

Departamento de Transportación y Obras Públicas
Autoridad de Carreteras y Transportación
Directoría de Infraestructura

DIRECTRIZ DE DISEÑO 103

**Certificación de Recomendaciones Estructurales, Geotécnicas
y de Socavación para Cimientos de Puentes**

Revisión: Noviembre-2009

Con el propósito de aligerar el proceso de revisión de los informes técnicos y aceptar los diseños preliminar y final, el diseñador deberá:

1. Certificar que las recomendaciones respecto a la profundidad de cimentación de las zapatas, pilotes o cualquier otro tipo de fundación y el resultado de la evaluación de socavación (Item 113) de acuerdo al "National Bridge Inspection Standards" (NBIS) están dentro de los parámetros prácticos y seguros, para que dicha estructura sea completamente funcional.
2. Enviar dicha certificación al Área de Diseño, y otra, a la Oficina de Ingeniería de Suelos para poder agilizar los trámites correspondientes.
3. Presentar dicha certificación con la firma, número y fecha de expiración de la licencia de los profesionales correspondientes.

La plantilla a utilizarse para la certificación se encuentra como anejo de esta directriz de diseño.

Esta directriz tiene vigencia inmediatamente.



Harold Cortés Laclaustra
Director Ejecutivo Auxiliar
para Infraestructura



Fecha

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Certificación de Recomendaciones Estructurales, Geotécnicas y de Socavación para Cimientos de Puentes

Revisión: Noviembre-2009

Department of Transportation and Public Works Puerto Rico Highway and Transportation Authority Infrastructure Directorate DESIGN AREA				Project Code:	AC-xxxxxx
				FHWA Code:	xxxxxx
				Date:	xxxx xx, 20xx
				Submitted by:	Consultant Firm Name
				Initials:	xxx
CERTIFICATION OF STRUCTURAL, GEOTECHNICAL AND SCOURING RECOMMENDATIONS FOR BRIDGE FOUNDATIONS					
BRIDGE INFORMATION					
Highway No.:		KM.		Bridge No.:	xxxx
Over:				Structure Sta.:	
Municipality:				Design Type:	
PROJECT DESCRIPTION:					
We have studied and analyzed in details the aspects related with the project substructure, the recommendations for bridge foundations are followings: [Describe in details the recommendations to be implemented in the project.]					
CODE DESCRIPTION FOR SCOUR CRITICAL BRIDGE (Type "X" for one applicable code.)				ITEM 113	<code>
N Bridge not over waterway.					
U Bridge with "unknown" foundation that has not been evaluated for scour. Since risk cannot be determined, flag for monitoring during flood events and, if appropriate, closure.					
T Bridge over "tidal" waters that has not been evaluated for scour, but considered low risk. Bridge will be monitored with regular inspection cycle and with appropriate underwater inspections. ("Unknown" foundation in "tidal" waters should be coded U.)					
9 Bridge foundations (including piles) on dry land well above flood water elevations.					
8 Bridge foundations determined to be stable for assessed or calculated scour conditions: calculated scour is above top of footing.					
7 Countermeasures have been installed to correct a previously existing problem with scour. Bridge is no longer scour critical.					
6 Scour calculation/evaluation has not been made. (Use only to describe case where bridge has not yet been evaluated for scour potential.)					
5 Bridge foundations determined to be stable for calculated scour conditions; scour within limits of footing or piles.					
4 Bridge foundations determined to be stable for calculated scour conditions; field review indicates action is required to protect exposed foundations from effects of additional erosion and corrosion.					

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		Date:	XXXX xx, 20XX	
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		Initials:	XXX	
CERTIFICATION OF STRUCTURAL, GEOTECHNICAL AND SCOURING RECOMMENDATIONS FOR BRIDGE FOUNDATIONS				
	3	Bridge is scour critical; bridge foundations determined to be unstable for calculated scour conditions: - Scour within limits of footing or piles. - Scour below spread-footing base or pile tips.		
	2	Bridge is scour critical; field review indicates that extensive scour has occurred at bridge foundations. Immediate action is required to provide scour countermeasures.		
	1	Bridge is scour critical; field review indicates that failure of piers/abutments is immitent. Bridge is closed to traffic.		
	0	Bridge is scour critical. Bridge has failed and is closed to traffic.		
We certify that these recommendations are in accordance with the conclusions of our multidisciplinary team and it represents a feasible and functional alternative for the project.				
SPECIALISTS		SIGNATURE	LICENSE NO.	DATE
< Print Name> Structural Engineer			<License Number> (Expiration Date)	
< Print Name> Geotechnical Engineer			<License Number> (Expiration Date)	
<Print Name> Hydraulic Engineer			<License Number> (Expiration Date)	
CONSULTANT SECTION				
Consultant Information		Signature	Date	
Name:	<Consultant Name>			
Employed by:	<Company or Consultant Firm Name>			
Address:	<Company or Consultant Firm Address>			
Telephone:	<Telephone Number>			
Fax:	<Fax Number>			
E-mail:	<e-mail address>			