Florida Department of Transportation

CHARLIE CRIST
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

STEPHANIE C. KOPELOUSOS
SECRETARY

May 14, 2010

TO: District Directors of Operations, District Directors of Production, District Design Engineers, District Construction Engineers, District Geotechnical Engineers, District Structures Design Engineers

FROM: Robert V. Robertson, Jr., P. E., State Structures Design Engineer
David O'Hagan, P.E., State Roadway Design Engineer

COPIES: Brian Blanchard, Lora Hollingsworth, Tom Andres, Marcus Ansley, Charles Boyd, Sam Fallaha, Larry Jones, Andre Pavlov, Jeffrey Ger (FHWA)

SUBJECT: Structures Design Bulletin C10-03
Roadway Design Bulletin 10-06
Implementation of Developmental Design Standards Policy

This Design Bulletin introduces the concept of Developmental Design Standards and implements policies and practices related to their use. Developmental Design Standards are to be regarded as Design Standards in accordance with Topic No. 625-010-003-h in all respects except as noted herein.

Developmental Design Standards will be released by the Structures Design Office (SDO) or Roadway Design Office (RDO) to implement new technologies in a limited trial fashion on an as-needed or as-available basis. As Developmental Design Standards are released, a Structures and/or Roadway Design Bulletin will be issued to announce the availability of the standard. A specific SDO or RDO contact person will be listed in each bulletin.

A sample Developmental Design Standard is attached to this bulletin. Images of available Developmental Design Standards will be posted on the Design Standards website along with instructions for the use of the standard. These images are intended for informational purposes only and will be read-only files with a watermark across the viewing area. Designers wishing to use a Developmental Design Standard must request approval to do so from the SDO or RDO contact person as appropriate to confirm the project-specific applicability of the standard. If the use of a Developmental Design Standard is deemed appropriate by the SDO for structures related standards or RDO for roadway related standards, with concurrence by the appropriate District Design Engineer or District Structures Design Engineer, a completed standard will be issued to the designer for inclusion in the project. The completed standard will have a title block filled in with project specific information and will be electronically signed and sealed. The corresponding electronic signatory files and the signed and sealed Signature Document will also be delivered.

Developmental Design Standards are to be inserted at the end of roadway or bridge plan sets as applicable and listed in the appropriate index of sheets. When they are included in bridge plan sets, Developmental Design Standards are to be inserted before existing bridge plan sheets if they are present. Developmental Design Standards are also to be included in the Electronic Delivery Index as outlined in Section 7.1 of the FDOT Electronic Delivery Training Course which can be found at: http://www.dot.state.fl.us/ecso/downloads/documentation/EDTrainingGuide/EDDocuments.shtm

Developmental Design Standards will be signed and sealed by the standard's originator and are not to be signed and sealed by the project Engineer of Record (EOR). The project EOR will, however, have to confirm the fitness of a particular Developmental Design Standard for use in the design of a project as is currently required when using Design Standards. The project EOR will be responsible for developing and including in the plans any supplemental information required to complement the standard for proper use.

New Developmental Specifications, Technical Special Provisions or Modified Special Provisions will be developed and implemented as-needed to coincide with the release of a Developmental Design Standard. These items will be posted on the Design Standards website with the Developmental Design Standard for informational purposes. They will be completed and issued to the project EOR along with the completed standard. New pay item numbers will be provided for Developmental Design Standards if required.

Due to their inherent nature, changes may be made to Developmental Design Standards from project to project as deemed appropriate by each standard's originator. Such changes may be based on project feedback and or lessons learned which may result in multiple versions of a given standard over time. If revisions to a previously released project specific version of a given Developmental Design Standard are necessary, the revisions will be coordinated with the State Construction Office and handled through normal contract administration procedures.

Due to their developmental status, Developmental Design Standards are not intended to be used on Design Build or LAP projects. If a district desires to use a concept or component from a given Developmental Design Standard then this requirement should be included in the RFP. Rather than using the actual standard however, the Design Build EOR would include the Developmental Design Standard concept or component in the project and take full responsibility for the design.

REQUIREMENTS

1. Replace ***Plans Preparation Manual***, Volume 1, Section 19.2 with the following:

   19.2 Sealing of Contract Plans/Record Set
   An Engineer of Record (EOR) is a Florida licensed professional engineer in responsible charge for the preparation of engineering documents. A Professional of Record (POR) is any Florida licensed professional in responsible charge for the preparation of design documents. An original set of the Contract Plans shall be sealed by the EOR or POR. This becomes the Record Set. Every sheet of the Record Set other than existing bridge plans (if present in the plan set) must be sealed by an EOR (or POR). The key sheet must be prepared and sealed by the EOR (or POR) who is the Prime Professional for that component. Other individual sheets of the Record Set may be sealed by a

delegated engineer or professional, who in turn becomes the EOR (or POR) for that portion of the work. A plans set shall not make reference to a sealed copy of "District Standards" that are kept on file at the District Office. Any "District Standards" intended for use on a project must be included in the plans set and sealed by the EOR (or POR) for that project.

2. Add the following to ***Plans Preparation Manual***, Volume 1, Chapter 26, Exhibit 26-D after "Load Rating Summary Sheet":

ITEM	BDR	30%	60% Substr. Submittal	60% Structures Plans	90%	100%
Developmental Design Standards		C	C	C	F	F
Existing Bridge Plans		F ‡‡	F ‡‡	F ‡‡	F	F

‡‡ Widenings and projects with phased construction

3. Add the following to ***Plans Preparation Manual***, Volume 2, Chapter 2, Figure 2.1 Summary of Phase Submittals, after "Selective Clearing and Grubbing":

Item	**Phase I**	**Phase II**	**Phase III**	**Phase IV**
Developmental Design Standards		C	C	F

4. Add the following to ***Plans Preparation Manual***, Volume 2, Chapter 3, Section 3.8 after the existing third paragraph:

   Developmental Design Standards are to be inserted at the end of roadway or bridge plan sets as applicable. When they are included in bridge plan sets, Developmental Design Standards are to be inserted before existing bridge plans if they are present. Developmental Design Standards are to be listed in the index of sheets for the plans component they are included in.

5. Follow the process shown in the attached "Developmental Design Standards – Usage Process" for requesting and using a Developmental Design Standard.

COMMENTARY

Developmental Design Standards will be released from time to time to address the implementation of new technologies in a limited fashion. Once a Developmental Design Standard has been used successfully on several projects, it will be considered for integration into the Design Standards.

The policy for a project EOR to not sign and seal a Developmental Design Standard is consistent with the current practice regarding the use of Design Standards and Interim Design Standards. Unlike Design Standards and Interim Design Standards however, Developmental Design Standards are to be included in the plans to limit their use to specific projects and to simplify delivery of the drawings to the contractor.

Designers are encouraged to submit suggestions for possible new Developmental Design Standards to the SDO and/or RDO, as appropriate.

BACKGROUND

The development of some current structures related Design Standards was based on their trial usage on SDO in-house designed projects. With a more limited number of in-house designs being undertaken by the SDO, the decision was made to create structures related Developmental Design Standards. The concept was later broadened to also include Developmental Design Standards for roadway related items.

Because they will only be issued on a limited basis, Developmental Design Standards will allow selective implementation of new designs, materials and technologies while their constructability, applicability and cost are being determined. This is an effort to address the inherent challenges associated with implementing new technologies while still allowing a new standard based on such technologies to progress to full integration into the Design Standards more rapidly than if they were used solely on in-house design projects.

IMPLEMENTATION

This new policy is effective immediately. Once a Developmental Design Standard has been released, it can be used on any project currently under design at the discretion of the SDO or RDO, as appropriate, with concurrence by the District.

CONTACTS

Structures Design Office:

Gevin McDaniel, P.E.
Structures Design Engineer
Florida Department of Transportation
605 Suwannee Street, MS 33
Tallahassee, FL 32399-0450
Phone (850)-414-4284

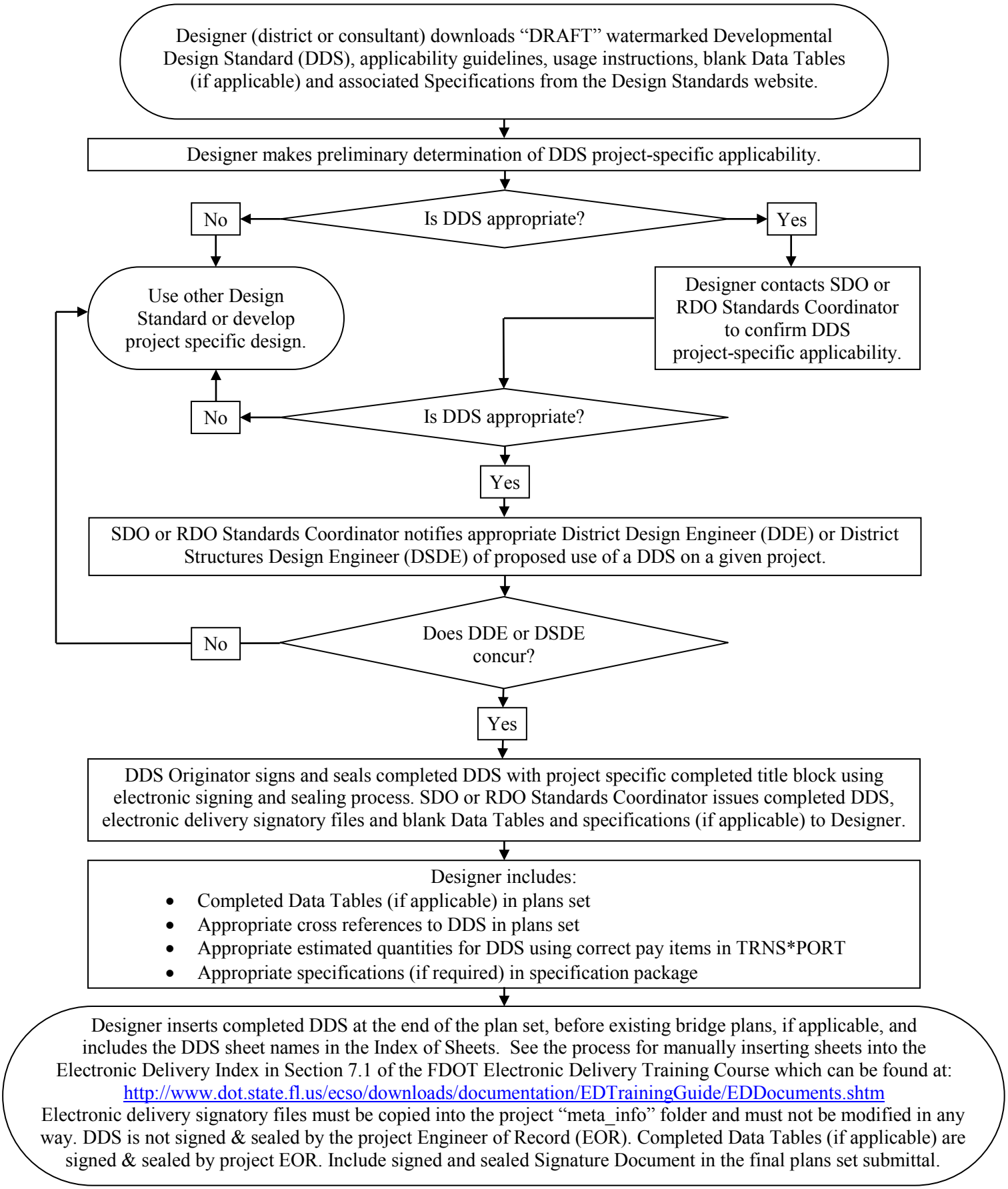
Roadway Design Office:

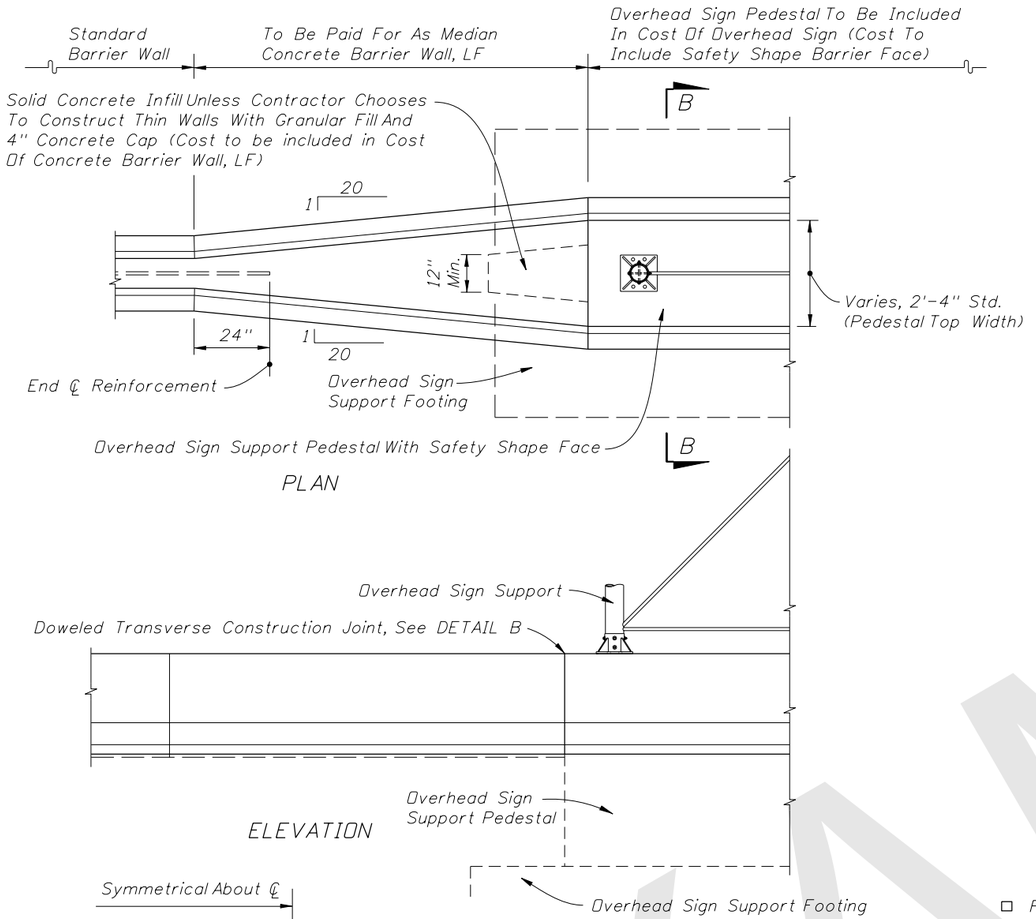
Jim Mills, P.E.
Roadway Design Engineer
Florida Department of Transportation
605 Suwannee Street, MS 32
Tallahassee, FL 32399-0450
Phone (850)-414-4318

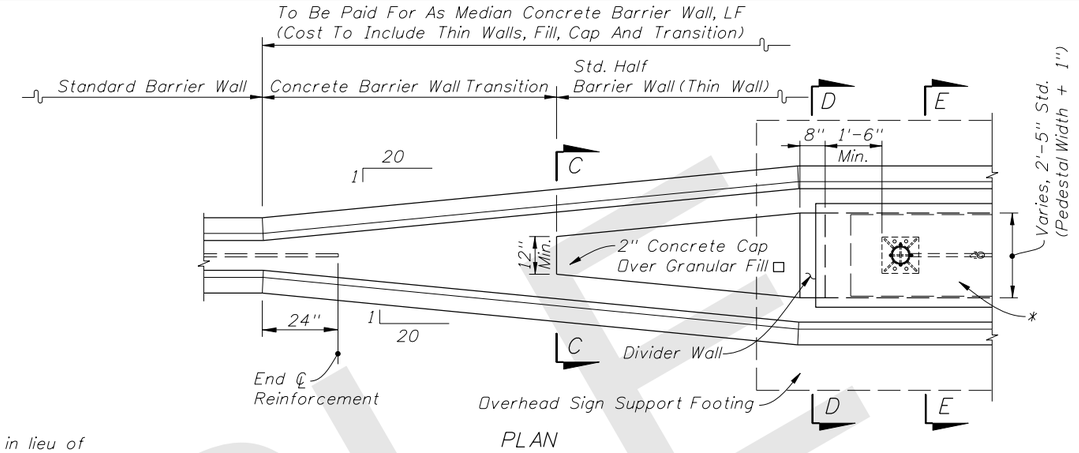
RVR/ceb

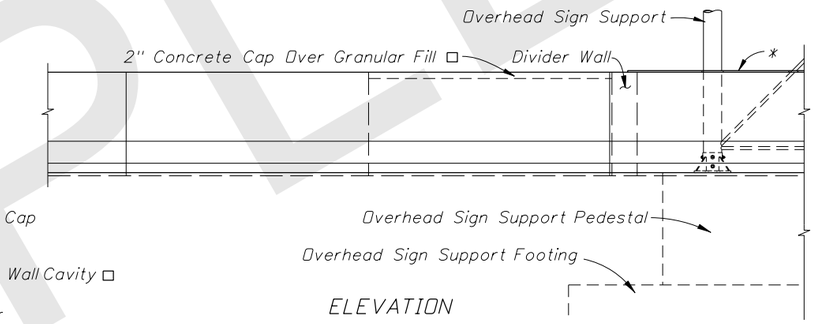
Attachments

Developmental Design Standards – Usage Process



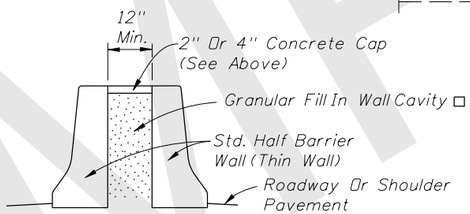




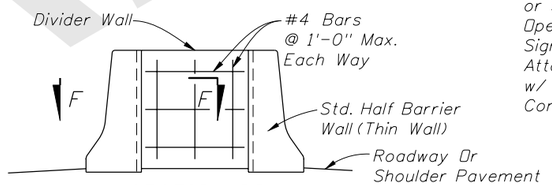


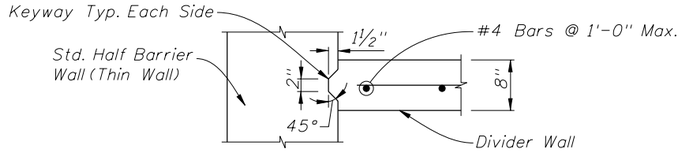
Notes:

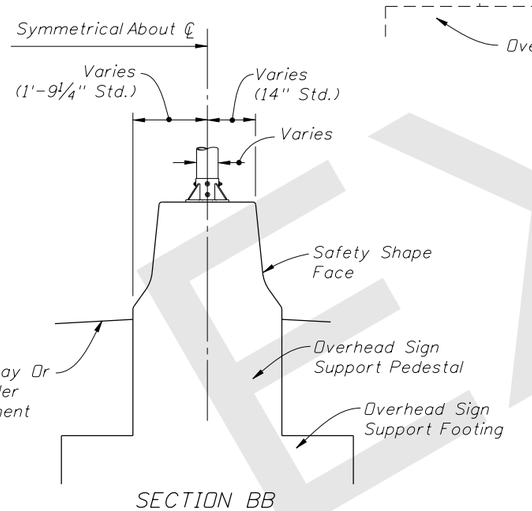
1. Use this sheet in lieu of Design Standard Index 410 Sheet 5 of 25.
2. Cost for Divider Wall and Plate/Grate shall be incidental to the cost of the Concrete Barrier Wall.

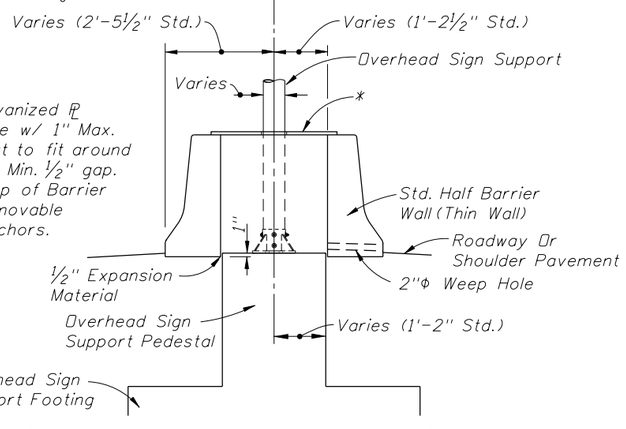


□ Fill To Be Free Of Deleterious And Cementitious Materials









* Split ¼" Galvanized ℄ or Steel Grate w/ 1" Max. Openings. Cut to fit around Sign Support Min. ½" gap. Attach to top of Barrier w/ ½"Φ Removable Concrete Anchors.

Note: This detail to be used only when installing barriers around existing sign supports that are to remain. It shall not be used for new sign support installations. For new installations use combination barrier and sign pedestal (Section BB).

COMBINATION BARRIER AND SIGN PEDESTAL

INDEPENDENT BARRIER AND SIGN PEDESTAL

CONCRETE MEDIAN BARRIER WALL TRANSITIONS AT OVERHEAD SIGN SUPPORTS

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DEVELOPMENTAL DESIGN STANDARD
STRUCTURES DESIGN OFFICE
CENTRAL OFFICE
605 Suwannee Street, MS 33
Tallahassee, Florida 32399-0450

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID

SHEET TITLE: CONCRETE BARRIER WALL SPECIAL DETAIL

PROJECT NAME:

Issue Date 09/01/09

Sheet No. 1 of 1

Index No. D410

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

EXAMPLE