Recommendation Of Dispute Review Board

December 14, 2001

RECEIVED

DEC 1 7 2001

BY:

William L. Sheridan, P.E. Metric Engineering, Inc. 7250 Summer Street Brooksville, Florida 34613

Robert T. Murphy, P.E. Smith & Company, Inc. 2400 SE Federal Highway, Suite 220 Stuart, Florida 34994

Dispute No. 2

Hearing Date: November 19, 2001 Contractor: Smith & Company Inc. District 8

Project: Suncoast Parkway Section 6 State Project No. 97080-3306

DISPUTE:

Work on the subject project commenced on October 11, 1998. Around March 15, 2000, several sink hole formations appeared at two separate locations within the project alignment. Subsequently, several additional sinkholes appeared, and the Department determined that a formal remediation program should be developed. On August 3, 2000, the Department furnished field personnel a Sink Hole Remediation Program which consisted of hydraulic filling and compaction of A-3 material, pressure grouting with sand cement grout utilizing grout pipe, and installing geotextile material over the sinkholes and surrounding roadway area. A subcontractor, Hayward Baker Inc. was brought in to do the grouting. The remediation was completed in December, 2000, and included filling 48 sinkhole formations, grouting 165 holes, and placing 24,489 square yards of geotextile material.

Both, the Contractor (SCI) and the Department, agree that the sinkholes constitute an unforeseen condition. The Department also agrees that the Contractor may be due an extension of contract time for impacts to controlling items of work, as well as, additional costs for performing unforeseen work as a result of the sinkholes. The dispute is over the amount of the time impacts and the resulting additional costs.

In an effort to resolve this matter, both Parties engaged the services of Trauner Consulting Services, Inc. (Trauner) to perform an independent review of the project delays between December 31, 1999, and December 31, 2000. Trauner submitted a report dated October 2001, but neither Party was willing to completely accept the findings presented therein.

The Board was therefore requested to rule on the quantum of the time impacts and resulting additional costs.

CONTRACTOR'S POSITION:

In order to demonstrate the effect of the sinkholes on SCI's revised approved method, manner and sequence of construction, as well as, its actual performance, SCI performed the following tasks.

- 1. SCI identified the revised approved schedule.
- 2. SCI prepared an as-built schedule from contemporaneous project documents and submitted its update to the Department.
- 3. SCI identified the individual sinkholes and segregated them by the various areas of construction on the project.
- 4. SCI reviewed the impact of the sinkholes and determined what crews or activities were impacted.
- 5. SCI incorporated the individual sinkholes into the December 10, 2000, schedule update.
- 6. SCI compared the as-built schedule to the approved baseline plan.
- 7. SCI quantified the periods of inefficiency during the sinkhole remediation work and quantified actual crews based on the Department's Daily Reports of construction.
- 8. SCI quantified the extended performance period for each crew impacted by the sinkholes.

The purpose of the above is to quantify the time associated with the excusable and compensable impacts SCI experienced on the project associated with the sinkholes. As a result of identifying the activities impacted during the sinkhole remediation work, SCI has identified activities and crews that were inefficient. In addition, by comparing SCI as-built December 10, 2000, schedule update to its revised baseline schedule, SCI has quantified activities and crews that will require an extended performance period as a direct result of the sinkholes. In summary, as a result of the sinkhole remediation work, which occurred from March 15, 2000 to December 15, 2000, SCI is entitled to a minimum of 141 calendar days time extension to its contract for the excusable and compensable impacts associated with the sinkhole remediation work.

The Contractor's request for equitable adjustment consists of three major items:

- 1. Costs due to inefficiencies by others during sinkhole remediation (Hayward Baker, Inc.) and additional mobilization/demobilization costs during this period.
- 2. Extended performance crew costs for the embankment, stabilization, and limerock base crews.
- 3. Other costs, which include extended field office and home office costs and the cost of preparing this request.

A profit of 10% and a bond cost of 1.5% was then added to the total of the above items.

1.. Inefficiencies and mobilization /demobilization costs

The Contractor determined that the embankment crew worked 29 days and the limerock base crew worked 1 day in the sinkhole area coincident with the remediation efforts by Hayward Baker. The Contractor assumed an efficiency factor of 50% for the above days. The labor costs are based on straight time, and the equipment costs are Blue Book rates. The Contractor also claims mobilizations/demobilizations during this same period at a cost of \$5000 each.

Tab 12 summarize

INEFFICIENCY ANALYSIS DURING SINK HOLE REMEDIATION WORK BY OTHERS

Cre							7.	Conhiliration Crew	Crow	Base Crew	rew	Top Soil Crew	Crew
Notified Start Finish Duration 07/18/00 10/13/00 12/09/00 57 08/22/00 10/02/00 12/04/00 63 05/03/00 12/05/00 12/15/00 10 10/02/0d 12/15/00 74	Mainline		Ŧ,	ıyward Ba.	Ker	EALTIMO	EARTHWOLK LYEN	SIMPLIE	ı			100	Dollah
07/18/00 10/13/00 12/09/00 57 08/22/00 10/02/00 12/09/00 63 05/03/00 12/05/00 12/15/00 10 10 10 10/02/00 12/15/00 10	2000000	b. confind	Cross	Finich	Duration	Crew Davs	DeMob	Crew Days	DeMob	Crew Days	Пемор	Demoe Crew Days	DEMON
07/18/00 10/13/00 12/09/00 57 08/22/00 10/02/00 12/04/00 63 05/03/00 12/05/00 12/15/00 10 10/02/00 12/15/00 74		Notified	2127				,	٥	c	,	_	0	0
08/22/00 10/02/00 12/04/00 63 05/03/00 12/05/00 12/15/00 10 18aker 10/02/0d 12/15/00 74		07/18/00	10/13/00	12/09/00	22	=	n	<u> </u>	o	-			
05/03/00 12/05/00 12/15/00 10 10 18aker 10/02/0d 12/15/00 74		00,000	10,000,000	12/04/00		17	n	0	0	0	Į,	0	0
05/03/00 12/05/00 12/15/00 10 1 Baker 10/02/00 12/15/00 74	4+00 to 3293+00	08/22/00	00000	3								c	c
1 Baker 10/02/00 12/15/00 74	3+00 to 3326+00	00/00/50	12/05/00	12/15/00	2	-	-	0	 -	>	>	>	•
	STOTAL Haward Baker		10/02/00	12/15/00	74								
****	10101					8	,	•	c	-	-	0	0
SUBTOTAL - Sink Hole 05/03/00 05/03/00 226 2	STOTAL - Sink Hole	09/03/00		12/15/00		67	,	,	,				

QUANTUM ANALYSIS

	1			SUBTOTAL	JYAL	MAKKUP	KUV	SCRICIAL	
:		Lohor	Fouin	Labor	Labor Equip	Labor	Equip	w/Markup	Factor
Crew	Sec.		6.392.50	\$49,093.52	\$49,093.52 \$185,382.50	25.00%		7.50% \$260,653.09	20.00%
Earthwork Crew	3 .	4 424 88	4 424 99 6 601 80	00 08	\$0.00	25.00%			50.00%
Stabilization Crew	o 	2	20.				7 50%	\$6.056.70	
Base Crew	-	1,591.38	1,591.38 3,783.70	\$1,591.38	\$3,783.70		;	•	
Topeoil Crew		1,257.88	1,257.88 1,477.90	\$0.00	\$0.00	25.00%	7.50%	\$0.00	
i opson Crew	,								
A30 VOICE LINE LATER	V								

\$3,028.35 \$0.00

\$133,354.90

TOTAL

\$0.00

\$130,326.54

TOTAL

MOBILIZATION/DEMOBILIZATION COSTS

Description	Est. #	Est. \$ SUBTOTAL	SUBTOTAL	Comments	TOTAL
	٥	\$5,000,00	\$5,000,00 \$40,000,00	Based on FDOT Dailies	\$40,000.00
Estimated Mob/Demobilization during Sink Hole Remediation by Others	,	22,000			
TOTAL ESTIMATED - Inefficiencies & Mob/Demobilization Costs	bilization	Costs			\$173,354.90

2. Extended performance crew costs

In order to determine the extent of the delays to the work due to the sinkholes, the Contractor utilized the revised project schedule (which was updated on January 15, 2000, approved by the Department on August 8, 2000, and accepted by the Contractor on August 9, 2000) and the asbuilt December 10, 2000, schedule update that depicts the actual conditions at the time of the report. This analysis indicates that the embankment crew was delayed 142 days, the stabilization crew 129 days, and the limerock base crew 128 days.

Labor costs are straight time costs multiplied by 1.5 for overtime and an efficiency factor of 1.133. The efficiency factor represents the reduced productivity of crews working over a 50 hour week. Equipment costs are Blue Book rates.

Tab 13 shows the extended costs for the above mentioned crews

Embankment Crew 142 days:

SCHEDULE/QUANTUM ANALYSIS

EMBANKMENT CREW

ACT	TITLE	AREA	12/10/00 Early Finish	Rev. Baseline Early Finish
S3192 R070	Excavate & Place Fill from WSA - 7 & 8	S3192	10/15/99	08/02/00
S3129 R050	Earthwork - Cut of Fill	S3129	12/22/99	07/05/00
S3293 R050	Earthwork - Cut of Fill	S3293	01/05/01	07/14/00
S3293 R070	Excavate & Place Fill from WSA - 11 & Cent	S3293	01/10/01	07/14/00
S3254 R050	Earthwork - Cut of Fill	S3254	01/17/01	07/14/00
S3254 R070	Excavate & Place Fill from WSA - 9	S3254	01/22/01	07/21/00
S3192 R050	Earthwork - Cut of Fill	S3192	01/31/01	07/14/00
S3129 R070	Excavate & Place Fill from WSA - 4, 5A, & 6	S3129	02/12/01	07/28/00

REVISED Baseline Planned Finish	02/12/01
12/10/00 Update Estimated Finish	07/28/00
Extended Performance (Calendar Days)	-199
Convert to Work Days	-142
Typical Embankment Crew Cost	
Labor (including Premium Time & Inefficiency)	\$ 2,878.00
Equipment	\$ 6,393.00
SUBTOTAL - Embankment Crew Extended Performance Cost	\$ 1,316,482.00

Stabilization Crew 129 days:

STABILIZATION CREW

ACT	TITLE	AREA	12/10/00 Early Finish	Rev. Baseline Early Finish
S3129 R120	Mix & Compact Stabilized Subgrade	S3192	02/08/01	07/18/00
S3192 R120	Mix & Compact Stabilized Subgrade	\$3192	03/12/01	8/30/*00
S3254 R120	Mix & Compact Stabilized Subgrade	S3254	04/02/01	09/27/00
S3293 R120	Mix & Compact Stabilized Subgrade	S3293	04/18/01	10/19/00

04/18/01 **REVISED** Baseline Planned Finish 10/19/00 12/10/00 Update Estimated Finish -181 Extended Performance (Calendar Days) -129 Convert to Work Days Typical Stabilization Crew Cost

2,434.00 Labor (including Premium Time & Inefficiency) 5,592.00 Equipment **SUBTOTAL** - Stabilization Crew Extended Performance Cost 1,035,354.00

Limerock Base Crew 128 days:

LIMEROCK BASE CREW

TITLE	AREA	12/10/00 Early Finish	Rev. Baseline Early Finish
Place 1st Lift of Limerock Base	S3129	02/20/01	08/22/00
Place 1st Lift of Limerock Base	\$3192	04/16/01	10/04/00
Place 1st Lift of Limerock Base	S3254	04/24/01	10/19/00
Place 1st Lift of Limerock Base	\$3293	05/10/01	11/10/00
Place 1st Lift of Limerock Base	S3129	02/23/01	09/12/00
Place 1st Lift of Limerock Base	S3254	05/16/01	11/10/00
Place 1st Lift of Limerock Base	\$3192	05/21/01	11/08/00
Place 1st Lift of Limerock Base	S3293	06/01/01	12/04/00
	Place 1st Lift of Limerock Base	Place 1st Lift of Limerock Base S3129 Place 1st Lift of Limerock Base S3254 Place 1st Lift of Limerock Base S3254 Place 1st Lift of Limerock Base S3293 Place 1st Lift of Limerock Base S3129 Place 1st Lift of Limerock Base S3129 Place 1st Lift of Limerock Base S3254 Place 1st Lift of Limerock Base S3254	TITLE AREA Early Finish Place 1st Lift of Limerock Base \$3129 02/20/01 Place 1st Lift of Limerock Base \$3192 04/16/01 Place 1st Lift of Limerock Base \$3254 04/24/01 Place 1st Lift of Limerock Base \$3293 05/10/01 Place 1st Lift of Limerock Base \$3129 02/23/01 Place 1st Lift of Limerock Base \$3254 05/16/01 Place 1st Lift of Limerock Base \$3192 05/21/01

06/01/01 **REVISED** Baseline Planned Finish 12/04/00 12/10/00 Update Estimated Finish -179 **Extended Performance (Calendar Days)** -128 Convert to Work Days

Typical Limerock Base Crew Cost

2,705.00 \$ Labor (including Premium Time & Inefficiency) 3,784.00 Equipment 830,592.00 **SUBTOTAL** - Limerock Base Crew Extended Performance Cost

When these cost are added together, a markup of 25% is added to the labor and a markup of 7.5% is added to the equipment. The total estimated crew cost from sinkhole is tabulated to be \$ 3,608,168.

SUMMARY OF ADDITIONAL CREW COST

Typical Embankment Crew Cost		
Labor	\$	408,676.00
Equipment	\$	907,806.00
SUBTOTAL - Embankment Crew Cost During Sink Hole Work	\$	1,316,482.00
Typical Stabilization Crew Cost		
Labor	\$	313,986.00
Equipment	\$	721,368.00
SUBTOTAL - Stabilization Crew Cost During Sink Hole Work	\$	1,035,354.00
Typical Limerock Base Crew Cost		•
Labor	\$	346,240.00
Equipment	\$	484,352.00
SUBTOTAL - Limerock Base Crew Cost During Sink Hole Work	\$	830,592.00
SUMMARY		
Labor	\$	1,068,902.00
25% Markup	\$	267,226.00
SUBTOTAL - Labor	\$	1,336,128.00
Equipment .	\$	2,113,526.00
7.5% Markup	_\$_	158,514.00
SUBTOTAL - Equipment	\$	2,272,040.00
ESTIMATED TOTAL CREW COST from Sink Hole	\$	3,608,168.00

3. Other costs

Tab 14 contains an Engineer's estimate of the daily field office costs \$ 2.258.

ENGINEER'S ESTIMATE Field Office, Daily Operating Cost

CLASS	RATE	OT RATE	REG. HOURS	OVERTIME	TOTA
Project Manager	\$48.08	N\A	8.00	N\A	\$38
Project Engineer	\$33.75	N/A	8.00	N\A	\$27
General Superintendent	\$40.00	N\A	4.00	N/A	\$16
		N/A	8.00	N\A	
		N/A	4.00	N\A	
<u></u>	4	N\A	4.00	N\A	
		\$0.00	4.00		
I		\$0.00	4.00		
		\$0.00	8.00	2.00	
Contract Administrator	\$15.00	\$22.50	8.00	2.00	\$16
I		\$0.00	8.00	2.00	
		\$0.00		Ī	
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		\$0.00			
		\$0.00			5
TAL		4070.64			
		\$979.64			
BURDEN	0.49	\$480.02			
ARKUP		\$364.92			
LAROR		¢1 924 F0			
LABOR		\$1.824.58			

SUMMARY	<u> </u>
LABOR	\$1,824.58
EQUIPMENT	\$358.79
MATERIALS	\$41.64
SUBTOTAL	\$2,225.01
1.5% BOND	\$33.38
TOTAL	\$2,258.39
\$2,258.39 x One Day	\$2,258.39

QTY	DESCRIPTION	RATE	HOURS	TOTAL
1	Office Rental	\$6.40	8.00	\$51.20
	Surveyor Office	\$1.65	0.00	\$0.00
1	Lot Rental	\$3.92	8.00	\$31,36
2	IP/U Truck	\$8.00	8.00	\$128,00
	Survey Crew Truck	\$13.12	0.00	\$0.00
	Connex Storage	\$7,88	0.00	\$0.00
2	Computer	\$1.86	8.00	\$29.76
3	Radios	\$1.00	8.00	\$24.00
1	Utilities	\$2.68	8.00	\$21.44
1	Ice Machine	\$1.00	8.00	\$8.00
1	Dumpster	\$1.25	8.00	\$10.00
1	IPhone/Long Distance	\$2.50	8.00	\$20.00
1	Furniture	\$1.25	8.00	\$10.00
	Data Expense	\$0.90	8.00	\$0.00
	SUBTOTAL 7.5% MARKUP TOTAL FOUIPMENT	\$333.76 \$25.03 \$358.79	•	

Office Suplies Postage	\$31.28 \$4.16
SUBTOTAL	\$35.44
17.5% MARKUP	\$6.20
TOTAL MATERIAL	\$41.64

SCI further states that the unabsorbed Home office costs are calculated at the rate of \$2,167 per day for 141 days (equals \$305,547), and that there are REA preparation costs of \$22,000

The following summarizes all of the referenced costs plus profit and bond. The total equitable adjustment requested is \$4,943,245.85.

;	Profit - 10% Bond - 1.5%	-	442,745.00 73,053.00
SUBTOTAL - REA		\$	4,427,447.85
Other Costs		<u>\$.</u>	645,925.00
Estimated Total Crew Cost from Sink Hole			3,608,167.95
Inefficiency & Mob/Demobilization Cost		\$	173,354.90
REA SUMMAR	Υ		
SUBTOTAL - Other Costs		\$	645,925.00
REA Preparation Costs	-	<u>\$</u>	22,000.0
Unabsorbed Home Office (141 Days @ \$2,167)		\$	305,547.0
Extended Field Costs (141 Days @ \$2,258)		\$	318,378.0
OTHER COSTS	S		
Estimated Total Crew Cost from Sink Hole		\$	3,608,167.9
SUBTOTAL - Equipment	=	\$	2,272,040.4
7.5% Markup		\$	158,514.4
Equipment		\$	2,113,526.0
SUBTOTAL - Labor		\$	1,336,127.5
25% Markup	-	\$	267,225.5
Labor		\$	1,068,902.0
SUMMARY EXTENDED PERFORMANCE CREW COST			
SUMMARY ADDITIONAL	CREW COST		···
TOTAL COST - INEFFICIENCY & MOB/DEMOBILIZATION C	OSTS _	\$	173,354.9
SUBTOTAL - Mob/Demob Costs	=	\$	40,000.0
Estimated Cost	_	\$	5,000.0
Estimated # of Mob/Demobilization			8.0
SUMMARY MOB/DEMOBILIZATION COSTS	_		
SUBTOTAL		\$	133,354.90
Estimated Total Crew Cost from Sink Hole Estimated Inefficiency Factor	:	\$	266,709.80 50.00
• •			·
7.5% Markup SUBTOTAL - Equipment		<u>\$</u> \$	14,187.4 203,353.6
Equipment		\$	189,166.20
SUBTOTAL - Labor	-	\$	63,356.1
25% Markup		\$ \$	12,671.2
Labor	:	S	50,684.90
SUMMARY INEFFICIENCY ANALYSIS			

DEPARTMENT'S POSITION:

In order to perform a proper analysis of "actual" vs. "planned" performance, an unaltered target copy of the original plan must be utilized. The October 18, 1999, original baseline schedule is SCI's original and approved plan. A schedule comparison of SCI's original baseline plan vs. the project as-built schedule clearly demonstrates a **trend of out-of-sequence and extended performance work activities before the sinkholes were a factor on the project**. The June 18, 2000, baseline revision, which was undertaken in an effort to reconcile erroneous cost loading information and correct obvious minor logic inconsistencies, contained erroneous early and late start information The conclusions drawn by comparing this revised schedule with the December 10, 2000, as-built schedule are not valid.

Another fundamental flaw with the SCI schedule analysis is that they have utilized the "retained logic" calculation mode for the software scheduling routing which handles activity relational logic, effects of activity sequencing, and determines the overall schedule final completion date. Retained logic requires that an out-of-sequence activity cannot resume until all predecessors finish. For non-linear projects, the retained logic mode imposes an unrealistic inflexibility into the schedule which artificially extends the project completion date.

The Department, using project records along with individual specific tracking efforts, has developed and maintained an as-built schedule. The Department has taken the current as-built, made some minor adjustments (reduced the friction course activities from an unrealistic 141 days to 81 days), and projected a realistic date for project completion. It is the Department's opinion that the net increase to project duration, due to all circumstances encountered since inception of operations, is 30 days.

1. Inefficiencies and mobilization/demobilization costs

The Department agrees that the **embankment operations** were on-going for 29 days during the sinkhole remediation, but believes that the inefficiency approximated 10%. They also determined the crew cost to be \$5,246.67.

Cost Recommendation; $$5,246.67 \times 29 \times 10\% = $15,215.34$ 18-May-01 \$5,169.13 TOTALS Subcontractor Costs Prime & Sub Total Costs BOND & MSURANCE (1.5%) TOTAL ESTIMATED COST \$695.00 \$496.50 \$503.00 \$817.10 \$157.95 EMBANKMENT CREW DAILY OPERATING COST ESTIMATE 88888 8888 \$114.84 \$126.50 \$148.50 \$90.00 \$148.50 \$148.50 \$148.50 \$16 \$9.59 \$49.65 \$50.30 \$81.71 \$63.18 \$25.32 \$46.00 Equipment Unit Cost Material Unit Cost \$16.00 \$11.50 \$13.50 \$9.00 \$10.00 \$9.50 Labor Unit Cost 1 1 1 1 1 1 1 1 1 1 노노노노 + 노노노 10.0 10.0 10.0 10.0 5.0 10.0 10.0 2.5 10.0 5.0 Material Mark-up @ 17.5% Sales Tax @ 6.0% Total Material Costs Claim # 6 - Sinkhole Impacts Embankment Crew Crew Dally Operating Costs Project No.: 97080-3306 Labor Mark-up @ 25% Subtotal Material TOTAL SUBCONTRACTOR COSTS Subtotal Labor Burden @ 45% Total Labor Costs Total Equipment Costs Equipment Mark-up @ 7.5% TOTAL PRIME & SUB COSTS Fracthos - Kometau PC300LC SUBCONTRACTOR COSTS .oeder - Komesu WA450 Engineer's Cost Estimate WATERIALS 1-0 1-02 1-05 1-06 1-07

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The Department agrees that **limerock** base operations were on-going for 1 day during remediation operations, but their records show no loss of productivity.

The 8 mobilizations/demobilizations are not disputed, but their estimate of the time involved is 2.5 hours each.

Cost Recommendation; $$5,246.67 \times 25\% \times 8 = $10,493.36$

2. Extended performance crew costs

Given the physical length of the project, availability of SCI resources, and overall similarity of scope throughout the alignment, SCI was afforded the flexibility to work numerous areas of the project at any given time. These conditions also allowed SCI the flexibility to mitigate impacts from not being able to work a certain area of the project. Although it was certainly understood that SCI was able, and was, in fact, mitigating any possible impacts in the sinkhole areas by both working around the sinkholes and re-sequencing operations, there was a critical period of time when SCI needed to be in the sinkhole areas completing embankment operations in order to avoid any possible delay to overall project completion. Since the embankment activities were the primary operation affected by the presence of sinkholes on the project, it seems reasonable that they be assigned the overall time impact of 30 days.

Cost Recommendation: $\$5,246.67 \times 30 = \$157,400.10$

While project records and observations of the Department's field personnel indicate that SCI did indeed work steadily on subgrade and base operations, the overall quality of these operations appears to have been inefficient, which created a reduction in the overall productivity of the crews, thereby extending crew performance beyond that in SCI's original "early" plan. However, a review of the overall status of the subgrade and base operations reveals that these operations will be completed within planned late time frames. The **Department therefore cannot support SCI's contention of extended performance of stabilization and base crews.**

3. Other costs

Extended field costs are based on the 30 days net increase in time and the labor and equipment costs shown in Table 9.

1911 # 8 14 Office 14 Office	Engineer's Cost Estimate Claim # 8 - Sinkhole Impacts Field Office Dally Operating Costs										
oject N	Project No.: 97080-3306			3	Medada	Fordament	E G	EXTENDED CO	COSTS	Subcontractor	
Hern 4	Cost Description	Quantity	TWO	Unit Cost	Unit Coet	Unit Cost	rođe	1.331	Equipment	Coets	TOTALS
•	PRIME LABOR - 10/1/2000 thru 12/15/2000										:
	Sr. Project Manager - G. Straker	8.0	ቷ	\$31.25			\$250.00				
	General Superintendent - B. Gorum	8.0	Ì	\$33.71			\$269.68				:
	Contract Administrator - L. Copper	8.0	Ηr	\$11.25			\$90.00				:
	Office Administrator - T. Koontz	8.0	Ŧ	\$12.50		1	\$100.00		:		•
	Subtotal Labor						\$709.68				:
	Burden @ 45%						\$319.36				
	letototal						\$1,029.04				
	Labor Mark-up @ 25%						\$257,26				
1-01	Total Labor Coats						\$1,286.30				
	HATEDIAI S.										
	Office Supplies	1.0	E		\$31.28			\$31.28			:
	Postson	1.0	Ą		\$4.18			\$4.18			
	Subtotal Material							\$35.44			
	Meterial Mark-up @ 17.5%							\$6.20			
1-02	Total Material Costs							\$41.64			
}											
	EQUIPMENT:										
	Office Rental	1.0	ED			\$51.20			\$51.20	!	
	Lot Rental	1.0	ධ			\$31.36			\$31.36		
	Pick-up Trucks (4wd)	2.0	ED			\$8.00			\$15.00		
	Computers	2.0	9			\$14.88			\$28.70		
	Radios	3.0	9			38.00			\$24.00		
	Utilities	1.0	3			\$21.44			37.1.4		
	toe Machine	0.0	3 6			86.00			300		
	Dumpster	2.	3 6			3			200		
	Telephone	0.1	3 6			\$15.00			2000		1
	Furniture	0.1	3			5000			\$244 PO		
	Namona scoro	1							618 36		
8	Mo. 1 St. Change Manney	1		:	:	!		:	\$263.16		
3 2	TOTAL DEBASE COSTS	-							!		\$1,591.10
5											
	SUBCONTRACTOR COSTS:									\$0.00	
1-05	TOTAL SUBCONTRACTOR COSTS									\$0.00	00'0\$
8									Drime & S	Prime & Suh Total Costs	81 591 10
-8	TOTAL PRIME & SUB COSTS								POND F	BOND & INSURANCE (1.8%)	\$23.87

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Unabsorbed home office costs are based on the same time frame utilizing SCI's daily cost figures.

Cost recommendation: $\$2,167.00 \times 30 = \$65,010.00$

The Department sees no basis for entitlement to the claims preparation costs and the profit.

The following summarizes The Department's entitlement determination as well as SCI's alleged impact.

CLAIM ANALYSIS SUMMARY •

Individual Cost Line Items	SCI Alleged Impact	Department Entitlement Determination	Engineer's Cost Estimate	Recommended Amount
Time Impacts :				
Overall Sinkhole Impact	141 days	30 days		30 days
Inefficiency Costs:				
Embankment Crew	\$130,326.55 .\$8988 ED@29day x50%	100%	\$5,246.67ED@30days x10%	\$15,215.34
Stabilization Crew	\$0.00	N/A	N/A	N/A
Limerock Base Crew	\$3028.35 \$6,056.70 ED@1dayx50%	0%	N/A	\$0.00
Mob/Demob	\$40,000.00 \$5000.00 ED@8 days	100%	\$5,246.67 ED x 1/5th day@8days	\$8,394.67
Subtotal	\$173,354.90		·	\$23,610.01
Additional Crew Costs:				
Embankment Crew	\$1,486,736.50 \$10,469.97 ED@142 days	100%	\$5,246.67ED@30days	\$157,400.10
Stabilization Crew	\$1,167,953.10 \$9,053.90 ED@129 days	0%	\$0.00	\$0.00
Limerock Base Crew	\$953,478.40 \$7,449.05 ED@128 days	0%	\$0.00	\$0.00
Subtotal	\$3,608,168.00			\$157,400.10
Other Costs:				
Extended Field	\$318,378.00 @2,258.00@141 days	100%	\$1,614.96@30 days	\$48,448.80
Home Office Overhead	\$305,547.00 \$2,167.00@141 days	100%	\$2,167.00@30 days	\$65,010.00
REA Preparation	\$22,000.00 LS	0%	\$0.00	\$0.00
Subtotal	\$645,925.00			\$113,458.80
SUBTOTALS SUMMARY	\$4,427,447.85			\$294,468.91
Profit @ 10%	\$442,745.00	0%	Included in Markups	\$0.00
Bond @ 1.5%	\$73,053.00	100%	\$294,468.9@1.5%	<u>\$4,417.03</u>
TOTALS	\$4,943,245.85			\$298,885.94

^{*} Complete details & breakdown for individual line items is found in SCI's REA package and Position Paper pages 16 thru 22.

BOARD FINDINGS:

Section 6 of the Suncoast Parkway runs from S.R. 50 north to U.S. 98, a distance of 10.346 miles or 54,627 ft. The original contract amount was \$29,646,874.01 with a duration of 865 days. Subsequent change orders and supplementals have added a total of \$2,755,923.00 to the contract and extended the duration 152 days. Construction began in the fall of 1998, and the first sinkhole appeared on March 15, 2000, 510 days into the project. In time, a total of 48 sinkholes formed in several areas comprising less than 2,000 linear feet of the project. Hayward Baker was brought in to perform remedial work, and they completed their operations on December 15, 2000, 274 days after the first sinkhole appeared. SCI has claimed an impact of 141 days delay and extended costs, plus profit, of \$4,943,245.85.

- There is no doubt that the sinkholes did, in fact, impact SCI's operations to a certain extent.
- However, the length of this project and the availability of SCI resources of
 personnel and equipment allowed SCI the flexibility to minimize the impact of
 not being able to work certain limited areas of the project. It appears that for a
 majority of the time that the sinkhole remediation was ongoing, SCI project
 management took advantage of this fact and were productively working in other
 areas of the project. SCI in effect resequenced their operations to mitigate the
 impact of the unforeseen conditions they encountered.
- Not withstanding the various schedule analyses performed by the FDOT, SCI and Trauner, the project schedule was not maintained so as to be able to establish sufficient nexus to substantiate the amount of time impact requested by SCI.
- There was very little discussion of this matter during the bi-weekly progress meetings. The Board, which met four times during this period, does not recall any mention of the fact that the sinkholes were having a major impact on the work. No major impacts were noted during the Board's site visits following the meetings.
- The Department states that other than a general reservation of rights exercised by SCI during the negotiations for Supplemental Agreement No. 8, covering the remediation work, the project record is devoid of contemporaneous notice of impact or specifics which would infer SCI was experiencing impacts in the order of magnitude presented in SCI's request for equitable adjustment.
- SCI responded by letter dated November 21, 2001 to questions from the Board concerning the detour at Bailey Hill Road bridge, which is in an area impacted by the sinkhole remediation.. This detour, which was not removed until March 2001, did somewhat impact the contractor's normal construction progress in this area.
- The Board accepts as generous the FDOT's opinion that the net increase to project duration is 30 days.

BOARD RECOMMENDATION:

Based on the observations of the Board during the life of the project, on the materials supplied to the Board, and presentations to the Board at the DRB hearing, the Board finds that the Contractor is entitled to \$447,666.56 and a 30 day time extension.

This Board sincerely appreciates the cooperation of all parties and the information presented for its review in making this recommendation.

Please remember that a response to the DRB and the other party of your acceptance or rejection of this recommendation is required within 15 days. Failure to respond constitutes an acceptance of this recommendation by both parties.

I certify that I have participated in all of the meetings of this DRB regarding Issue No. 2 and concur with the findings and recommendations.

Respectfully Submitted
Disputes Review Board
G. A. "Dolph" Hanson, P.E.; DRB Chairman
John H. Duke, Sr.; DRB Member
E. K. Richardson, P.E.; DRB Member

SIGNED FOR AND WITH THE CONCURRENCE OF ALL MEMBERS:

G. A. "Dolph" Hanson, P.E.

AA Hanson

DRB Chairman