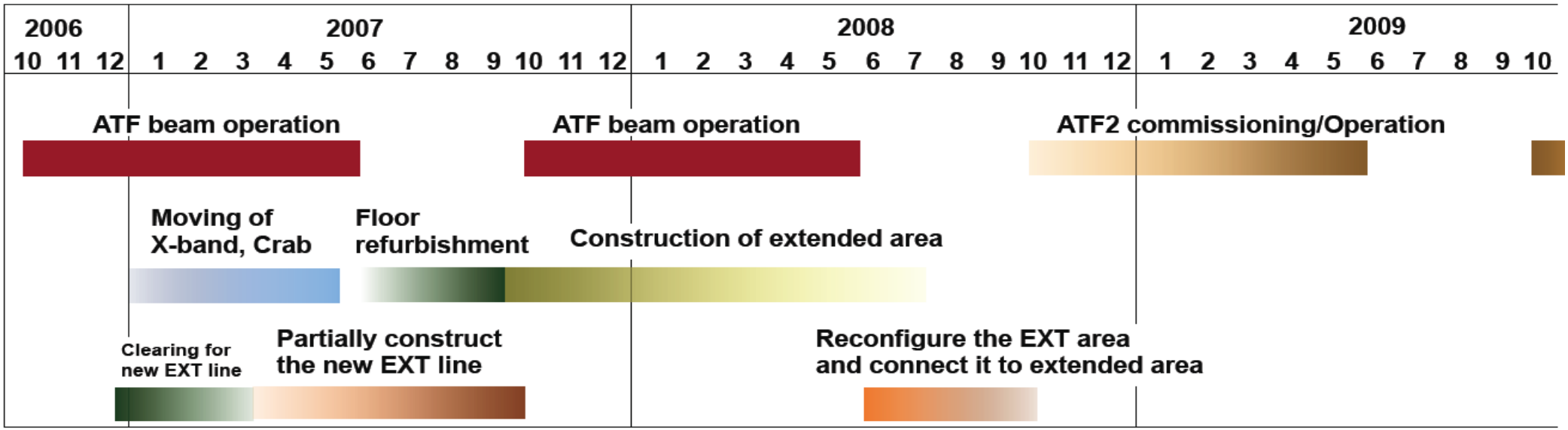
Installation of ATF2 Magnets

R. Sugahara
KEK

ATF2 Project Meeting at DESY
July 31, 2007

·. New schedule for construction



- **Construction of the extended shield area for final focus system can be done during the ATF beam operation.**
- Partial construction beside the current EXT line in shutdown week will release the work load for reconfiguration of the EXT line in summer of 2008.
- **ATF2 beam will come in October, 2008.**

Magnets and supports for ATF2 Beam Line

R. Sugahara June 1, 2007

Concrete blocks	In ATF Ring	Out of ATF Ring	Comment
Type 1	3		No movers
Type 2A	3		No movers
Type 2B	1		No movers
Type 3		3	2 Q's + 1 Sx on One
Type 4		14	
Type 10		1	Not concrete
Type 11		1	Not concrete
Type 5		3	for Dipoles
Magnets			
Old quads	14	2	
Old sextupoles	4		
Old dipoles	6		
New quads (QEA)	7	20	
New sextupoles		3	
New dipoles		3	

Magnet installation schedule in 2007 (outside of ATF ring)

R.S. May 23, 2

2007	August		September				October				November	
	20/26	27/2	3/9	10/16	17/23	24/30	1/7	8/14	15/21	22/28	29/4	5/11
Install & survey beam line markers							↔		↔			
Draw beam line & mark mag. position	↔							↔				
Install concrete blocks		↔										
Install movers, stands, magnets			↔									
First alignment												
	For 4 magnets in the ATF ring											
Floor painting									↔			
ATF2 floor refurbishment	←					→	¾ Start observation of the floor displacement					
Close ATF ring and start beam OP									←			

		December					January, 2008				February	
	19/25	26/2	3/9	10/16	17/23	24/30	31/6	7/13	14/20	21/27	28/3	4/10
Install concrete blocks				↔								
						New Year's holiday						
Install movers, stands, magnets								↔				
First alignment										↔		
Open magnets and install BPM												←
Connect beam pipes												←
Beam opeartion	←											→

P4

* Second alignment will be carried out just before the ATF2 beam commissioning. When?

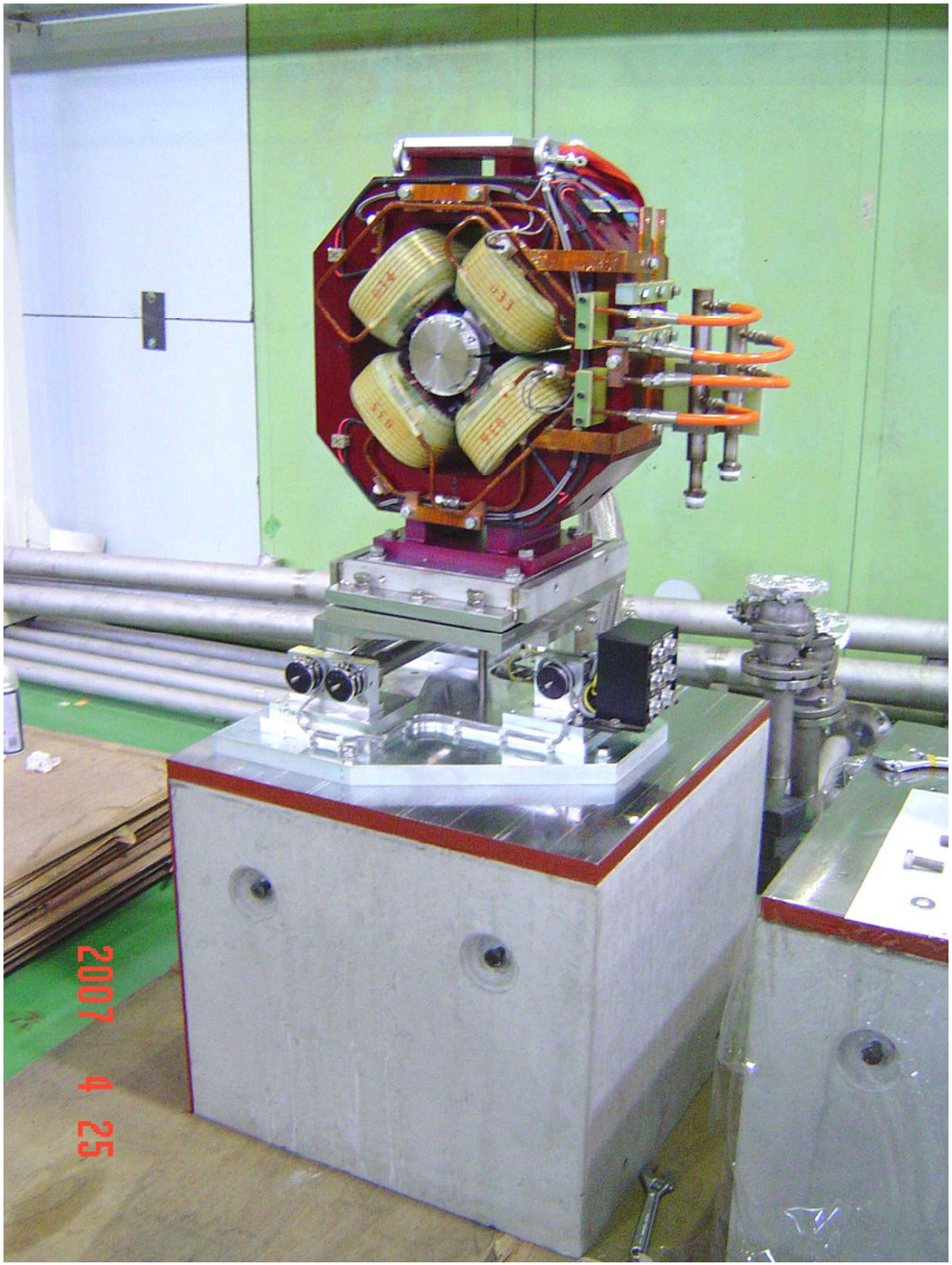
- **QEA magnet system Build up trial**

April 24th, 2007

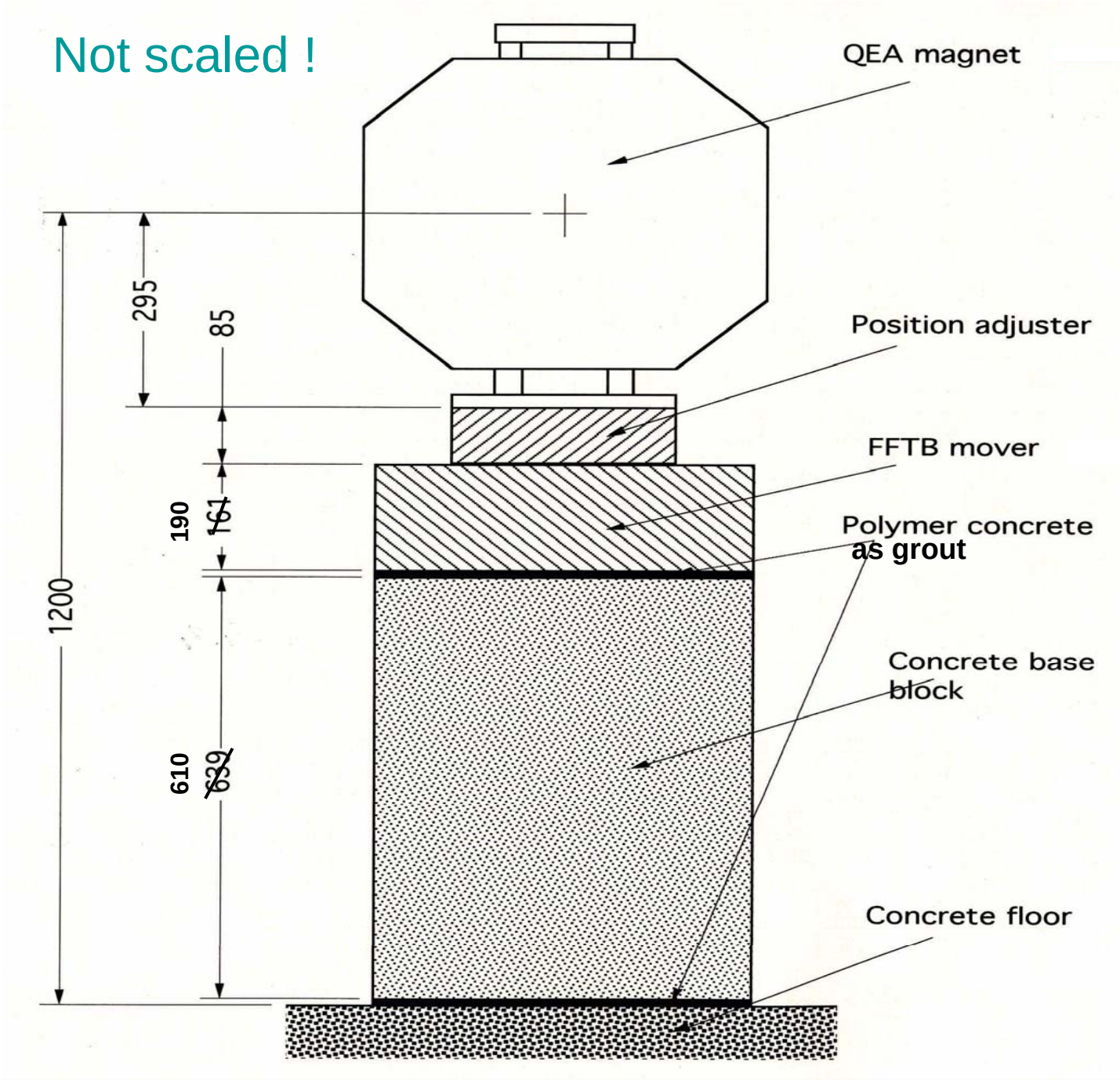
Magnet
|
Position adjuster
|
Mover
|
Concrete base block

Found

- **Need to fix the plate on the mover along beam direction**
- **Height of actual mover is higher than prototype one by about 15mm**



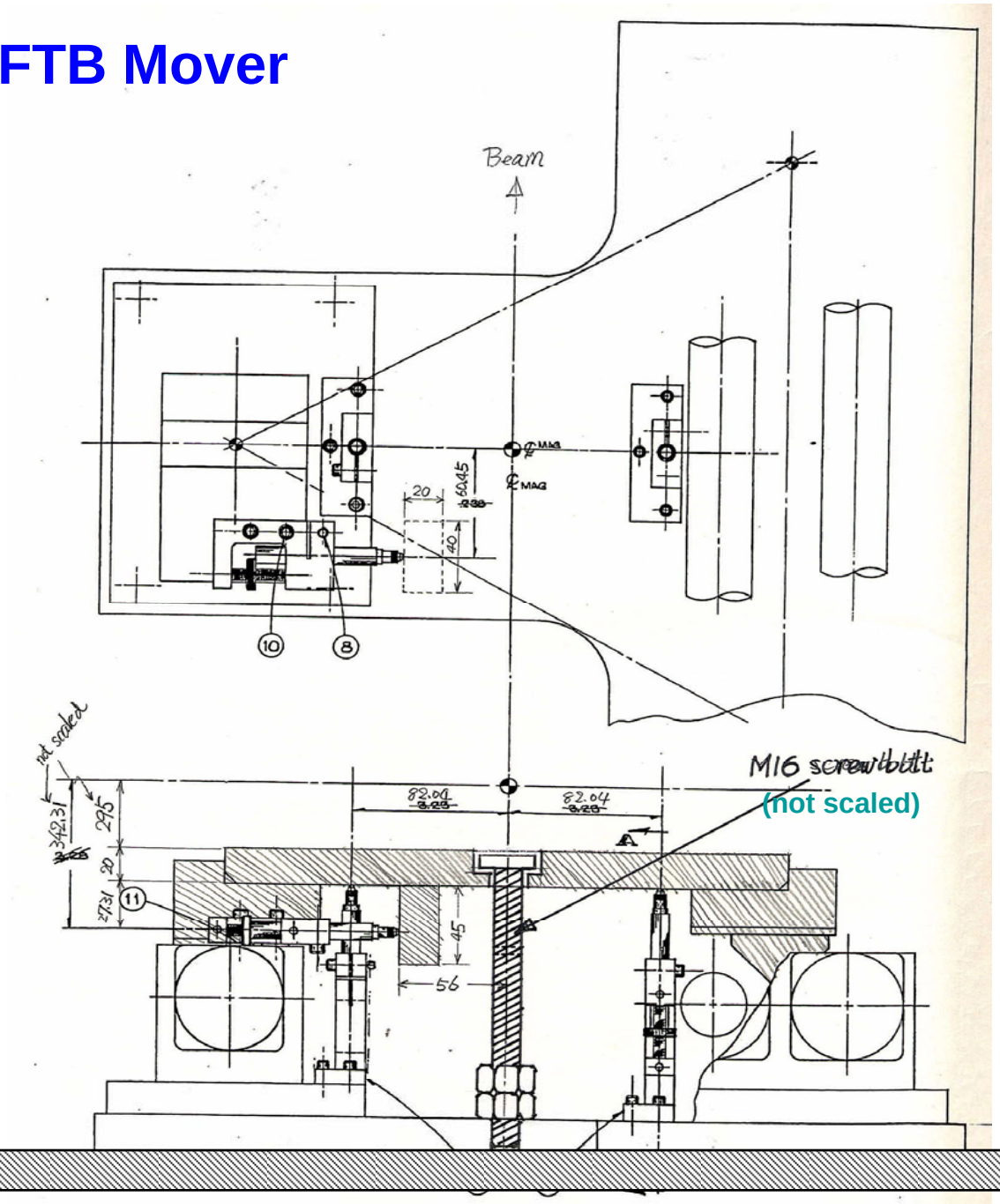
<<< - >>>


Not scaled !
QEA magnet
Position adjuster
FFTB mover
Polymer concrete
as grout
Concrete base
block
Concrete floor
295
85
190
161
1200
610
639

New magnets to be produced

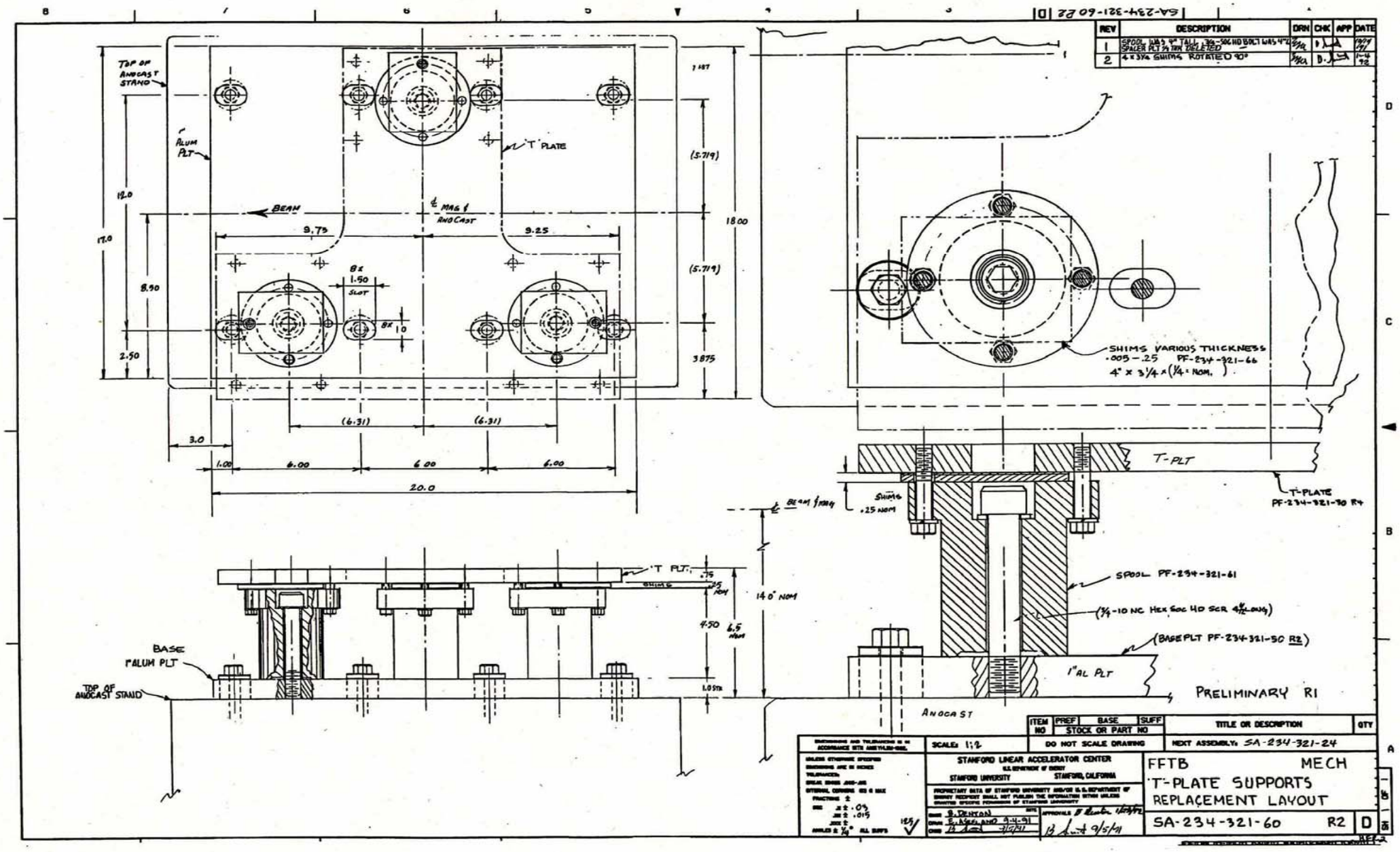
- Dipoles 3
  - --> Produced this fiscal year? (SLAC group)
- Beam line Quadrupoles 27
  - 24 magnets were produced last fiscal year, and 3+1(spare) are produced this fiscal year
- FFP Quadrupoles 2
  - --> Reuse FFTB magnets (QC3 type)
- Sextupoles 5 (three for BL and two for FFP)
  - --> Produced this fiscal year? (SLAC group)
- Octupoles ?
- Steering magnets ?

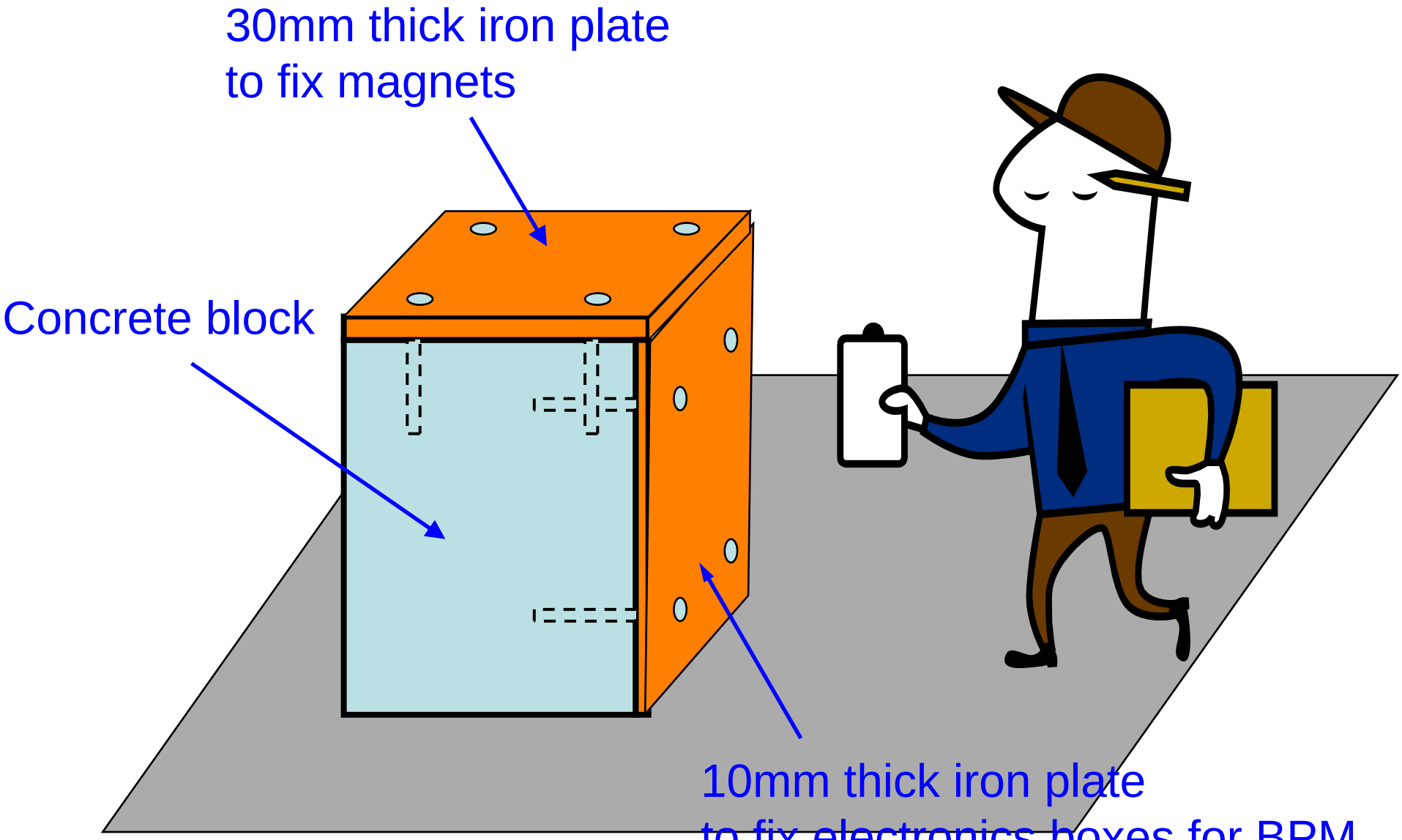
FFTB Mover



29mm thick

Bottom plate (T-plate) of FFTB mover




30mm thick iron plate
to fix magnets
Concrete block
10mm thick iron plate
to fix electronics boxes for BPM