SURVEYED BY .....
SUPERVISED BY AAA
DESIGNED BY Dewberry (703) 849-0607

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.
7/17/08	3	VA.		7		2E(1)

IN PROGRESS 09/26/08
NOT FOR CONTRUCTION

GRADING DIAGRAM AND SUMMARY

PROJECT NO.	Location	Roadway Cut (1) (8)	Root Mat In Cut Sections (10)	Root Mat In Fill Sections (10) (11)	Cut - Ditches	Root Mat In Cut Ditches	Removal And Disposal Unsuitable Material (Undercut Excavation) (6) Below Subgrade	Above Subgrade	Pipe Undercut	Roadway Fill (8)	Total Regular Excavation (6)	Usable Regular Excavation (Roadway)	Total Fill	Demolition of Pavement (2)	SWM Basin Excavation (6)	Minor Structure Excavation (2)	Usable Regular Excavation (Misc)	Total Usable Regular Excavation	(6) Embankment
		C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.
	RAMP A	945	459	303			3,962	539		23,018	1,248	413	27,282	0		1,169	994	1,407	25,875
	RAMP B	2,358	931	0			2,838	786		10,843	2,358	1,213	13,680	1,169		106	90	1,303	12,377
	RAMP C	92	72	268			4,911	527		19,730	361	17	24,909	156		527	448	465	24,444
	RAMP D	235	199	285			5,102	759		20,672	520	31	26,059	0			0	31	26,028
	SPUR A	0	0	0			1,183	0		10,751	0	0	11,934	0			0	0	11,934
	SPUR B	0	0	0			0	0		15,594	0	0	15,594	0			0	0	15,594
	SPUR C	0	0	0			2,045	0		17,009	0	0	19,054	0			0	0	19,054
	SPUR D	22	17	0			0	0		21,708	22	5	21,708	0			0	5	21,703
	ROUTE 607	155	0	0			41,918	3,457		129,850	155	132	171,768	11,998		612	520	652	171,116
	ROUTE 607 NB	322	205	153			0	0		170	475	99	323	0			0	99	224
	ROUTE 607 SB	257	243	60	0	0	0	0	0	358	317	12	418	269			0	12	405
	ROUTE 7 EB	2,809	1,258	260			372	345		19,142	3,070	1,319	19,774	807		1,837	1,562	2,880	16,893
	ROUTE 7 WB	4,857	1,859	468			721	233		15,727	5,325	2,548	16,917	1,431		1,259	869	3,418	13,499
	SMITH CIRCLE	0	0	0						342	0	0	342	0			0	0	342
	LEXINGTON DRIVE	315	183	0			0	0		0	315	113	0	0			0	113	(113)
	ROUTE 607 DETOUR	144	131	56			1,145	187		817	200	11	2,018	0			0	11	2,007
	ROUTE 607 NB DETOUR	0	0	0			475	155		39	630	0	514	0			0	0	514
	SWM POND E	0	0	0			0	0		957	0	4,120	957	0	4,431		3,766	3,766	(2,809)
	DIVERSION DIKE	0	0	0			0	0		1,353	0	0	1,353	0			0	0	1,353
	TOTALS	12,514	5,557	1,853	0	0	64,671	6,987	0	308,079	14,997	5,913	374,604	15,831	4,431	5,511	8,250	14,163	360,441
	FORMULAS	A (3)	B (4)	C (3) (7)	D (3)	E (12)	F (3)	G (3) (4)	H (4)	I (7)	J	K	L	M	R	N	O	P	Q

FORMULAS

Roadway Cut (A) = Unadjusted Cut from Computer Listings or Manual Cross-Sections minus (-) Demolition of Pavement.

Total Reg. Excav. (J) = A + C + D
Total Fill (L) = I + C + F
Usable Regular Excavation (Roadway) (K) = [(J - B - C)- ((J - B - C) × 0.15)]
Usable Regular Excavation (Misc.) (O) = [(N+R) -((N+R) × 0.15)]
Total Usable Regular Excavation (P) = K + O
Embankment (Surplus) (Q = L - P
Note: A Negative Value Indicates Embankment (Surplus) Material And Is Shown In Parentesis

GENERAL NOTES:

1. The information shown was obtained with reasonable care and in good faith solely for the use by the department in the establishing design control for the project. V.D.O.T. has no reason to suspect that such information is not reasonably accurate. V.D.O.T. does not in any way warrant or guarantee such data and any projections . by bidders are purely interpretive and altogether speculative. Further V.D.O.T. does not in any way guarantee, either expressly or by implication, the sufficiency of the information for bid purposes. This information is made available to bidders in order that they may have access to data identical to that which is possessed by V.D.O.T. and is not intended as a substitute for personal investigation, interpretation, and judgement by the bidders.
2. The usable regular excavation quantities shown were computed on the basis of an average shrinkage factor of 15% for soils. The contractor will be responsible for determining the actual factor for the embankment material needed to complete this project.
3. The contractor shall be responsible for finding an acceptable disposal site for any unsuitable and surplus material encountered on the project.
4. If material denoted as unsuitable on the plans is found to be suitable, the contractor will not receive any additional overhaul payment since this was included in the price bid for undercut excavation.

⊗ Denotes items to be paid for a basis of plan quantities in accordance with current VDOT Road and Bridge Specifications.

(1) Cut quantity shown does not include the material removed as "Demolition of Pavement" or "Minor Structure Excavation".

(2) Quantity shown for use in Grading Diagram only. See other Summaries for pay item(s).

(3) Included in "Total Regular Excavation".

(4) Included in "Roadway Cut" quantity.

(6) Denotes pay item.

(7) Included in "Total Fill" quantity.

(8) This quantity comes from the computer listings and/or manual cross-sections and may be ajusted for other quantities.

(10) All Root Mat is assumed to be 1 ft deep.

(11) "Root Mat in Fill Sections" is root mat beneath travelled sections of roadways (including the entire shoulder) where the vertical distance between the Proposed Subgrade and existing ground is less than 5 ft.

(12) Included in "Cut Ditch" Quantity.

⊢130⊣ Fill — Denotes fill quantity from computer listings and/or manual cross-sections.

⊢130⊣ Cut — Denotes cut quantity from computer listings and/or manual cross-sections.

Denotes yd³ root mat material in cut areas which is included in Regular Excavation quantities.

Denotes yd³ root mat material removed from fill sections and backfilled.

Denotes yd³ unsuitable material above subgrade

Denotes yd³ of excavation of unsuitable mat'l. below subgrade. See Sheet 2J(3) for backfill material.

Denotes yd³ Minor Structure Excavation.

Denotes yd³ existing pavement to be removed as "Demolition of Pavement."

Denotes yd³ Haul.

Denotes yd³ fill for S.W.M. (Stormwater Management Basin)

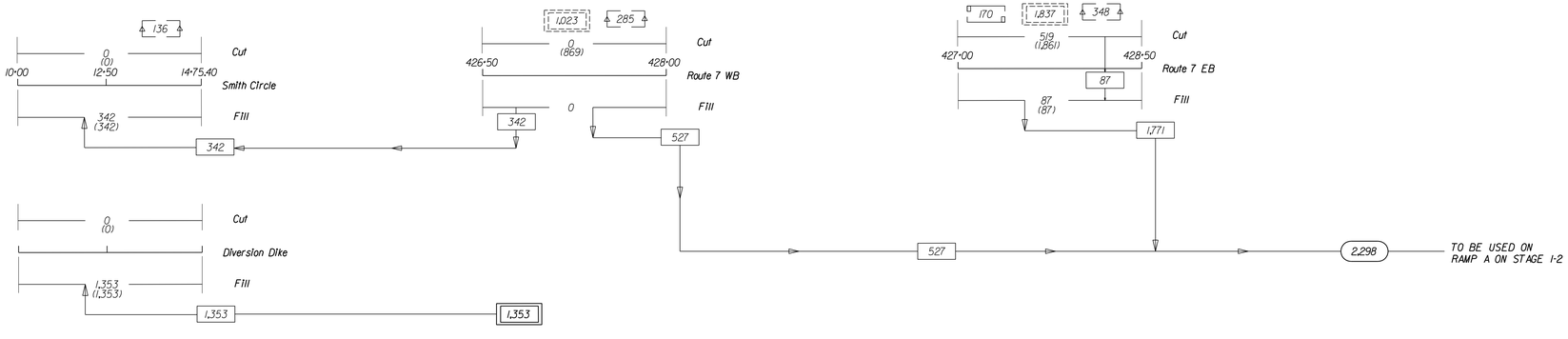
Denotes yd³ cut from S.W.M. (Stormwater Management Basin)

Denotes yd³ Borrow Material

Denotes yd³ Surplus Material.

Denotes yd³ pipe undercut excavation which is included in Total Regular Excavation.

Stage 1-1 Construction



COMMONWEALTH OF VIRGINIA
DAVID JOHN MAHONEY
Lic. No. 020798
PROFESSIONAL ENGINEER

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
A			2E(1)