

**CITY OF LOS ANGELES**  
**HYPERION FULL SECONDARY**  
**&**  
**WASTEWATER PROGRAM**  
**MASTER SCHEDULING SPECIFICATIONS**  
**SUBJECT INDEX**



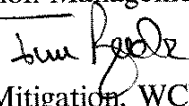
**Wastewater Construction Management Division**  
**&**  
**Wastewater Master Specification Review Committee**

**June 1993**

**CITY OF LOS ANGELES**  
**INTER-DEPARTMENTAL CORRESPONDENCE**

**DATE:** June 16, 1993

**TO:** Walter R. Naydo, Division Engineer  
Wastewater Construction Management Division

**FROM:** Jim Zack, Manager   
Construction Claims Mitigation, WCMD

**SUBJECT:** **HYPERION FULL SECONDARY AND WASTEWATER PROGRAM  
MASTER SCHEDULING SPECIFICATIONS SUBJECT INDEX**

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Wastewater Master Specification Review Committee

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One of the tasks undertaken by this Division in 1992 was the review and rewrite of the Master Scheduling Specification for Hyperion Full Secondary Projects. After this review was completed in September, 1992 members of this Division worked with the Wastewater Master Specification Review Committee to create an entire set of Master Scheduling Specifications for use on a Program-wide basis. These four sets of Master Scheduling Specifications are now complete and adopted as follows.

**Hyperion Full Secondary and Wastewater Program "Long Form" Scheduling Specifications:** These two specifications are virtually identical in language but were written separately because of the differences in format of the two sets of specifications. The Long Form scheduling specifications are intended for use on projects greater than \$10 million in value or on moderately sized projects with a high degree of complexity or multiple interfaces with other projects.

**Wastewater Program "Moderate Form" Scheduling Specification:** This scheduling specification is intended for use on medium sized projects in the range of \$3 million to \$10 million in cost or on smaller sized projects with a high degree of complexity or multiple interfaces with other projects.

**Wastewater Program "Short Form" Scheduling Specification:** This scheduling specification is intended for use on small, non-complex projects in the range of \$500,000 to \$3 million, requiring few interfaces and minimal coordination with other projects.

**Wastewater Program "Teeny Weeny" Form Scheduling Specification:** This, the shortest form, scheduling specification is intended for use on the smallest, non-complex projects with estimated project costs less than \$500,000, requiring few interfaces and minimal coordination with other projects.

After completion of the four scheduling specifications, the Chairman of the Wastewater Master Specification Review Committee suggested that creation and publication of a "subject index" would be most helpful. The Subject Index created identifies discrete subjects within each of the four scheduling specifications (i.e., Joint Ownership of Float Clause, Banked Float Clause, Time Impact Analysis Clause, etc.) and identifies for each specification exactly where this subject is located in the specification.

All work on the four scheduling specifications and the Subject Index has now been completed by this Division and the Wastewater Master Specification Review Committee. A copy of each of the four scheduling specifications and the Subject Index are included in this report for your use.

The "Long Form" scheduling specifications have already received favorable national comment. In the 1993 Cumulative Supplement -- Construction Scheduling: Preparation, Liability, and Claims, the authors, Jon Wickwire, Thomas Driscoll and Stephen Hurlbut, included the following statements concerning the HFS Scheduling Specification.

"Appendix J contains the 1992 approved master specification for the Hyperion (Construction) Division of the City of Los Angeles for major wastewater treatment procurements. This specification, which is a variant of the model specification provided by the authors in the text, addresses some of the key points of typical conflict, such as:

- \* use of CPM to really schedule the work
- \* requirement for continuing involvement of experienced scheduling personnel throughout the life of the project, and strict times for approval actions
- \* joint project updating
- \* prohibition of unauthorized modifications in the network logic
- \* provision of a clear baseline for evaluating time requests
- \* requirements for timely and proactive engagement by the parties in addressing time issues on the project."

As noted, this addition to the 1991 Construction Scheduling book also reprinted the HFS Scheduling Specification in full.

In addition to the items mentioned above, the new Master Scheduling Specifications also

contain language addressing the following scheduling issues.

- Banked float
- Payment for including Change Orders in the schedule
- Schedule windows for provision of owner furnished items
- Confirmation of the schedule by major subcontractors
- Resource loading of schedules
- Delays to negative float situations
- Liquidated damages for failure to submit schedules
- Early completion schedules
- Joint ownership of schedule float
- Mobilization payments contingent upon schedule submittals
- Out of sequence construction activities
- Procurement schedules
- Recorder of the schedule requirements
- Reduction of contract duration for early completion schedules
- Submittal schedules
- Sequestering of float
- Time impact analysis requirements.

These and many other items are specifically called out in the Subject Index for ease of reference.

If there are any questions or comments, please do not hesitate to contact me. (310/524-8016)

**HYPERION FULL SECONDARY  
&  
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MASTER SCHEDULING SPECIFICATIONS**

**SUBJECT INDEX**

SUBJECT INDEX

**HYPERION FULL SECONDARY & WASTEWATER PROGRAM  
MASTER SCHEDULING SPECIFICATIONS**

	<u>HFS SPEC</u>	<u>LONG FORM</u>	<u>MODERATE FORM</u>	<u>SHORT FORM</u>	<u>TEENY WEENY FORM</u>
Activity identification system, submitted for approval	9.3(b)	21.C.2	21.C.2	N/I *	N/I
Activity status, listed on each update	9.11(b)(1)(i)	21.K.2.a	21.J.2.a	21.K	21.H
Activity durations stipulated	9.7(d)	21.G.4	21.F.3	21.J	21.C
AGC publication, referenced	9.3(a)	21.C.1	21.C.1	N/I	N/I
conflict with specification provided for	9.3(a)	21.C.1	21.C.1	N/I	N/I
As-built schedule, condition precedent to release of retainage	9.18	21.R	21.Q	21.O	21.L
"Banked float", used to offset delays	9.15(e)	21.O.5	21.N.5	21.G	21.E
Bar Chart Schedule, allowed	N/I	N/I	N/I	N/I	21.C
Baseline schedule, revisions to, discussed	9.10	21.J	21.I	21.I	N/I
See Detailed Project Schedule, below					
submittal required within 45 days of approval of Preliminary Project Schedule	9.6(a)	21.F.1	N/I	N/I	N/I
submittal required within 30 days of Preconstruction Scheduling Conference	N/I	N/I	21.E.1	N/I	N/I
submittal required within 7 days after issuance of Notice to Proceed	N/I	N/I	N/I	21.D	21.C
Cash flow projections, required	9.9(a)(4) 9.11(b)(1)(vii) 9.13(a)	21.I.1.d 21.K.2.a.(7) 21.M.1	21.H.1.d 21.J.2.a.(7) 21.L.1	N/I	N/I
Change orders, contractor paid to include in schedule reflected in next schedule update	9.6(g) 9.10(b) 9.11(b)(1)(iv)	21.F.7 21.J.2 21.K.2.a.(4)	21.E.8 21.I.2 21.J.2.a.(4)	21.L 21.L	21.I 21.J

SUBJECT INDEX

<u>HFS SPEC</u>	<u>LONG FORM</u>	<u>MODERATE FORM</u>	<u>SHORT FORM</u>	<u>TEENY WEENY FORM</u>
Changes in approved schedule, requires Engineer approval	21.J 21.K.3 21.K.5	21.I 21.J.3 21.J.5	N/I	N/I
City furnished equipment delivery dates	21.C.3 21.G.3.e	21.C.3 21.F.2.e	N/I	N/I
Coding structure, defined requires Engineer approval	21.C.3 21.C.2	21.C.3 21.C.2	N/I N/I	N/I N/I
Comments on schedule submittal, not relieve contractor of contract compliance	21.F.6	21.E.6	21.I	21.G
Computer hardware for scheduling, required on site	21.C.4	N/I	N/I	N/I
Computer reports, condition precedent to monthly payments part of initial schedule submittal	21.M.3 21.H	21.L.3 21.G	21.L 21.J	21.I N/I
Confirmation of major subcontractors/suppliers, required	21.G.1 21.K.1.a	21.F.1 21.J.1.a	21.I	21.G
Conflict between specification and AGC publication, provided for	21.C.1	21.C.1	N/I	N/I
Constraints listed in contract, in schedule	21.G.3.b	21.F.2.b	N/I	N/I
Construction equipment listing, required	21.Q	21.P	N/I	N/I
Construction sequences listed in contract, must be included in schedule	21.G.3.b	21.F.2.b	N/I	N/I
Contract milestones, must be included in schedule	21.G.3.b	21.F.2.b	N/I	N/I
Contract sequences, must be included in schedule	21.G.3.b	21.F.2.b	N/I	N/I
Contractor required to take remedial action when behind schedule	21.K.4 21.N	21.J.4 21.M	21.M	21.J
Cost loading, condition precedent to progress payments	21.M.3	21.L.3	21.D	21.C

SUBJECT INDEX

	<u>HFS SPEC</u>	<u>LONG FORM</u>	<u>MODERATE FORM</u>	<u>SHORT FORM</u>	<u>TEENY WEENY FORM</u>
required	9.7(c)(12) 9.7(f) 9.13 9.13(a) 9.3(a) N/I 9.7(d) 9.11(a)(2) 9.16	21.G.3.1 21.G.6 21.M 21.M.1 21.C.1 N/I 21.G.4 21.K.1.b 21.P	21.F.2.1 21.F.5 21.L 21.L.1 21.C.1 N/I 21.F.3 21.O	21.D  21.D 21.D N/I N/I	21.C  21.C N/I 21.C N/I
sum of costs assigned equal contract value					
CPM, required					
CPM, allowed					
Craft loading, required					
Craft, resource limitation, no more than 5 crafts/activity	9.7(d)	21.G.4	N/I	N/I	N/I
Days, calendar days unless otherwise specified	9.2(a)	21.B.1	21.B.2	N/I	N/I
Delay to negative float situation, addressed	9.11(g) 9.15(c)(ii) 9.7(c)(4) 9.7(c)(5)	21.K.7 21.O.3.b 21.G.3.d 21.G.3.e	21.J.7 21.N.3.b 21.F.2.d 21.F.2.e	21.G  N/I	21.E  N/I
Delivery activities, included in schedule					
Detailed Project Schedule, activity durations	9.7(d) 9.9	21.G.4 21.I	21.F.3 21.H	21.J N/I	21.C N/I
approval process, discussed based on working days	9.7(a)	21.G.1	21.F.1	N/I	N/I
City furnished equipment delivery windows	9.7(c)(5)	21.G.3.e	21.F.2.e	N/I	N/I
condition precedent to mobilization payment	9.9(c)(5)	21.I.3.e	21.H.2.e	N/I	N/I
confirmation of major subcontractors/suppliers, required	9.7(a)	21.G.1	21.F.1	21.I	21.G
cost loaded	9.7(d)	21.G.4	21.F.3	21.D	21.C
	9.7(f)	21.G.6	21.F.5		
	9.13	21.M	21.L		
details required	9.7(c)	21.G.3	21.F.2	21.J	21.C
early completion discussed	9.6(d)	21.F.4	21.E.4	21.H	21.F
include milestone & completion dates, constraints, restraints, sequences					
mathematical analysis required	9.7(c) 9.8(a)	21.G.3 21.H.1	21.F.2 21.G.1	N/I N/I	N/I N/I



SUBJECT INDEX

<u>HFS SPEC</u>	<u>LONG FORM</u>	<u>MODERATE FORM</u>	<u>SHORT FORM</u>	<u>TEENY WEENY FORM</u>
9.9(c)(6)	21.I.3.f	21.H.2.f	21.N	21.K
9.7(c)(4)	21.G.3.d	21.F.2.d	N/I	N/I
9.7	21.G	21.F	21.J	N/I
9.19	21.S	21.R	N/I	N/I
9.8	21.H	21.G	21.J	N/I
9.7(c)	21.G.3	21.F.3	21.D	21.C
9.6(f)	21.F.6	21.E.6	21.I	21.G
9.19	21.S	21.R		
9.10	21.J	21.I	N/I	N/I
9.6	21.F	21.E	N/I	N/I
9.6(c)	21.F.3	21.E.3	21.F	21.D
9.9	21.I	21.H	N/I	N/I
9.9(c)(5)	21.I.3.e	21.H.3.e	N/I	N/I
9.8(e)	21.H.5	N/I	21.K.(4)	21.H
9.9(b)	21.I.2			
N/I	N/I	21.G.4	N/I	N/I
9.6(a)	21.F.1	N/I	N/I	N/I
N/I	N/I	21.E.1	N/I	N/I
N/I	N/I	N/I	21.D	21.C
9.7(a)	21.G.1	21.F.1	N/I	N/I
9.7(h)	21.G.8	21.F.7		
9.8	21.H	21.G	21.J	N/I
9.6(d)	21.F.4	21.E.4	21.H	21.F
9.6(d)	21.F.4	21.E.4	21.H	21.F

liquidated damages for failure to submit list of materials/equipment to be paid prior to installation

network details required

Recorder of the Schedule process, discussed reports required

resource loading required

review comments not relieve contractor of contract requirements

revisions to approved Baseline Schedule required

sequestering of float, prohibited

submittal and approval process discussed

submittal condition precedent to mobilization payment

submittal of electronic disk, allowed

submittal of electronic disk, required

submittal required within 45 days of approval of Preliminary Project Schedule

submittal required within 30 days of Preconstruction Scheduling Conference

submittal required within 7 days after issuance of Notice to Proceed

time scaled

Detailed Project Schedule Reports, specified and discussed

Early completion schedules, addressed

Early completion time, shown as project float

SUBJECT INDEX

<u>HFS SPEC</u>	<u>LONG FORM</u>	<u>MODERATE FORM</u>	<u>SHORT FORM</u>	<u>TEENY WEENY FORM</u>
ECA's, included in next schedule update	21.J.2	21.I.2	21.L	21.I
Emergency Change Authorizations, included in next schedule update	21.K.2.a.(4)	21.J.2.a.(4)		
Equipment, delivery windows	21.J.2	21.I.2	21.L	21.I
list of items requesting payment for prior to installation, required listing required	21.K.2.a.(4)	21.J.2.a.(4)		
loading as a resource, required major items addressed	21.G.3.e	21.F.2.e	N/I	N/I
resources & projections required	21.G.3.d	21.F.2.d	N/I	N/I
Event numbering system, unique, required	21.G.4	21.F.3	N/I	N/I
Float, joint ownership declared	21.Q	21.P	N/I	N/I
Float sequestering, prohibited	21.Q	21.P	N/I	N/I
Fragnets, required for time extension requests	21.G.3.d	21.F.2.d	N/I	N/I
I-J network, allowed	21.G.5	N/I	N/I	N/I
Initial Detailed Project Schedule, condition precedent to mobilization payments	21.C.2	21.C.2	N/I	N/I
Installation activities, included in schedule	21.O.3	21.N.3	21.F	21.D
Joint ownership of float, declared	21.F.3	21.E.3	21.F	21.D
Joint schedule review meetings (including subs & suppliers), required	21.O.1	21.N.1	21.G	21.E
Keeper of the Schedule, see "Recorder of the Schedule" below	21.C.1	21.C.1	N/I	N/I
Levelling for equipment & manpower, addressed	21.I.3.e	21.H.2.e	N/I	N/I
Limited form "no damage for delay clause"	21.G.3.d	21.F.2.d	N/I	N/I
	21.O.3	21.N.3	21.F	21.D
	21.F.5	21.H.2.b	21.I	21.G
	21.I.3.b			
	21.K.1.b			
	21.G.5	N/I	N/I	N/I
	21.O.3	21.N.3	21.G	21.E

SUBJECT INDEX

	<u>HFS SPEC</u>	<u>LONG FORM</u>	<u>MODERATE FORM</u>	<u>SHORT FORM</u>	<u>TEENY WEENY FORM</u>
Liquidated damages, for					
failure to submit baseline schedule	9.9(c)(6)	21.I.3.f	21.H.2.f	21.N	21.K
failure to submit schedule updates	9.11(h)	21.K.8	21.J.8	21.N	21.K
Major changes to schedule, require schedule revision	9.10(d)	21.J.4	21.I.4	N/I	N/I
Major subcontractors/suppliers, defined	9.6(e)	21.F.5	21.F.1	21.I	21.G
participate in schedule review meetings	9.6(e)	21.F.5	21.E.5	21.I	21.G
written confirmation of schedule required	9.9(c)(2)	21.I.3.b	21.H.2.b		
	9.7(a)	21.G.1	21.F.1	N/I	N/I
	9.9(a)(6)	21.I.1.f	21.H.1.g		
	9.11(a)(2)	21.K.1.b	21.J.1.a		
Manpower loading					
discussed at Preconstruction Scheduling Conference	9.4	21.D	21.D	21.C	N/I
requirements & projections, required	9.7(d)	21.G.4	21.F.3	N/I	N/I
	9.16	21.P	21.O		
Master Bar Chart Summary Schedule, required	9.8(d)	21.H.4	N/I	N/I	N/I
Materials listing,					
list of items requesting payment prior to installation	9.7(c)(4)	21.G.3.d	21.F.2.d	N/I	N/I
required report	9.8(b)(5)	21.H.2.e	21.G.2.b	N/I	N/I
Mathematical analysis,					
calculate total value of completed and partially completed work	9.8(a)(14)	21.H.1.n	21.G.1.n	N/I	N/I
discussion of what to be submitted	9.8(a)	21.H.1	21.G.1	N/I	N/I
required for Detailed Project Schedule	9.8	21.H	21.G	N/I	N/I
required for Preliminary Project Schedule	9.5(g)	21.E.7	N/I	N/I	N/I
Maximum duration requirement, on-site construction activities (15 WD's)	9.7(d)	21.G.4	21.F.3	N/I	N/I
Maximum duration requirement, on-site construction activities (30 CD's)	N/I	N/I	N/I	21.J	21.C

SUBJECT INDEX

	<u>HFS SPEC</u>	<u>LONG FORM</u>	<u>MODERATE FORM</u>	<u>SHORT FORM</u>	<u>TEENY WEENY FORM</u>
Milestones listed in contract, included in schedule	9.7(c) 9.7(c)(2) 9.8(d)	21.G.3 21.G.3.b 21.H.4	21.F.2 21.F.2.b	N/I	N/I
Mobilization progress payments, tied to initial schedule submittal	9.9(c)(5)	21.I.3.e	21.H.2.e	N/I	N/I
Monthly update meetings	9.11(a)	21.K.1	21.J.1	N/I	N/I
Narrative Report, required	9.11(b)(1)(vii)	21.K.2.a.(7)	21.J.2.a.(7)	N/I	N/I
Near critical paths (less than 15 days), minimized	9.7(e)	21.G.5	21.F.4	N/I	N/I
Negative float delay situation, addressed	9.11(g) 9.15(c)(ii) 9.7	21.K.7 21.O.3.b 21.G	21.J.7 21.N.3.b 21.F	21.G 21.J	21.E N/I
Network details					
No mobilization payment until initial Detailed Project Schedule submitted and approved	9.9(c)(5)	21.I.3.e	21.H.2.e	N/I	N/I
Non-Compliance Notices status, included in schedule updates	9.11(a)(2)(vi)	21.K.1.b.(6)	21.J.2.a.(4)	N/I	N/I
Optimization of resources, required	9.7(e)	21.G.5	N/I	N/I	N/I
Out of sequence construction, addressed	9.10(a)	21.J.1	21.I.1	N/I	N/I
Owner furnished equipment, included in schedule with delivery windows/times	9.7(c)(5)	21.G.3.e	21.F.2.e	N/I	N/I
Payment, for including change orders in schedule	9.6(g)	21.F.7	21.E.8	21.L	21.I
Precedence diagram method, allowed	9.3(a)	21.C.1	21.C.1	N/I	N/I
Preconstruction Scheduling Conference, required and outlined	9.4	21.D	21.D	21.C	21.B
Predecessor/Successor Report, required submittal	9.8(e)	21.H.5	21.G.4	21.J.(1)	N/I
Preliminary Project Schedule (90 Day Schedule), agreement of Engineer on manpower and cost loading, required	9.5(d)	21.E.4	N/I	N/I	N/I
basis for payment during 90 day period	9.5(e)	21.E.5	N/I	N/I	N/I
cost loaded	9.5(d)	21.E.4	N/I	N/I	N/I
detailed project approach for first 90 days	9.5(a)	21.E.1	N/I	N/I	N/I
Engineer/Inspector comment within 7 days of submittal	9.5(b)	21.E.2	N/I	N/I	N/I

SUBJECT INDEX

<u>HFS SPEC</u>	<u>LONG FORM</u>	<u>MODERATE FORM</u>	<u>SHORT FORM</u>	<u>TEENY WEENY FORM</u>
9.5(b)	21.E.2	N/I	N/I	N/I
9.5(d)	21.E.4	N/I	N/I	N/I
9.5(f)	21.E.6	N/I	N/I	N/I
9.5(d)	21.E.4	N/I	N/I	N/I
9.5(b)	21.E.2	N/I	N/I	N/I
9.5(c)	21.E.3	N/I	N/I	N/I
9.5	21.E	N/I	N/I	N/I
9.5(c)	21.E.3	N/I	N/I	N/I
9.5(d)	21.E.4	N/I	N/I	N/I
9.5(d)	21.E.4	N/I	N/I	N/I
9.5(a)	21.E.1	N/I	N/I	N/I
9.5(f)	21.E.6	N/I	N/I	N/I
9.5(a)	21.E.1	N/I	N/I	N/I
9.5(g)	21.E.7	N/I	N/I	N/I
9.3(c)	21.C.4	N/I	N/I	N/I
N/I	N/I	21.C.4	N/I	N/I
9.7(c)(4)	21.G.3.d	21.F.2.d	21.J	21.C
9.8(b)(4)	21.H.2.d	21.G.2.b	N/I	N/I
9.8(b)(5)	21.H.2.e			
9.7(c)(4)	21.G.3.d	21.F.2.d	N/I	N/I
9.19(d)	21.S.4	21.R.4	N/I	N/I
9.19(a)	21.S.1	21.R.1	N/I	N/I
9.19(b)	21.S.2	21.S.2		
9.19(c)	21.S.3	21.S.3		
9.6(d)	21.F.4	21.E.4	21.H	21.F

SUBJECT INDEX

<u>HFS SPEC</u>	<u>LONG FORM</u>	<u>MODERATE FORM</u>	<u>SHORT FORM</u>	<u>TEENY WEENY FORM</u>
Rescheduling of work, when required	21.J.1	21.I.1	21.N	21.J
Resource leveling, required	21.J.4	21.I.4	N/I	N/I
Resource loading, only for on-site construction activities	21.G.5	N/I	21.D	21.C
required for cost, manpower, equipment	21.G.4	21.F.5		
	21.I.1	21.H.1		
	21.G.3.1	21.F.3.1	21.D	21.C
	21.K.1.b	21.J.1.b		
	21.K.2.a	21.L		
	21.M	21.O		
	21.P	21.P		
	21.Q			
	21.N	21.M	N/I	N/I
	21.G.3.b	21.F.2.b	N/I	N/I
	21.G.3.f	21.F.2.f	N/I	N/I
	21.F.6	21.E.6	21.I	21.G
	21.S.4	21.R.4		
	21.J	21.I	N/I	N/I
	21.J.1	21.I.1	N/I	N/I
	21.J.5	21.I.5		
	21.K.4	21.J.4		
	21.K.4.a	21.J.4.a	21.M	21.J
	21.K.4.b	21.J.4.b		
	21.K.4.c	21.J.4.c		
	21.J.2	21.I.2	N/I	N/I
	21.K.2.a	21.J.2.a	N/I	N/I

SUBJECT INDEX

<u>HFS SPEC</u>	<u>LONG FORM</u>	<u>MODERATE FORM</u>	<u>SHORT FORM</u>	<u>TEENY WEENY FORM</u>
9.9(b)	21.I.2	21.H.1.f	21.K.(4)	21.H
9.11(b)(1)(vi)	21.K.2.a.(6)	21.J.2.a.(6)		
9.11(b)(1)(viii)	21.K.2.a.(8)	21.J.2.a.(8)		
9.3(a)	21.C.1	21.C.1	21.C	21.B
9.11(b)(1)(vii)	21.K.2.a.(7)	21.J.2.a.(7)	N/I	N/I
9.9(c)(5)	21.I.3.e	21.H.2.e	21.L	21.I
9.11(b)(1)(vii)	21.K.2.a.(7)	21.J.2.a.(7)	N/I	N/I
9.8	21.H	21.G	21.J	N/I
9.11(b)	21.K.2	21.J.2	21.K	
9.4	21.D	21.D	21.C	21.B
9.5(e)	21.E.5	21.J.7	N/I	N/I
9.11(g)	21.K.7			
9.2(b)(1)	21.B.2.a	21.B.2.a	N/I	N/I
9.2(c)	21.B.3	N/I	N/I	N/I
9.2(c)	21.B.3	N/I	N/I	N/I
9.2(a)	21.B.1	21.B.1	21.B	N/I
9.3(c)	21.C.4	N/I	N/I	N/I
9.2(a)	21.B.1	21.B.1	21.B	N/I
9.2(b)	21.B.2	21.B.2	21.B	N/I
9.2(a)	21.B.1	N/I	N/I	N/I
9.2(b)	21.B.2	21.B.2		
9.2(b)(2)	21.B.2.b	21.B.2.b	N/I	N/I
9.2(a)	21.B.1	21.B.3	N/I	N/I
9.2(b)	21.B.2			
9.2(a)	21.B.1	21.B.1	21.B	N/I
9.2(a)	21.B.1	21.B.1	21.B	21.B
9.2(c)	21.B.3	21.B.3	N/I	N/I

Schedule information on disk, allowed

Schedule methodology, discussed

Schedule Narrative Report, required

Schedule reports,

condition precedent to payment

narrative report

specified

Schedule, sequence of operations discussed at

Preconstruction Scheduling Conference

Schedule updates, basis for payment requests

Scheduler,

capabilities submitted within 5 days of Notice

of Award

Engineer/Inspector approval required

Engineer right of removal

experience required

located on site

qualifications required for

quits, replace in 30 days

references required

replacement subject to Engineer approval

required

required to attend all meetings

subject to approval of Engineer

SUBJECT INDEX

<u>HFS SPEC</u>	<u>LONG FORM</u>	<u>MODERATE FORM</u>	<u>SHORT FORM</u>	<u>TEENY WEENY FORM</u>
Scheduling capabilities, submitted within 5 days of Notice of Award	21.B.2	21.B.2	N/I	N/I
Scheduling system, identified within 5 days of Notice of Award	21.B.2.c	21.C.4	N/I	N/I
maintained on site	21.C.4	N/I	N/I	N/I
requirements of	21.C.4	21.C.4	N/I	N/I
Sequence of operations, discussed at Preconstruction Scheduling Conference	21.D	21.D	21.C	21.B
Sequences listed in contract, included in schedule	21.G.3	21.F.2	N/I	N/I
Sequestering of float, prohibited	21.G.3.b	21.F.2.b	21.F	21.D
Shop drawing, review time specified	21.F.3	21.E.3	21.F	21.C
Sorting Selection Code, Engineer approval required	21.G.3.f	21.F.2.f	21.D	21.C
Standardized scheduling software, required and specified	21.C.2	21.C.2	N/I	N/I
Start up & test time, included in schedule	21.C.4	21.C.4	N/I	N/I
Stop work, can be ordered if initial schedule not submitted	21.G.3.n	21.F.2.n	N/I	N/I
Subcontractor/supplier (major), participation in schedule meetings	21.I.3.e	21.H.2.e	N/I	N/I
written confirmation of schedule required	21.F.5	21.E.5	21.I	21.G
Submittals, included in schedule	21.I.3.b	21.H.2.b	21.I	21.G
review time in schedule provided for	21.G.1	21.F.1	N/I	N/I
Summary Project Schedule, submitted within 15 days after Notice of Award	21.I.1.f	21.H.1.g	N/I	N/I
T&M changes, included in next schedule update	21.K.1.a	21.J.1.a	21.D	21.C
	21.G.3.d	21.F.2.d	21.D	21.C
	21.G.3.f	21.F.2.f	21.D	21.C
	21.E.1	N/I	N/I	N/I
	21.J.2	21.I.2	21.L	21.J
	21.K.2.a.(4)	21.J.2.a.(4)	21.L	21.J



SUBJECT INDEX

	<u>HFS SPEC</u>	<u>LONG FORM</u>	<u>MODERATE FORM</u>	<u>SHORT FORM</u>	<u>TEENY WEENY FORM</u>
Time and material changes, included in next schedule update	9.10(b) 9.11(b)(1)(iv)	21.J.2 21.K.2.a.(4)	21.I.2 21.J.2.e.(4)	21.L	21.I
Time extensions, "banked float" fragments, required procedure subject to joint ownership of float time impact analysis, required	9.15(e) 9.15(a) 9.15 9.15(c) 9.15(a) 9.15(b)	21.O.5 21.O.1 21.O 21.O.3 21.O.1 21.O.2	21.N.5 21.N.1 21.N 21.N.3 21.N.1 21.N.2	21.G N/I 21.G 21.F 21.G	21.E N/I 21.E 21.D 21.E
Time impact analysis, required for time extension requests	9.15(a) N/I	21.O.1 N/I	21.N.1 21.C.4	21.G N/I	21.E N/I
Time Machine Scheduling System, allowed Time of the essence clause	9.1 9.10(b)	21.A 21.J.2	21.A 21.I.2	21.A 21.L	21.A 21.I
Unilateral changes, included in next schedule update	9.11(b)(1)(iv) 9.7(c)(17)	21.K.2.a.(4) 21.G.3.q	21.J.2.a.(4) 21.F.2.q	N/I	N/I
Unusual shift work, identified in schedule Updates to Detailed Project Schedule, actual dates, verified activity percent complete, verified basis for progress payment confirmation of major subcontractors/suppliers, required cost & resource loaded include changes, ECA's, T&M changes, unilateral changes initial update within 1 week of approval of Baseline Schedule initial update within 14 days of approval of Baseline Schedule joint review of updates, required joint review of updates, allowed	9.11(a)(2)(i) 9.11(a)(2) 9.11(g) 9.11(a)(1) 9.11(a)(2) 9.11(b)(1)(iv) 9.11(a)(2)	21.K.1.b.(1) 21.K.1.b 21.K.7 21.K.1.a 21.K.1.b 21.K.2.a.(4) 21.K.1.b	21.J.2.a 21.J.2.a.(2) 21.J.7 21.J.1.a 21.J.7 21.J.2.a.(4) N/I	21.K.(1) 21.K N/I N/I N/I 21.L N/I	21.H 21.H N/I N/I N/I 21.I N/I

SUBJECT INDEX

<u>HFS SPEC</u>	<u>LONG FORM</u>	<u>MODERATE FORM</u>	<u>SHORT FORM</u>	<u>TEENY WEENY FORM</u>
liquidated damages for failure to submit	21.K8	21.J.8	21.N	21.K
Recorder of Schedule requirement	21.S.2	21.R.2	N/I	N/I
routine updates, monthly	21.K.2	21.J.2	21.K	21.H
Schedule Narrative Report, required	21.K.2.a.(7)	21.J.2.a.(7)	N/I	N/I
submitted in same detail as baseline schedule	21.K.1.a	21.J.1.a	21.K	21.I
verify actual dates	21.K.1.b	21.J.2.a	21.K	21.H
withholding of progress payments, provided	21.K.8	21.J.8	21.L	21.I
Utility Access/Alteration Reports, required	21.L.1.b	21.K.1.b	N/I	N/I
Variances from Contract Requirements, identified at time of submittal	21.I.3.d	21.H.2.d	N/I	N/I
Weekly progress reports, required	21.L	21.K	N/I	N/I
Withholding of progress payments	21.N.4	21.M.4	N/I	N/I
failure to meet milestone/completion dates	21.K.8	21.J.8	21.L	21.I
failure to submit schedule updates				
Work Breakdown Structure (WBS), code field required	21.C.3	21.C.3	N/I	N/I
Engineer approval required	21.C.2	21.C.2	N/I	N/I
required to be alpha-numeric	21.C.2	21.C.2	N/I	N/I
requirements for WBS discussed	21.C.3	21.C.3	N/I	N/I
submitted for approval at Preconstruction Scheduling Conference	21.C.2	21.C.2	N/I	N/I
Work in progress, stautused with updates	21.K.2.a	21.J.2.a	21.K	21.H
Work may be stopped if initial schedule not submitted	21.I.3.e	21.H.2.f	N/I	N/I
Work not start until Preliminary Project Schedule approved	21.E.6	N/I	N/I	N/I

**NOTE: \* N/I = Not included in this version of the scheduling specification.**