

NH Priority		Capital Budget	\$ 1,191,000
Advisory Group Rank		Budget Detail	Level 3 (+20/-10)
		Project Score	70

## Executive Summary

Project Name:	GRB LAB Chemistry Analyzer N0007429 N0007432, N0030782 Replacement		
Project Category:	Equipment	Equipment Description:	Chemistry Analyzer N0007429 N0007432, N0030782
Project Type:	Replacement	Service Network:	Laboratory Services
Facility/Site:	GR Baker Memorial Hospital		
Department Name:	Laboratory	Lab Department:	Chemistry
Contact Person:	Patti Lalande 250 985 5683		
Sponsor(s):	Lisette Vienneau, Penny Anguish		
Initial Creation Date:	27-Jan-21	Version:	1.0 DPT for Amortization: 5631.71.4109000

## Project Analysis

Capital Cost	\$ 1,191,000
Annual Operating Budget Increase(Decrease)	\$ 2,473
Risk Score (risk of not doing project)	Low
Mandated by Ministry of Health	No

## Sign offs

Title	Name	Initial Sign-Off Date	Final Sign-Off Date
Sponsor	Penny Anguish		4-Mar-22
HSA	Daryl Petsul	2-Dec-21	2-Dec-21
Director, Biomed	Scott Nelson		24-Jan-22
ITS Director	Jesse Priseman		6-Jan-22
Capital Planning	Rebecca Gustafson		3-Nov-21
Facilities Maintenance	John Barrett	12-Apr-21	8-Nov-21
Director, Lab & Medical Imaging	Lisette Vienneau	22-Apr-21	21-Oct-21
Business Analyst	Kara Simons		8-Feb-22

## Project Description

### 1. Needs Identification

Provincial replacement of Chemistry analyzers. E411 purchased in 2012 and Integra sn purchased in 2011 and both are end of life. Recommended replacement dates are 2020/2021

### 2. Relevant Background and Current Situation

Currently Integra 400 tests most chemistry analytes such as Electrolytes, glucose, liver enzymes and more. The e411 tests for Ferritin, TSH for thyroid function, BHCG for ectopics, Troponin and BNP which are important for heart monitoring. These 2 analyzers do almost all of the tests in the Chemistry department. They are both at the end of life and without them tests will need to be sent to UHNBC which would increase TAT and decrease patient service. The NHA is moving toward a Provincial contract with Siemens and have listed recommended replacements. The recommendation is to purchase CH930 and IM1300 with a sample handler prime and decapper. It is also recommended to purchase a second CH930 for back up. The sample handler and decapper would allow the two analyzers to be hooked together as a unit. They will decrease specimen handling by staff, decrease workload and improve workflow and TAT. The decapper will reduce repetitive hand motions and increase employee safety.

### 3. List reasonable alternatives/options for the project

Maintaining status quo but as analyzers reach their end of life they become more unreliable creating more troubleshooting, service visits and downtimes. This creates increase workload, delays in results and increase costs.

### 4. Recommended solution

Replace Integra 400 and e411 with CH930, IM1300 and sample handler prime and decapper. Purchase a second back up CH930 and handler prime the following year. If budget allows purchase both but stagger install dates. Purchase a new larger distilled water system and humidification system to support environmental requirements.

### 5. Equipment Purchases (if applicable):

If replacement, enter the tag number(s) of the old equipment: N0007429, N0007432, N0030782

Fiscal year: 20XX/XX 20XX/XX 20XX/XX

Equipment Utilization (last 3 years):

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Projected Utilization (next year):

## Project Description

Will the equipment have an impact on operations (negative or positive)? If yes, provide a description below.

The equipment will have a positive impact on operations. Reduced troubleshooting, service visits and down times. The Sample handler Prime will help reduce workload and sample handling. Samples collected from patients will be reduce as 1 sample can move through each analyzer by the sample handler. The sample handler also reconizes urgent samples and can prioritize testing therefore TAT will be decreased. The Integra 400 has had it hard drive fail and replaced and recent service calls due to workstation age. The e411 has also experience increased service calls.

### 6. Project Scope

Atellica CH930 analyzer will replace the Integra 400 and the Atellica IM1300 will replace the e411. The Atellica Sample Handler Prime will accept samples and move them through both analyzers. A second back up Atellica CH930 and Atellica Sample handler will need to be purchased in near future to replace back up Integra 400. These analyzers are free standing. A back up instrument is important to decrease down times of critical samples and can increase the testing capacity. Counters in Chemistry will need to be removed to make space but will improve the flow of the department. Counter tops are in need of replacing as they are chipping and require constant maintenance. Previous CPAF put in for all counter replacements will be modified to include changes.

### 7. Innovation: Is this project innovative? Significantly If yes, describe how:

The Sample handler will reduce workload, decrease sample handling and the amount of samples required and will reduce TAT. The Provincial contract standardizes NHA with the Province. It also standardizes the NHA which would reduce the price of reagent, allow for borrowing of reagents and increase comparability.

### 8. Desired Outcomes:

Decrease work load, improve the flow of the department which will make the Chemistry department more efficient. It will decrease TAT which improves service delivery and reduce patient stays. The decapper will improve employee safety and reduce repetitive motion injuries.

### 9. Strategic Alignment:

[2016-2021 Strategic Plan](#)

Enabling Priority 1 - Supports the recruitment and retention of staff and physicians to meet the current and emerging workforce needs in Northern and rural communities.	Chemistry is the busiest department and the sample handler will reduce workload
Enabling Priority 2 - Uses technology to reduce the impacts of distance and time in bringing health services to people and their families.	Results from other labs will be same technology and comparable
Enabling Priority 2 - Build, maintain and manage facilities and infrastructure in support of service delivery.	Improve workflow and remove some of the counters that are in need of repair
Enabling Priority 2 - Using technology to deliver a range of clinical and diagnostic services to support primary care, community services and	and NHA. Sample handler will reduce TAT of urgent samples



Capital/Operating Project Approval Form (CPAF)

GRB LAB Chemistry Analyzer N0007429 N0007432, N0030782 Replacement

Project Description

Enabling Priority 1 - Supports the recruitment and retention of staff and physicians to meet the current and emerging workforce needs in Northern and	Improve safety and reduce repetitive motion injuries. Improve workflow
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Project Risk and Scoring Criteria		70	
Category	Score	Select Applicable Description	Comments/Justification
<b>Safety/Risk Management (weight = 33)</b>	<b>41</b>		
<b>Risk Rating</b>	<b>Low</b>	0 Impact - Insignificant (Minor problem easily handled by normal day-to-day process) Likelihood - Rare (<3% chance)	
<b>Safety</b>	<b>18</b>		
Safety - Patients		Documentation of potential for incidents to occur.	Increased down time and increase TAT and delay in results
Safety - Staff		Documentation of potential for incidents to occur.	decreased workload, increase safety
<b>External mandate</b>	<b>23</b>		
Accreditation		Required to meet Accreditation Standards.	Using equipment past end of life
Legislation		We are in adherence to current code/legislation.	Province is moving towards Siemens
Worksafe BC		Not applicable.	
<b>Asset Life Cycle (weight = 17)</b>	<b>69</b>		
<b>Urgency</b>	<b>31</b>		
End of Life		Physical life of asset exceeds life span.	
Supportability		Asset is supported by vendor.	
Capacity	<b>25</b>	Current demand exceeds capacity.	
Technology	<b>13</b>	Asset no longer meets program requirements or standards.	
Facility Condition Index (for renovations only)	<b>0</b>	Not applicable.	
<b>Impact if not approved (weight = 25)</b>	<b>80</b>		
Impact	<b>52</b>	Impact on a whole facility	
Redundancy	<b>28</b>	No redundancy, but alternative solution is available	
<b>Project Benefits (weight = 25)</b>	<b>88</b>		
<b>Efficiencies</b>	<b>25</b>		
Staff Efficiencies		Enables staff to be moderately more efficient daily activities.	
Physician Efficiencies		Will create minimal efficiencies for physicians.	Reduced TAT, decreased stays and reduce sample collection size
Standardization		Will increase standardization across Northern Health	Province is moving towards Siemens
<b>Patient Impact</b>	<b>18</b>		
Patient Outcomes		This will minimally improve population health, patient outcomes or quality of life, or patient satisfaction.	Reduced TAT, decreased stays and reduce sample collection size
Decreased Patient Stays		Decrease in admissions or length of stay of less than 5%.	
<b>Operations</b>	<b>45</b>		
Ongoing Operations		Project is needed to ensure continued service delivery.	If old equipment fails then testing not done on site.
Increased Access to Services		Will minimally increase access to services.	Possibility of adding new tests on site
<b>Financial Benefits (bonus = 20)</b>	<b>3</b>		
Operating Impact	<b>3</b>	Operational savings (no budget transfer).	
Funding	<b>0</b>	To be funded by standard capital funding.	



## Capital/Operating Project Approval Form (CPAF)

3 Chemistry Analyzer N0007429 N0007432, N0030782 Replacement

### Project Financials

#### Capital Budget Required:

	Year 1	Year 2	Year 3	Total
Total Capital Budget	\$ 1,191,149			\$ 1,191,149

#### Operational Budget Required:

Expenditure Type	Year 2 Change	Year 3 Change	Total Budget Adjustment
<b>Total Revenue (Increase)Decrease:</b>	\$ -	\$ -	\$ -
Expense Increase(Savings):			
Salaries/Wages (including benefits)	\$ -	\$ -	\$ -
Service Contract	\$ -	\$ -	\$ -
Supplies	\$ -	\$ -	\$ -
Utilities	\$ -	\$ -	\$ -
Training	\$ -	\$ -	\$ -
Maintenance	\$ -	\$ -	\$ -
Information Technology	\$ 2,473	\$ -	\$ 2,473
Other (see Operating Impacts tab for detail)	\$ -	\$ -	\$ -
<b>Total Expense Increase(Decrease):</b>	\$ 2,473	\$ -	\$ 2,473
<b>Total Operating Cost(Savings)</b>	\$ 2,473	\$ -	\$ 2,473

**CAPITAL PROJECT BUDGET WORKSHEET**
**GRB LAB Chemistry Analyzer N0007429 N0007432, N0030782 Replacement**

Budget Creation Date:	12-Feb-21	Budget Revision Date:	02-Nov-21	Budget Version #:	1.0
Budget Level	Level 3 (+20/-10)	Budget Comments: Siemens will visit site on Nov. 18. More details will be available then on layout and scope of renovation.			

Fill out the blue-highlighted cells

Expenditure Description		Cost	Disbursements	Tax	Federal Tax	Federal Tax Rebate	Provincial Tax	Total
<b>Construction Costs</b>								
Construction (Including Site Prep)		160,000		GST	8,000	(6,640)	-	161,360
Construction Contingency	10.0%	16,000		NONE	-	-	-	16,000
Course of Construction Insurance	0.0%	-		NONE	-	-	-	-
Remediation				GST	-	-	-	-
Building Permit				NONE	-	-	-	-
Architect Fees		20,000	5,000	GST	1,250	(1,038)	-	25,213
Structural Engineer		5,000	2,500	GST	375	(311)	-	7,564
Mechanical Engineer		10,000	2,500	GST	625	(519)	-	12,606
Electrical Engineer		10,000	2,500	GST	625	(519)	-	12,606
Civil Engineer				GST	-	-	-	-
Quantity Surveyor				GST	-	-	-	-
Hazardous Materials		10,000		GST	500	(415)	-	10,085
Infection Control				GST	-	-	-	-
Interior Designer				GST	-	-	-	-
Dietary Consultant				GST	-	-	-	-
Other Consultants				GST	-	-	-	-
Testing				GST	-	-	-	-
Land/Site Costs				GST	-	-	-	-
Landscaping/Site Improvements				GST	-	-	-	-
Local Government/Utilities/Etc.				GST	-	-	-	-
<b>Equipment and Other Costs</b>								
Equipment/Furnishings/Hardware		530,000		BOTH	26,500	(21,995)	37,100	571,605
Freight/Shipping				BOTH	-	-	-	-
Foreign Exchange				NONE	-	-	-	-
Installation Costs				GST	-	-	-	-
Software				BOTH	-	-	-	-
Internal Staff		40,000		NONE	-	-	-	40,000
Travel				BOTH	-	-	-	-
Other Costs				BOTH	-	-	-	-
a) New water system		75,000		BOTH	3,750	(3,113)	5,250	80,888
b) Reagents for validation		5,000		BOTH	250	(208)	350	5,393
c) Compressed air system		15,000		BOTH	750	(623)	1,050	16,178
Information Technology		25,000		BOTH	1,250	(1,038)	1,750	26,963
Biomedical Engineering				NONE	-	-	-	-
Administration/Project Management	5.0%	49,323		NONE	-	-	-	49,323
Project Contingency	15.0%	155,367		NONE	-	-	-	155,367
<b>Total Project Budget</b>								<b>\$ 1,191,149</b>

Notes:

Please indicate the operational impacts on clinical and support departments if this project is approved.

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## Budget Checklist for Reviewing Departments

Budget Considerations	Classification	Included?
<b>Requesting Department</b>		
Equipment requirements	<a href="#">Capital</a>	Yes
Accessories	<a href="#">Capital</a>	Yes
Shipping	<a href="#">Capital</a>	Unknown at this Time
Installation	<a href="#">Capital</a>	Unknown at this Time
Assembly	<a href="#">Capital</a>	
Supplies - validation/verification	<a href="#">Capital</a>	Unknown at this Time
Supplies - ongoing	<a href="#">Operating</a>	Yes
Supplies - storage	<a href="#">Operating</a>	
Staffing - technologist, reception	<a href="#">Operating</a>	Yes
Staffing furniture	<a href="#">Capital</a>	
Training Costs	<a href="#">Operating</a>	Unknown at this Time
Impact on other departments (Support Services, Staffing, IT, Facilities Maintenance, Health Records, Billing, etc)	<a href="#">Operating</a>	Yes
<b>Biomed</b>		
Training	<a href="#">Operating</a>	Not Required
Service Contracts	<a href="#">Operating</a>	Yes
Equipment Lifecycle Management	<a href="#">Operating</a>	Yes
Tools/Equipment to support new equipment	<a href="#">Capital</a>	
Water Supply System	<a href="#">Capital</a>	Yes
Physics shielding assessments	<a href="#">Capital</a>	
Physics acceptance testing	<a href="#">Capital</a>	
RFP Costs	<a href="#">Capital</a>	
Freight/Shipping	<a href="#">Capital</a>	Unknown at this Time
<b>ITS</b>		
Interfaces	<a href="#">Capital</a>	Yes
Storage (PACS, etc)	<a href="#">Capital</a>	Not Required
Hardware infrastructure	<a href="#">Capital</a>	Unknown at this Time
Software modules	<a href="#">Capital</a>	
Maintenance (software, hardware, etc)	<a href="#">Operating</a>	Yes
Refresh costs (vocera badges, etc)	<a href="#">Operating</a>	
New Provincial Standards Required?	<a href="#">Capital</a>	
Privacy Impact Assessment	<a href="#">Capital</a>	Not Required
Project labour	<a href="#">Capital</a>	Yes
Consultant Costs	<a href="#">Capital</a>	Unknown at this Time
<b>Facilities Maintenance</b>		
Remediation	<a href="#">Capital</a>	Yes
Hazardous Mat Testing/Abatement	<a href="#">Capital</a>	

Site Prep	<a href="#">Capital</a>	Yes
Infection Control Costs	<a href="#">Capital</a>	Yes
General Contractor	<a href="#">Capital</a>	Yes
Trades-Carpentry	<a href="#">Capital</a>	Yes
Trades-Electrical	<a href="#">Capital</a>	Yes
Trades-Mechanical/Plumbing	<a href="#">Capital</a>	Yes
Material Handling/Waste	<a href="#">Capital</a>	Yes
Utility Tie In - Waste Water	<a href="#">Capital</a>	Yes
Utility Tie In - Electrical	<a href="#">Capital</a>	Yes
Utility Tie In - Domestic Water Cold	<a href="#">Capital</a>	Yes
Utility Tie In - Domestic Hot	<a href="#">Capital</a>	
Utility Tie In - Nat Gas / Propane	<a href="#">Capital</a>	
HVAC Supply - Spatial Heat	<a href="#">Capital</a>	
HVAC Supply - Air Conditioning	<a href="#">Capital</a>	
HVAC Supply - Fresh Air	<a href="#">Capital</a>	
HVAC Supply - Humidity Control	<a href="#">Capital</a>	Yes
Specialty Systems-Fire Safety	<a href="#">Capital</a>	
Specialty Systems-Medical Gas	<a href="#">Capital</a>	
Specialty Systems-Emergency Power	<a href="#">Capital</a>	
Specialty Systems-Alarm/Security	<a href="#">Capital</a>	
Specialty Systems-Nurse Call/Vocera	<a href="#">Capital</a>	
Specialty Systems-Other (see notes)	<a href="#">Capital</a>	Unknown at this Time
Energy Cost Savings or Increases	<a href="#">Operating</a>	
Annual Maintenance Costs	<a href="#">Operating</a>	
<b>Capital Planning</b>		
Renovations	<a href="#">Capital</a>	Yes
Insurance-Course of Construction	<a href="#">Capital</a>	
Performance Bond	<a href="#">Capital</a>	
Permits-Tech Safety BC	<a href="#">Capital</a>	Unknown at this Time
Permits-Building	<a href="#">Capital</a>	Unknown at this Time
Engineering	<a href="#">Capital</a>	Unknown at this Time
Testing	<a href="#">Capital</a>	
Infection Control	<a href="#">Capital</a>	Yes
Hazardous Materials Abatement	<a href="#">Capital</a>	

- Instructions:
1. Scroll down to find the checklist for your department
  2. For each item, mark that it has either been included in the budget or it is not required
  3. The link beside each item brings you to the appropriate budget tab to add the item