SECTION A-7--"NO PLAN" AND "MINIMUM PLAN" PROJECTS

GENERAL CONCEPTS

Description

The "No Plan" and "Minimum Plan" concept provides for the accomplishment by contract of the type improvements that would not require complete and detailed surveys and plans, and where the use of modified Specifications would be appropriate. Generally, the improvements will consist of widening, grading, draining and stabilizing primary and secondary roads with relatively low traffic volumes by using engineering judgment. "No Plan" and "Minimum Plan" concepts are to be used only for projects where significant reductions in the cost of engineering and construction can be experienced by using these concepts to obtain the quality of improvement necessary for the particular situation. To optimize the usefulness of this concept, very careful initial study and project selection by the District and Residency staff is required. On secondary projects, this determination should be made in accordance with Mr. E. C. Cochran, Jr.'s memorandum dated December 1, 1994 concerning "Initial Field Review / Scoping Report - Revised Guidelines". The Federal Highway Administration has concurred with the use of the "No Plan" and "Minimum Plan" concept on selected projects with Federal Oversight.

"No Plan" projects are used when no survey, engineering, hydraulic analysis or river mechanics studies are needed or when there will be no major structures with "B" or "D" designation numbers. Right of way may be acquired on "No Plan" projects provided it is acquired thru donations and no condemnation is required. A "No Plan" project is an assembly of letter size sketches showing the location of the project with a typical cross section and estimated quantities.

A "Minimum Plan" project differs in that limited survey is needed to provide the information necessary to secure right of way by the Right of Way and Utilities Division and a profile sheet is provided. In the establishment of such projects, attention should be given to determine that the project location and selection is in an area where disruption due to construction can be tolerated by the users of that particular roadway for a reasonable period of time.

Public Hearing and Right of Way

All right of way negotiations are to be conducted in accordance with the applicable statutes, regulations, policies, and procedures stipulated in the Right of Way and Utilities Division's Manual of Instructions and related memoranda.

Any required right of way and/or easements will normally be secured by donation. However, right of way may be purchased by individual deeds or under the minimum plan concept (see - second paragraph under "Minimum Plan" Projects, Page A-110).

The Commonwealth Transportation Board's resolution of February 16, 1961 specifies a minimum 12.2 m right of way is to be provided for any initial improvement to the secondary system, except in extenuating circumstances.

Section 33.1 - 70.1, Code of Virginia permits consideration for hard surfacing of a secondary road on less than a 12.2 m right of way.

Right of Way - Donations

Public hearing requirements will normally be waived on "No Plan" and "Minimum Plan" projects when all landowners are willing to donate the right of way provided there is no evidence of controversy, the landowners have been advised of their right to receive just compensation prior to requesting donations, and the project files have been so documented.

Right of Way - Acquisitions

When Right of Way must be acquired, a "Willingness to Hold a Public Hearing" will be advertised and public hearings will be conducted upon request. A public hearing handout and appropriate environmental document, on projects with Federal Oversight, will be prepared following the usual guidelines. If there are questions concerning the public hearing requirements or procedures, check with the State Location and Design Engineer.

Special Design Structures, Soil Survey and Pavement Design

"No Plan" projects may include drainage structures; however, major structures with "B" or "D" designation numbers and all standard box culverts that require a hydraulic study are to be constructed under the "Minimum Plan" concept. When pipes are to be extended and endwalls, end sections, pipe spillouts, etc., are to be provided, separate bid items are to be set up.

The District Materials section is to review the project site to determine if soil samples may be necessary and the District Materials Engineer is to furnish recommendations regarding any undercutting and pavement design.

Mobilization and Field Office

Mobilization is to be set up as a contract item on "No Plan" and "Minimum Plan" projects in accordance with VDOT's Road and Bridge Specifications.

When it is necessary to set up a field office, it is set up as a contract item in accordance with VDOT's Road and Bridge Specifications at the discretion of the District; however, other arrangements should be considered such as the use of existing facilities where feasible to eliminate the need for the extra cost of a field office.

Erosion and Sediment Control

Temporary and permanent erosion and sediment control measures are required in accordance with the Department's standard practices and procedures. Seeding operations, erosion control, and sedimentation measures shall be included as specific contract items in accordance with standard specifications and procedures or shall be performed by State Forces, at the discretion of the District. When seeding operations and other items are to be performed by State Forces, a plan note must be included to denote such State Force work; and, in the event of Federal Oversight, finding of cost effectiveness must be furnished in accordance with existing policy and procedures.

Contract Time Limit

Generally, a 90 to 180 calendar day time limit should be established; however, the contract time limit should be determined after thorough consideration of the need to realize the lowest cost possible to provide the improvement at the earliest practical date.

PROCEDURES

General

Form C-99 (No Plan and Minimum Plan Quantity Support Report) and a Field Narrative (i.e., detailed description of proposed work in narrative or sketch form - See Page A-109) are to be completed by the Resident Engineer or the District Administrator's staff. They are to be submitted with the project assembly for the purpose of providing information concerning the general description of construction work from which to develop and support the construction cost estimate. Also provide a project specific erosion and sediment control plan (narrative or sketch) on projects disturbing more than 929 square meters of soil. Form C-99 and the Field Narrative should be reviewed and updated prior to the assembly being turned into the Construction Division for first submission to assure the data reflects existing conditions and supports the information to be used at the project showing. The Field Narrative will become part of the contract assembly.

Project Scoping & Initial Field Review

All projects are to be scoped and an Initial Field Review is to be held in accordance with IIM LD- (D) 210. These procedures will define the potential need for field and office engineering as well as right of way and environmental requirements.

"No Plan" Projects

The "No Plan" concept should be used when:

(a) survey data is not required
*(b) improvements to roadways do not involve major structures or special design items
*(c) Hydraulic or River Mechanics Studies are not required.
(d) rights-of-way are acquired thru donations and no condemnation is required.
(e) environmental permits will not normally be required
(f) construction activities must be handled in an expeditious manner
(g) detailed engineering is not required

* Exception - when a project requires an extensive study (survey, hydraulic or river mechanics study, etc.) for a major structure, the "No Plan" concept may be used only if the necessary studies for the structure design are performed. When a major structure is located on a long No Plan project, the site should be treated as a Minimum Plan exception to the No Plan Project.

The Resident Engineer normally obtains any donated right of way by use of the appropriate Right of Way Forms. When a "No Plan" project is to be constructed within existing right of way, a note must placed on the title sheet indicating that "All construction is to be performed within existing right of way."

Metes and bounds plans are required for right of way from unique clients (e.g. Federal and State agencies, the National Forest, railroads, Virginia Power, etc.) - see VDOT's Road Design Manual Chapter 2D, Section 2D-8.

The construction baseline should generally follow the center of the existing roadway; however, minor relocation and alignment improvements (horizontal and vertical), roadway widening, and turn lanes may be accomplished. The geometrics should comply with the appropriate design standards. However, where it is impractical or not economical to obtain the minimum design and an exception is required, permission shall be secured from the State Location and Design Engineer and, if applicable, from the Federal Highway Administration.

The Resident Engineer, with the assistance of the project designer, determines the typical section and furnishes an estimate of quantities on the "Quantity Support Report" (C-99). Grading should generally be balanced and set up as a lump sum quantity. Form C-99 should indicate an estimate of grading quantities, including anticipated waste quantities, to guide the Construction Division in preparing the construction cost estimate.

When borrow material is anticipated, "Borrow Excavation" is to be set up as a separate bid item in accordance with VDOT's Road and Bridge Specifications. Borrow sources should be located and designated whenever possible in accordance with VDOT's Road Design Manual Chapter 2D, Section 2D-16 - SOIL SURVEY AND PAVEMENT DESIGN.

A unit price for extra excavation is to be established by the Resident Engineer or the District Administrator's staff and entered on Form C-99 for inclusion in the contract assembly by the contract section.

The Resident Engineer is responsible for conducting the utility field inspections and preparing the field inspection reports, determining utility conflicts, method of adjustment, cost responsibility and for obtaining and forwarding all plans and estimates from utility owners to the District Administrator (District Utilities Engineer) for processing. The Resident Engineer is also responsible for advising the District Administrator (District Utilities Engineer) in writing, no later than 60 days prior to the advertisement of the project, when all arrangements have been made with the utility owners to adjust the utilities prior to or in conjunction with project construction. The Central Office Right of Way and Utilities Division will obtain any necessary FHWA authorization for utility work and will furnish the usual utility clearances and estimates to the Construction Division for contract projects and State Force projects with Federal Oversight. If no known utilities and/or railroads are involved, the plans will contain a note so stating.

A general description of the work must be provided on Form C-99 and the Field Narrative to denote the nature of the work to be performed, such as daylighting of slopes; realignment; intersection improvement; or widening of shoulders and ditchlines. For all projects disturbing more than 929 square meters of soil, a plan narrative or sketch with profile which must include erosion and sediment control measures and specify placement of those items. "Simple" sketches may be used in lieu of the narrative. Stormwater management facilities may be addressed in a similar fashion provided sufficient detail is included to ensure their proper construction. When this is not practicable, additional sketches shall be included in the no-plan assembly to define the construction of these items.

The responsibility for compliance with applicable regulations, policies and standards is assumed by the District Administrator for "No Plan" secondary projects. The State Location and Design Engineer is responsible for all other roadway classifications. This responsibility is evidenced by affixing the signature of the District Administrator or the State Location and Design Engineer in the appropriate plan signature space.

On Secondary "No Plan" projects, the project designer will transmit the plan assembly directly to the Secondary Roads Engineer for processing for construction advertisement or authorization for State Force work on projects with Federal Oversight, whichever is applicable. Primary "No Plan" projects will continue to be transmitted to the District Coordination Section for processing and recommended approval for advertisement. Construction plans will be retained in the District until right of way has been secured and arrangements made for utility adjustments. When retained, status reports (containing applicable correspondence) will be submitted the by District Administrator's staff by the plan-due-date and quarterly until clear.

"Minimum Plan" Projects

Those sites that require an engineering evaluation should be designated as "Minimum Plan" projects. This will permit the development of required engineering studies and will provide a vehicle for transmitting critical information to the contractor.

Projects that should be developed with the "Minimum Plan" concept include:

(a) locations requiring survey
(b) major stream crossing sites
(c) locations that will require environmental evaluation and/or permits
(d) all projects with "B" and "D" designation numbers
(e) locations requiring Hydraulic or River Mechanics studies
(f) locations that involve the acquisition of right of way and/or condemnation

The basic difference between the "Minimum Plan" and the "No Plan" project is the need for a limited survey and topo to provide sufficient right of way plans necessary to acquire right of way. Form RW-205 or individual deed forms are to be used. If any additional right of way or easements are necessary, the usual right of way certification letter and release for advertisement will be required. If additional right of way or easements are not required, the "Minimum Plan" title sheet is to contain a note indicating that "All construction is to be performed within existing right of way."

"Minimum Plan" projects may include relocation or alignment improvements (horizontal or vertical), roadway widening, and the addition of turn lanes. The intent of the "Minimum Plan" project is for it to be constructed using engineering judgment; however, the complete project should not be required to be redesigned during construction. Special attention should be given to major drainage problems and the limits set for the proposed right of way. The geometrics should comply with the appropriate design standards. However, where it is impractical or not economical to obtain minimum design and an exception is required, permission must be secured from the State Location and Design Engineer and, if applicable, from the Federal Highway Administration.

Quantities computed by the project designer, typical sections, and other similar information generally should be shown on the initial plan and profile sheet. A grade line is required when the grade is to be different than that of the existing road.

When borrow material is anticipated, "Borrow Excavation" is to be set up as a separate bid item in accordance with Section 303 of VDOT's Road and Bridge Specifications. Borrow sources should be located and designated, whenever possible, in accordance with VDOT's Road Design Manual, Chapter 2D, Section 2D-16 - SOIL SURVEY AND PAVEMENT DESIGN.

A unit price for extra excavation is to be established by the Resident Engineer or the District Administrator's staff and entered on Form C-99 for inclusion in the contract assembly by the contract section.

Utility adjustments shall be handled in accordance with IIM LD- (D) 140 and (D) 203.

A general description of work must be provided on Form C-99 and the Field Narrative to denote additional work that is not covered on the plans.

For all projects disturbing more than 929 square meters of soil, erosion and sediment control measures (narrative, sketch, or station to station summary) must be shown on the plan sheets. Stormwater facilities must also be shown.

Permits and Reviews ("No Plan" and "Minimum Plan" Projects)

The need for 401, 404, navigation, and other environmental permits is to be considered in accordance with the Guidelines for the Preparation of Permit Application. A VPDES permit is required on all projects with a total disturbed area of more than two continuous hectares. (Request Form LD-252).

Historical and archaeological reviews are to be made. (Request Forms LD-252 and EQ-429).

PLAN PREPARATION

The sample plan assemblies for both "No Plan" and "Minimum Plan" projects (See Pages A-114 thru A-142) provide the manner of showing the minimum essential information and the notes necessary to govern construction. For current versions of these sheets, see the CADD No Plan Directory. Variation may be made to the formats to meet the specific project needs and to best utilize all available sheet space, thereby minimizing the total number of project assembly sheets. Careful attention should be given to the notes shown thereon.

Generally, plan variations from AASHTO guidelines, as set forth in the Geometric Design Standards (See VDOT's Road Design Manual, Appendix A), are not readily apparent in an office review; therefore, it is very important that the variations be defined in the project assembly (consisting of the plan details, Form C-99, cost analysis, and narrative or description of the work) by the Resident Engineer and/or District Administrator.

Aggregate Material No. 21, 21A, 25 or 26 should be set up as a contract item for roadway base or subbase, maintenance of traffic, private entrances, and mailbox turnouts. Normally, one contract item should cover all uses.

SPECIFICATIONS

It is intended that modified versions of parts of VDOT's Road and Bridge Specifications will be followed in order to reduce the field engineering and final computations required; however, the use of such modifications must still be consistent with good construction practices in relation to the kind and type of improvement being provided.

A unit price for extra excavation is to be established by the Resident Engineer or the District Administrator's staff and entered on Form C-99 for inclusion in the contract assembly by the contract section.

The Special Provisions for "No Plan and Minimum Plan Projects" (available from VDOT's Construction Division) are approved by the Federal Highway Administration for use on a project by project basis. When additional changes to the Specifications are necessary, such changes should be documented and submitted with the project assembly. (Any additional Special Provisions are to be reviewed by the Construction Division in ample time for inclusion in the project bid proposal.)

"No Plan" and "Minimum Plan" projects will often consist of small quantities of materials; therefore, materials testing requirements for most items will fall within the limits of minimum testing as set forth in VDOT's Materials Manual. Compactive effort must be provided by the Contractor in such a manner as to attain the required densities and random compaction tests will be performed to the extent required to assure proper compaction.

Generally, materials from sources that have proven to be satisfactory in the past will normally be accepted by certification as determined by VDOT's Materials Division, subject to visual inspection at the project site.

The Contractor shall perform all construction surveying on "No Plan" and "Minimum Plan" projects in accordance with the Special Provision "Copied Note" for Section 105.10 of VDOT's (See IIM LD- (D) 152) VDOT's Road and Bridge Specifications.

Prospective bidders may be required to attend the Project Showing as a prerequisite for submitting a bid proposal for "No Plan" and "Minimum Plan" projects. When attendance is required, prospective bidders must register with the Engineer at the project showing and all attending parties are to be noted in the project showing letter. The Project Engineer and the Project Inspector must also attend the project showing. The Field Narrative will indicate if attendance is required.

PROJECT LAYOUT

If deemed necessary by the District Administrator or Resident Engineer, marked stakes shall be established showing the approximate depth at centerline of major fills and cuts which exceed 1.2 m and/or other areas as required. Marked stakes shall be in place at the time of the Project Showing.

Survey work for "Minimum Plan" projects should normally be performed in accordance with the VDOT Survey Instructions Manual or as otherwise determined by the District Administrator or Resident Engineer. The designer should determine in the early stages of the plan development where additional survey is needed in order to alleviate any major problem during construction. Normally, on "Minimum Plan" projects, entrance profiles are taken where right of way donations are not anticipated; however, they should not be plotted unless the need for condemnation is required.

INSPECTION AND RECORD KEEPING

Close coordination between the Project Inspector and the Contractor is necessary to assure the success of the "No Plan" and "Minimum Plan" concepts.

Only one loose leaf notebook is normally necessary on a "No Plan" or "Minimum Plan" project and it may be used as a combination diary, materials book, and sketch book provided that electronic versions of these materials are not available. Alignment and sketches may be entered in accordance with standard procedures or, where feasible, small sketches may be glued into the notebook to properly indicate the work performed.

Where it is determined by the District that "As Built Plans" are more practical, they may be used in lieu of entering alignment, sketches, and summaries in the notebook. When "As Built Plans" are used, any changes, additions, or deletions of any nature are to be clearly indicated on the prints/files furnished to the Inspector with the diary and materials information entered in the notebook.

Upon the completion of a project, all records shall be submitted in accordance with standard procedures; except that after verification of the materials section by the District Materials Engineer, a reproducible copy of the materials section of the notebook/file is to be furnished to the State Materials Engineer in lieu of furnishing the original document/file.

PROJECT: 0624-039-P47, N-501 A-114
Metric

SAMPLE PLAN ASSEMBLY

NO PLAN PROJECT REV. 3-96
COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

DISTRICT: Culpeper COUNTY: Greene PPMS NO.: 2016

Rural-Local (FUNCTIONAL CLASS) 16003 (FHWA 534 DATA) FOOO (TYPE CODE)

ROUTE: 624 PROJ. 0624-039-P47, N-501 FEDERAL AID: None

FROM: .89 km N of Rte. 623 TO: Int. Rte. 622

LENGTH: 1851 m 1.85 km

TOPO: Rolling DES. SPEED: 50 kmh 101 VPD (1988)

DESIGNED BY: F. E. James R/W DONATION: Yes/No

Utilities Yes/No and/or Railroads Yes/No are involved in the construction of this project.

This project is to be constructed in accordance with the Department's Road and Bridge Specifications dated Jan. 1997, Road and Bridge Standards dated Dec. 1, 1994, Work Area Protection Manual dated Jan. 1996 and as amended by contract provisions and the complete plan assembly.

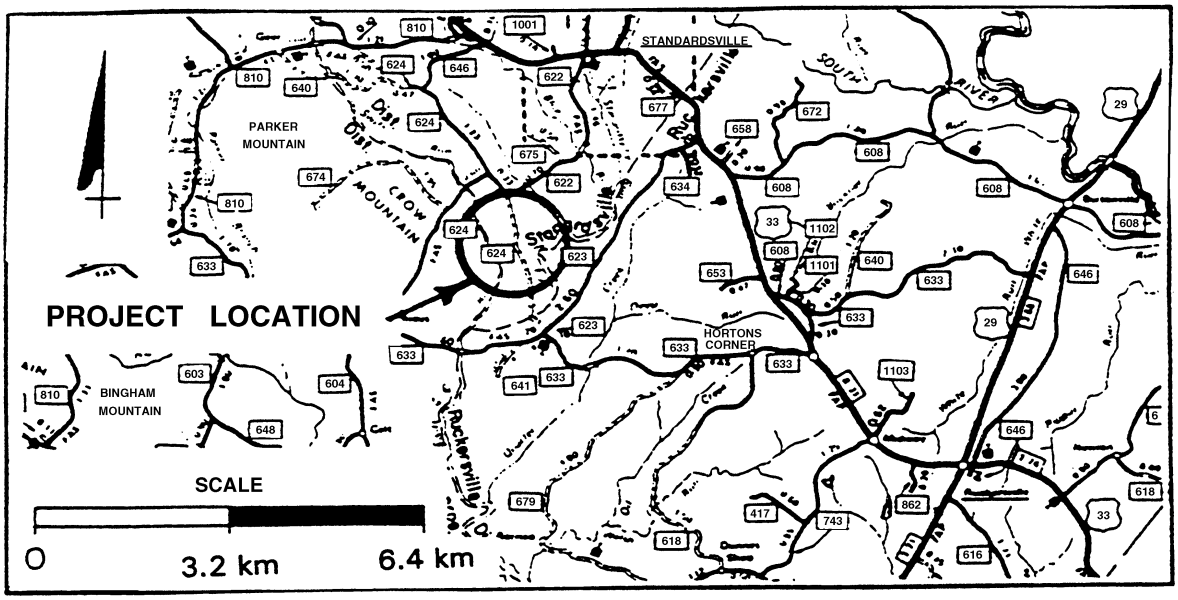
"All curves are to be superelevated, transitioned and widened in accordance with proper highway engineering practices."

RECOMMENDED FOR APPROVAL FOR CONSTRUCTION	
DATE	DISTRICT ADMINISTRATOR
DATE	SECONDARY ROADS ENGINEER
DATE	ASSISTANT COMMISSIONER FOR FINANCE
APPROVED FOR CONSTRUCTION	
	CHIEF ENGINEER
DATE	

(CONTINUED)

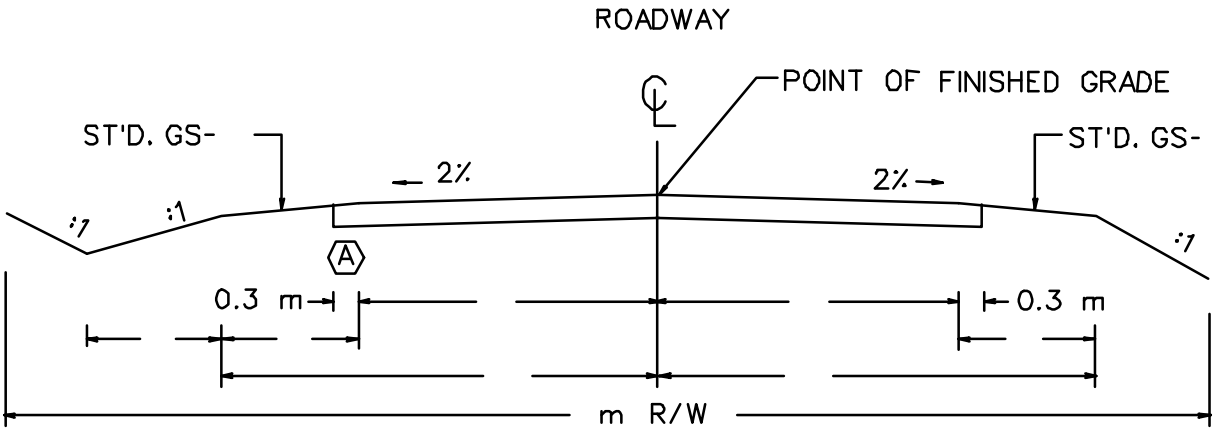
PROJECT: 0624-039-P47, N-501

LOCATION MAP



B2
(CONTINUED)

TYPICAL SECTION



(A) NON-PAVED SHOULDERS WILL RECEIVE 0.3 m OF PAVEMENT WIDENING HAVING THE SAME SLOPE AND STRUCTURE AS THE MAINLINE PAVEMENT; HOWEVER, THIS 0.3 m EXTENTION IS INCLUDED IN THE OVERALL WIDTH OF THE SHOULDER.

NOTE: Aggr. depth to be placed as directed by the Engineer (150 mm depth to be used for **estimating purposes only).**

NOTE: Fill shoulders to be increased by 0.9 m where guardrail is required.

PRIME & DOUBLE SEAL SURFACE TREATMENT					
PRIME		INITIAL SEAL		FINAL SEAL	
LIQUID ASPHALT MATERIAL	COVER MATERIAL AGGREGATE	LIQUID ASPHALT MATERIAL	COVER MATERIAL AGGREGATE	LIQUID ASPHALT MATERIAL	COVER MATERIAL AGGREGATE
RC-70, RC-250 or MC-250 @ 1.8 L/m²	NO. 68 Stone, Slag or Crushed Gravel @ 16 kg/m²	CRS-2, CMS-2 or CMS-2h @ 1.2 L/m²	NO. 8P Stone, Slag or Crushed Gravel @ 10 kg/m²	CRS-2, CMS-2 or CMS-2h @ 1.2 L/m²	NO. 8P Stone, Slag or Crushed Gravel @ 10 kg/m²
LITERS	METRIC TONS	LITERS	METRIC TONS	LITERS	METRIC TONS

Rev. 2-97

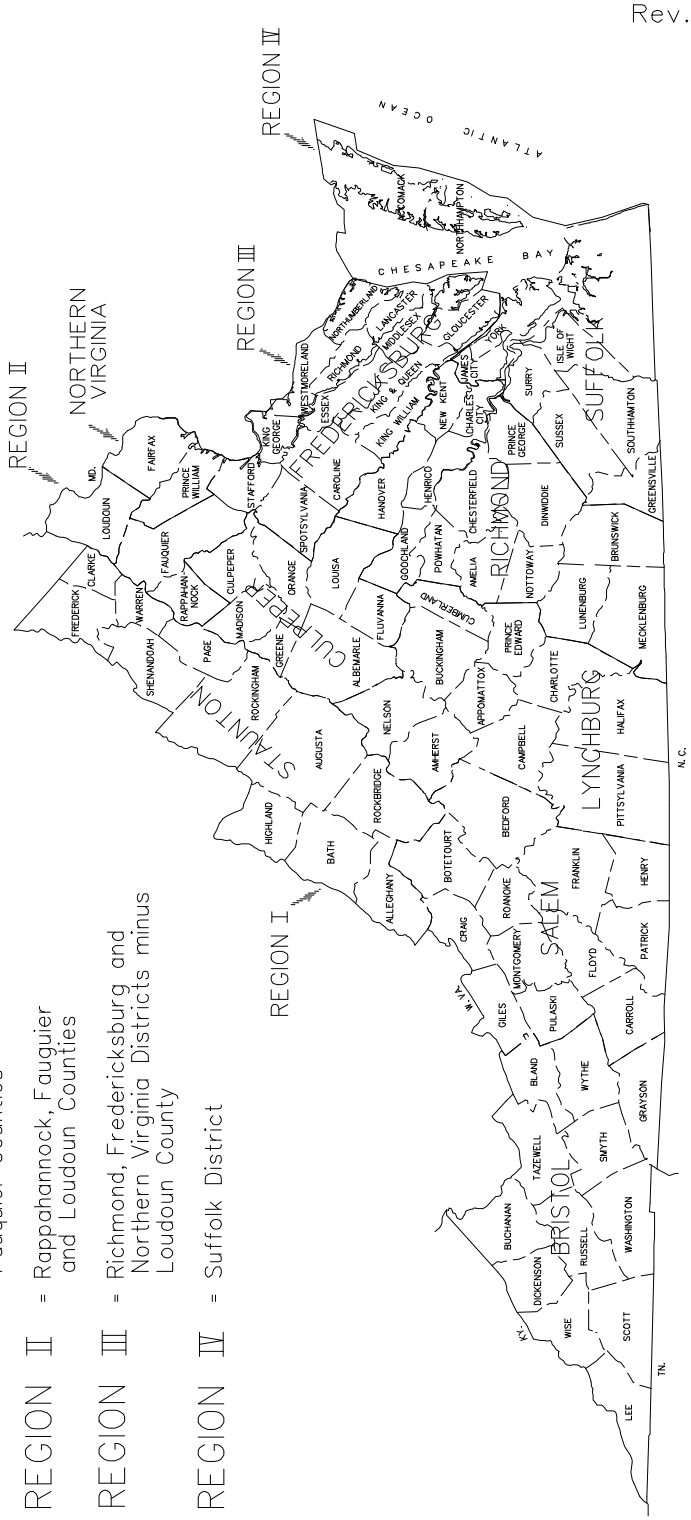
ROADSIDE DEVELOPMENT

REGION I = Bristol, Salem, Staunton, Lynchburg, and Culpeper Districts minus Rappahannock and Fauquier Counties

REGION II = Rappahannock, Fauquier and Loudoun Counties

REGION III = Richmond, Fredericksburg and Northern Virginia Districts minus Loudoun County

REGION IV = Suffolk District



Rev. 2-97

ROADSIDE DEVELOPMENT

CORE MIX

MIX	MINIMUM kg/hectare	DESCRIPTION
1	115	100% CERTIFIED FINE FESCUE
2	115	100% CERTIFIED TALL FESCUE
3	60 60	50% CERTIFIED TALL FESCUE 50% CERTIFIED FINE FESCUE
4	60 60	50% ORCHARD GRASS 50% CERTIFIED KENTUCKY
5	60	100% BERMUDA GRASS
TEMPORARY		
3/1 – 5/16 and 8/16 – 3/1	60 60	50% CERTIFIED TALL FESCUE 50% WHEAT, BARLEY OR RYE
5/16 – 8/16	60 60	50% FOXTAIL MILLET 50% CERTIFIED TALL FESCUE

ADDITIVES

TYPE	MINIMUM kg/hectare	DESCRIPTION
A	2 10	100% LOVE GRASS OR 100% FOXTAIL MILLET
B	25	100% RYE GRAIN, WHEAT OR BARLEY
C	25	100% CROWN VETCH
D	25	100% SERICEA LESPEDEZA
E	10 10	100% FOXTAIL MILLET OR 100% ANNUAL RYEGRASS

SEEDING SCHEDULE

	SLOPES SEED MIX WITH ADDITIVE	MOWED SEED MIX WITH ADDITIVE	SLOPES SEED MIX WITH ADDITIVE	MOWED SEED MIX WITH ADDITIVE	SLOPES SEED MIX WITH ADDITIVE	MOWED SEED MIX WITH ADDITIVE
I	2, 3, 4 B, C, D	1, 2, 3, 4 B	2, 3, 4 A, C	1, 2, 3, 4 A, E	2, 3, 4 B, C, D	1, 2, 3, 4 B
II	4 B, C	4 B	4 A, C	4 E	4 B, C	4 B
III	2, 3 B, C	2, 3 B	2, 3 A, C, D	2, 3 E	2, 3 B, D	2, 3 B
IV	2, 5 B, C, D	2, 5 B	2, 5 A, C, D	2, 5 E	2, 5 B, C, D	2, 5 B

REGIONS	SPRING & FALL MONTH & DATE	SUMMER MONTH & DATE	LATE FALL & WINTER MONTH & DATE
I	4/1 – 6/15 8/1 – 9/30	6/16 – 7/31	10/1 – 3/31
II	3/1 – 5/15 8/1 – 9/30	5/16 – 7/31	10/1 – 2/29
III, IV	3/1 – 4/30 8/1 – 10/31	5/1 – 7/31	11/1 – 2/29

MIX REQUIREMENTS THIS PROJECT

SEED MIXTURE RECOMMENDATIONS MAY AT TIMES DEVIATE FROM THE SEED MIXTURE GUIDELINES ON THE ROADSIDE DEVELOPMENT SHEET. RECOMMENDATIONS FOR THE APPLICATION OF SEED MIXTURES (CORE MIX AND ADDITIVES), FERTILIZER, LIME, ETC. ARE TO BE OBTAINED FROM THE DISTRICT ENVIRONMENTAL MANAGER ON FORM RD-100.

PROJECT NUMBERS						

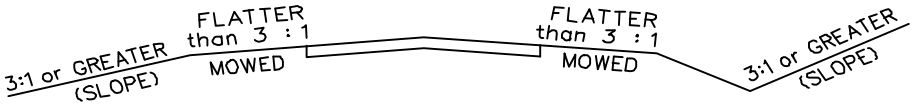
PROJECT: 0624-039-P47, N-501

A-119
Metric

ROADSIDE DEVELOPMENT

Rev. 2-97

SECTION OF SEED LOCATIONS



NOTES

Approximately _____ hectares will be disturbed on this project and will require the establishment of grasses and /or legumes.

NOTES FOR FIELD USE ONLY

Supplemental seeding consists of overseeding or regular seeding as determined by the Engineer.

Over seeding rates shall be 50% of the seed mixture specified and fertilizer rates shall be 33% of the rates specified.

The Engineer will require the Contractor to perform supplemental seeding when less than 75 percent uniform stand of the permanent grass specified in the mixture obtained. (Annual species such as, Rye and Millet are temporary varieties and require supplemental seeding.)

Tall and Fine Fescue shall not be used in Loudon, Fauquier and Rappahannock Counties. (Mix 4 only) Orcharch Grass mixture shall be used for these counties. Type II mulch only.

NOTES APPLY TO SCHEDULE

Legume seed mixes (Crown Vetch and Sericea Lespedeza) and weeping Lovegrass shall not be used on shoulders and other locations flatter that 3:1 slope.

A temporary mix of erosion control mulch, as directed by the Engineer, is to be used only on areas that are to be regraded or later disturbed, if left dormant for more than 30 days, between March 1 and November 30.

Spring and Fall defined for the purpose of determining whether hulled or unhulled Bermuda and Sericea Lespedeza seed is required:

Spring - May 1 - Sept. 30
Fall - Oct. 1 - Apr. 30

Type I mulch (Straw or Hay) to be used on newly seeded areas adjacent to all waterways, wetlands, swamps, or any area in which drainage flows toward areas under the jurisdiction of the environmental regulatory agencies.

Type I mulch shall be applied at 4.5 metric tons per hectare to provide a minumum 90% coverage.

Type I mulch shall be tacked with Fiber mulch at the rate of 840 kg per hectare.

Type II mulch (Fiber mulch) may be substituted for Type I mulch at the recommendation of the District Environmental Manager.

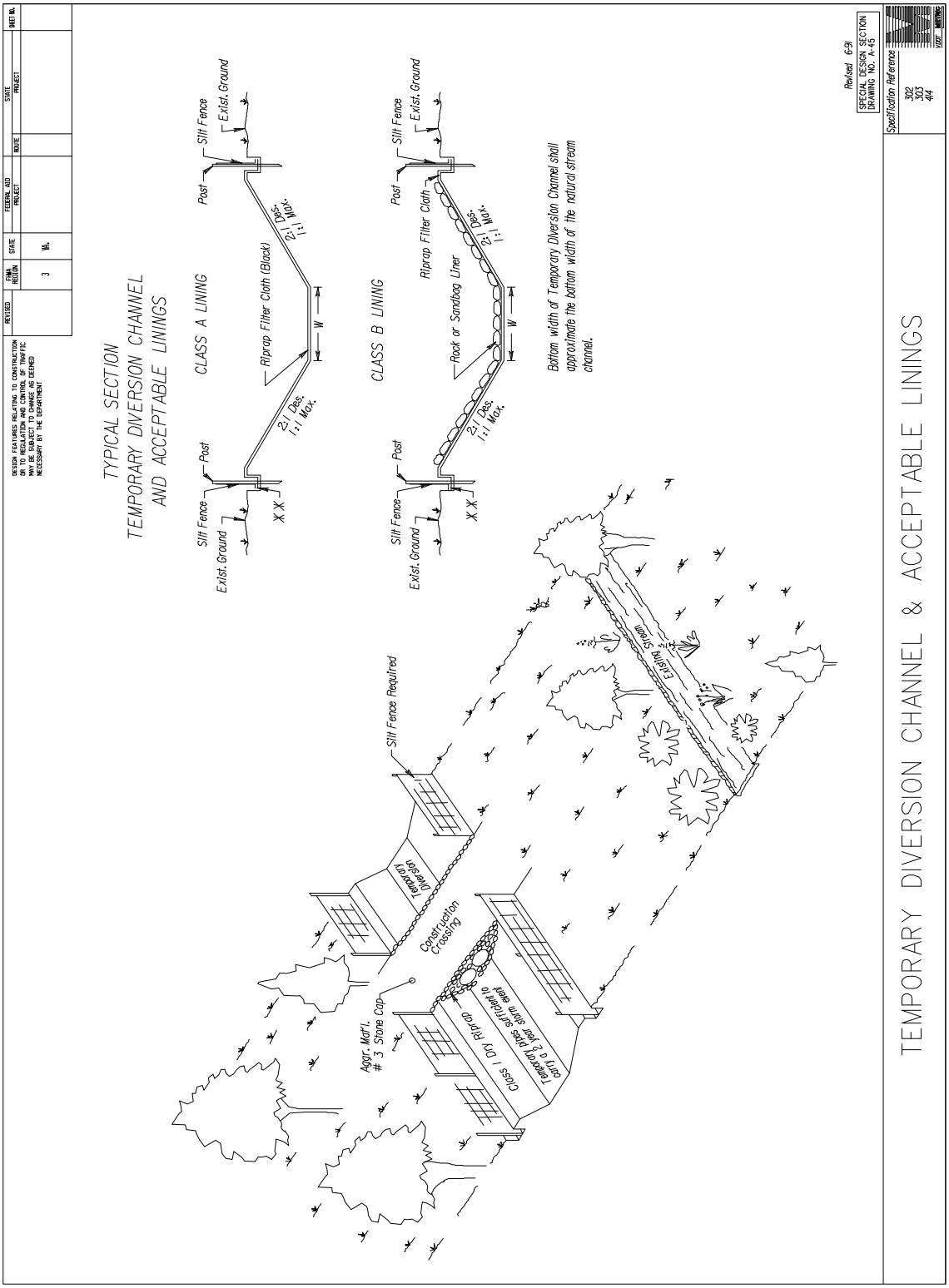
Type II mulch shall be applied at a rate of 2000 kg (net dry weight) per hectare.

Erosion Control Mulch, as listed on the VDOT Approved Products List, shall be applied in accordance with the manugacture's recommendations.

Erosion Control Mulch shall provide 100% coverage of all denuded areas.

All topsoil is to be free of hard lumps, clods, rocks and foreign debris and is to be hand raked to tie into existing lawns.

All seed must be in conformance with VDOT seed specifications for Grasses & Legumes and be provided at the project site in bags not opened and labeled for use on VDOT projects with a green tag certifying inspection by the Virginia Crop Improvement Association.



B7
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A-121
Metric

STREAM DIVERSION
GENERAL NOTES

Slopes

Maximum steepness of side slopes shall be 1:1. Depth and grade may be variable, dependent on site conditions, but shall be sufficient to ensure continuous flow of water in the diversion.

Excavation

No excavated material shall be stored or stockpiled next to the diversion or in such a manner that siltation of the stream should occur.

Pipe Culverts

Pipe culvert(s) may be used to divert a stream provided they are properly sized to safely carry the flow of a mean annual flood. Undersized pipes shall be used for no longer than 72 hours provided less than 50% threat of rain can be reasonably expected within that time period and they are approved by the Engineer.

When the contractor uses pipe culverts in lieu of the diversion channel or portion of the channel, payment will be made based on the price bid for the quantities shown on the plans for Temporary Diversion Channel Excavation and Temporary Diversion Channel Lining Class specified.

Linings

The contractor shall have the option of using a higher class of lining than that specified on the plans. No additional compensation will be allowed for using the higher class.

Stream diversion liners shall be secured at the upstream and downstream sides with non-erodible weights such as erosion control stone. These weights shall allow normal flow of the stream. Soil shall not be mixed in with stream diversion weights. Weights may also be needed along the stream diversion's length.

Jute mesh (EC-2) staples or non-erodible weights shall be used as necessary to anchor stream diversion liners to the side slopes of the diversion. Wooden stakes shall not be used on the diversion's bottom or side slopes.

Stream diversion liners shall be overlapped when a single or continuous liner is not available or is impractical. Overlaps shall be such that continuous flow of the stream is maintained. An upstream section shall overlap a downstream section by a minimum of 450 mm. Overlaps along the cross-section shall be made such that a liner is placed in the stream diversion bottom first and additional pieces of liner on the slopes overlap the bottom piece by a minimum of 450 mm.

tream diversion liners shall be entrenched at the top of the diversion slopes (slope breaks) with a line of silt fence.

General

The downstream plug shall be removed prior to the upstream plug when opening a stream diversion for the transport of water.

Non-erodible materials such as erosion control stone, concrete barriers, sandbags, plywood, or sheet piling shall be used both to divert the streams away from their original channels and to prevent or reduce water backup into a construction area.

Streams may be diverted through an existing or incomplete structure provided they will not re-enter a disturbed area, come into contact with wet concrete, and/or become partially or wholly impounded, sifted, or otherwise contaminated.

Streams shall be rediverted upon completion of the drainage structure(s) for which the diversion was built. Prior to rediversion, any materials used to prevent water backup into the downstream end of the drainage structure(s) shall be removed. This material shall not be placed in the downstream end of the diversion until after water has been rediverted to the drainage structure(s). A stream shall be rediverted by removing all of the materials damming the upstream end of the drainage structure(s) before placing it in the upstream end of the stream diversion. The diversion shall be sealed off at the downstream end and then backfilled.

Once started, any work to relocate a stream (plugs) shall not be discontinued until it is completed.

Any deviations to the above noted stream diversion design, installation, or maintenance shall be approved by the Engineer.

Basis of Payment

Silt Fence will be measured and paid for in meters in accordance with Section 303. Temporary Diversion Channel Excavation will be measured and paid for in cubic meters in accordance with Section 302.

Temporary Diversion Channel Lining Class __ will be measured and paid for in square meters in accordance with Section 302.

PROJECT: 0624-039-P47, N-501

A-123
Metric

HYDROLOGIC DATA
(To be used if applicable)

The data presented herein was statistically derived by empirical methods and from field observations. It is presented as an estimate of the hydraulic performance of these facilities during the passage of actual flood events.

1. Estimated 100 year frequency flood data (unless otherwise.) this magnitude of flooding may pass through the proposed facility or it may obtain the necessary hydraulic conveyance by partial inundation of the roadways and/or partial by pass of the facility.

2. Specified frequency flood data. It is anticipated that this magnitude of flooding will be conveyed through the proposed hydraulic facility under estimated conditions which satisfy the design criteria applicable to the site.

3. This data was obtained from observations by persons familiar with the area and/or official records combined with an evaluation by empirical methods. the reliability of this data is relative to the accuracy of the source. A future flood of the same magnitude may achieve a significantly different stage elevation from that shown due to changes in the physical characteristics of the watershed.

FIELD INSPECTION STAGE__ FINAL DESIGN STAGE__					BASE FLOOD		DESIGN FLOOD		
Sheet No.	Station	Stream Name	Drainage Area	Structure Size	Discharge (m^3/s)	Stage Elevation (m)	Discharge (m^3/s)	Estimated Exceedance Probability %	Storage Elevation (m)

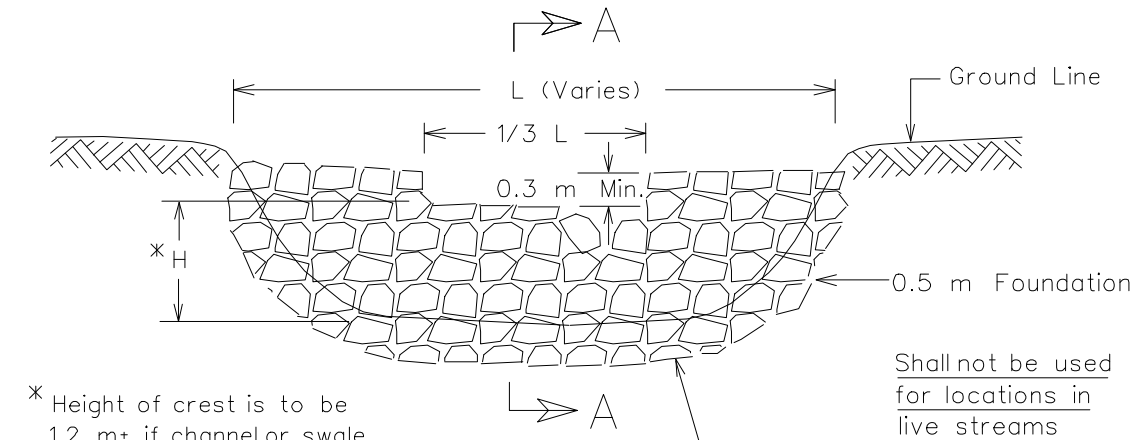
		OVERTOPPING FLOOD		HISTORICAL DATA		
Sheet No.	Station	Discharge (m^3/s)	Stage Elevation (m)	Estimated Exceedance Probability %	Data	Estimated Exceedance Probability %

REMARKS: Source of information and other related data.

TEMPORARY EROSION & SILTATION CONTROL

Rev. 6-97

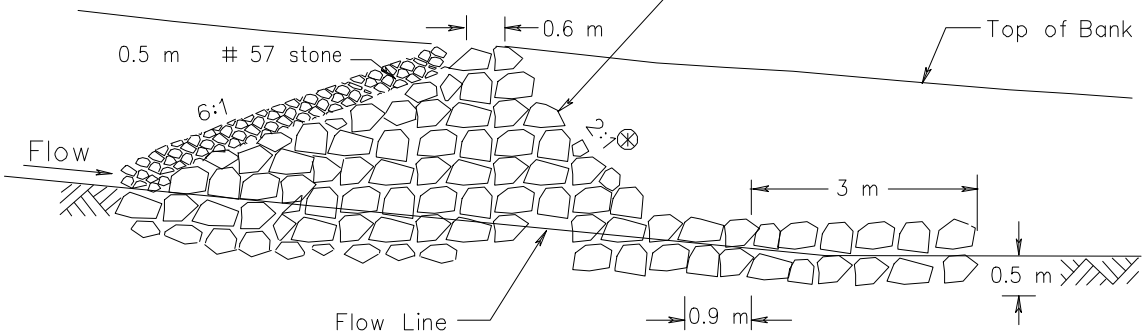
CHECK DAMS
TYPICAL DETAIL FOR ROCK CHECK DAM TYPE I



Shall not be used for locations in live streams

* Height of crest is to be 1.2 m± if channel or swale is deep enough or as designated by designer.

FRONT ELEVATION



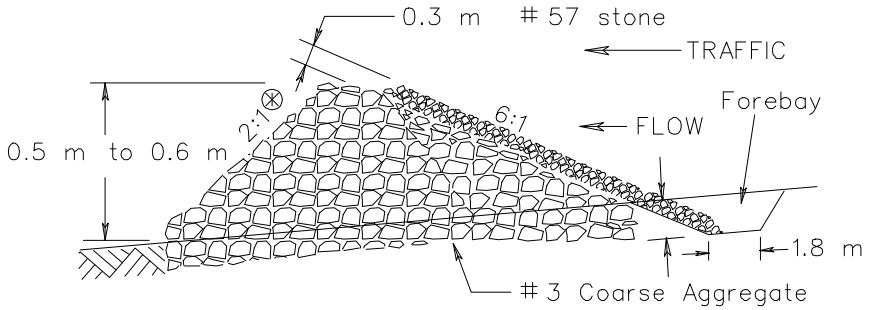
⊛ If Rock Check Dams are subject to two way traffic and arelocated within the clear zone, they are to have 6:1 slopes on bothsides.

SECTION A-A

TEMPORARY EROSION & SILTATION CONTROL

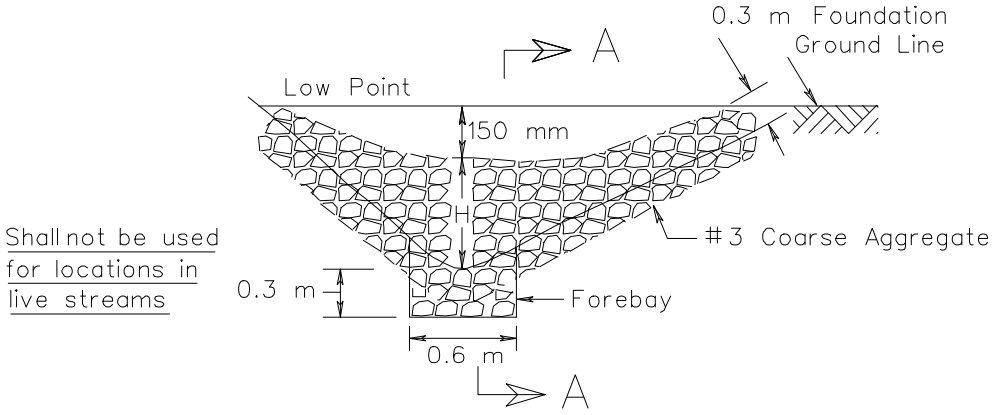
Rev. 6-97

TYPICAL DETAIL FOR ROCK CHECK DAM TYPE II



SECTION A-A

Shall not be used in cut ditch within clear zone when H > 0.3 m



FRONT ELEVATION

NOTES:

Rock Check Dams that are designated on the plans as a Stormwater Management (SWM) item are to be left in place as a permanent installation.

H = Height of dam 0.3 m or as designated by designer.

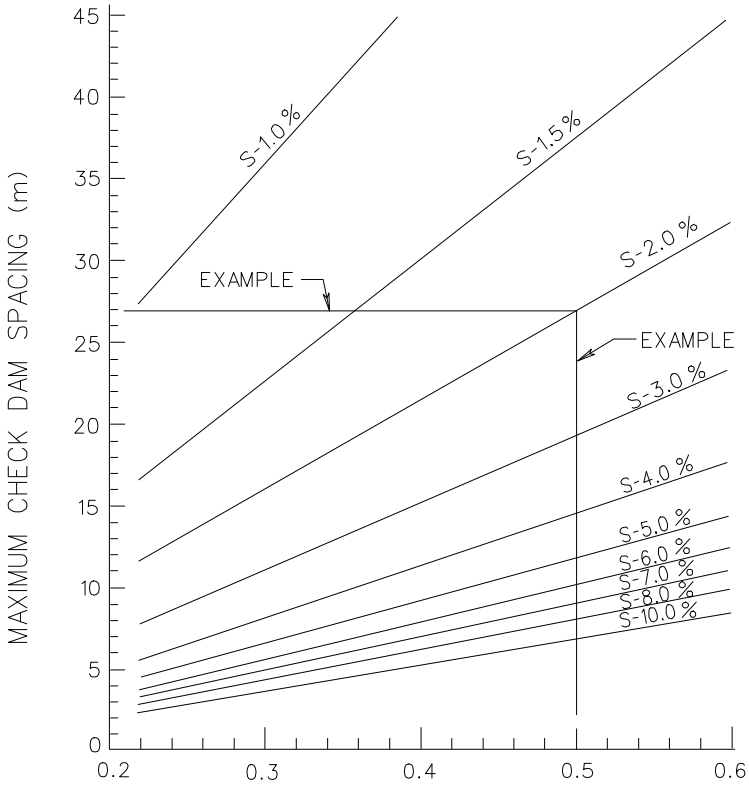
Where drainage areas exceed 0.4 hectares or ditch grade exceeds 3%, a temporary sediment trap shall be installed with minimum dimensions of 0.3 m deep and 1.8 m in length.

⊗ If Rock Check Dams are subject to two way traffic and are located within the clear zone, they are to have 6:1 slopes on both sides.

TEMPORARY EROSION & SILTATION CONTROL

Rev. 6-97

ROCK CHECK DAM SPACING



CHECK DAM HEIGHT (m)
MEASURED AT BOTTOM OF SPILLWAY

DESIGN OF STONE CHECK DAM SPACING
(n=0.030, V=0.6 m/s)

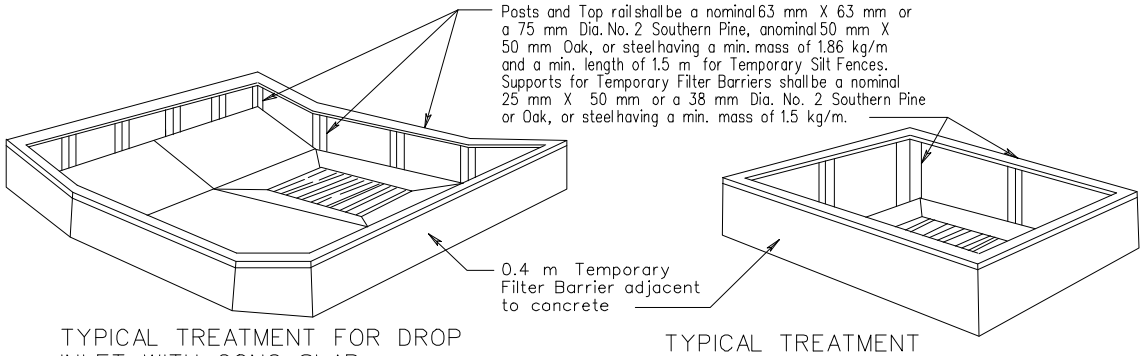
EXAMPLE: HEIGHT OF STRUCTURE 0.5 m
GRADE 2%
EXTEND PERPENDICULAR FROM 0.5 m HEIGHT TO INTERSECT 2% GRADE
EXTEND 90° TO THE LEFT TO DETERMINE SPACING (27 m±)

A-127
Metric

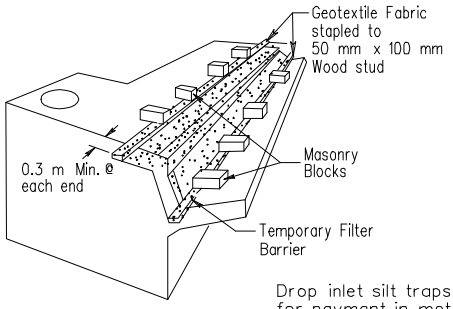
TEMPORARY EROSION & SILTATION CONTROL

DROP INLET SILT TRAP

Rev. 6-97

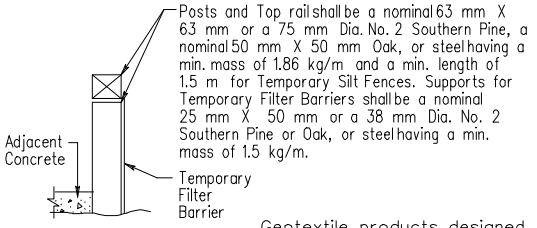


TYPICAL TREATMENT FOR DROP INLET WITH CONC. SLAB



TYPICAL TREATMENT CURB DROP INLET

TYPICAL TREATMENT FOR DROP INLET WITHOUT CONC. SLAB

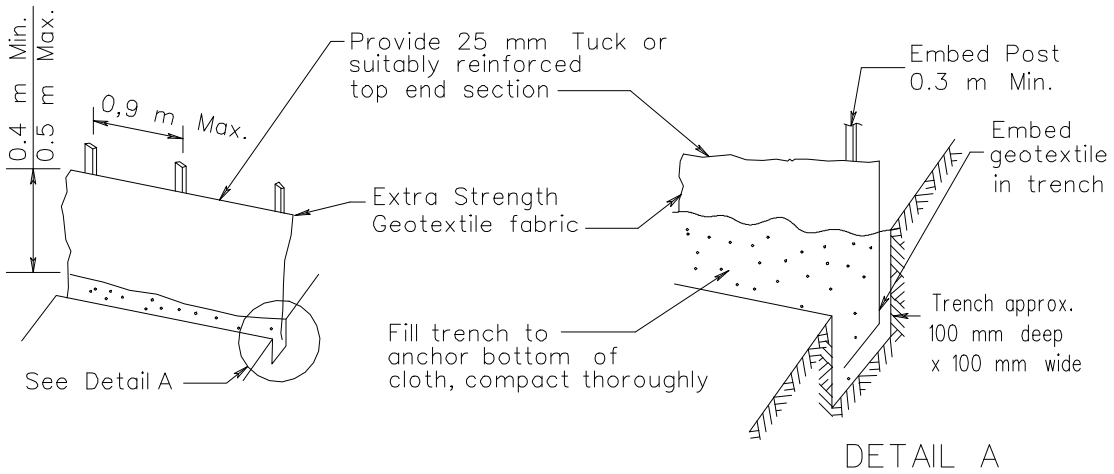


Drop inlet silt traps will be measured for payment in meters of Temporary Filter Barrier.

Curb Drop Inlet Filter Barrier will be measured in meters along the throat and paid for as Temporary Filter Barrier.

Geotextile products designed to be inserted into grated drop Inlets or designed to cover the slots of slot drop inlets that have been approved for use on VDOT projects and are found on VDOT's SPEL list may be substituted for the drop inlet protection devices.

TEMPORARY FILTER BARRIER

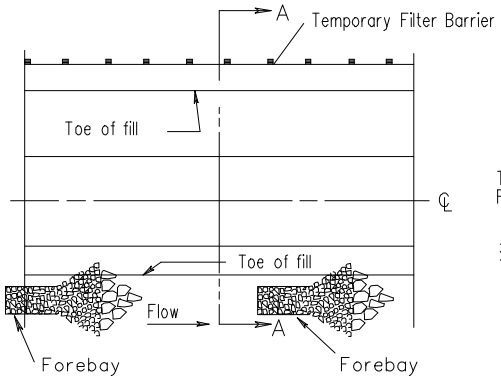


DETAIL A

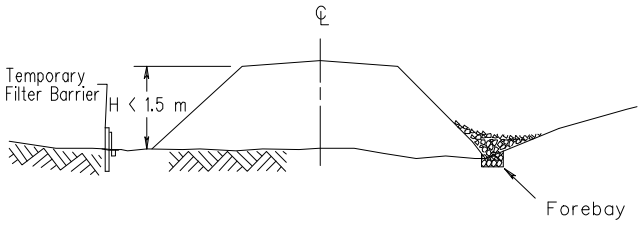
TEMPORARY EROSION & SILTATION CONTROL

TYPICAL DETAIL FOR TEMPORARY FILTER BARRIER AT TOE OF FILL

Rev. 6-97

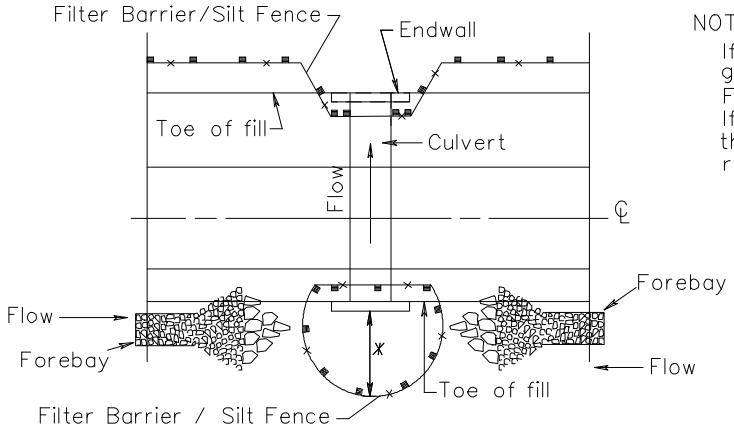


PLAN



SECTION A-A

TYPICAL DETAIL FOR TEMPORARY FILTER BARRIER / SILT FENCE AT CULVERT OR PIPE



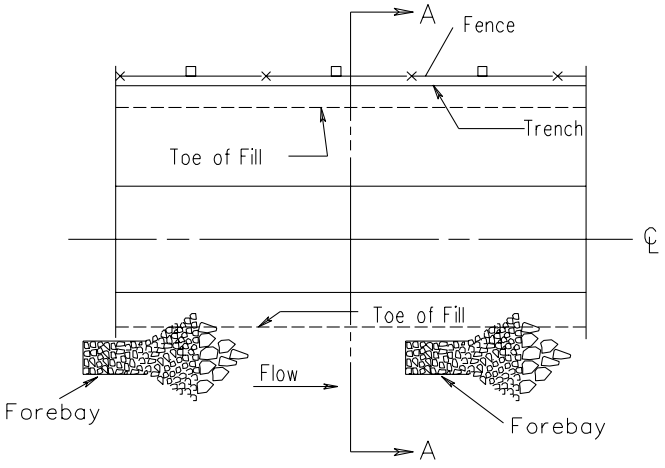
NOTE:
If any portion of Fill is greater than 1.5 m, Silt Fence is required.
If Fill height is less than 1.5 m, Filter Barrier is required.

* Distance is 1.8 m minimum if flow is toward the embankment. To be contained in right of way or easement.

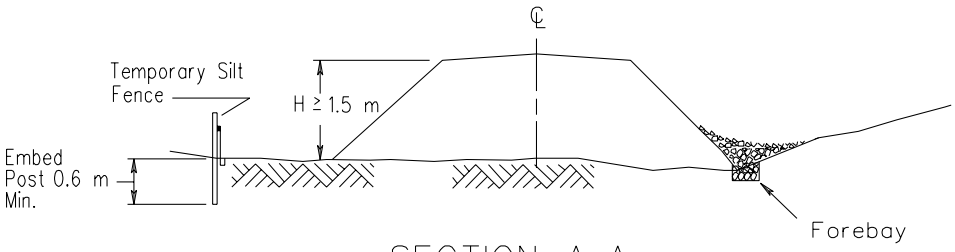
TEMPORARY EROSION & SILTATION CONTROL

Rev. 6-97

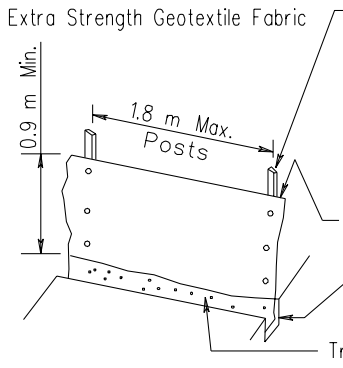
TEMPORARY SILT FENCE



NOTE:
Rock Check Dam is to be constructed in accordance with the Road and Bridge Specifications, and Standard ESC-INS sheet 115.01.



SECTION A-A



Posts for temporary silt fences shall be a nominal 63 millimeters by 63 millimeters or a 75 millimeter diameter No. 2 Southern pine, a nominal 50 by 50 millimeters oak, or steel having a weight of at least 1.86 kilograms per meter and a length of at least 1.5 meters.

Supports for temporary filter barriers shall be a nominal 25 by 50 millimeters or 38 millimeter diameter No. 2 Southern pine or oak, or steel having a mass of at least 1.5 kilograms per meter.

Provide 25 mm Tuck or suitably reinforced top end section.

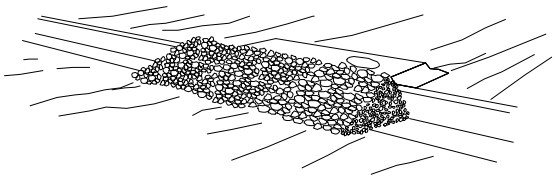
Embed Geotextile Fabric approx. 200 mm in trench.

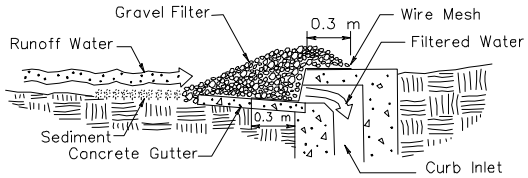
Trench approx. 100 mm deep X 100 mm wide
Fill trench to anchor bottom of Fabric, compact thoroughly.

TEMPORARY EROSION & SILTATION CONTROL

ALTERNATE DROP INLET SILT TRAP (GRAVEL TYPE)

Rev. 6-97





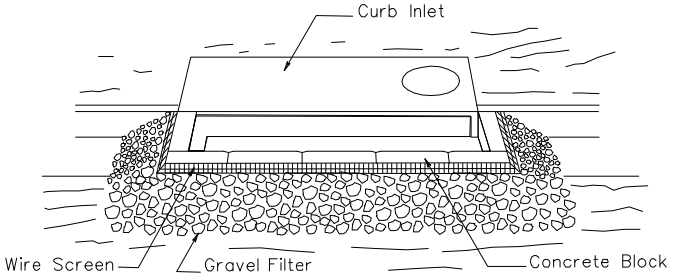
SECTIONAL VIEW

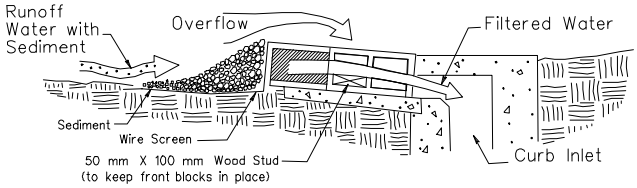
Specific Application

This method of inlet protection is applicable at curb inlets where ponding in front of the structure is not likely to cause inconvenience or damage to adjacent structures and unprotected areas.

Geotextile products designed to be inserted into grated drop Inlets or designed to cover the slots of slot drop inlets that have been approved for use on VDOT projects and are found on VDOT's SPEL list may be substituted for the drop inlet protection devices.

ALTERNATE DROP INLET SILT TRAP (BLOCK AND GRAVEL TYPE)





SECTIONAL VIEW

Specific Application

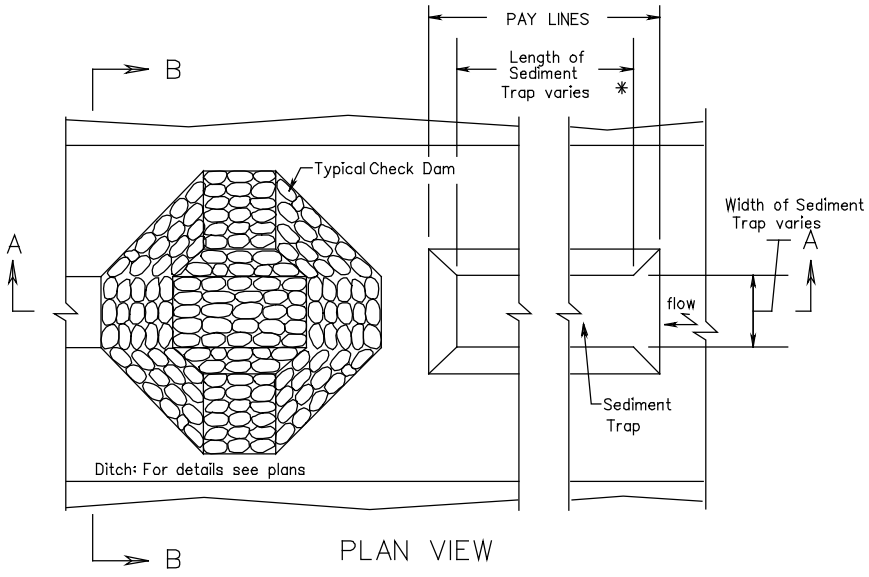
This method of inlet protection is applicable at curb inlets where an overflow capability is necessary to prevent excessive ponding in front of the structure.

Geotextile products designed to be inserted into grated drop Inlets or designed to cover the slots of slot drop inlets that have been approved for use on VDOT projects and are found on VDOT's SPEL list may be substituted for the drop inlet protection devices.

TEMPORARY EROSION & SILTATION CONTROL

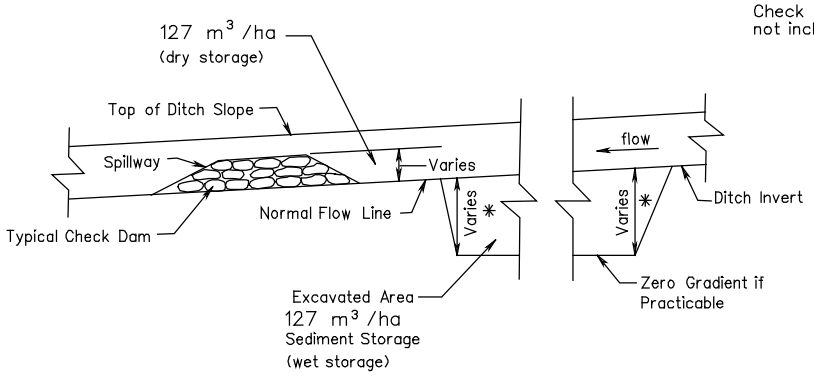
Rev. 6-97

TYPICAL SEDIMENT TRAP



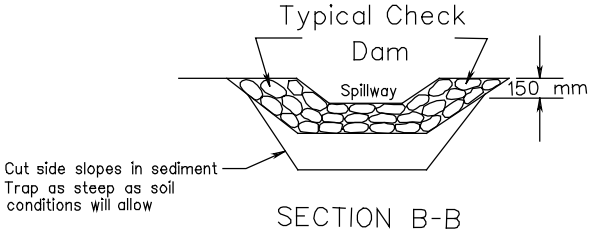
PLAN VIEW

NOTES:
Check Dam is shown for illustration only and is not included in payment for Sediment Trap.



SECTION A-A

Note: The sediment storage volume shall be 254 m³ /ha of total contributing drainage area and shall consist of half in the form of wet storage and half in the form of dry storage.



SECTION B-B

* Where drainage areas exceed 0.4 ha or ditch grade exceeds 3%, a Sediment Trap shall be installed with each Check Dam with minimum dimensions of 0.3 m deep and 1.8 m in length.

PAGES A-132 THROUGH A-136 ARE INTENTIONALLY LEFT BLANK

SAMPLE NARRATIVE FOR
EROSION CONTROL PLAN
("NO PLAN" AND "MINIMUM PLAN" PROJECTS)

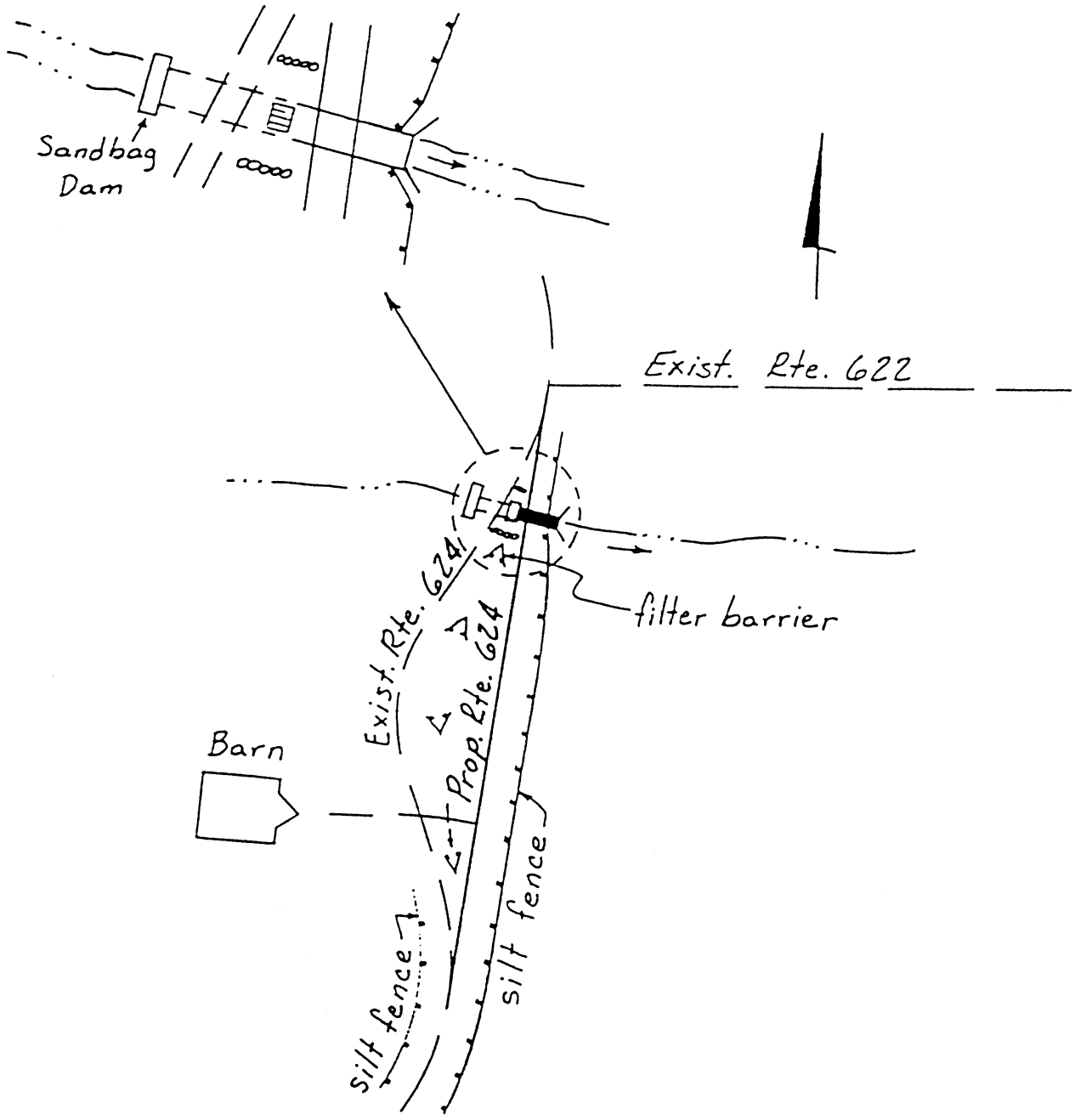
Route 624: From 0.89 km north of intersection with Route 623 to intersection with Route 622.

Route 624 will be rebuilt on new location approximately 0.24 km east of its present location. The hill at Mr. John Brown's property near his barn will be cut to create a near level roadway. The alignment will tie in to curves at the termini with a tangent section across Mr. Brown's property. A line of silt fence will be required along the east side of the project at the toe of fill. A line of silt fence will be required on the west side of Route 624 from the proposed entrance to Mr. Brown's barn to the end of the project. An entrance is proposed from the new alignment tying in to Mr. Brown's old entrance to his barn. A 375 mm C.M. pipe is required at the new entrance. Filter barrier is required at the inlet to the 375 mm pipe. Filter barrier is also required every 60 m in the ditch line on the west side of Route 624.

A 1200 mm C.M. pipe 90 m south of the intersection with Route 622 will require a 12 m extension. A St'd. EW-2 is required at the outlet end. A St'd. DI-1 is required in the joint between the existing and proposed pipes. A temporary stream diversion is required while laying the pipe extension. Rock check dams are required north and south of the joint between existing and proposed pipes.

USE NARRATIVE OR SKETCH

SAMPLE SKETCH FOR
EROSION CONTROL PLAN
("NO PLAN" AND "MINIMUM PLAN" PROJECTS)



USE NARRATIVE OR SKETCH

PLANS DESIGNED BY RICHMOND DISTRICT DESIGN UNIT

SURVEYED BY M. S. KIDD (804) 447-5043
SUPERVISED BY C. E. COSILEY, JR. 524-6144
DESIGNED BY L. B. V. STEWART, JR. 524-6281
CADD OPERATOR B. V. STEWART, JR. 524-6281
REVISED BY

PRINTS SENT TO

NO.	DATE	
		W & M DIV.
		COMPLETED PLANS
		ADVANCE PLANS
		FOR UTILITIES
		ADVANCE PLANS
		FOR RIGHT OF WAY

DIST. ENGR.
RES. ENGR.
CONSTR. ENGR.

INDEX OF SHEETS

SHEET NO.	DESCRIPTION	STA. TO STA.
1	Title Sheet	
1A	Geometric Data Sheet	
1B	Preliminary Right Of Way Data Sheet	
1C	Revision Data Sheet	
1D	Construction Baseline Coordinate Sheet	
2	Typical Section, General Notes, & Summary Sheet	
2A	Roadside Developement Sheet	
2B thru 2D	Erosion & Siltation Control Sheets	
3 and 3A	Plan and Profile sheet	10+00 - 12+00
3E	Profile sheet Conn. Rte. 609	10+00 - 12+00
4 and 4A	Plan and Profile sheet	12+00 - 16+00
5 and 5A	Plan and Profile sheet	16+00 - 20+00
6 and 6A	Plan and Profile sheet	20+00 - 24+00
7 and 7A	Plan and Profile sheet	24+00 - 28+00
8 and 8A	Plan and Profile sheet	28+00 - 32+00
9 and 9A	Plan and Profile sheet	32+00 - 36+00
10 and 10A	Plan and Profile sheet	36+00 - 40+00
11 and 11A	Plan and Profile sheet	40+00 - 44+00
12 and 12A	Plan and Profile sheet	44+00 - 48+00
13 and 13A	Plan and Profile sheet	48+00 - 50+00

ONLY THE COMPLETE PLAN ASSEMBLY AS AWARDED, INCLUDING ALL SUBSEQUENT REVISIONS, WILL BE THE OFFICIAL CONSTRUCTION PLANS. ANY COMBINATIONS OF LAYERED SHEETS, IF AVAILABLE, WILL NOT BE CONSIDERED A PART OF THE OFFICIAL ASSEMBLY.

THIS PLAN ASSEMBLY HAS BEEN CADD GENERATED AND IS AVAILABLE IN LAYERED FORMAT. THE CONTRACTOR SHALL REQUEST SPECIFIC LAYERED SHEETS FROM THE ENGINEER IN WRITING.

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT.

THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DEPARTMENT'S ROAD AND BRIDGE SPECIFICATIONS DATED JULY 1996, ROAD AND BRIDGE STANDARDS DATED DECEMBER 1, 1994, WORK AREA PROTECTION MANUAL DATED JANUARY 1, 1998 AND AS AMENDED BY CONTRACT PROVISIONS AND THE COMPLETE PAPER COPY OF THE PLAN ASSEMBLY.

ALL CURVES ARE TO BE SUPERELEVATED, TRANSITIONED AND WIDENED IN ACCORDANCE WITH STANDARD TC-5R, EXCEPT WHERE OTHERWISE NOTED.

CONVENTIONAL SIGNS

STATE LINE	LEVEE OR EMBANKMENT
COUNTY LINE	BRIDGES
CITY,TOWN OR VILLAGE	CULVERTS
RIGHT OF WAY LINE	DROP INLET
FENCE LINE	POWER POLES
UNFENCED PROPERTY LINE	TELEPHONE OR TELEGRAPH POLES
FENCED PROPERTY LINE	TELEPHONE OR TELEGRAPH LINES
WATER LINE	HEDGE
SANITARY SEWER LINE	TREES
GAS LINE	HEAVY WOODS
ELECTRIC UNDERGROUND CABLE	GROUND ELEVATION
TRAVELED WAY	GRADE ELEVATION
GUARD RAIL	
RETAINING WALL	
RAILROAD	
BASE OR SURVEY LINE	

COMMONWEALTH OF VIRGINIA

DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE OF PROPOSED STATE HIGHWAY

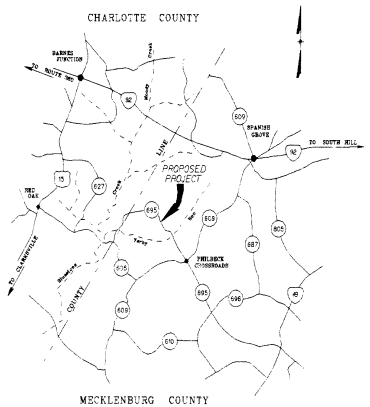
MECKLENBURG COUNTY
FROM: 0.114 km S.INT.RTE.609
TO: 0.064 km N.INT.RTE.605

FHWA 534 DATA (6003
PPMS * 8569

FHWA REGION	STATE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.	TOTAL SHEETS
3	VA.		695	0695-058-P65,M-501 See Tabulation Below For Section Numbers	1	

FUNCTIONAL CLASSIFICATION AND TRAFFIC DATA	
RURAL LOCAL - ROLLING - 50km/h MIN. DESIGN SPEED	
	Fr: 0.114 km S. Int. Rte. 609 To: 0.064 km N. Int. Rte. 605
ADT (1991)	110 VPD
ADT	
DHV	
D (%)	
T (%)	
V (KM/H)	○

○ SEE PLAN AND PROFILE SHEETS FOR HORIZONTAL AND VERTICAL CURVE DESIGN SPEEDS.



STATE PROJECT NO.	SECTION	FEDERAL AID PROJECT NO.	TYPE CODE	PPMS NO.	EQUALITIES METERS	LENGTH INCLUDING BRIDGES METERS	LENGTH INCLUDING BRIDGES KILOMETERS	LENGTH EXCLUDING BRIDGES METERS	LENGTH EXCLUDING BRIDGES KILOMETERS	TYPE PROJECT	DESCRIPTION
0695-058-P65	M-501	NONE	F000	8569	NONE	3,893.40	3.893			Gr.,Drain.,& Pave.	FROM: 0.114 km S. Int. 609 TO: 0.064 km N. Int. Rte. 605

NOTE: PROJECT LENGTH BASED ON CONSTRUCTION CENTERLINE.

REVISED

RECOMMENDED FOR APPROVAL FOR RIGHT OF WAY ACQUISITION

DATE — SECONDARY ROADS ENGINEER
DATE — STATE LOCATION AND DESIGN ENGINEER
DATE — ASSISTANT COMMISSIONER FOR FINANCE
DATE — CHIEF ENGINEER

APPROVED FOR RIGHT OF WAY ACQUISITION

DATE — COMMISSIONER

RECOMMENDED FOR APPROVAL FOR CONSTRUCTION

DATE — SECONDARY ROADS ENGINEER
DATE — STATE LOCATION AND DESIGN ENGINEER
DATE — ASSISTANT COMMISSIONER FOR FINANCE

APPROVED FOR CONSTRUCTION

DATE — CHIEF ENGINEER

APPROVED

DATE — DIVISION ADMINISTRATOR FEDERAL HIGHWAY ADMINISTRATION U.S. DEPARTMENT OF TRANSPORTATION

04/18/96 15:19:20 CODE NO. 6010

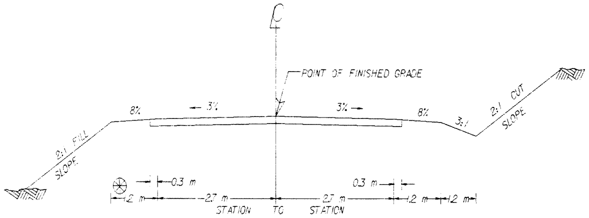
PLAN NO.	PROJECT	FILE NO.	SHEET NO.
A	0695-058-P65		

TYPICAL SECTIONS

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

REVISED	FHWA REGION	STATE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.
	3	VA.		695	0695-058-P65, M-501	2

⊠ 6m X VAR. DEPTH AGGREGATE BASE MATERIAL, TYPE I, NO. 21-B
WITH PRIME AND DOUBLE SEAL SURFACE TREATMENT
7.8m CLEAR ROADWAY



STATION	TO	STATION	
10+20.00	-	11+31.12	MAINLINE
11+37.72	-	49+20.00	MAINLINE
10+00.00	-	12+00.00	CONN. RTE. 609

SHOULDERS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH GS-12.

⊛ WHERE GUARDRAIL IS REQUIRED SHOULDER IS TO WIDENED 0.9 m TO ALLOW A 0.9 m OFFSET TO FACE OF GUARDRAIL.

⊠ USE 200 mm (8") DEPTH FOR ESTIMATING PURPOSES. DEPTH TO BE PLACED AS DIRECTED BY THE ENGINEER. QUANTITY TO BE BASED ON ACTUAL DEPTH CONSTRUCTED.

SHOULDERS, DITCHES & SLOPES ARE TO BE SEEDED AND FERTILIZED.

FOR ADDITIONAL PAY ITEMS, SEE SHEET NO. ______

⊗ DENOTES ITEMS TO BE PAID FOR ON BASIS OF PLAN QUANTITIES IN ACCORDANCE WITH CURRENT ROAD AND BRIDGE SPECIFICATIONS.

ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITY

GENERAL NOTES

GRADING

G-1 The grade line denotes top of finished pavement unless shown otherwise on typical sections or plans.

DRAINAGE

D-1 The locations of all drainage structures shown on these plans are approximate only, with the exception of structures showing specific stations.

Pipes are to conform to any of the allowable types listed below, within the applicable fill height limitations, for strength, sheet thickness, or class designation; available sizes; height of fill limitations; and method of bedding required for a particular height of cover. See standard drawings PC-1 and PB-1.

Height of cover for drainage structures is minimum unless otherwise noted on plans.

All existing entrance pipe is to be removed unless otherwise noted or directed by the Engineer. The cost of removing existing pipe is to be included in the price bid for Lump Sum Grading.

PAVEMENT

P-2 The materials listed below are to be paid on a tonnage basis on this project. The theoretical tonnage shown on these plans is based on the weight shown hereon. The weight will vary in accordance with the specific gravity of the aggregates and the asphaltic content of the mix actually used to secure the design depth. The weight of the asphalt concrete is based on 95% of theoretical maximum density.

P-3 Aggregate Base Material Type I No. 21B @ 66 kg.\m³.
(Plus 6% moisture correction)

INCIDENTALS

When no centerline is shown for a proposed entrance is to be constructed in the same location as the existing entrance.

All proposed entrances to be standard PE-1 unless otherwise noted on plans.

A minimum 16 m Right of Way is to be secured based on the centerline shown on the plans together with the Right and Easement to use the additional areas as may be necessary for the proper execution and maintenance of the work as indicated on the plans.

SUGGESTED SEQUENCE OF CONSTRUCTION / TRAFFIC CONTROL

Traffic is to be maintained throughout the project on the present road or on the grade where the present road is to be raised or lowered. Short periods of one-way, flag controlled, traffic will be allowed at the option of the Engineer.

ALLOWABLE PIPE TYPES (UNLESS OTHERWISE SHOWN ON PLANS)
(SEE STANDARD DRAWING PC-1 FOR HEIGHT OF COVER LIMITATIONS FOR EACH TYPE)

LOCATION	CONCRETE	FULLY ASPHALT COATED CORRUGATED STEEL WITH PAVED INVERT	UNCOATED CORRUGATED STEEL	CORRUGATED ALUMINUM ALLOY	POLYETHYLENE CORRUGATED	POLYETHELENE DOUBLE WALL	ALUMINUM COATED TY. 2 CORRUGATED STEEL	ALUMINUM COATED TY. 2 FULLY ASPHALT COATED CORRUGATED STEEL	PVC RIBBED CULVERT PIPE
MAINLINE	X	X	X	X	X	X	X		X
ENTRANCE	X	X	X	X		X	X		X
CONN.	X	X	X	X	X	X	X		X

PAVEMENT SURFACING					
INITIAL SEAL		INTERMEDIATE SEAL		FINAL SEAL	
LIQ. ASPH. MAT'L.	COV. MAT'L. AGGR.	LIQ. ASPH. MAT'L.	COV. MAT'L. AGGR.	LIQ. ASPH. MAT'L.	COV. MAT'L. AGGR.
RC-70, RC-250, OR MC-250 @ 1.6 L/m²	NO. 68 STONE, SLAG OR CRUSHED @ 16 kg/m²	CRS-2, CMS-2 OR CMS-2h @ 1.2 L/m²	NO. 8P STONE, SLAG OR CRUSHED GRAVEL @ 10 kg/m²	CRS-2, CMS-2 OR CMS-2h @ 1.2 L/m²	NO. 8P STONE, SLAG OR CRUSHED GRAVEL @ 10 kg/m²
LITERS	METRIC TONS	LITERS	METRIC TONS	LITERS	METRIC TONS
*	*	*	*	*	*

* QUANTITIES ARE SHOWN FOR ESTIMATING PURPOSES ONLY AND ARE INCLUDED WITH THE ESTIMATED QUANTITIES

DEMOLITION OF BUILDING

SH. NO.	DEMO. NO.	PROPERTY OWNER	STATION	DESCRIPTION	LUMP SUM	PARCEL NO.
7	D-1	Carter	27+80 Lt.	Tobacco Barn	L.S.	013
9	D-2	Gregory	34+25 Rt.	Frame Barn	L.S.	020
9	D-3	Gregory	34+70 Lt.	Barn & Shed	L.S.	019
11	D-4	Gregory	41+60 Rt.	Frame Barn	L.S.	023

WORK TO BE DONE BY STATE FORCES
(NON-PARTICIPATING)

SURVEYED BY M.S. KIDD (804) 447-5043
SUPERVISED BY G.E. COSTLEY, JR. 524-6144
DESIGNED BY B.V. STEWART 524-6281
CADD OPERATOR G.E. COSTLEY, JR. 524-6144
REVISED BY ______

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
A	0695-058-P65		2

A-140
Metric

A-141
Metric

Electrical Utilities Owned By:

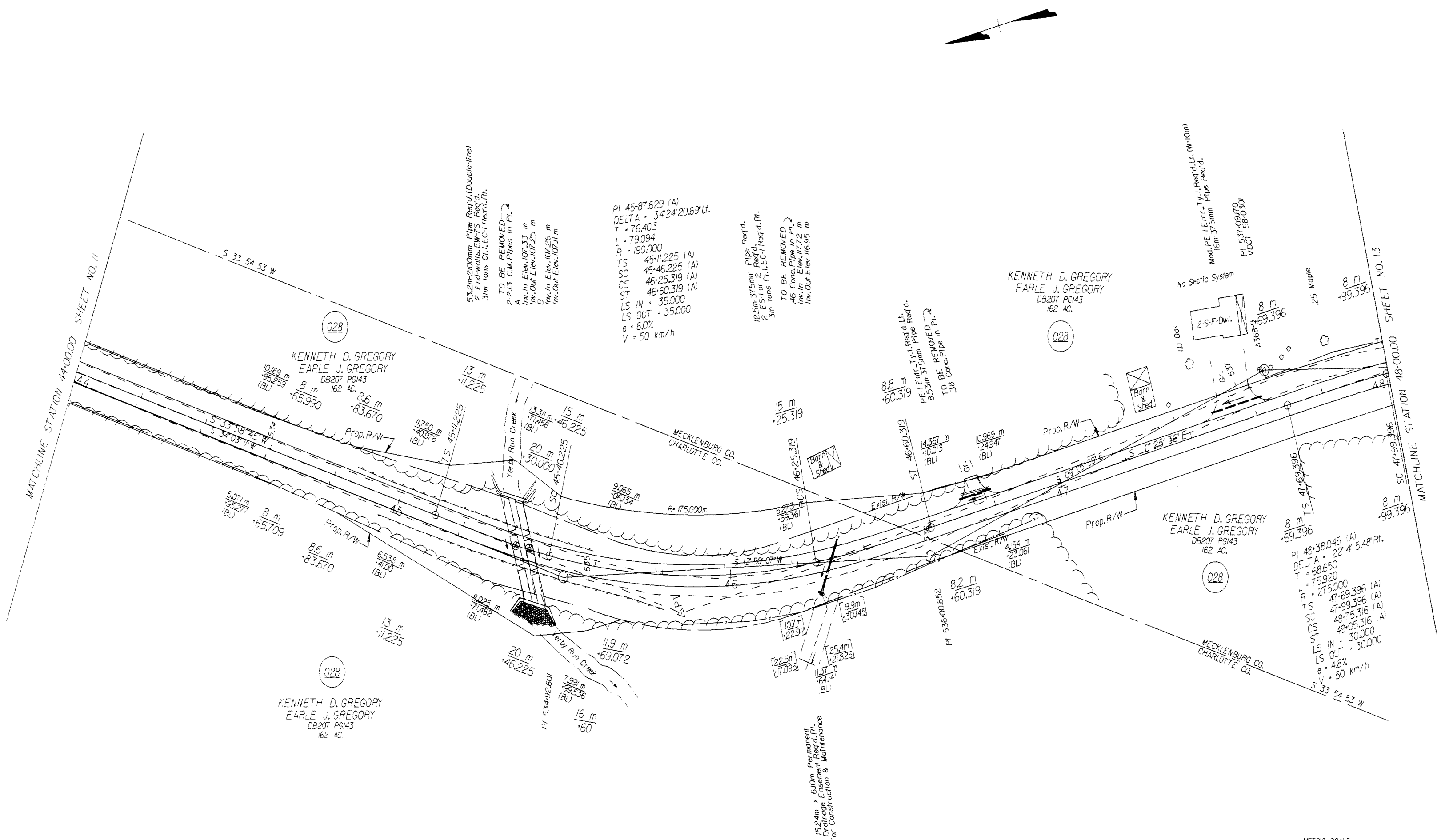
Mecklenburg Electric Coop.
P.O. Box 2451
Chase City, Va. 23924

Telephone Utilities Owned By:

GTE Of Va.
121 N. Marshall St.
Chase City, Va. 23924

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE DEPARTMENT

REVISED	FHWA REGION	STATE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.
	3	VA.		595	0695-058-P65, M-501	12



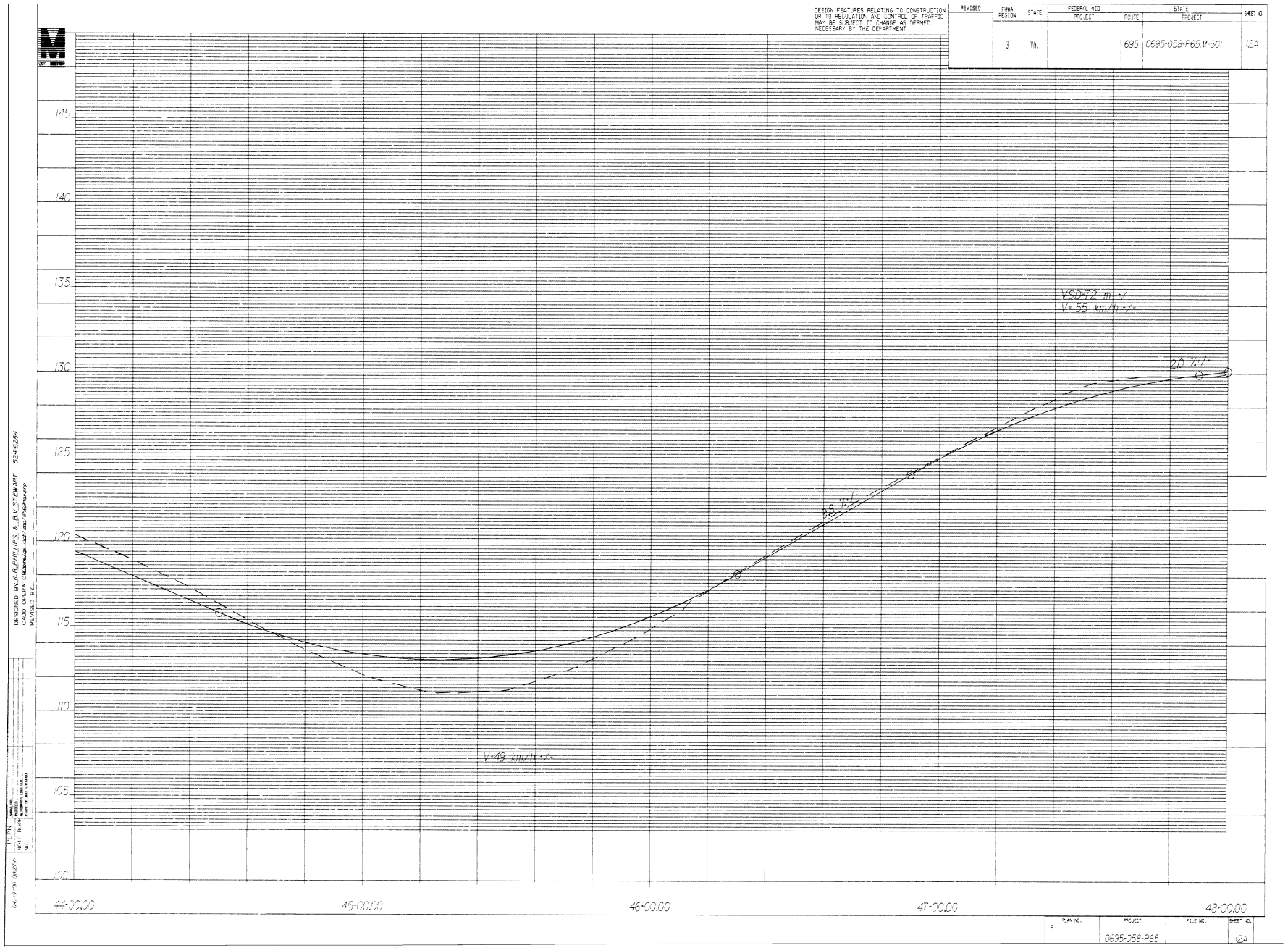
METRIC SCALE
1:500
0 10 m 20 m

NOTE :
Existing R/W Obtained From
Project 0695-058-162, I-627

SUPERVISED BY C.E. COLLEY, JR. 524-6144
DESIGNED BY K.B. PHILLIPS & D.V. STEWART 524-6281
CADD OPERATOR
REVISED BY

04/19/96 08:08:22

	PLAN NO.	PROJECT	FILE NO.	SHEET NO.
A		0695-058-P65		12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REVISED
FHWA REGION
STATE
FEDERAL AID PROJECT
STATE ROUTE
STATE PROJECT
SHEET NO.
3
VA.
695
0695-058-P65,M-501
12A
DESIGNED BY K.R.PHILLIPS & B.V.STEWART 524-6284
CADD OPERATOR
REVISED BY
145
140
135
130
125
120
115
110
105
100
VSDT2 m +/-
V=55 km/h +/-
2.0 %/
8.8 %/
V=49 km/h +/-
44+00.00
45+00.00
46+00.00
47+00.00
48+00.00
PLAN NO.
A
PROJECT
0695-058-P65
FILE NO.
SHEET NO.
12A