

**APPENDIX E | ANALYSIS II INFORMATION**  
*SCHEDULE AND COST SAVINGS DATA FOR THE ALTERNATIVE  
CONCRETE CONSTRUCTION PROCESS CAN BE FOUND ON THE  
FOLLOWING PAGES.*

## REVISED SCHEDULE

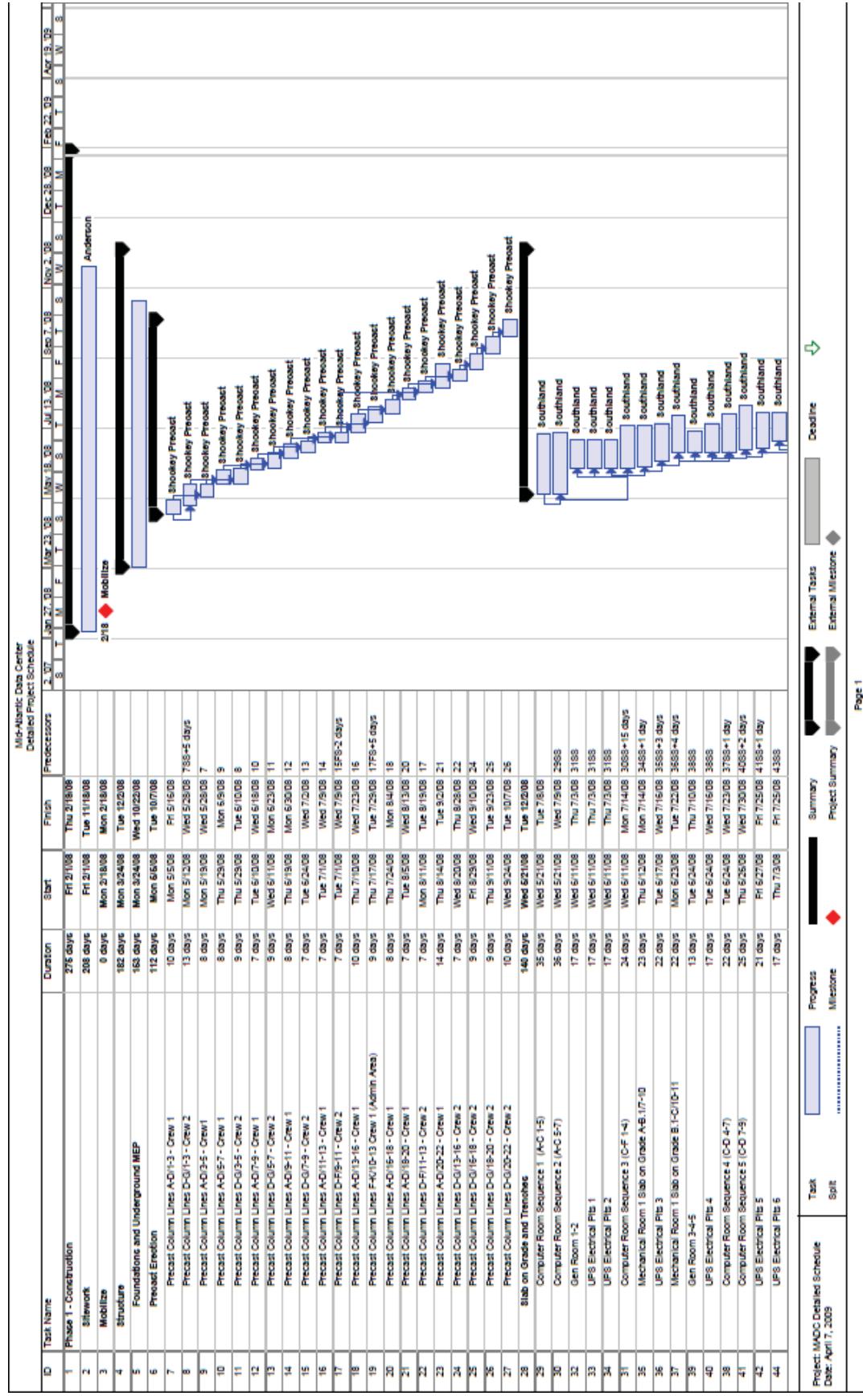


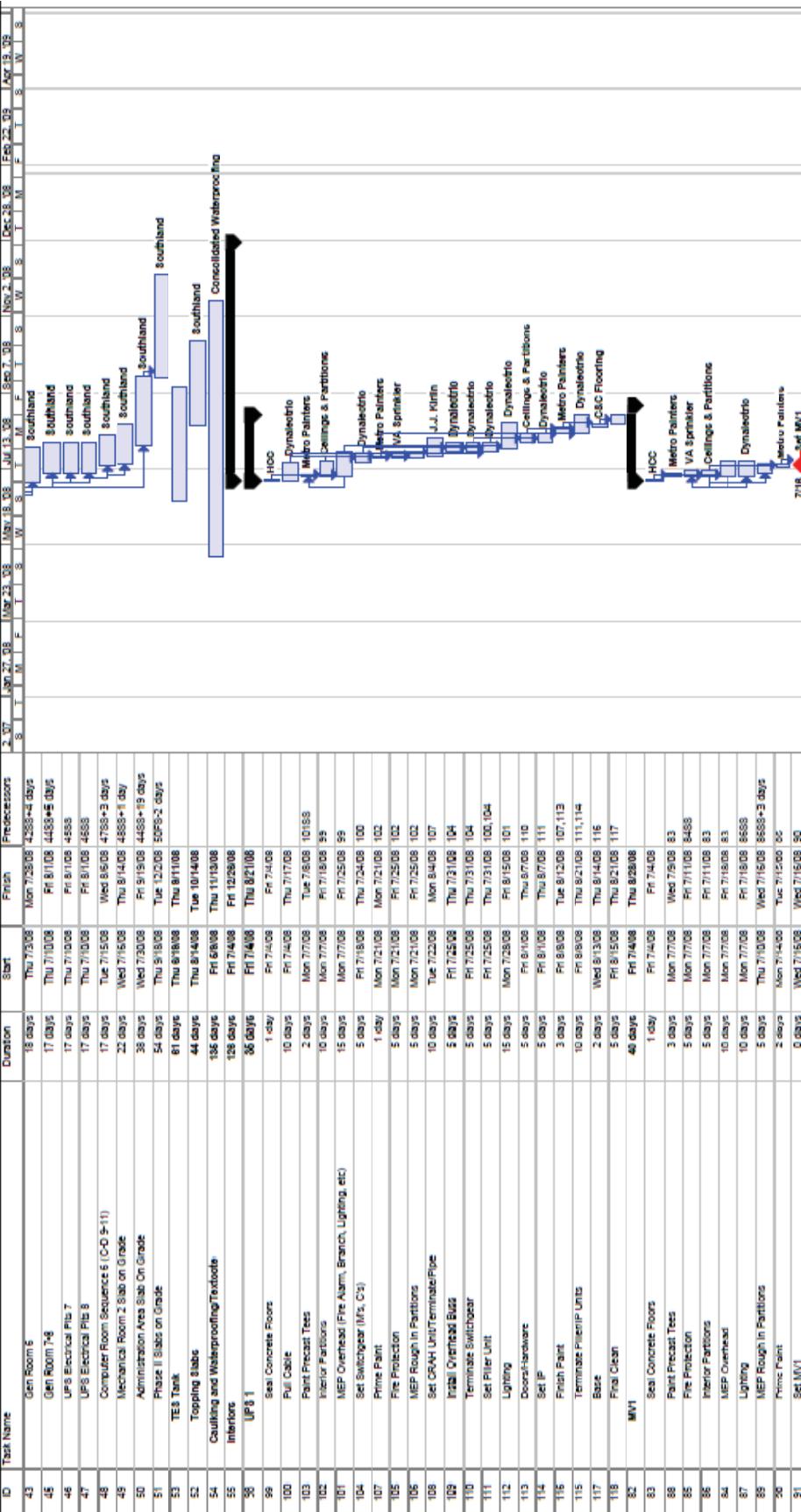
Figure 29 - Revised Overall Detailed Project Schedule

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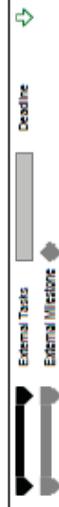
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 DR. MESSNER | AE FACULTY CONSULTANT  
 SENIOR THESIS FINAL REPORT

APRIL 7, 2009

Mid-Atlantic Data Center  
 Detailed Project Schedule



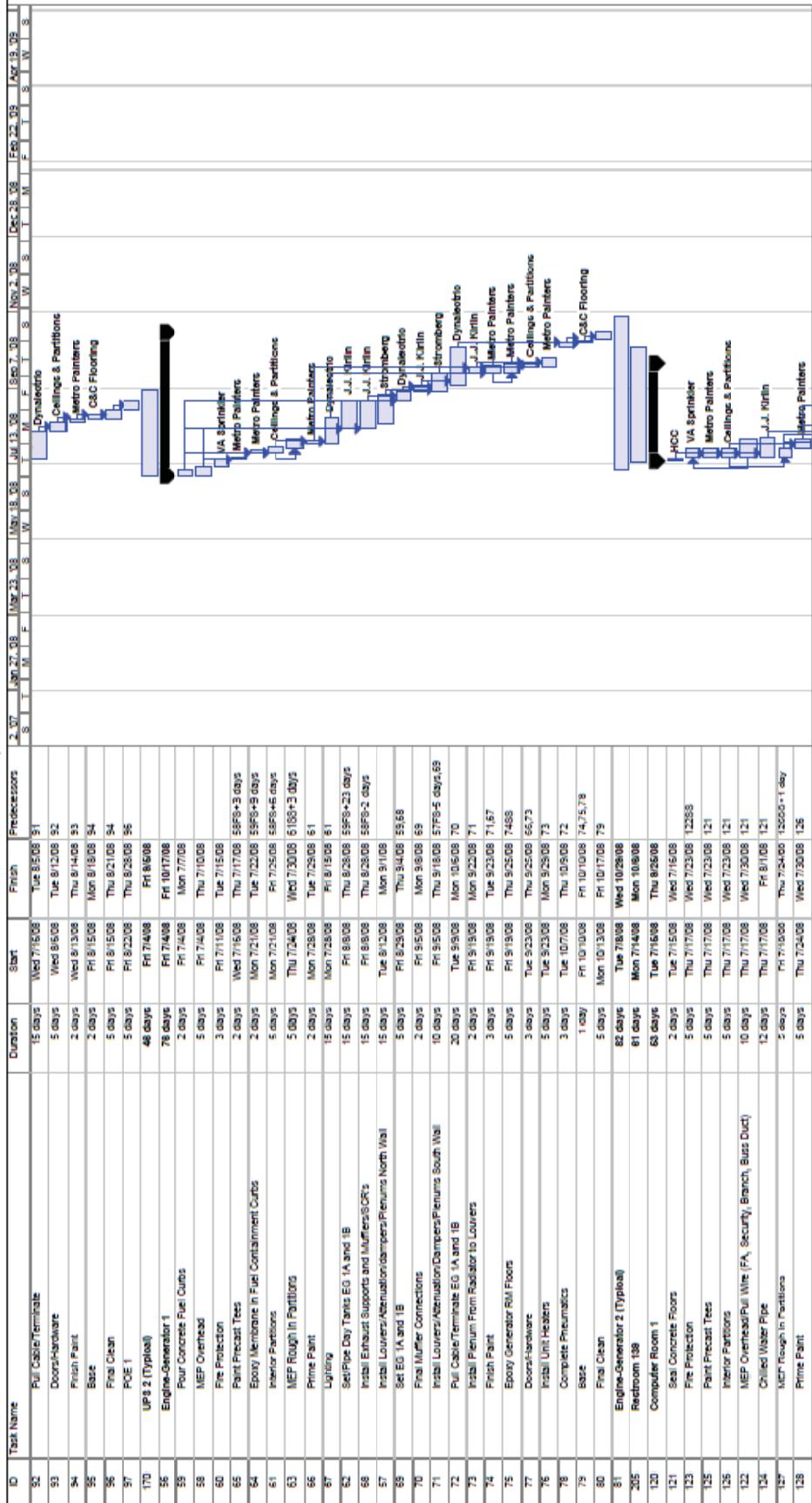
Project: MADC Detailed Schedule  
 Date: April 7, 2009  
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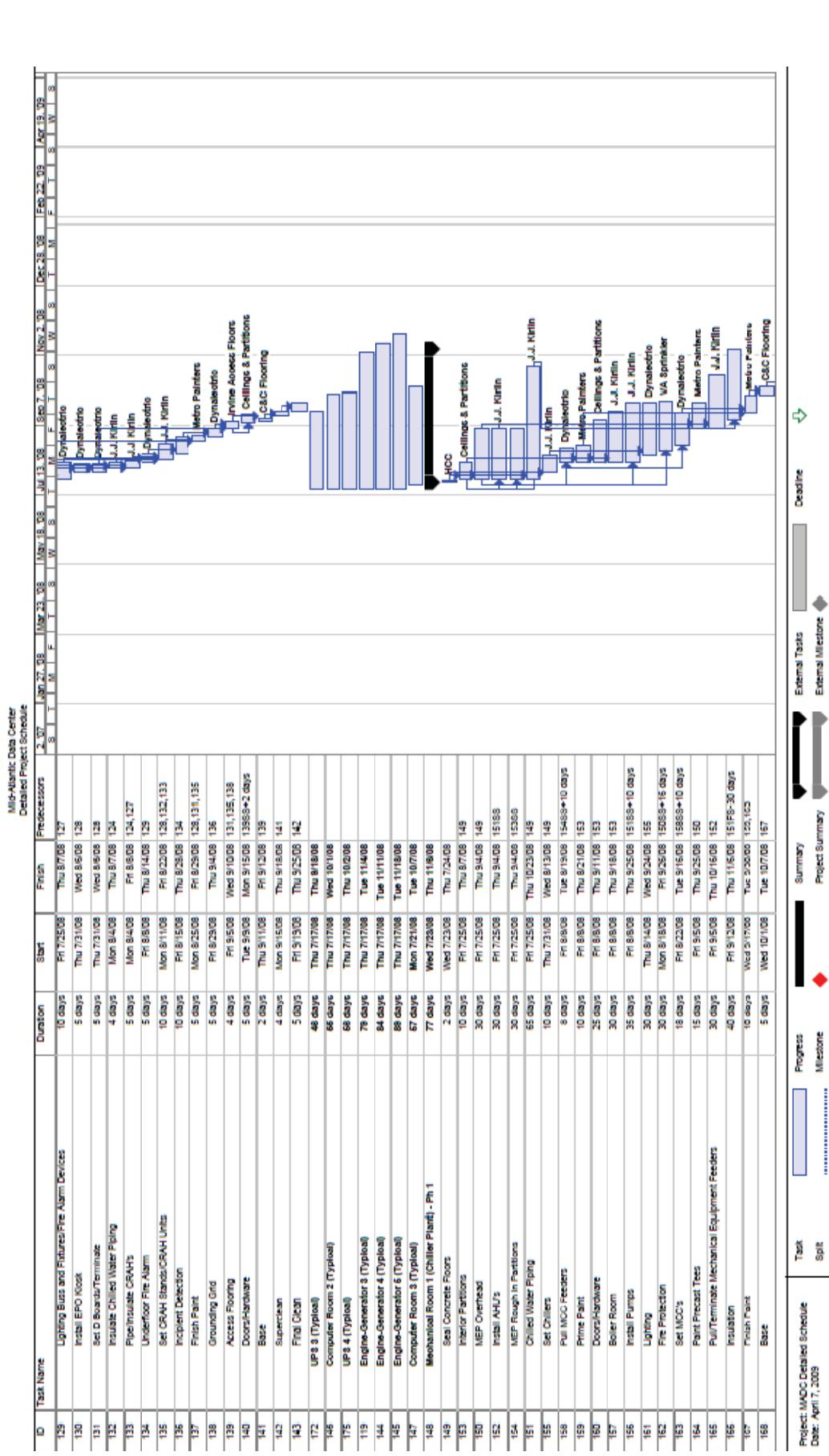


Project: MAOC Detailed Schedule	Task	Progress	Summary	External Tasks	Deadline
Date: April 7, 2009	Split	Milestone	Project Summary	External Milestone	Deadline

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Project: MADC Detailed Schedule	Task	Progress	External Tasks	Summary	Project Summary	Deadline
Date: April 7, 2009	Split					

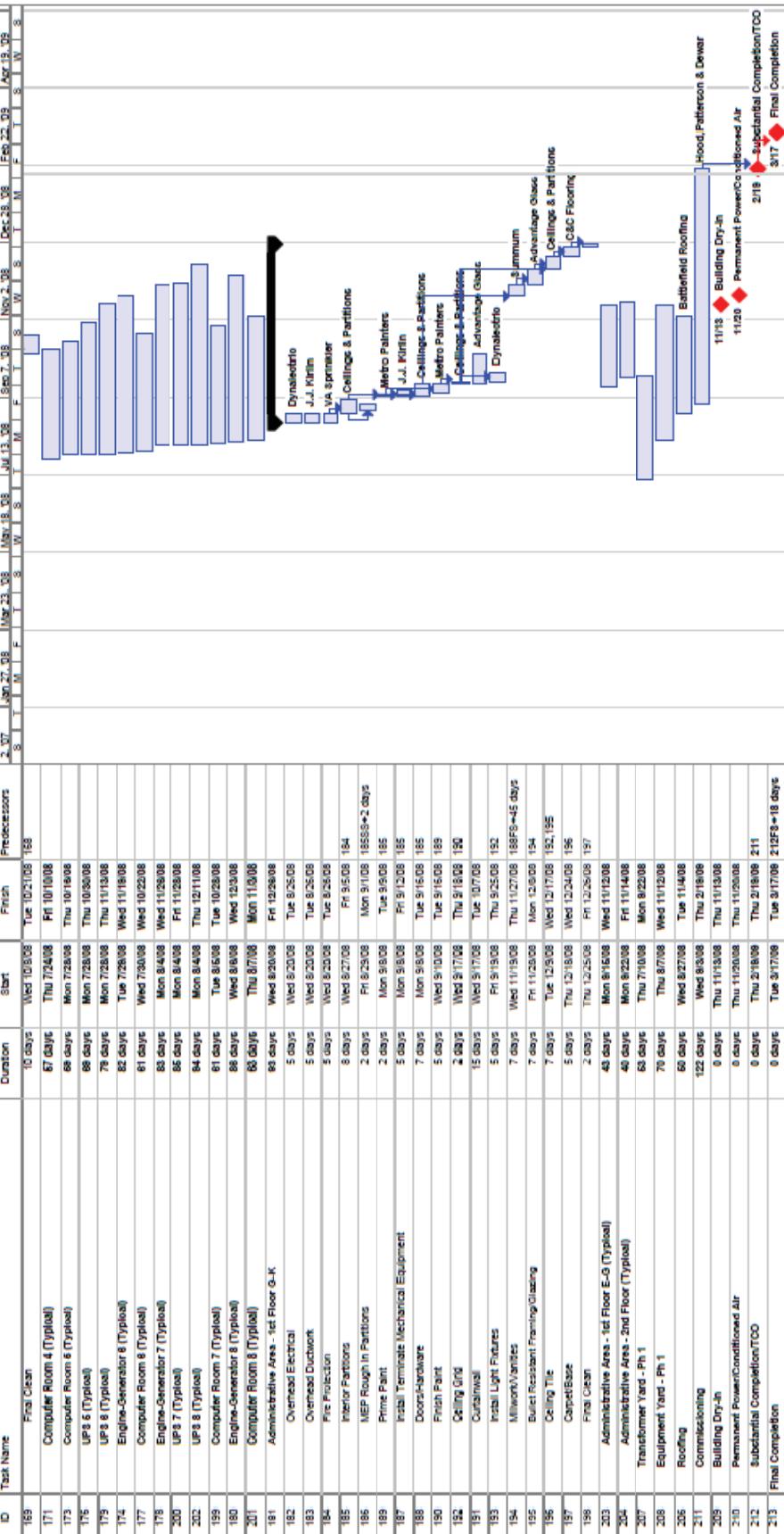
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Project: MADC Detailed Schedule  
 Date: April 7, 2009

Legend:

- Progress:
- Milestone:
- Summary:
- External Tasks:
- External Metrics:

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### COST SAVINGS DATA

Table 31 – New Design: Formwork Unit Cost Savings Estimate

Description	Qty	Unit	# Rooms	Unit Price	Total
UPS Pits	4	Bundles/Pit	8	4000	\$ 128,000
Computer Room Trenches	0.625	Bundles/Rm	16	4000	\$ 40,000
<b>Total</b>					<b>\$ 168,000</b>

Table 32 – New Design: Concrete Unit Cost Savings Estimate

Div.	Description	Qty	Unit	Material	Labor	Equip	Total
03310	3000 psi concrete	1,405	CY	\$147,771	\$0	\$0	\$147,771
03318	Placing, SOG, pumped, up to 6" thick	1,405	CY	\$0	\$14,314	\$8,456	\$22,770
03325	CIP, slab on grade, 6" thick	67,183	SF	\$137,725	\$32,248	\$672	\$170,645
03210	Rebar, avg. price, A615, grade 40	68	Ton	\$62,642	\$0	\$0	\$62,642
	Formwork	1	LS	\$0	\$0	\$0	\$168,000
	Trench Fall Protection	1	LS	\$0	\$0	\$0	\$56,000
<b>TOTAL</b>				<b>\$348,138</b>	<b>\$46,562</b>	<b>\$9,128</b>	<b>\$627,828</b>

Table 33 - Existing Design: Unit Cost Estimate

Div.	Description	Qty	Unit	Material	Labor	Equip	Total
03310	3000 psi concrete	9,790	CY	\$1,029,855	\$0	\$0	\$1,029,855
03311	3500 psi concrete	2,167	CY	\$234,762	\$0	\$0	\$234,762
03312	4000 psi concrete	674	CY	\$75,130	\$0	\$0	\$75,130
03313	5000 psi concrete	6,204	CY	\$711,384	\$0	\$0	\$711,384
03314	Placing, topping slab, pumped, <6" thick	5,343	CY	\$0	\$50,489	\$29,759	\$80,248
03315	Placing, topping slab, pumped, 6"-10" thick	1,594	CY	\$0	\$13,169	\$7,764	\$20,933
03316	Placing, continuous footing, pumped	648	CY	\$0	\$5,724	\$3,380	\$9,104
03317	Placing, grade beam, pumped	674	CY	\$0	\$4,959	\$2,917	\$7,876
03318	Placing, SOG, pumped, up to 6" thick	12,143	CY	\$0	\$123,740	\$73,102	\$196,842

03319	Placing, SOG, pumped, over 6" thick	3,442	CY	\$0	\$24,612	\$14,492	\$39,104
03320	Placing, spread footing, pumped	1,526	CY	\$0	\$31,359	\$18,297	\$49,656
03321	CIP, topping slab, 4" slab	471,508	SF	\$674,257	\$216,894	\$132,022	\$1,023,173
03322	CIP, topping slab, 6" slab	76,167	SF	\$162,236	\$35,798	\$21,327	\$219,361
03323	CIP, spread footing	1,308	CY	\$264,190	\$79,566	\$746	\$344,501
03324	CIP, continuous strip footing, 24" x 12"	648	CY	\$90,598	\$35,127	\$330	\$126,055
03325	CIP, slab on grade, 6" thick	589,057	SF	\$1,207,568	\$282,748	\$5,891	\$1,496,206
03326	CIP, slab on grade, 8" thick	97,650	SF	\$274,397	\$49,802	\$977	\$325,175
03327	CIP Piers square, 36" x 36"	152	CY	\$57,660	\$31,913	\$4,963	\$94,537
03328	CIP Piers square, 24" x 24"	231	CY	\$99,635	\$63,610	\$9,848	\$173,093
03329	CIP Stairs, cast on ground	98	LF Nose	\$455	\$906	\$20	\$1,380
03330	CIP Stair Landing, cast on ground	277	SF	\$995	\$674	\$14	\$1,683
03220	WWF, sheets, 6 x 6 - W4 x W4 (4 x 4), A185	2,730	CSF	\$78,215	\$44,363	\$0	\$122,577
03221	WWF, sheets, 4 x 4 - W2.9 x W2.9 (6 x 6), A185	2,919	CSF	\$90,839	\$47,434	\$0	\$138,273
03210	Rebar, avg. price, A615, grade 40	473	Ton	\$436,486	\$0	\$0	\$436,486
	Formwork	1	LS	\$0	\$0	\$0	\$270,000
		<b>TOTAL</b>		<b>\$5,488,661</b>	<b>\$1,142,884</b>	<b>\$325,848</b>	<b>\$7,227,393</b>