

June 30, 2004

NATIONAL ENGINEERING MANUAL  
210V (Second Edition)  
Amendment FL-34

SUBJECT: ENG - NATIONAL ENGINEERING MANUAL, FLORIDA AMENDMENTS

Purpose. To supplement the National Engineering Manual (NEM).

Effective Date. This amendment is effective when received.

The engineering job approval chart for Classes IV and V has been changed for Dike from Hazard Classes II and III to Hazard Class III.

Pages FL503-13(1) – FL503-13(2) and FL503-13(1) – FL503-13(2) correct format and contains no substantial changes in the document.

Filing Instructions. The attached amendments are to be filed in the NEM.

Delete Pages

Insert Pages

-----	NEM Notice Florida Amendment FL-34
FL501-12(11) – FL501-12(20) (03/04)	FL501-12(11) – FL501-12(20) (06/04)
FL503-13(1) – FL503-13(2) (3/04)	FL503-13(1) – FL503-13(2) (6/04)
FL505-12(1) – FL505-12(4) (3/04)	FL505-12(1) – FL505-12(4) (6/04)

Questions regarding the attached amendment should be directed to the SCE.

Jesse T. Wilson  
State Conservation Engineer

Enclosure

DIST: A, F, ENG

PART 501 – AUTHORIZATIONS  
SUBPART A - REVIEW AND APPROVAL

FL501.09 Exhibit FL2 - Engineering job approval authority.

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**ENGINEERING JOB APPROVAL AUTHORITY <sup>1/</sup>**

Name: \_\_\_\_\_ Title: \_\_\_\_\_ Grade: \_\_\_\_\_

Delegated by: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_  
*(Responsible Engineer)*

Concurred By: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_  
*(Line Officer)*

This form will be reviewed with the employee annually and revised as needed. If no significant changes are made, the following table will be used to document that the review has been made by the appropriate engineering personnel.

Reviewed by	Title	Comments	Date:

**DEFINITIONS OF MAXIMUM APPROVAL LIMITS COLUMN**

Inventory and Evaluation (I&E) - Onsite review of an exploratory nature and preparation of sound engineering alternative solutions of sufficient intensity for the land owner to make treatment decisions. I&Es may require assistance from engineers with higher engineering job approval authority for large or complex jobs.

Design - Designing and checking all aspects of supporting data, drawings, and specifications to ensure that the planned practice will meet the purpose for which it is installed. Also includes determining and setting any specific requirements for the site conditions.

Construction – Includes survey construction layout, inspections of construction materials, and construction inspection including performing required tests to determine that the job meets the requirements of the plans and specifications.

Standard designs noted under practice name are those engineering drawings and design criteria that have been approved and distributed or otherwise approved by the State Conservation Engineer. Standard designs are developed to function satisfactorily based on a set of design parameters. The person responsible for design and approval shall verify that the standard design is adaptable to the site and the design limitations are not exceeded.

<sup>1/</sup> Approval of engineering work within the limits of the engineering job approval authority places the full responsibility on the individual for planning, design, and construction of the practice. Any engineering practice may involve complexities, such as geology or hydrology, with which the employee may be unfamiliar. Employees shall request assistance when complexities are encountered which exceed their expertise. The employee approving the engineering design shall check the designs, drawings, and specifications and be satisfied that (1) adequate field investigations have been made; (2) the plans conform to NRCS standards and policy; (3) the layout is suitable; and (4) installations, if constructed in accordance with the plans and specifications, will function properly. Each sheet of the engineering plans shall be signed and dated by the person approving the plans. See National Engineering Manual for additional information on engineering job approval authority.

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Name: _____				Title: _____					Grade: _____		
Prac. Code	Practice Name	Controlling Factors	Units	Job Class					Max. Approval Limits		
				I	II	III	IV	V	I&E	Design	Constr.
--	Any Practice	Hazard Potential as defined in 503 NEM	---	Low	Low	Low	Low	Low.			
--	Any Practice	Alters the visual resources of beaches and shorelines on oceans	---	None	None	None	None	None			
560	Access Road	Surface Treatment	kind	Un-surfaced	Gravel	Gravel	Asphalt	All			
		Length	feet	2,000	5,000	10,000	20,000	All			
		Grade	%	3	5	8	10	All			
		Culvert									
		Pipe, I.D.	feet	2	3	4	5	6			
		Fill Height Over Top of Pipe	feet	3	5	8	12	All			
	Other Water Control Structures		2/	2/	2/	2/	2/	2/	2/	2/	
702	Agrichemical Handling Facility	Tank Storage Volume for Chemicals	gal	None	None	500	1,000	5,000			
703	Agrichemical Mixing Station - Portable	Area	sq. ft.	None	None	All	All	All			
316	Animal Mortality Facility										
	<u>Normal Mortality</u>										
	Composters	Capacity	cu. ft.	1,000	2,000	All	All	All			
	Freezers	Capacity	cu. ft.	None	None	All	All	All			
	Incinerator	Capacity	lbs.	None	None	All	All	All			
	Disposal Pit	Capacity	cu. ft.	None	None	All	All	All			
	<u>Catastrophic Mortality Events</u>										
Burial Pit	Capacity	cu. ft.	None	None	All	All	All				
Composting	Capacity	cu. ft.	None	None	All	All	All				
365	Anaerobic Digester – Ambient Temperature	No.	each	None	None	None	All	All			
366	Anaerobic Digester – Controlled Temperature	No.	each	None	None	None	All	All			

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Name: _____				Title: _____					Grade: _____		
Prac. Code	Practice Name	Controlling Factors	Units	Job Class					Max. Approval Limits		
				I	II	III	IV	V	I&E	Design	Constr.
575	Animal Trails and Walkways	Area	acres	0.5	2	5	10	All			
450	Anionic Polyacrylamide (PAM) Erosion Control	Area	acres	1	20	40	80	All			
397	Aquaculture Ponds	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
	Surface Area	acres		1	2	5	10	All			
310	Bedding	Area	acres	10	40	160	320	All			
584	Channel Stabilization	Design Capacity	cfs	10	100	300	400	500			
		Design Velocity	fps	2	2.5	3	5	10			
326	Clearing & Snagging	Length of Reach	feet	500	1,500	2,500	All	All			
360	Closure of Waste Impoundments	Surface Area	acres	0.5	1.0	3.0	10	All			
317	Composting Facility (Std. Design)	Design Capacity	cu. ft.	1,000	2,000	3,000	5,000	All			
656	Constructed Wetland	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
	Area	acres		0.5	1	5	20	All			
402	Dam	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
	Storage	ac-ft		1	10	50	100	All			
348	Dam, Diversion	Stream Flow (25 yr. freq.)	cfs	100	500	1,000	1,500	2,000			
		Flow Diverted	cfs	10	50	100	150	200			
		Height of Drop	feet	2	3	5	7	8			
356	Dike	Water Height	feet	1	2	3	5	12			
		Hazard	class	III	III	III	III	III			
362	Diversion	Drainage Area	acres	5	20	40	100	All			
554	Drainage, Water Management	Area501.09 Eng Job Approva	acres	40	80	160	640	All			
432	Dry Hydrant	Capacity	gpm	500	1,000	2,000	All	All			
393	Filter Strip	Surface Area	acres	0.5	1	5	All	All			

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Name: _____		Title: _____							Grade: _____			
Prac. Code	Practice Name	Controlling Factors	Units	Job Class					Max. Approval Limits			
398	Fish Raceway or Tank	Length	feet	500	1,000	2,000	3,000	All				
		Capacity	cfs	1	3	5	10	All				
410	Grade Stabilization Structure	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	
412	Grassed Waterway	Design Capacity	cfs	25	50	100	250	All				
561	Heavy Use Area Protection	Area Treated	acres	0.25	0.5	1.0	All	All				
		Surface Treatment	kind	Grass, mulch, etc.	Gravel	Limerock	All	All				
320	Irrigation Canal or Lateral	Design Capacity	cfs	10	25	100	300	500				
388	Irrigation Field Ditch	Design Capacity	cfs	1	5	10	25	All				
464	Irrigation Land Leveling	Design Area	acres	40	80	160	640	All				
552	Irrigation Regulating Reservoir (Std. Design)	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	
		Storage	ac-ft	5	10	20	40	All				
436	Irrigation Storage Reservoir	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	
		Storage Capacity	ac-ft	5	10	20	40	All				
441	Irrigation System, Microirrigation	System Area	acres	10	40	80	160	All				
		Slope	%	0.5	2	5	All	All				
442	Irrigation System, Sprinkler	System Area	acres	10	40	80	160	All				
		Slope	%	2	5	10	All	All				
443	Irrigation System, Surface and Subsurface											
		<u>All surface systems</u>	System Area	acres	20	40	80	160	All			
		<u>Subsurface systems</u>										
		Crown Flood	System Area	acres	20	80	160	320	All			
		Flow Through	System Area	acres	20	80	160	320	All			
		Fully Enclosed	System Area	acres	20	40	80	320	All			
		Open Channels	System Area	acres	20	80	160	320	All			
		Underground Conduits	System Area	acres	10	20	80	160	All			
		Ebb and Flow	System Area	acres	5	10	20	40	All			

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Name: _____		Title: _____							Grade: _____		
Prac. Code	Practice Name	Controlling Factors	Units	Job Class					Max. Approval Limits		
447	Irrigation System, Tailwater Recovery	Pump-back Capacity	gpm	500	1,000	2,500	5,000	All			
		Area Served	acres	20	80	160	320	All			
543	Land Reconstruction, Abandoned Mined Land	Area	acres	0.5	10	40	160	All			
428	Irrigation Water Conveyance, Ditch & Canal Lining	Design Capacity	cfs	2	5	50	100	200			
430	Irrigation Water Conveyance, Pipeline	Pipeline Capacity ≥ 50 psi	gpm	300	600	1,200	2,000	3,500			
		Pipeline Capacity ≤ 50 psi	gpm	300	600	1,200	2,000	5,000			
449	Irrigation Water Management	Area Served	acres	10	40	80	320	All			
460	Land Clearing	Area Cleared	acres	5	10	40	All	All			
455	Land Reclamation, Toxic Discharge Control	Flow	cfs	None	None	None	None	None			
466	Land Smoothing	Area Smoothed	acres	40	80	160	320	All			
468	Lined Waterway or Outlet	Design Capacity	cfs	10	50	100	300	All			
779	Livestock Cooling Pond	Water Surface Area	acres	0.25	0.50	1.0	All	All			
717	Livestock Shade Structure	Structure Size, Area	sq. ft.	300	500	All	All	All			
634	Manure Transfer	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/
482	Mole Drain	Length	feet	660	1,320	All	All	All			
353	Monitoring Well	No.	each	None	None	None	All	All			
500	Obstruction Removal	Hazard to Public During Removal									
		None	acres	0.5	1	3	All	All			
		Moderate to High	acres	None	None	None	None	None			
582	Open Channel	Design Capacity (Subcritical Flow Only)	cfs	50	100	300	500	1,000			
		Design Velocity	fps	2.0	2.0	3.0	5	10			
516	Pipeline	Operating Pressure	psi.	60	80	125	200	300			
		Inside Diameter	in.	2	3	4	6	8			

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Name: _____		Title: _____							Grade: _____			
Prac. Code	Practice Name	Controlling Factors	Units	Job Class					Max. Approval Limits			
378	Pond											
	Embankment	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/
	Excavated	Water Surface Area	acres	0.25	0.50	1.0	All	All				
521	Pond Sealing or Lining	Area Lined	acres	0.25	0.5	2	5	All				
462	Precision Land Forming	Design Area	acres	40	160	320	640	All				
533	Pumping Plant	<u>Axial Flow Pump</u>										
		Design Capacity	gpm	1,000	2,500	10,000	30,000	50,000				
		Static Head	feet	10	10	10	12	15				
		<u>Mixed Flow Pump</u>										
		Designed Capacity	gpm	1,000	5,000	10,000	30,000	50,000				
		Head	feet	10	10	15	30	40				
		<u>Centrifugal Pump</u>										
		Design Capacity	gpm	300	500	2,000	2,500	3,500				
		Static Head	feet	75	150	300	350	350				
		<u>Turbine Pump</u>										
		Design Capacity	gpm	300	500	1,500	2,500	3,500				
		Static Head	feet	75	150	300	350	500				
566	Recreation Land Grading & Shaping	Area Graded	acres	4	10	40	160	All				
568	Recreation Trail and Walkway	Length	feet	1,000	5,000	10,000	All	All				
		Surface Treatment	kind	No Treat.	Wood Chips	Gravel	All	All				
558	Roof Runoff Structure	Roof Area	sq. ft.	2,000	10,000	All	All	All				
557	Row Arrangement	Area of Field	acres	40	160	320	640	All				
570	Runoff Management System	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/
		Area of System	acres	1	5	20	100	All				
350	Sediment Basin	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/	2/
572	Spoil Spreading	Area Receiving Spoil	acres	0.25	0.50	3.0	All	All				

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Name: _____		Title: _____							Grade: _____		
Prac. Code	Practice Name	Controlling Factors	Units	Job Class					Max. Approval Limits		
574	Spring Development	Spring Flow	gpm	10	50	300	450	All			
787	Stormwater Wet Detention/Chemical Treatment System	Storage	ac-ft	10	20	40	160	All			
580	Streambank and Shoreline Protection	Beaches and Shorelines, Revetments, Bulkheads, and Groins									
		Water Height Above Shoreline	feet	None	None	None	None	3			
		Bankfull Capacity	cfs	None	None	200	500	5,000			
		Bankfull Velocity	fps	None	None	3	5	10			
587	Structure for Water Control	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
		Design Capacity	cfs	10	50	100	300	All			
606	Subsurface Drain	Design Area	acres	10	40	160	640	All			
		Diameter	in.	4	8	12	24	All			
607	Surface Drainage, Field Ditch	Drainage Area	acres	2	5	10	All	All			
608	Surface Drainage, Main or Lateral	Design Capacity	cfs	10	50	100	300	1,000			
		Design Velocity	fps	1.5	2.0	3.0	5	10			
600	Terrace	Area of System	acres	25	50	100	All	All			
620	Underground Outlet	Pipe Diameter	in.	6	8	10	18	All			
367	Waste Facility Cover	Area of Cover	acres	None	None	None	All	All			
313	Waste Storage Facility (Std. Design)	<u>Structure</u>									
		<u>Wall Height</u>									
		Above Ground	feet	0	3	6	10	16			
		Below Ground	feet	0	3	5	8	8			
		<u>Tank Span</u>									
		Above Ground	feet	0	0	0	All	All			
		Below Ground	feet	0	0	0	14	16			
		<u>Storage Capacity</u>	cu. ft. (thous)	0	0	0	1,000	2,000			
		<u>Impoundment</u>									
		Storage Volume	ac. ft.	5	10	40	100	All			
Effective Height of Dam	feet	5	10	15	25	35					

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Name: _____		Title: _____							Grade: _____		
Prac. Code	Practice Name	Controlling Factors	Units	Job Class					Max. Approval Limits		
359	Waste Treatment Lagoon	Aerobic-Surface Area	acres	0.25	0.50	1.0	8	25			
		Anaerobic Volume	cu. ft. (thous)	50	100	500	1,000	2,000			
		Effective Height of Dam	feet	5	5	15	25	35			
635	Wastewater Treatment Strip	Area	acres	1	2	5	10	All			
633	Waste Utilization	Area	acres	20	40	160	All	All			
638	Water and Sediment Control Basin	Drainage Area	acres	5	10	20	All	All			
		Fill Height	feet	5	10	12	15	All			
614	Watering Facility	Capacity	gal.	100	200	1,000	All	All			
642	Water Well	Diameter	in.	4	6	8	16	All			
351	Well Decommissioning	Diameter	in.	4	6	8	All	All			
755	Well Plugging	Diameter	in.	4	6	8	10	All			
658	Wetland Creation	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
		Area	acres	0.25	0.50	5	20	All			
659	Wetland Enhancement	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
		Area	acres	10	20	40	All	All			
657	Wetland Restoration	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>	<u>2/</u>
		Area	acres	10	20	40	All	All			
648	Wildlife Watering Facility	Surface Area	acres	0.25	0.50	1	All	All			
		Capacity of Fabricated Structure	gal	100	200	1000	All	All			

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Name: \_\_\_\_\_ Title: \_\_\_\_\_ Grade: \_\_\_\_\_

Prac. Code	Practice Name	Controlling Factors	Units	Job Class					Max. Approval Limits			
---	<sup>2/</sup> Dams and Structures	Hazard Class	---	low	low	low	low	low	low	low	low	low
		Drainage Area	sq. mi.	0.25	0.50	1.0	5.0	20.0				
		<sup>3/</sup> Effective Height	feet	10	15	25	30	35				
		Embankment over active fault	---	None	None	None	None	None				
		<u>Open Channel Spillways</u>										
		slope > 0.5%	acres	40	80	640	960	12,800				
		slope < 0.5%	sq. mi.	0.25	1	5	10	20				
		<u>Principal Spillway Prefabricated Conduit (Single)</u>										
		<u>Corrugated Metal</u>										
		Inside Diameter	in.	12	24	36	42	48				
		<sup>4/</sup> Total Head	feet	10	15	25	30	All				
		<u>Concrete</u>										
		Inside Diameter	in.	None	12	24	36	48				
		<sup>4/</sup> Total Head	feet	None	10	20	30	All				
		<u>HDPE</u>										
		Inside Diameter	in.	12	24	36	42	48				
		<sup>4/</sup> Total Head	feet	3	5	10	15	All				
		<u>Plastic (PVC)</u>										
		Inside Diameter	in.	8	12	15	18	48				
		<sup>4/</sup> Total Head	feet	5	10	15	20	All				
		Storage x Height	ac-ft <sup>2</sup>	500	1,000	2,000	3,000	3,000				
		<u>Straight Drop Spillways (Std Design)</u>										
		Net Drop	feet	None	4	6	8	8				
		Weir Capacity	cfs	None	100	300	400	500				
		<u>Box Inlet Drop Spillways Open or to Conduit</u>										
		Net Drop	feet	None	3	4	5	6				
		Weir Capacity	cfs	None	100	300	400	500				
		<u>Chutes (Std. Design)</u>										
		Net Drop	feet	None	4	8	10	12				
		Weir Capacity	cfs	None	50	200	250	300				

<sup>2/</sup> Dams & Structures - All with relatively impervious cutoff, simple foundation needs, and standard or proven designs not exceeding the limits of effective height and total head set forth above in the above table.

<sup>3/</sup> Effective height of dam is the difference in elevation in feet between the lowest open channel auxiliary spillway crest and the lowest point in the original profile along the centerline of the dam. If there is no open channel auxiliary spillway, the top of the dam becomes the upper limit.

<sup>4/</sup> Total head is measured from crest of auxiliary spillway to elevation at the top of pipe outlet.

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PART 503 - SAFETY

SUBPART D – DAM SAFETY

FL503.56(b)

FL503.55 NRCS/State Relationships.

The State Conservation Engineer (SCE) is responsible for coordinating NRCS activities concerning dam safety and adherence to state laws. The SCE shall establish needed working arrangements with the State of Florida in promoting a strong State dam-safety program. Florida's dam safety law is contained in Water Resources, Chapter 373, Florida Statutes (F.S.). Rules and regulations for the administration of Chapter 373, F. S. have been delegated to the five water management districts and are contained in Chapter 40 (A, B, C, D, and E)-4 Florida Administrative Code (F.A.C.). The law contains requirements for a permit to construct, alter or remove a dam.

FL503.56 Responsibility for dams.

(a) NRCS in Florida provides technical and/or financial assistance on dams, dikes, and other water control structures under various programs. Sudden failure of many of these may seriously endanger life and property. Adequate design, construction, and proper operation and maintenance can significantly reduce the likelihood of such failures. NRCS technical assistance in the design and construction of dams shall ensure that all applicable state laws and regulations and NRCS standards are met and that the dam does not pose an unsafe condition to downstream landowners.

(b) For dams planned, designed, and constructed under the conservation operations program, the District Conservationist (DC) in consultation with the Area Conservationist and Area Engineer, is responsible for determining if proper design and construction inspection assistance can be provided to fulfill NRCS commitments in accordance with NRCS policy and state law, rules and regulations. If NRCS cannot provide the necessary technical assistance in a timely manner, the DC shall inform the landowner of his/her need to arrange for the services of a private engineer before proceeding with the project. Before NRCS provides technical assistance for the design of dams, the DC is to inform the landowner in writing of his/her responsibilities to comply with all applicable laws, regulations and permit conditions in constructing and operating the dam. When the design and plans are complete, the landowner is responsible for obtaining required permits to construct the dam. The DC should provide assistance as needed in securing the permit, but shall not act as an agent for the landowner under any circumstances.

FL503-13(1)

PART 503 - SAFETY

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PART 505 - NON-NRCS ENGINEERING SERVICES  
SUBPART B - USE OF NON-NRCS ENGINEERING SERVICES

FL505.10(a)(2)(iii)

FL505.10 Non-project activities

(a) Non-NRCS Engineering Services

(2) (i) It is NRCS policy in Florida to encourage the use of non-NRCS engineering services in planning and applying soil and water conservation measures, regardless of size, for individuals or groups who wish to use these services and where NRCS standards and specifications will be followed.

(ii) Non-NRCS engineering services should be used for jobs that exceed the engineering job approval authority of the Area Engineer (AE). Where requests for technical services are beyond the normal capabilities, staff time, and/or resources available at the field offices, the Area Conservationist (AC) may set the limits of NRCS assistance to an engineering job class below that of the AE's engineering job approval authority. This will allow NRCS staff to work on jobs within available resources and to further encourage the use of non-NRCS engineering services. Requests for engineering assistance exceeding the AE's engineering job approval authority are to be submitted to the State Conservationist (STC) by the AC for approval prior to committing resources beyond a preliminary investigation.

(iii) Non-NRCS engineering services shall be used for jobs that exceed the engineering job approval authority of the state conservation engineer (Class VI and greater), unless specifically authorized by the STC. Unless additional assistance is authorized, NRCS assistance on these jobs shall be limited to conservation planning assistance, preliminary investigations, furnishing criteria and consultative assistance. Requests for NRCS assistance on these complex jobs shall be in writing from the AC to the STC. The STC will evaluate the request and determine the extent of assistance that NRCS can provide and inform the AC of his/her decision. The request shall include, but not be limited to, the following information:

- Location of the proposed job.
  - General description of the proposal and brief discussion of its complexities.
  - Purpose of the proposed work.
  - Landowner or operator, group, or organization requesting assistance.
  - Estimated cost of the job.
  - Availability of non-Service engineers including Technical Service Providers and A&E Services.
  - Engineering assistance needed that cannot be provided at the area level such as geology, structural design, etc.
  - Assurance that interested landowner(s) or operator(s) will install the facility in accordance with the plans and specifications. (Note: landowner(s) or operator(s) will be required to pay for necessary soil mechanics laboratory tests.)
- \* Area staff recommendation on what assistance NRCS should provide.

FL505-12(1)

Part 505 - NON-NRCS ENGINEERING SERVICES

FL505.10(b)

(b) Technical Services.

(1) Utilizing technical services.

(i) Qualified contractors and other qualified individuals should be encouraged to design, layout, and provide construction check out of conservation practices. To facilitate this, field offices should determine the training needs of local contractors and provide training where applicable. Training may include such items as how to perform design surveys, how to use NRCS standards and specifications, how to perform construction layout surveys from bench marks and reference stakes or lines, how to prepare engineering designs, and how to perform construction checks.

(ii) The cooperator and the person providing technical services shall be informed and understand that they are responsible for the accuracy of the survey and supporting data. The survey, design, and supporting data need not be the format used by NRCS but must be legible and understandable. The NRCS acceptance of a design is based on the assumption that the survey and supporting data are accurate.

(iii) To ensure conformance to NRCS standards and specifications, jobs designed by someone providing technical services shall be reviewed and approved by NRCS personnel having the appropriate engineering job approval authority prior to installation. If the NRCS employee responsible is satisfied that the design will meet standards and specifications, a statement such as: "This design, as presented, will meet NRCS minimum standards and specifications." shall be placed on the design, dated and signed by the NRCS employee.

(iv) The landowner and designer will be informed, preferably in writing, that the NRCS must be notified at least three days prior to the start of construction. Failure to inform the NRCS and not provide the NRCS an opportunity to inspect construction may result in the NRCS not being able to certify the practice as meeting standards and specifications.

(v) The certification of practices accomplished by non-NRCS personnel within the field office service area is the responsibility of the District Conservationist (DC). The DC may accept the final checkout, and quantity documentation provided by individuals providing technical services as supporting data for certifying performance of a practice. The individual is to furnish signed statements, sketches, design data and notes giving appropriate information and measurements to show that standards and specifications have been met and design quantities have been installed. The supporting data does not have to be in the format used by NRCS, but must be legible and understandable. This information must be on file before certifying the practice.

(vi) Utilizing technical services of non-NRCS employees does not relieve the DC of the responsibility for determining needs and practicability for cost share programs.

FL505-12(2)

(210-V-NEM, Amend. FL-34, June 2004)

## SUBPART B - USE OF NON-NRCS ENGINEERING SERVICES

### FL505.10(b)(1)(viii)

(vi) Where persons supplying technical services are utilized in providing construction documentation, a complete construction check (spot check) will be made on at least one (1) job but not less than ten (10) percent of the jobs designed and/or installed by each individual during the fiscal year. Spot checks will be conducted by a NRCS engineer. The spot check notes will be recorded and filed in the field office. If it was determined that the individual performed unacceptable work, additional jobs will be checked and the AC will determine if a misunderstanding exists and if the individual can be depended upon to perform to the quality expected. If the individual produces poor quality plans, designs, or checking of completed installations, then all the individual's documentation will not be utilized in certifying practices.

(viii) Laws and regulations - Those who provide technical services need to be aware of state laws and regulations contained in Chapter 471, Florida Statutes (F.S.) and Chapter 61G15, Florida Administrative Code (F.A.C.). The practice of engineering must be performed under the responsible charge of or by a Florida registered professional engineer. Persons who are not registered professional engineers or who do not have a registered engineer to seal the specifications, construction drawings, reports, and other engineering documents must be careful not to be in violation of state law. Compliance with state law is the individual's responsibility and NRCS acceptance of an individual's work does not suggest or imply compliance with state engineering registration requirements.

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