

REQUEST FOR BOARD ACTION

HENDERSON COUNTY BOARD OF COMMISSIONERS

MEETING DATE: June 7, 2010

SUBJECT: Resolution – for Henderson County Solid Waste Funding Request to North Carolina Department of Transportation (NCDOT)

ATTACHMENTS: Yes

- 1.) Resolution
- 2.) Copy of GS 36-44.1,143B-350(f),(g)
- 3.) Financial Analysis
- 4.) Input Data for Financial Analysis
- 5.) McGill and Associates Cost Estimate

SUMMARY OF REQUEST:

Attached is a resolution to support funding requests to NCDOT for street improvements (left turn lane and entrance road) for the Stoney Mountain Transfer Facility (SMTF). In return for the street improvements, the Henderson County operations of the NCDOT will be allowed to use the SMTF at no charge for waste disposal for up to 550 tons per year.

A review of this resolution to assure a benefit to the Citizens of Henderson County is provided by the attached Financial Analysis and by reviewing the budget source within NCDOT. First in reviewing the budget with NCDOT per discussions with Mark Gibbs (District Engineer for NCDOT), the funding for the turn lane and entrance road (\$360,000 per McGill estimate) is from Capital dollars out of a Statewide budget. The tipping fees paid to SMTF are funded out of the NCDOT Henderson County maintenance budget. Therefore, by waiving the tipping fee to the local NCDOT operations more funds are available for Henderson County operations at the cost of statewide capital dollars. The dollars are switched from funding Solid Waste operations to increasing NCDOT road maintenance in Henderson County.

In addition to the above information supporting the resolution, the attached Financial Analysis conservatively concludes that at NCDOT's average rate of material delivered to SMTF the County has a positive cash flow at all years. After this funding request at the average rate, there is over a \$1.2 Million positive difference in funding between the County and State. Switching to an analysis of the NCDOT rate of delivering material at the proposed limit of 550 tons and using the most costly processing, the County carries a positive cash flow until year 44 after the request. Lastly using the limit rate, the negative difference to the County after 96 years is slightly more than the original cost of the turn lane and entrance road. Note, accurate conclusions of the costs past twenty year or even five to ten years is suspect and subject to many variables; however, the general, conservative conclusion to be drawn from the Analysis is the results for Henderson County Solid Waste are very likely to be favorable.

BOARD ACTION REQUESTED:

The Board is requested to adopt the attached Resolution as presented.

SUGGESTED MOTION:

I move that the Board adopt the Resolution in support for the funding request from the North Carolina Department of Transportation for the turn lane and entrance road at the Stoney Mountain Transfer Facility.

HENDERSON COUNTY BOARD OF COMMISSIONERS

1 Historic Courthouse Square, Suite #1
Hendersonville, NC 28792
Phone (828) 697-4808 • Fax (828) 698-4443
TDD: (828) 697-4580
www.hendersoncountync.org

BILL MOYER
Chairman
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Vice-Chairman

CHUCK MCGRADY
CHARLIE MESSER
LARRY YOUNG

Resolution for Henderson County Solid Waste Funding Request to North Carolina Department of Transportation

- WHEREAS,** Henderson County is applying for an access permit to North Carolina Department of Transportation (NCDOT) for the improvements to the Stoney Mountain Transfer Facility; and
- WHEREAS,** The Access permit will require a left turn lane on Stoney Mountain Road; and
- WHEREAS,** In return for the use of the Stoney Mountain Transfer Facility and per GS 36-44.1,143B-350(f),(g) (attached);, NCDOT will fund construction of the required turn lane and entrances. In addition, the entrance road will become part of the State System for maintenance; and
- WHEREAS,** NCDOT maintenance operations in Henderson County have a three year average of 250 tons varying from 85 to 507 tons, with the average cost of \$12,500 per year; and
- NOW, THEREFORE,** be it resolved that we, the Henderson County Board of Commissioners, does hereby request funding for the Stoney Mountain entrance road and turn lane from NCDOT and for the entrance road to become part of the State System for maintenance. In return Henderson County will receive materials from NCDOT for Henderson County Maintenance Operations at an annual amount not to exceed 550 tons.

Adopted this the 7th day of June, 2010.

WILLIAM L. MOYER, CHAIRMAN
HENDERSON COUNTY BOARD OF COMMISSIONERS

ATTEST:

TERESA L. WILSON, CLERK TO THE BOARD

G.S. 136-441.; 143B-350(f),(g).

- a. The NCDOT will assist the individual counties in the construction of roads to serve county supervised landfills by either participating with the financing, by doing the construction on a 100 percent reimbursable basis, or by assuming the total construction cost after it has been determined to what degree that secondary road improvement funds allocated to that county will be available by the Board of Transportation, the Division Engineer and the District Engineer. The construction cost of the road to serve the landfill must be of a reasonable nature when compared to the total needs of the county, as well as available funds. The road will become a part of the state maintained system, and 60 feet of right of way must be dedicated to the NCDOT at no cost. The division of Highways must be allowed to utilize the landfill for dumping purposes free of charge.
- b. The initiation of such a project will be by a resolution from the Board of County Commissioners recommending the use of county allocated funds to partially or totally fund the road. The resolution must also state that the Division of Highways can utilize the landfill.

Financial Analysis: NCDOT Funding for Solid Waste Entrance and Turn Lane

Year	Road Maintenance	Construction Cost	Annual Material Cost	
	Cost	Value	Limit	Average
1	\$ 504,000.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
2	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
3	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
4	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
5	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
6	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
7	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
8	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
9	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
10	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
11	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
12	\$ 33,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
13	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
14	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
15	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
16	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
17	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
18	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
19	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
20	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
21	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
22	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
23	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
24	\$ 38,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
25	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
26	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
27	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
28	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
29	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
30	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
31	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
32	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
33	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
34	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
35	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
36	\$ 33,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
37	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
38	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
39	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
40	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
41	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
42	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
43	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00

Financial Analysis: NCDOT Funding for Solid Waste Entrance and Turn Lane

Year	Road Maintenance	Construction Cost	Annual Material Cost	
	Cost	Value	Limit	Average
44	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
45	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
46	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
47	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
48	\$ 38,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
49	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
50	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
51	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
52	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
53	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
54	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
55	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
56	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
57	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
58	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
59	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
60	\$ 33,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
61	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
62	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
63	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
64	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
65	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
66	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
67	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
68	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
69	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
70	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
71	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
72	\$ 38,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
73	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
74	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
75	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
76	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
77	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
78	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
79	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
80	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
81	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
82	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
83	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
84	\$ 33,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
85	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
86	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00

Financial Analysis: NCDOT Funding for Solid Waste Entrance and Turn Lane

Year	Road Maintenance	Construction Cost	Annual Material Cost	
	Cost	Value	Limit	Average
87	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
88	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
89	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
90	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
91	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
92	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
93	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
94	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
95	\$ 2,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00
96	\$ 38,500.00	\$ 15,120.00	\$ 23,400.00	\$ 6,500.00

Totals: \$ 1,009,500.00 \$ 1,451,520.00 \$ 2,246,400.00 \$ 624,000.00

Net Cost to Henderson County: \$ (214,620.00) \$ (1,837,020.00)

Input Data for Financial Analysis:

1) Distribution of NCDOT Material (from WasteWorks reports of actual NCDOT tonnage)

Material	Unit Cost	FY06		FY07		FY08		FY09		FY10 (est)	
		Tn	Cost	Tn	Cost	Tn	Cost	Tn	Cost	Tn	Cost
Litter from ROW	\$ -	112.46	\$ -	103.56	\$ -	88.25	\$ -	97.86	\$ -	70.00	\$ -
MSW	\$ 52.00	0.58	\$ 30.16	12.48	\$ 648.96	0.18	\$ 9.36	0.87	\$ 45.24		\$ -
Brush	\$ 52.00		\$ -	4.52	\$ 235.04	1.08	\$ 56.16		\$ -	7.00	\$ 364.00
C&D	\$ 52.00		\$ -	393.17	\$ 20,444.84	194.24	\$ 10,100.48	5.70	\$ 296.40	0.70	\$ 36.40
totals		113.04	\$ 30.16	513.73	\$ 21,328.84	283.75	\$ 10,166.00	104.43	\$ 341.64	77.70	\$ 400.40

2) From table above 513 tons is highest, assume cap at 550 tons

- Assume HCSW tipping fee will go up relative to inflation and increases are offset by conservative assumption in tonnage
 - 550 ton per year includes approximately 100 tons per year of Litter which is currently no charge
 - Highest possible Annual Cost to HCSW: 550 ton minus 100 Litter tonnage x \$52 = \$23,400
- (Note, brush is less expensive to process than MSW (\$52) and future operations will process C&D less expensively as well.)

3) Average Annual Cost to NCDOT: \$6,500 (average from annual data in above table)

4) Engineer Estimate for Construction: \$504,000 (McGill Estimate)

- Turn Lane: \$146,400
- Entrance Road: \$357,600

5) Annual Value of Construction Cost: \$504,000 x 3% APR = \$15,120

6) Engineer's Estimate for Maintenance

- \$33,500 every 12 years for Resurfacing (McGill Estimate)
- \$5,000 every 24 years for Milling in addition to Resurfacing
- \$2,500 annually for drainage, mowing, etc (equates to about 10 hours of Operator and Heavy Equipment Rental)

7) Assume zero inflation (applies to Road Costs, Material Costs and Value of Construction Cost)

8) Definition of Terms Used

- Road Maintenance Cost: Cost to NCDOT annually to build and maintain the Entrance and Turn lanes
- Construction Cost Value: The annual value of the money not spent by Henderson County on the Entrance and Turn lanes
- Annual Material Cost: The cost to NCDOT for bringing material (MSW, brush and C&D) to the Transfer Station. Broken into upper Limit, Average and Low.

HENDERSON COUNTY
STONEY MOUNTAIN ROAD LANDFILL

PRELIMINARY CONSTRUCTION COST ESTIMATE
SCALE ACCESS ROAD

May 19, 2010

ITEM NO.	DESCRIPTION	QUAN.	UNIT	UNIT PRICE	TOTAL
CONSTRUCTION COSTS					
1	Mobilization	1	LS	12,000.00	12,000.00
2	Clearing, grubbing, and demolition	1	LS	25,000.00	25,000.00
3	Silt fence	1,100	LF	4.00	4,400.00
4	Temporary sediment trap	2	EA	2,000.00	4,000.00
5	Relocate existing utility services	1	LS	30,000.00	30,000.00
6	Temporary construction entrance	1	LS	3,000.00	3,000.00
7	Grassing	1.8	AC	3,000.00	5,400.00
8	Earthworks (16,600 cy cut, 7,600 cy fill, remainder stockpiled on site)	16,600	CY	4.00	66,400.00
9	24" HDPE storm drainage piping (Hancor Blue Seal, or approved equal)	150	LF	70.00	10,500.00
10	30" HDPE storm drainage piping (Hancor Blue Seal, or approved equal)	94	LF	78.00	7,332.00
11	New Asphalt paving, including 2" Type S9.5B Superpave surface course, 2" Type I19.0B intermediate binder course, 4" Type B-25B binder course, 6" compacted aggregate base course	2,800	SY	42.00	117,600.00
12	NCDOT Standard guardrail	310	LF	35.00	10,850.00
13	Concrete end walls	2	EA	1,800.00	3,600.00
14	Riprap inlet/outlet protection	1	LS	2,500.00	2,500.00
15	Erosion control matting in ditches	1	LS	10,000.00	10,000.00
16	Remove and reinstall chain link fence	350	LF	20.00	7,000.00
17	Lane striping	1	LS	3,000.00	3,000.00
18	Construction contingency (approx. 10%)	1	LS	35,000.00	35,000.00
PRELIMINARY SCALE ACCESS ROAD CONSTRUCTION COST ESTIMATE					357,582.00

Note: Cost estimate based on Preliminary Site Layout, dated 5/19/10

STONEY MOUNTAIN ROAD LANDFILL

**PRELIMINARY CONSTRUCTION COST ESTIMATE
STONEY MOUNTAIN ROAD**

May 19, 2010

ITEM NO.	DESCRIPTION	QUAN.	UNIT	UNIT PRICE	TOTAL
CONSTRUCTION COSTS					
1	Mobilization	1	LS	8,000.00	8,000.00
2	Clearing, grubbing, and demolition	1	LS	10,000.00	10,000.00
3	Silt fence	300	LF	4.00	1,200.00
4	Block modular tree protection	2	EA	900.00	1,800.00
5	Relocate existing utility services	1	LS	15,000.00	15,000.00
6	Grassing	0.5	AC	3,000.00	1,500.00
7	Earthworks (500 cy cut, 100 cy fill, remainder stockpiled on site)	500	CY	4.00	2,000.00
8	24" HDPE storm drainage piping (Hancor Blue Seal, or approved equal)	105	LF	70.00	7,350.00
9	Storm Drainage Pipe P1A installation, including connection to existing culvert	1	LS	4,500.00	4,500.00
10	New Asphalt paving, including 2" Type S9.5B Superpave surface course, 2" Type I19.0B intermediate binder course, 4" Type B-25B binder course, 6" compacted aggregate base course	600	SY	42.00	25,200.00
11	Asphalt overlay of existing Stoney Mountain Road, overlay is 2" minimum Type S9.5B Superpave surface course	3,400	SY	12.00	40,800.00
12	Miscellaneous asphalt curbing (approx. 150 l.f.) and flume at end of curb cuts	1	LS	1,750.00	1,750.00
13	Mill existing Stoney Mountain Road pavement at ends of asphalt overlay	1	LS	1,000.00	1,000.00
14	Concrete end walls	1	EA	1,800.00	1,800.00
15	Riprap inlet/outlet protection	1	LS	1,500.00	1,500.00
16	Erosion control matting in ditches	1	LS	1,500.00	1,500.00
17	Lane striping	1	LS	6,500.00	6,500.00
18	Construction contingency (approx. 10%)	1	LS	15,000.00	15,000.00
PRELIMINARY STONEY MOUNTAIN ROAD CONSTRUCTION COST ESTIMATE					146,400.00

Note: Cost estimate based on Preliminary Site Layout, dated 5/19/10