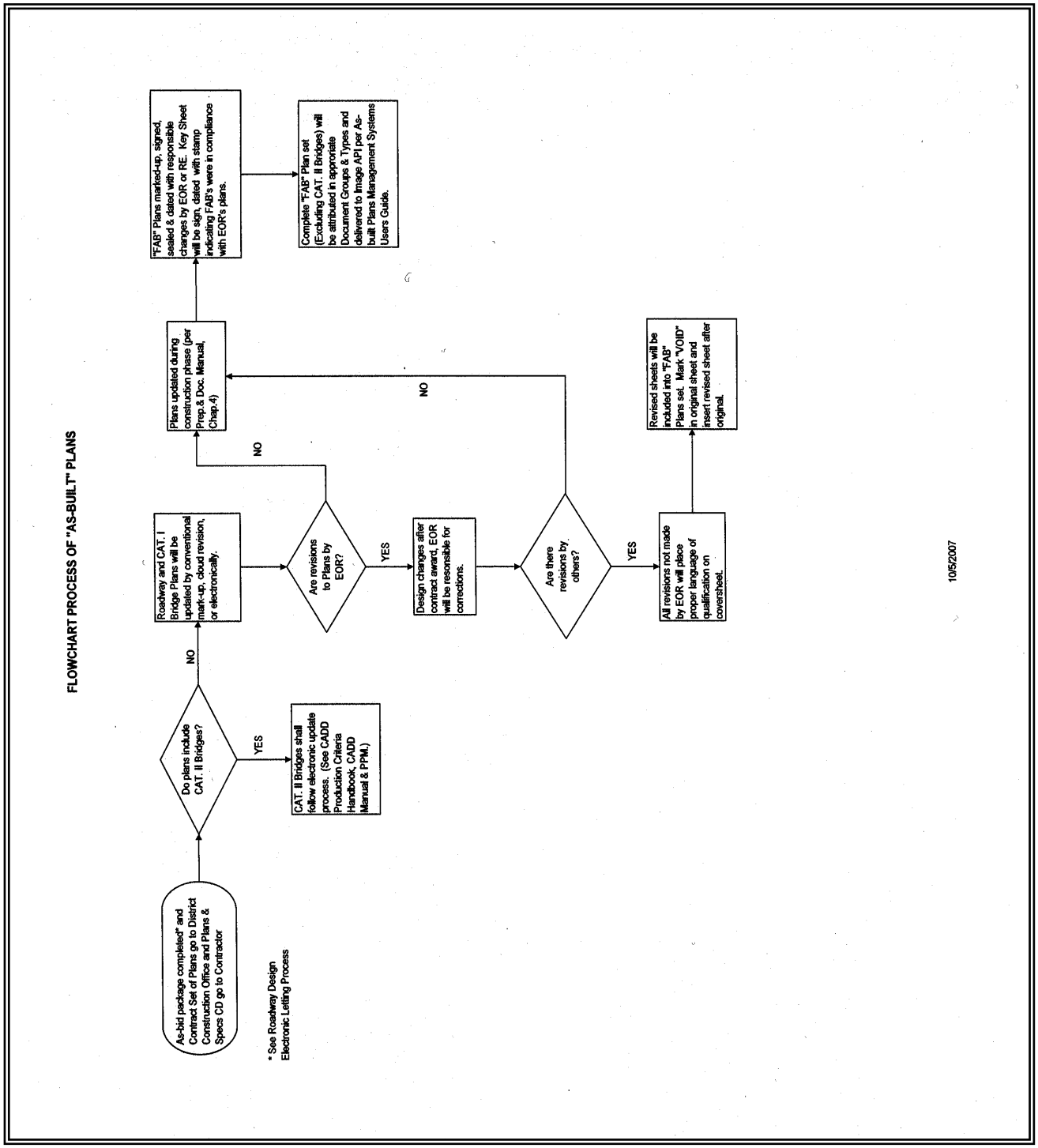

Figure 4-4
BRIDGE CATEGORY DEFINITIONS

26.3 Definitions

All structures have been grouped into the following two categories based upon design difficulty and complexity:

26.3.1 Category 1 Structures

Category 1 Structures consist of box or three-sided culverts, short span bridges (continuous reinforced slabs and prestressed slabs), simple span bridges with spans less than 170 feet, continuous straight steel plate girder bridges with spans less than 170 feet, bridge widenings for these structure types, retaining walls, roadway signing, signalization and lighting supports, sound barriers, and overhead sign structures.

26.3.2 Category 2 Structures

A structure will be classified as a Category 2 Structure when any of the following are present: steel box girders, curved steel plate girders, span lengths equal to or greater than 170 feet, cast-in-place concrete box girder bridges, concrete segmental bridges, continuous post-tensioned concrete bridges with or without pretensioning, steel truss bridges, cable stayed bridges, movable bridges, depressed roadways, tunnels, non-redundant foundations, straddle piers, integral caps, bridges designed for vessel collision, or any design concepts, components, details or construction techniques with a history of less than five (5) years of use in Florida.