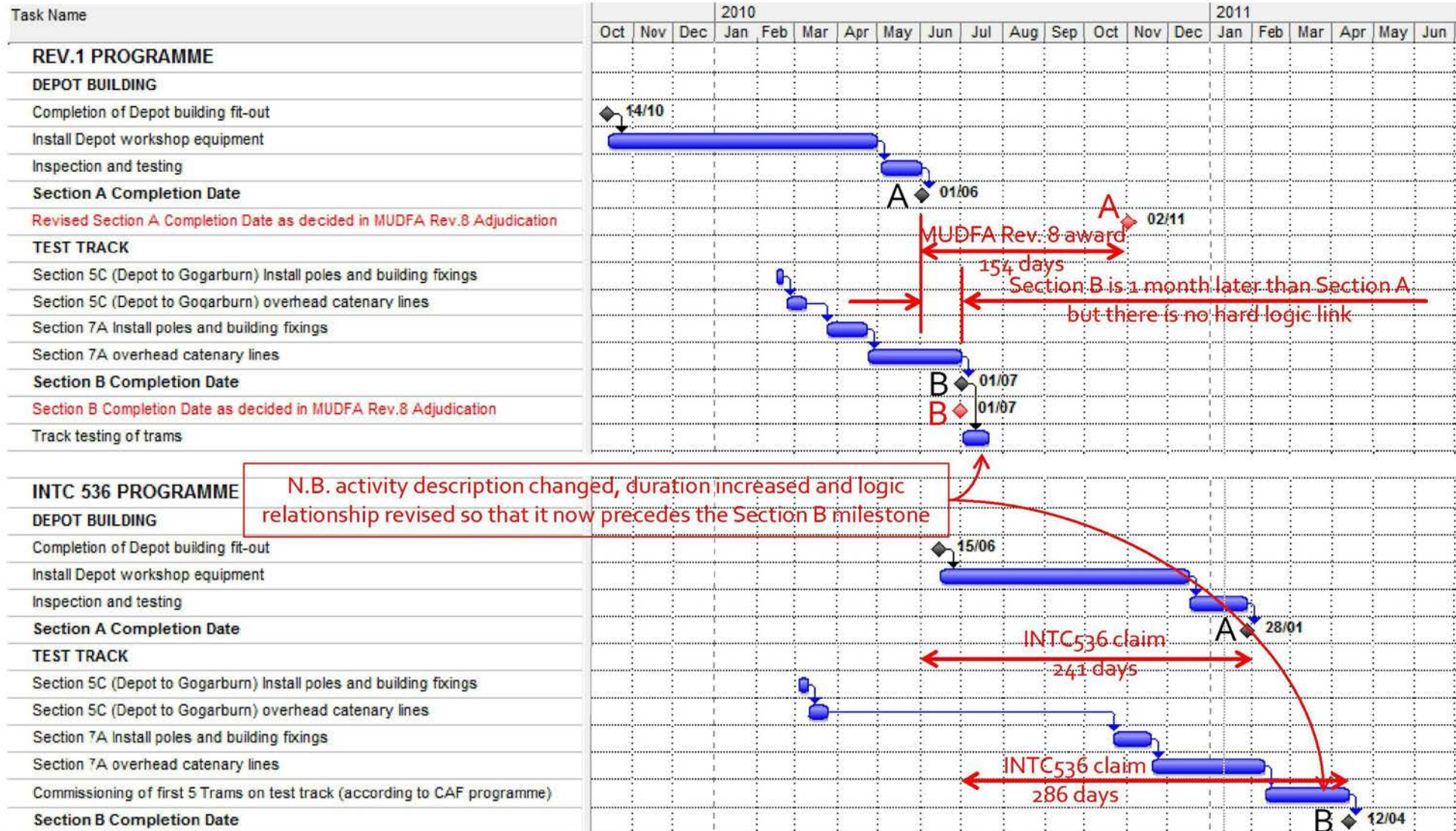
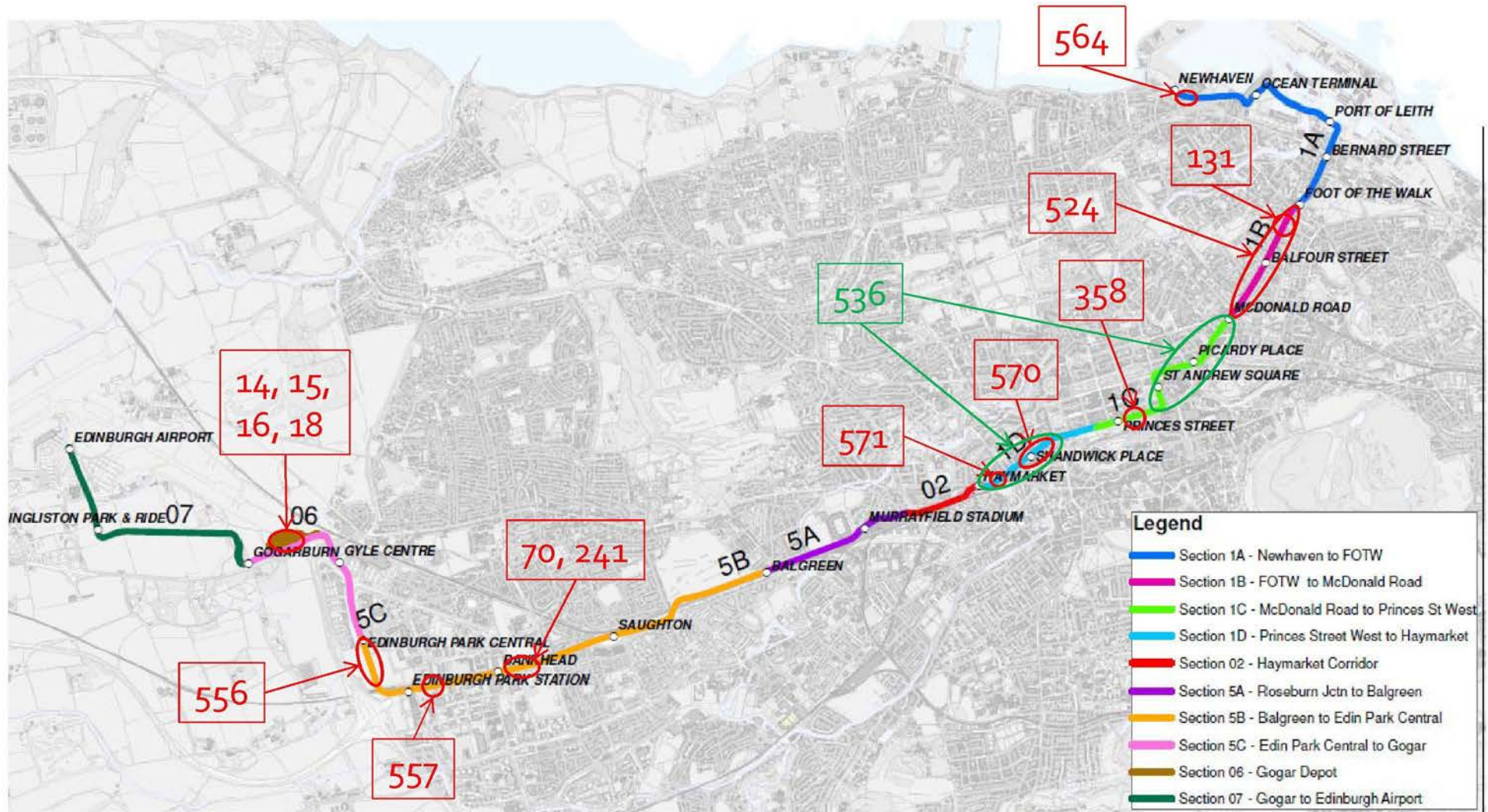


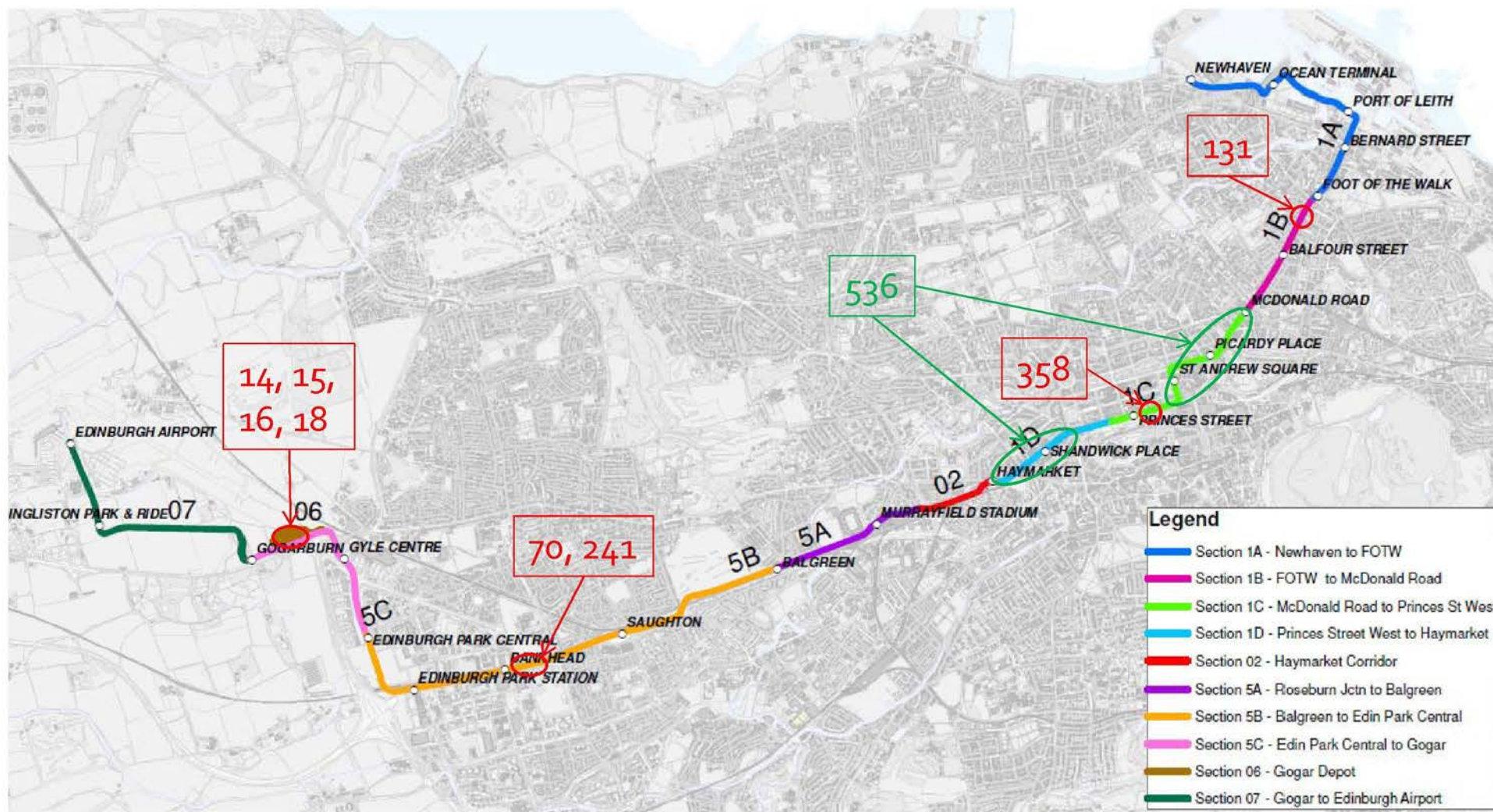
MUDFA Rev. 8 decision and the relationship between Section A & B Completion Dates



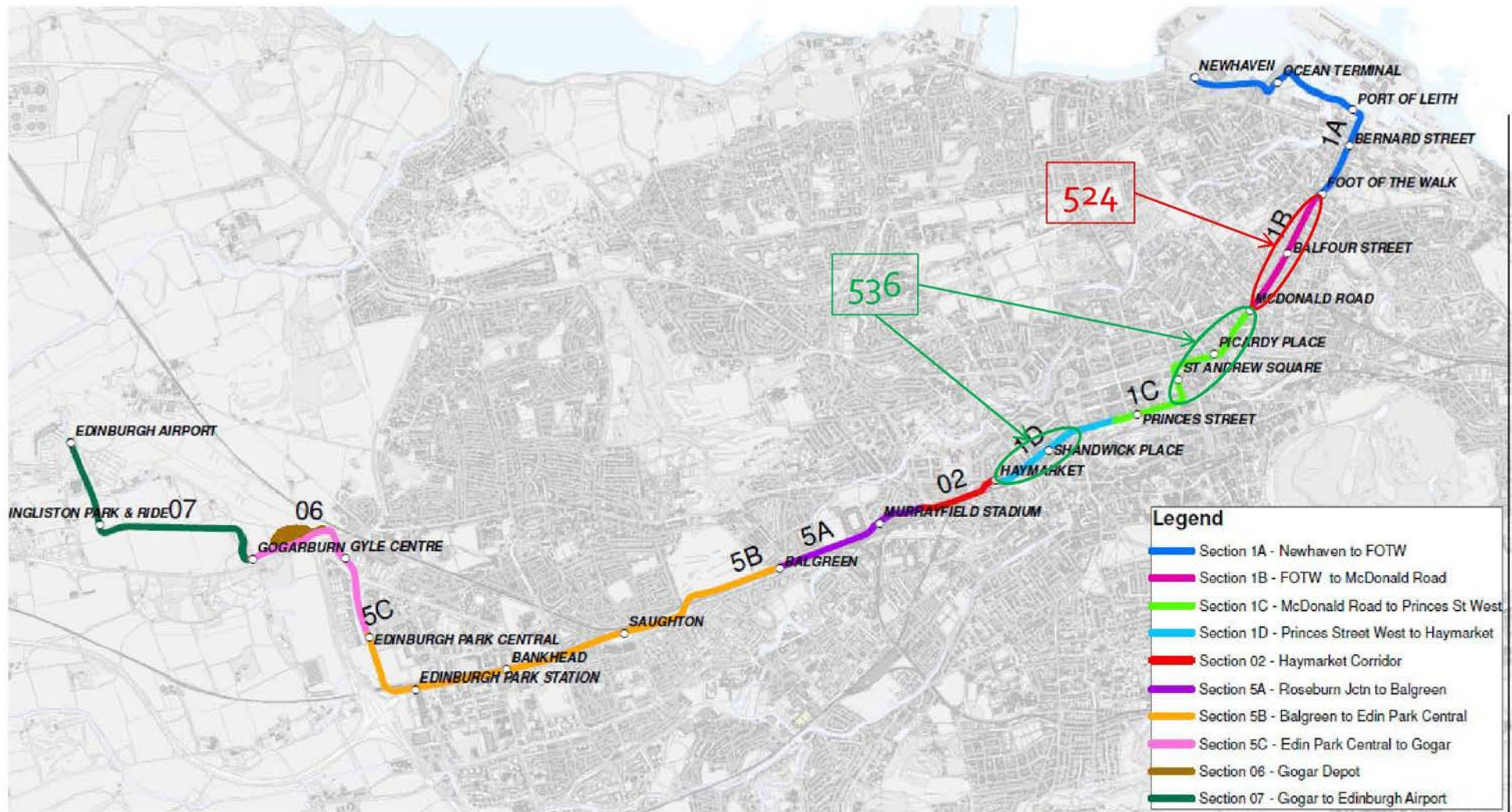
Scope of INTCs



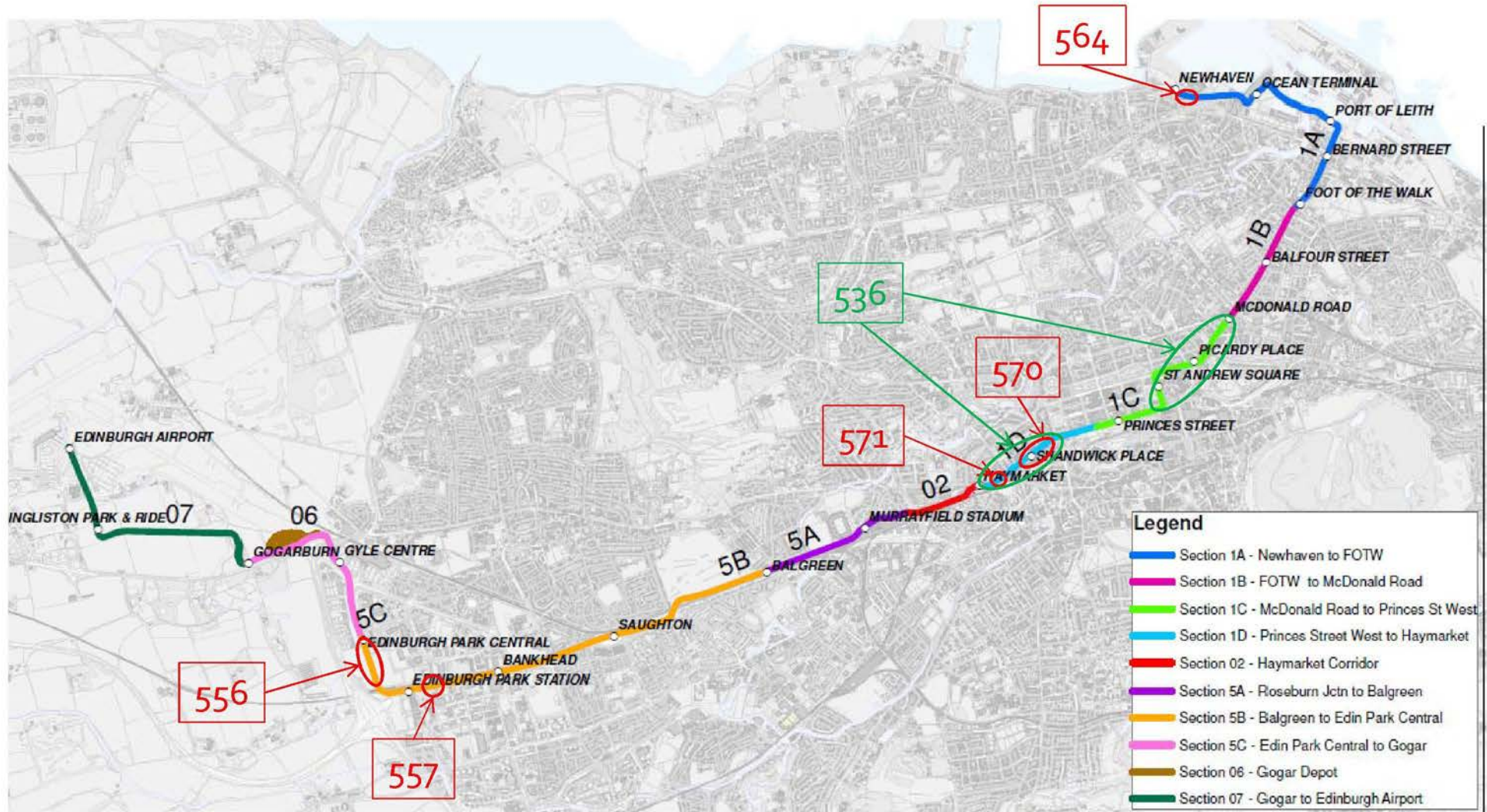
Scope of INTCs that pre-date INTC 429 (MUDFA Rev.8)



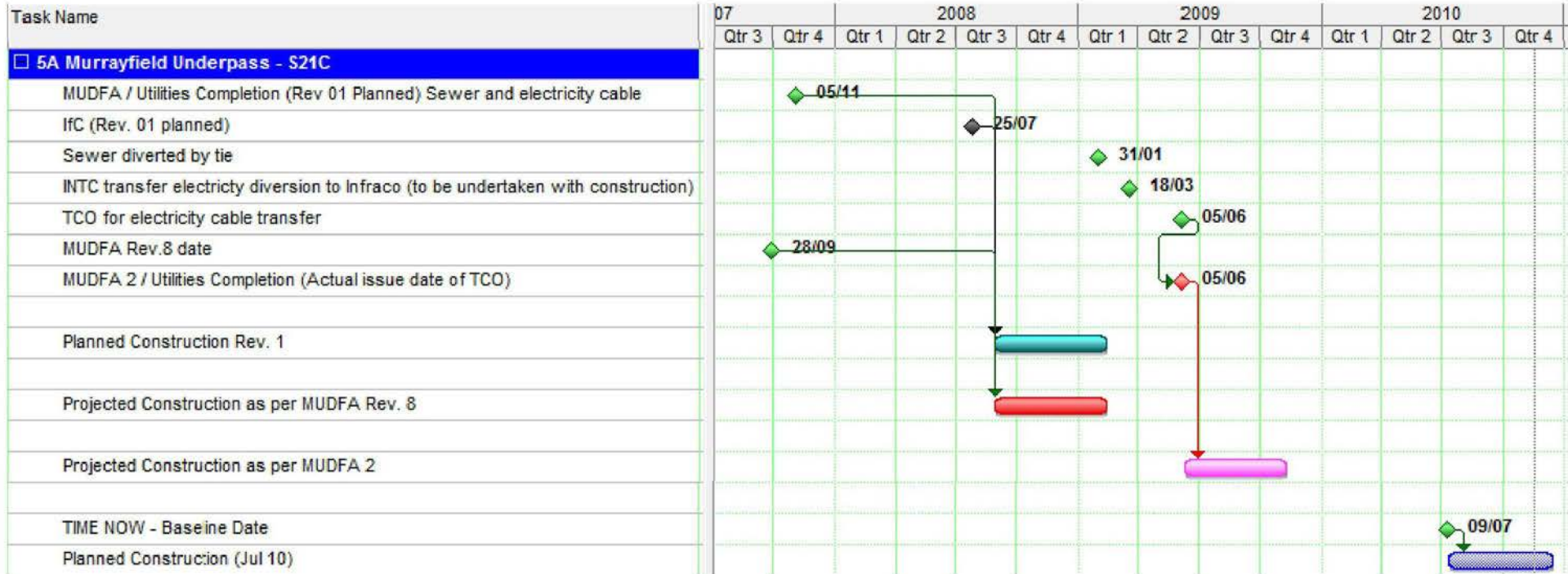
Scope of INTCs that post-date INTC 429 (MUDFA Rev.8) but pre-date INTC 536



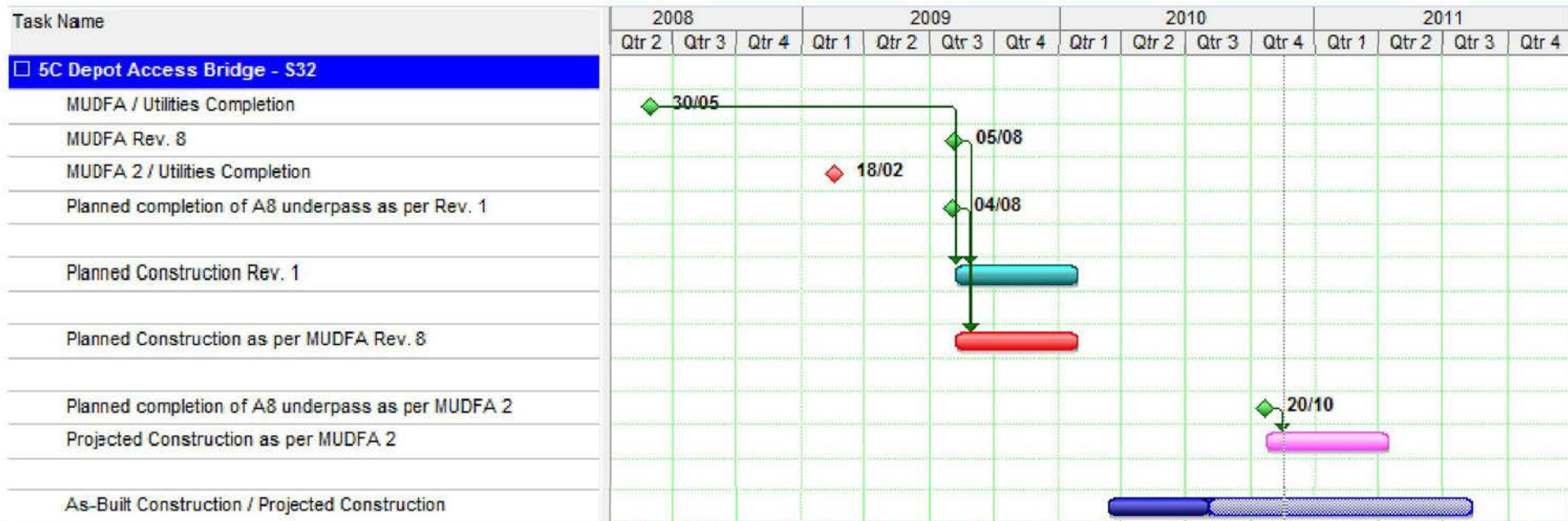
Scope of INTCs that post-date INTC 536



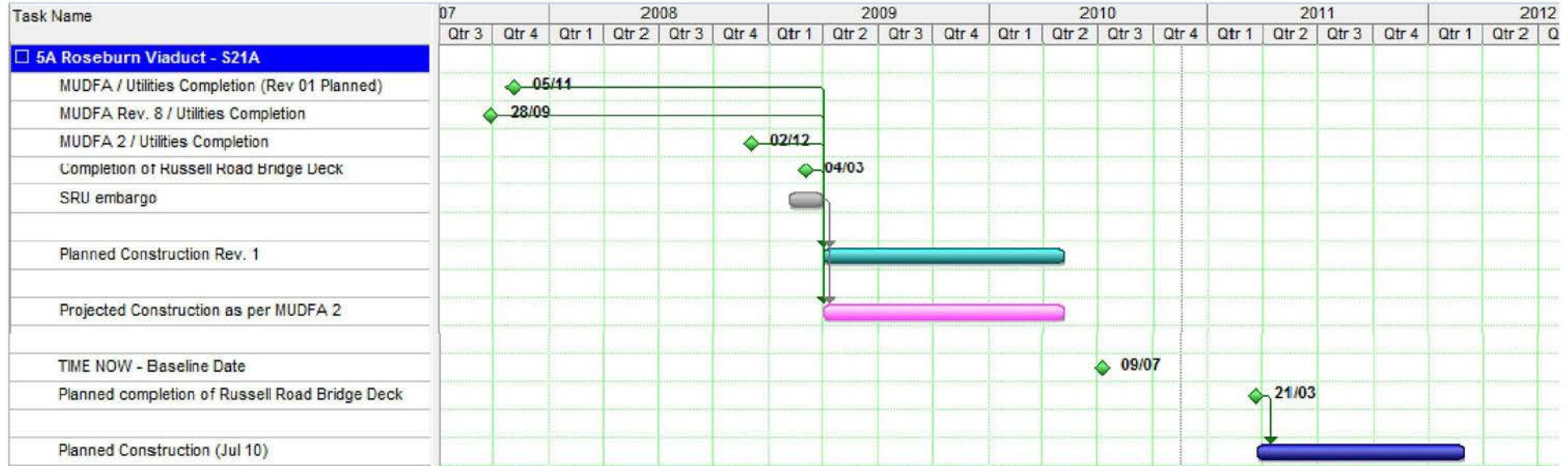
Murrayfield Underpass



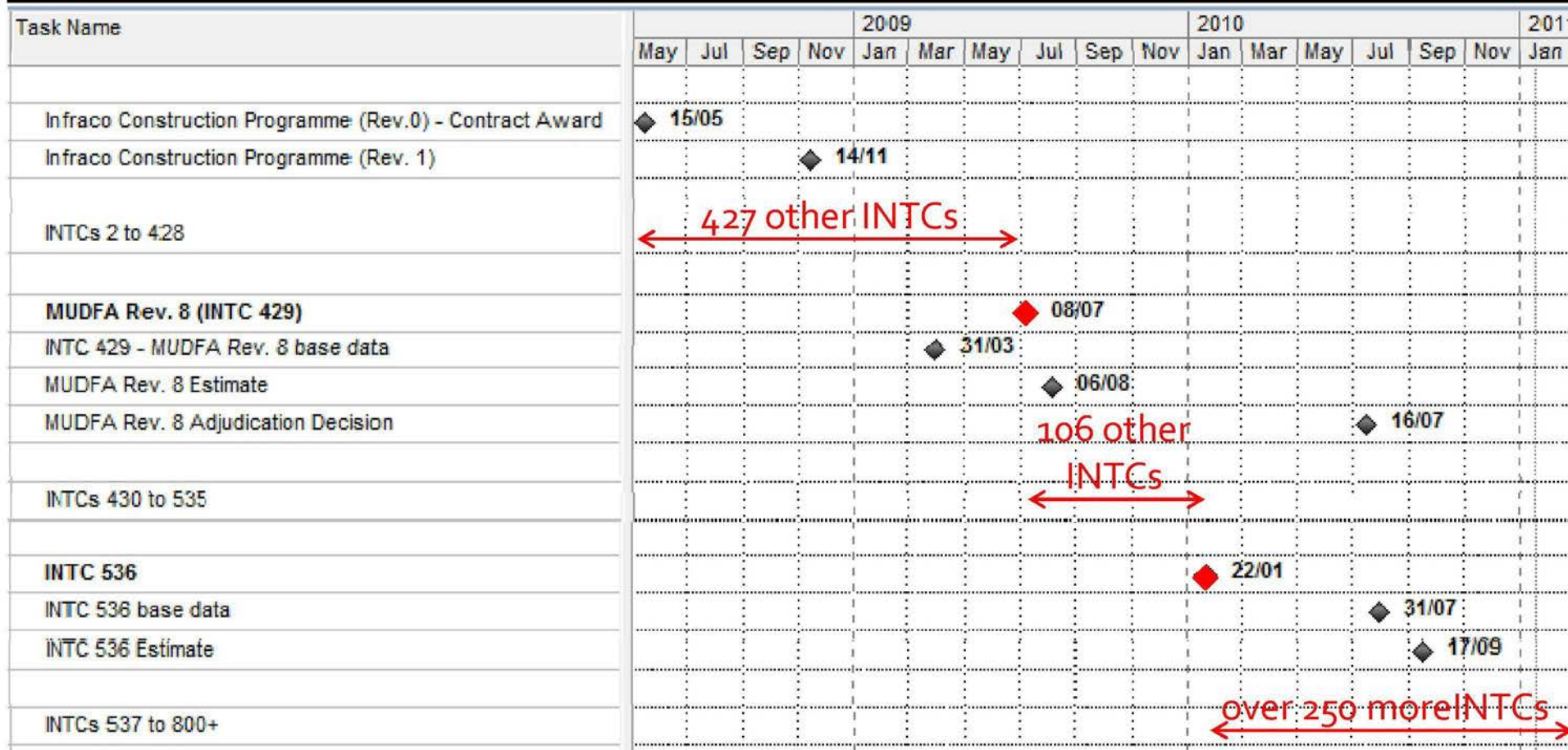
Depot Access Bridge



Roseburn Viaduct



Timing and scope of INTC 536



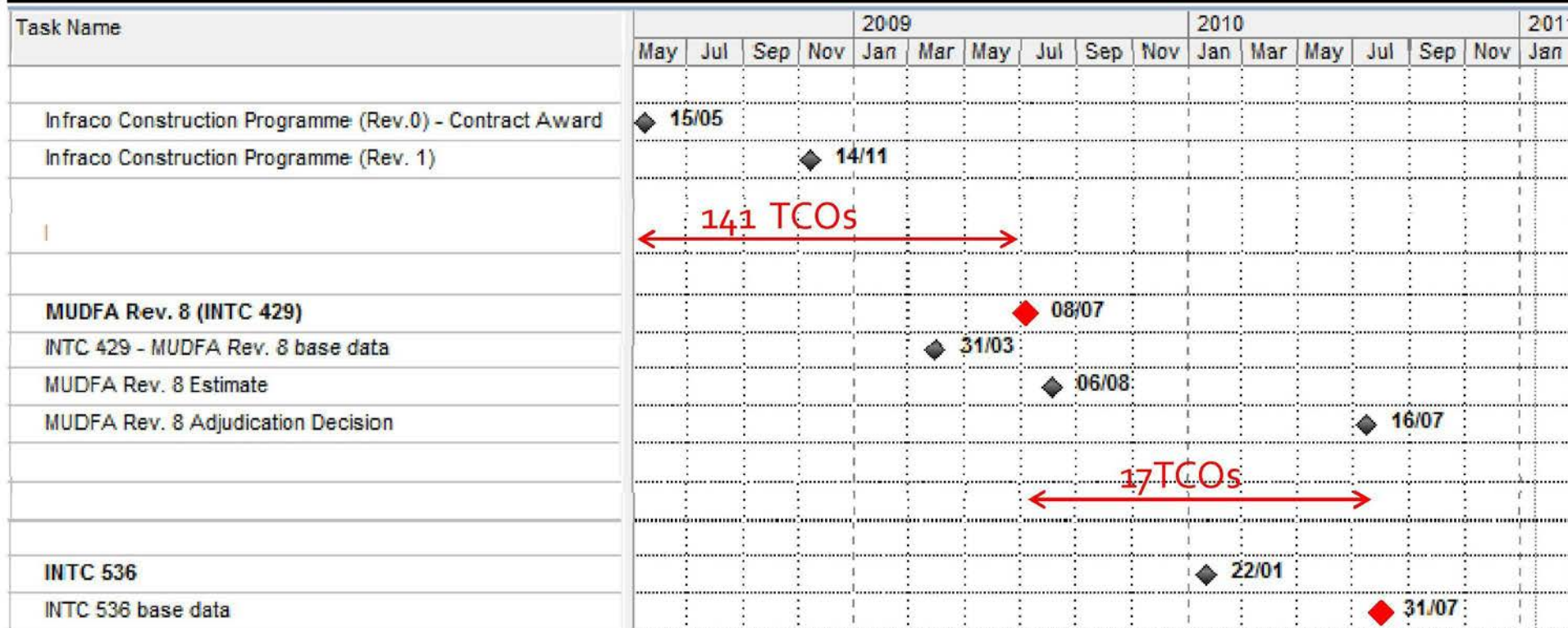
Quote from INTC 536 Estimate - "As this INTC takes account of the information available to Infraco as at 31 July 2010, it supersedes INTC's 14, 15, 16, 18, 70, 131, 241, 358, 524, 556, 557, 564, 570, 571 which addressed the information known as earlier dates."

Timing and scope of INTC 536

Task Name	2009				2010				2011									
	May	Jul	Sep	Nov	Jan	Mar	May	Jul	Sep	Nov	Jan	Mar	May	Jul	Sep	Nov	Jan	
Infraco Construction Programme (Rev.0) - Contract Award	◆ 15/05																	
Infraco Construction Programme (Rev. 1)				◆ 14/11														
INTCs 2 to 428	← XXX other CEs →																	
MUDFA Rev. 8 (INTC 429)								◆ 08/07										
INTC 429 - MUDFA Rev. 8 base data						◆ 31/03												
MUDFA Rev. 8 Estimate								◆ 06/08										
MUDFA Rev. 8 Adjudication Decision																		◆ 16/07
INTCs 430 to 535	← XXX other CEs →																	
INTC 536																		◆ 22/01
INTC 536 base data																		◆ 31/07
INTC 536 Estimate																		◆ 17/09
INTCs 537 to 800+	← over XXX more CEs →																	

XX
 CCCCCCCCCCCCCCCCCCCCCC

Timing of other TCOs relative to INTC 536

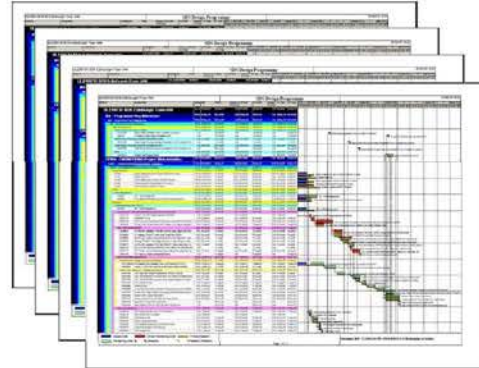


This chart identifies the number of **tie** Change Orders that have been issued during the periods associated with INTC 429 and INTC 536 Estimates. Only TCO No. 1 has been incorporated into the programme used in the Estimates produced for INTC 429 and INTC 536.

The Programme (as defined by Schedule Part 15)



Infraco Construction Programme



SDS Design Delivery Programme



On Street Construction Methodology



Programming Assumptions (12 May 2008)

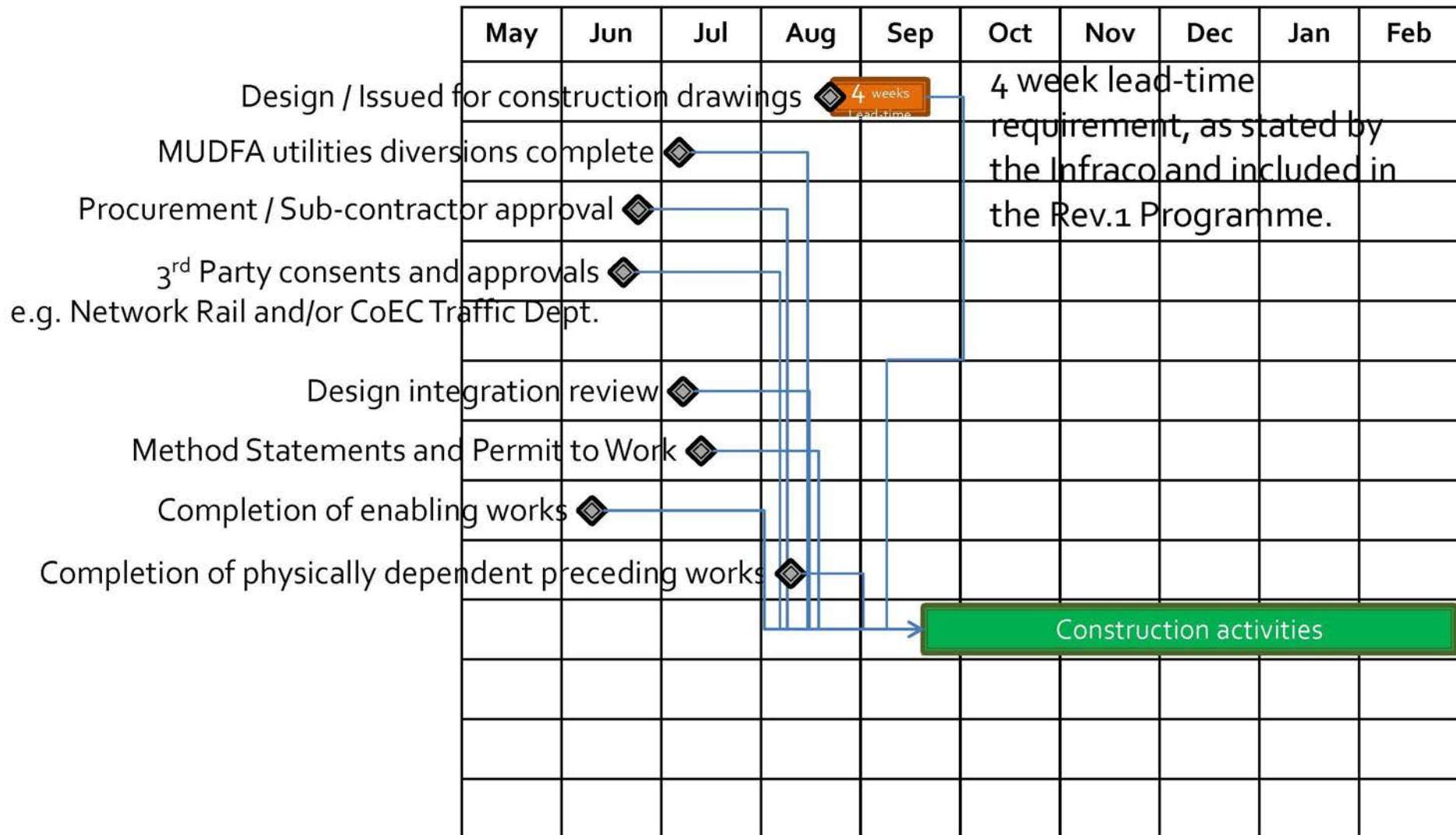
Plus:-

SDS Consents Programme derived from SDS Design Delivery Programme

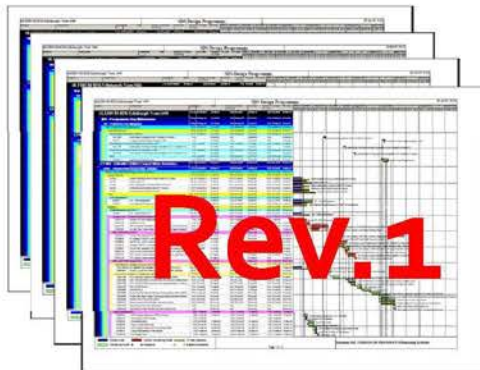
and

Relaxations to CoCP constraints as annotated and agreed with tie

Pre-requisites to start of a set of construction activities

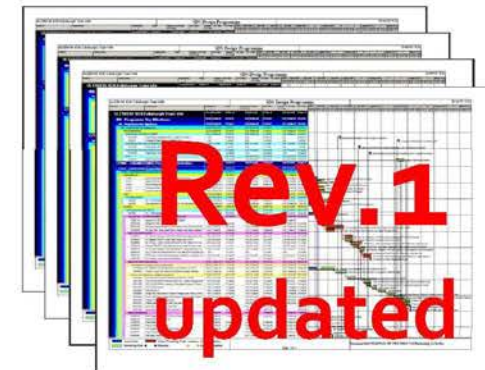


What is the "Programme" against which to assess the impact of a tie Change?



Current version of Infracore construction Programme produced and agreed as part of **tie** Change Order No.1, (i.e. to reflect the V31 SDS design delivery programme)

or



Infracore construction programme (Version current at 31 July 2010)



SDS design delivery programme (Version current at 31 July 2010)

Updated Programme elements not in alignment and not taken into account in the INTC 536 Estimate

Extract from SDS design delivery programme – July 2010 (“Ver. 60”)

Modification to S21B Murrayfield Stadium Retaining Wall		107	10-May-10 A	11-Oct-10
VO87430	Detailed Design & Check (started at risk)	48	10-May-10 A	30-Jul-10
VO87450	Issue Detailed Design & Check Certificates to CEC & Network Rail	0		30-Jul-10
VO87460	CEC & Network Rail Approval Period	38	30-Jul-10	27-Sep-10
VO88050	IDC	9	30-Jul-10	13-Aug-10
VO88060	Incorporate IDC Comments	9	13-Aug-10	27-Aug-10
VO87470	Receive CEC Approval for Detailed Design	0		27-Sep-10
VO87480	Incorporate CEC Comments & Prepare IFC Drawings	9	27-Sep-10	11-Oct-10
VO87530	Receive Network Rail Technical Approval for Form B	0		27-Sep-10
VO87490	Issue Construction Drawings - Murrayfield Stadium RW	0		11-Oct-10

Extract from updated Infraco construction programme – July 2010 (updated “Rev.1”)

Murrayfield Retaining Walls (S21B)		10-Nov-08 A	26-Apr-11
110	Site Clearance	10-Nov-08 A	05-Oct-10
10760	Murrayfield Stadium Accomodation Works	12-Apr-10 A	01-Oct-10
10700	Issue Construction Drawings		27-Aug-10*
197	Demolition	24-Sep-10	18-Apr-11
378	Foundations	08-Oct-10	29-Oct-10
388	Reinforced Earth Wall	22-Oct-10	21-Mar-11
400	Coping	21-Mar-11	12-Apr-11
410	Handrail	12-Apr-11	26-Apr-11

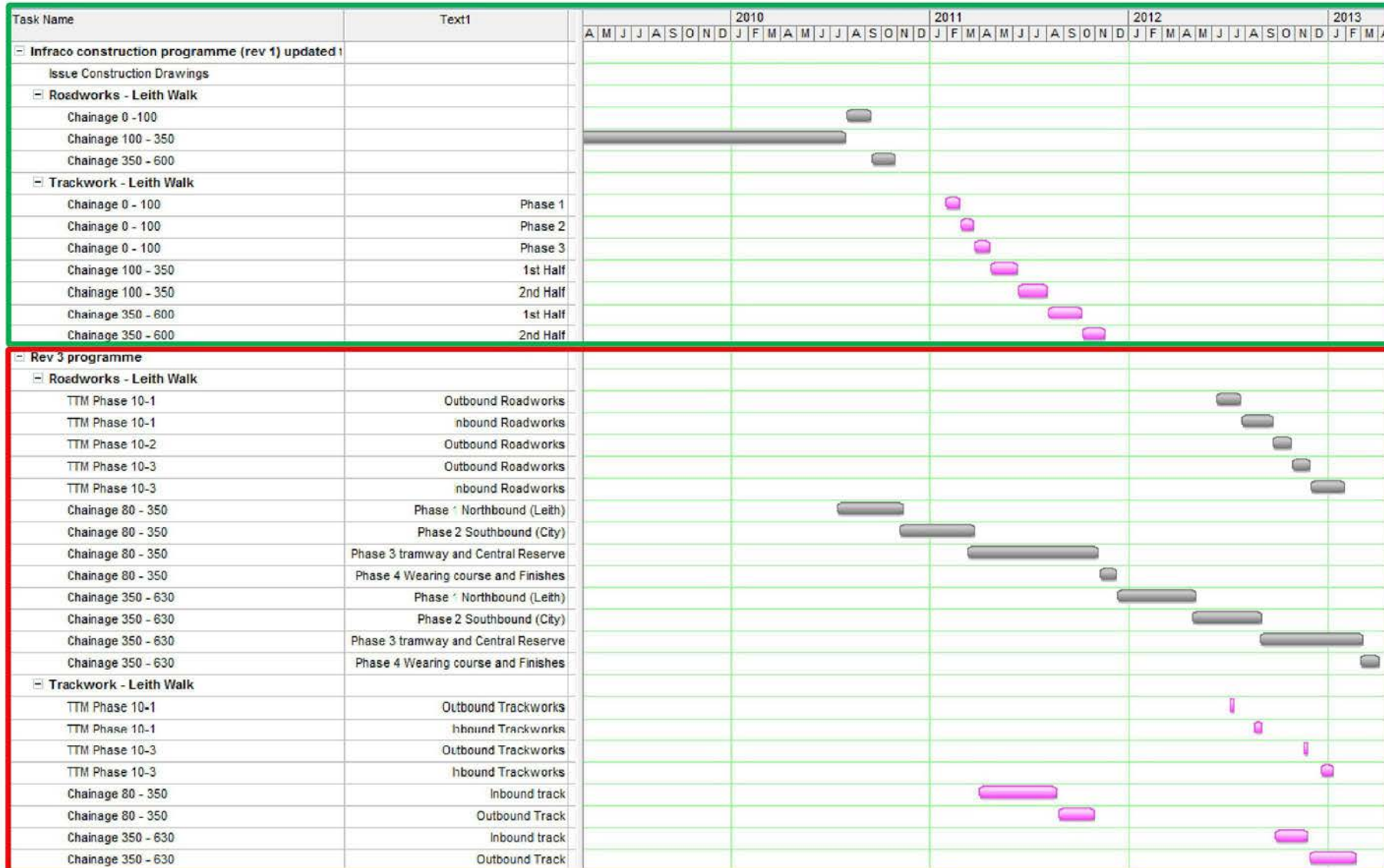
Updated SDS design delivery programme not in alignment with the updated Infraco construction programme

Extract from Infraco INTC 536 delay analysis programme – base date 31 July 2010
 (N.B. Milestone for “Issue Construction Drawings” has been removed from the INTC 536 delay analysis programme)

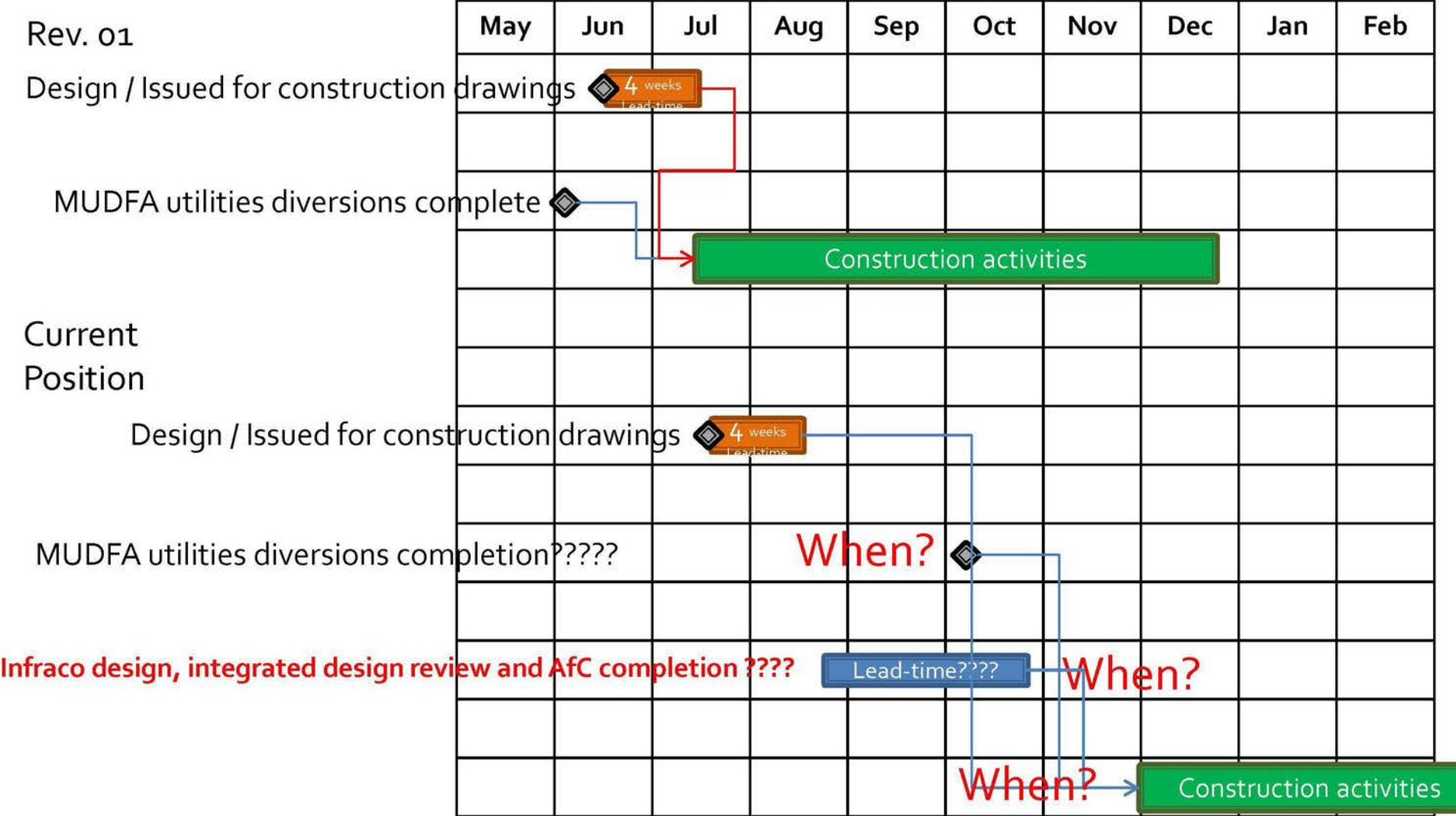
Murrayfield Retaining Walls (S21B)		172	02-Jun-08	07-Apr-09
5A-11-S21	Murrayfield Stadium Accomodation Works	60	02-Jun-08*	25-Aug-08
5A-11-S21	Site Clearance	20	26-Aug-08*	22-Sep-08
5A-11-S21	Demolition	10	09-Sep-08	22-Sep-08
5A-11-S21	Foundations	15	23-Sep-08	13-Oct-08
5A-11-S21	Reinforced Earth Wall	95	07-Oct-08	03-Mar-09
5A-11-S21	Coping	15	04-Mar-09	24-Mar-09
5A-11-S21	Handrail	10	25-Mar-09	07-Apr-09

INTC 536 delay analysis programme shows this structure complete over 2 years earlier than the updated Infraco construction programme.

Programme not updated for changes to the Infraco's proposed order and manner for delivering the Infraco Works – (example shown is part of Section 1B)



What is the dominant cause of delay?

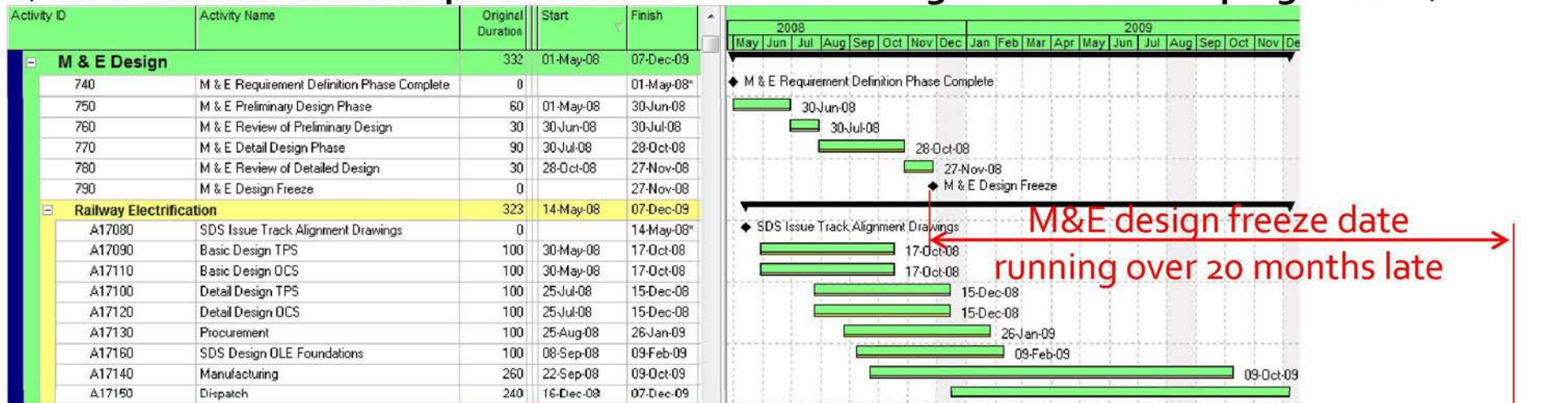


Criticality of MUDFA Works?

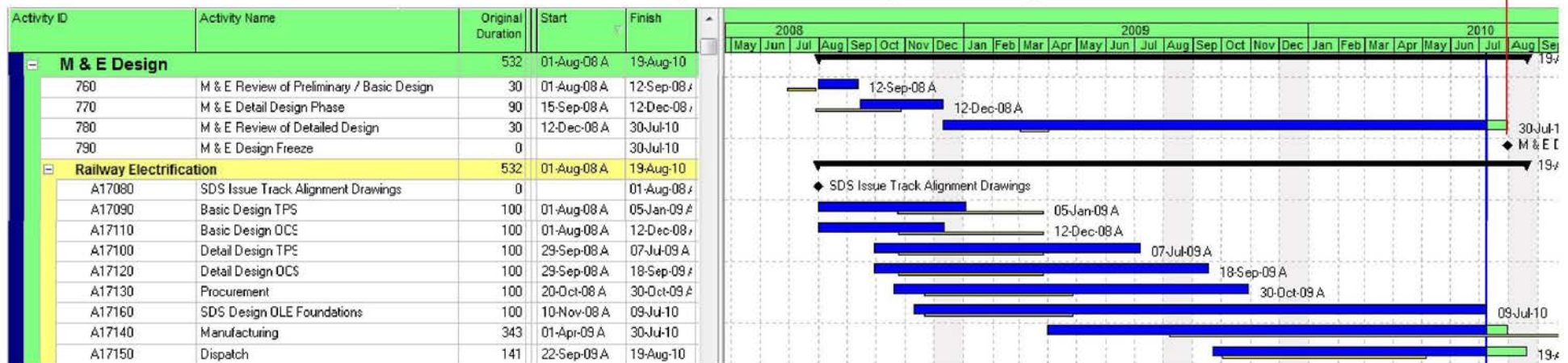
- Cause of EoT from Rev. 0 to Rev. 1 was design delay, therefore design must be driving the critical path. MUDFA Works appear to be off the planned critical path.
- The actual critical path appears to be driven by *inter alia* design delivery and design change. Whether they have been completed, MUDFA Works appear to be off the actual critical path. Where they are yet to be completed it is, as yet, unclear if they will prove to be critical. Current indications are that they will not.

Delays to the M&E Design

Extract from Infraco INTC 536 delay analysis programme – base date 31 July 2010
 (this is the same as the equivalent extract from the original "Revision 1" programme.)

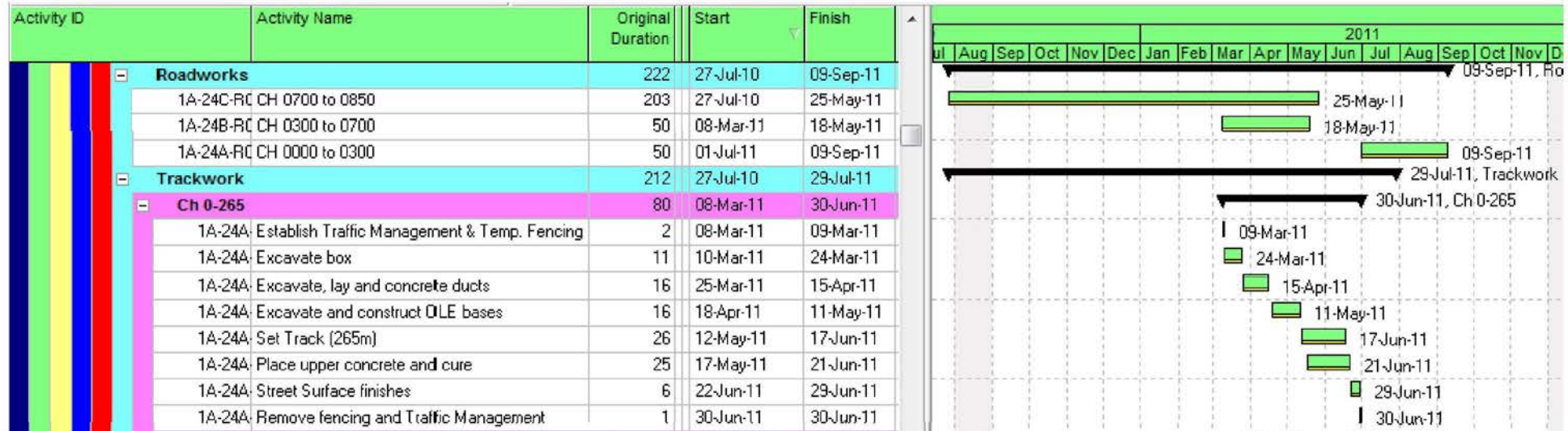


Extract from the Infraco construction programme – July 2010 (updated "Rev.1")



Use of construction programme Activity Descriptions to define DWAs and dictate sequencing

Extract from Infracore INTC 536 delay analysis programme – base date 31 July 2010



Chainage 0 to 230 unaffected by utilities