Index 430-020 Flared End Section

Design Criteria

Drainage Manual (DM); ***FDOT Design Manual (FDM)***; ***Drainage Design Guide (DDG); Structures Design Guidelines (SDG)***

Design Assumptions and Limitations

Locate flared end sections in accordance with the ***Drainage Manual Chapter 3***. Additionally, when the slope intersection permits, 12" and 15" flared end sections may be located with the culvert opening as close as 8' beyond the outside edge of the shoulder. Do not use flared end sections for side drain installations.

Use reinforced concrete jackets where high velocities and/or highly erosive soils may cause disjointing. Show location(s) of reinforced concrete jackets in Plans.

Use toe walls whenever the anticipated velocity of discharge and soil type are such that erosive action would occur. Toe walls are not required where ditch pavement is provided, except when disjointing would occur if the ditch pavement should fail. Show toe wall location(s) in the Plans.

When steel fiber-reinforcing is proposed as an alternative to the conventional reinforcing shown on the Index, evaluate in accordance with ***SDG 3.17***. Submit for approval a Technical Special Provision identifying the fiber-reinforcing material, dosage rate and quality control provisions to the District Materials Office. Include the Technical Special Provision in the producer's approved Quality Control Plan.

For sod around end treatments, see ***Index 570-001***.

Plan Content Requirements

In the Roadway Plans:

Summarize quantity by location in the Summary of Drainage Structures, Summary of Sidedrain, or Summary of Miscellaneous Drainage Items in accordance with ***FDM 916***.

Clearly show the location of each Flared End Section and note when reinforced concrete jackets or toe walls are to be installed.

Payment

Item number	Item Description	Unit Measure
430-200-BB	Flared End Section (Concrete)	EA
570-1-A	Performance Turf	SY

See the ***BOE*** and ***Specification 430*** for additional information on payment, pay item use and compensation.