FORTH ESTUARY TRANSPORT AUTHORITY
CAPITAL PLAN - SPENDING REVIEW

Comments on Projects with Forecast Spend 2011-2015

Capital Schemes	Centre	Comments
Vehicle Replacement	95089	Rolling programme of vehicle replacement. £100k spend in 2011/12 is to allow for replacement of tower wagon and breakdown recovery vehicle.
External Repairs to Buildings	TBA	Works programmed for 2013/14 deferred until 2015/16
Upgrade CCTV & intruder alarms	95092	N/A
Landscape Works	TBA	Works required to trim trees in area around Administration Offices at South Queensferry to maintain views of existing Bridges and FRC.
Refurb Canteen	TBA	N/A
Parking Areas Landscaping & reconstruction	95084	Payment in 2011/12 is release of retention for works completed in 2010/11. Committed.
Toll Eq Rep/Plaz Impr/Adm Bld Extension	95096-7	N/A
Replace FRB VMS System	95095	N/A
Resurface Main Span South	TBA	Resurfacing of southbound carriageway on main span programmed for 2012/3. If surfacing on main span deck panels is not acting compositely with waterproofing membrane and deck plate then there is a risk of the deck plates becoming overstressed.
Resurface Main/Side Spans North	95072	N/A
Resurface Viaducts and North Approaches	95099	Works programmed for 2013/14 deferred until 2015/16. Viaducts were last resurfaced in 2000 and have no waterproofing membrane. Surfacing has shown increasing signs of distress in recent months with patching and localised repairs to deck required.
Resurface Plaza & Service Road	TBA	N/A
Viaduct Gantries Contract	TBA	N/A
Viaduct Outrigger Beams	95081	Works programmed for 2013/14 deferred until 2015/16.
Viaducts Painting Access	TBA	Expediture required to provide full containment system to allow painting of the viaduct box girders, Works will involve the installation of permanent anchors in the underside of the viaduct to allow a hanging scffold to be installed to undertake the work.
Viaducts S3 platform and access	95073	
Tower Painting/Dropped Objects Canopy	95080	The Dropped Object Canopy, which is a temporary structure, requires to be dismantled and removed from the Bridge once the North Main Tower painting programme has been completed.
Main Cable Acoustic Monitoring	95093	Expenditure in 2011/12 is for installation of permanent cabling system as a present system opeates on a temporary cable network. Additional costs required to modify system to increase number of sensors which will improve reliability and accuracy of the system. The existing system was one of the first installed on a suspension bridge and these systems have developed since installation.
Main Cable Dehumidification	95120	Costs identified are for ongoing maintenance which was included in the installation contract.Committed.
Main Expansion Joint Replacement	95104	Payment in 2011/12 is release of retention for works completed in 2010/11. Committed.
Viaduct Bearing Replacement	95101	Committed project currently in progress.
Truss End Linkages	95106	An assessment of the connections between the main towers and the suspended structure has identified that several key elements in these connections have overstress indices greater than 1.0.
Tower Wind Barriers/Impact Strengthening	95109	
Suspended Span Painting	95083	Project deferred.
Suspended Span Gantry Refurbishment	95112	
Suspended Span Truss Strengthening (Capital element)	TBA	
South Anchorage build ext & storage area	95118	The existing storage shed located within the south anchorage compound will be demolished as part of the anchorage investigation project. The south anchorage compound area will also be unuseable during the anchorage investigation works as this area will be required for the works. These facilities will require to be reinstated on completion of the anchorage investigation project.
Aircraft Warning Lights	95128	N/A. Project completed.
Main Towers Cathodic Protection (Piers)	95124	Expenditure is required to repair the existing cathodic protection to the main tower pier defences which is not operating correctly.
Replace weigh in motion system	95129	N/A. Project completed.
Comp House Improvements	TBA	Project deferred. The existing airp compressors which feed the Bridge ring main are aproximately 30 years old and wil require to be replaced.
Improvements to Deck Half Joints	95130	There is a long term problem with the half joints between the deck panels on the suspended structure. This is due to the original design of these joints which are not accessible for maintenance. As a result the joints have become worn and adjacent deck panels are now misaligned. This affects ride quality requires a large input from the Maintenace Department to reduce the effect on the structure. Two prototype designs have been developed and it is intended to install thee on the Bridge to assess there suitablility as a long term replacement for the existing joints.
High Mast Light Replacement	95131	The existing lighting system on the plaza area at the south end of the Bridge dates from the mid1970's and consists of a mixture of high mast lighting supplemented by lower level lighting around the periphery of the area. The high masts are of particular concern have exceeded their design life and there are concerns about the structural integrity of the masts. The lighting heads on the masts are maintained by lowere the head via a hoist system built into the mast. Due to the deign of the masts we are unable to meet our statutory obligations regarding the inspection of the hoist systems. A feasibility study report has been prepared which recommends the replacement of the exsting system with lower level ligthing columns which will be easier to maintain, more envronmentally friendly, will be cheaper to operate and less visually intrusive.
Cable Band Bolt Replacement	95132	During the main cable dehumidification project a number of nuts on the cable band bolt assemblies were found to be cracked. As access was available as part of the dehumidificastion project, the damaged nuts were replaced at that time. However, further investigations have identified further nuts ahcih are cracked and which will require replacement. These are highly stressed elements which are integral to the integrity iof the structure. As the special cradles used during main cable dehumidification project are no longer on the Bridge, a special access system require to be developed.
North Approach Rock Cut Stabilisation	TBA	The condition of the rock faces in the cutting on the north approach to the Bridge are a cause for concern. A geotechnical report has advised that works to stabilise the rack faces shoul be undetaken. Part of the rock cut area will be required by Transport Scotland as part of the FRC project but FETA will remain responsible for approximately 50% of the existing length of the cutting.
M9 Spur extension / A8000 upgrade	95091	Committed expenditure. Residual costs from M9 Spur project associated with compensation claims, etc.
Administration Block Upgrade	95077	
Suspended Spans Underdeck Access Improvements	TBA	Project deferred.Future project, the extent of which will be determined by the outcome of the Suspended Spans Underdeck Access Study detailed below.

Revenue Schemes	Centre	
Main Cable Investigation	95094	
Parapet Investigation	95122	As a result of the full scale testing of the existing parapets on suspended spans and the viaducts it has been determined that these parapets meet current standards and do not require full scale replacement.
Bridge Specific Assessment Live Load	95113	
Suspended Span Truss Strengthening (Revenue element)	95105	
Contingencies / Minor Works	95098	
Anchorage Investigation	95114	This work is essential to ascertain the structural integrity of the main cable anchorages. The anchorages on the Forth Road Bridge of a unique design and there is no other way of check the condition of the anchorages.
Main Cable Replacement/Augmentation Study	95121	
Suspended Spans Underdeck Access Study	95133	The walkway and staging board system on the suspended structure is approaching 30 years of age and a feassibility study report has been commissioned to ascertain the condition of the existing system and advise on future refurbishment/replacement options. The staging boards, which are removable, have a finite life span and there are also inherent material issues with these elements of the system.