

Bell, Mark J HLTH:EX

From: Palmer, Joel HLTH:EX
Sent: Wednesday, March 16, 2016 10:58 AM
To: Wolsey, Ashfey HLTH:EX
Cc: Bell, Mark J HLTH:EX
Subject: RE: Dawson Creek

Yes. See a few suggested changes in the messaging.

NHA has told us at a staff level that Mills is their top priority and Dawson Creek second, but it's up to NHA to say publicly or to document what their capital priorities are, and why, not the province.

From: Wolsey, Ashley HLTH:EX
Sent: Wednesday, March 16, 2016 10:42 AM
To: Palmer, Joel HLTH:EX
Subject: FW: Dawson Creek

Hey... any concerns?

From: Plank, Sarah GCPE:EX
Sent: Wednesday, March 16, 2016 10:31 AM
To: Sidhu, Manjit HLTH:EX
Cc: Wolsey, Ashley HLTH:EX; Heinze, Laura R GCPE:EX; Thistle-Walker, Carlene GCPE:EX
Subject: Dawson Creek

Hi Manjit – Minister Bernier is doing a media interview this afternoon, and they've asked him as one of the topics to comment on the status of upgrading Dawson Creek hospital. Any concerns with the following, which was provided by NH?

- Northern Health is currently in the ~~concept~~ planning stage for the Dawson Creek and District Hospital, which is the top capital priority in the Northeast.
 - The master planning process was completed in the Fall of 2014.
 - The concept plan has been forwarded to the Province of B.C. for review, and it has been discussed with the Peace River Regional Hospital District.
 - ~~There is a process that is outlined by the Province of B.C. that capital projects need to undertake.~~
 - The next step for this project would be approval to proceed with a business plan.
- Northern Health continues to work with the Province of BC and the local regional hospital districts on a number of planning processes across the region, and will continue to do so.

Also, I find this sort of an odd request, but apparently he's asking to see documentation around that prioritization... I am not sure about that, and whether he would even be privy to such documentation, but if you had something like a letter from Northern Health or something that gives some indication – perhaps something that came with the concept plan or??

Thanks!
S.

Sarah Plank
Communications Director | Ministry of Health
Government Communications & Public Engagement
Office: 250.952.1889 | Mobile: 250.208.9621 | Email: sarah.plank@gov.bc.ca

INFORMATION BULLETS

CLIFF: 1050365

SUBJECT: Dawson Creek & District Hospital (DCDH) Redevelopment.

ISSUE:

Follow up from March 2, 2016 meeting between Minister Lake and Minister Bernier, MLA for Peace River South, related to hospital and primary care capacity in Dawson Creek.

DISCUSSION:

- The new inpatient addition and renovation at the DCDH was discussed as one of the highest priority projects in Northern Health Authority's (NHA) capital plan. Minister Bernier indicated that NHA has not advised as to DCDH's priority relative to other projects.

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s.13,s.17

FOLLOW UP REQUIRED:

- Financial and Corporate Services Division to advise on the following:
 - the estimated capital cost for the DCDH;
 - the priority of the project; and,
 - the ability to accommodate the project within the ministry's capital plan.

RESPONSE:

- In September 2015, the NHA submitted a draft Concept Plan for the redevelopment of DCDH to the Capital Services Branch of the Ministry of Health (the Ministry).
- The Ministry did not request that NHA develop a Concept Plan and the Ministry has not reviewed the Plan in detail.

s.17

- NHA has indicated that DCDH redevelopment is their second highest priority major capital project after the replacement of Mills Memorial Hospital (MMH) in Terrace.

- Neither of these major capital projects is funded in the Ministry's current capital plan. In order to accommodate these projects, the Ministry would require additional funding and/or existing projects in the plan would have to be cancelled or deferred.

FACT SHEET

Dawson Creek and District Hospital Inpatient Addition and Renovations

ISSUE

Update on new Inpatient Addition and Renovations at Dawson Creek and District Hospital (DCDH).

KEY FACTS

- A new Inpatient Addition and Renovations at DCDH is one of the highest priority projects in the Northern Health Authority's (NHA) capital plan for capital funding consideration.
- Currently, the redevelopment or replacement of Mills Memorial Hospital in Terrace is the highest priority in NHA's capital plan.
- In fall 2015, NHA completed a Concept Plan for the redevelopment of DCDH and submitted it to the Ministry of Health seeking approval and funding to develop a full business plan.

s.13,s.17

- A major capital project for the DCDH is not included in the Ministry's current 10-year capital plan as of January 2016.
- The proposed Inpatient Addition and Renovation project at DCDH is subject to the provincial prioritization process and availability of capital funding.

Background

- DCDH is a full service community hospital that has 32 acute care beds and 15 regional adult psychiatric beds.
- Services include 24/7 emergency, ICU, medical and surgical inpatient care, and day surgery, as well as the specialty services of respiratory therapy, rehab therapy, diabetic education, primary care, general surgery, diagnostics including lab and medical imaging with CT, cancer care, and visiting specialists including urology and dermatology, obstetrics and gynecology, and pediatrics.
- DCDH was constructed in 1960 with an addition in 1995.
- The hospital has a facility condition index (FCI) of 0.50 and was last assessed in 2013. The lower the FCI value, the better condition that a facility is in, and the lesser need for renovations or renewal relative to the facility's value.
- Since 2001, approximately \$10 million has been invested in various upgrades at DCDH including: a new CT scanner, renovations to food/laundry services and the loading dock and an expansion and relocation of the pharmacy.
- The concept planning stage follows Master Planning completed in 2013 and updated in 2014.
- Master planning is a process wherein stakeholders are engaged to work towards the development of a master plan for health services for the community for the future.

FACT SHEET

- The process examined how health services could be aligned to address growth in the community, projected shifts in demographics, and anticipated changes in health care delivery through to 2036.

FINANCIAL IMPLICATIONS

s.17

Approved by:

Joel Palmer, Capital Services Branch; January 28, 2016

Manjit Sidhu, Finance and Corporate Services Division; February 2, 2016

Bell, Mark J HLTH:EX

From: Palmer, Joel HLTH:EX
Sent: Thursday, January 7, 2016 2:31 PM
To: Bell, Mark J HLTH:EX
Subject: FW: Request for Backgrounders
Attachments: Dawson Creek and District Hospital - JAN 2015.docx

I need to send some info to TBS to respond to this so I quickly updated the factsheet. Any concerns with it?

From: Dale, Raman FIN:EX
Sent: Thursday, January 7, 2016 11:43 AM
To: Sidhu, Manjit HLTH:EX; Palmer, Joel HLTH:EX
Subject: FW: Request for Backgrounders

Good morning,

Our Minister is meeting with the Mayor of Dawson Creek at the end of this month to discuss a number of items and I need to provide a briefing document on the following HLTH topic:

- the Dawson Creek and District Hospital Patient Care Replacement Project (there is a worry that Terrace's project has been given priority even though it is nowhere near shovel ready and the need for it is in the future, whereas the need in Peace River South is now);

Are you able to provide me with some background info?

Thanks,

Raman Dale
Treasury Board Staff
desk: (250) 387-9067
mobile: (250) 217-1024

NHA Planning Call

Dec 18/2015

⑤ UNABC S/T projects

Mark L. & S. Brown & Sabine visiting NHA Jan 5th
s.13, s.17

s.13, s.17 presented to Mlt Exec: Steve, Lynn, Sabine

B) Mlt project -

s.13, s.17

s.13, s.17

s.13, s.17

been on Mlt Cap Plan for 10 yrs

* MOH has run operating surplus in past - gave grants to other orgs - SB. asked if that should be redirected to HA's instead.

JP: not expecting any surplus in MOH budget that ^{were} ~~was~~

Been to RHD 6-7 times this year - typically come up with 40% talking to Hcom in January

UHNBC Cont'
s.13

s.13

(2) Ruesnel GR Baker
s.13

(3) PG Downtown - not really capital

(4) Dementia Care s.13

s.13, s.17

(1) MRI s.13

s.13

FSS - impact on FSJ
s.13

- impact not too significant.

JP: Business Plans will be required. for both
s.13

(10) Fort St John Helipad. - gravelly legs have plan

(7) Fort St James - Concept Plan submission
s.13, s.17

s.13

(11) Athlin - discuss with community
~~the~~ initially too large
s.13, s.17

s.13 (6) UAHNBC LIT projects

JP: Need Prioritized List from NY
split up larger projects from smaller ones
we have no \$ now for any.

BIG ① Milys

② DC

③ Ruesnel

④ FS James

SM ① UAHNBC 1 2 3 interim projects

② Alves - ~~no~~ ER, ICW, daycare
L#1

Bell, Mark J HLTH:EX

From: Palmer, Joel HLTH:EX
Sent: Tuesday, December 15, 2015 10:03 AM
To: Forsberg, Nicole A HLTH:EX
Cc: Postans, James HLTH:EX; Bell, Mark J HLTH:EX; Cavelti, John HLTH:EX
Subject: FW: Meeting on Mills, smaller urgent projects, Dawson Creek concept plan

Nicole

Could you set up a videoconference meeting with all the folks on the email below? Either Thurs between 10:00-11:00 or 3:00-4:00, or else Friday morning. Whatever works best for the most people.

If videoconference isn't possible, then telcon is fine.

Thanks

Joel

From: Hoefer, Michael [<mailto:Michael.Hoefer@northernhealth.ca>]
Sent: Tuesday, December 15, 2015 9:11 AM
To: Palmer, Joel HLTH:EX
Cc: Sommerfeld, Albert; Bell, Mark J HLTH:EX; Postans, James HLTH:EX; XT:HLTH De Croos, Mark; Cavelti, John HLTH:EX
Subject: RE: Meeting on Mills, smaller urgent projects, Dawson Creek concept plan

Joel, we can add to the 11th meeting. If you were to have a time Thursday or Friday this week, Albert would really like to bring you up to speed on the urgent issues. This way, we will have you somewhat prepared for meetings our CEO is having January 5th with the DM, ADM's group.

Mike

From: Palmer, Joel HLTH:EX [<mailto:Joel.Palmer@gov.bc.ca>]
Sent: Monday, December 14, 2015 5:19 PM
To: Hoefer, Michael
Cc: Sommerfeld, Albert; Bell, Mark J HLTH:EX; Postans, James HLTH:EX; De Croos, Mark; Cavelti, John HLTH:EX
Subject: RE: Meeting on Mills, smaller urgent projects, Dawson Creek concept plan

Hi Mike

Could we add these items to our Jan 11 agenda? We are scheduled for 2 hours.

Which of the items below are urgent? I could find some time this week if there's something that's time sensitive. But after Friday this week, it will be tough to get everyone together, especially James who is running off to his new adventure in the world of Advanced Education.

Joel

Joel Palmer | Executive Director | Capital Services | Ministry of Health
Joel.Palmer@gov.bc.ca | desk 250-952-1102 | mobile 250-216-4627

From: Hoefer, Michael [<mailto:Michael.Hoefer@northernhealth.ca>]
Sent: Monday, December 14, 2015 11:57 AM
To: Palmer, Joel HLTH:EX
Cc: Sommerfeld, Albert; Bell, Mark J HLTH:EX; Postans, James HLTH:EX; XT:HLTH De Croos, Mark
Subject: Meeting on Mills, smaller urgent projects, Dawson Creek concept plan
Importance: High

Joel:

There is an urgent need for Albert and I to apprise your department of what is going on here in NH Capital Planning. I know we talked about booking an early January meeting but I still don't see anything in my calendar other than the discussion on Mills January 11th.

Is it at all possible for us to get a meeting the week of January 4th to discuss the following list of items?

I think we should do a review of all our pending capital planning projects just to make sure we are all on the same page.

1. MRI NH Strategy
2. GR Baker projects – interim to the bigger Concept Plan submission
3. downtown PG health services - updates
4. dementia care - updates
5. UHNBC three short term projects – interim the major planning below
6. UHNBC long term planning and direction for RPG (Michael is working on this)
7. fort St James primary care – while waiting for Concept Plan
8. Dawson Creek Concept Plan – following Mills discussion
9. GR Baker Concept Plan – see 2 above
10. Fort St John Helipad – brief FYI
11. Atlin – very brief FYI

I know when we last met you had presented some alternate scenarios and we have been working on the above list with this in mind.

I would be interested to know your thoughts on having Manjit and Sabine Fuelgen present for these discussions as I am aware Mark De Croos is conversing with Manjit and Sabine is with Cathy Ulrich?

Mike

NHA Capital Planning VC

Oct 14/2015

① MMH. CP submission early summer
resubmission to DM from NH CEO
s.13,s.17

DCDH CP submitted Sept 17th
s.13,s.17

GR Baker (Avesnes) s.13,s.17

s.13,s.17

s.13,s.17
UNNBC

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UNBC (cont)
s.13

s.13, s.17

② Priority Invest Projects

#1 AMH s.13, s.17

#2 DCDH

#3, 7, 8

in PG.
Fraser RHD
Fort George

#4 SLH Ft St. James s.13, s.17
s.13

s.13

(FCI ok)

Res Care Facility new in 2010

Priorities

Mt's #1 - hub

SLH was being planned around same time as LDH
but then mill fire occurred.

Then QCI went ahead to

Exec approved this updated version of Cap Plan.

Board approval comes in Jan 2016

s.13, s.17

#6 UHNBC Redvelop

s.13

#7/8 Res
Cane

#9 Fort Nelson 4.5 hours north of FSS.

#10 GRB ER/ICU/DCS - could move up in priority
s.13

s.13

#12 Wrench

#13 Tombsler Ridge - down turn in economy due to
coal mining - fast priority

Summary

many old facilities -
s.13

s.13

Joel

put projects in buckets

large - medium - small

would priorities change depending on amount
of money that became available.

#3 UBCM

rumors...

CEO to write response letters from meetings
s.13, s.17

Dawson creek - political will for project
Oveshel - Minister turned Oveshel / Williams Lake
heard Williams Lake Cariboo Memorial is priority

#4 RADO Meetings

6 RADO's - Mon 7th signing next week - (every 2 years)
meeting next week - present list of potential
projects

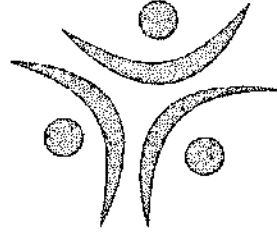
#5 CP Submissions

get meeting to go thru CP
- start with Mills
- NH to send us a copy for review.
- biggest change to cost
- update projection #'s (PEOPLE 2014)

Dawson Cr. next priority.

Northwest Emerging Issues

Confidential for Discussion



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Community Catchment Population

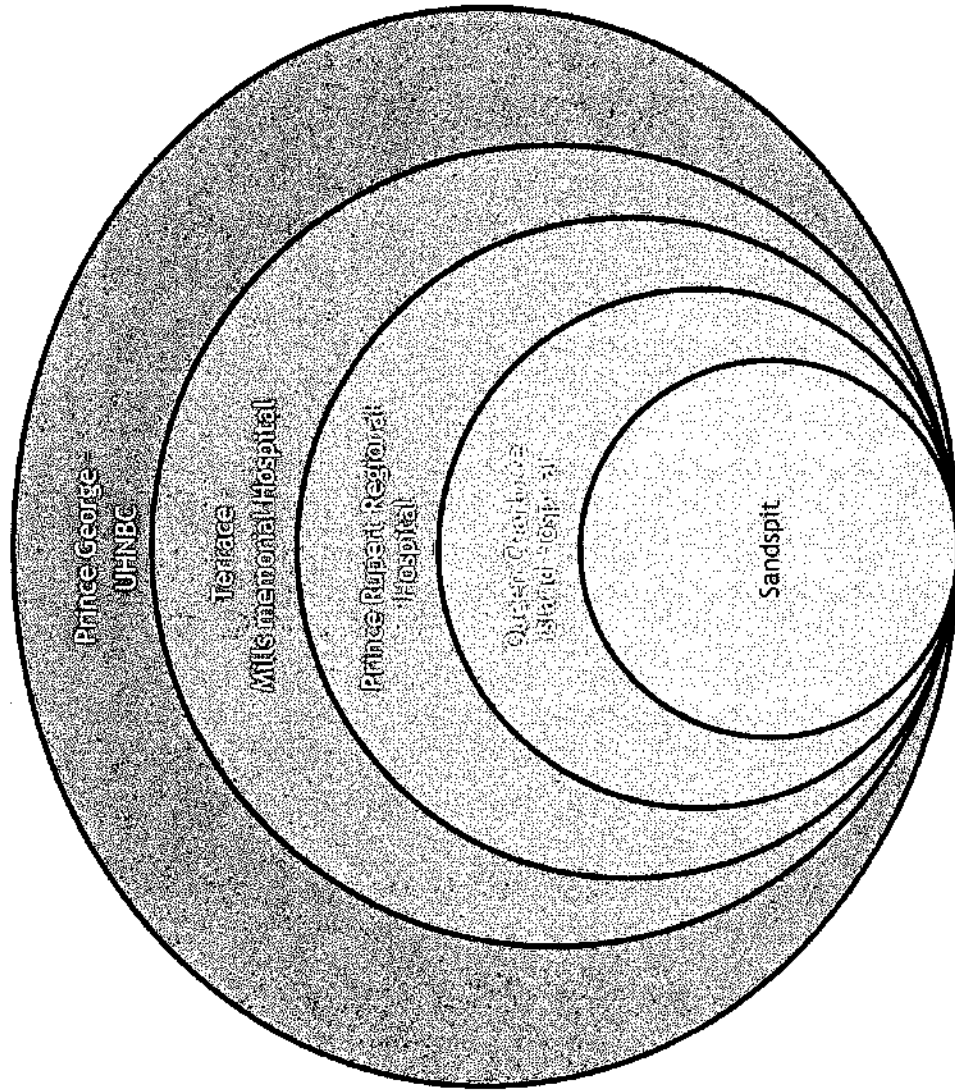
Northwest

Community	Population	Catchment Population	Community Classification
Atlin	400	481	Rural Community – More Isolated
Dease Lake	384	1,324	Rural Community – More Isolated
Stewart	444	541	Rural Community – More Isolated
Houston	2,958	3,076	Rural Community – Less Isolated
Hazelton	604	6,870	Small Rural Center
Massett	929	2,241	Small Rural Center
Queen Charlotte City	948	2,352	Small Rural Center
Kitimat - expect growth	9,226	9,874	Rural Center - Smaller Referral Base
Smithers	5,321	16,850	Rural Center - Smaller Referral Base
Prince Rupert –expect growth	12,846	19,499	Rural Center - Large Referral Base
Terrace – expect growth	11,675	55,854	Rural Center - Large Referral Base



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Northwest HSDA



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Industrial Development, Demographic Shifts and Implications Northwest

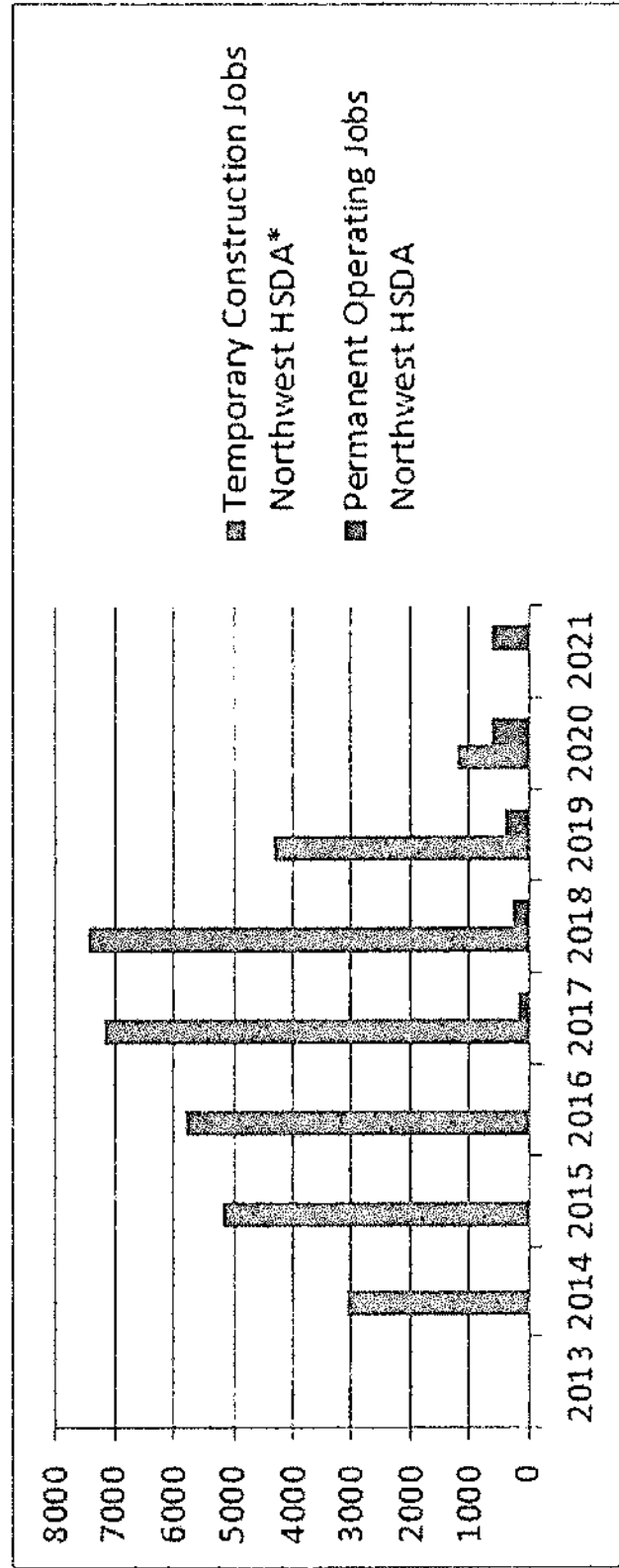
Summary of Expected Development and Related Regional Impacts

Development Impacts Next 0-5 Years	Development Impacts Next 5-10 Years
◦ (7-8000) temporary LNG workforce, Kitimat/Prince Rupert ◦ Large, work camps near urban areas ◦ Possible slowing of mining developments ◦ Forest sector downsizing in east part ◦ Decline in Rio Tinto workforce ◦ Jobs growth at Port of Prince Rupert ◦ Modest permanent population increase in western part of HSDA	◦ Modest permanent LNG workforce ◦ Emergence of LNG support cluster of business ◦ Modest mining growth, ~2 new ◦ Stable forest sector ◦ Continued moderate population growth in western part of HSDA



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Incremental LNG Workforce Impact Estimate Northwest HSDA

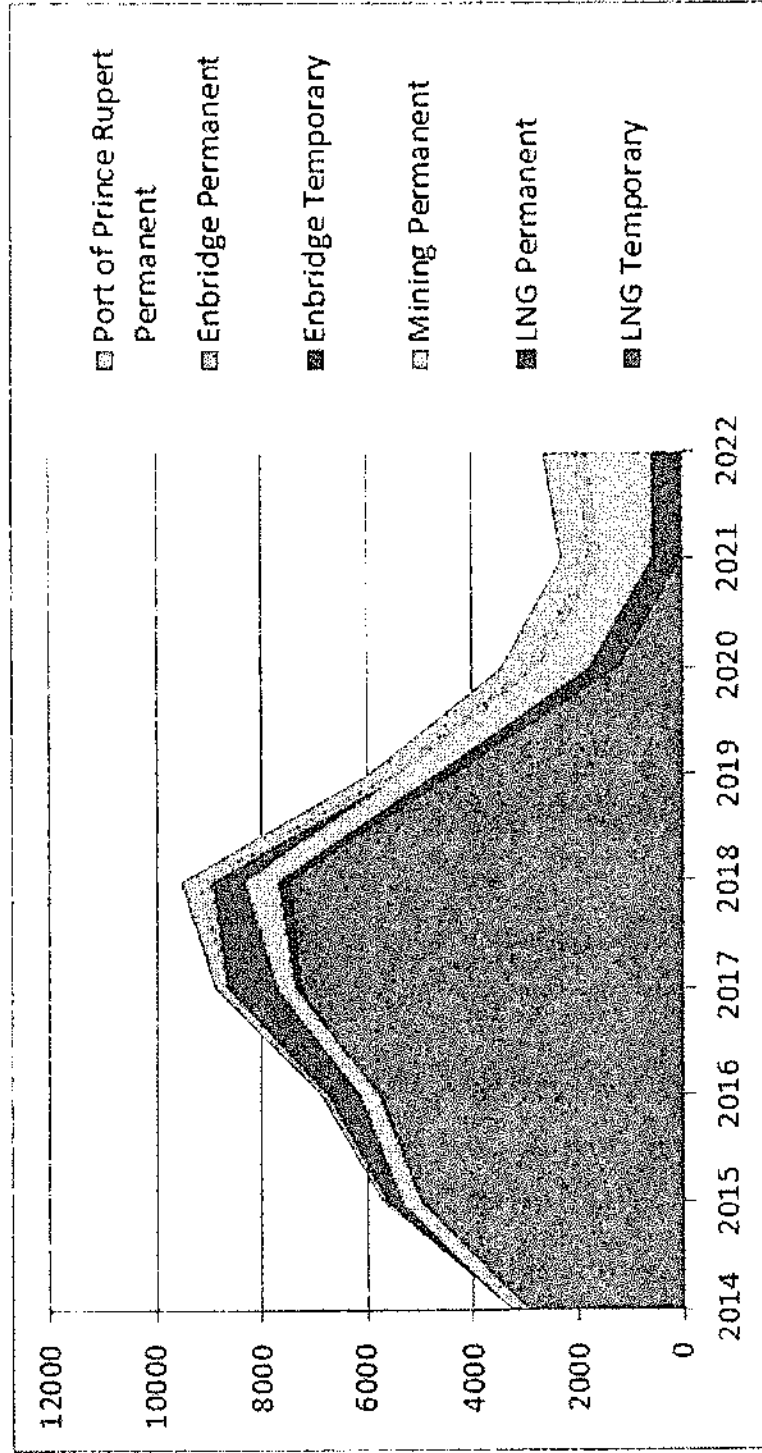


* These numbers includes some pipeline construction jobs that will temporarily exist in the Northern Interior HSDA



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Cumulative, Incremental Direct Employment Estimate - Northwest HSDA



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Industrial Camps - Northwest

- Total new camps - approximately 10,000 workers (most situated in Kitimat)
- 1 to 3 - 300 workers/camp related to mining
- LNG construction - 3000 to a peak of 7500 workers in Kitimat, Prince Rupert and Terrace
- LNG Pipeline construction - ?
- Alcan expansion - 1500 to 2000 workers
- Enbridge construction - 3000 workers deployed in 7 sections



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Summary Linkages Between Economic Developments and Health Services

- Risk of large, 'near urban' construction camps stressing trauma and primary care health services in western part of Northwest HSDA;
- Possible significant impacts on all aspects of health services due to the combined effect of natural gas developments and Site C on Fort St John area
- Coal developments raise pressure for health services, especially in Tumbler Ridge area
- Forestry declines raise risk of community distress and associated health issues in south and western parts of Northern Interior HSDA and eastern part of Northwest HSDA



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Existing Service Delivery System - Acute Care: Northwest

- Surgical Services
 - General Surgeon - Terrace, Kitimat, Prince Rupert, outreach to Smithers
 - Orthopedics - Prince Rupert, Kitimat
- Critical Care
 - Internist - Terrace
 - ICU with ventilator capacity - Terrace
 - Critical Care unit - Prince Rupert
- Diagnostic
 - CT - Prince Rupert, Terrace
 - MRI - Prince George
- Trauma Services
 - Level 5 Trauma Accreditation - Terrace



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Shifts needed in Service Delivery System in the Northwest

- Studies completed:
 - RHD commissioned trauma services study in the NW
 - Feb 2010 - Northwest Surgical Services Review
 - Jan 2012 - BC Northern Health Regional Trauma Accreditation Report
 - May 2013 - A Feasibility Assessment for Improved Access to MRI in Northern Health
 - March 2014 - Regional Surgical Services Review underway
 - March 2014 - Diagnostic Imaging Strategy for Northern Health
- Summary of Issues:
 - Incoherence of service delivery in NW
 - Consolidate higher level surgical services, critical care, and diagnostic capacity in Terrace with an outreach model
 - Develop trauma program in Terrace
 - Capital infrastructure barriers at Mills Memorial Hospital in Terrace
 - Access to diagnostic imaging capacity - CT and MRI



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Capital Infrastructure Northwest

- Mills Memorial Hospital (Briefing Note)
 - Constructed in 1959
 - Renovations to parts of the hospital in 1975
 - FCI 0.34
 - June 2007 - Terrace Space Plan (RPG)
 - Feb 2010 - Enhanced Trauma and Elective Surgery in the NW Review
 - Jan 2011 - Argument for Redevelopment of MMH (RPG)
 - Mar 2014 - Master Program and Master Plan, MMH (RPG and Renaissance)
 - Mar 2014 - MMH Facility Renewal Plan: Concept Plan
 - Moving to functional program and business case stage
- MMH Issues:
 - Surgical suites and labour and delivery remain circa 1959
 - Landlocked diagnostic imaging, lab, and pharmacy
 - Traffic flow within hospital very poorly designed and highly inefficient
 - Inpatient units, emergency, and critical care not well placed
 - Infrastructure old and vulnerable to failure
 - Renovation would prove as costly as replacement
- Emergency Department in Kitimat (complete)



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Primary Care Issues Northwest

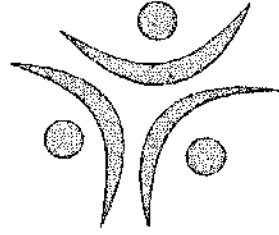
- Vacancies
 - Family Practice - 12.5 vacancies
 - Terrace - 6 vacancies and 16 filled positions
 - Prince Rupert - 3 vacancies and 15 filled positions
 - Kitimat - 3 vacancies and 4 filled positions
 - Specialists - 17.5 vacancies



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Northeast Emerging Issues

Confidential for Discussion



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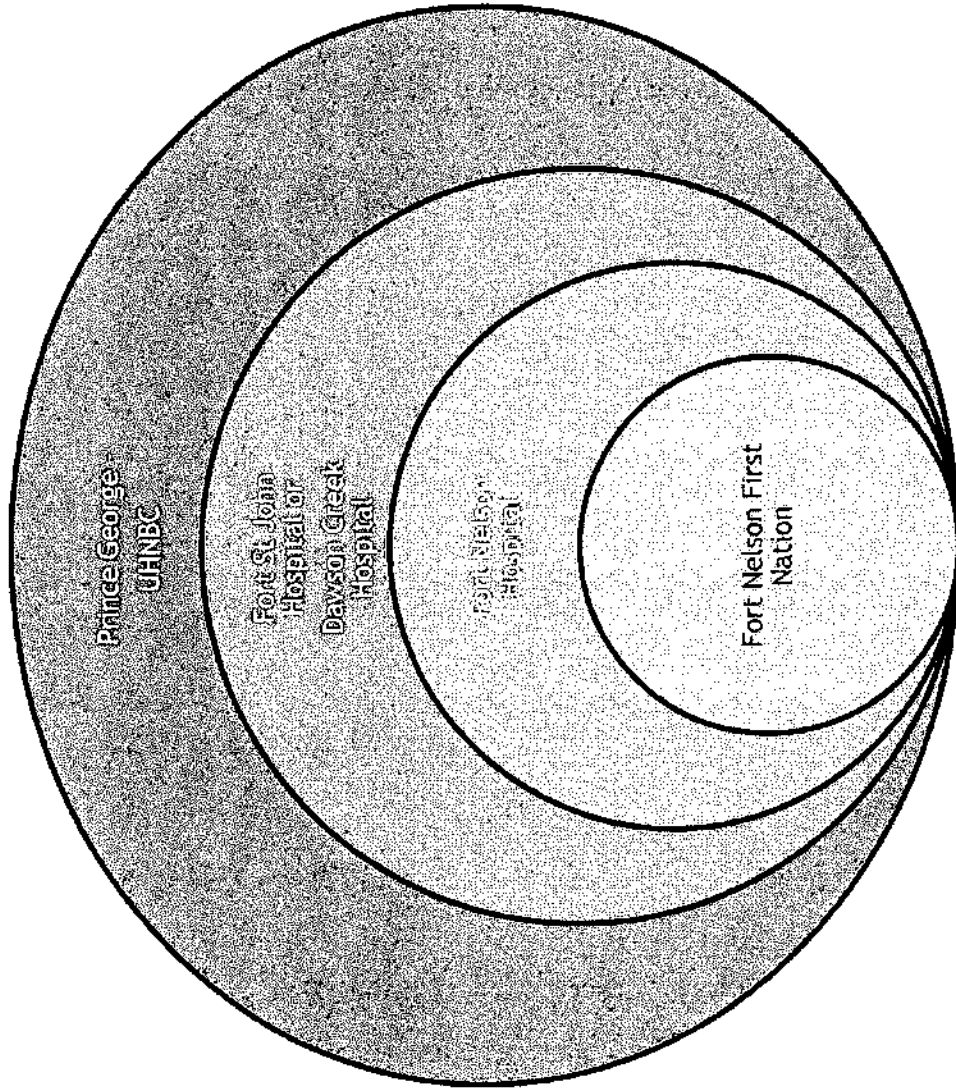
Community Catchment Population Northeast

Community	Population	Catchment Population	Community Classification
Tumbler Ridge – expect growth	2,450	2,450	Rural Community – More Isolated
Hudson's Hope	1,057	1,199	Rural Community – Less Isolated
Chetwynd	2,676	4,427	Small Rural Center
Fort Nelson – expect growth	4,664	6,209	Rural Center - Smaller Referral Base
Dawson Creek – expect growth	11,664	27,351	Rural Center - Large Referral Base
Fort St. John - expect significant growth	19,457	41,199	Rural Center - Large Referral Base



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Northeast HSDA



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Industrial Development, Demographic Shifts and Implications

Northeast

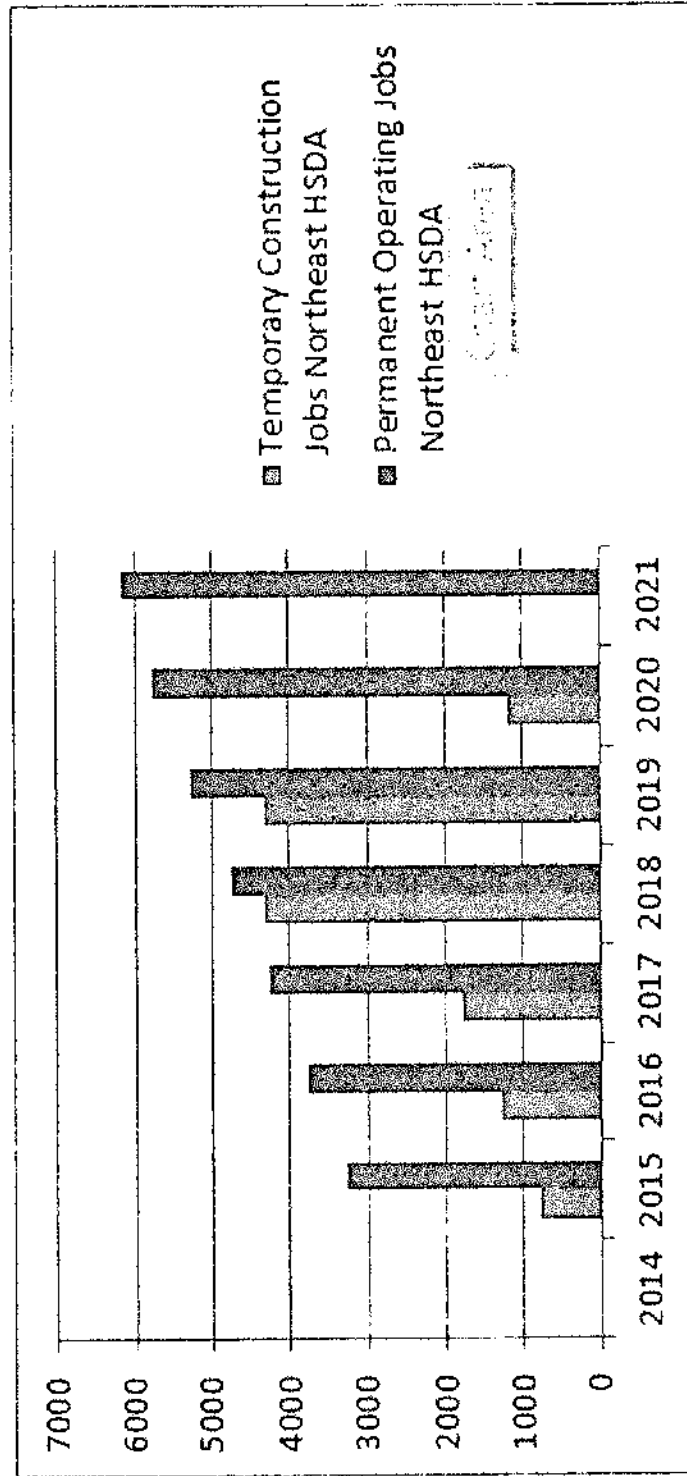
Summary of Expected Development and Related Regional Impacts

Development Impacts Next 0-5 Years	Development Impacts Next 5-10 Years
• Significant temporary natural gas construction workforce • Large ramp-up in permanent natural gas workforce to 2018 • New coal developments, ~2, Tumbler Ridge Area • Site C likely to proceed, temporary workforce near Fort St John • Stable forest sector • Rapid permanent population growth possible, esp. Fort St John area	• Decline in temporary workforce for natural gas • Natural gas workforce stabilizes around LNG demand established • New coal developments, ~1 or 2 • Site C construction continues, then winds down • Stable forest sector • Rate of population growth moderates



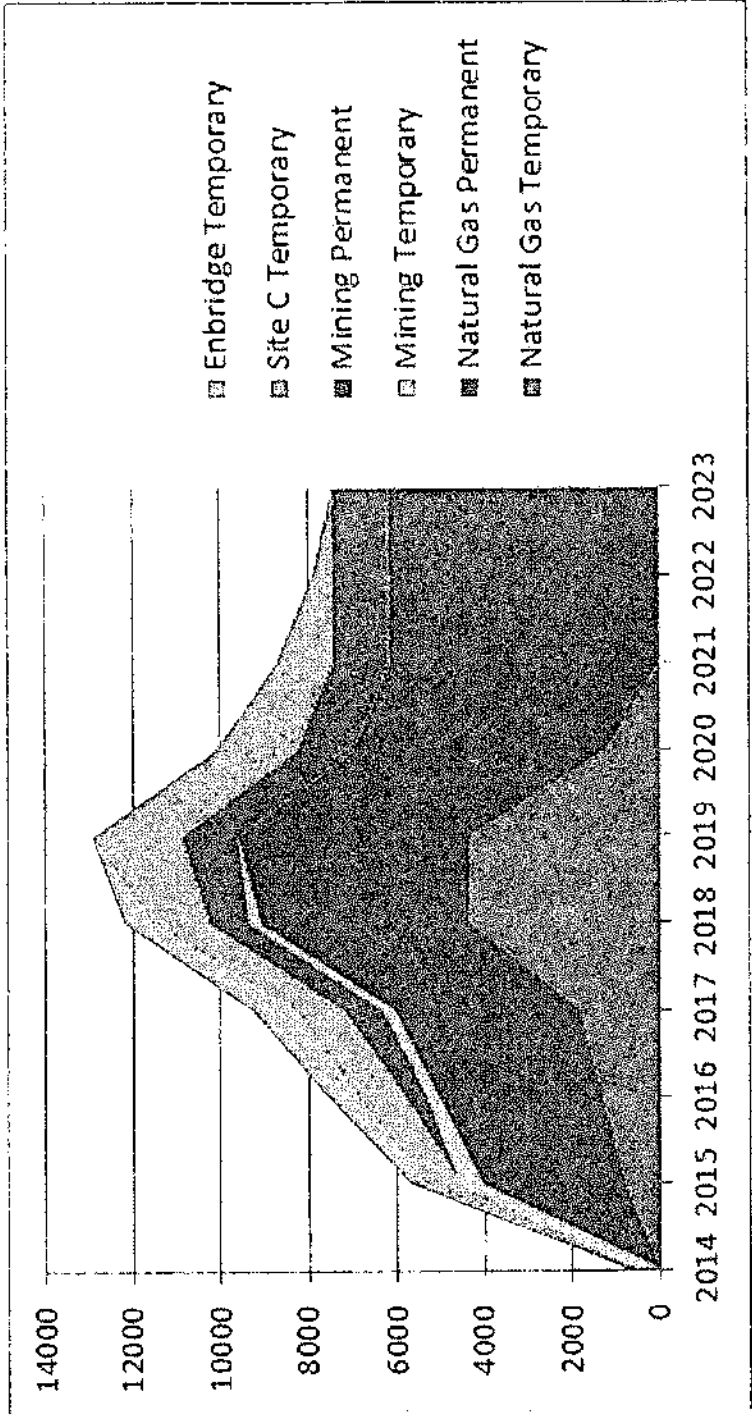
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Incremental LNG Workforce Impact Estimate Northeast HSDA



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Cumulative, Incremental Direct Employment Estimate - Northeast HSDA



Industrial Camps - Northeast

- BC Hydro - 145 to a peak of 1400 workers
- LNG construction - 1000 to a peak of 4500 workers
- LNG pipeline construction - ?
- Enbridge construction - 3000 workers deployed in 7 sections



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Cost of Living - Northeast

- Average housing price: \$374,000 (YTD 2013) compared to \$256,000 for the consolidated north inclusive of Prince George
- Rental housing vacancy rate: 3% for the City of Fort St John
- Property management companies vacancy rate: 0.5%
- Rental housing costs: \$1800/month
- Rental apartment costs: \$900 to 1000/month
- Commercial office space: four known spaces that might be available
- Commercial office space costs: \$18.00/sq ft plus triple net which generally is about \$5.50/sq ft

Acute Care Services Northeast

- Acute Care in the NE
 - Collaboration between Dawson Creek and Fort St John
 - Lowest per capita Specialist Physicians
 - Average between 600 and 700 births/year in Fort St John
 - Will the critical care, surgical, obstetrical, and pediatric capacity be sufficient to meet the projected population growth?
- Terms of Reference - Fort St. John Hospital & Dawson Creek and District Hospital
- Assess the current state of acute care services
- Determine the future acute services demand
- Define the roles of both hospitals in rendering specialized acute services
- Determine collaboration between the two institutions
- Identify resources (human resources, equipment, capital, operational, inpatient beds, etc) required per site
- Develop processes to ensure resources are utilized in an efficient and effective manner
- Determine collaboration among acute care services, existing primary care services and future primary care homes
- Consider creative service delivery options eg Perinatal Service at Fort St John Hospital
- Determine how to manage unattached inpatients



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Primary Care Services

Northeast

- Vacancies
 - Tumbler Ridge - 1 Family Practice vacancies and 2 filled positions
 - Chetwynd - 5 Family Practice positions filled but anticipate vacancies later in 2013
 - Dawson Creek - 4 Family Practice vacancies and 13 filled positions
 - Fort St John - 11 Family Practice vacancies and 19 filled positions



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Particular Issues in Fort St John

Primary Care

- **Physician Human Resources:**
 - 2013 - 7 physicians left and 1 physician left to take anesthesia (planning to return in July 2014) and 1 left to do Obs in South Africa
 - 2014 - 5 physicians likely to leave plus
 - 2015 - 7 physicians likely to retire or leave and 2 physicians likely planning to slow down
 - Leaves about 10 physicians with at least half working part time or slowing down
- **Fort St John Medical Clinic:**
 - Bought and renovated a school
 - Overhead costs are significant \$10,000/month and increasing to 12,500 to 14,500/month as the number of partners are decreasing
 - May 1 - closing walk in clinic and reopening for same day appointments for patients who have a family physician at the clinic
 - July 1 - reduce clinic to 8 to 10 physicians and lease out remaining space
 - July 2015 - may close completely
 - Medical Education - clerkships and family practice residents at risk
 - Residents are seeking a 'turn key' multidisciplinary type practice and non FFS compensation
- **Division of Family Practice**
 - 17 to 18,000 patients currently without a family physician
 - Perinatal Clinic
 - Team based care
 - Rapid deployment of home health



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Particular Issues in Fort St John Primary Care

- Action Underway:
 - Physician Human Resource and Business Model Planning workshop - March 17 Fort St John and March 24 Dawson Creek
 - Allocate resources to support physician recruitment in the NE
 - Physician recruiter
 - Community partnership
 - Investigate options for alternative approaches to physician compensation
 - Investigate options for alternative approaches to medical clinic space and consider co-location of community program teams:
s.13,s.17

- Physicians and Division of FP are actively engaging the community - industry, chamber of commerce, City of Fort St John, MLA
 - Public is anxious
 - Politicians are highly aware and anxious

Capital Infrastructure Northeast

- Tumbler Ridge - Master Plan complete with a phased renovation plan
- Hudson's Hope - planning underway for minor renovations
- Dawson Creek - Master Plan complete
 - Replacement of inpatient wing s.13,s.17
- Peace River Haven - next steps
- Mobile MRI

Other topics

- Dementia Care and Residential Care Needs
 - Dementia care strategy development
 - Continuum of care needs including:
 - Home support
 - Assisted living
 - Residential Care
- Issues in communities where forestry has made some downturns

Northern Health MRI

MRI Exams per 1,000 Population

■ 2012/13

34.4

31.4

27.4

22.4

21.5

18.2

VCHA

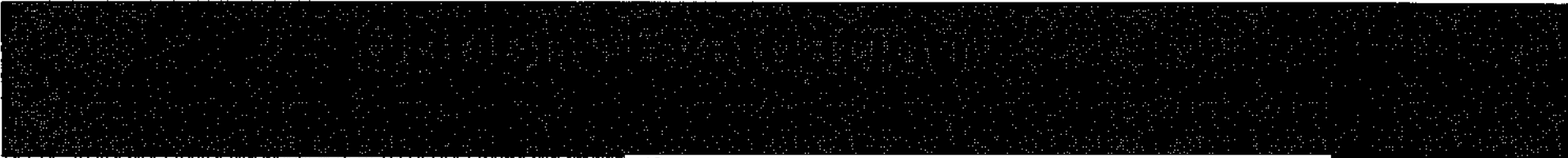
VIHA

BC

FHA

IHA

NHA



Option Assessment Criteria
Options - All assume an operating budget to achieve the BC Provincial average MRI Utilization rate

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	Two fixed scanners; one NE and one for NW
1	One fixed scanner for either NE or NW
2	One shared mobile MRI in the NW and NE
3	



Fails to meet criteria



Minimally meets criteria



Meets criteria



Exceeds criteria



Significantly exceeds criteria

s.13

Moen, Shelley L HLTH:EX

From: Bell, Mark J HLTH:EX
Sent: Thursday, October 1, 2015 8:44 AM
To: Palmer, Joel HLTH:EX; Moen, Shelley L HLTH:EX; Postans, James HLTH:EX
Subject: RE: milestones for unfunded projects

Hi Joel,

I agree with Shelley's comment that for the larger projects, likely to be P3s, we should allow extra time for business plan and particularly procurement.

Regarding Concept Plans, as we have seen recently, NHA is on a tear producing them (approved or not) so you may have taken that into account when looking at the milestones for the NH projects

These are my specific comments/concerns:
s.13,s.17

For presentation purposes, I suggest we do the same thing as we did for the other projects on the list and re-order them in chronological order

Mark Bell

Director Major Projects | Capital Services Branch | Ministry of Health
Phone: 250-952-1640 **Email:** Mark.J.Bell@gov.bc.ca

From: Palmer, Joel HLTH:EX
Sent: Wednesday, September 30, 2015 5:13 PM
To: Bell, Mark J HLTH:EX; Moen, Shelley L HLTH:EX; Postans, James HLTH:EX
Subject: milestones for unfunded projects

I populated the bottom section of this table. It is definitely not a precise science, but could you let me know if you see any serious clangers?

Note it assumes we receive approval to proceed with a business plan in June 2016

Thanks

Joel

Ministry of Health
 Ten-Year Capital Plan 2015/16 - 2024/25
 Estimated Provincial Capital Spending Only - Projects Not Included in Current 10-Year Capital Plan
 \$000s

NEW PROJECTS NOT INCLUDED IN CURRENT 10 YEAR CAPITAL PLAN	PROJECT TYPE	Health Authority	2015/16	2016/17	2017/18	2018/19	Plan Period (15/16 - 18/19)	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	10-Year Plan Total	2025/26	2026/27	Total

s.13,s.17

Health Capital Project	Total Project Cost	Business Plan	Gov't Approval	Procurement	Construction	
					Start	Complete
Projects Underway						

s.13,s.17

Planned Projects						

s.13,s.17

Projects Not in the 10-year Plan ±						

s.13,s.17

Joel Palmer | Executive Director | Capital Services | Ministry of Health
Joel.Palmer@gov.bc.ca | desk 250-952-1102 | mobile 250-216-4627

Bell, Mark J HLTH:EX

From: Forsberg, Nicole A HLTH:EX
Sent: Wednesday, September 30, 2015 8:31 AM
To: Bell, Mark J HLTH:EX
Subject: RE: Northern Health Concept Plan Submission for Dawson Creek Hospital

Hi Mark,

I've never set up a video conference before, so Marilyn is going to show me how to set it up today. She has secured room 595 for us and we will contact Mike Hoefer's assistant today to finalize it.

From: Bell, Mark J HLTH:EX
Sent: Wednesday, September 30, 2015 8:28 AM
To: Forsberg, Nicole A HLTH:EX
Subject: RE: Northern Health Concept Plan Submission for Dawson Creek Hospital

Did you have any luck securing a VC room for this meeting ?

Mark Bell

Director Major Projects | Capital Services Branch | Ministry of Health
Phone: 250-952-1640 Email: Mark.J.Bell@gov.bc.ca

From: Bell, Mark J HLTH:EX
Sent: Monday, September 28, 2015 3:44 PM
To: Forsberg, Nicole A HLTH:EX
Subject: FW: Northern Health Concept Plan Submission for Dawson Creek Hospital

Hi Nicole,

Welcome back for day two!!

I would like to have a video conference with NHA on October 14th between 2:30 and 4:30
From NHA it would be Mike Hoefer and Albert Sommerfeld and from MOH it would be myself, James and Joel

Could you please check if there is a VC room available and book it if there is ?

Thanks

Mark Bell

Director Major Projects | Capital Services Branch | Ministry of Health
Phone: 250-952-1640 Email: Mark.J.Bell@gov.bc.ca

From: Hoefer, Michael [<mailto:Michael.Hoefer@northernhealth.ca>]
Sent: Monday, September 28, 2015 3:24 PM
To: Bell, Mark J HLTH:EX
Cc: Sommerfeld, Albert; Mayert, Cora-Lee
Subject: RE: Northern Health Concept Plan Submission for Dawson Creek Hospital

Hi Mark:

I am fully committed and on travel status out to the NW next week ^{s.22}

In looking at Albert's calendar I am thinking either afternoon of October 14th, between 2:30 and 4:30 or perhaps Friday 16th between 9 am and 12 would work best.

Agree booking videoconference may be problematic but we can see what Cora-Lee can do on this end and you guys can look into your side at MoH?

Mike

From: Bell, Mark J HLTH:EX [<mailto:Mark.J.Bell@gov.bc.ca>]
Sent: Monday, September 28, 2015 3:12 PM
To: Hoefer, Michael
Cc: Sommerfeld, Albert
Subject: RE: Northern Health Concept Plan Submission for Dawson Creek Hospital

Hi Mike,

I just left you a voicemail. You can call me back or if you want to suggest some dates/times that work at your end, I can look at calendars at this end and try and work something out

When I asked Joel earlier, he suggested next Tuesday October 6th as a possibility. At the moment most of that day looks pretty good, the problem might be getting a VC room here as they tend to book up far in advance.

Thanks

Mark Bell

Director Major Projects | Capital Services Branch | Ministry of Health
Phone: 250-952-1640 Email: Mark.J.Bell@gov.bc.ca

From: Hoefer, Michael [<mailto:Michael.Hoefer@northernhealth.ca>]
Sent: Monday, September 28, 2015 1:01 PM
To: Bell, Mark J HLTH:EX; Postans, James HLTH:EX
Cc: Sommerfeld, Albert
Subject: FW: Northern Health Concept Plan Submission for Dawson Creek Hospital

Mark:

Would you like to give me a call on scheduling our get together on Master Planning and Priority Investments Listing? I think we need to get something scheduled, we could do videoconference?

Mike

From: Palmer, Joel HLTH:EX [<mailto:Joel.Palmer@gov.bc.ca>]
Sent: Friday, September 25, 2015 4:43 PM
To: Sommerfeld, Albert
Cc: Hoefer, Michael; De Croos, Mark; Bell, Mark J HLTH:EX; Good, Jeff PSBC:EX; Steele, Rick PSBC:EX
Subject: RE: Northern Health Concept Plan Submission for Dawson Creek Hospital

Hi Albert

I think it would be helpful to have a video or tele conference so you and Mike could walk us through the concept plans and give us an opportunity to ask some questions.

Joel

Joel Palmer | Executive Director | Capital Services | Ministry of Health
Joel.Palmer@gov.bc.ca | desk 250-952-1102 | mobile 250-216-4627

From: Sommerfeld, Albert [<mailto:Albert.Sommerfeld@northernhealth.ca>]
Sent: Monday, September 21, 2015 8:36 AM
To: Palmer, Joel HLTH:EX
Cc: Hoefer, Michael; XT:HLTH De Croos, Mark; Bell, Mark J HLTH:EX; Good, Jeff PSBC:EX; Steele, Rick PSBC:EX
Subject: Northern Health Concept Plan Submission for Dawson Creek Hospital

Hi Joel,

On behalf of Mike Hoefer, please find attached the Concept Plan for the proposed Northern Health Redevelopment of Dawson Creek Hospital.

Please do not hesitate to contact me if you require any further information in regard to this project or concept plan submission.

Albert Sommerfeld P.Eng MBA
Director, Capital Development and Projects
Northern Health
300-299 Victoria Street
Prince George, BC V2L 5B8
Tel: 250.649.7645
Cell: 250.612.2195
Fax: 250.565.2753
www.northernhealth.ca
albert.sommerfeld@northernhealth.ca

Integrity - Stewardship - Quality

Please note: Cora-Lee Mayert provides administrative support within my portfolio. Her phone number is 250.565.2351 and email is cora-lee.mayert@northernhealth.ca

Bell, Mark J HLTH:EX

From: Palmer, Joel HLTH:EX
Sent: Monday, September 28, 2015 3:38 PM
To: Bell, Mark J HLTH:EX
Subject: RE: Northern Health Concept Plan Submission for Dawson Creek Hospital

Follow Up Flag: Follow up
Flag Status: Completed

Let's try the 14th. Yes, include James please

From: Bell, Mark J HLTH:EX
Sent: Monday, September 28, 2015 3:31 PM
To: Palmer, Joel HLTH:EX
Subject: FW: Northern Health Concept Plan Submission for Dawson Creek Hospital

Hi Joel,

Mike is not available October 6th

He suggested either:
Wednesday October 14th, between 2:30 and 4:30
Friday October 16th between 9 am and 12

FYI, that is a short week with Thanksgiving on Monday.
Not sure about availability of VC rooms but if these dates/times work for you, I can have Nicole look for one
Also, do you want me to invite James based on Mike including him in his email ?

Mark Bell

Director Major Projects | Capital Services Branch | Ministry of Health
Phone: 250-952-1640 Email: Mark.J.Bell@gov.bc.ca

From: Hoefer, Michael [<mailto:Michael.Hoefer@northernhealth.ca>]
Sent: Monday, September 28, 2015 3:24 PM
To: Bell, Mark J HLTH:EX
Cc: Sommerfeld, Albert; Mayert, Cora-Lee
Subject: RE: Northern Health Concept Plan Submission for Dawson Creek Hospital

Hi Mark:

I am fully committed and on travel status out to the NW next week s.22

In looking at Albert's calendar I am thinking either afternoon of October 14th, between 2:30 and 4:30 or perhaps Friday 16th between 9 am and 12 would work best.

Agree booking videoconference may be problematic but we can see what Cora-Lee can do on this end and you guys can look into your side at MoH?

Mike

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Sent: Monday, September 28, 2015 3:12 PM
To: Hoefer, Michael
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Hi Mike,

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Phone: 250-952-1640 Email: Mark.J.Bell@gov.bc.ca

From: Hoefer, Michael [<mailto:Michael.Hoefer@northernhealth.ca>]
Sent: Monday, September 28, 2015 1:01 PM
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Cc: Sommerfeld, Albert
Subject: FW: Northern Health Concept Plan Submission for Dawson Creek Hospital

Mark:

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Mike

From: Palmer, Joel HLTH:EX [<mailto:Joel.Palmer@gov.bc.ca>]
Sent: Friday, September 25, 2015 4:43 PM
To: Sommerfeld, Albert
Cc: Hoefer, Michael; De Croos, Mark; Bell, Mark J HLTH:EX; Good, Jeff PSBC:EX; Steele, Rick PSBC:EX
Subject: RE: Northern Health Concept Plan Submission for Dawson Creek Hospital

Hi Albert

I think it would be helpful to have a video or tele conference so you and Mike could walk us through the concept plans and give us an opportunity to ask some questions.

Joel

Joel Palmer | Executive Director | Capital Services | Ministry of Health
Joel.Palmer@gov.bc.ca | desk 250-952-1102 | mobile 250-216-4627

From: Sommerfeld, Albert [<mailto:Albert.Sommerfeld@northernhealth.ca>]
Sent: Monday, September 21, 2015 8:36 AM
To: Palmer, Joel HLTH:EX
Cc: Hoefer, Michael; XT:HLTH De Croos, Mark; Bell, Mark J HLTH:EX; Good, Jeff PSBC:EX; Steele, Rick PSBC:EX
Subject: Northern Health Concept Plan Submission for Dawson Creek Hospital

Hi Joel,

On behalf of Mike Hoefer, please find attached the Concept Plan for the proposed Northern Health Redevelopment of Dawson Creek Hospital.

Please do not hesitate to contact me if you require any further information in regard to this project or concept plan submission.

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Integrity - Stewardship - Quality

Please note: Cora-Lee Mayert provides administrative support within my portfolio. Her phone number is 250.565.2351 and email is cora-lee.mayert@northernhealth.ca

Bell, Mark J HLTH:EX

From: Palmer, Joel HLTH:EX
Sent: Monday, September 28, 2015 1:40 PM
To: Bell, Mark J HLTH:EX
Subject: RE: Northern Health Concept Plan Submission for Dawson Creek Hospital

How about Tuesday next week?

From: Bell, Mark J HLTH:EX
Sent: Monday, September 28, 2015 1:28 PM
To: Palmer, Joel HLTH:EX
Subject: FW: Northern Health Concept Plan Submission for Dawson Creek Hospital

Not sure why Mike did not include you (but added James) on this email....

Any preference as to when we would have a video conference ?

Mark Bell

Director Major Projects | Capital Services Branch | Ministry of Health
Phone: 250-952-1640 **Email:** Mark.J.Bell@gov.bc.ca

From: Hoefer, Michael [<mailto:Michael.Hoefer@northernhealth.ca>]
Sent: Monday, September 28, 2015 1:01 PM
To: Bell, Mark J HLTH:EX; Postans, James HLTH:EX
Cc: Sommerfeld, Albert
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To: Palmer, Joel HLTH:EX

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Bell, Mark J HLTH:EX

From: Hoefer, Michael <Michael.Hoefer@northernhealth.ca>
Sent: Monday, September 28, 2015 1:01 PM
To: Bell, Mark J HLTH:EX; Postans, James HLTH:EX
Cc: Sommerfeld, Albert
Subject: FW: Northern Health Concept Plan Submission for Dawson Creek Hospital
Attachments: RE: Northern Health Concept Plan Submission for Dawson Creek Hospital

Follow Up Flag: Follow up
Flag Status: Completed

Mark:

Would you like to give me a call on scheduling our get together on Master Planning and Priority Investments Listing? I think we need to get something scheduled, we could do videoconference?

Mike

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Sent: Friday, September 25, 2015 4:43 PM
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Please do not hesitate to contact me if you require any further information in regard to this project or concept plan submission.

Albert Sommerfeld P.Eng MBA
Director, Capital Development and Projects

Northern Health

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Please note: Cora-Lee Mayert provides administrative support within my portfolio. Her phone number is 250.565.2351 and email is cora-lee.mayert@northernhealth.ca

Bell, Mark J HLTH:EX

From: Sommerfeld, Albert <Albert.Sommerfeld@northernhealth.ca>
Sent: Monday, September 28, 2015 10:00 AM
To: Bell, Mark J HLTH:EX
Cc: Palmer, Joel HLTH:EX; Hoefer, Michael
Subject: Dawson Creek Concept Plan, Costing Appendix
Attachments: Dawson Creek Hospital Program Estimate #1 Report - July 14, 2015.pdf

As requested, here is the QS Level D estimate for DCDH to accompany the concept plan

Albert Sommerfeld P.Eng MBA
Director, Capital Development and Projects
Northern Health
300-299 Victoria Street
Prince George, BC V2L 5B8
Tel: 250.649.7645
Cell: 250.612.2195
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Integrity - Stewardship - Quality

Please note: Cora-Lee Mayert provides administrative support within my portfolio. Her phone number is 250.565.2351 and email is cora-lee.mayert@northernhealth.ca



*People to count on.
Knowledge to build with.*

Cost Management Services for

Dawson Creek & District Hospital

Program Cost Estimate

Version: 1.0
Submitted: 14 July, 2015

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1.0 EXECUTIVE SUMMARY

1.1. Instructions Received

- 1.1.1. This report has been prepared by BTY Group ("BTY") at the request of Northern Health (the "Client").
- 1.1.2. Northern Health has appointed BTY to provide a Program estimate developed for the Dawson Creek & District Hospital (the "Project"). The Project will be delivered using a traditional Design-Bid-Build model and, therefore, BTY strongly recommends that estimates are prepared at each of the key design milestones.
- 1.1.3. Information related to the Project for the purposes of this report was received by BTY from June 17, 2015 to June 25, 2015. Please refer to Section 13.0 for confirmation of what information has been reviewed for the purposes of producing this report.

1.2. Report Findings

- 1.2.1. s.17

1.3. Report Purpose

- 1.3.1. The purpose of this report is to provide a realistic assessment of the project cost based on the information available at the time of writing this report. This will assist the Client in assessing the project viability from a financial perspective.
- 1.3.2. The opinion contained within this report has been prepared without the benefit of reviewing any detailed architectural, structural, mechanical, or electrical drawings and should, therefore, be considered as an order of magnitude estimate. Based on the information reviewed, our opinion on cost would be correct to a magnitude of approximately +/- 15% to 20%.
- 1.3.3. In order to provide an accurate cost estimate for the Project, BTY Group strongly recommends that a professional Quantity Surveying organization, such as BTY Group, is retained to provide a detailed analysis on any design information produced on behalf of the Client during the design development and construction phases. Should you have any queries regarding the content of this report, please do not hesitate to contact either of the following:

Ellis Pang (PQS/MRICS)
ellisfang@bty.com
604 734 3126

Eldon Lau (PQS/MRICS)
eldonlau@bty.com
604 734 3126

2.0 PROJECT DESCRIPTION

- 2.1. Technological advances, increasing acuity of patients and aging population have a direct impact on the planning of healthcare facilities and delivery of healthcare services.
- 2.2. The key strategy of this master program is to develop a flexible facility which enables efficient use of space and staff resources to meet the increasing demand on health care services.
- 2.3. This master program is based on a planning projection to 2036 for the following key platforms:
 - Universal Care Platform
 - Interventional Platform
 - Inpatient Services Platform
 - Clinical Support Services Platform
 - Administration and Academic Platform
 - Logistics Platform
- 2.4. The Project has been assumed to be developed in 3 phases. The space to be developed in each phase can be referred to Section 6.0 of this report.
- 2.5. The Project will be procured under a traditional Design-Bid-Build model as advised by the Client.

3.0 DEVELOPMENT COST SUMMARY

3.1. The current estimated cost of the project may be summarized as follows:

Item	s.13,s.17	Total \$
A. Land Cost (Excluded)	s.13,s.17	
B. Construction		
C. Allowances		
D. Professional Fees		
E. Municipal & Connection Fee		
F. Management & Overhead		
G. Project Contingency		
H. Furnishings, Fittings & Equipment		
I. Payable Goods & Services Tax		
J. Financing Cost (Excluded)		
TOTAL PROJECT COST (July 2015 \$)		
K. Escalation		
ESCALATED PROJECT COST (August 2020)		

Please note that, where zero dollar values are stated, BTY has excluded these costs and the values should be carried in a separate budget (if applicable).

3.0 PROJECT COST ESTIMATE

4.1. A summary of the estimated capital cost is as follows:

Item	s.13,s.17	Total \$
A. LAND COST		
1 Land		
B. CONSTRUCTION		
C. ALLOWANCES		
1 Design Contingency (Design & Program Changes)		
2 Post Tender Change Order Contingency		
D. PROFESSIONAL FEES		
1 Programming		
2 Architectural		
3 Structural		
4 Mechanical		
5 Electrical		
6 Cost Consultant		
7 LEED Consultant		
8 Other Consultants and Disbursements		
E. MUNICIPAL & CONNECTION FEES		
1 Development Cost Charges		
2 Building Permits		
F. MANAGEMENT & OVERHEAD		
1 Project Management Fee		
2 Owners Planning and Administrative Cost		
3 Project Insurance		
4 Project Commissioning		
5 Decanting and Moving (Allowance)		
G. PROJECT CONTINGENCY (10% of Items D to F)		
H. FURNISHINGS & EQUIPMENT (Allowance)		
I. PAYABLE GOODS & SERVICES TAX (0.85%)		
J. ESCALATION		

s.13,s.17

5. BASIS AND ASSUMPTION

5.1. s.17

5.2. Please note that BTY are not qualified to act as engineering and architectural consultants. Where assumptions have been made these assumptions cannot be relied upon as accurate assessments and should be reviewed by the design team.

6.0 AREAS

- 6.1. The gross floor areas of the project based on the Area Summary Table are:
s.17

7.0 ENCLINCHS

7.1. s.17

7.2.

7.0 TAXES

The estimate **includes** the Provincial Sales Tax (P.S.T.) where applicable.

The estimate **includes** the Payable Goods & Services Tax (G.S.T.) at a rate of 0.85%.

9.0 PRODUCT SCHEDULE S ESCALATION

9.1. s.13,s.17

9.2.

9.3.

10.0 PRICING

10.1. s.17

10.2.

11.2 RISK MITIGATION

- 11.1. BTY Group recommends that the Owner, Project Manager and Design Team carefully review this document, including exclusions, inclusions and assumptions, contingencies, escalation and mark-ups. If the project is over budget, or if there are unresolved budgeting issues, alternative systems/schemes should be evaluated before proceeding into the next design phase.
- 11.2. Requests for modifications of any apparent errors or omissions to this document must be made to BTY Group within ten (10) days of receipt of this estimate. Otherwise, it will be understood that the contents have been concurred with and accepted.
- 11.3. It is recommended that BTY Group design and propose a cost management framework for implementation. This framework would require that a series of further estimates be undertaken at key design stage milestones and a final update estimate produced which is representative of the completed tender documents, project delivery model and schedule. The final updated estimate will address changes and additions to the documents, as well as addenda issued during the bidding process. BTY Group is unable to reconcile bid results to any estimate not produced from bid documents including all addenda.

12.2 CONTINGENCIES

- 12.1. *Design Allowance*
s.17

- 12.2. *Construction Allowance*
s.17

- 12.3. *Project Contingency*
s.17

13.0 QUALIFICATIONS

13.1. Reliance Upon the Report

- 13.1.1. This report has been prepared in accordance with the scope of our Fee Proposal dated June 22, 2015 which was prepared in response to Mr. Albert Sommerfeld's email dated June 17, 2015 and is subject to the terms of that appointment. This report is for the sole and confidential use and reliance of the Client. BTY Group, its Directors, staff or agents do not make any representation or warranty as to the factual accuracy of the information provided to us on behalf of the Client or other third party consultants or agents, upon which this report is based. BTY Group will not be liable for the result of any information not received which, if produced, could have materially changed the opinions or conclusions stated in this report.
- 13.1.2. This report shall not be reproduced or distributed to any party without the express permission of BTY Group.
- 13.1.3. Any advice, opinions, or recommendations within this document should be read and relied upon only in the context of this report as a whole. The contents of this report do not provide legal, insurance or tax advice or opinion.
- 13.1.4. Opinions in this report are not an advocate for any party and if called upon to give oral or written testimony it will be given on the same assumption.

14.0 DOCUMENTATION REVIEWED

The list below confirms the information that we have reviewed in order to prepare our opinion contained within this report:

Drawing	Description	Date
Drawings		
	Dawson Creek Master Plan Text Description	June 11, 2015
	Dawson Creek Master Plan Presentation	June 11, 2015
	Master Program	December 19, 2014
	Original Building Drawings	June 24, 2015
	Master Plan (25 pages)	June 25, 2015

15.0 APPENDICES

BTY.COM

APPENDIX I

Cost Breakdown

BTY.COM

Page 075 to/à Page 078

Withheld pursuant to/removed as

s.17

APPENDIX II

Definitions

BTY.COM

DEFINITIONS

The estimate for the project has been prepared and summarized in the following categories. The scope of work covered within each category is as follows:

Land Cost:

These costs include the acquisition of the site and associated fees, service obligations and property purchase tax.

Construction:

This category encompasses all direct and indirect construction costs including building(s), associated site development work and general contractor's general requirements and fee.

Where renovations to the existing hospital have been identified by Stantec, renovations have been assumed in accordance with the following definitions:

Moderate Renovations

Similar to Minor Renovations with the assumption that the structural, mechanical and electrical systems of the existing building are generally in good condition. The primary scope of renovation is limited to the areas within the building envelope and includes:

- Reconfiguration of interior partitions
- Replacement of interior finishes
- Mechanical and electrical modifications to adapt the system to the new layout
- Replacement of plumbing fixtures
- Minor structural modifications if necessary
- Seismic upgrades and code upgrades are excluded

Major Renovations

Similar to Moderate Renovations, with the addition of the following scopes of work:

- Replacement of mechanical and electrical systems
- Structural modifications if necessary
- Seismic upgrades and code upgrades are excluded

Renovation costs have been estimated in accordance with the above definition.

DEFINITIONS (Cont'd)

Allowances:

Allowances are established for cost increases as the design is developed and/or the work is performed on site.

Professional Fees:

Within this section professional fees have been estimated for the primary design team consultants including: the architect, structural, mechanical & electrical engineers, and the cost consultant. Other specialist consultants and an allowance for disbursements are also included. Where available, all consultant fees have been calculated based on the current schedule of recommended charges published by professional associations.

Municipal & Connection Fees:

This section includes an estimate for all project related fees and charges required as part of the development by the city and other authorities having jurisdiction. These costs include Development Cost Charges (DCC's), Building Permits, levies and associated legal and survey fees. These costs are based on current city formulas and schedules.

Management & Overhead:

The project management fee is charged by a company or individual providing project management services. The Owner's Planning and Administrative cost covers the owner's project-related management costs. Provisions are also included for project insurance, commissioning the facility prior to handover and move-in costs.

Project Contingency:

This allowance is provided as an owner's contingency to cover changes to non-construction items.

Furnishings, Fittings & Equipment:

The Furnishings, Fittings & Equipment estimate for the project has been compiled using a combination of BTY Group's own historical cost data and information specific to this project.

Taxes:

The amount is adjusted to reflect rebates available to certain types of project.

Escalation:

This is an allowance for increases in prices of inputs to the project, occurring after the date of the estimate, on the final cost of the project. This allowance is calculated based on BTY's projected annual escalation rates as stated in this report.

APPENDIX III

Benchmark

BTY.COM

BENCHMARK

	Project	GFA m ²	Adjusted Construction Cost \$	Unit Cost Cost/m ²
1	Project 1	31,926 m ²	\$229,642,900	\$7,196/m ²
2	Project 2	60,608 m ²	\$331,405,700	\$5,470/m ²
3	Project 3	31,699 m ²	\$205,609,400	\$6,489/m ²
4	Project 4	38,095 m ²	\$228,421,800	\$5,998/m ²
5	Project 5	19,352 m ²	\$152,195,700	\$7,867/m ²
6	Project 6	32,557 m ²	\$186,948,400	\$5,744/m ²
7	Project 7	19,186 m ²	\$96,727,700	\$5,043/m ²
8	Project 8	59,500 m ²	\$376,937,200	\$6,337/m ²
9	Project 9	37,501 m ²	\$225,567,900	\$6,017/m ²
Average				\$6,156/m²

Dawson Creek & District Hospital s.17

Note: * The estimated construction cost includes New Build and Site Development only, but excludes Renovation, Phasing Premium and Contingencies.



People to count on.
Knowledge to build with.

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Bell, Mark J HLTH:EX

From: Hoefer, Michael <Michael.Hoefer@northernhealth.ca>
Sent: Monday, September 28, 2015 9:49 AM
To: Palmer, Joel HLTH:EX; Sommerfeld, Albert
Cc: XT:HLTH De Croos, Mark; Bell, Mark J HLTH:EX; Good, Jeff PSBC:EX; Steele, Rick PSBC:EX
Subject: RE: Northern Health Concept Plan Submission for Dawson Creek Hospital

Joel:

I agree, I think its time for another sit down.

I would like to schedule a meeting with you in the near future to discuss our current plan of Priority Investments, the concept plans we have submitted, are working on, and what is transpiring on each plan as we submit. This would be a follow-up to the one we did this summer.

Mike

From: Palmer, Joel HLTH:EX [<mailto:Joel.Palmer@gov.bc.ca>]
Sent: Friday, September 25, 2015 4:43 PM
To: Sommerfeld, Albert
Cc: Hoefer, Michael; De Croos, Mark; Bell, Mark J HLTH:EX; Good, Jeff PSBC:EX; Steele, Rick PSBC:EX
Subject: RE: Northern Health Concept Plan Submission for Dawson Creek Hospital

Hi Albert

I think it would be helpful to have a video or tele conference so you and Mike could walk us through the concept plans and give us an opportunity to ask some questions.

Joel

Joel Palmer | Executive Director | Capital Services | Ministry of Health
Joel.Palmer@gov.bc.ca | desk 250-952-1102 | mobile 250-216-4627

From: Sommerfeld, Albert [<mailto:Albert.Sommerfeld@northernhealth.ca>]
Sent: Monday, September 21, 2015 8:36 AM
To: Palmer, Joel HLTH:EX
Cc: Hoefer, Michael; XT:HLTH De Croos, Mark; Bell, Mark J HLTH:EX; Good, Jeff PSBC:EX; Steele, Rick PSBC:EX
Subject: Northern Health Concept Plan Submission for Dawson Creek Hospital

Hi Joel,

On behalf of Mike Hoefer, please find attached the Concept Plan for the proposed Northern Health Redevelopment of Dawson Creek Hospital.

Please do not hesitate to contact me if you require any further information in regard to this project or concept plan submission.

Albert Sommerfeld P.Eng MBA
Director, Capital Development and Projects
Northern Health
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Prince George, BC V2L 5B8
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Fax: 250.565.2753
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albert.sommerfeld@northernhealth.ca

Integrity - Stewardship - Quality

Please note: Cora-Lee Mayert provides administrative support within my portfolio. Her phone number is 250.565.2351 and email is cora-lee.mayert@northernhealth.ca

Bell, Mark J HLTH:EX

From: Sommerfeld, Albert <Albert.Sommerfeld@northernhealth.ca>
Sent: Wednesday, September 23, 2015 4:17 PM
To: Bell, Mark J HLTH:EX
Subject: RE: Northern Health Concept Plan Submission for Dawson Creek Hospital
Attachments: Statagic Plan Brochure.pdf

Mark, Here is the Appendix C. is this ok as a separate document or do you want me to integrate it into the concept plan document?

Cost Estimate to follow. Waiting for that from PBC.

Albert Sommerfeld

250 649 7645

From: Bell, Mark J HLTH:EX [<mailto:Mark.J.Bell@gov.bc.ca>]
Sent: Tuesday, September 22, 2015 2:25 PM
To: Sommerfeld, Albert
Cc: Palmer, Joel HLTH:EX; Hoefer, Michael
Subject: RE: Northern Health Concept Plan Submission for Dawson Creek Hospital

Thanks Albert.

I notice the concept plan lists three appendices but they were not included.
Appendix A is the master plan which we have already but Appendix B is the cost estimate and Appendix C is the NHA strategic plan.

Could you please send us copies of Appendices B & C for our records ?

Thanks

Mark Bell

Director Major Projects | Capital Services Branch | Ministry of Health
Phone: 250-952-1640 **Email:** Mark.J.Bell@gov.bc.ca

From: Sommerfeld, Albert [<mailto:Albert.Sommerfeld@northernhealth.ca>]
Sent: Tuesday, September 22, 2015 12:29 PM
To: Bell, Mark J HLTH:EX
Cc: Palmer, Joel HLTH:EX; Hoefer, Michael
Subject: RE: Northern Health Concept Plan Submission for Dawson Creek Hospital

Hi Mark,

That's a summation error and the material was directly copied from the Concept Plan into the cover letter. The correct number is 46.

Albert Sommerfeld

250 649 7645

From: Bell, Mark J HLTH:EX [<mailto:Mark.J.Bell@gov.bc.ca>]
Sent: Tuesday, September 22, 2015 9:20 AM
To: Sommerfeld, Albert
Cc: Palmer, Joel HLTH:EX; Hoefer, Michael
Subject: RE: Northern Health Concept Plan Submission for Dawson Creek Hospital

Hi Albert,

FYI, the bed number table included in the cover letter and within the CP (table 5, pg 12) appears to have an addition error.

The current beds column shows a total of 41 but when you add up the individual bed numbers^{s.13} it comes to 46 ?

Mark Bell

Director Major Projects | Capital Services Branch | Ministry of Health
Phone: 250-952-1640 **Email:** Mark.J.Bell@gov.bc.ca

From: Sommerfeld, Albert [<mailto:Albert.Sommerfeld@northernhealth.ca>]
Sent: Monday, September 21, 2015 8:36 AM
To: Palmer, Joel HLTH:EX
Cc: Hoefer, Michael; XT:HLTH De Croos, Mark; Bell, Mark J HLTH:EX; Good, Jeff PSBC:EX; Steele, Rick PSBC:EX
Subject: Northern Health Concept Plan Submission for Dawson Creek Hospital

Hi Joel,

On behalf of Mike Hoefer, please find attached the Concept Plan for the proposed Northern Health Redevelopment of Dawson Creek Hospital.

Please do not hesitate to contact me if you require any further information in regard to this project or concept plan submission.

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Director, Capital Development and Projects
Northern Health
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Prince George, BC V2L 5B8
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Cell: 250.612.2195
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albert.sommerfeld@northernhealth.ca

Integrity - Stewardship - Quality

Please note: Cora-Lee Mayert provides administrative support within my portfolio. Her phone number is 250.565.2351 and email is cora-lee.mayert@northernhealth.ca



Mission Statement—Our Purpose

Through the efforts of our dedicated staff and physicians, in partnership with communities and organizations, we provide exceptional health services for Northerners.

Organizational values

The beliefs that guide our work

We treat people with:

- Respect: honouring diversity and treating people fairly
- Compassion: caring genuinely
- Empathy: understanding and earning trust

We demonstrate:

- Integrity: ensuring open, honest, ethical behaviour
- Stewardship: showing transparent, responsible and effective use of resources
- Quality: providing exceptional service guided by evidence

We work in a spirit of:

- Collaboration: working to better serve the people of Northern BC
- Innovation: learning and finding better ways to deliver health care





Vision - a picture of 2015

Northern Health leads the way in promoting health and providing health services for Northern and rural populations.

- **Northern Health** is known for our strong primary health care system. People experience seamless and coordinated service. The “Primary Care Home”^{*} is the foundation for multidisciplinary health care and helps people navigate across services.
- **Northern Health** involves people and their families in their own health and health care. Individuals and families feel respected and are treated compassionately.
- **Northern Health** provides high-quality health services, using evidence and innovation, to meet the needs of our Northern and rural populations. We are known for the creativity of our staff and physicians and for our innovative use of technology to care for people as close to home as possible.
- **Northern Health** is recognized as an outstanding place to work, learn, and grow. We foster a safe and healthy work environment. Education and development of people in the north, for the north, attracts and retains staff and physicians.
- **Northern Health** works with communities and organizations to support Northern people to live well and prevent injury and illness. The health status of Northern people is improving faster than the rest of BC.

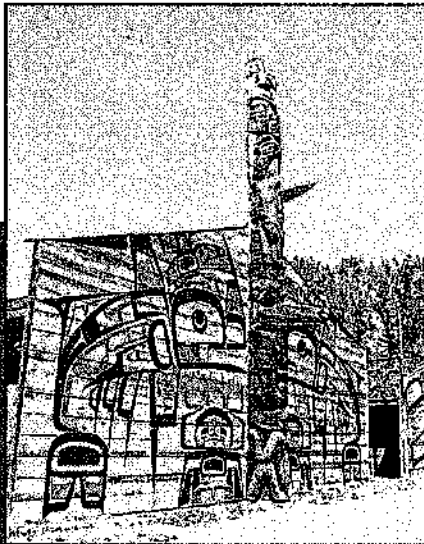
^{*} A “Primary Care Home” is where people establish a long-term relationship with a multidisciplinary team, and through this team, receive health care and are supported in managing their own health.

Integrated accessible health services

Northern people will have access to integrated health services, built on a foundation of primary health care.

We will:

- Partner with others to establish multi-disciplinary “Primary Care Homes” where people will access coordinated health services.
- Partner with Aboriginal people to build a health system that honours diversity and provides service in a culturally relevant manner.
- Build efficient and effective secondary and specialty services which are aligned with the “Primary Care Home” and designed to meet the needs of Northern populations.
- Develop and implement strategies that improve service provider collaboration.
- Measurably improve satisfaction with the health services provided by Northern Health.



A focus on our people

Northern Health will create a dynamic work environment that engages, retains and attracts staff and physicians.

We will:

- Measurably improve staff and physician engagement within Northern Health.
- Establish a culture of workplace health and safety.
- Establish and implement an innovative retention strategy that includes:
 - Developing and supporting effective, innovative leaders and managers who will guide our organization now and in the future.
 - Educating, developing, and mentoring our staff internally and through partnerships with academic and other organizations.
 - Providing clear expectations of staff through performance planning.
- Develop and implement an innovative recruitment strategy.

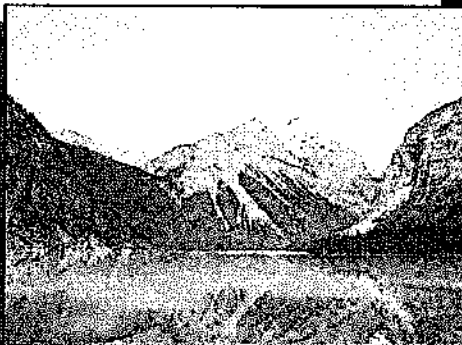


A population health approach

Northern Health will lead initiatives that improve the health of the people we serve.

We will:

- Work with communities and organizational partners to identify and act on key issues where a population health approach can have a significant positive impact on the health of Northern people.
- Work in partnership with our staff and physicians to create initiatives that foster a safe, healthy, and environmentally responsible workplace.
- Use population health evidence to inform health service planning and resource allocation.



High-quality services

Northern Health will ensure quality in all aspects of the organization.

We will:

- Establish a culture of continuous quality improvement and patient safety.
- Establish the organizational structures and processes required for effective decision making.
- Foster a learning environment and engage in research, in partnership with academic organizations.
- Strengthen our capacity to manage the change needed to improve quality.
- Identify and manage risks to the organization and strengthen our preparedness for emergencies.





“Through our dedicated physicians and staff, it is the vision of Northern Health to deliver a comprehensive and sustainable system of health care across the region. Our values support a North that reflects healthy lifestyles and a place where everyone has access to primary care, and it is our mission to develop the solutions that improve the overall quality of health for Northerners.”

— Dr. Charles Jago
Northern Health Board Chair



northern health
the northern way of caring

Visit us online: www.northernhealth.ca

Reorder#10-300-4127 Rev12/09mac

Bell, Mark J HLTH:EX

From: Postans, James HLTH:EX
Sent: Monday, September 21, 2015 3:24 PM
To: Palmer, Joel HLTH:EX
Cc: Moen, Shelley L HLTH:EX; Bell, Mark J HLTH:EX
Subject: RE: Northern Health Concept Plan Submission for Dawson Creek Hospital

I will update accordingly in our slide deck.

s.13,s.17

James

From: Palmer, Joel HLTH:EX
Sent: Monday, September 21, 2015 2:30 PM
To: Postans, James HLTH:EX
Cc: Moen, Shelley L HLTH:EX; Bell, Mark J HLTH:EX
Subject: FW: Northern Health Concept Plan Submission for Dawson Creek Hospital

I guess we'd better update our estimated cost pressures.....

From: Sommerfeld, Albert [<mailto:Albert.Sommerfeld@northernhealth.ca>]
Sent: Monday, September 21, 2015 8:36 AM
To: Palmer, Joel HLTH:EX
Cc: Hoefer, Michael; XT:HLTH De Croos, Mark; Bell, Mark J HLTH:EX; Good, Jeff PSBC:EX; Steele, Rick PSBC:EX
Subject: Northern Health Concept Plan Submission for Dawson Creek Hospital

Hi Joel,

On behalf of Mike Hoefer, please find attached the Concept Plan for the proposed Northern Health Redevelopment of Dawson Creek Hospital.

Please do not hesitate to contact me if you require any further information in regard to this project or concept plan submission.

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Bell, Mark J HLTH:EX

From: Sommerfeld, Albert <Albert.Sommerfeld@northernhealth.ca>
Sent: Monday, September 21, 2015 8:36 AM
To: Palmer, Joel HLTH:EX
Cc: Hoefer, Michael; XT:HLTH De Croos, Mark; Bell, Mark J HLTH:EX; Good, Jeff PSBC:EX; Steele, Rick PSBC:EX
Subject: Northern Health Concept Plan Submission for Dawson Creek Hospital
Attachments: Concept Plan Ministry Submission Cover - DCDH.pdf; 2015 09 09 - Dawson Concept Plan FINAL DRAFT.pdf

Hi Joel,

On behalf of Mike Hoefer, please find attached the Concept Plan for the proposed Northern Health Redevelopment of Dawson Creek Hospital.

Please do not hesitate to contact me if you require any further information in regard to this project or concept plan submission.

Albert Sommerfeld P.Eng MBA
Director, Capital Development and Projects
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Please note: Cora-Lee Mayert provides administrative support within my portfolio. Her phone number is 250.565.2351 and email is cora-lee.mayert@northernhealth.ca

September 17, 2015

Joel Palmer, Executive Director, Capital Services
Ministry of Health, Capital Services Branch
6-1, 1515 Blanshard Street
Victoria, BC, V8W 3C8

Re: Concept Plan Submission, Dawson Creek District Hospital Redevelopment Plan

Dear Joel:

Please find attached the Concept Plan submission for the redevelopment of the Dawson Creek District Hospital.

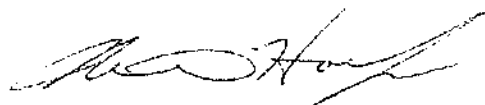
This Concept Plan was prepared with the support of Partnerships BC in conjunction with Stantec; based on their master planning. **s.13,s.17**

s.13,s.17

s.13,s.17

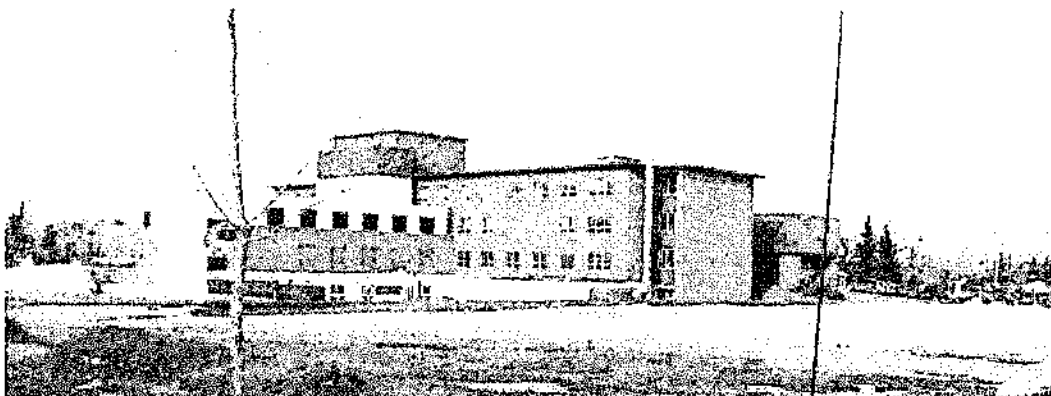
My department is available at your convenience for discussion as required.

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Hoefler", written in a cursive style.

Mike Hoefler, Regional Director, Capital Planning and Support Services
Northern Health

MH:nh



Dawson Creek & District Hospital Concept Plan

Confidential Draft

September 2015

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PURPOSE

The purpose of this Concept Plan, prepared by Northern Health (the Authority) and Partnerships BC, is to document the need for capital investment at the Dawson Creek and District Hospital (the Project), to outline proposed next steps, and to seek approval to proceed to a full business plan for the Project.

1 EXECUTIVE SUMMARY

The Dawson Creek & District Hospital (the Hospital) is a vital hub for health care delivery in the northeast area of British Columbia. In conjunction with other facilities in the region, the Hospital provides a wide range of services to a diverse population. It is the community referral hospital within the Peace River South Local Health Area, supporting the Chetwynd Hospital and Health Centre and the Tumbler Ridge Community Health Centre. The Hospital is also the regional referral centre of the Northeast Health Service Delivery Area (NHSDA) for inpatient mental health services.

The Hospital has current constraints related to size, lay-out and physical deterioration that affect health care delivery today and will limit the ability of the Authority to provide needed services in the future.

s.13,s.17

Page 106 to/à Page 108

Withheld pursuant to/removed as

s.13;s.17

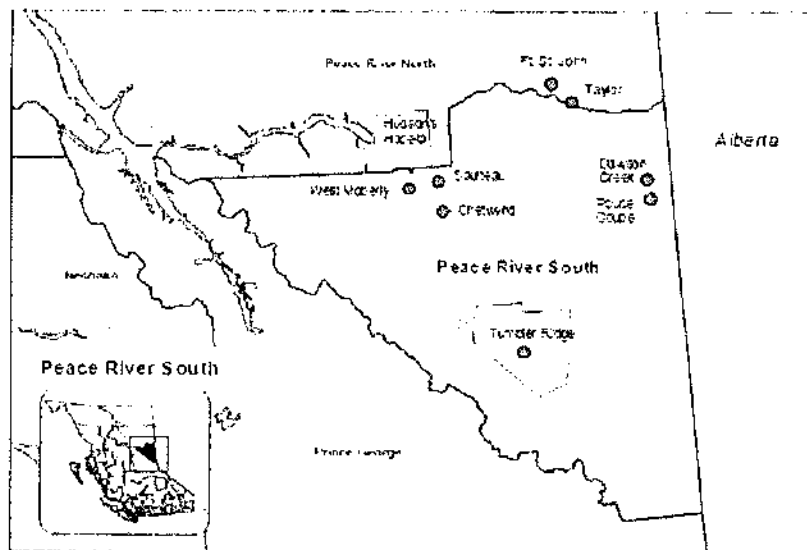
3 STRATEGIC CONTEXT

The Hospital is a vital hub for health care delivery in the northeast area of British Columbia. In conjunction with other facilities in the region, the Hospital provides a wide range of services to a diverse population.

3.1 THE COMMUNITY

The Hospital is located within the City of Dawson Creek. The City is home to more than 11,000 people and is located approximately 412 km northeast of Prince George and 73 km southeast of Fort St. John.

Figure 1: Peace River District



Map Credit: adapted from BC Stats: Regional Socio-economic Profiles and Indices, 2009.

Both the City and the larger Peace River District have experienced growth of almost eight percent and almost 9 per cent respectively over the past decade, as demonstrated in Table 1.

Table 1: Population Growth in Dawson Creek and the Peace River District

	2001	2006	2011
City of Dawson Creek	10,740	10,994	11,583
Peace River District	55,080	58,264	60,082

Source: Dawson Creek Community Profile, 2014

Dawson Creek is a business, tourism and educational hub for the northeast area of the province. The Dawson Creek Campus of Northern Lights College is one of eight campuses that serve the largest geographical area of any educational institution in the province. Dawson Creek is Mile 0 on the Alaskan Highway and therefore a tourism gateway community to the North. In 2012, 14,957 visitors stopped in at the Dawson Creek Visitor Information Centre.

This business-minded community, which is comprised of a stable mix of entrepreneurs, has a diverse economy relying on agriculture, oil and gas, forestry, and tourism. Over the past three years, Dawson Creek has seen growth and development, as evidenced by the increase in construction and building permits described in Table 2. The rapidly developing liquefied natural gas industry is expected to drive even higher rates of growth in the future¹. This growth may be moderated given the recent downturn in energy prices.

Table 2: Construction Values and Building Permits 2008 – 2014 (millions)

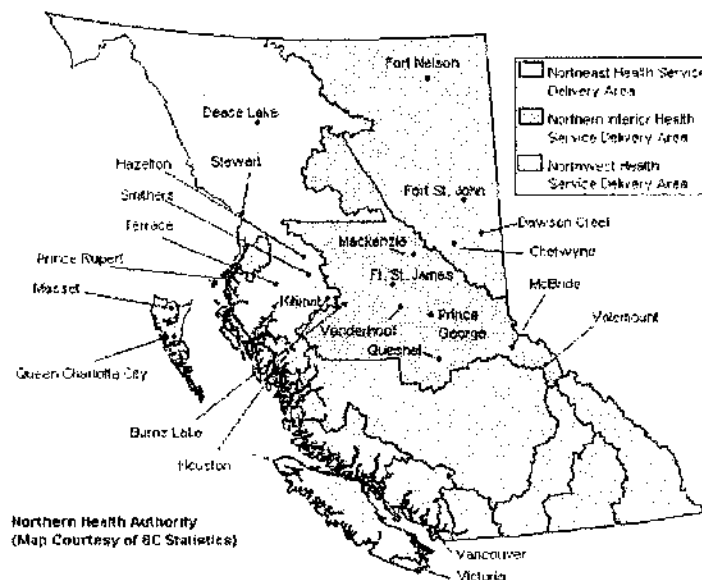
	2008	2009	2010	2011	2012	2013	2014
Total Value of Construction	\$55.4	\$36.2	\$49.4	\$57.5	\$33.2	\$20.3	\$56.8
Total Building Permits	142	130	125	144	117	114	188

Source: Dawson Creek Community Profile 2014

3.2 HOSPITAL SERVICES

As shown in Figure 2, the Hospital is within the Peace River South Local Health Area which is a part of the Northeast Health Service Delivery Area of Northern Health.

Figure 2: Northern Health Authority



The Hospital is the community referral hospital within the Peace River South Local Health Area, supporting the Chetwynd Hospital and Health Centre and the Tumbler Ridge Community Health Centre. The Hospital is also the regional referral centre of the Northeast Health Service Delivery Area for inpatient mental health services. The Hospital employs 178 full time equivalents.

¹ Industrial Development Studies, Northern Health

The Hospital is an integral component of the Northern Health system, supporting the vision outlined in the Authority's 2009-2015 Strategic Plan attached as Appendix C.

As a community referral hospital serving both the City of Dawson Creek and the surrounding local health area, the Hospital provides a wide range of services to a diverse population. The 8,538 Component Gross Square Metres (CGSM) Hospital provides outpatient, day patient, emergency care, surgical, post-anesthetic care, medical imaging, medical, surgical, mental health services, and maternity inpatient care, and supporting services².

Table 3: Current Funded Beds and Spaces

Bed or Space Type	Number
Medical	14
Surgical	10
ICU	2
Maternity	3
Recovery beds	3
Operating Theatres	2
Trauma Rooms	1
Mental Health Beds	15
TOTAL	50

The Hospital Building was built in the late 1950s with an extensive single storey (and basement) addition constructed in 1995. The addition, located to the north of the original facility, is linked via service corridors. The original Hospital, which houses all of the inpatient wards, consists of four wings forming a cross-shaped building footprint. The original Hospital is a three-storey structure with the remaining areas having either one or two storeys as well as a basement.

A small dormitory block is located to the east of the original structure and is linked by a glazed corridor. This structure has limited use due to safety concerns. A mechanical and electrical services building is located to the north east of the building addition and is a standalone structure. It is linked to the main facility by an underground access corridor from the addition basement. Mechanical penthouses are located in various roof top locations with the main penthouse located above the third floor of the original building.

The current Hospital building, including the 1995 addition, contains the departments, services and amenities described in Figure 3.

Figure 3: Current Hospital Departments

² See Stantec Master Plan for detailed services description.

Original Hospital Building Departments				
Third Level	Administration	Red Cross Storage		
Second Level	Medical Ward Oncology Department	Surgical Ward Maternity Ward	1995 Addition	
Main Level	Orthopedics Health Records OR Department Digital Imaging Server Room	Meeting Rooms IT Ladies' Auxiliary Sleeping Rooms	Laboratory Rehabilitation Psychiatric Services Admitting Ambulatory Care	Diabetes Education Respiratory Therapy Emergency Intensive Care Unit
Basement Level	Food Services Laundry Central Sterilizing HSS BC Storage Maintenance Shops Main Boiler Room	Housekeeping Offices Electrical Rooms Comm. Room Change Rooms	HSS BC Storage Northern Health Pandemic Storage Maintenance Storage General Hospital Storage	Mechanical Room Future Elevator Shaft Pharmacy Medical School

3.3 NEED FOR INVESTMENT

The Hospital has current constraints related to size, lay-out and physical deterioration that affect health care delivery today and will severely limit health care delivery in the near future.

As part of a master planning process undertaken between 2012 and 2015, the Authority and Stantec analyzed considerable data sources and studies, including utilization data from programs and services, patient days, occupancy rates, number of procedures, demographic information, and historical workload data. The master planning process also took into consideration provincial plans for cancer care, renal care and best practice guidelines for occupancy and length of stay.

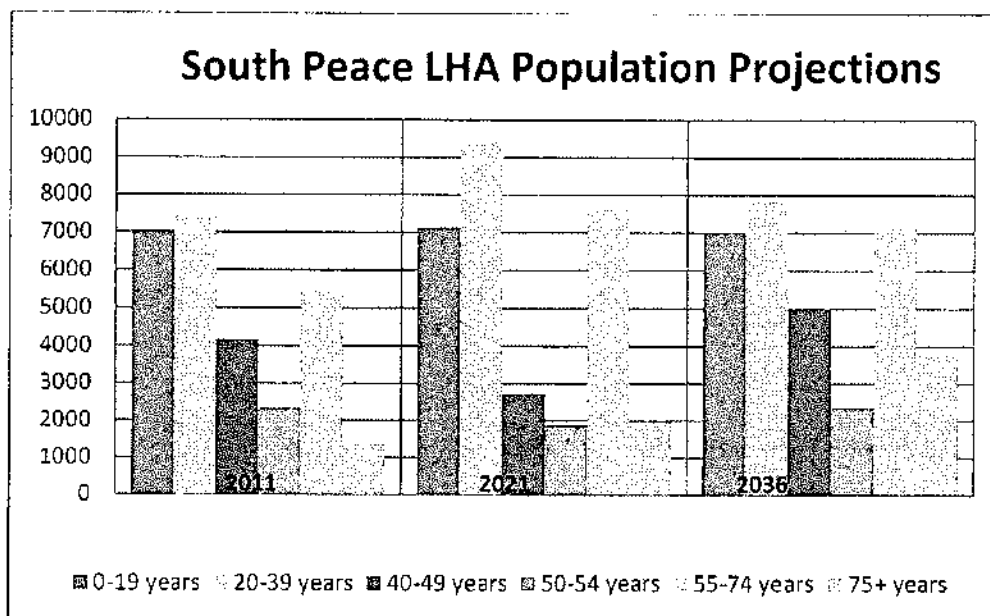
s.13

3.3.1 Operational Efficiencies

In common with other areas of the province, demographics for the Northern Health region are predicted to shift significantly over the coming decades. Total population growth for the Northern Health region from 2007 to 2023 is forecasted at 5.1 per cent. However, overall growth rate is comprised of reductions across all age cohorts from 0 – 55, balanced by a significant (24.8 per cent) increase in the 55-64 age cohort and a very substantial increase of 109 per cent in the 65+ age cohort³.

Of note, for the Peace River South Local Health Area in which the Hospital is located, the overall population is predicted to increase by 22.3 per cent from 2011 to 2035, driven largely by a 64.6 per cent increase in the 55 – 74 age cohort and a 153.7 per cent increase in the 75+ age cohort.

Figure 4: South Peace LHA Population Projections



Source Stantec Master Plan (PEOPLE September 2011)

Page 114 to/à Page 136

Withheld pursuant to/removed as

s.13;s.17

APPENDIX A MASTER PLAN AND MASTER PROGRAM

Provided as a separate document.

APPENDIX B PROGRAM COST ESTIMATE

Provided as a separate document.

APPENDIX C NORTHERN HEALTH STRATEGIC PLAN

Provided as a separate document.

FACT SHEET

Dawson Creek and District Hospital

ISSUE

Update on new Inpatient Addition and Renovations at Dawson Creek and District Hospital (DCDH).

KEY FACTS

- A new Inpatient Addition and Renovations at DCDH is one of the highest priority projects in the Northern Health Authority's (NHA) capital plan for capital funding consideration.
- Currently, the redevelopment or replacement of Mills Memorial Hospital in Terrace is the highest priority in NHA's capital plan.
- NHA submitted a Concept Plan to the Ministry in the fall of 2015.
- Funding for a major capital project for the DCDH is not included in the Ministry's current 10-year capital plan.
- The proposed Inpatient Addition and Renovation project at DCDH is subject to the provincial prioritization process and availability of capital funding.

Background

- DCDH is a full service community hospital that has 32 acute care beds and 15 regional adult psychiatric beds.
- Services include 24/7 emergency, ICU, medical and surgical inpatient care, and day surgery, as well as the specialty services of respiratory therapy, rehab therapy, diabetic education, primary care, general surgery, diagnostics including lab and medical imaging with CT, cancer care, and visiting specialists including urology and dermatology, obstetrics and gynecology, and pediatrics.
- DCDH was constructed in 1960 with an addition in 1995.
- Since 2001, approximately \$10 million has been invested in various upgrades at DCDH including: a new CT scanner, renovations to food/laundry services and the loading dock and an expansion and relocation of the pharmacy.
- The concept planning stage followed Master Planning completed in 2013 and updated in 2014.
- Master planning is a process wherein stakeholders are engaged to work towards the development of a master plan for health services for the community for the future.
- The process examined how health services could be aligned to address growth in the community, projected shifts in demographics, and anticipated changes in health care delivery through to 2036.

FINANCIAL IMPLICATIONS

N/A

Approved by:

Joel Palmer, Capital Services Branch; September 4, 2015

Manjit Sidhu, Finance and Corporate Services Division; September 9, 2015

Bell, Mark J HLTH:EX

From: Postans, James HLTH:EX
Sent: Friday, August 28, 2015 4:02 PM
To: Bell, Mark J HLTH:EX; Palmer, Joel HLTH:EX
Subject: RE: Discuss NH planning projects, capital submission of concept plans, priority investment list for NH

As far as I know we never gave NHA the green light to proceed with any concept plan except for Mills.

We have been clear with NHA that there is no \$ in the capital plan to entertain looking at any of these concept plans let alone allow a business plan to proceed.

For Mills I understand we were directed by government to allow the concept plan to proceed however again we were clear that this did not constitute approval.

NHA may have felt these plans were in progress once the direction letter was issue by Manjit so they may have felt they could proceed with completing them however they did not check with us on this fact.

Happy to be involved in any call next week.

James

From: Bell, Mark J HLTH:EX
Sent: Friday, August 28, 2015 3:30 PM
To: Palmer, Joel HLTH:EX
Cc: Postans, James HLTH:EX
Subject: RE: Discuss NH planning projects, capital submission of concept plans, priority investment list for NH

I am somewhat new to the NH file, but I am not aware of NH receiving approval to produce concept plans for those facilities

On our call with Mike in June, he advised us that draft CPs had been initiated for Dawson Creek and Fort St James.

I think the questions you have are all good ones for a call with Mike.

Should I ask him to set one up and invite James and provide Mike with the other items we would like to discuss ?

Mark Bell

Director Major Projects | Capital Services Branch | Ministry of Health
Phone: 250-952-1640 Email: Mark.J.Bell@gov.bc.ca

Please note my new phone number effective June 11th 2015

From: Palmer, Joel HLTH:EX
Sent: Friday, August 28, 2015 3:01 PM
To: Bell, Mark J HLTH:EX
Cc: Postans, James HLTH:EX
Subject: FW: Discuss NH planning projects, capital submission of concept plans, priority investment list for NH

Hi Mark

Was approval given for NH to proceed with CPs for Dawson, Ft St James or Quesnel? Or will this mtg involve NH asking for that approval?

I'm curious to know what we think the next steps for MMH actually are. I'm not inclined to spend a lot of planning money until we have some confidence that the project could actually fit into the ten-year capital plan.

I would also like to discuss with them:

- MRIs event(s)
- PINES update (funding source)
- Discussion of projects proposed to be funded from Restricted Operating (MRI, Masset, etc)

James, would be worthwhile for you to participate in this call as well.

Joel

From: Hoefer, Michael [<mailto:Michael.Hoefer@northernhealth.ca>]

Sent: Friday, August 28, 2015 12:45 PM

To: Bell, Mark J HLTH:EX

Cc: Palmer, Joel HLTH:EX; XT:HLTH De Croos, Mark; Mayert, Cora-Lee

Subject: Discuss NH planning projects, capital submission of concept plans, priority investment list for NH

Mark Bell:

We are working on a number of planning projects for priority investments. I wonder if a brief discussion with yourself and Joel perhaps week after next on this topic as we would like to update Joel from our summer discussions, and on what is coming your way here in September.

Agenda Draft:

1. Priority Investment Listing from NH
 - a. Prince George Complex Care/Dementia Care, discussions with Deputy Minister
2. Fort St James Concept Plan
3. Dawson Creek Concept Plan
4. Quesnel Concept Plan
5. Mills Memorial – next steps

Mike

Thank You,
Mike Hoefer, BMLSc., MHA
Regional Director, Capital Planning and Support Services
Northern Health Authority
Suite 300-299 Victoria Street, Prince George, V2L 5B8
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NHA Capital Plan Priorities

Aug 6th 2015

Call w/ Albert Sommerfeld.

#1 Mills cost est BTY ^{s.13,s.17}
75 beds s.13,s.17

DC + Quesnel projects refreshed now
s.13,s.17

s.13,s.17

#2 Dawson Creek. working on CP

#3 Fort St. James - Stuart Lake
s.13,s.17

Jan 2015

#4 Quesnel
s.13

Bell, Mark J HLTH:EX

From: Sommerfeld, Albert <Albert.Sommerfeld@northernhealth.ca>
Sent: Thursday, August 6, 2015 8:42 AM
To: Bell, Mark J HLTH:EX
Subject: RE: NHA capital plan

Sure that works.

thanks

Albert Sommerfeld

250 649 7645

From: Bell, Mark J HLTH:EX [mailto:Mark.J.Bell@gov.bc.ca]
Sent: Thursday, August 06, 2015 8:40 AM
To: Sommerfeld, Albert
Subject: RE: NHA capital plan

Hi Albert,

Sorry I didn't get back to you yesterday.

I would be happy to have a quick chat this morning if that works for you, how about 10am ? I can call you

FYI, ^{s.22} and returning to the office Mon Aug 17th

Thanks

Mark Bell

Director Major Projects | Capital Services Branch | Ministry of Health
Phone: 250-952-1640 **Email:** Mark.J.Bell@gov.bc.ca

Please note my new phone number effective June 11th 2015

From: Sommerfeld, Albert [mailto:Albert.Sommerfeld@northernhealth.ca]
Sent: Wednesday, August 5, 2015 12:04 PM
To: Bell, Mark J HLTH:EX
Subject: RE: NHA capital plan

Hi Mark, did you want to discuss this week sometime? My calendar is open this week

Albert Sommerfeld

250 649 7645

From: Bell, Mark J HLTH:EX [mailto:Mark.J.Bell@gov.bc.ca]
Sent: Friday, July 24, 2015 10:54 AM
To: Hoefer, Michael
Cc: Sommerfeld, Albert
Subject: RE: NHA capital plan

Thanks Mike, much appreciated

Mark Bell

Director Major Projects | Capital Services Branch | Ministry of Health
Phone: 250-952-1640 Email: Mark.J.Bell@gov.bc.ca

Please note my new phone number effective June 11th 2015

From: Hoefer, Michael [<mailto:Michael.Hoefer@northernhealth.ca>]
Sent: Friday, July 24, 2015 10:46 AM
To: Bell, Mark J HLTH:EX
Cc: Sommerfeld, Albert
Subject: RE: NHA capital plan

s.17

We are debating

these amounts and what parts go for ask in concept plan form. We need to update the numbers and timing accordingly so you will have this better planning information. Problem being since plan approval in Feb 2015, we have collected more data and done work that needs to be updated for you to have a better sense.

s.17

Hope to have a draft to you by end of August, Albert is back in office Aug 4th, please feel free to discuss with him..... AS I am not back until the 11th.

Mike

Thank You,
Mike Hoefer, BMLSc., MHA
Regional Director, Capital Planning and Support Services
Northern Health Authority
Suite 300-299 Victoria Street, Prince George, V2L 5B8
Tel: 250-565-2303
Cell: 250-565-5110 Fax: 250-565-2753
E-mail: Michael.Hoefer@northernhealth.ca



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From: Bell, Mark J HLTH:EX [<mailto:Mark.J.Bell@gov.bc.ca>]
Sent: Friday, July 24, 2015 10:38 AM
To: Hoefer, Michael
Subject: RE: NHA capital plan

Ok thanks Mike. We are trying to get a sense of all the unfunded pressures (magnitude and timing) that are out there. The materials you mention would be very helpful for us whenever they are ready to share.

Did you say that Dawson Creek was more s.17

Mark Bell

Director Major Projects | Capital Services Branch | Ministry of Health
Phone: 250-952-1640 Email: Mark.J.Bell@gov.bc.ca

Please note my new phone number effective June 11th 2015

From: Hoefer, Michael [<mailto:Michael.Hoefer@northernhealth.ca>]
Sent: Friday, July 24, 2015 10:03 AM
To: Bell, Mark J HLTH:EX
Subject: RE: NHA capital plan

Yes, we are working with our CFO to prepare some materials on this. Its not quite ready for prime time but it will cover all the priority investments that are coming and where we are at with concept plans, master planning ect. Will be a couple more weeks as I am away next 2.
Mike

Thank You,
Mike Hoefer, BMLSc., MHA
Regional Director, Capital Planning and Support Services
Northern Health Authority
Suite 300-299 Victoria Street, Prince George, V2L 5B8
Tel: 250-565-2303
Cell: 250-565-5110 Fax: 250-565-2753
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From: Bell, Mark J HLTH:EX [<mailto:Mark.J.Bell@gov.bc.ca>]
Sent: Friday, July 24, 2015 9:56 AM
To: Hoefer, Michael
Subject: NHA capital plan

Hi Mike,

When we spoke about NHA master planning updates a few weeks ago, I mentioned that I had an older version of NHA's capital plan. I found the one I had but it is from way back in 2010/11.

Do you have anything more recent that you could share with me ? something that reflects the projects we discussed ?
(Mills, Dawson Creek, GR Baker, Stuart Lake, UHNBC)

Thanks

Mark Bell

Director Major Projects | Capital Services Branch | Ministry of Health
Phone: 250-952-1640 Email: Mark.J.Bell@gov.bc.ca

FACT SHEET

Dawson Creek and District Hospital

ISSUE

Update on new Inpatient Addition and Renovations at Dawson Creek and District Hospital (DCDH).

KEY FACTS

- A new Inpatient Addition and Renovations at DCDH is one of the highest priority projects in the Northern Health Authority's (NHA) capital plan for capital funding consideration. Redevelopment/replacement of Mills Memorial Hospital in Terrace is the highest priority in NHA's capital plan.
- A major capital project for the DCDH is not currently included in the Ministry's 10-year capital plan.
- The new Inpatient Addition and Renovation project at DCDH is subject to the provincial prioritization process and availability of capital funding.
- NHA advises work on the Concept Plan for the project is underway to further define the scope and capital cost of the project. Completion is planned for fall 2015.

Background

- DCDH is a full service community hospital that has 32 acute care beds and 15 regional adult psychiatric beds.
- Services include 24/7 emergency, ICU, medical and surgical inpatient care, and day surgery, as well as the specialty services of respiratory therapy, rehab therapy, diabetic education, primary care, general surgery, diagnostics including lab and medical imaging with CT, cancer care, and visiting specialists including urology and dermatology, obstetrics and gynecology, and pediatrics.
- DCDH was constructed in 1960 with an addition in 1995.
- The hospital has a facility condition index (FCI) of 0.39 and was last assessed in 2013. The lower the FCI value, the better condition that a facility is in, and the lesser need for renovations or renewal relative to the facility's value.
- Since 2001, approximately \$10 million has been invested in various upgrades at DCDH including: a new CT scanner, renovations to food/laundry services and the loading dock and an expansion and relocation of the pharmacy.
- The concept planning stage follows Master Planning completed in 2013 and updated in 2014.
- Master planning is a process wherein stakeholders are engaged to work towards the development of a master plan for health services for the community for the future. The process examines how health services can be aligned to address growth in the community, projected shifts in demographics, and anticipated changes in health care delivery through to 2036.

FINANCIAL IMPLICATIONS

N/A

Approved by:

Joel Palmer, Capital Services Branch; July 6, 2015

Manjit Sidhu, Finance and Corporate Services Division; July 7, 2015

Moen, Shelley L HLTH:EX

From: Palmer, Joel HLTH:EX
Sent: Monday, July 13, 2015 5:21 PM
To: Stusek, Glen HLTH:EX; Moen, Shelley L HLTH:EX; Perisic, Dragana HLTH:EX; Postans, James HLTH:EX
Subject: FW: not in plan summary
Attachments: Projects not in current 10 year plan.xlsx

Thanks for this Glen, this is a good start.

I will set up some time Tuesday afternoon for us to discuss other potential pressures that should be included on this list, including some smaller items like equipment or systems. I would also like to discuss HA restricted funds and commitments against those funds.

Joel

From: Stusek, Glen HLTH:EX
Sent: Monday, July 13, 2015 4:32 PM
To: Palmer, Joel HLTH:EX
Subject: not in plan summary

Hi Joel –

I've started up a new worksheet to summarize potential projects not in the current 10 year capital plan. This worksheet can then be added to the bottom of the summary reflecting current cash flows for the projects in the plan, resulting in an overall document similar to the one you discussed with Manjit.

The attached file contains the new worksheet, which uses the cash flow estimates used in November/14 for the indicated projects. I've added in 24/25 so it shows the full 10 years, plus the amounts for 25/26 and 26/27 ^{s.13}. I've also included columns to indicate whether it's a PI or RCI project and the applicable HA, to assist with review and summarization of information. I've also included a copy of the earlier worksheet from the Nov/14 capital plan update (not included in the March/15 update)

We need to review and update the cash flows and estimates as necessary, as well as add in additional possible projects/pressures, but this should help frame and start the necessary discussion

Thanks

Glen Stusek | Director | Decision Support - Capital Finance | Finance and Corporate Services | Ministry of Health | PO Box 9647 STN Prov Govt
Victoria BC V8W 9P4 | P: 250 952 1646 | C: 250 216 6831 | F: 250 952 2873 |

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Ministry of Health
Ten-Year Capital Plan 2015/16 - 2024/25
Estimated Provincial Capital Spending Only - Projects Not Included in Current 10-Year Capital Plan
\$000s

NEW PROJECTS NOT INCLUDED IN CURRENT 10 YEAR CAPITAL PLAN	PROJECT TYPE	Health Authority					Plan Period (15/16 - 18/19)								10-Year Plan Total			
			2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	Total			
s.13,s.17																		

TABLE 3 - REVISED 10 YEAR PLAN (2014/15 TO 2023/24) AND PROJECTS NOT INCLUDED IN THE PLAN

REVISED OCTOBER 30, 2014 RE: ADDITIONAL PROJECTS NOT IN PLAN

Ministry of Health
Capital Budget 2015/16 - 2017/18 Update Submission
Provincial Capital Spending Only
\$000s

Provincial Capital Spending based on revised plan since Q1 14/15													
Row	Description	2014/15	2015/16	2016/17	2017/18	Plan Period (14/15 - 17/18)	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	10-Year Plan Total
s.13,s.17	PRIORITY INVESTMENTS CURRENTLY UNDERWAY												
s.13,s.17	PRIORITY INVESTMENTS IN PLANNING												

NEW PROJECTS NOT INCLUDED IN CURRENT 10 YEAR CAPITAL PLAN

s.13,s.17

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s.13;s.17

NHA Planning/Priorities/Projects

June 23/2015

Mike H. & Albert Sommerfeld.

Terrace - MMH

CP to gov't

expecting to get permission from DM to proceed to BP
prelimin cost ^{s.13,s.17}

work w/PBC - Cathy Ulrich direction/targets ^{s.13,s.17}

- project scope

- costing add ons: inflation, location

- w/kg with Program areas re scope

* update CP with new costing?

Mike directed to update in BP (not redo CP)

UBCM may be hot bed re Northern Health developments

Dawson Creek District Hospital

s.13,s.17

- inpatient unit needs replacing

1980's building in reasonable shape

CP in draft form - meeting BTY tomorrow re costing

high political pressure

s.17

* pressure to have EP done prior to UBCM in Fall

Quesnel - Gil Baker

hosp between Hwy and River - (and locked
s.13,s.17

3RD largest operation behind FST and PG

s.13

s.13

beds (28 now)
s.13 OR's (2 now)

Existing Res Care Facility is next to
s.17

Fort St James - Stuart Lake Hosp. (4th Priority)

was modular facility - no sprinklers
pulling them in now.

4-5 acute bed } similar to QCI
8-12 res care }

+ primary care centre (new initiative - EOI)

currently in - Medical Clinic
s.13,s.17

Res Care

since 5000 beds $\Rightarrow$ no additional res care capacity done
s.13

UHNBC
s.13

Chelmsford.
s.13



NEWS RELEASE

Northern Health implementing plan to address hospital capacity issues in Dawson Creek

June 25, 2015

Northern Health is implementing a plan to address capacity issues currently being experienced at the Dawson Creek and District Hospital. The plan includes a continued focus on work currently underway within the hospital and the implementation of new initiatives to increase community capacity.

The reasons for the increased demand are complex and can be attributable to a number of reasons such as higher than normal admissions due to aging of the population and increased incidence of chronic diseases, nursing and specialty nursing recruitment and retention challenges, and the need for increased community services.

"We are working with the physicians and health care professionals in the community to develop some processes to take the pressures of the hospital," said Angela De Smit, Northern Health's Chief Operating Officer for the northeast. "It is not one thing, rather a number of actions that will help solve some of the challenges that we face."

In consultation with physicians, Northern Health will be implementing initiatives to help manage capacity pressures on the facility. New initiatives include:

- Establishing improved patient flow processes, including establishing expected dates of discharge and discharge planning processes.
- Developing a rapid mobilization of home support services out of the emergency department.
- Developing a model for dedicated surgical beds and staffing accordingly.
- Creating new permanent full time and part time nursing positions and a recruitment strategy to help with difficult to fill nursing positions.
- Continuing recruitment of physicians to Dawson Creek in partnership with physicians, the community and the Northern Health physician recruiter dedicated to the northeast.
- Completing an evaluation residential care and assisted living capacity in the community, including how respite, adult day programs, and convalescent care is used.
- Continuing partnership with primary care providers including family practice physicians and nurse practitioners to strengthen the community services support for seniors and those living with chronic disease.

Northern Health is working on a long term plan for the replacement and redevelopment of the inpatient capacity at the Dawson Creek Hospital. Currently, a master planning process for this hospital was completed in 2014 that projects health care needs to 2036. The next step in this process is the completion of a concept plan which will be finalized by the fall 2015.

In addition, the Dawson Creek mayor and council are in the early stages of forming a health community committee. Northern Health will participate in that group as it discusses how communities can work with a range of local groups and the health authority on topics such as healthy communities, senior friendly design, physician recruitment and retention, and more.

Northern Health is asking the public for their support by using the emergency department appropriately. Northern Health's emergency rooms tend to patients who have experienced a sudden and/or unusual change in their health. This includes, but isn't limited to, breathing difficulties, severe bleeding or pain, broken bones, chest pain and eye injuries. Individuals who require emergency attention can call 9-1-1 for transport to the emergency department or can seek private transportation. Northern Health Connections bus service is also available for medical travel to and from communities and hospital facilities in northern B.C., and includes options for medical travel beyond the region as well.

Patients who aren't sure whether their condition would warrant an emergency room visit or need health advice can call

Northern Health implementing plan to address hospital capacity issues in Dawson Creek

HealthLink B.C. 8-1-1 or visit Healthlinkbc.ca. HealthLink B.C. provides non-emergency health information from nurses, dietitians, and pharmacists 24 hours a day, seven days per week. The public is also encouraged to utilize other community health services for non-immediate health care needs including their general practitioner or walk-in clinics.

Media Contact: NH media line – 1-877-961-7724



Bell, Mark J HLTH:EX

From: Moen, Shelley L HLTH:EX
Sent: Thursday, June 18, 2015 2:17 PM
To: Palmer, Joel HLTH:EX; Bell, Mark J HLTH:EX; Palmer, Joel HLTH:EX
Subject: FW: Briefing Notes for NH board on Master PLanning, Cencept PLans and Business Cases.
Attachments: 06.08 Master Planning Update (May 2015).pdf
Follow Up Flag: Follow up
Flag Status: Completed

Please find attached background information from Mike Hoefer in advance of our meeting next Tuesday.

S

From: Hoefer, Michael [<mailto:Michael.Hoefer@northernhealth.ca>]
Sent: Thursday, June 18, 2015 12:05 PM
To: Moen, Shelley L HLTH:EX
Cc: Sommerfeld, Albert
Subject: Briefing Notes for NH board on Master PLanning, Cencept PLans and Business Cases.

For our meetings with Joel, a bit more of a listing and update on where each planning job is at.
Mike

Thank You,
Mike Hoefer, BMLSc., MHA
Regional Director, Capital Planning and Support Services
Northern Health Authority
Suite 300-299 Victoria Street, Prince George, V2L 5B8
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Withheld pursuant to/removed as

s.13

Bell, Mark J HLTH:EX

From: Hoefer, Michael <Michael.Hoefer@northernhealth.ca>
Sent: Monday, June 15, 2015 10:05 AM
To: Moen, Shelley L HLTH:EX; Bell, Mark J HLTH:EX
Cc: XT:HLTH De Croos, Mark; Sommerfeld, Albert; Postans, James HLTH:EX; Palmer, Joel HLTH:EX; Buckland, Arthur HLTH:EX; Mayert, Cora-Lee
Subject: RE: Request meeting with Joel Palmer "Northern Health Planning Projects"

3 – 4 Tuesday next week, also Wednesday 11 am to 12 would work for me. I would like to see if we can do Video Conference as we have not met Joel as yet.

Mike

Thank You,
Mike Hoefer, BMLSc., MHA
Regional Director, Capital Planning and Support Services
Northern Health Authority
Suite 300-299 Victoria Street, Prince George, V2L 5B8
Tel: 250-565-2303
Cell: 250-565-5110 Fax: 250-565-2753
E-mail: Michael.Hoefer@northernhealth.ca



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From: Moen, Shelley L HLTH:EX [<mailto:Shelley.Moen@gov.bc.ca>]
Sent: Monday, June 15, 2015 10:00 AM
To: Hoefer, Michael; Bell, Mark J HLTH:EX
Cc: De Croos, Mark; Sommerfeld, Albert; Postans, James HLTH:EX; Palmer, Joel HLTH:EX; Buckland, Arthur HLTH:EX
Subject: RE: Request meeting with Joel Palmer "Northern Health Planning Projects"

Hi Mike -- we will schedule as requested. Do you have a particular date/time in mind to meet. Is early next week too late?

Thanks -Shelley

From: Hoefer, Michael [<mailto:Michael.Hoefer@northernhealth.ca>]
Sent: Monday, June 15, 2015 9:14 AM
To: Bell, Mark J HLTH:EX; Moen, Shelley L HLTH:EX
Cc: XT:HLTH De Croos, Mark; Sommerfeld, Albert; Postans, James HLTH:EX
Subject: Request meeting with Joel Palmer "Northern Health Planning Projects"

Mark/Shelley:

Albert and I would like to request a meeting with Joel to discuss NH Capital Planning, projects we are working on planning for, potential submissions in the fall of Concept Plans. We are working towards fall 2015 UBCM in September.

Topic list would be as follows:

- Mills Memorial Replacement, Terrace BC – Concept Plan submitted, moving to Business Plan in fall.
- Dawson Creek Hospital – Concept Plan in fall submission
- Quesnel, GR Baker Hospital – Concept plan in fall submission
- Fort St James – Concept plan in fall submission
- Fort St John Medical Clinic Purchase – Deputy Minister Stephen Brown

Shelley, could I also ask that when we meet to discuss the Pines Generator issue, we have Joel informed? It pertains to the Fort St John medical clinic issue above and would like him to be aware....

Thank you,

Mike

Thank You,

Mike Hoefer, BMLSc., MHA

Regional Director, Capital Planning and Support Services

Northern Health Authority

Suite 300-299 Victoria Street, Prince George, V2L 5B8

Tel: 250-565-2303

Cell: 250-565-5110 Fax: 250-565-2753

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Moen, Shelley L HLTH:EX

From: Wolsey, Ashley HLTH:EX
Sent: Tuesday, May 19, 2015 2:00 PM
To: Moen, Shelley L HLTH:EX
Subject: RE: Any updates on Dawson Creek hospital planning?

Thanks ☺

From: Moen, Shelley L HLTH:EX
Sent: Tuesday, May 19, 2015 1:58 PM
To: Wolsey, Ashley HLTH:EX
Subject: RE: Any updates on Dawson Creek hospital planning?

Hi Ashley – I'm fine with your suggested response.

Thank you.

Shelley

From: Wolsey, Ashley HLTH:EX
Sent: Tuesday, May 19, 2015 1:05 PM
To: Moen, Shelley L HLTH:EX
Subject: FW: Any updates on Dawson Creek hospital planning?
Importance: High

Hi Shelley,

Cindy from GCPE is looking for some wording the Minister can say out loud when asked about Dawson Creek.

I pulled the gist of the following wording from your fact sheet.

- A new Inpatient Addition and Renovations at DCDH is a high priority in the NHA's capital plan.
- The new Inpatient Addition and Renovation project at DCDH is not currently in the Ministry's 10 year capital plan, and the project is subject to the provincial prioritization process and availability of capital funding.
- NHA advises work on a Concept Plan for the project is underway to further define the scope and capital cost of the project. The Concept Plan should be completed by Fall 2015.

Let me know what you think...

Thanks!

From: MacDougall, Cindy GCPE:EX
Sent: Tuesday, May 19, 2015 12:34 PM
To: Wolsey, Ashley HLTH:EX
Subject: Any updates on Dawson Creek hospital planning?
Importance: High

Hi Ashley!

I'm putting together an issue scan and messages requested by MO on Dawson Creek.

Looking through recent issues there, I stumbles on NH's issue note on capital planning for the hospital there – this is what their messaging from last year says:

- Northern Health is working with the Ministry of Health and Peace River Regional Hospital District on concept planning for a potential capital project at the Dawson Creek and District Hospital.
 - Concept planning will then be submitted to the government for approval.
 - The concept planning process will determine scope of the capital project that will be put forward for approval in the business case stage by the regional hospital district and Government of B.C.
- The concept planning stage follows Master Planning that was completed in 2013
 - Master planning is a process wherein we engage a wide range of stakeholders to work towards the development of a master plan for health services for the community for the future
 - The planning process will assess how health services can be aligned to meet growth in the community, projected shifts in demographics, and anticipated changes in healthcare delivery through to 2035.

Where are we at with this project? Have we moved beyond concept planning? Can you give me a quick update by 2 p.m. please? I just need a quick explanation of where we're at.

Thanks!

Cindy MacDougall ~ Senior Public Affairs Officer ~ Government Communications and Public Engagement, Ministry of Health ~ 250 952-3552 ~ cell 250 920-8534 ~ Cindy.MacDougall@gov.bc.ca

Moen, Shelley L HLTH:EX

From: Bell, Mark J HLTH:EX
Sent: Monday, May 4, 2015 11:17 AM
To: Moen, Shelley L HLTH:EX
Cc: Postans, James HLTH:EX; Forsberg, Nicole A HLTH:EX
Subject: FW: Dawson Creek and District Hospital

FYI, see Mikes response. The fact sheet appears to be accurate.

CC'ing Nicole so she is aware that it can go into Finals folder and into the Estimates binder unless there are any required edits

Mark

From: Hoefer, Michael [<mailto:Michael.Hoefer@northernhealth.ca>]
Sent: Monday, May 4, 2015 10:49 AM
To: Bell, Mark J HLTH:EX
Subject: RE: Dawson Creek and District Hospital

Mark:

We are working on a concept plan for Dawson Creek. It will involve a major project to rebuild the inpatient beds and inpatient psychiatry. This is necessary because we have to replace the inpatient unit which is the oldest part of the hospital. I can confirm, this is NH's second priority project after Mills Memorial Concept plan which is already submitted. Our plan is completion of this concept plan in fall of 2015. Submission will require some internal approvals but that is the plan at this point.

Mike

Thank You,
Mike Hoefer, BMLSc., MHA
Regional Director, Capital Planning and Support Services
Northern Health Authority
Suite 300-299 Victoria Street, Prince George, V2L 5B8
Tel: 250-565-2303
Cell: 250-565-5110 Fax: 250-565-2753
E-mail: Michael.Hoefer@northernhealth.ca



www.northernhealth.ca

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From: Bell, Mark J HLTH:EX [<mailto:Mark.J.Bell@gov.bc.ca>]
Sent: Monday, May 04, 2015 9:22 AM
To: Hoefer, Michael
Subject: FW: Dawson Creek and District Hospital

Hi Mike,

Our fact sheet on the Dawson Creek and District Hospital makes a few statements that I am hoping you can confirm or correct as the case may be
Christine Rundell worked on this fact sheet ^{s.22} and we are unsure if the information is accurate.

The fact sheet states:

- A new Inpatient Addition and Renovations at DCDH is NHA's 2nd highest priority (with Mills Memorial being 1st)
- Development of a Concept Plan is underway and will be complete by Fall 2015

Thanks

Mark Bell

Director Major Projects | Capital Services Branch | Ministry of Health
Phone: 250-952-1518 Email: Mark.J.Bell@gov.bc.ca

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From: Moen, Shelley L HLTH:EX
Sent: Friday, May 1, 2015 4:52 PM
To: Postans, James HLTH:EX; Bell, Mark J HLTH:EX
Subject: Dawson Creek and District Hospital

Okay – I've been looking at one to many fact sheets! Did either of you work on updating the DCDH fact sheet?

There are a couple of facts that I want to confirm – but want to check in case one of you may have already done so before I email Mike Hoefer.

Questions are:

- Is a new inpatient addition and renovations at DCDH NHA's second highest priority for capital funding consideration?
- NHA advises that a concept plan for the project is underway to further define the scope and capital cost of the project. Completion is planned for Fall 2015? Is this correct?

Regards
Shelley

FACT SHEET

Dawson Creek and District Hospital

ISSUE

Update on new Inpatient Addition and Renovations at Dawson Creek and District Hospital (DCDH).

KEY FACTS

- A new Inpatient Addition and Renovations at DCDH is the second highest priority in the Northern Health Authority's (NHA) capital plan for capital funding consideration. Redevelopment/replacement of Mills Memorial Hospital in Terrace is the highest priority in NHA's capital plan.
- A major capital project for the DCDH is not currently included in the Ministry's 10-year capital plan.
- The new Inpatient Addition and Renovation project at DCDH is subject to the provincial prioritization process and availability of capital funding.
- NHA advises work on the Concept Plan for the project is underway to further define the scope and capital cost of the project. Completion is planned for fall 2015.

Background

- DCDH is a full service community hospital that has 32 acute care beds and 15 regional adult psychiatric beds.
- Services include 24/7 emergency, ICU, medical and surgical inpatient care, and day surgery, as well as the specialty services of respiratory therapy, rehab therapy, diabetic education, primary care, general surgery, diagnostics including lab and medical imaging with CT, cancer care, and visiting specialists including urology and dermatology, obstetrics & gynecology, and pediatrics.
- DCDH was constructed in 1960 with an addition in 1995.
- The hospital has a facility condition index (FCI) of 0.39 and was last assessed in 2013. The lower the FCI value, the better condition that a facility is in, and the lesser need for renovations or renewal relative to the facility's value.
- Since 2001, approximately \$10 million has been invested in various upgrades at DCDH including: a new CT scanner, renovations to food/laundry services and the loading dock and an expansion and relocation of the pharmacy.
- The concept planning stage follows Master Planning that was completed in 2013.
- Master planning is a process wherein stakeholders are engaged to work towards the development of a master plan for health services for the community for the future. The process examines how health services can be aligned to address growth in the community, projected shifts in demographics, and anticipated changes in health care delivery through to 2036.

FINANCIAL IMPLICATIONS

N/A

Approved by:

Shelley Moen, Capital Services Branch; May 4, 2015

Manjit Sidhu, Finance and Corporate Services Division; May 7, 2015

Bell, Mark J HLTH:EX

From: Moen, Shelley L HLTH:EX
Sent: Friday, May 1, 2015 9:29 PM
To: Bell, Mark J HLTH:EX; Postans, James HLTH:EX
Subject: Re: Dawson Creek and District Hospital

Thanks James and Mark for getting back to me. I'll follow up with Mike Hoefer.

S

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Bell, Mark J HLTH:EX
Sent: Friday, May 1, 2015 5:02 PM
To: Postans, James HLTH:EX; Moen, Shelley L HLTH:EX
Subject: Re: Dawson Creek and District Hospital

I don't recall that one being on my list or having looked at it
Mark

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Postans, James HLTH:EX
Sent: Friday, May 1, 2015 5:01 PM
To: Moen, Shelley L HLTH:EX; Bell, Mark J HLTH:EX
Subject: Re: Dawson Creek and District Hospital

Hi Shelley,

I didn't review this fact sheet. I believe this was one Christine was reviewing however I am also suffering from fact sheet overload and may be mixing things up as well.

Let me know if you need any assistance.

James

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Moen, Shelley L HLTH:EX
Sent: Friday, May 1, 2015 4:51 PM
To: Postans, James HLTH:EX; Bell, Mark J HLTH:EX
Subject: Dawson Creek and District Hospital

Okay – I've been looking at one to many fact sheets! Did either of you work on updating the DCDH fact sheet?

There are a couple of facts that I want to confirm – but want to check in case one of you may have already done so before I email Mike Hoefer.

Questions are:

- Is a new inpatient addition and renovations at DCDH NHA's second highest priority for capital funding consideration?
- NHA advises that a concept plan for the project is underway to further define the scope and capital cost of the project. Completion is planned for Fall 2015? Is this correct?

Thanks so much to both of you for all of your hard work to finalize our Estimates materials. Really really appreciate it.

Regards
Shelley

Moen, Shelley L HLTH:EX

From: Moen, Shelley L HLTH:EX
Sent: Thursday, March 12, 2015 10:40 AM
To: Forsberg, Nicole A HLTH:EX
Subject: Dawson Creek and District Hospital_March 2015
Attachments: Dawson Creek and District Hospital_March 2015.docx

Can you please include the subject fact sheet in the table of contents for the estimates binder in the NHA section.

I've saved on K: in the fact sheet folder.

Thx. Shelley

Moen, Shelley L HLTH:EX

From: Moen, Shelley L HLTH:EX
Sent: Friday, March 6, 2015 3:22 PM
To: Sidhu, Manjit HLTH:EX
Subject: RE: RUSH Request for MO - Info for Today - Dawson Creek Hospital
Attachments: Dawson Creek and District Hospital_March 2015.docx; Dawson Creek and GR Baker Cap Inv 2001-2015.xlsx

Fact Sheet and capital achievements as requested.

Hope this helps.

Shelley

From: Sidhu, Manjit HLTH:EX
Sent: Friday, March 6, 2015 11:49 AM
To: Moen, Shelley L HLTH:EX
Subject: FW: RUSH Request for MO - Info for Today - Dawson Creek Hospital

From: Foran, Grace E HLTH:EX
Sent: Friday, March 6, 2015 11:47 AM
To: Sidhu, Manjit HLTH:EX
Cc: Casanova, Tamara HLTH:EX
Subject: FW: RUSH Request for MO - Info for Today - Dawson Creek Hospital

Manjit – looping re: some advice from Ryan re: what could be said publicly.

From: Jabs, Ryan GCPE:EX
Sent: Friday, March 6, 2015 10:57 AM
To: Foran, Grace E HLTH:EX
Cc: Casanova, Tamara HLTH:EX
Subject: RE: RUSH Request for MO - Info for Today - Dawson Creek Hospital

I think he's just looking for the most recent fact sheet or something on where things are at with Dawson Creek Hospital. Publicly, I don't think we can say much more than we've said before.

I think this is the most recent lines I have on it (from 2013)

- Northern Health is working with the Ministry of Health and Peace River Regional Hospital District on concept planning for a potential capital project at the Dawson Creek and District Hospital.
 - Concept planning will then be submitted to the government for approval.
 - The concept planning process will determine scope of the capital project that will be put forward for approval in the business case stage by the regional hospital district and Government of B.C.
- The concept planning stage follows Master Planning that was completed in 2013
 - Master planning is a process wherein we engage a wide range of stakeholders to work towards the development of a master plan for health services for the community for the future

- The planning process will assess how health services can be aligned to meet growth in the community, projected shifts in demographics, and anticipated changes in healthcare delivery through to 2035.

From: Foran, Grace E HLTH:EX
Sent: Friday, March 6, 2015 10:21 AM
To: Jabs, Ryan GCPE:EX
Cc: Casanova, Tamara HLTH:EX
Subject: FW: RUSH Request for MO - Info for Today - Dawson Creek Hospital
Importance: High

Ryan, looping in case you or your staff has any advice on public statement once Manjit provides the latest on the hospital as requested by the MO.

From: Casanova, Tamara HLTH:EX
Sent: Friday, March 6, 2015 10:19 AM
To: Sidhu, Manjit HLTH:EX
Cc: Foran, Grace E HLTH:EX
Subject: RUSH Request for MO - Info for Today - Dawson Creek Hospital
Importance: High

Hi Manjit,

Apologies for the short notice on this request received this morning. Can you please advise regarding any latest information on Dawson Creek Hospital, as well as what we can/would say publically about it?

Tamara Casanova | Executive Operations
Office of the Deputy Minister
Ministry of Health

P: 250.952.1908 | C: 250.217.3655 | email: tamara.casanova@gov.bc.ca

From: Wallace-Deering, Eric HLTH:EX
Sent: Friday, March 6, 2015 10:17 AM
To: Casanova, Tamara HLTH:EX
Cc: Foran, Grace E HLTH:EX
Subject: RE: Info for Today - Dawson Creek Hospital

Ryan said he had 0 information.

From: Casanova, Tamara HLTH:EX
Sent: Friday, March 6, 2015 10:14 AM
To: Wallace-Deering, Eric HLTH:EX
Cc: Foran, Grace E HLTH:EX
Subject: Info for Today - Dawson Creek Hospital

Is Ryan following up at all? This might be better addressed through GCPE, as this request is regarding what can be said publically.

Tamara Casanova | Executive Operations
Office of the Deputy Minister
Ministry of Health

P: 250.952.1908 | C: 250.217.3655 | email: tamara.casanova@gov.bc.ca

From: Wallace-Deering, Eric HLTH:EX
Sent: Friday, March 6, 2015 10:12 AM
To: Casanova, Tamara HLTH:EX
Subject: Info for Today - Dawson Creek Hospital

Hi,

Can you connect with Manjit/his group and find out the latest on Dawson Creek Hospital, as well as what we can/would say publically about it?

Ryan referred my question to him.

Thank you!

Eric Wallace-Deering
Executive Assistant
Hon. Terry Lake
Minister of Health
250-387-2545
Eric.WallaceDeering@gov.bc.ca

Bell, Mark J HLTH:EX

From: Moen, Shelley L HLTH:EX
Sent: Friday, March 6, 2015 3:25 PM
To: Postans, James HLTH:EX; Bell, Mark J HLTH:EX
Cc: Rundell, Christine HLTH:EX
Subject: FW: DCDH Master Plan

Latest version of Dawson Creek and District Hospital Master Plan from NHA.

I have saved on K: but wanted you to be aware of the document.

S

From: Hoefer, Michael [<mailto:Michael.Hoefer@northernhealth.ca>]
Sent: Friday, March 6, 2015 1:52 PM
To: Moen, Shelley L HLTH:EX
Subject: FW: DCDH Master Plan

Here you go.
Mike

Thank You,
Mike Hoefer, BMLSc., MHA
Regional Director, Capital Planning and Support Services
Northern Health Authority
Suite 300-299 Victoria Street, Prince George, V2L 5B8
Tel: 250-565-2303
Cell: 250-565-5110 Fax: 250-565-2753
E-mail: Michael.Hoefer@northernhealth.ca



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From: Sommerfeld, Albert
Sent: Friday, March 06, 2015 1:51 PM
To: Hoefer, Michael
Subject: DCDH Master Plan

Mike,

Attached is the "current" master plan document for Dawson Creek District Hospital. Note that this document is currently being updated to reflect the latest full year workload data and potential impact on space. (the attached uses 2011 data)

Albert Sommerfeld P.Eng MBA
Director, Capital Development and Projects
Northern Health

300-299 Victoria Street
Prince George, BC V2L 5B8
Tel: 250.649.7645
Cell: 250.612.2195
Fax: 250.565.2753
www.northernhealth.ca
albert.sommerfeld@northernhealth.ca

Integrity - Stewardship - Quality

Please note: Cora-Lee Mayert provides administrative support within my portfolio. Her phone number is 250.565.2351 and email is cora-lee.mayert@northernhealth.ca

Bell, Mark J HLTH:EX

From: Moen, Shelley L HLTH:EX
Sent: Friday, March 6, 2015 11:40 AM
To: Postans, James HLTH:EX; Bell, Mark J HLTH:EX
Subject: FW: Dawson Creek and District Hospital

Oh oh.....

From: Moen, Shelley L HLTH:EX
Sent: Friday, March 6, 2015 11:39 AM
To: Sidhu, Manjit HLTH:EX
Subject: Dawson Creek and District Hospital

Just spoke with Mike Hoefer regarding plans for Dawson Creek and District Hospital.

He advised that NHA has entered into a contract with PBC to develop a concept plan for an Inpatient Tower. I asked Mike if he was aware of the requirement to have Ministry approval prior to starting the concept plan and he mentioned that he is aware of this requirement; however direction to proceed came from his CEO.

Mike also mentioned that a contract is also in place with PBC for a concept plan for GR Baker Memorial Hospital in Quesnel.

I can provide information on capital investments to date at both facilities if useful for you.

S

FACT SHEET

DAWSON CREEK AND DISTRICT HOSPITAL NORTHERN HEALTH AUTHORITY

ISSUE

Dawson Creek and District Hospital (DCDH) – New Inpatient Addition and Renovations

KEY FACTS

- A new Inpatient Addition and Renovations at DCDH is the second highest priority in the Northern Health Authority's (NHA) capital plan for capital funding consideration. Redevelopment/replacement of Mills Memorial Hospital in Terrace is the highest priority in NHA's capital plan.
- A major capital project for the DCDH is not currently included in the Ministry's ten year capital plan.
- The new Inpatient Addition and Renovation project at DCDH is subject to the provincial prioritization process and availability of capital funding.
- NHA advises work on the Concept Plan for the project is underway to further define the scope and capital cost of the project. Completion is planned for fall 2015.

FINANCIAL IMPLICATIONS

N/A

BACKGROUND

- DCDH is a full service community hospital that has 32 acute care beds and 15 regional adult psychiatric beds.
- Services include 24/7 emergency, ICU, medical and surgical inpatient care, and day surgery, as well as the specialty services of respiratory therapy, rehab therapy, diabetic education, primary care, general surgery, diagnostics including lab and medical imaging with CT, cancer care, and visiting specialists including urology and dermatology, obstetrics & gynecology, and pediatrics.
- DCDH was constructed in 1960 with an addition in 1995.
- The hospital has a facility condition index (FCI) of 0.39 and was last assessed in 2013. The lower the FCI value, the better condition that a facility is in, and the lesser need for renovations or renewal relative to the facility's value.
- Since 2001, approximately \$10 million has been invested in various upgrades at DCDH including: a new CT scanner, renovations to food/laundry services and the loading dock and an expansion and relocation of the pharmacy.
- The concept planning stage follows Master Planning that was completed in 2013.

FACT SHEET

- Master planning is a process wherein stakeholders are engaged to work towards the development of a master plan for health services for the community for the future. The process examines how health services can be aligned to address growth in the community, projected shifts in demographics, and anticipated changes in health care delivery through to 2036.

APPROVALS

Approved by: Shelley Moen, A/Executive Director, Capital Services Branch – March 2015

Approved by: Manjit Sidhu, Assistant Deputy Minister, Finance and Corporate Services Division –

**Capital Achievements
2001 - 2014
Northern Health Authority
Sorted by Health Authority and Community**

Capital Projects Costing Greater than \$100,000 Complete and In Progress

Project funding sources may include: Ministry of Health, Regional Hospital Districts, Foundations and other sources

Updated: January 2015 as per Q3 Adj.

by: Lisa Lloyd and Christine Rundell

Community	Project Description	Capital Cost (Millions)	Status	Completion Year
Dawson Creek	Dawson Creek and District Hospital, Energy Conservation Measures	0.28	In Progress	2015
	Dawson Creek and District Hospital, Parking Lot Resurfacing	0.29	In Progress	2015
	Dawson Creek and District Hospital, Nurse Call Replacement	0.35	In Progress	2015
	Dawson Creek and District Hospital, Window Replacement	0.18	Complete	2013
	Dawson Creek and District Hospital, Maternity Renovations	0.58	Complete	2012
	Dawson Creek and District Hospital, Vocera Communication System	0.20	Complete	2012
	Dawson Creek and District Hospital, Energy Conservation Measures (PSECA Phase 1 - Lighting, Mechanical, and Building Automation)	0.31	Complete	2011
	Dawson Creek and District Hospital, Pharmacy Relocation and Expansion	0.77	Complete	2011
	Dawson Creek and District Hospital, CT Replacement	1.26	Complete	2010
	Dawson Creek and District Hospital, Loading Doc Renovations	0.66	Complete	2010
	Dawson Creek and District Hospital, General Rad DR Room 2	0.55	Complete	2010
	Dawson Creek and District Hospital, Medical School Expansion	0.46	Complete	2010
	Dawson Creek and District Hospital, Anaesthetic Machine	0.14	Complete	2009
	Dawson Creek and District Hospital, Security System Upgrade	0.29	Complete	2009
	Dawson Creek and District Hospital, Ultrasound Unit	0.34	Complete	2009
	Dawson Creek and District Hospital, Ultrasound Unit 2	0.26	Complete	2009
	Dawson Creek and District Hospital, Building Requirements	0.28	Complete	2008
	Dawson Creek and District Hospital, C Arm (Digital)	0.23	Complete	2008

**Capital Achievements
2001 - 2014
Northern Health Authority
Sorted by Health Authority and Community**

Capital Projects Costing Greater than \$100,000 Complete and In Progress

Project funding sources may include: Ministry of Health, Regional Hospital Districts, Foundations and other sources

Updated: January 2015 as per Q3 Adj.

by: Lisa Lloyd and Christine Rundell

Community	Project Description	Capital Cost (Millions)	Status	Completion Year
	Dawson Creek and District Hospital, Laundry Centralization	0.75	Complete	2008
	Dawson Creek and District Hospital, Northeast Orthopedic Expansion	0.19	Complete	2008
	Dawson Creek and District Hospital, Food Services Consolidation	1.43	Complete	2002
	Dawson Creek and District Hospital, Kitchen Redevelopment	0.14	Complete	2001
	Total Dawson Creek and District Hospital	9.95		
Quesnel	G.R. Baker Memorial Hospital, Pharmacy-Sterile Products Room	1.78	In Progress	2015
	G.R. Baker Memorial Hospital, QUESST Enhancements	0.33	In Progress	TBD
	G.R. Baker Memorial Hospital, Switchgear	0.17	In Progress	TBD
	G.R. Baker Memorial Hospital, Elevator Replacement	0.67	Complete	2013
	G.R. Baker Memorial Hospital, Medical Air System	0.30	Complete	2013
	G.R. Baker Memorial Hospital, Medical School Simulation Room	0.20	Complete	2011
	G.R. Baker Memorial Hospital, Energy Conservation Measures (PSECA Phase 1)	0.34	Complete	2011
	G.R. Baker Memorial Hospital, General Radiology Room	0.57	Complete	2011
	G.R. Baker Memorial Hospital, Laundry Renovations	0.91	Complete	2011
	G.R. Baker Memorial Hospital, Air Conditioning Chiller Replacement	1.05	Complete	2010
	G.R. Baker Memorial Hospital, Security Upgrade	0.37	Complete	2010
	G.R. Baker Memorial Hospital, Ultrasound Machine Room 2	0.30	Complete	2009
	G.R. Baker Memorial Hospital, Ultrasound Unit	0.30	Complete	2009

Capital Achievements

2001 - 2014

Northern Health Authority

Sorted by Health Authority and Community

Capital Projects Costing Greater than \$100,000 Complete and In Progress

Project funding sources may include: Ministry of Health, Regional Hospital Districts, Foundations and other sources

Updated: January 2015 as per Q3 Adj.

by: Lisa Lloyd and Christine Rundell

Community	Project Description	Capital Cost (Millions)	Status	Completion Year
	G.R. Baker Memorial Hospital, Anaesthetic Unit	0.16	Complete	2008
	G.R. Baker Memorial Hospital, CT Scanner (Includes Installation)	1.74	Complete	2006
	G.R. Baker Memorial Hospital, Third Floor Development and Acute Care In-Patient Redesign	5.23	Complete	2006
	G.R. Baker Memorial Hospital, Building Requirements	0.66	Complete	2005
	Total G.R. Baker Memorial Hospital	15.07		

Forsberg, Nicole A HLTH:EX

From: Moen, Shelley L HLTH:EX
Sent: Monday, November 10, 2014 11:41 AM
To: HLTH FCS FOI General HLTH:EX
Cc: South, Nancy HLTH:EX; Forsberg, Nicole A HLTH:EX
Subject: FW: DUE Nov 17**FOI REQUEST: CLIFF 1023519 HTH-2014-00306
Attachments: CFR-HTH-2014-00306_complete.pdf

Please see attached for details – CSB does not have any responsive records for this request.

Thanks Nancy!

Shelley

From: Carter, Cheryl HLTH:EX
Sent: Friday, October 31, 2014 12:10 PM
To: Moen, Shelley L HLTH:EX
Cc: Forsberg, Nicole A HLTH:EX
Subject: DUE Nov 17**FOI REQUEST: CLIFF 1023519 HTH-2014-00306

This FOI request has been referred to you in CLIFF. I have attached the Call for Records form (CFR) in this email for convenience. Please see the request details section in the CFR and conduct a search for responsive records.

If you have responsive records, please conduct a harms assessment, and send me a clean copy and a harms copy of the records as well as a completed CFR.

If you do not have responsive records, please send me a completed CFR. When there are no responsive records a rationale is also required. It could be something as simple as, "no records found for the time frame requested". The rationale can be added to Section 3 of the CFR.

Reminder: ED approval is required.

Thank you,

Cheryl Carter
Divisional FOI Coordinator
Finance and Corporate Services
Ministry of Health
4th floor
1515 Blanshard St
Victoria BC V8W 9P4
PO Box 9647 Stn Prov Govt

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From: HLTH FOI Operations HLTH:EX
Sent: Friday, October 31, 2014 8:48 AM
To: Wolsey, Ashley HLTH:EX; Carter, Cheryl HLTH:EX
Cc: Baker, Ardys MTIC:EX
Subject: **FOI REQUEST: CLIFF 1023519 HTH-2014-00306

Good morning,

Please find the Call for Records form for this FOI request made under the *Freedom of Information and Protection of Privacy Act* (FOIPPA) in **CLIFF LOG 1023519**. Ardys Baker is the IAO analyst for this request.

Please provide Ardys (via FOI.Health.Education@gov.bc.ca) with the responsive records – with a cc to the Health FOI Inbox (HLTH.FOIOperations@gov.bc.ca).

The due date for Call for Records is November 17.

You should be aware that FOIPPA obligates us to assist the applicant and to respond without delay, openly, accurately, and completely. In the event that the ministry must defend the adequacy of its search to the Information and Privacy Commissioner at Inquiry, those involved in searching for records may be required to sign affidavits to prove that they have conducted an adequate search for relevant records.

Please do not hesitate to contact your analyst to discuss:

- whether the records may be routinely releasable;
- whether the information is being prepared for public release or is already publicly available;
- whether staff would be available to discuss the request with the applicant, if the applicant is agreeable;
- ways in which an applicant may want to narrow/focus their request to reduce potential fees; and/or
- any other questions or concerns relating to this request.

Thank you,
Miranda

Miranda Andrews, Analyst
FOI Operations
Deputy Minister's Office
250-952-3244

Ministry of Health
5th Floor, 1515 Blanshard
PO Box 9639 STN PROV GOVT
Victoria BC V8W 9P1

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Information Access Operations
Ministry of Technology, Innovation
and Citizens' Services
PO Box 9569 Stn Prov Govt
Victoria BC V8W 9K1

CALL FOR RECORDS – FOI REQUEST

Request Number: HTH-2014-00306

GENERAL REQUEST ☒

PERSONAL REQUEST ☐

Personal Request authorization received date: _____

APPLICANT TYPE	DATE RECEIVED	FOI ANALYST	FEE ESTIMATE DUE	RECORDS DUE
Media	October 30, 2014	Ardys Baker	November 12, 2014	November 17, 2014

REQUEST DETAILS:

Minutes or records of a September 8 meeting between Nancy South or designate of the Ministry and representatives from Northern Health and Partnerships BC concerning upgrades to the Dawson Creek and District hospital and/or the hospital(s) in Quesnel. Date range is September 1, 2014 to October 1, 2014.

Section 1: Initial Records Assessment

Do you hold any responsive records?

YES ☐ NO ☒

Are you aware of other records that may be responsive to this request within your Ministry?

YES ☐ NO ☒

Are you aware of other records that may be responsive to this request held by another public body?

YES ☐ NO ☒

If yes, specify:

NO RECORDS HAS BEEN LOCATED

Please forward to Ministry of the Attorney General for Delegated Queen's Printer public body approval if no records have been located.

Final Public Body Approval (If applicable)	Signature	Date

Section 2: Fee Estimate — General Request only (if this is a Personal Request skip to Section 3)

Please ensure that all reasonable efforts are made to generate as accurate an estimate as possible

Search

Locating/Retrieving

Tasks may include:

- Searching for hard & electronic files
- Reviewing box content lists
- Retrieving records from off site
- Retrieving email records (Outlook)

Estimated Hours

Actual Hours

Producing records

Tasks may include:

- Identifying relevant sources of data/information
- Manual time spent creating and producing records

Estimated Hours

Actual Hours

Volume

Electronic files (in pages):

*Other refers to PDF, Word, Excel, photos and any other electronic file responsive to the request

Email without attachments:

Estimated Pages

Actual Pages

Email with attachments:

Estimated Pages

Actual Pages

*Other documents

Estimated Pages

Actual Pages

Hardcopy files (in pages):

- Average file folder = 1" and holds approximately 200 pages (single sided)
- 1 Standard Records Centre Services Box:
 - If in legal sized folders - 1,800 pages
 - If in letter sized folders - 2,200 pages

Estimated Pages

Actual Pages

Preparation

Tasks may include:

- Photocopying/scanning records into electronic format (PDF)
- Ensuring completeness of responsive records
- Copying other types of media; if so please specify:

Estimated Hours

Actual Hours

Suggestions for possible narrowing:

Section 3: Search Summary and Program Area Recommendations

Please describe the search for records including what records were searched, (eg. files, email, databases; TRIM files, off site records, etc.), duration of search time, and who concluded the search for records.

I have checked my calendar and day books; there was no meeting on this topic on September 8th. In fact, there has not been a follow up meeting to the one held on 14 July 2014. When the response to the previous FOI request was sent out, the last bit of notes from the previous and unrelated meeting recorded in the same notebook was not severed. The September 8 date for a next meeting refers to the next meeting on a completely unrelated topic.

Could release of any/all of the responsive records potentially cause harm?

YES ☐

NO ☒

***Harm – Disclosure of the records would significantly harm the ministry's position, or a third party's interests on a given topic. The harm assessment allows FOI staff to better understand the context of the records and make informed severing recommendations based on potential harms. (Issues associated with possible disclosure through the FOI process that are unrelated to the harm assessment should be communicated to your ministry executive and/or Government Communications and Public Engagement office.)**

If yes which information, if released, may cause harm?

- Please reference the applicable records and information of concern, the harms, and associated page numbers below.
- If any of these records have been prepared for, or used to inform, a decision of Cabinet or any of its committees, section 12 (Cabinet confidences) may apply. Please identify the applicable records and advise: (1) what is the status of the issue? and (2) has the decision been made public or implemented?

(GENERAL REQUEST ONLY)-

Unless specific exemption criteria apply, records provided to the applicant in response to this request will be published on the Government's Open Information Website. If you have any concerns about the publication of the responsive records please indicate here or discuss with your FOI Analyst.

Section 4: Contact Information

Who completed this form? (Full Name, Title):

Nancy South, Director, Major Projects, Capital Services Branch

Phone Number:

250 952 1640

Date:

07 November 2014

Harm assessment completed by (Full Name, Title)

Program Area:

Harm assessment approved by (Full Name, Title)

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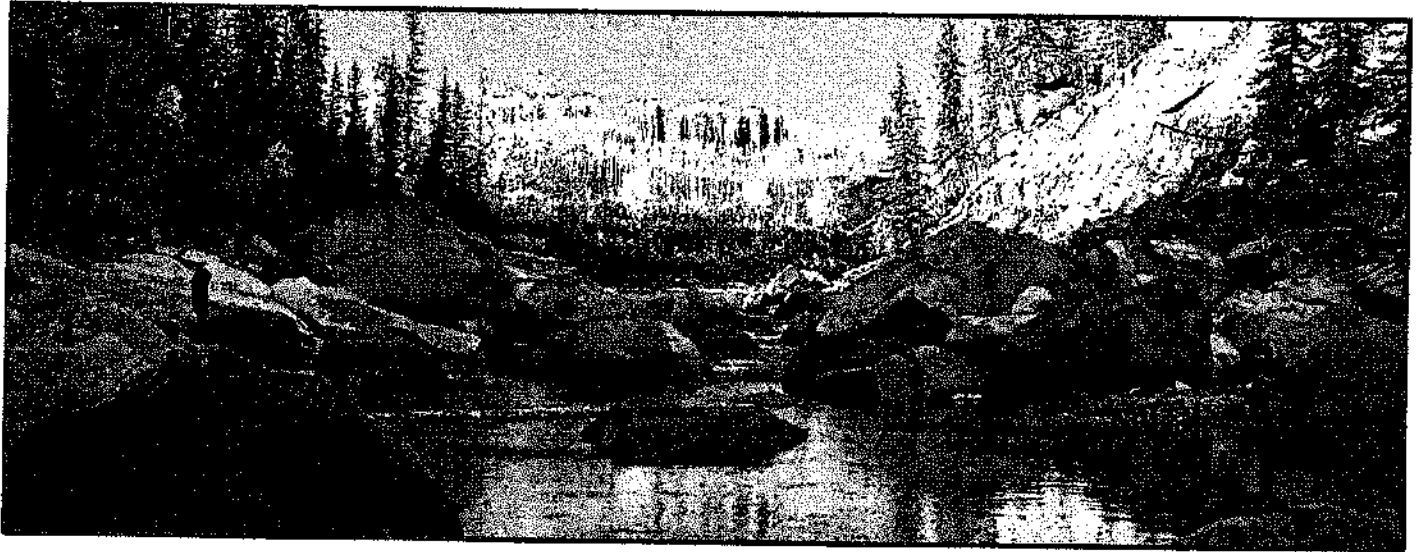
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MASTERPLAN & MASTER PROGRAM

Dawson Creek & District Hospital

December 2013

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Dawson Creek & District Hospital

EXECUTIVE SUMMARY

The following document contains the Executive Summary for the Dawson Creek & District Hospital Master Plan project. The planning has been projected to 2036.

December 2013

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**DAWSON CREEK & DISTRICT HOSPITAL
MASTER PLAN**

1.0 EXECUTIVE SUMMARY

Dawson Creek, BC

Dawson Creek, B.C. has a total land area of 22.32 square km, and was incorporated in 1936. Approximately 412km northeast of Prince George and 73km southeast of Fort St. John, Dawson Creek is situated in the Peace River Regional District (and Peace River South Local Health Area).

The Project

In May 2011, Northern Health engaged Stantec Architecture Ltd. to develop a comprehensive Master Program and Master Plan for the existing Dawson Creek & District Hospital (DC&DH). The overall objective of the Master Program /Master Plan was to establish a planning framework for the future development of the DC&DH site including services and programs provided. Program Directors, on-site Managers, Physicians and front-line staff were engaged to build on the existing assumptions, and program requirements to develop a 'future state' of service delivery at DC&DH.

The purpose of the DC&DH Master Program and Master Plan was to:

- Describe both the current and future state for the clinical, clinical support and non-clinical services that exist currently and of those that will be delivered in the future at DC&DH;
- Identify key assumptions of service delivery based on future trends and evidence-based best practice;
- Develop the desired future state flows that are informed by Lean planning principles and are influenced by future trends and proven health care best practices appropriate for DC&DH;
- Identify space requirements for the long term, with a planning horizon to 2036;
- Propose Master Plan development options;
- Identify a preferred development option; and
- Identify high level capital costs.

Final Summary Document Organization

The Final Master Plan Report is organized as follows:

1. **Executive Summary:** which explains the basic approach and methodology driving the development of the Master Program and Master Plan, an overview of key findings, and a summary of Working Paper #1 Project Charter (incorporating project Vision, Goals and objectives that establish the framework for the study);
2. **Working Paper #2 Project Parameters:** provides an overview of the parameters and assumptions that guide the Master Program and Master Plan for Dawson Creek & District Hospital, also includes demographic trends (i.e. population growth), and key drivers that could affect future service delivery;
3. **Working Paper #3 Master Program:** which includes a Future State Analysis identifying future state workflows and supporting infrastructure to enable optimal value for patients by eliminating waste; the Master Program planning paradigm is based on Lean planning principles;

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DAWSON CREEK & DISTRICT HOSPITAL MASTER PLAN

4. **Working Paper #4 Master Plan:** identifies the preferred development option and includes a Mechanical and Electrical Master Plan, phasing and high level capital costs that support the Dawson Creek & District Hospital for the planning horizon 2036;
5. **Appendix I Working Paper #1 Project Charter:** defines the Project Scope, Success Factors, risk factors, team members, lines of communication, project schedule and the approval process;
6. **Appendix II Facility Assessment Report:** which describes an assessment of the existing facilities infrastructure and the current site conditions;
7. **Appendix III Additional Master Plan Options:** provides a complete list of all options explored and developed throughout the project;
8. **Appendix IV Additional Costing Details:** Includes costing details for all additional Master Plan options;
9. **Appendix V CPAFs:** Northern Health Capital Project Approval Forms, for reference; and
10. **Appendix VI Lean Planning Principles:** Additional information detailing the Lean planning paradigm utilized in this Master Program/Master Plan.

Project Assumptions

The project proceeded based on the following assumptions, as outlined in Working Paper#1 Project Charter:

1. A single steering committee will oversee the project
2. A primary contact will be established who will be responsible for information gathering and distribution to users, arranging meetings and liaising with Northern Health senior management.
3. Review and decisions are made in a timely manner to meet project schedule.
4. The Plan will encompass the spectrum of health services located at the Dawson Creek and District Hospital.
5. Planning will be based on the demographic needs of the NE HSDA established during Program Parameters.
6. Existing co-location between programs and services will be changed where improved patient/client services or operations can be demonstrated.
7. Stantec will have access to site information that would affect the process and outcome of the project in a timely manner.
8. Northern Health staff will have the time to devote to this project while realizing there will be competing priorities.
9. The management team will devote the time required to collect, collate and verify the materials.
10. Northern Health staff will have the resources (information, documents, etc) available to them as per what is required of them for the project.

The Adopted Process

Phase 1: Project Kick-Off, Project Agreements and Information Gathering and Analysis

Project Kick-Off and Working Paper #1 – Project Charter

The Project Charter was developed following a site tour and Project kick-off meeting as a means of defining the project purpose, critical success factors and guiding principles, key planning assumptions, goals, risks, deliverables, and confirming the project scope.

The Stantec team reviewed and confirmed the proposed programming and planning methodology for the high level Master Program and Master Plan. This review included a summary of all tasks, schedules,

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DAWSON CREEK & DISTRICT HOSPITAL MASTER PLAN

review and approval of processes, and a detailed work plan. Working Paper #1 Project Charter was signed-off on by the Project Steering Committee.

Data Collection, Current State and Working Paper #2 – Project Parameters

This report focuses on understanding how the DC&DH functions today, including a review of services, workload, and staffing. Also included is a review of environmental factors such as demographic projections, industry best practices and guidelines and key drivers that may affect healthcare outcomes and requirements. Analysis of the current state was based on the flow of patients, clinicians, information, medications, supplies and equipment in support of the patient.

Phase 2: The Way Forward: Master Program and Master Plan

Future State and Working Paper #3: Master Program

Informed by the work completed in the Project Parameters as well as the Project Charter, the Master Program was developed through the analysis of operational requirements, functional adjacencies, technology requirements, workloads, staffing levels (current and future), and space requirements.

Multi-Disciplinary Study Teams (MDST) workshops were held with key stakeholders to verify infrastructure requirements, functional adjacencies and technology requirements along with current work flow concerns and spatial requirements. This document also references best practice and innovative processes that are currently being implemented in other healthcare facilities in Canada and the United States. Lean planning principles were used throughout the Master Programming phase of the project. See Working Paper #3: Master Program for detailed planning information.

Important to the future functioning of the 'Lean Hospital' is that all hospital departments and staff commit to adopting Lean process improvements for their services and service areas. s.13,s.17
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Space summary of Master Program: The tables on the following page represent 1) the existing space currently occupied at Dawson Creek & District Hospital, broken down by area s.13,s.17
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s.13

DAWSON CREEK & DISTRICT HOSPITAL
MASTER PLAN

DCDH Existing Space Inventory

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Existing Inpatient	
Inpatient (Med/Surg)	785
ICU	104
Maternity (LDRPs)	358
Mental Health	1133
Total Inpatient	2,380
Existing Interventional	
Surgery	320
C-Section	-
PAR	-
Endoscopy	0
Medical Imaging	775
Total Interventional	1,095
Existing Universal Care	
Emergency Exam/Treatment	484
Trauma	26
Minor Procedure	0
Ambulatory Clinics	388
Chemotherapy	114
Day Surgery	0
Total Universal Care	1,012
Existing Clinical Support Services	
Lab	390
Pharmacy	268
PT/OT	210
Total Clinical Support	868
Existing Logistics	
Material Mangement	522
Maintenance & Operations	407.63
CSR	139
Food Services	374
Total Logistics	1,442
Existing Administration	
Health Records	331
Admissions	139
Public Space	73
Office - Facility Administration	295
Meeting Space	533
Staff Support Space	211
Total Administration	1,581
Existing Academic Space	
Student Residence	160
Total Academic	160
Total Existing Area, CGSM	8,538

Table 1.0 Existing Space- DCDH

Stantec**DAWSON CREEK & DISTRICT HOSPITAL
MASTER PLAN**

Table 3.0 below compares summary areas between the existing DC&DH campus, the required Master Program 2036 area and the drawn Masterplan Preferred Option 5B final build-out area summaries.
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Table 3.0 Space Summary- Existing, Master Program 2036, Drawn Master Plan

Existing Campus Total Area 2013	Master Program 2036 Area	Drawn Master Plan Option 5B Area
8,538 m2*	s.13,s.17	

** Existing space does not incl. basement 'hospital storage' and Pandemic Supply storage (@200m2)*

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Working Paper #4: Master Plan

The master planning process began with a 'Hospitals of the Future' workshop, presented by Stantec to the DCDH Project Team, to provide some imagery of contemporary hospitals around the world using best practise standards through both innovation in operations and design.

A Master Planning gaming workshop (August 2011) engaged user groups to participate in bringing forward their ideas, and taking part in the planning process. This workshop, along with the medical planning work of the master planning team generated the original 3 options, which were then phased and costed in December 2011.

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Key Success Factors of the DC&DH Master Program/Master Plan

The following critical success factors (measures) have been identified for the project in Working Paper#1 Project Charter:

1. Examine all realistic physical development options and develop a sustainable master plan (financially and operationally).
2. Provide a relevant plan that addresses needs of Dawson Creek.
3. Ensure all stakeholders, especially staff and physician user groups, feel that they have had appropriate input.
4. Ensure the Dawson Creek Master Plan has been well communicated both internally and externally.
5. Ensure plans fit within the Northern Health service delivery plans.
6. Develop an implementation plan that has minimal operational impacts.
7. Create flexibility and adaptability for the facility.
8. The Master Plan will receive the type of investment and commitment by Northern Health as shown by Dawson Creek District Hospital and Stantec, and that NH will move the project forward.

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DAWSON CREEK & DISTRICT HOSPITAL MASTER PLAN

Project Goals:

The following goals have been established for the DC&DH Master Program/ Master Plan project as outlined in Working Paper#1 Project Charter. The Plan will:

1. Provide a patient and family focused approach.
2. Identify priority service delivery requirements.
3. Develop accommodation strategies for all services at the Dawson Creek and District Hospital.
4. Identify high-level capital cost requirements based on current (2011) costs.
5. Maintain long-term flexibility for Northern Health in the Dawson Creek and District Hospital.
6. Support the most efficient and effective use of resources including staff, infrastructure, equipment and technology.
7. Identify a growth management strategy and help ensure adequate space is available for acute programs when required.
8. Allow for the orderly and logical sequencing of growth of existing programs and introduction of new programs.
9. Consider and support technological capabilities and requirements in service delivery.
10. Align with the Northern Health Strategic Plan.

Acknowledgements:

The following participants were involved at various levels during this project:

Project Steering Committee:

- Betty Morris
- Lyndon Peterson
- Jane Lindstrom
- Michael Leisinger
- Mike Hoefer
- Al Martin/Jaret Clay
- Dr. Becky Temple

Stantec Project Team:

- Jennifer Silliman, Master Programmer
- Ruth Dollinger (Née Varvas), Facility Planner and Programmer
- Ray Pradinuk, Master Planner
- Bernadette Morillo, Medical Facility Planner
- Nick Coucill, Master Programmer and Analyst
- John Maccarrone, Mechanical Engineer
- Chun Tam, Structural Engineer
- Ian Carter, Project Director



Dawson
Creek &
District
Hospital

Working Paper #2 Project Parameters

The following document contains the Project Parameters
for the Dawson Creek & District Hospital planning project.
The planning has been projected to 2036.

December 2013

**DAWSON CREEK & DISTRICT HOSPITAL
PROJECT PARAMETERS****Table of Contents**

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1.0 INTRODUCTION TO PROJECT PARAMETERS

1.1 PURPOSE

The Project Parameters provides an overview of the parameters and assumptions that will guide the Master Program and Master Plan for the acute health services located at the Dawson Creek & District Hospital (DCDH).

The key drivers identified in this document will determine some of the current and future trends in healthcare, along with the potential growth and change factors that will influence future Northern Health Authority (NH) service delivery at the DCDH.

1.2 SCOPE

The document scope will provide the following as established in the Project Charter:

- Confirmation of Demographic trends including projected population growth
- Key Drivers that could affect future service delivery
- Compilation and analysis of previous documentation and planning studies

2.0 Mission, Vision, Values, & Strategic Planning

"The Northern way of caring"

2.1 MISSION

Through the efforts of our dedicated staff and physicians, in partnership with communities and organizations, we provide exceptional health services for Northerners.

2.2 VISION

Northern Health leads the way in promoting health and providing health services for Northern and rural populations.

- Northern Health is known for our strong primary health care system. People experience seamless and coordinated service. The 'Primary Care Home'¹ is the foundation for multidisciplinary health care and helps people navigate across services.
- Northern Health involves people and their families in their own health and health care. Individuals and families feel respected and are treated compassionately.
- Northern Health provides high quality health services, using evidence and innovation, to meet the needs of our Northern and rural populations. We are known for the creativity of our staff and physicians and for our innovative use of technology to care for people as close to home as possible.
- Northern Health is recognized as an outstanding place to work, learn, and grow. We foster a safe and healthy work environment. Education and development of people in the north, for the north, attracts and retains staff and physicians.
- Northern Health works with communities and organizations to support Northern people to live well and prevent injury and illness. The health status of Northern people is improving faster than the rest of BC.

¹A 'Primary Care Home' is where people establish a long term relationship with a multi-disciplinary team and through this team, receive health care and are supported in managing their own health.

STRATEGIC DIRECTIONS

GOAL 1: A POPULATION HEALTH APPROACH

Northern Health will lead initiatives that improve the health of the people we serve.

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DAWSON CREEK & DISTRICT HOSPITAL

Project Parameters

Mission, Vision, Values, & Strategic Planning

We will:

- Work with communities and organizational partners to identify and act on key issues where a population health approach can have a significant positive impact on the health of Northern people
- Work in partnership with our staff and physicians to create initiatives that foster a safe, healthy, and environmentally responsible workplace
- Use population health evidence to inform health service planning and resource allocation

GOAL 2: HIGH QUALITY HEALTH SERVICES

Northern Health will ensure quality in all aspects of the organization

We will:

- Establish a culture of continuous quality improvement and patient safety
- Establish the organizational structures and processes required for effective decision making
- Foster a learning environment and engage in research, in partnership with academic organizations
- Strengthen our capacity to manage the change needed to improve quality
- Identify and manage risks to the organization and strengthen our preparedness for emergencies

GOAL 3: INTEGRATED ACCESSIBLE HEALTH SERVICES

Northern people will have access to integrated health services, built on a foundation of primary health care

We will:

- Partner with others to establish multi-disciplinary 'Primary Care Homes' where people will access coordinated health services
- Partner with aboriginal people to build a health system that honours diversity and provides service in a culturally relevant manner
- Build efficient and effective secondary and specialty services which are aligned with the 'Primary Care Home' and designed to meet the needs of Northern populations
- Develop and implement strategies that improve service provider collaboration

Measurably improve satisfaction with the health services provided by Northern Health.

GOAL 4: A FOCUS ON OUR PEOPLE

Northern Health will create a dynamic work environment that engages, retains and attracts staff and physicians

Stantec**DAWSON CREEK & DISTRICT HOSPITAL****Project Parameters**

Mission, Vision, Values, & Strategic Planning

We will:

- Measurably improve staff and physician engagement within Northern Health
- Establish a culture of workplace health and safety
- Establish and implement an innovative retention strategy that includes:
 - Developing and supporting effective, innovative leaders and managers who will guide our organization now and in the future
 - Educating, developing, and mentoring our staff internally and through partnerships with academic and other organizations
 - Providing clear expectations of staff through performance planning
 - Develop and implement an innovative recruitment strategy.

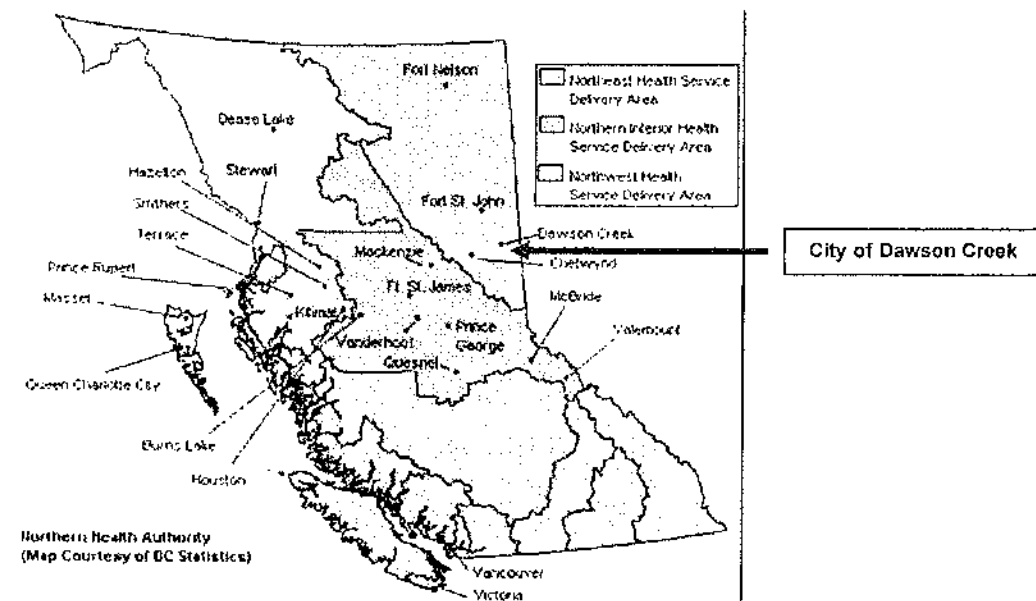
3.0 THE PEACE RIVER SOUTH LHA

3.1 INTRODUCTION

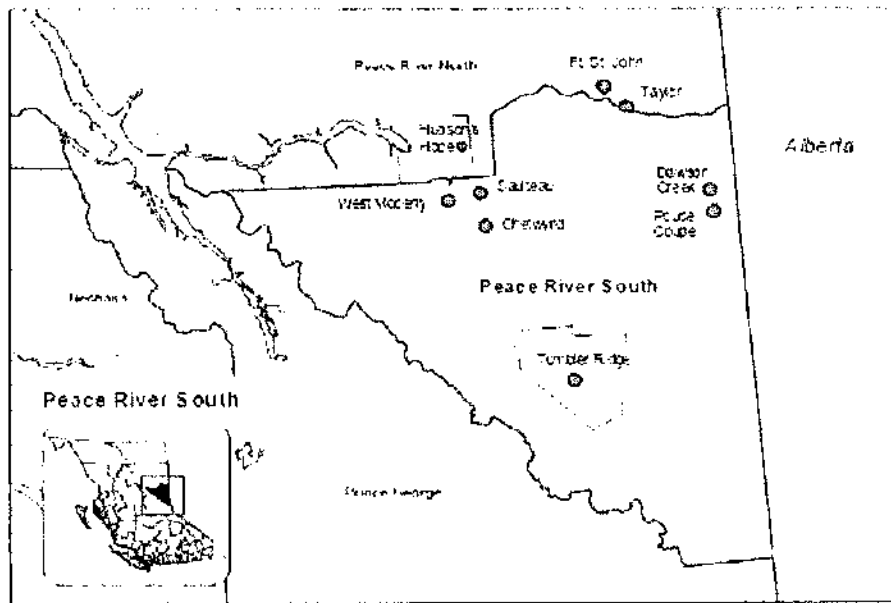
Incorporated in 1936, Dawson Creek has a total land area of 22.32 square km (2006 Census). Dawson Creek is approximately 412 km northeast of Prince George and 73 km southeast of Fort St. John. Dawson Creek is in the Peace River Regional District.¹

3.2 GEOGRAPHIC LOCATION

The following map shows the location of the Dawson Creek in British Columbia. As the 'Start of the Alaskan Highway', the City of Dawson Creek is located in the Northeast quadrant of the province and is a main road to the North.



¹ BC Stats, Community Fact sheet, <http://www.bcstats.gov.bc.ca/data/dd/factsheet/cf262.pdf> (2011)



Map Credit: Adapted from BC Stats, Regional Socio-Economic Profiles and Indices, 2009.

3.3 ROLE OF THE DAWSON CREEK AND DISTRICT HOSPITAL

Dawson Creek & District Hospital is the community referral hospital.

3.4 COMMUNITY PROFILE (DAWSON CREEK ANNUAL REPORT- 2010)

The following community profile information has been generated from the City of Dawson Creek 2010 Annual Report. The purpose of the community profile is to allow for a brief overview of the community while gaining an appreciation of the complexity of the region.

3.4.1 Lifestyle

The future vision for Dawson Creek is to be a visionary community that works together for innovative social, cultural, economic and environmental vitality. Celebrating arts, heritage and culture, creating recreational opportunities, providing opportunities for life-long learning, optimizing transportation and movement around the city and working to reduce crime rates and opportunities for crime in our community are all part of the vision of Dawson Creek.

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DAWSON CREEK & DISTRICT HOSPITAL

Project Parameters

THE PEACE RIVER SOUTH LHA

3.4.2 Education

The Dawson Creek Campus of Northern Lights College is one of eight campuses that serve the largest geographical area of any educational institution in the province. Several specialized programs delivered on the Dawson Creek Campus are unique to the region and even the country. University of Northern British Columbia (UNBC) offers a number of courses in Dawson Creek. UNBC and Northern Lights College regularly publish a joint calendar listing up-to-date course offerings at both institutions. Sprott-Shaw Community College is also opening a small campus for Residential Care Attendants. Chiron Learning Centre offers training programs for adults to improve literacy levels and requiring assistance in other fundamental subject.

3.4.3 Tourism/Events

Dawson Creek is Mile 0 on the Alaskan Highway and therefore a gateway community to the North for tourism.

3.4.4 Business

The City of Dawson Creek has an "Open for Business" attitude. This attitude resonates throughout the business community making Dawson Creek not only the place to do business, but to live as well. This business-minded community has a diverse economy relying on agriculture, oil and gas, forestry, and tourism. The business community is comprised of a stable and natural mix of entrepreneurs. Over the past three years, Dawson Creek has seen over \$72 million dollar's worth of growth; a remarkable feat for a community of 12,500. With such success and prosperity, it is no wonder why Dawson Creek is called the Capital of the Peace.

2006 Employment By Industry (Stats Canada)

Industry	Employed
Other	225
Business	1705
Retail	1,005
Health Care/Social Services	680
Manufacturing	365
Education	430
Agriculture/Resources	400
Construction	595
Wholesale	215
Finance/Real Estate	275

4.0 DEMOGRAPHIC ANALYSIS

4.1 NORTHERN HEALTH – POPULATION PROJECTION

The following projections have been prepared by PEOPLE – Population Extrapolation for Organizational Planning with Less Error (run 35, 2010). This has been prepared as part of the Population Section, BC Stats, Ministry of Labour and Citizens Services, Government of the Province of British Columbia.

- Median age is almost 3.5 years younger than the provincial median.

- The gender ratio is weighted in favour of males, in contrast to the province as a whole, where there are more females than males. This is likely due to the dependence on male-dominated resource industries.

- Consistent with its rural character, fertility continues to be higher than the provincial rate, despite having declined since the early 1990s. Declining fertility contributes to a decrease in the ratio of children (17 years and under) to working age population (aged 18 to 64), although it remains higher than the provincial ratio.

- In contrast, there are proportionately fewer elderly people (aged 65 and older) than in the province as a whole although the elderly dependency ratio has almost doubled in the last twenty years.

NH Population Projections

Age Cohort	2007	2013	2018	2023
0-4	17,395	16,737	16,107	15,310
5-14	38,930	35,157	34,430	33,581
15-24	42,109	38,940	35,269	33,311
25-39	59,350	58,889	59,345	58,525
40-54	70,543	66,974	62,213	61,078
55-64	32,915	41,138	45,535	43,721
65+	27,842	36,514	46,597	58,164
Total	289,084	294,349	299,496	303,690

Source: P.E.O.P.L.E. 35 Projection Run

NH Population Projections - % Change

Age Cohort	2007	2013	2018	2023
0-4		-3.8%	-3.8%	-4.9%
5-14		-9.7%	-2.1%	-2.5%
15-24		-7.5%	-9.4%	-5.6%
25-39		-0.8%	0.8%	-1.4%
40-54		-5.1%	-7.1%	-1.8%
55-64		25.0%	10.7%	-4.0%
65+		31.1%	27.6%	24.8%
Total		1.8%	1.7%	1.4%

Source: P.E.O.P.L.E. 35 Projection Run

4.2 POPULATION PROJECTIONS – PEACE RIVER SOUTH (LHA 059)

The following projections have been prepared by PEOPLE – Population Extrapolation for Organizational Planning with Less Error (run 35, 2011). This has been prepared as part of the Population Section, BC Stats, Ministry of Labour and Citizens Services, Government of the Province of British Columbia.

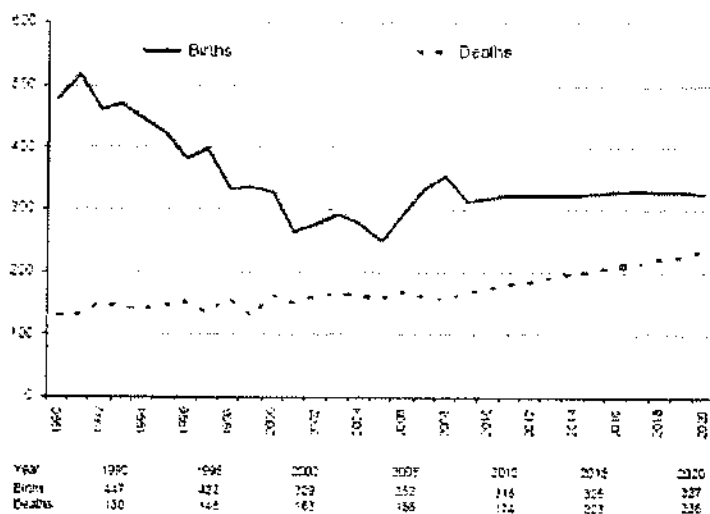
South Peace LHA - Population Projections

Age Cohort	2011	2015	2025	2035	% Change (2011 to 2035)
0-19	6,970	6,894	7,070	7,250	4.0%
20-54	13,694	13,834	13,856	13,878	1.3%
55-74	5,466	6,381	7,577	8,997	64.6%
75+	1,399	1,616	2,464	3,549	153.7%
Total	27,529	28,725	30,967	33,674	22.3%

Source: NH - BI population projections

- The decline in birth numbers and increased deaths may reflect the effects of an aging baby boomer generation that is moving out of the child bearing years.
- The birth decline may also indicate that people in their most productive childbearing years (20-29) have moved away from the area. This is possible since there was a net out-migration of at least 4,800 persons from the Peace Regional District during the period from the mid-1990s to 2004.

Birth and Death Trends
Peace River South, LHA 059: 1990-2020



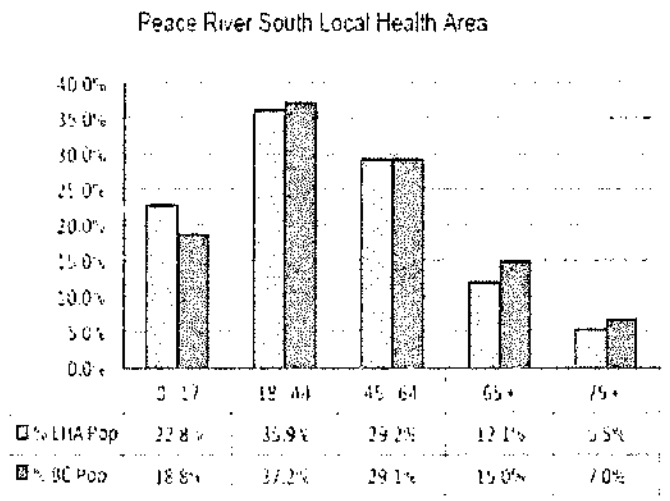
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DAWSON CREEK & DISTRICT HOSPITAL

Project Parameters

DEMOGRAPHIC ANALYSIS

- Children and youth from ages 0-17 years comprise 22.8% of the Peace River South Local Health Area population.
- Adults from age 18-64 years comprise 65.1% of the Peace South LHA population.
- Seniors from ages 65+ years comprise 12.1% of the Peace South population. This group is expected to grow quickly over the next 15 years. The 65+ and 75+ populations in the Peace South LHA are expected to grow by 95% and 98.7% respectively by 2025.



5.0 Northern Health Strategic Plan Initiatives – 2009 to 2015

The following commentary is derived from the Government of BC, 10-year plan to Strengthen Health Care document that was first developed in 2003. The evolution of this plan continues today as the initiatives gain maturity and require further refinement. The document is available through the Government of BC website www.health.gov.bc.ca/cpa/mediasite/accountability.html.

The document identifies several initiatives as crucial in strengthening healthcare services in BC and specific details on how each of these initiatives will impact the residents of BC. Below is a brief summation of those initiatives.

5.1 TARGET POPULATION HEALTH IMPROVEMENTS INITIATIVES

Improve health status and prevent the incidence of chronic disease and cancer through focused work in collaboration with partners on:

- Tobacco reduction
- Road Health
- Healthy Eating and Active Living
- Early child development

Target Population(s)

- All residents of northern British Columbia
- Specific focus populations

5.1.1 Men's Health

Develop and implement strategies that improve the health of men living in the north.

- Understand the health status of men
- Implement a public consultation process designed to educate the public about men's health and to identify the key partners for collaborative action
- Implement strategies designed to improve the health status of men

Target Population(s)

- Men across northern British Columbia
- Men's interest groups particularly in initial six communities focusing on community integration work
- 'Men predominant' working sectors

5.1.2 Community based integration

Improve outcomes for the frail elderly, those living with chronic disease, dementia, cancer, and mental health and addictions issues, and support healthy outcomes for childbearing families with a focus on an initial six communities and expanding by two to three communities each year by:

- Implementing an integration and quality improvement collaborative focused on actions that will improve outcomes for those living with complex health conditions and will integrate the functions necessary for comprehensive, longitudinal care
- Supporting primary care practices and Divisions of Family Practice to undertake quality improvement work using the Physician Support Program, primary care 'attachment' initiatives, implantation of EMRs, meaningful use of data to improve the quality of care and continuing the expansion and use of the AMCARE data
- Partnering with municipal and community leaders in six communities to establish one to two community based actions that build a health community. Two to three additional communities will be added in 2011/2012 and again in 2012/2013
- Implementing a developmental evaluation and program of research that ensures the use of evidence and development of new knowledge, and enables knowledge translation.

Target Population(s)

- All northern British Columbia residents
- Particular focus on individuals with Mental Health & Addictions problems
- Chronic Conditions and Frail Elderly
- Aboriginals Perinatal populations

5.1.3 Aboriginal Health Improvements

Build relationships and partnerships with aboriginal communities in order to improve the health status of the aboriginal population by:

- Refreshing the regional aboriginal health strategy in partnership with aboriginal communities and organizations and in alignment with the Tripartite Health Plan
- Strengthening Northern Health's seven Aboriginal Health Improvement Committees (AHICs) and continuing work on initiatives arising from the strategy with a focus on chronic disease management, mental health and addictions issues, discharge planning and cultural competency
- Achieving 100% completing of the PHSA Cultural Competency program by all Board, Executive and Senior Management teams by the end of 2011/2012
- Developing Northern Health's formal relationship with the First Nations Health Council and other emerging structures in alignment with the Tripartite Health Plan

Target Population(s)

- Northern BC First Nations and Metis peoples

5.1.4 Ensuring Quality of Services for People living with Cancer

Access to family and community-based health care services is a particular challenge in Northern communities, where the system's capacity to provide timely, health care services to a remote population can be limited. The federal government has agreed to help to address the unique challenges facing the development and delivery of health care services in the North on a priority basis, including the costs of medical transportation as follows:

- The federal government proposes to increase funding to the Territories totalling \$150 million over 5 years through a Territorial Health Access Fund, targeted at facilitating long-term health reforms, and establish a federal/territorial working group to support the management of the fund, and additional direct funding for medical transportation costs.
- Recognizing the enormous potential of the North, the Government of Canada and the Territories will jointly develop a vision for the North.

5.1.5 Enhance Quality Through Programmatic Focus

First Ministers direct Health Ministers to establish a Ministerial Task Force to develop and implement the national pharmaceuticals strategy.

- Develop, assess and cost options for catastrophic pharmaceutical coverage;
- Establish a common National Drug Formulary for participating jurisdictions based on safety and cost effectiveness;
- Accelerate access to breakthrough drugs for unmet health needs through improvements to the drug approval process;
- Strengthen evaluation of real-world drug safety and effectiveness;
- Pursue purchasing strategies to obtain best prices for Canadians for drugs and vaccines;
- Enhance action to influence the prescribing behaviour of health care professionals so that drugs are used only when needed and the right drug is used for the right problem;
- Broaden the practice of e-prescribing through accelerated development and deployment of the Electronic Health Record;
- Accelerate access to non-patented drugs and achieve international parity on prices of non-patented drugs; and
- Enhance analysis of cost drivers and cost-effectiveness, including best practices in drug plan policies.

5.1.6 Support of Quality improvement, evaluation, and Research through IDC

- All governments recognize that public health efforts on health promotion, disease and injury prevention are critical to achieving better health outcomes for Canadians and contributing to the long-term sustainability of Medicare
- Managing chronic disease more effectively maintains health status for individuals and counters a growing trend of increasing disease burden.
- All governments commit to further collaboration and cooperation in developing coordinated responses to infectious disease outbreaks and other public health emergencies through the new Public Health Network.
- The federal government also commits to building on recent investments in immunization through ongoing investments for needed vaccines,
- Governments will set goals and targets for improving the health status of Canadians through a collaborative process with experts.

5.1.7 Develop and Information Management Strategy

- Investments in health system innovation through science, technology and research help to strengthen health care as well as our competitiveness and productivity.
- Investments in science, technology and research are necessary to develop new, more cost-effective approaches and to facilitate and accelerate the adoption and evaluation of new models of health protection and chronic disease management.

5.1.8 Complete Implementation of Provincial e-health

- All funding arrangements require that jurisdictions comply with the reporting provisions of this communiqué.
- Jurisdictions participating in the Health Council agree that the Council prepare an annual report to all Canadians, on the health status of Canadians and health outcomes.

5.1.9 Establish and implement plans to use Patient focused funding optimally

- By inclusion in this communiqué, governments formalize the agreement reached on dispute avoidance and resolution with regard to the Canada Health Act in an exchange of letters in April 2002.

6.0 KEY DRIVERS AFFECTING FUTURE SERVICE DELIVERY

6.1 RISING HEALTHCARE EXPENDITURES

The rising cost of healthcare has and will continue to affect the way in which healthcare services are delivered. As costs for physicians, nurses, other allied health professionals, equipment, capital development, utilities, insurance and liability concerns and pharmaceutical drugs continue to rise; strategies must be developed to efficiently and effectively maximize each healthcare dollar. There will always be concerns as to the amount of funding provided by the government; however the implementation of a strong, well-developed long-term plan will provide the strategy for managing the cost of health.

Healthcare Spending In British Columbia – By the Numbers

\$10.50 Billion	Amount spent by the province on Healthcare services in 2001
\$12.83 Billion	Amount spent by the province on Healthcare services in 2006/07
\$35.0 Million	Estimated cost to the province of operating the healthcare system in British Columbia for 1 day
\$1.5 Million	Estimate cost to the province of operating the healthcare system in British Columbia for 1 hour
40%	The percentage of total government spending that goes to healthcare this year
70%	The potential percentage of total government spending that healthcare could consume by 2017

Source: Conversation on Health (Government of British Columbia)

6.1.1 Age and the demand on Healthcare services

As identified in the population projections for Northern Health Authority and the City of Dawson Creek, the overall population in each area is projected slightly increase by approximately 1.4%. However when speaking in healthcare parameters, it is essential to identify the 65+ population cohort. As displayed in the population projections that cohort is expected to increase by approximately 25%.

As the population ages, the need for access to healthcare services and the frequency of which health is used is increase, creating a greater strain on the system. The table below illustrates the expenditure requirements, comparing age and the subsequent average demand on the healthcare system.

Age and the demand on Healthcare Service

\$3,157	Amount spent by the province annually per person on health care in B.C.
\$2,364	Average spent by the province annually per person aged 45 - 64
\$5,224	Average spent by the province annually per person aged 65 - 74
\$9,841	Average spent by the province annually per person aged 75 - 84
14%	Percentage of B.C. population over the age of 65 today
24%	Percentage of B.C. population expected to be over age 65 by year 2030

Source: Conversation on Health (Government of British Columbia)

6.1.2 Geographic Remoteness and High Population Mobility

Geographic remoteness and high population mobility are key factors to British Columbia having the highest census under-coverage rate among all Canadian provinces. Inaccurate assessments of 'shadow' populations pose a number of risks to future community health care users and service delivery².

6.2 SURGICAL WAIT TIMES

On February 1, 2006, Premier Gordon Campbell announced a \$60.5-million wait time management strategy. The strategy includes³:

- A new Centre for Surgical Innovation at UBC Hospital – \$25 million in 2006/07 to support dedicated operating rooms to help clear patient backlogs for hip and knee surgery.
- Additional funding to immediately address existing backlogs – \$25 million in 2005/06 for health authorities across the province to immediately increase the number of surgeries with a focus on joint replacement surgery.
- A Provincial Surgical Patient Registry – \$5 million to create and implement a province-wide patient registry developed by the Provincial Health Services Authority and all health authorities to help better manage the surgical backlog.
- A Research Centre for Hip Health at Vancouver General Hospital – \$5.5 million from the Ministry of Advanced Education.

**Median Wait Times (Weeks) For Patients on Surgical Wait Registry
2001/02 to 2007/08**

Fiscal Year	All Surgeries	Cataracts	Cardiac Surgery	Hip Replacements	Knee Replacements
2007/08	4.4	8.3	9.0	11.0	16.9
2006/07	4.0	7.2	11.3	13.3	19.9
2005/06	4.0	7.1	9.0	16.8	25.0
2004/05	4.9	9.4	8.9	22.1	28.9
2003/04	5.0	10.9	16.0	20.1	28.7
2002/03	4.1	8.7	15.1	17.0	22.8
2001/02	4.1	9.0	15.1	18.7	25.4

Source: Province of British Columbia (<http://www.health.gov.bc.ca/cpa/mediasite/waitlist/median.html>)

The table above shows the surgical wait times for the province of BC. While the overall wait time for all surgeries remains consistent over the past 5 years, 3 of the 4 major surgical procedures listed above have seen significant reductions in wait times. These reductions in wait times should continue as the wait list reduction strategies are incorporated and more effective management of surgical scheduling and waitlists continue to evolve.

² Population section, BC Stats, Finance and Corporate Relations, 1998

³ Government of BC: <http://www.health.gov.bc.ca/cpa/mediasite/waitlist/median.html>

6.3 HEALTH INFORMATION MANAGEMENT SYSTEM (EMR)

The *Framework for an Electronic Medical Record (EMR)*⁴ is a document developed by the Government of British Columbia which identifies the future direction of electronic health records in British Columbia.

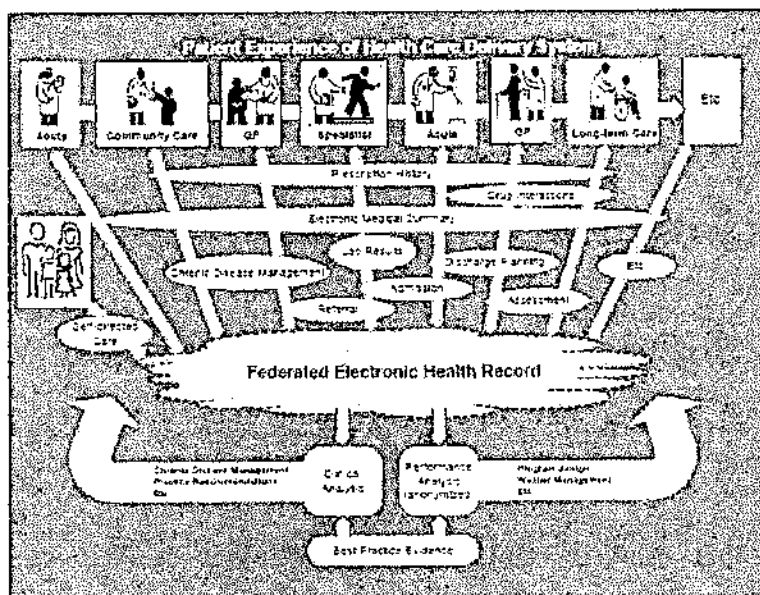
For British Columbians the Electronic Medical Record provides an information technology blueprint for the future – a future where Electronic Medical Record is shared electronically to support health care decisions by caregivers. This future will be possible through the creation of a secure and private lifetime health record for each British Columbian; available twenty-four hours a day, seven days a week anywhere in British Columbia.

This tactical framework outlined a common strategic direction for British Columbia's Electronic Medical Record. It set priorities for future action and demonstrated the alliances formed to realize the Electronic Medical Record vision.

The Health CIO Council believes this Framework provides a concrete plan for achieving goal one of their Strategic Plan, the sharing of caregiver information. By focusing on information technology this framework provides for one aspect of the major changes required to implement an Electronic Medical Record. It represents the first step in a complex, evolutionary journey that must eventually include cultural, attitudinal and business practices changes.

It is assumed that Electronic Health Records will be widely available to most geographical areas in Northern Health Authority.

The following table provides an illustration of the patient experience of Electronic Medical Records.



⁴ Framework for an Electronic Health Record for British Columbians.

http://healthnet.hnet.bc.ca/pub_reports/ehr_framework.pdf

6.4 STAFF RECRUITMENT & RETENTION TRENDS

The use of technologies, for example Tele-health and home based therapies such as renal dialysis may decrease workload demands for some services, programs, and facilities. The increased human resource cost of replacing trained workers, difficulty in attracting new workers and chronic staff deficiencies poses a particular disadvantage to the healthcare industry whose workforce is predominantly made up of women. The aging staff demographic will also have an impact on the type of space required (e.g. lifts, ergonomics, staff amenities). There may be a need to have a prioritization of what services will be delivered depending on limiting Human Resource capacity. In more rural and remote areas, the difficulty in recruiting and retaining staff becomes a more significant concern. Additionally, new healthcare providers in the future will make an impact on the provision of services, such as Physician's Assistants, Nurse Practitioners etc.

These issues are reflective of all healthcare regions and there are no simple solutions. Providing a strong and challenging work environment is a significant step in the recruitment and retention of qualified healthcare staff. The development of in-house training (i.e. collaboration with University of Northern British Columbia and providing significant student placements) will ultimately increase the likelihood of recruitment of additional healthcare staff members).

6.5 THE INTERNET AS A HEALTHCARE INFORMATION RESOURCE

The Internet is becoming the first stop for many people who have a health concern. The capability to access information has been expanded to not only include point of care facilities but anywhere the internet is available. Consumers can benefit from advanced home monitoring systems, tele-consultations, personalized care, and individualized treatments.⁵

Although there is significant information, the Internet's influence in healthcare decisions will gain momentum. People will understand the "good sources" and "bad sources" of information and new portals will crop up that separate the wheat from the chaff.⁶

6.6 ALTERNATIVE MEDICINES

Alternative medicine, including naturopathy, hypnotherapy, Chinese medicine, chiropractic, yoga, etc. have become a main-stream healthcare service and is becoming more popular as frustrations with the traditional healthcare service (surgery and medicine) develop; however, it should be noted that Alternative Medicines have no significant impact to the DCDH Master Program. The following alternative medicine trends have been identified:⁷

- These studies have shown that people are making more trips to these alternative practitioners than they are to regular Physicians.
- Alternative medicine is often less expensive, can be as effective as traditional healthcare services

⁵ Top 10 Trends in Healthcare. <http://ezinearticles.com/?Top-10-Trends-in-Healthcare&id=49498>

⁶ Top 10 Trends in Healthcare. <http://ezinearticles.com/?Top-10-Trends-in-Healthcare&id=49498>

⁷ Top 10 Trends in Healthcare. <http://ezinearticles.com/?Top-10-Trends-in-Healthcare&id=49498>

- Major institutions are now doing large numbers of studies on alternative medicines, including herbal remedies, bodywork, meditation, dietary changes and many others. Randomized, controlled studies are available on almost every type of alternative healing practice, and they typically show good results.

While the need for traditional healthcare will not diminish in the future, there is a potential collaboration between alternative and traditional healthcare, but does not result in any space requirements in the hospital.

6.7 EMERGENCY RESPONSE CAPABILITY AND PLANNING

Pandemic means worldwide epidemic, where a disease spreads rapidly around the world and affects much of the population. Planning also includes mass casualty incidents.

Pandemic influenza emerges when an unusual flu strain is formed, often when a human virus is mixed with animal or bird virus. Humans have little or no immunity against this strain and an influenza vaccine may not immediately be available. The flu is highly contagious for the first 24-48 hours before symptoms even appear, and for five days after the onset of symptoms.⁸

It is essential that the University Teaching Hospital of the North is able to adequately cope with a potential pandemic as it is recognized as the tertiary healthcare facility and the major health service provided in Northern BC. The goals of pandemic and mass casualty incident planning are to realize the following⁹:

- Planning for pandemic and mass casualty incidents requires flexibility of space and storage of supplies
- Minimize serious illness, deaths and community disruption. The plan aims to ensure timely and accurate information before, during and after a pandemic by regularly updating and communicating the plan to our staff, volunteers, physicians, patients, families, health care partners and the community at-large.
- To continue to serve as the tertiary care facility for children/youth of the region during pandemic
- To minimize the impact of pandemic influenza on the delivery of essential Healthcare Services

6.8 EVOLUTION OF PRIMARY CARE

Other reforms have focused on primary health care delivery, including

- Creating primary health Multi-Disciplinary Teams;

⁸ <http://www.hanoverhospital.on.ca/Pandemic.pdf>

⁹ http://www.caphc.org/documents_membership/benchmarking/pandemic_planning_ppt/lindy_sanson.ppt#8

- Placing greater emphasis on promoting health, preventing illness and injury, and managing chronic diseases;
- Increasing coordination and integration of comprehensive health services; and improving the work environments of primary health care providers.

Coordinated primary health care teams include family doctors, nurses, nurse practitioners and other health professionals, and provide a broad range of primary health care services. These team members can vary according to the needs of the community they serve, and provincial and territorial priorities. This team approach, along with the introduction of medical telephone call centres (tele-health), reduces the use of emergency units by providing advice and after-hours access to primary health care services.¹⁰

6.9 HOME TREATMENT

Increasing hospitalisation and treatment costs, together with developments in remote monitoring and wireless communications, will create a boom in home based monitoring, diagnosis and treatment. This trend will also be driven by the rise in the number of people aged 65+ that are quite literally clogging up hospitals (there has been a 155% increase in the number of Americans being treated for heart failure in the US, not because of an increased disease rate but simply because people are living for longer)¹¹.

Advanced Home Treatment Example:

A strong example of the advancements in home treatment technology is the personal defibrillator. This self-diagnosis or treatment is the Philips Heart Start Automatic External Defibrillator (AED) and is available for purchase online.¹²

Additional Future Potential Home Treatments could include¹³:

- Nursing - Oncology, IV antibiotics / antivirals, Blood transfusion, Immunoglobulin
- Pharma-services - Growth hormone, Oncology, Enzyme replacement, Diabetes, Haemophilia, Multiple Sclerosis, Anaemia Management, Rheumatoid Arthritis, Hepatitis, Transplantation, HIV
- NHS - TPN, Desferal, Iloprost, Cystic Fibrosis, COPD, Early Discharge
- Clinical Trials, Oncology
- Consultancy and training

¹⁰ Government of Canada - <http://www.hc-sc.gc.ca/hcs-sss/pubs/system-regime/2005-hcs-sss/del-pres-eng.php>

¹¹ Healthcare at Home. <http://www.healthcare-at-home.co.uk/>

¹² Healthcare at Home. <http://www.healthcare-at-home.co.uk/>

¹³ Healthcare at Home. <http://www.healthcare-at-home.co.uk/>

6.10 TECHNOLOGICAL ADVANCES

Technology is changing how health services are delivered from patient registration to the surgical suites. The Community Space Plan will need to consider the impact of continued technological advances on facility infrastructure requirements. Items like the electronic health record could significantly impact at a later stage, on storage of records required at the site and increased technology on the units and at the bedside.

The impact of new technologies will be discussed with each functional component. Some examples include:

- Increase in Laboratory workloads may be somewhat offset by the automated technologies.
- Advances in Diagnostic Imaging technology has resulted in a shift to a digital environment. The incorporation of a Picture Archiving Communications System (PACS) has reduced the space needed to store images and files, has increased the communication between facilities using PACS, and has reduced the number of redundant tests completed because hard copy files were not available for review.
- Technical advances in surgical services will help reduce the surgical inpatient's length of stay and will continue to shift traditional inpatient surgeries to the outpatient surgical department.
- Adoption of electronic charting, registration and patient records will increase the sharing of patient information and help the individual Health Region's as well as the province better manage patient's information.

6.11 EXPANDED DIAGNOSTIC TESTING

Testing that results in earlier identification and diagnosis of illness, combined with the impact of new procedures, will further increase demand for health services.

6.12 INCREASING DEMAND ON OUTPATIENT SERVICES

Outpatient services will continue to expand as options for treatments increase and new drug treatments come on line. Technological advances to support outpatient treatment, such as home dialysis and point of care testing, will also impact the future demand for outpatient services.

6.13 EXISTING CAPACITY CONSTRAINTS

Existing facility constraints limit the total workload that can be accommodated on site and also limit the ability of the facility to implement new technologies and equipment. New or renovated facilities must be flexible to allow program growth and the introduction of new technologies and equipment.

6.14 FUTURE CONSIDERATIONS

The 'Northern Renal Strategy', which is currently under development, should be considered upon its completion and coordinated with planning assumptions for the DCDH Master Program/Master Plan.

7.0 OTHER STUDIES TO CONSIDER

The following documentation will be reviewed as the functional components are developed.

- Northern Cancer Control Strategy
- Food Services Master Plan
- Gateway Project
- Northern Health Strategic Plan
- Prince George (Northern Health) Space Standards
- Physician Manpower Plan
- Complex Care Analysis (Residential Care)
- Any Building Assessment Information (e.g. VFA reports)



Stantec

Dawson
Creek &
District
Hospital

Working Paper #3

Master Program

The following document contains the Master Program for the Dawson Creek & District Hospital planning project. The planning has been projected to 2036.

December 2013

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Preface to Master Program

The following Master Program is based on the application of Lean principles throughout all services including patient services as well as logistical and support services. Indeed, if the space projections identified are to function efficiently and meet projected service demand, Northern Health (NH) and Dawson Creek and District Hospital (DC&DH) will apply quality improvement tools such as Lean.

The following document is based on a planning horizon to 2036. Therefore, future trends in clinical services have been taken into consideration in the Master Program and may deviate from the current services provided at DC&DH. It is anticipated that, in addition to changes in population, technology, staffing levels, and patient acuity will directly impact the scope of services at DC&DH.

This Master Program has been developed as an 'adaptable' guide for the planning horizon 2036; work within this document is flexible to accommodate unforeseen future changes.

Definition of Terms

Accessible: A site, building, and its facilities that can be approached, entered, and used by all people, including those with physical, sensory or cognitive disabilities.

Bariatric: Of or relating to persons with a body mass index greater than 30 or a weight above 182kg.

Barrier-Free: As applied to an area or service, having characteristics that allow it to be approached, entered, and used by persons with physical or sensory disabilities.

Component Gross Square Metres (CGSM): that portion of a building assigned to a specific component/ (or platform), including net areas, internal circulation, partitions, building structure, and small mechanical shafts.

Cycle Time: Time from presentation of need to team outcome.

DIGMA: Drop-In Group Medical Appointment

e-Health: the use of technology to deliver quality care to patients remotely from specialized centers of care and/or regional centers to local facilities. Components of e-Health include: EMR, Tele-health, e-Pharmacy, e-ICU, and remote access to PACS.

Inpatient Planning Factor: The inpatient planning factor is the best practice standard for component gross square meters (CGSM) for each patient bed. For each patient bed identified the area stated in this column is the total area required to support that bed including patient rooms, internal corridors, support space, and staff work areas.

Inpatient Services Platform: Features beds for all inpatient services, stresses as much "universality" as possible based on variation of patients' needs.

Interventional Platform: Features dedicated to surgery and other procedures spaces, spaces for advanced diagnostics, trauma resuscitation space and interfaces with Universal Care Platform.

Kanban: A 'Kanban' is a system which maintains inventory levels; a signal is sent to produce and deliver a new shipment as material is consumed. These signals are tracked through the replenishment cycle and bring extraordinary visibility to suppliers and consumers.

Master Plan: A document (or set of documents) that states how the health care facility intends to move from its current state to a desired future state as outlined in its Strategic Plan.

Master Program: A Master Program is a broad-level document that combines an assessment of the hospital's existing facilities with recommendations for change required to fulfill a defined role or strategic direction. The Master Program reflects the health care facility's present and future service role within the community; it sets out the changes anticipated in each service area with respect to the scope of services provided, the level of activity sustained, and the amount of space occupied. It may also consider the staffing of the service.¹

MDSTs: Multidisciplinary Study Teams engaged to envision opportunities for deep collaboration or "teams" based on optimization of process. MDSTs are comprised of a cross-section of key stakeholders

¹ CSA Standards. Canadian Health Care Facilities. September 2011, pg. 28.

from various platforms, versus a traditional concept of interviewing separate departments, or components, thereby continuing the 'silo affect' on planning.

Net Square Meters (NSM): the actual occupiable area of each room or space as measured to the interior finished surfaces of all walls, partitions, or mechanical enclosures.

Outcomes: The completion of a set of tasks required to move the patient to the next stage of care and ultimately discharge.

Acute Care Teams/Outcomes:

- Intake Team— care plan completed, patient cleared for procedure
- Interventional Team— indicated procedure is complete, patient ready for discharge or admission
- Emergency Team— patient stabilized, ready for admission or discharge
- Inpatient Team— patient successfully discharged (may be several patient specific cells/teams: Med/Surg, intensive care, OB, pediatrics, mental health)
- Rehab
- Mental Health & Addictions

Platform: Space intended to support a care team or teams.

Pulled Services: Value-based services that are moved to patient, as opposed to moving the patient around to various services.

Smart Room: An inpatient room being equipped with computer screens that can display vital signs, medications and other patient information. The system presents other information including reminders to patients to ask for help in getting out of bed if they are risk for falls; additionally, the patient will be informed on a screen the name of the medical personnel entering the room. This technology is believed to enhance patient safety, and allow clinicians to spend more time at the bedside.

(<http://healthcaremanagementblog.com/smart-patient-rooms/>)

Teams: Groups of people (teams) collaborating to produce meaningful outcomes.

Tele-Health: the use of technology to deliver quality care to patients remotely from specialized centers of care and/or regional centers to local facilities. Components of e-Health include: EMR, Tele-health, e-Pharmacy, e-ICU, and remote access to PACS.

Throughput: Capacity of team to produce outcomes.

Transitional Patient: Similar to 'ALC' patient- a patient waiting or transitioning to an extended or long term care facility.

Turn Around Time: Time from request of pulled service to completion of service.

Universal Care Platform (UCP): As a single point of access for ambulatory patients, pre-admission patients, day surgery patients, and same day surgery patient, the UCP provides exam/treatment rooms that can manage a variety of patient types with universally equipped rooms. The UCP can also provide overflow capacity to Emergency as the spatial types are the same. The UCP provides a space for multidisciplinary clinical teams to come together to care for a patient in one area, thereby reducing travel time, length of stay and patient movement dramatically.

Virtual Triage: Triage which is done by telephone, internet/online or computer (such as information kiosk).

Way Finding: The process of using spatial and environmental information to find one's way through a facility or built environment. Sources of way finding can include: signage, landmarks, environmental cues, site plans or maps, and interior design features.

1.0 Forward – The Cellular Care Hospital

1.1 THE PLANNING PARADIGM

Healthcare is rapidly changing due to technological advances, increasing acuity of patients, and an aging population. All of these factors have a direct and profound impact on the planning of facilities and the delivery of services. Stantec has been requested to find an innovative, cost effective way to produce quality patient outcomes while reducing capital and operational requirements. With this mandate, and by using Lean principles and methodologies, Stantec has been involved in creating a new model for delivering clinical services and shaping the facilities that house them for the DC&DH. At the core of this model is the meaningful understanding of operational processes and their direct impact on design requirements. During the Master Programming phase, stakeholders had the opportunity to shape an improved patient journey based on optimized workflows and clinical and support team organization.

With the increasing demand on healthcare services, hospital facilities also are facing a reduction of available healthcare professionals. The imbalance of a growing demand on healthcare services and a shrinking workforce demands a new way of delivering healthcare. Recovering operational efficiencies and planning facilities that support the optimized care delivery model is a significant step in regaining the ability to deliver quality and safe care in a timely manner. The importance of providing quality work environments is also a significant factor in the recruitment and retention of staff.

Leveraging the connectivity of healthcare providers, and using technology, can also positively impact the delivery of healthcare to the communities of NH. The ability to connect with a specialist and/or other services not currently available in the community or within its facilities allows patients to receive care in their communities with the benefit of an extensive extended care community. This Master Program has considered the impact that technology and equipment can have on service delivery and the physical facility requirements.

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1.2 UNDERSTANDING THIS MASTER PROGRAM

Stantec has developed an innovative Master Program based on the “Cellular Hospital” concept. Based on optimized patient flows, patient care teams pull services to the patient to create radical improvements to the operational efficiency, space utilization, patient movement, and handoffs between departments.

The implication of this model on the Master Program and the Master Planning of the site are significant and deviate from a traditional planning model. The changes can be seen in several ways throughout the Master Program including:

- vocabulary and terminology
- space typologies
- clinical operational processes
- thorough logistics delivery model

The vocabulary of the document reflects a systemic change to the operational organization of the facility (a list of terms has been provided in the Definition of Terms, p.5). To maximize efficiencies, the department silos have been broken down to reveal patient care teams. These teams are multi-disciplinary and focus on producing specific and pre-defined outcomes. The spaces that have been

determined to support the delivery of these outcomes are called platforms. Rather than formulating space requirements based on traditional departments, platforms group a series of spaces required to produce defined outcomes. Another important factor in this model is that staff, teams, and traditional departments do not have ownership of space, but rather have the opportunity to utilize resources (including space) to respond to patient care needs.

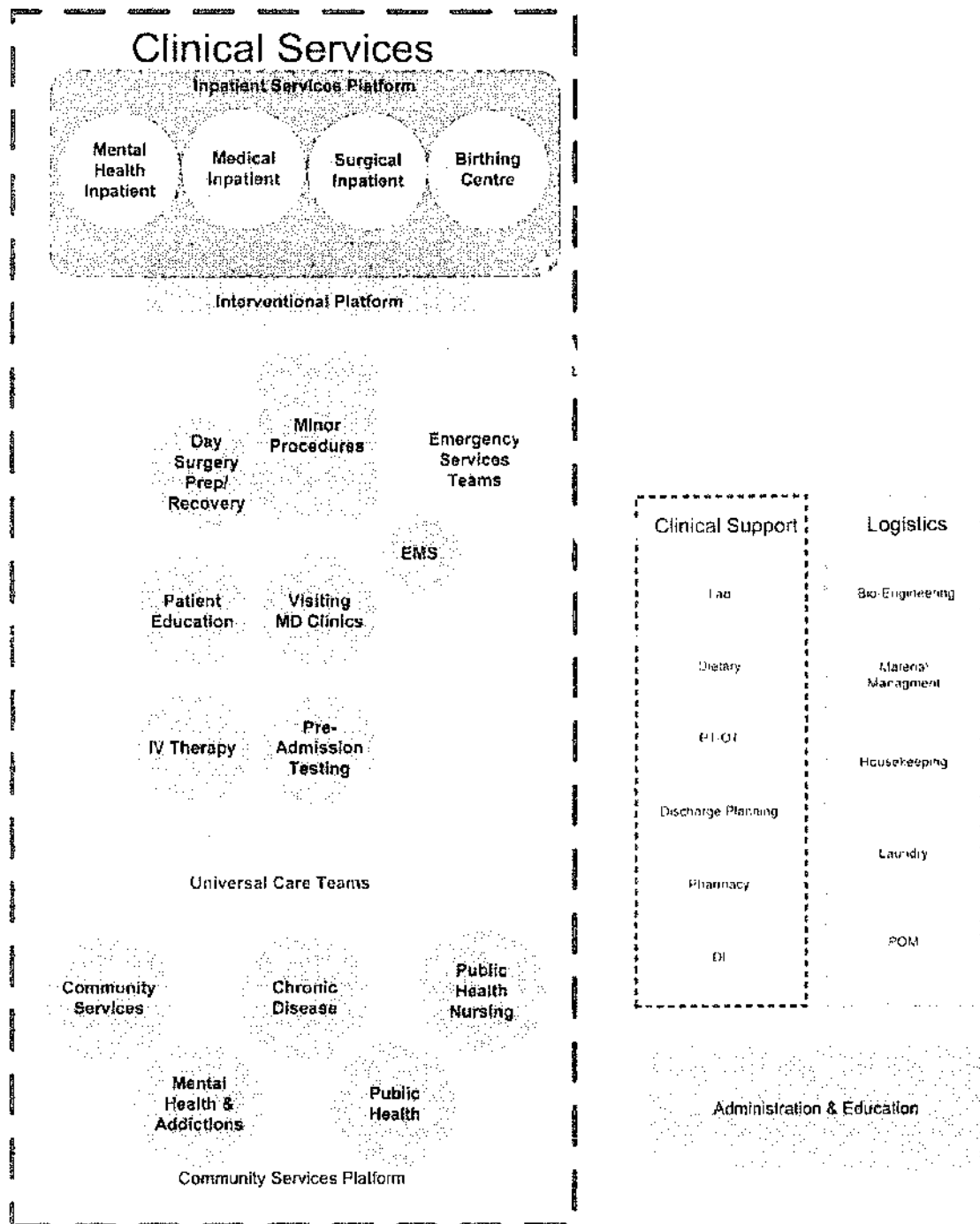
Unlike a traditional hospital organization, which is based on silos of departments, Stantec's Master Program reflects the 'cellular' model of organization based on six key platforms. The platforms are as follows:

- Universal Care Platform
- Interventional Platform
- Inpatient Services Platform
- Clinical Support Services Platform
- Administration and Academic Platform
- Logistics Platform

Critical to the success of this approach is an understanding of the importance of universal spaces. Through creating universal space typologies that are program adaptable, the hospital can manage fluctuations in patient needs and populations, as well as maximize space utilization over the continuum of the daily, weekly, and yearly cycles.

Three critical universal space typologies are identified in this Master Program, which include the Universal Care Platform (UCP), Interventional Services Platform (IVSP) and Inpatient Services Platform (ISP). Combined, these typologies make up the majority of care space for patients.

The following diagram outlines the relationship between platforms, as well as identifying the various services provided within each platform. For further descriptions and definitions of the Universal Care Platform, Inpatient Services Platform and the Interventional Platform, please refer to Appendix B.



1.3 PURPOSE OF MASTER PROGRAM

Informed by the work completed in the project workshops and in alignment with NH Strategic Plan, the Master Program is developed through analysis of operational requirements, functional adjacencies, technology requirements, and space requirements. MDST workshops were held with key stakeholders to verify infrastructure requirements, functional adjacencies and technology requirements along with current and future space and work flow requirements.

This document structure demonstrates the key organization of the project into MDSTs, work process operations and physical requirements. Each section has been informed by the MDST members to verify validity of work completed within this document.

As the first phase in the development of facility design, programming is the gathering of information related to project goals, building use, space requirements, relationships and adjacencies. The facility program is the compilation of that information and is used to translate the findings into design criteria. This phase of the process is not design, and all information provided in this document should be considered as information related to both the operational and physical adjacencies as well as the spatial requirements of the facility.

1.4 DOCUMENT ORGANIZATION

The Master Program presents a summary of the role and scope for DC&DH and the general requirements for each functional platform.

Included within each of the component sections are:

- Functional description
- Future direction
- Workload projections
- Adjacencies
- Space analysis

1.5 GOALS & OBJECTIVES OF DAWSON CREEK & DISTRICT HOSPITAL

The following goals have been established for the DC&DH Master Plan project:

1. Planning will provide a patient and family focused approach.
2. Planning will be conducted with sensitivity to First Nations in keeping with the major goals of NH's Strategic Plan and Aboriginal Health Plan.
3. Primary care and home care will be included.
4. Identify priority service delivery requirements.
5. Develop a Master Program/Master Plan with accommodation strategies for all services at the DC&DH excluding public health protection services.
6. Identify high-level capital cost requirements based on current (2012) costs.
7. Maintain long-term flexibility for NH in the DC&DH site.

8. Plan to support the most efficient and effective use of resources including staff, infrastructure, equipment and technology.
9. Identify a growth management strategy and help ensure adequate space is available for acute programs when required.
10. Allow for the orderly and logical sequencing of growth of existing programs and introduction of new programs.
11. Consider and support technological capabilities and requirements in the service delivery.
12. Master Space Plan is in alignment with the NH Strategic Plan.

1.6 CRITICAL SUCCESS FACTORS

The following critical success factors (measures) have been identified:

1. Examine all realistic physical development options and develop a sustainable Master Plan (financially and operationally).
2. Provide a relevant Master Program/Master Plan that addresses the present and future needs of Dawson Creek and catchment area.
3. Ensure all stakeholders, especially staff and physician user groups, feel that they have had appropriate input.
4. Ensure the DC&DH Master Plan has been well communicated both internally and externally.
5. Ensure plans fit within the NH regional service delivery plans.
6. Develop an implementation plan that minimizes operational impacts within the facilities. Implementation plan should include program descriptions, identified projects and buildings that may be affected and what is required to achieve objectives of the Master Plan.
7. Create options and plans that are flexible and adaptable for the facility.
8. Ensure all existing capital projects are reviewed for validity within the proposed Master Plan and that cost estimates are valid for 2012. Where existing capital projects are not valid or do not support the Master Plan, provide rationale for rejection or what changes are required to the projects to support the Master Program/Master Plan.

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Appendix A: Lean Planning Principles

The following information is general, descriptive information regarding the Lean methodology and principles which have been applied and used as a lens for creating this Master Program.

LEAN PLANNING PRINCIPLES & STRATEGIES

The following five points outline the key principles required to successfully undertake Lean process improvement⁴

1. Collaborate, really collaborate
2. Increase the relatedness of the participants
3. Develop a network of commitments
4. Optimize the whole, not the pieces
5. Tightly couple learning with action

These five principles drive lean planning and enable it to focus on eliminating waste by integrating operational process improvement with the process of planning and designing the DC&DH⁵.

There are eight wastes identified in Lean healthcare planning. They are as follows:

1. Overproduction
2. Waiting
3. Transportation
4. Complexity
5. Inventory
6. Motion
7. Underuse of staff
8. Defects

Overproduction

From the context of healthcare delivery, overproduction is evidenced by acceptance of poor utilization of spatial and human resources, time impacts from batch processing of requests and unnecessary replication of processes due to departmental fragmentation.

Examples include:

- Lab holds tests to batch process them in the interest of minimizing cost per test; as a consequence of added time, patient stays are increased and overall costs are significantly higher
- Departments control elements of the registration and scheduling process, requiring patients to repeat these processes at each point in their journey

Measures that indicate overproduction or reduction of production include effective utilization rates, average length of stay (inpatient), and aggregated cycle times for completion of major milestone in the care plan.

⁴ Chambers, David (2009) *Efficient Healthcare: Overcoming Broken Paradigms*. Rice University, Houston

⁵ Black, John. R. (2008). *The Toyota Way to Healthcare Excellence: Increase Efficiency and Improve Quality with Lean*. Healthcare Administration Press.

Waiting

Waiting occurs throughout the patient care process. It occurs for the patient and it occurs for staff. Both wait for test results. Patients also wait at each check-in point for services to be initiated.

Measures for status and improvement include discreet queues and handoffs in the care pathway, time for completion of test requests (primarily imaging and lab), number of provider returns due to patient not available for indicated service, and patient wait times (aggregated to milestones).

Transportation

Transportation, simply put is all the patient, staff, supplies and information movement required before a care plan is completed. This is a high systemic issue in the current care delivery model.

Measures include total distance traveled (patients and staff) for each milestone in the care pathway, total discreet steps in the care pathway, distance and trip counts for access to supplies and medications.

Complexity

Complexity impacts healthcare delivery in two major ways:

1. Environments become cluttered with many discreet devices. These devices create visual complexity that, in its extreme, adds to the potential for errors and accidents, and at the least, adds time to ascertain "which button, dial or switch to use or respond to".
2. The integration of clinical technologies into space also creates limits of what can be done in one space versus the other. These limits add to the waste of transportation discussed above. In fact, this assessment of waste is a very strong argument against traditional approaches based upon static concepts of function.

Measures include simplification of the human-technology interface (reduced choices), reduced errors and accidents, reduced training requirements/quicker training certifications, reduced patient movement and fewer patient treatment room types.

Inventory

Excess inventory includes redundant storage throughout typical healthcare facilities. Provider groups often rationalize that this is reasonable due to the 'life-critical' nature of their services. However, 'just in time' means exactly that. If essential supplies and medications are required for care, they are delivered just in time. A Kanban system, a 'just in time' system, of materials distribution has been implemented in some healthcare facility locations in the US and has proven to be very effective at decreasing excess inventory. This waste is multiplied due to multiple redundant care processes as noted above, each process supplied discreetly.

Measures include, total supplies required per adjusted patient discharge (a throughput metric), and supplies requiring replacement due to expired dates.

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MASTER PROGRAM

Appendix A: Lean Planning Principles

Motion

This waste deals with complex ergonomics and is a consequence of one of the complexity wastes described above. Complex motions require extensive training to avoid errors and accidents.

Measures for improving efficiency through reduction of complex motion are connected with incidents of staff injuries and patient accidents.

Under Use of Staff

Of all wastes, this waste is the most costly by far in the context of healthcare delivery. Resourcing the delivery of care with staff represents well over 60% of the costs for delivering care to patients. Increasing staffing efficiency is virtually not possible without changing patient and staff flow characteristics. But with changes to patient and staff flows, and the resulting dissolution of departments, the potential in this area is enormous. Every patient care location that duplicates processes adds human resource requirements.

Every unanticipated patient interaction adds human resources. Every similar clinical process separated by space adds human resources. The cumulative effect of these is a greater than 40% impact of waste on human resources.

In effect, departmental structures can never equal the sum of their parts when looking at the overall output of a service model, but multidisciplinary care teams configured to produce meaningful milestone outcomes in the care pathway, can surpass the sum of their parts.

Measures include discreet steps in patient flow for measured milestone outcomes; distance traveled by patients and staff, aggregated cycle times and ultimately, required full time equivalent staff per adjusted patient discharge.

Defects

Several major organizations have focused significant attention on patient safety issues and continue to press for a zero errors target. The most profound defects in the healthcare system are evidenced by accidental deaths, medical errors, patient falls, and hospital acquired infections.

Measures include those incidents indicated in the preceding paragraph; rational targets should include zero *sentinel events* (a *sentinel event* is defined as any unanticipated event in a healthcare setting resulting in death or serious physical or psychological injury to a patient or patients, not related to the natural course of the patient's illness), incidents of medical errors, patient falls, and re-admissions due to errors or incompleteness of initial care provision. In the world of healthcare, errors hurt and even kill people. Our tolerance for them should be zero.

Appendix B: Generic Platform Description

Universal Care Platform

The Universal Care Platform (UCP) provides a single point of access for Outpatients, Day Surgery Patients and Emergency Care. Services are grouped into Universal Care Teams. Patient movement falls dramatically as services, once separated, are consolidated at single points of service. Caregiver teams are built to function together completely within the platform.

A primary concept in the UCP is providing standardized room typologies that can be used for a variety of processes. This enables the management of workflow cycles and allows individual platforms within the UCP to expand as necessary to meet the demands of the moment. The below table identifies typical spaces which are located within a typical Universal Care Platform, as well as a high-level list of those types of items which are found within the room typology (note: list of requirements is not exhaustive of all items).

Standard Room Typologies - Universal Care Platform			
Room	Functional Description	Technical Requirements	Occupants
Exam / Treatment (13.0m ²)	• Patient exams • Minor procedures • Non-scheduled POC testing • Beside/portable Diagnostic Procedures (i.e. Ultrasound, ECG) • Tele-health • Specimen collection • Charting	• Exam stretcher • Medical gas headwall • OH exam light • 2 chairs (family) • EHR monitor • Staff hand wash sink • Kanban storage • Exam stool • e-Health equipment	1 patient 1-2 staff 1-2 family
Exam (13.0m ²)	• Patient exams • Patient consultation • Tele-health • Specimen collection	• Exam stretcher • Medical gas headwall • OH exam light • 2 chairs (family) • EHR monitor • Staff hand wash sink • Kanban storage • Exam stool • e-Health equipment	1 patient 1-2 staff 1-2 family

Standard Room Typologies - Universal Care Platform			
Room	Functional Description	Technical Requirements	Occupants
Minor Procedure Room (22.5m²)	Diagnostic procedures including stress test, cardio diagnostics	- Equipment includes medical gas - Stretcher or chair - Clinician charting station w/diagnostic set - Staff hand wash sink - Instrument table - Ceiling mounted booms for Video monitors/ equipment/ gases - Negative ventilation - e-Health equipment - EHR monitor	1 patient 1-2 staff
Patient W/R (5.5m²)	- Wheelchair accessible - Both sides toilet - Specimen collection	- Toilet - Specimen pass through - Hand wash sink - Emergency call	1 patient 1-2 staff
Staff Workstation (3.0m²)	- Patient charting - Consultation with care team	- Built-in desk 1 chair - EHR monitor - Phone	1 staff
Clean Utility (11.0m²)	- Storage of equipment & clean linen - Recharging of equipment (e.g. IV pumps) - Storage of special supplies	- Wall plugs for recharging - Hand wash sink - Accommodates cart storage - Shelving for Kanban	1-2 staff
Medication Room (9.5m²)	- Storage and preparation of some medications - Automated Medication Units - Storage of narcotics - Storage of blood products	- Hand washing sink - Secure storage - Work counter - Large fridge with monitor - Small fridge with monitor - EHR monitor	1-2 staff

Standard Room Typologies - Universal Care Platform			
Room	Functional Description	Technical Requirements	Occupants
Soiled Utility (12.0m²)	- Disposal of human waste, soiled supplies - Rinsing of reusable equipment	- Macerator - Work surface - Prep sink - Hand wash sink - Reusable equipment - Cart - Cleaning supplies	1-2 staff
Housekeeping Closet (7.0m²)	- Storage of housekeeping equipment and supplies - Disposal of soiled water	- Equipment racks - Supply racks - Floor drain with mop sink - Housekeeping cart	1 staff
Consultation Room (11.0m²)	- Tele-health/ e-Consults - Individual consults	- e-Health monitor - Comfortable - Seating for 2-4 - Small table - Digital recording - EHR monitor	1-2 staff 1 patient 1-2 family
Group Consultation Room (15.0m²)	- Tele-health/ e-Consults - Group consults	- e-Health monitor - Seating for up to 12 - Small table - Digital recording - EHR monitor	1-2 staff 2-10 patient

Interventional Platform

The Interventional Platform is where all procedures requiring specialized equipment and space are to be completed. The Interventional Platform provides several space typologies that support varying acuities of patient conditions. The Interventional Platform supports both diagnostic procedures including medical imaging and surgical interventions.

Standard Room Typologies - Interventional Platform			
Room	Functional Description	Technical Requirements	Occupants
Procedure Room (30m²)	- Minor surgical procedures not requiring a general anesthetic; e.g. endoscopies, vasectomies, foreign object removal, D&C, biopsies, carpal tunnel releases, ophthalmology cataracts - Stress test, cardio diagnostics	- Exam stretcher - Medical gas headwall 2 chairs (family) - EHR monitor - Hand wash sink - Kanban storage - Exam stool - Tele-health equipment	1 patient 1-2 staff
Operating Room (60.0m²)	- Clinical diagnostics - Examination - Conference - Observation/Monitoring - Major Treatment/Procedure - Research/Teaching - Documentation/Charting	- Medical gases - Anaesthesia cart & machine - Negative ventilation - OR Table/stretchers - Ceiling Mounted booms for Video monitors/ equipment/ gases - OR Light - Tele-health equipment - EHR monitor/ workstation - Hand wash sink - Instrument table - Gas scavenging - Laminar flow air	1 patient - Up to 7 staff

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MASTER PROGRAM

Appendix B: Generic Platform Description

Standard Room Typologies - Interventional Platform			
Room	Functional Description	Technical Requirements	Occupants
Future Interventional OR (70.0m2)	• Clinical diagnostics • Examination • Conference • Major Treatment/Procedure • Research/Teaching • Documentation/Charting • At least one OR will be planned to support image guided surgical/radiological procedures • Multidisciplinary	• Equipment includes medical gas • OR table or stretcher • OR Light • Instrument table • Anaesthesia cart & machine • Ceiling mounted booms for Video monitors/ equipment/ gases • Negative ventilation • Tele-health equipment • Hand wash sink • EHR monitor/ workstation • Lead shielding to support future image guided procedures	• 1 patient • 2-4 staff • 1 anesthetist • 1 surgeon • 2 physicians

Inpatient Services Platform

The Inpatient Services Platform will consist of universal rooms capable of managing all inpatient requirements. The patient room is the center of the platform and can be used in an acuity adaptable operating paradigm reducing patient room transfers. Care givers treating a patient no longer have to leave the patient room to complete tasks, designing out interruptions and wasted motion, while promoting patient safety (storage of equipment, supplies, and information will be located in the room).

Inpatients will have single handed universal rooms, room servers with patient specific medications, supplies, clean linen, soiled waste, equipment and nurse/consultant charting space with visual access to the patient outside of every patient room.

Standard Room Typologies - Inpatient Platform			
Room	Functional Description	Technical Requirements	Occupants
Inpatient Room (28-30m2)	- Nursing care of medical and post-surgery patients - Charting - Accommodate family members sleeping over - Specimen collection	- Medical gas headwall - Overhead lift - Overhead exam light - Negative airflow 2 chairs (family) - EHR monitor - Staff hand wash sink - Kanban storage - Exam stool - e-Health equipment	1 patient 1-2 staff
Patient W/R (included in IP room area)	- Bathing - Specimen collection - Personal care 2 sided access	- Toilet with side bars - Hand wash sink - Hand shower with bench - Emergency call	1 patient 1 staff
Bariatric Inpatient Room (35m2)	- Nursing care of medical and post-surgery patients - Charting - Accommodate family members sleeping over - Specimen collection	- Medical gas headwall - OH exam light 2 chairs (family) - EHR workstation - Staff hand wash sink - Kanban storage - Exam stool - e-Health equipment - Overhead lift	1 patient 1-2 staff

Standard Room Typologies - Inpatient Platform			
Room	Functional Description	Technical Requirements	Occupants
Bariatric W/R (area incl. in IP room)	- Bathing - Specimen collection - Personal care 2 sided access	- Toilet with side bars - Hand wash sink - Hand shower with bench - Emergency call	1 patient 1-2 staff
Isolation Room (35m2)	- Clinical Diagnostics - Documents/Charting - Nursing Care of patients requiring isolation - Patient/Family Consultation - Observation/Monitoring - Research/Teaching - Minor Treatment/Procedure - Multidisciplinary	- Ante Room - Overhead lift - Isolation Supplies cart (incl. biohazard waste receptacle) - OH exam light - Medical gases - Staff hand wash sink 2 chairs (family) - EHR workstation - Kanban storage - Exam stool - Negative Pressure airflow	1 patient 3 staff 2 family
LDRP (38m2)	- Charting - Accommodate family members sleeping over - Specimen collection - Labour and delivery - Post-partum care for both mother and baby	- Delivery bed - Medical gas headwall - Medical baby headwall - Baby space - Isolette 2 seats (family) - EHR monitor - Staff hand wash sink - Kanban storage - Exam stool - OH baby spotlight - Sleeping cot/bed for spouse/family - Tele-health/ e-health equipment - Delivery equipment	2 patient 1 infant 3-6 staff (including physicians)

Stantec**DAWSON CREEK & DISTRICT HOSPITAL****MASTER PROGRAM***Appendix B: Generic Platform Description*

Standard Room Typologies - Inpatient Platform			
Room	Functional Description	Technical Requirements	Occupants
LDRP W/R (incl. in LDRP room area)	• Bathing • Specimen collection • Personal care • 2 sided access	• Toilet with side bars • Bath and shower • Hand wash sink • Hand shower with bench • Emergency call	1 patient 1-2 staff

Appendix C: Detailed Population Projections

The following table provides the population projections for the catchment area of the DC&DH. These projections are developed by P.E.O.P.L.E. 36 (September 2011)⁶. The table provides a summary of the population projections by age-cohort. These age-cohorts are used in a variety of platforms to aid in workload projections.

Population Growth Summaries (for workload projections)												
Age Cohort	2011	2016		2021		2026		2031		2036		% Change
	Total	Total	% 5-year Change	Total	% 5-year Change	Total	% 5-year Change	Total	% 5-year Change	Total	% 5-year Change	2036-2011
Total	27,779	29,664	6.8%	30,701	3.5%	31,626	3.0%	32,277	2.1%	33,197	2.9%	19.5%
0-19	7,037	7,068	0.4%	7,137	1.0%	7,167	0.4%	7,076	-1.3%	7,010	-0.9%	-0.4%
15-39	9,430	10,059	6.7%	10,141	0.8%	10,022	-1.2%	9,845	-1.8%	9,718	-1.3%	3.1%
20+	20,742	22,596	8.9%	23,564	4.3%	24,459	3.8%	25,201	3.0%	26,187	3.5%	26.3%
40+	13,314	14,263	7.1%	15,169	6.4%	16,313	7.5%	17,250	5.7%	18,333	6.3%	37.7%
50+	9,157	10,620	16.0%	11,449	7.8%	12,002	4.8%	12,479	4.0%	13,330	6.8%	45.6%
55+	6,818	8,316	22.0%	9,580	15.2%	10,244	6.9%	10,544	2.9%	10,968	4.0%	60.9%
75+	1,376	1,651	20.0%	1,969	19.3%	2,547	29.4%	2,980	17.0%	3,810	27.9%	176.9%

⁶ <http://www.bcstats.gov.bc.ca/StatisticsBySubject/Demography/PopulationProjections.aspx>

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Dawson
Creek &
District
Hospital

Working Paper #4

MASTER PLAN

The following document contains the Master Plan preferred option for the Dawson Creek & District Hospital planning project. The planning has been projected to 2036.

December 2013

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1.0 INTRODUCTION TO THE DC&DH MASTER PLAN

Five Master Plan options were developed in total for the Dawson Creek & District Hospital Master Plan project, with three options dating from 2011, and the final two options being developed in 2012. The original three options were developed with a considerable amount of User Group engagement, including one full-day gaming workshop which provided input to component adjacencies, circulation patterns and creative problem solving by the users. The design teams analyzed the master plan options generated in the Gaming Workshop, and began an intensive integrated process to transform the workshop schemes to fully functional and viable options for evaluation, also considering the Northern Health CPAFs (CPAFs are included in Appendix V). The original concept options addressed implementation phasing to a level sufficient for evaluation against Critical Design Success Factors and for preliminary costing by the cost consultant.

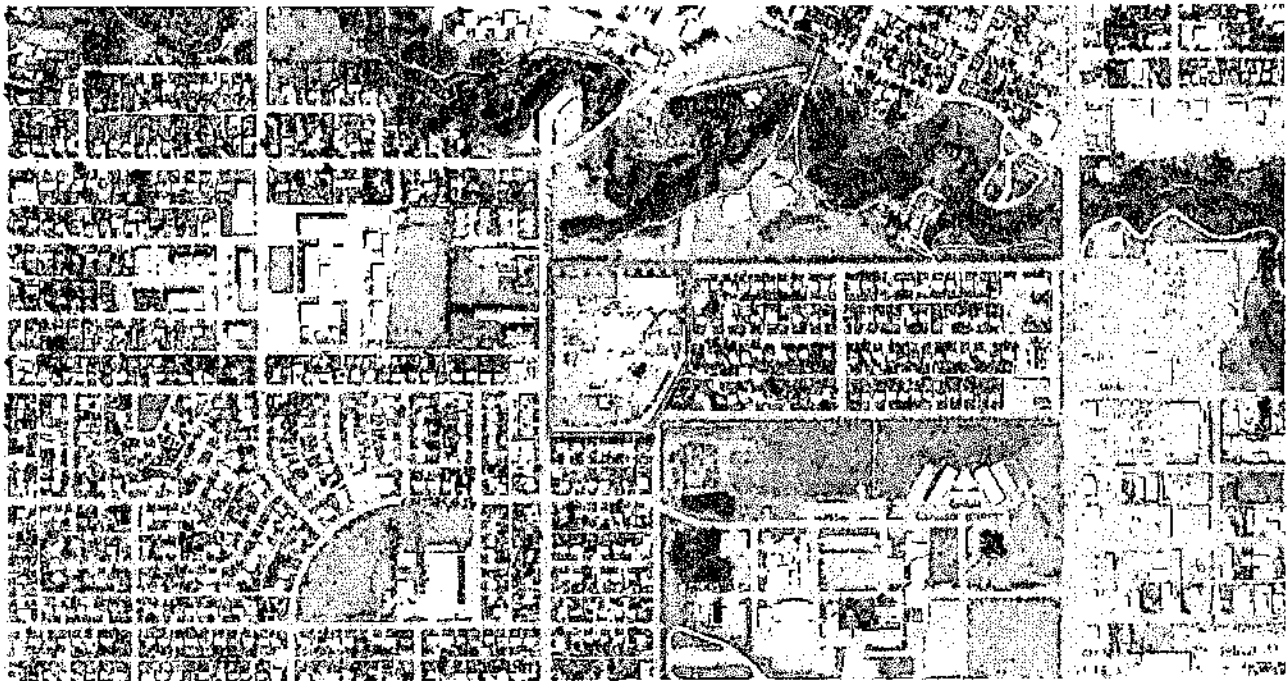
Two additional options were generated in November 2012, which were based on the original gaming options, and Lean Health Care planning principles. Of these, Modified Option 5 was changed slightly to produce 'Modified Option 5b', which then became the final preferred option for the Dawson Creek & District Hospital Master Plan in January 2013. S.13,s.17

s.13,s.17 The following indicators were used to aid the evaluation of all options and selection of the final option:

- Gross building area
- Gross building volume
- Gross building area by floor level
- Travel distances/time between prioritized component pairs
- Global way finding system complexity to key patient destinations
- Daylight achieved by the Green Guide for Health Care criteria
- Energy implications of building orientation and massing, and
- Interim moves required and other implications for construction scheduling

The preferred option is described in this Working Paper #4 S.13,s.17
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2.0 DAWSON CREEK & DISTRICT HOSPITAL SITE



Dawson & District Hospital Aerial View

The above diagram shows an aerial view of the Dawson City & District Hospital site, which is delineated in red. The DC&DH was constructed in 1960 with an addition in 1995. The 3-storey building with basement and two penthouses contains 15,605 square metres of space. The site is level with the main floor at grade, facing 13th Street (see Site plan on following pages).

The penthouse is currently comprised of mechanical room space. The 3rd Floor consists of administrative offices and information technology, as well as some miscellaneous storage and other uses. Some of the Departments located on the second floor include Maternity Unit, Surgical and Intensive Care Unit as well as Chemotherapy. The 1st Floor includes the Main Entry, Health Records, Physical Therapy, Digital Imaging, Mental Health & Addiction Services, Laboratory, Emergency Department, and Day Surgery and Operating Rooms. The Cafeteria, Laundry and other mechanical and electrical spaces are located in the Basement level. One Laundry chute services the main level through the 3rd floor (for more information on existing DC&DH conditions, see the Facility Assessment Report in Appendix II).

The new Fort St. John Hospital will have a regional laundry which the Dawson Creek & District Hospital will move their services to – this will free up space in the existing hospital for other needs. Also, the Microbiology program currently situated at DC&DH will go to the new Fort St. John Hospital in the future.

Stantec**DAWSON CREEK & DISTRICT HOSPITAL
MASTER PLAN – Working Paper #4**

The follow lists comprise issues, in no particular order of priority, which prompted the master planning process. These issues were gleaned by the Stantec team from various site visits and meetings from both users and Steering Committee members.

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5.0 MECHANICAL SYSTEMS REVIEW

5.1 INTRODUCTION AND SUMMARY

This section of the Master Plan Report provides mechanical system design guidance and principles relating to low energy design, which will be applied in the next phase(s) of the design process for the development of the Dawson Creek & District Hospital (DC&DH).

The overall objective of the Master Program/Master Plan was to establish a planning framework for the future development of the DC&DH site including services.

A comparison of existing and proposed program functions is presented below, with proposed building areas:

Inpatient	
Total Existing	2,380
Interventional	
Total Existing	1,095
Universal Care	
Total Existing	1,012
Clinical Support Services	
Total Existing	868
Logistics	
Total Existing	1,442
Administration	
Total Existing	1,581
Academic Space	
Total Existing	160
Total Campus Area	8,538

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TABLE 1.0 EXISTING SPACE - DCDH

5.2 DESIGN PRINCIPLES

Hospitals require high ventilation rates to reduce nosocomial infection, have high occupation density and are designated as post-disaster facilities requiring robustness and redundancy in all building systems. For these and other reasons, hospitals are expensive to build and operate, and consume more energy per unit area than almost any other major building type. At the same time, care processes within hospitals are often highly stressful for patients and caregivers. Therefore, technology advancements that maintain or improve overall Indoor Environmental Quality (IEQ) for occupants while reducing the hospital's energy intensity, operating cost, and carbon footprint are required.

Carbon neutrality for hospitals is an emerging industry goal; by as early as 2020 it is expected that all hospital designs will be required to be effectively Carbon Neutral. Application of low energy and low carbon design strategies may include: use of displacement ventilation, radiant heating and cooling, exterior automatic solar shading, thermal labyrinths, configurations for daylighting, and energy

recovery. The application of these and other Energy Conservation Measures (ECMs) have the potential of reducing energy use of the facility by 60% to 80% of a typical code compliant facility.

The objectives of the next phases of design may include:

- Determine the energy savings that can be achieved using the optimal combination of ECMs
- Determine the reductions in plant and equipment made possible by the reduced energy demand
- Estimate the capital costs/savings resulting from the ECMs employed

Some of the guiding principles that are recommended for consideration in the next phase of design are:

- Mechanical systems should be designed considering occupant safety/ well-being, IEQ and operational efficiency.
- Mechanical system's design should consider probable changes in outdoor environmental conditions due to global warming and changes in seasonal weather patterns.
- The mechanical systems should be resilient and be able to be operational after a catastrophic event.
- The design process should use a fully integrated team, representing all disciplines, to take advantage of building system synergies, such as reduction/ control of solar gains and lighting heat thermal loads to reduce the mechanical system's cooling/ ventilation loads and at the same time improve the IEQ/ occupant thermal comfort and well-being.
- The mechanical systems should be flexible for changing use and operating conditions.
- Consider emerging design trends, such as

Optimization of daylight, view and physical connection to the outside etc.

Low carbon/ energy design consideration

Usage of low energy design principles (e.g. cascading energy usage), using the lowest grade energy possible, decoupling of thermal and ventilation systems and maximizing the use of natural forces/ energy flows etc. wherever possible.

Consideration/ usage of natural ventilation, displacement ventilation. Hybrid/ mixed mode ventilation systems where appropriate.

- Minimize the use of water by using low-flow technology, possible water collection and possible recycling the water used wherever possible.
- LEED Gold Building (Provincial Requirement)

5.3 MECHANICAL DESIGN STANDARDS

5.3.1 Regulations and Standards

Mechanical systems are to be designed in accordance with all authoritative/ legislated codes and standards adopted at the time of design by the authorities having jurisdiction or stipulated most recent version of standards (whichever is most stringent), as follows:

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- The 2012 British Columbia Building Code (BCBC).
- The National Research Council of Canada - National Fire Code of Canada.
- The British Columbia Power Engineers Boiler and Pressure Vessel Safety Act and Regulations 1982.
- The British Columbia Industrial Health & Safety Regulations (WorkSafe BC).
- The Canadian Standards Association Standard Z7396.1-09 Medical gas pipeline systems — Part 1: Pipelines for medical gases and vacuum and Part 2: Anaesthetic gas scavenging disposal systems
- The National Fire Protection Association #13, 1999 Edition, Standard for the Installation of Sprinkler Systems.
- The National Fire Protection Association #14, 2000 Edition, Standard for the Installation of Standpipe and Hose Systems.
- The Canadian Standards Association Standard B51-M1997, Boiler Pressure Vessel, and Pressure Piping Code.
- The Canadian Standards Association Standard B52-M1995, Mechanical Refrigeration Code.
- The Canadian Standards Association Standard CSA Z317.2.10, Special Requirements for Heating, Ventilating and Air Conditioning (HVAC) Systems in Health Care Facilities.
- Other healthcare related Canadian Standards Association documents, that have related mechanical system implications, such as;
 - Radiation therapy standards and guidelines
 - Laboratory standards and guidelines
 - Pharmacy standards and guidelines (USP 797)
 - Sterile supplies standards and guidelines
 - Infectious disease control and management standards and guidelines.
- Applicable ASHRAE standards and guidance documents such as
 - ASHRAE design guides
 - ASHRAE 90.1 (latest applicable standard
 - ASHRAE 170 (use either CSA Z317 or ASHRAE 170 stipulated requirements, whichever is the most stringent)

5.4 CSA Z317

The primary document for healthcare mechanical system design is the CSA Z 317 Standard (Special Requirements for HVAC Systems in Health Care Facilities). The latest version of this standard is the CSA Z317.2.10, which was published in 2011. As far as we know, the latest version of CSA Z317 has not been adopted/ referenced in the most recent National Building Code or in BCBC, but is expected to be referenced in the next round of code revisions (2015 or before). There are some significant differences between the older CSA standard used in the 2009 Fit Test and the latest CSA standard that could affect the hospitals design. An abbreviated summary is as follows:

- The new standard requires the design to consider catastrophic events e.g. HVAC systems are required to be capable of supplying 100% outside air or 100% recirculation air for Type 1 acute care areas. This could increase the plant loads and air handling system configurations.

- The new standard requires existing areas that are renovated within a hospital to be brought up to latest code standards. This could affect the use of existing equipment.
- The new standard requires the cooling and heating plant serving Type 1 (class 1 in old standard) areas to be designed to 1% design weather data. This could increase the plant loads.
- The new standard requires the heating and cooling plant be sized for 100% outside air for all Type 1 systems and also assuming that the largest energy recovery system is “out of service”. This will increase the plant loads.
- The new standard requires dedicated mechanical cooling for numerous areas e.g. computer/ communication rooms, medical equipment, even elevator machine rooms etc. This will require additional systems.
- The new standard requires pressure control between most Type 1 and some Type 2 areas within the hospital. This will require effective air barrier sealing between most departments and even down to some specific rooms.
- The new standard does not allow “finned tube” type heat exchangers in any Type 1 or 2 rooms e.g. no “finned tube” radiators, fan coils etc.
- The new standard stipulates horizontal and vertical separation requirements between hospital exhaust air/ helicopter/ gen set exhaust etc. For instance, the standard states that a minimum separation of 60m horizontal and 3 m vertical, from a helicopter exhaust and an air intake.

5.5 ACOUSTICS AND VIBRATION

Suggested items for study by an acoustic consultant are as follows. Additional items may become apparent during the next phase of the design process.

- Emergency generators
- Air distribution systems
- Chillers and condensers
- Major equipment (air handling units, pumps, compressors...)
- Noise transfer through openings in the outside wall
- Noise from the steam PRV's

5.6 DESIGN CRITERIA

The cooling and heating plant is to be designed to meet CSA Z317.2.10.

5.7 CHANGING AND VARIABLE CLIMATES

The mechanical systems are to be designed with the ability to increase their capacity in the future to accommodate possible changes in the weather. The following is taken from a recent 'Canadian Commission on Building and Fire Codes' review document:

“Climate is not static. At any location, weather and climatic conditions vary from season to season, year to year, and over longer time periods (climate cycles). This has always been the case. When estimating climatic design loads, this variability can be considered using appropriate statistical analysis, data records spanning sufficient periods, and

meteorological judgment. The analysis generally assumes that the past climate will be representative of the future climate.

Past and ongoing modifications to atmospheric chemistry (from greenhouse gas emissions and land use changes) are expected to alter most climatic regimes in the future. As a result, it can no longer be safely assumed that the climate of the past few decades will be a sufficient guide to the climate of the next few decades. While average climatic conditions may be changing, the frequency and magnitude of extreme climatic events may also be changing in unknown ways. Although consensus is emerging on the long-term trends for some climatic elements, there is no agreement as yet on the changes expected in climatic variability".

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Appendix I Working Paper #1 Project Charter

The following document contains Working Paper #1 Project Charter for the Dawson Creek & District Hospital Master Plan project. The planning has been projected to 2036.

December 2013

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**DAWSON CREEK & DISTRICT HOSPITAL
MASTER PLAN**

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1.0 PROJECT OVERVIEW

1.1 KEY SUCCESS FACTORS

The following critical success factors (measures) have been identified:

1. Examine all realistic physical development options and develop a sustainable master plan (financially and operationally).
2. Provide a relevant plan that addresses needs of the Dawson Creek.
3. Ensure all stakeholders, especially staff and physician user groups, feel that they have had appropriate input.
4. Ensure the Dawson Creek Master Plan has been well communicated both internally and externally.
5. Plans fit within the Northern Health service delivery plans.
6. Develop an implementation plan that has minimal operational impacts.
7. Creating flexibility and adaptability for the facility.
8. The Master Plan will receive the type of investment and commitment by Northern Health as shown by Dawson Creek District Hospital and Stantec, and that NH will move the project forward

1.2 PROJECT GOALS

The following goals have been established for the Dawson Creek Master Plan project:

1. Planning will provide a patient and family focused approach.
2. Identify priority service delivery requirements.
3. Develop master plan with accommodation strategies for all services at the Dawson Creek and District Hospital.
4. Identify high-level capital cost requirements based on current (2011) costs.
5. Maintain long-term flexibility for Northern Health in the Dawson Creek and District Hospital.

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PROJECT CHARTER (FINAL DRAFT APPROVED JULY 2011)
PROJECT OVERVIEW**

6. Plan to support the most efficient and effective use of resources including staff, infrastructure, equipment and technology.
7. Identify a growth management strategy and help ensure adequate space is available for acute programs when required.
8. Allow for the orderly and logical sequencing of growth of existing programs and introduction of new programs.
9. Consider and support technological capabilities and requirements in the service delivery.
10. Master Space Plan is in alignment with the Northern Health Strategic Plan.

1.3 PROJECT ASSUMPTIONS

The project will proceed based on the following assumptions:

1. A single steering committee will over see the project
2. A primary contact will be established who will be responsible for information gathering and distribution to users, arranging meetings and liaising with Northern Health senior management.
3. Review and decisions are made in a timely manner to meet project schedule.
4. The Plan will encompass the spectrum of health services located at the Dawson Creek and District Hospital.
5. Planning will be based on the demographic needs of the NE HSDA established during Program Parameters.
6. Existing co-location between programs and services will be changed where improved patient/client services or operations can be demonstrated.
7. Stantec will have access to site information that would affect the process and outcome of the project in a timely manner.
8. Northern Health staff will have the time to devote to this project while realizing there will be competing priorities.
9. The management team will devote the time required to collect, collate and verify the materials.
10. Northern Health staff will have the resources (information, documents, etc) available to them as per what is required of them for the project.

DAWSON CREEK AND DISTRICT HOSPITAL MASTER PLAN
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PROJECT OVERVIEW

1.4 INITIAL RISKS AND MITIGATION

Potential Risk	Occurrence Probability	Potential Severity	Mitigation Strategy
Schedule Risks			
Documentation Review	Medium	High	Stantec will ensure that documentation is simple, concise and delivered for distribution to users one week prior to meetings.
Availability of Users	High	High	All meetings will be scheduled as soon as possible. Due to the timing (summer) of the meeting key stakeholders may be unavailable
Budget Risk			
Project Scope	Medium	Medium	Stantec will use the Project Charter to monitor scope changes

2.0 SCOPE AND DELIVERABLES

2.1 SCOPE

2.1.1 Planning Horizon

- Planning horizon 2035/6.

2.1.2 Facilities

- Dawson Creek and District Hospital

2.2 DELIVERABLES

2.2.1 Working Paper #1: Project Charter

The Project Charter defines the following:

- Project Scope
- Success Factors
- Risk Factors
- Team Members
- Lines of Communication
- A Project Schedule
- The Approval Process

Key Activities of the Project Charter include:

- Project Start-Up Meeting and Charter Workshop
- Production of the Project Charter Document

2.2.2 Working Paper #2: Program Parameters

The Program Parameters includes the following:

- Compilation and Summation of previous documentation and planning studies as well as health delivery service targets, capital plans and other resources
- Confirmation of Demographic trends including projected population growth

Key Activities of the Program Parameters include:

- Issue and timely response by DCDH of a Questionnaire
- Review Existing Planning Documentation
- Interviews of Key Stakeholders
- Production of a Project Parameters Document

**DAWSON CREEK AND DISTRICT HOSPITAL MASTER PLAN
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SCOPE AND DELIVERABLES**

2.2.3 Working Paper #3: Master Space Program

The Master Space Program provides a summary of activity levels, functional relationships, technology, staff and preliminary space estimates for each functional component in each facility.

Key Activities of the Master Space Program include:

- Summarizing activity levels for each program/service (2035/6)
- Summarizing anticipated staff levels by program/service
- Identification and documentation of optimal functional relationships
- Identification of technological impacts
- Development of Preliminary Space Estimates for each program/service
- Production of a Master Space Program document

2.2.4 Working Paper #4: Master Plan Options

The intent of the Program & Facility Options is to identify potential realignment options and outline key recommendations regarding building utilization.

Key Activities of the Program & Facility Alignment Options include:

- Review of existing as-built ASME drawings/specifications
- Facility tours (room names, numbers and department boundaries)
- Analysis of functional existing space utilization
- Identification of potential short- and long-term realignment/growth management options
- Development of key recommendations regarding building utilization
- Review of implementation strategies with Steering Committee
- Selection of preferred implementation strategy
- Development of preliminary cost estimates
- Development of an implementation and phasing schedule
- Production of a Master Plan Document

2.2.5 Summary Report

Approved information contained in Working Papers 1-4 will be compiled into a final Master Plan Summary Report.

**DAWSON CREEK AND DISTRICT HOSPITAL MASTER PLAN
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SCOPE AND DELIVERABLES**

2.3 DOCUMENTS REQUIRED FROM NORTHERN HEALTH

1.Guiding documents	Plans, studies, reports that could affect the Dawson Hospital sites in future, including: • Documents that address current health status, health services, service/care reviews, health issues, unmet health service needs • Existing written proposals for new services • Physician Resource Plan • Infection Control Guidelines • Provincial plans such as: ○ Renal Program ○ Cancer Care Services ○ Pharmacy Services ○ Diagnostic Imaging ○ Laboratory Services ○ Telehealth Services ○ Health Records ○ Food Services ○ Materiel Management • Planning guidelines for occupancy levels, length of stay
2.Population & demographic data	Current and projected to at least 2030; by sex and by age
3.Program descriptions	Written descriptions of current programs and services at the both sites
4.Health status data	Number of residents of catchment area having: • Haemodialysis (Ft. St. John), peritoneal dialysis (Prince George), home dialysis (Dawson Creek) • Communicable disease (e.g., STI, TB) • Chronic disease (e.g., diabetes, renal disease)
5.Workload data & statistics	Acute and continuing care
a. Services provided locally	3 - 5 years historical data for all services including: • Acute care and continuing care beds in operation (funded) • Patient discharges & patient days by service • ELOS and ALC data

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SCOPE AND DELIVERABLES**

	• Ambulatory visits by type of clinic/service • Telehealth clinics held (Multi-Disciplinary Service Team meeting) • Day procedure visits by type of procedure • Emergency visits by level of care • Ambulances on site • Ambulance/EMS activity • Births & C Sections • Surgical procedures provide on site by type of procedure • Lab tests by type of test • Diagnostic imaging procedures by type of procedure • Pharmacy prescriptions filled • Respiratory therapy treatments • Rehabilitation visits/treatments by type of treatment • Community Health visits/service by type of service • Home Care visits • Meals served, inpatient, meals on wheel & cafeteria • Linear feet of existing health records storage on and off site • Purchase orders • Pounds of laundry done on site or sent off site • Primary health network visits by health care provider(nurse practitioner)
b. Services referred out	3-5 years historical data for services to residents provided outside of area (out migration) • Patient discharges and patient days by facility & type of service including births (hub of shadow population) demographic...driver of use • Patients receiving chemotherapy by location of service • Patients on haemodialysis by location of service • Surgical procedures by site provided and by type of procedure
6. Human Resources	• Budgeted and actual FTE for current year (10/11) • 2 years of historical FTE information (08/09, 09/10)

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SCOPE AND DELIVERABLES**

-
- Current physician resources information (number, specialty)
 - Staff resource plans
 - Current staffing models & plans for future staffing models
-

3.0 SCHEDULE AND KEY MILESTONES

3.1 SCHEDULE

A detailed project schedule has been developed and is attached.

3.2 MILESTONES

A summary of the key milestones and their target dates is listed below:

Milestone	Target Dates (2011/12)
Start-Up Meeting	June
Submit Draft WP#1: Project Charter	July
Submit Final WP#1: Project Charter	July
Issue Questionnaires	June
Interviews with Key Staff Members	June/July
Submit Draft WP#2: Project Parameters	July
Submit Final WP#2: Project Parameters	July
Submit Draft WP#3: Master Space Program	July
Submit Final WP#3: Master Space Program	September
Submit Draft WP#4: Program & Facility Alignment Options	October
Submit Final WP#4: Program & Facility Alignment Options	October
Submit Draft Summary Report	October
Submit Final Summary Report	October 2011/ March 2012

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DAWSON CREEK AND DISTRICT HOSPITAL MASTER PLAN PROJECT CHARTER (FINAL DRAFT APPROVED JULY 2011) KEY STANTEC & STEERING COMMITTEE TEAM MEMBERS

4.0 KEY STANTEC & STEERING COMMITTEE TEAM MEMBERS

4.1 STANTEC PROJECT TEAM MEMBERS

Stantec Team Members	Role
Ian Carter	Principal in Charge
John Maccarrone	Engineering Coordination
Ray Pradinuk	Healthcare Planner/Research
Jennifer Silliman	Master Programmer
Ruth Dollinger	Healthcare Planner
Nick Coucill	Healthcare Planner/ Data Analyst
<i>Other Stantec personnel will provide engineering and technical input as required.</i>	

4.2 NORTHERN HEALTH STEERING COMMITTEE MEMBERS

DCDH Steering Committee Members		
Name	Representing	Email
Mike Hoefer	Capital Planning	Michael.hoefer@northernhealth.ca
Michael Leisinger	Corporate Planning / Health Services	Michael.leisinger@northernhealth.ca
Betty Morris	COO, NE HSDA	Betty.Morris@northernhealth.ca
Lyndon Petersen	Capital Planning	Lyndon.Petersen@northernhealth.ca
Al Martin	Interm HSA	al.martin@northernhealth.ca
Jane Lindstrom	VP HR	jane.lindstrom@northernhealth.ca
Dr. Becky Temple	Medical Director - NEHSDA	Becky.Temple@northernhealth.ca

4.3 REPORTING AND COMMUNICATION

There will be one point of contact for communication between Northern Health and Stantec.

- Darrel Edelman will serve as the point of contact for all Northern Health communication
- Ian Carter will serve as the point of contact for all Stantec communication

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**DAWSON CREEK AND DISTRICT HOSPITAL MASTER PLAN
PROJECT CHARTER (FINAL DRAFT APPROVED JULY 2011)
APPROVAL & ACCEPTANCE**

5.0 APPROVAL & ACCEPTANCE

The signatures below indicate the undersigned have read and agreed to the context of this Project Charter and have thus given approval and acceptance for this project to be initiated.

Approval: Northern Health Authority

Date

Approval: Stantec Consulting - Principal in Charge (Ian Carter)

Date



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Appendix II Facility Assessment Report

The following document contains the Facility Assessment Reports for the Dawson Creek & District Hospital Master Plan project. The planning has been projected to 2036.

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**DAWSON CREEK & DISTRICT HOSPITAL
MASTER PLAN**



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Dawson Creek Hospital - Site Assessment Summary

Project: Dawson Creek Hospital Master Planning – Dawson Creek, BC

Project No. 144311046

Consultant: Stantec

File: 04-01

Owner: Northern Health

The following site review was conducted on: June 7, 8, & 9, 2011

The following persons were present during various portions of this site review:

Robert Hajdasz – Stantec Architecture

Jean-Sebastien Ratte – Stantec Consulting (Mechanical)

Andrew Crosson – Stantec Consulting (Electrical)

Norbert Fischer – Plant & Property Supervisor, Northern Health

Troy M. – Maintenance Department – Dawson Creek Hospital

Weather: n/a

General Overview

The Dawson Creek and District Hospital was constructed in the late 1950's, with an extensive single story addition with a basement constructed in 1995. The addition is located to the north of the original facility and is linked via service corridors. The original hospital structure consists of 4 wings which form a cross shaped building footprint. The main portion of the original hospital is a three story structure with the remaining areas having a combination of one and two stories, all areas of the original facility have basement areas.

A small dormitory block is located to the east of the original structure and is linked by a glazed corridor. It was noted by maintenance that this structure is mostly abandoned except for a few sleeping rooms for out of town staff.

A mechanical and electrical services building is located to the north east of the building addition and is a stand alone structure. It is linked to the main facility by an underground access corridor from the addition basement.

Mechanical penthouses are located in various roof top locations with the main penthouse located above the third floor of the original building.

Building Overview

The 1995 addition contains the following departments & amenities:

Main Floor

- Laboratory
- Rehabilitation
- Psychiatric Services
- Admitting
- Emergency
- ICU
- Ambulatory Care
- Diabetes Education
- Respiratory Therapy

Basement

- Pharmacy
- Medical School
- HSS BC Storage
- Northern Health Pandemic storage.
- Maintenance Storage
- General hospital Storage
- Mechanical Room
- Future elevator shaft

The original hospital building contains the following departments:

Basement

- Food Services
- Laundry
- CSD
- HSS BC Storage
- Maintenance Shops
- Main Boiler Room
- Housekeeping
- Offices
- Electrical Rooms
- Communication Room
- Male and Female Change Rooms

Main Floor

- Orthopedics
- Health Records
- OR Department
- Digital Imaging
- Server Room
- Meeting Rooms
- IT department
- Ladies Auxiliary

- Sleeping Rooms.

Second Floor

- Oncology Department
- Surgical Ward
- Medical Ward
- Maternity Ward

Third Floor

- Administration
- Red Cross Storage

Refer to the attached plan reviews for reference.

Site Overview

The facility site is generally level with the main entrance elevated from 13th Street. Areas to the south of the original building are graded sharply towards the existing facility. The main entrance is located at the west side of the facility in the new building addition, and is covered with a large canopy which covers the entry and vehicle drop off area.

Visitor parking is located to the west of the facility. Staff parking is located to the south east of the facility. Access to the emergency department is located on the east side of the newer addition

Shipping and receiving is located at the south side of the facility.

The following site deficiencies were observed during this review.

- Signage around the site is poor for directing traffic to appropriate locations.
- There are no pedestrian sidewalks away from the perimeter of the main building leading to the various parking areas. Visitors to the hospital are forced to walk in the roadways.
- Pedestrian road crossing signage and road markings were not observed.
- The sidewalk at the main entrance is not level and poses a tripping hazard for visitors to the facility. (See image 00)
- Several sidewalks around the north side of the facility are in poor condition with several sidewalks severely frost heaved and cracked. These sidewalks pose a tripping hazard. (See image 01)
- The asphalt around the facility is in poor condition in several locations paving has settled leaving catch basins higher than the surrounding paving. This condition is leading to poor site drainage. (See image 19)

- The soils in the Dawson Creek area contain large amounts of clay and tend to drain very poorly. Site grading around the facility is poor in many locations. Grade around the newer addition is higher than the bottom brick coursing. There are several areas where the grade is steeply sloped towards the original building. In some conditions water from roof decks are dumped directly to grade at foundation walls. In one area which is next to the boiler room water large amounts of water free flow from the metal roof. It has created a large crevasse in the ground and may one of the contributing factors why the boiler room fills with water in the spring. (See images 05, 06, 08, 09, 12, & 13)
- The shipping receiving areas for the hospital does not have a protective cover. There is no loading dock. Access to this area is via sloped roadways. (See image 14)
- No bollards are installed to protect deliveries vehicles from hitting the building. (See images 14, & 16)
- A unprotected fuel tank is located in the south east staff parking area. (See image 11)
- Parking appears to be at a premium at this facility. A review of parking requirements for this facility is recommended.
- The concrete road curbing around the facility is in poor condition and requires extensive repairs.

Building Envelope – Walls / Doors / Windows

The existing 1995 addition is constructed of reinforced cast in place concrete foundations with a structural steel super structure, insulated metal stud infill wall framing with a exterior brick veneer finish.

The original hospital structure is constructed with cast in place concrete, structural steel and wood frame construction with an exterior brick veneer finish.

Doors around the facility are a combination of steel & wood doors set in pressed steel doors, and wood doors set in wood frames. Aluminum sliding doors are located at the main and emergency entrance.

Sectional overhead doors are located at the ambulance entrance to the ER department.

Windows at the 1995 addition are aluminum framed units with sealed double glazing. Windows on the original hospital structures are original to the facility and are wood & aluminum frame units with single glazing. A window replacement program has been undertaken. Old windows have been replaced with new vinyl windows on the second floor of the original building.

The following site deficiencies were observed during this review.

- The brick veneer on the 1995 addition does not have proper base flashing at the base of the brick veneer. (See image 03, 05, & 06)
- The concrete faced insulation board used at grade locations is in poor condition. The plastic head mechanical fasteners are disintegrating under UV conditions, causing panels to become loose and fall away from the building. (See images 03, & 22) The protection board at door locations is not properly terminated rigid insulation is left exposed. In several locations the exposed insulation has been burned by local transients. (See images 02)
- Penetrations in through the exterior brick veneer have not been sealed to prevent water infiltration into the wall cavity. (See images. 04, & 20)
- The caulking around windows and doors is in poor condition. Caulking in several locations has dried out and or failed and is allowing moisture to penetrate the building envelope at these locations. There are several locations where caulking is missing altogether. (See image 03, 04, 07, 21, & 23)
- There are several locations around the facility where the concrete foundations are cracked. It has been noted that during spring thaw the main building boiler room fills with water from cracks and unsealed penetrations in the exterior foundation walls. (See image 17, 36, 37, 38)
- Painted finishes around the facility are in fair to poor condition. (See images 15, & 18)

Building Envelope - Roofs

The typical roofing system which has been installed is a 2 ply SBS roof membrane with a granular cap sheet. Metal roofing has been used on the 1995 addition and the services building.

The two areas of the facility which have old membrane roofing are the dorm and the connecting corridor section.

The existing facility has had a number of roofing projects completed over the last few years.

The following roofing deficiencies were observed during this review.

- The 2 ply SBS roofing membrane which has been installed is blistering. Moisture which was trapped during installation has puffed the membrane through out the various roof decks. This problem will severely reduce the lifespan of the roof system. This problem was observed on all 2 ply SBS roof membrane installations (See image 29)

- The termination of cap flashings at building intersections is poorly done in several locations. These areas will allow moisture to penetrate the building envelope. (See image 25)
- The metal roofing is in good condition, however the hidden gutters need to be cleaned. Vegetation has started growing in the gutters which will severely reduce the effectiveness of the gutter system.
- Caulking around the clearstory structure is in need of total replacement and there are several areas where gaps in flashing will lead to moisture infiltrating into the building envelope. (See images 53, & 54)
- The roof on the third floor of the original was recently reroofed however no steps were taken to improve the drainage of this roof. Currently water is pooling on one half of the roof and there is no drain. The drain is located on the other side of the roof on the high side. (See image 30)
- The roof over the main entry does not drain properly. (See image 24)
- There are several areas where the roofs do not drain properly and moss has started to grow. (See image 31)

Building Interior

The typical wall finishes in the facility are painted gypsum wall board, plaster and concrete block. Wood paneling is located in some old portions of the hospital. Showers and washrooms in old portions of the hospital contain ceramic tile finishes.

The typical floor finishes in this facility are resilient sheet flooring, vinyl composite tile, ceramic tile, terrazzo, concrete painted and unpainted. There are a few administrative areas which have carpeting. Wall base is primarily rubber base with flash coved sheet flooring in specific clinical areas.

The typical ceiling finishes throughout the facility include acoustic T-bar ceilings, 12x12 surfaced mounted tiles, painted plaster and gypsum board assemblies. Exposed ceiling structure is located in many service and storage areas.

The following site deficiencies were observed during this review.

- The facility lacks sufficient wall protection throughout. Most walls are showing a sign of damage from carts, beds, and chairs.
-

- The existing facility contains large amounts of vinyl composite tile, much of which is in the vintage to contain asbestos.
- Several areas were observed to have vinyl composite tiles which were loose, missing or severely damaged.
- Door hardware in the old portion of the building does not comply with current building code requirements and is coming to the end of its useful life cycle. (See images 39 & 40)
- Many doors in the service areas and ER are in poor condition and should be replaced or repaired.
- Radiant heating panels throughout this facility are fully discolored. It is unknown what has caused the ceramics to discolour.
- Stairwells in the original building portion do not comply with current building code standards for design layout, tactile warning, and handrail design.
- Way finding around the interior of the hospital is poor. Directional signage is confusing at certain locations.

Building Code and Life Safety

A review of the facility has revealed several Building Code and Life Safety infractions.

- Fire stopping at rated partitions & separations is severely lacking, and needs to be address. (See image)
- The exit stairwells in the existing facility do not conforms to current building code. Refer to **BC Building Code Section 3.4.6** with regards to design handrails, & tactile warning. These stairs are an existing condition in the original building, any extensive renovation in the original building area will require these stairs to be addressed. (See images)
- Door hardware in the old portion of the building does not comply with current building code requirements **Refer to BC Building Code section 3.3..1.13** (See image 39 & 40)
- Storage of equipment and cleaning chemicals in exit stairs is not permitted by code. (See image 34)
- The storage of medical gas cylinders is not permitted in general storage areas.
- Paper exit signs were observed in various locations in the hospital, there are also several locations where exit signage is missing. (See image 35)
- Combustible materials were observed being stored in mechanical rooms with fuel fire appliances.

- Fire rated doors were not installed at the electrical room located next to maintenance storage.
- Hand wash sinks are missing in many key clinical and washroom locations. Hand wash sinks should be installed for infection control. (See image 45)
- Tiled shower areas are in need of additional attention, several showers were observed to have damaged or missing tiles, mould was observed in tile crevices. (See images 42, 43, & 44)

General Department Overview

ER Department

- The general public access the ER from the ambulance drop off area or through the main admitting / reception area.
- Design of ambulance drop off area is very poor. Access for ambulances is on a sloped curved road into a garage with overhead doors. This does not allow for quick drop off.
- ER space is not secure, people can enter department and easily slip into hospital unnoticed. Poor site lines.
- The sliding doors; leading to the ER department from ambulance entrance and to the trauma areas are in poor condition. The operation of doors is slow and shaky.
- It has been noted that the clinical sink unit in Trauma room does work.
- There is no dedicated triage space.
- Standing water was observed at patient shower, this is an infection control issue.
- Millwork showing signs of wear.
- Area appears to lack sufficient equipment storage. Equipment is left in hallways.
- ICU does not have a proper isolation room, complete with a Ante Room, and negative pressure.
- ICU Bariatric lift support structure is in the way of work flow in room.
- There is no decontamination space with separate exhaust system at entry to ER.

Laboratory

- This area appears to be in good condition.

Rehabilitation

- This space is in good condition and is very spacious.

Psychiatric Services

- This space is in good condition and is very spacious.
- There are a few pieces of millwork which need some attention

Ambulatory

- This area appears to be in good condition.

Admitting

- The sliding main entrance doors are problem in the winter. In sub-zero temperatures the doors do not operate properly allowing cold air to blow through admitting and reception.
- General space appears to be in good condition.

Orthopedics

- This area appears to be in good condition.

Health records

- This area appears to be in fair condition.
- Several wall and floor finishes require repair.
- Old windows should be replaced.

Operating Room Department

- The emergency exit in this spaced is blocked by storage cart, and is a life safety issue.
- Additional storage is needed for this department.
- Refer to mechanical report for HVAC requirements for this space.
- This area appears to be in good condition.

Digital Imaging & Records

- This area was recently renovated and appears to be in good condition.
- Flooring in records area is a collection of various types of flooring. New flooring through out is recommended.

IT & Server rooms

- The Server & Communication rooms are crowded and are filled with all type of garbage and computer parts. Cable management is poor as most wiring is a tangled mess. (See image 49, 50, & 51)
- IT room lacks proper storage for equipment and spare parts. Ventilation appears to be a problem.

Oncology

- Department appears to have been recently renovated, and is in good condition.

Surgical Ward

- This ward is located on the second floor of the original building. Finishes in this area are in fair condition.
- Patient washrooms were observed to have no hand wash sinks in several locations. This is a serious infection control issue. (See image 45)
- This ward is lacking proper structured storage.
- Door hardware in this ward is reaching the end of its useful life and is not code compliant.
- Nurse station is too small to accommodate all nursing staff.
- Tiled shower areas are in need of additional attention, several showers were observed to have damaged or missing tiles, mould was observed in tile crevices. (See images 41)

Medical ward

- This ward is located on the second floor of the original building. Finishes in this area are in fair to poor condition with many in need of immediate repair.
- Nurse station is old and in poor condition.
- Tiled shower areas are in need of additional attention, several showers were observed to have damaged or missing tiles, .

mod was observed in tile crevices. (See images 42, 43, & 44)

- Door hardware in this ward is reaching the end of its useful life and is not code compliant.

Maternity ward

- This ward is located on the second floor of the original building. Finishes in this area are in fair condition with many in need of immediate repair.
- Patient washrooms were observed to have no hand wash sinks in several locations. This is a serious infection control issue.
- The floor of the birthing suite vibrates due to the large laundry duct which is directly outside of this room.

Administration

- This department is located on the third floor. The offices are located in the old patient rooms.
- The finishes in this area are in fair condition.

Medical School.

- This department is located in the basement of the 1995 addition and has recently been constructed.

Pharmacy

- This department is located in the basement of the 1995 addition and has recently been constructed.
- There appears to be problems with the ante room maintaining negative pressure. All penetrations and seals around this room need to be examined and repaired. This is a health safety & CSA requirement.

Food Services

- This department is located in the basement of the original building.
- Cafeteria portion of this space appears to be in fair to good condition.
- The food preparation area is clean and appears to be in good condition.
- The food delivery area is in poor condition. This area is not

properly designed to handle food deliveries in an efficient manner. No delivery or covered loading dock is provided.

- The doors to this space were observed to be left open for extended periods after deliveries. Leaving doors open is an open invitation for rodents and insects to enter the facility. (See image 10)
- The doors and structure appear to move during the seasons. Large rubber flaps at the base of the door have been installed to close off the large gaps.
- The floor finishes in deliveries corridor is in poor condition and need to be replaced.
- It appears that several coolers are using old and antiquated technology which may be very costly to operate. (See image 46)

Laundry

- This department is located in the basement of the original building.
- The finishes in this area are in fair condition. There are many ceiling tile finishes which are in need of repair. Certain existing ceiling tile products should be tested to confirm they do not contain asbestos.
- The exit corridor from this area does not have proper exit signage (See image 35)

CSD

- This department is located in the basement of the original building.
- The finishes in this area are in fair to poor condition. There are many floor finishes which are in need of immediate repair.
- This area appears to lack sufficient storage.

Morgue

- This department is located in the basement of the original building.
- Bulk chemical storage was observed in this room these products should be stored in a appropriate room. (See image 47)
- The finishes in this area are in fair condition.

Mechanical , Electrical, Maintenance & Service Rooms

- These service areas are mainly located in the basement of the original building & new building addition. Mechanical and electrical services are also located in mechanical penthouses located on various roof decks around this facility.
- A stand alone services building contains mechanical & electrical equipment. The generator for this facility is located in this building.
- Fire stopping through out this facility is almost non existent. This is a major building code and safety infraction. (See images 52) All penetrations through rated floor and wall assemblies are required to be fire stopped.

Main Storage Areas

- The main storage areas are mainly located in the basement of the original building & new building addition.
- Northern Health pandemic supply storage is located in the basement of the 1995 addition.
- HSS BC storage areas are located in both the 1995 addition and original building locations.
- Storage of medical gas cylinders are not permitted in general storage areas. These gas cylinders should be removed from the 1995 basement storage area. (See image 48)

Refer to attached photos & reference plans.

This site report was prepared by:

Robert Hajdasz

Technologist

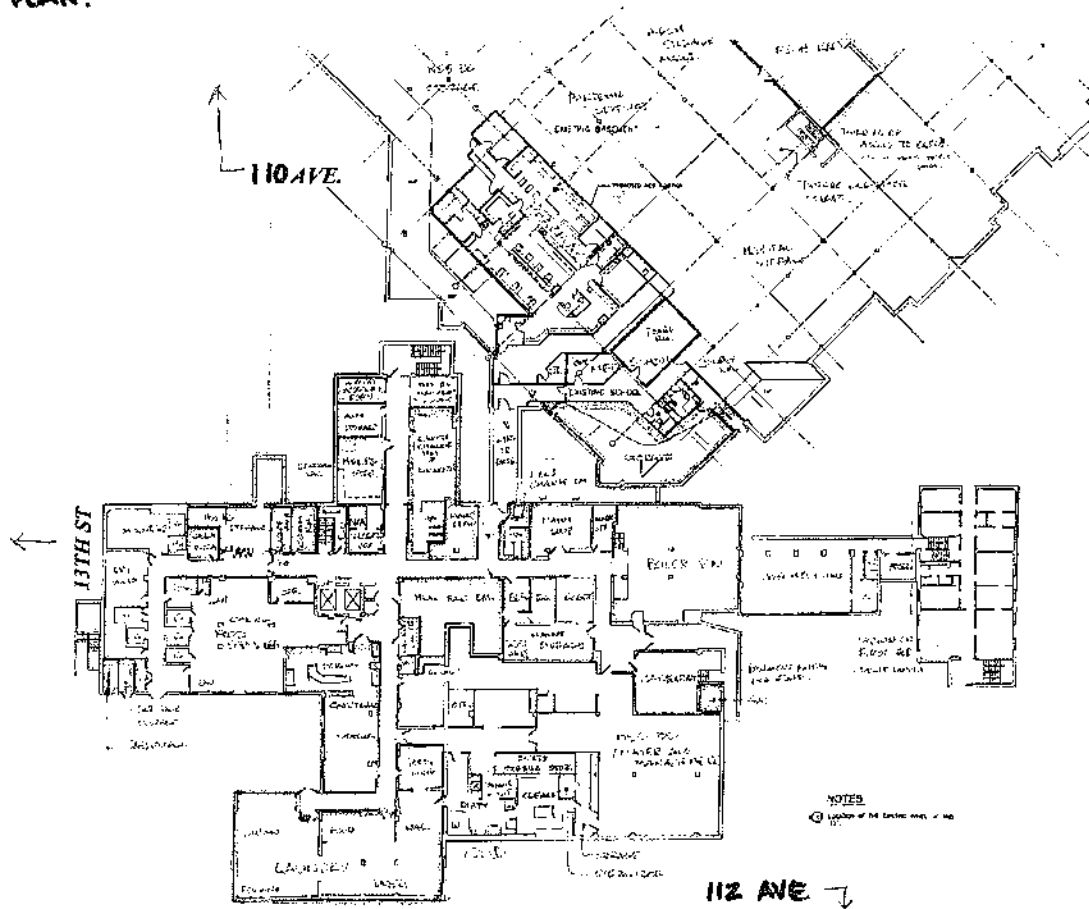
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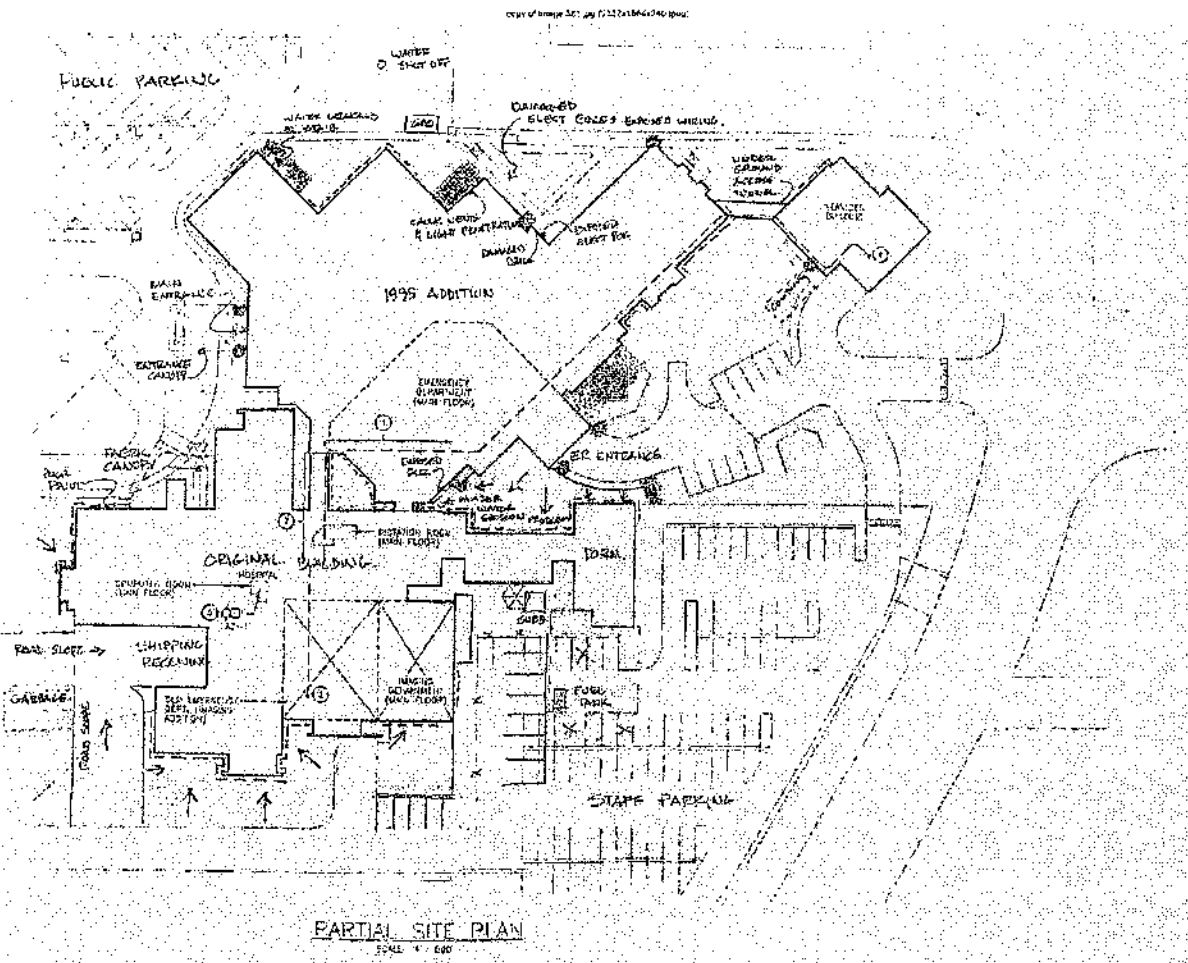
Fax: (250) 828-1196

robert.hajdasz@stantec.com

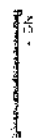
Distribution:	☒	Owner	☐	Structural
	☒	Hospital	☒	Mechanical
	☒	Architect	☒	Electrical
	☐		☐	

DAWSON CREEK & DIST. HOSPITAL
BASEMENT FLOOR PLAN.





FLOOR PLAN



Upper Level

063



2024.04.22

2. 10. 1954

LEGEND

Fire Extinguisher

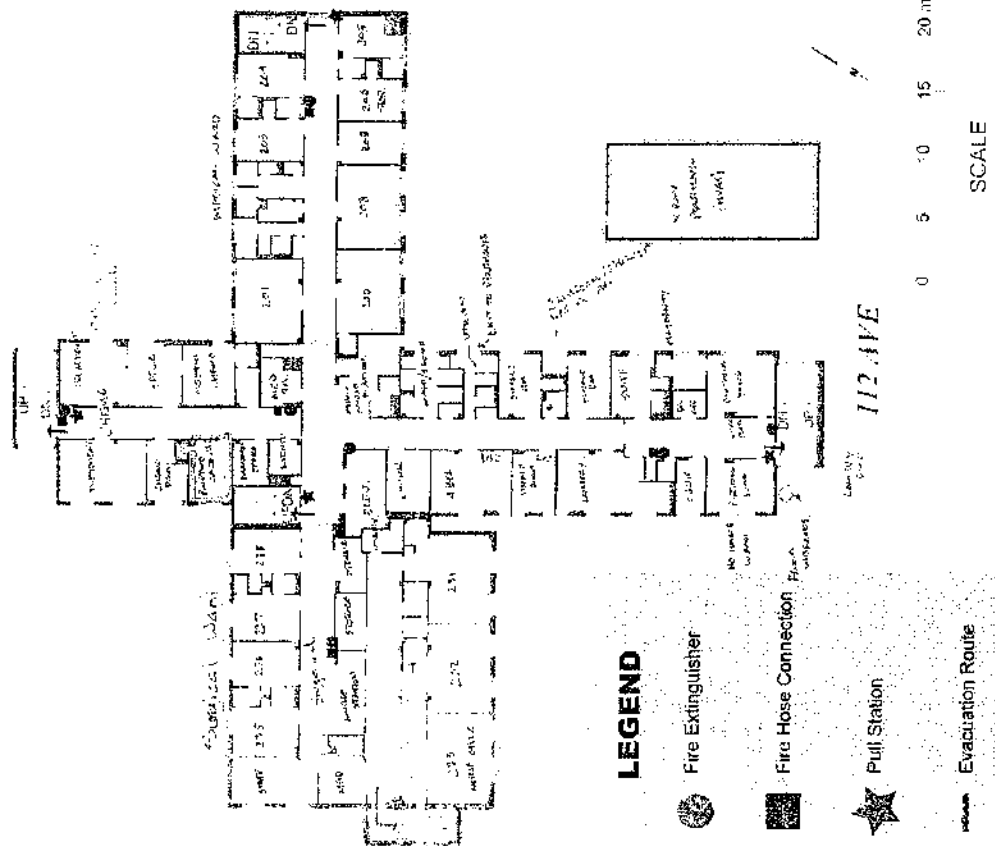
Fire Hose Connection

Full Station

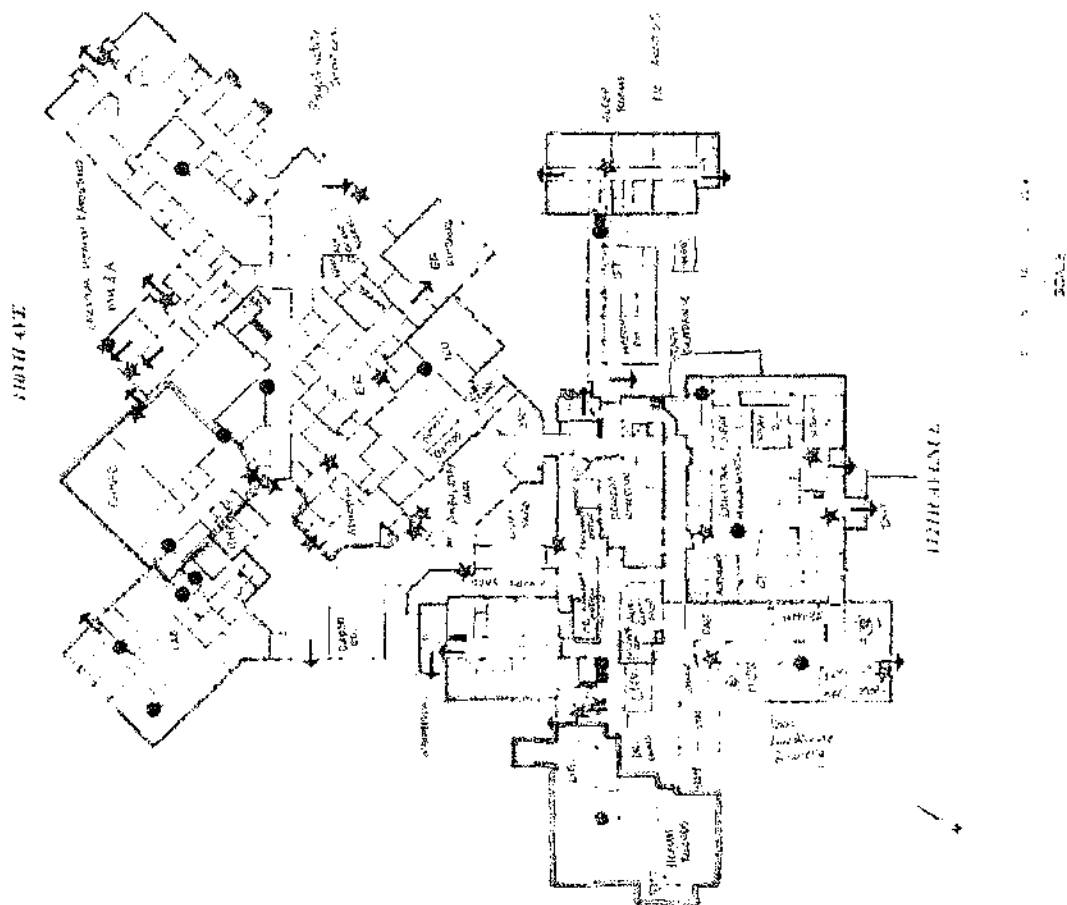
Evacuation Route

10-315-4005 Rev 02/08mac

DAWSON CREEK & DISTRICT HOSPITAL
FLOOR PLAN
SECOND FLOOR



DAWSON CREEK & DISTRICT HOSPITAL FLOOR PLAN FIRST FLOOR



Dawson Creek Hospital - Site Assessment Photos



Image (00)

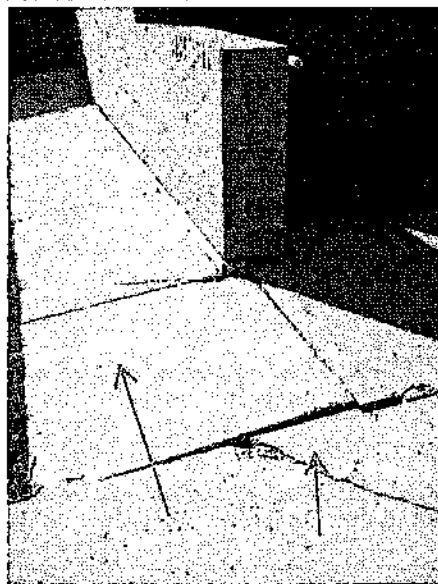


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Image (02)

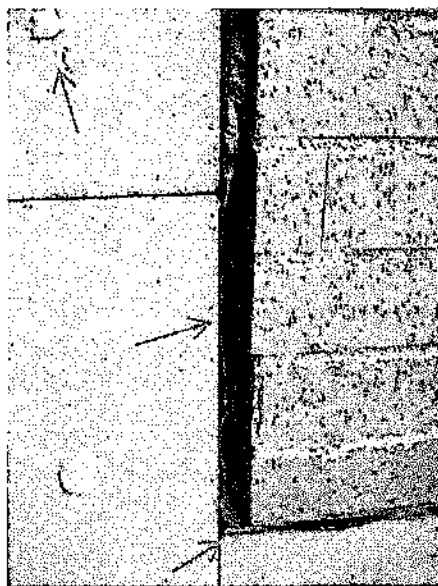


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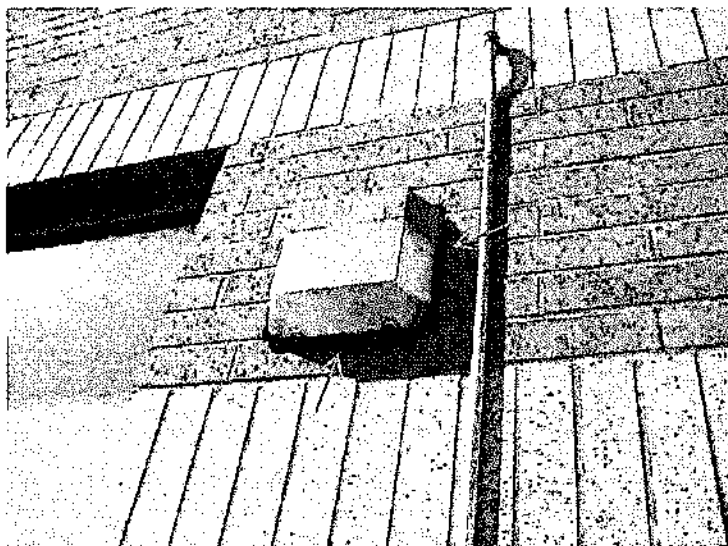


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Image (05)

Dawson Creek Hospital - Site Assessment Photos

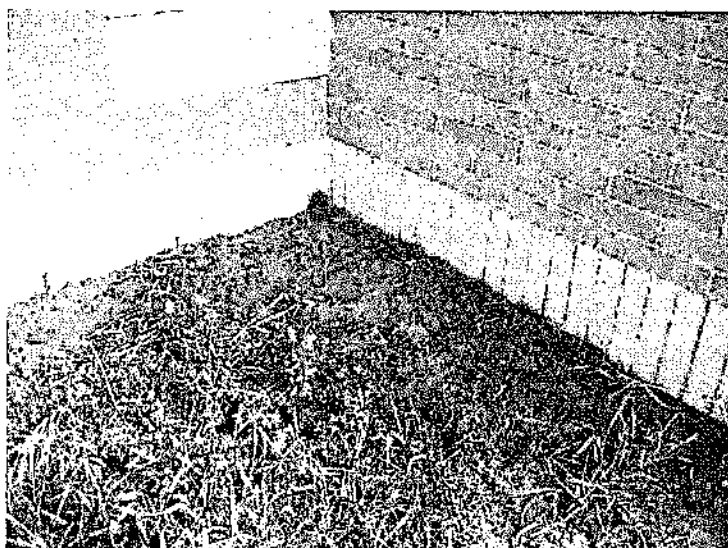


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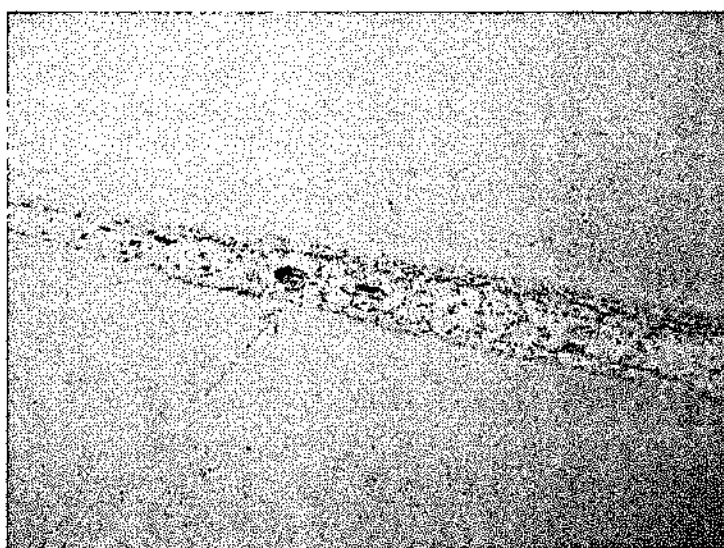


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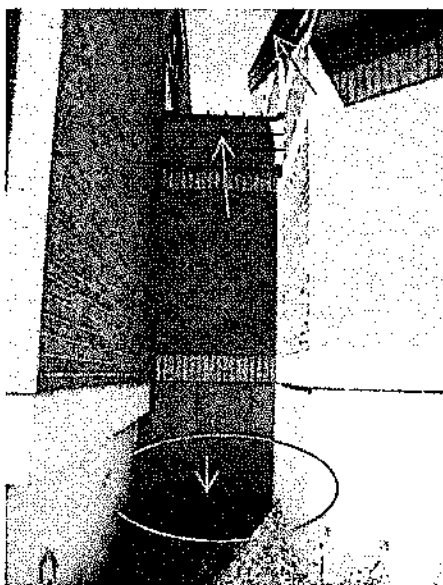


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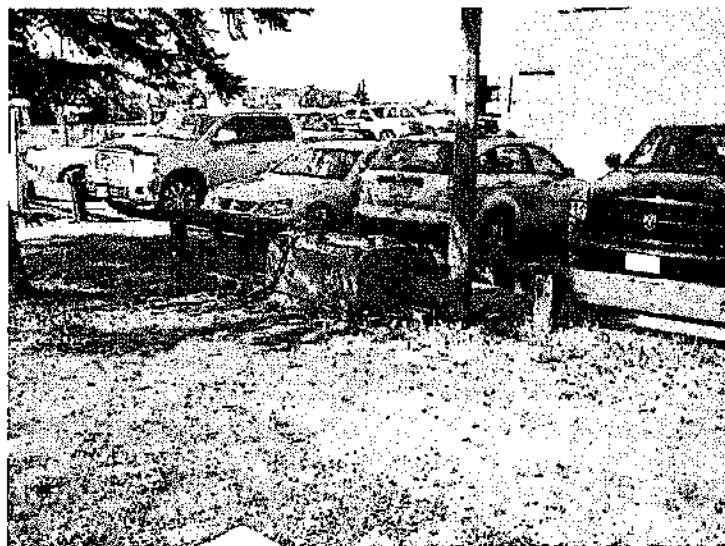


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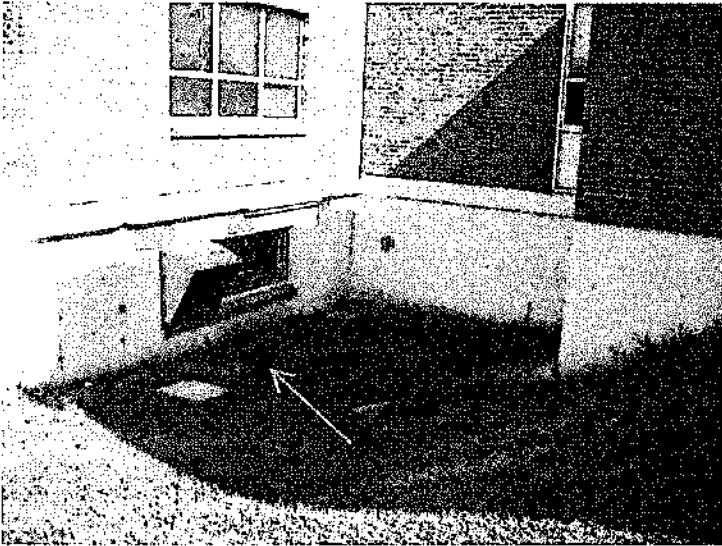


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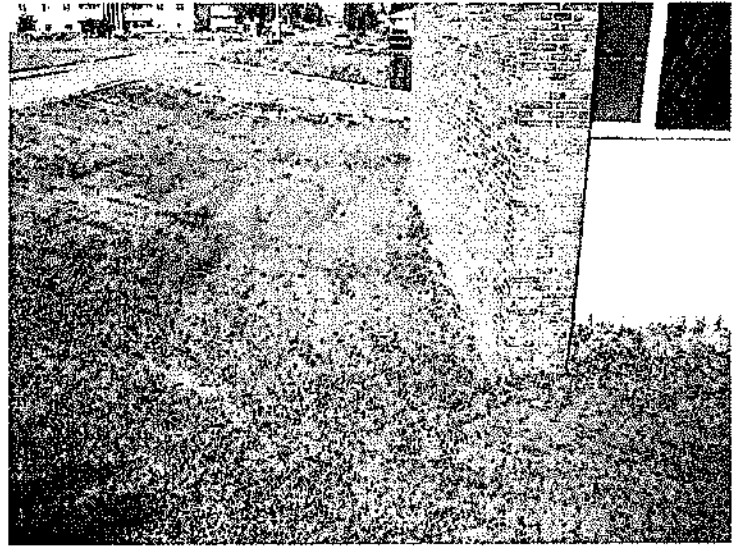


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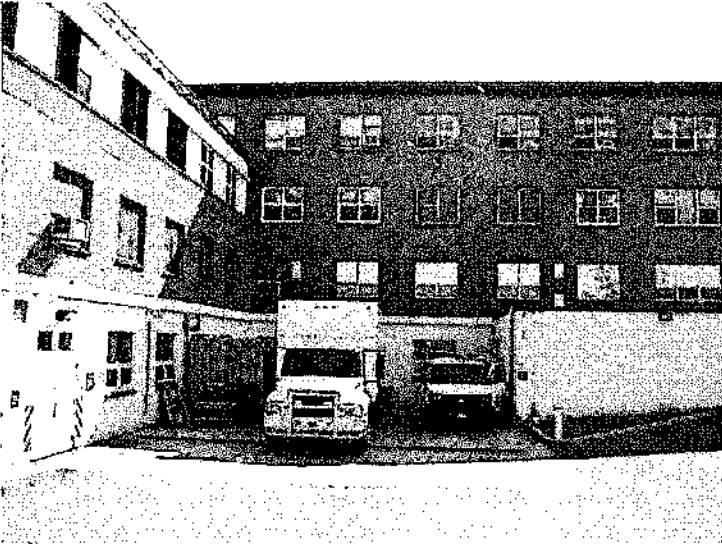


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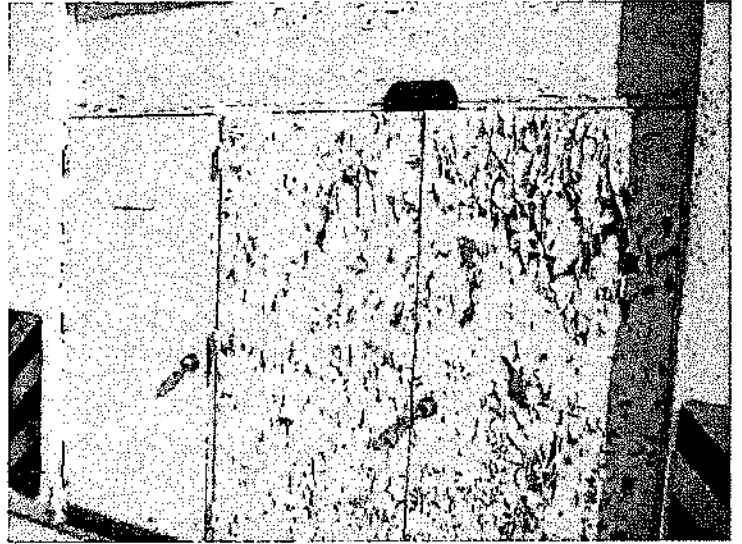


Image (15)



Image (16)



Image (17)

Dawson Creek Hospital - Site Assessment Photos



Image (18)



Image (19)

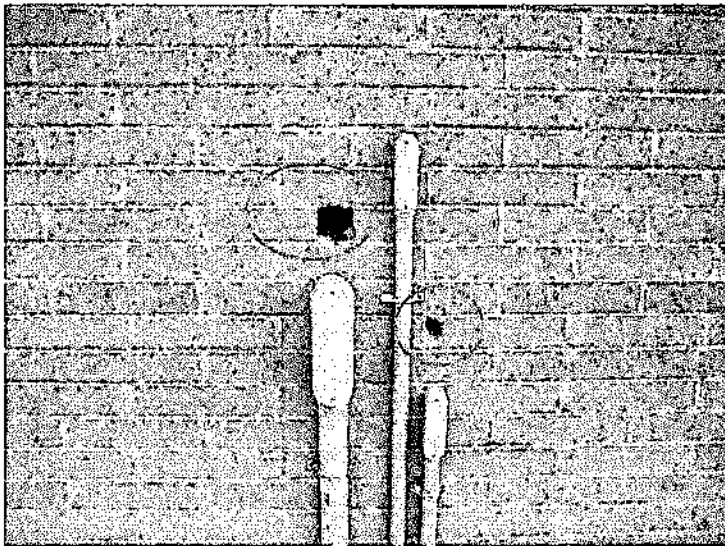


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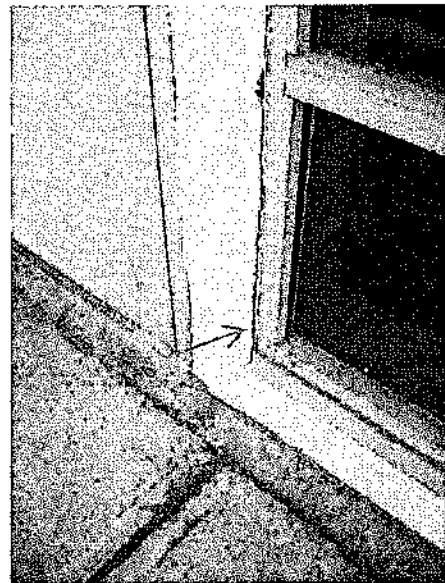


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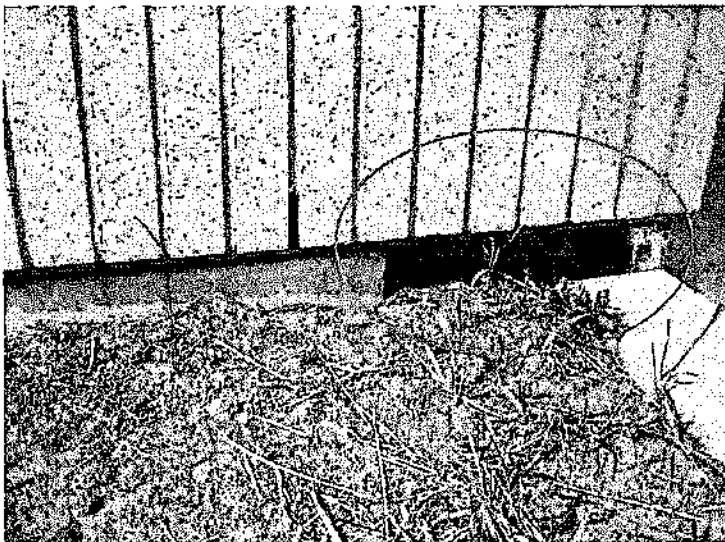


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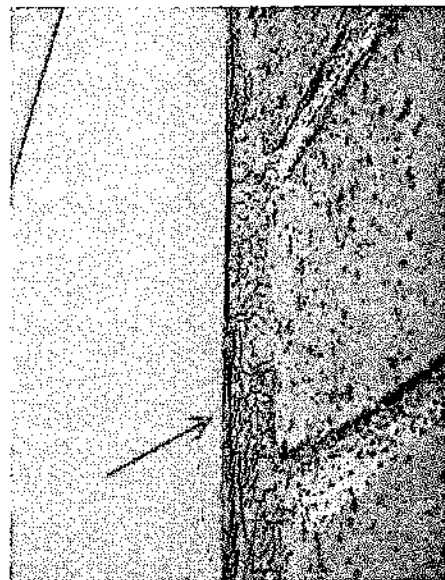


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Dawson Creek Hospital - Site Assessment Photos

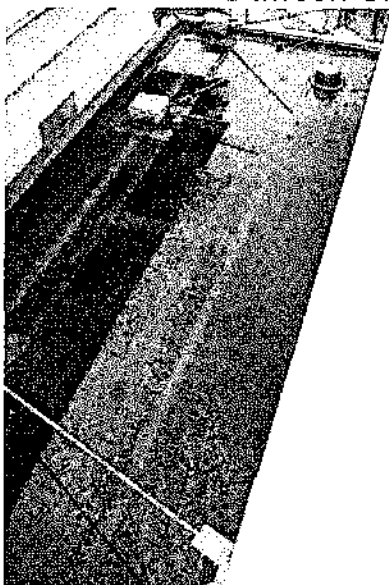


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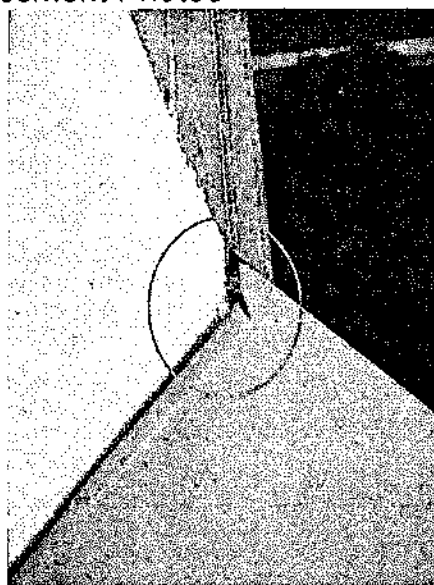


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Image (26)



Image (27)

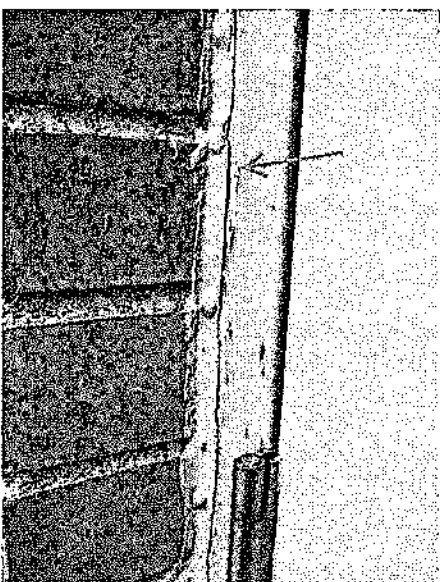


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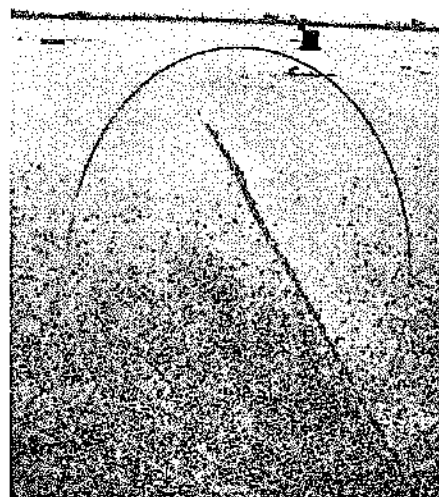


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Dawson Creek Hospital - Site Assessment Photos

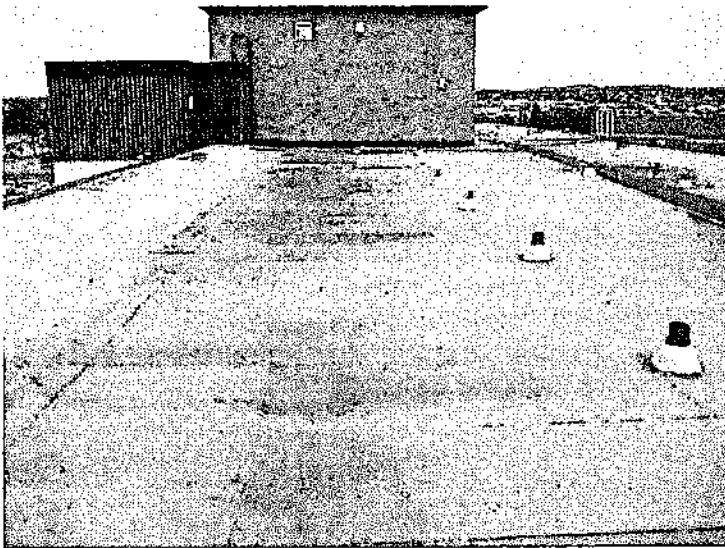


Image (30)



Image (31)

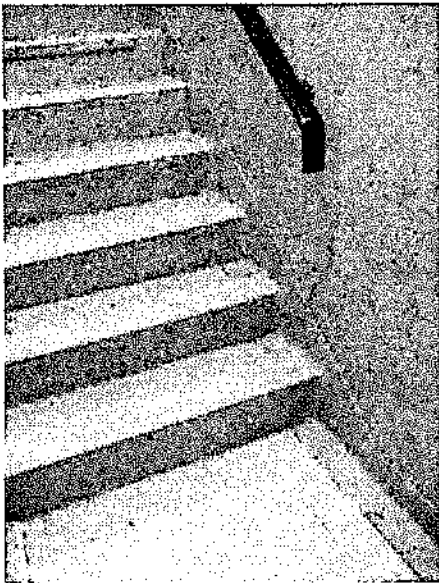


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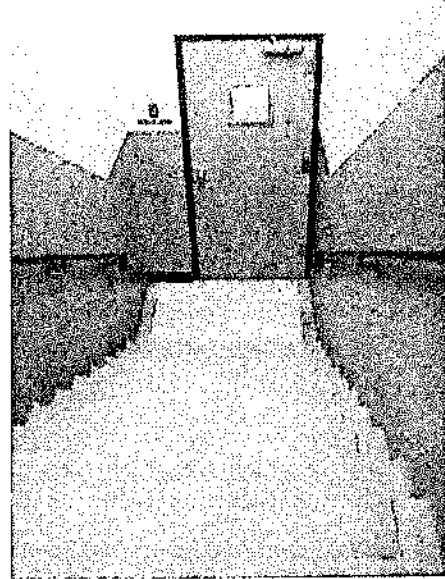


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Image (34)

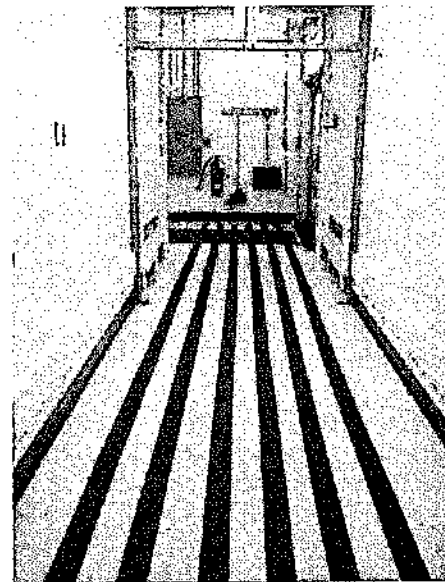


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Dawson Creek Hospital - Site Assessment Photos



Image (36)

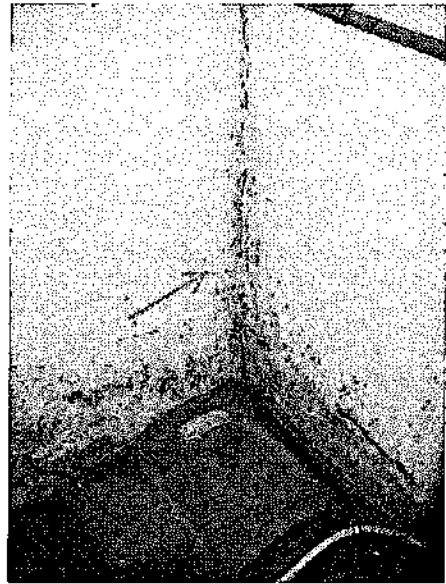


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Image (38)



Image (39)

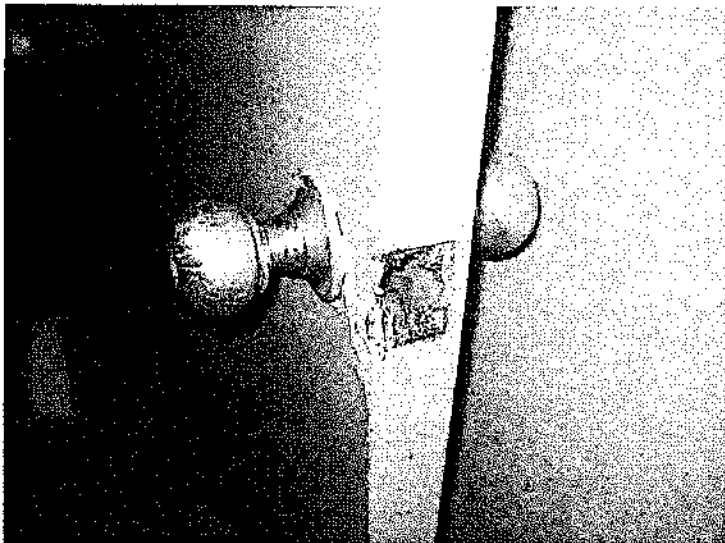


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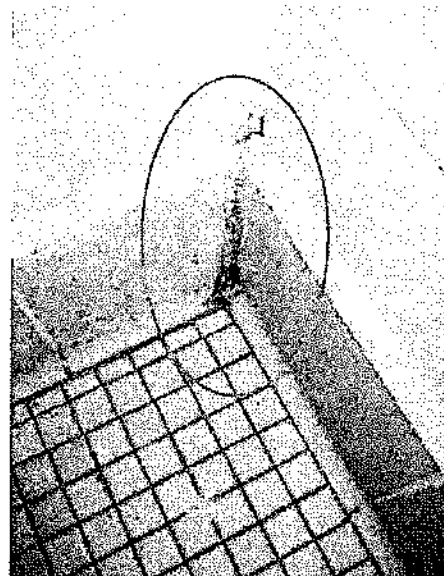


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Dawson Creek Hospital - Site Assessment Photos

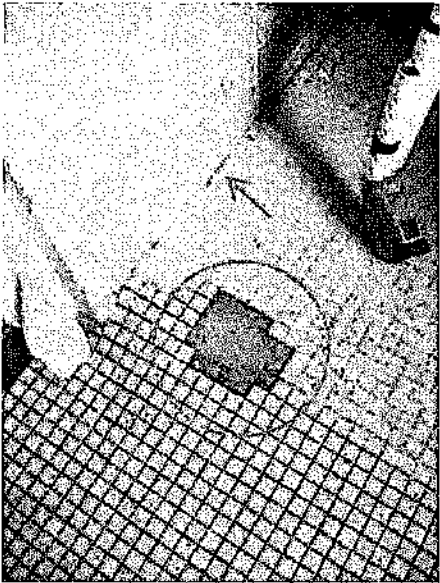


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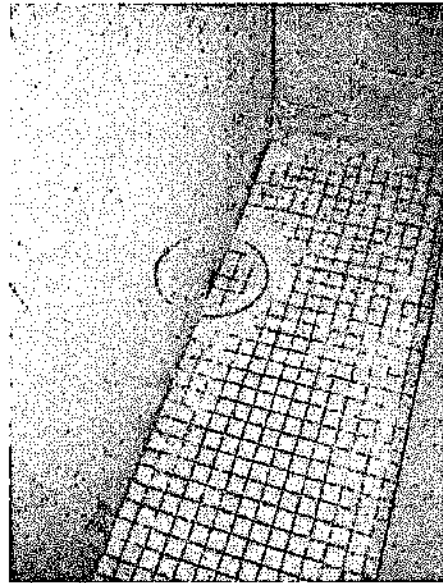


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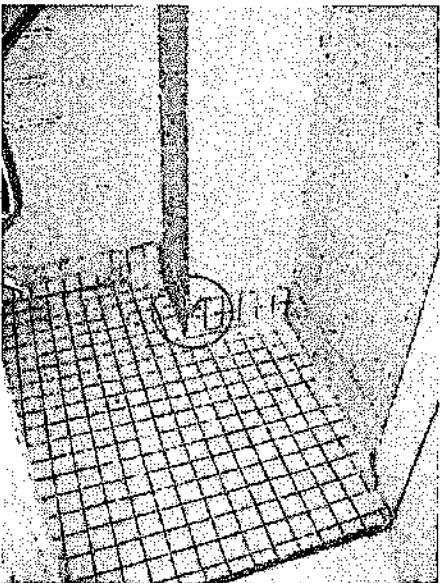


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Image (45)

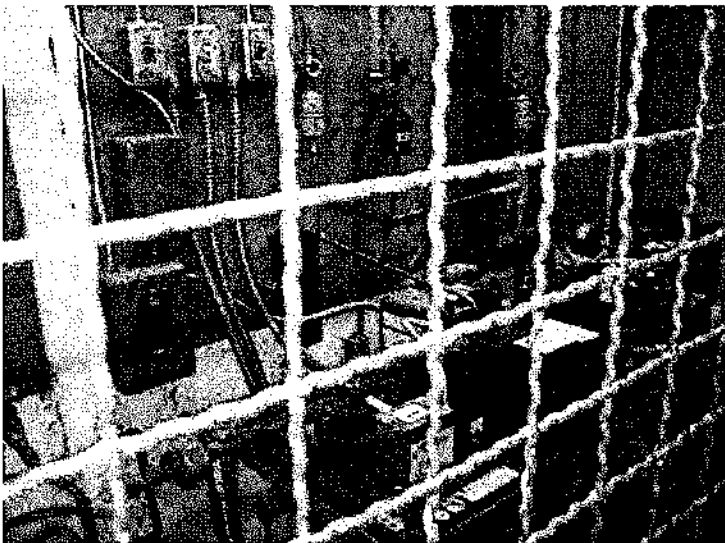


Image (46)



Image (47)

Dawson Creek Hospital - Site Assessment Photos



Image (48)

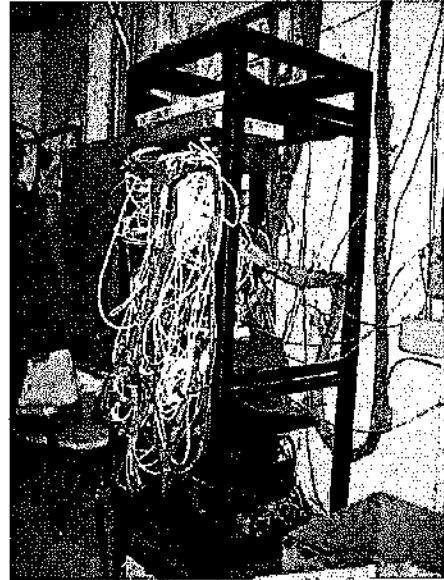


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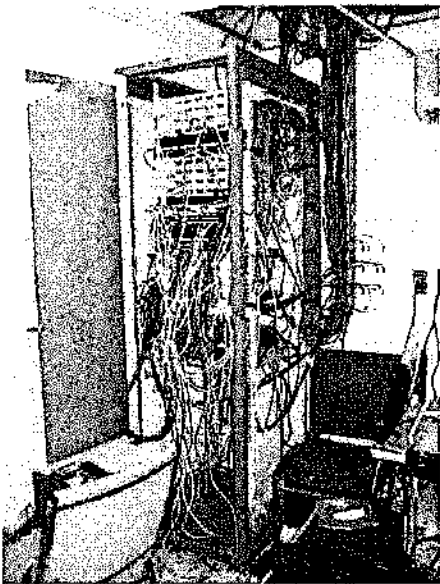


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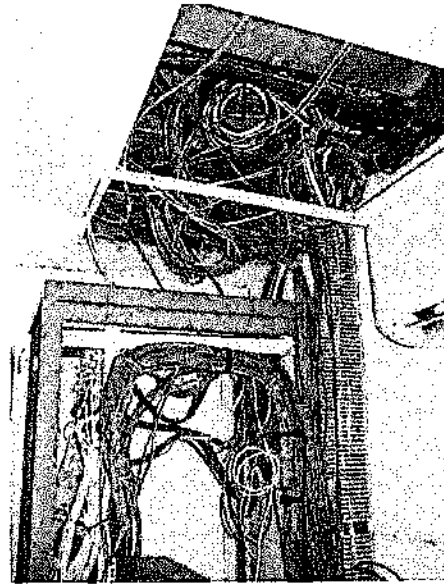


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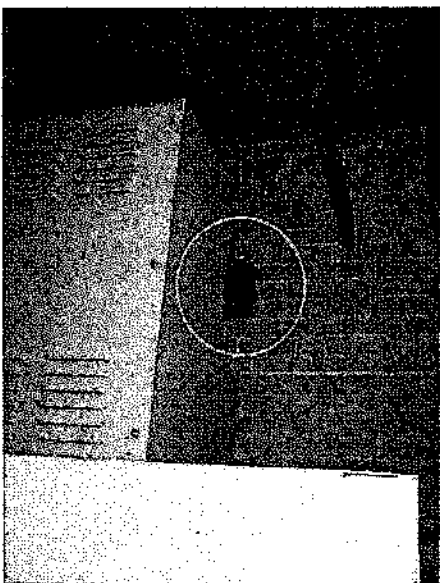


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Dawson Creek Hospital - Site Assessment Photos

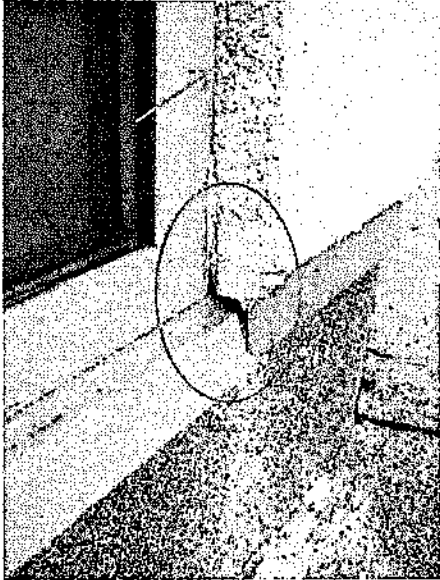


Image (54)



Stantec

Dawson Creek and District Hospital

11100 13 Street, Dawson Creek, BC

Structural Assessment Report

Prepared for:
Northern Health

Prepared by:

Stantec Consulting Ltd.
1100 – 111 Dunsmuir St
Vancouver, BC

July 26, 2011

Stantec Project No: 144311046

Stantec
Dawson Creek and District Hospital
11100 13 Street, Dawson Creek, BC
Structural Assessment Report

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APPENDICES

APPENDIX A - PHOTOGRAPHS

Stantec

Dawson Creek and District Hospital

11100 13 Street, Dawson Creek, BC

Structural Assessment Report

1.0 INTRODUCTION

Stantec Consulting Ltd. performed a structural assessment of the existing Dawson Creek Hospital located at 11100 13 Street in Dawson Creek, British Columbia. The assessment involved visual site observations of structural components, general review of available existing structural drawings on site and overall comparison of previous and current building code load requirements. No testing was conducted on the building components for this evaluation. No structural analysis was performed on the individual structural elements to verify load resistance or capacities to current code requirements. The focus of this report is to identify visible structural deficiencies found during the site walkthrough and to identify code deficiencies due to code changes.

The report will provide a brief history of the date of construction of the original and various additions of the hospital. The type of structural framing and foundations will be covered including the applicable Building Code. Finally, deficiencies based on building code changes and site observed deficiencies are provided.

Stantec

Dawson Creek and District Hospital

11100 13 Street, Dawson Creek, BC

Structural Assessment Report

2.0 STRUCTURAL EVALUATION PROCESS

The structural evaluation will consists of the following:

- Site review/walkthrough of the building
- Determine general condition of the structural components; physical defects and deterioration, visual observations only.
- Identify code deficiencies.
- Building code comparisons of snow and lateral loads

Stantec Consulting Ltd. conducted a site review of the Dawson City and District Hospital on July 4th and 5th of 2011. The walkthrough began from the basement up to the roof of each portion of the hospital. A perimeter walk around the building was conducted to look for exterior structural deficiencies to the cladding and foundation settlements. Various pictures were taken during the walkthrough.

Most of the superstructure framing was covered by wall, floor and ceiling finishes. Some ceiling panels were temporarily removed at various locations to verify type of construction during the walkthrough. Size and locations of each structural member was not verified and is beyond the scope of this report. Foundation system was not visible and not confirmed.

A couple of physical deficiencies were observed during the walkthrough and is described later in the report.

3.0 BUILDING DESCRIPTION

3.1 GENERAL

The original hospital was a three storey building constructed in the late 1950's. A small one storey building with penthouse was added in 1976. In 1995, a large single storey building was added to the north end and connected to the original hospital by corridors on each side of a courtyard. A two storey extension on the east end of the original hospital is temporarily being used by a few staff members from out-of-town. The structural framing for these three portions of the hospital is described below.

3.2 1959 BUILDING:

The original 1959 building is a three storey building with a basement level. Foundation consists of concrete spread footings for column supports and 8" thick concrete basement walls. The basement floor consists of a 100 mm thick concrete slab on grade. At the main level, the floor structure consists of 140 mm thick concrete slab and 450 mm thick concrete slab and framing system. Concrete columns provide vertical support of the floor framing. Levels 2, 3 and roof have similar floor framing system. Lateral loads are resisted by concrete shearwalls at stair cores.

3.3 1979 BUILDING ADDITION:

The single storey addition has a basement and penthouse. Foundation consists of concrete piles for column support and the basement floor is a concrete slab on grade. The main floor framing consists of 225 mm thick flat concrete slab and supported on concrete columns and basement walls below. The roof is of similar construction using concrete flat slabs and concrete columns. The penthouse roof framing is steel deck on open web steel joists and steel beams.

3.4 1995 BUILDING ADDITION:

The single storey building has a crawlspace/basement currently used for storage. The foundation system consists of expanded base concrete piles at columns and basement wall locations. Basement floor consists of 100mm thick concrete slab on grade. Berms covered by 50mm concrete skim coat are located at the perimeter on the basement. The reason for these berms are not known but may be used to reduce the height of retaining wall, excavation and backfill costs at the time of construction.

4.0 OBSERVED DEFICIENCIES

In general, structural condition of the building components that are visible during the site walkthrough is good. Only a couple of deficiencies were observed. These are described below:

4.1 CONCRETE STACK:

The exterior cement based finish around the concrete stack appears to be severely cracked and will need repairs to prevent debris from creating a falling hazard. See Photo A.

4.2 BASEMENT WALLS:

Various cracks in the basement walls were observed in the basement level. Water appears to be penetrating through these cracks and forming pools at the base of the berms. The cracks are vertical and probably due to horizontal shrinkage of the concrete wall; is not a strength deficiency. Grout injection can be used to repair of these cracks. However, to prevent water from entering the basement, the perimeter waterproofing must be repaired. See Photo B.

5.0 CODE DEFICIENCIES

5.1 GENERAL

Significant changes in the building codes have occurred since the 1950's when the original building was first constructed. Some of these changes include snow and seismic loading requirements. The effects of these changes are discussed below.

5.2 SNOW LOADING:

Prior to the 1960 National Building Code of Canada, snow loads was taken to be equal to the ground snow load without allowances for snow drifts or increase loading due to rainwater absorption by the snow. This resulted in areas that were over-designed or more problematic, under-designed according to the current 2006 British Columbia Building Code. Various adjustments to the snow loading were made to rationalize this complex and highly variable condition. In the 1985 edition, the basic snow weight was increased by 25% from 2.4kN/m³ to 3.0 kN/m³. Recently, the 2006 BC Building Code introduced several major changes to provide a more accurate correlation with the expected service life of the building. The changes are as follows:

- The return period for the ground snow load has been increased from 30 years to 50 years resulting in a 10% increase in snow loading.
- An importance factor was added resulting in a 25% increase in snow loading for post disaster buildings such as hospitals.
- Wind exposure factors to reduce snow loading on roofs were disallowed for post disaster buildings resulting in a 25% load increase.

The combination of these changes results in a 75% increase to the snow loading for a typical flat roof of a post disaster building. For roof areas subjected to snow drifts, the increase in snow loading as compared to the 1953 Code can be three times higher. The higher snow load demand results in a code deficiency to the roof structure. However, existing structures are not required to be upgraded to current code unless there are significant modifications to the structure or change in occupancy.

5.3 SEISMIC LOADING:

Major changes in code seismic analysis occurred from 1953 edition of the Building Code to the current 2006 edition. Seismic zones were first introduced in the 1953 edition and replaced with site specific design values in the 2006 edition. These design values have a probability of exceedance of 2% in 50 years (2475 year return period). Prior codes such as the 1970 edition are based on seismic events with a 100 year return period. The result of these changes is a substantial increase in seismic loading to buildings with low ductility such as unreinforced masonry or to buildings with poor seismic detailing. Buildings located in areas with moderate to high seismic activities will be greatly affected. According to the recently issued 2010 National Building Code, seismic activity in Dawson Creek is considered low with a seismic design parameter of 0.11g (5% damped spectral response acceleration with a period of 0.02 seconds). For a building site with stiff soil conditions and a seismic design parameter below 0.12g, current code requirement may not need to be considered. A geotechnical investigation will be needed to verify that the Dawson Creek Hospital site is below this cut-off value.

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DAWSON CREEK AND DISTRICT HOSPITAL

11100 13 STREET, DAWSON CREEK, BC

STRUCTURAL ASSESSMENT REPORT

6.0 CONCLUSION

In general, no immediate structural safety concerns were visible during the site visit. Deficient items previously identified will require repairs soon to prevent corrosion of the wall reinforcing or falling hazards from the cracked finish of the stack. Code deficiencies will not need to be addressed unless changes to the building structure or additions are made.

APPENDIX A

Photographs

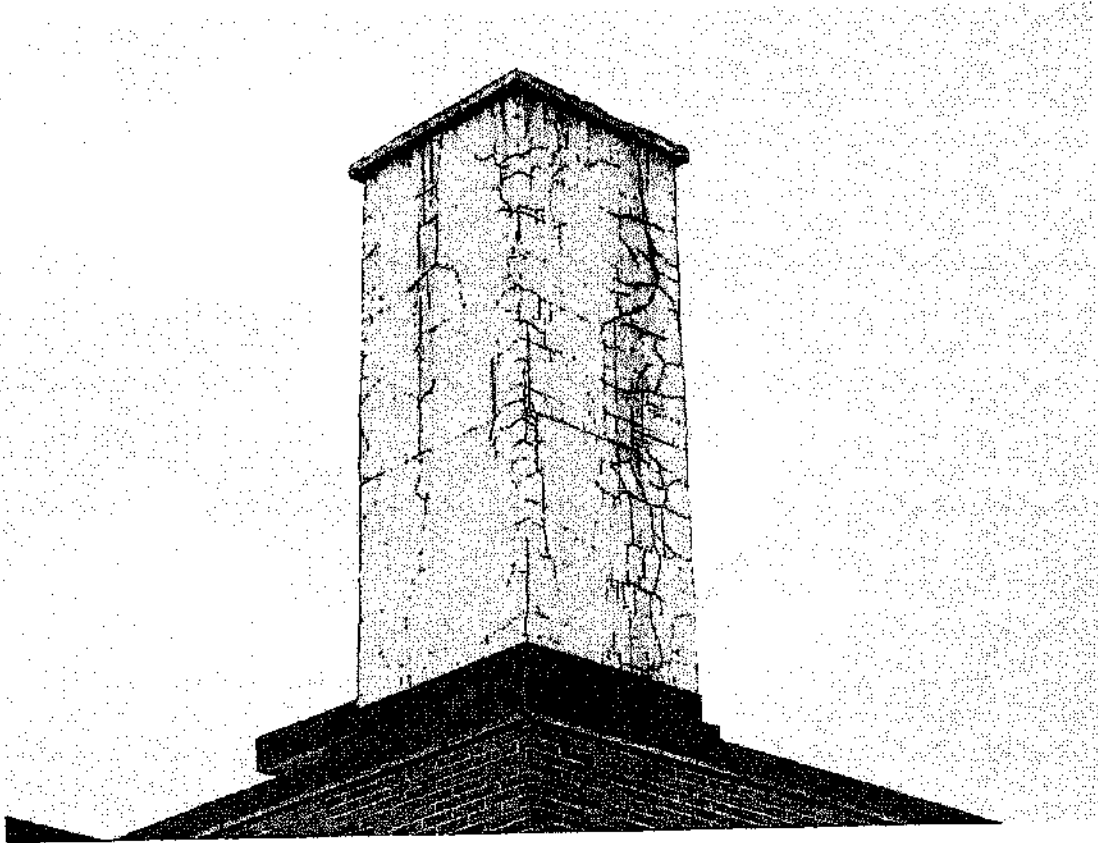


Photo A – Concrete stack showing surface cracks in the cement finish.

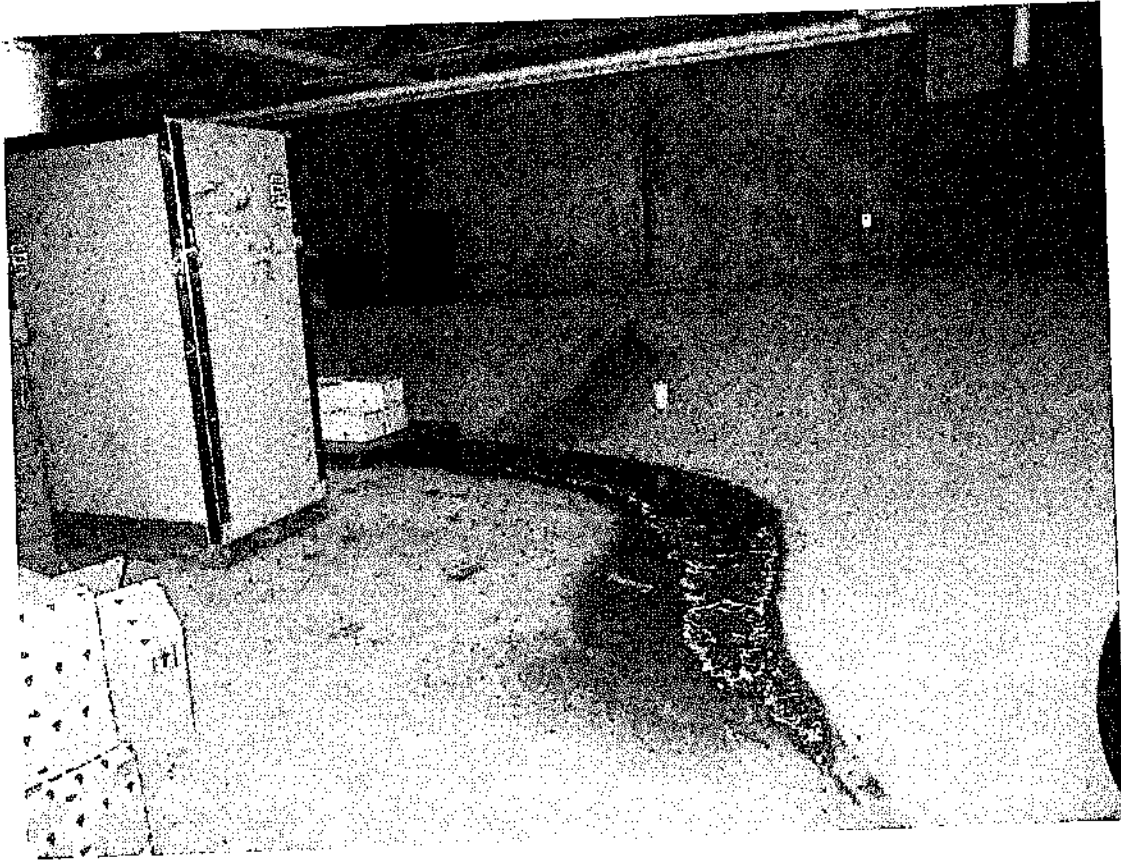


Photo B – Cracking in the concrete walls resulting in water penetration into basement.



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Appendix III Additional Master Plan Options

The following document contains the Additional Master Plan
Options for Dawson Creek & District Hospital Master Plan project.
The planning has been projected to 2036.

December 2013

Page 411 to/à Page 432

Withheld pursuant to/removed as

s.13;s.17



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District
Hospital

Appendix IV Additional Costing Details

The following document contains the Additional Costing Details for the Dawson Creek & District Hospital Master Plan project. Planning has been projected to 2036.

December 2013

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**DAWSON CREEK & DISTRICT HOSPITAL
MASTER PLAN**

Page 435 to/à Page 444

Withheld pursuant to/removed as

s.13;s.17



Dawson Creek & District Hospital

Appendix V CPAFs

The following document contains CPAFs (Capital Project Approval Forms) for the Dawson Creek & District Hospital Master Plan project. The planning has been projected to 2036.

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**DAWSON CREEK & DISTRICT HOSPITAL
MASTER PLAN**

Page 447 to/à Page 456

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Creek &
District
Hospital

Appendix VI Lean Process Improvement

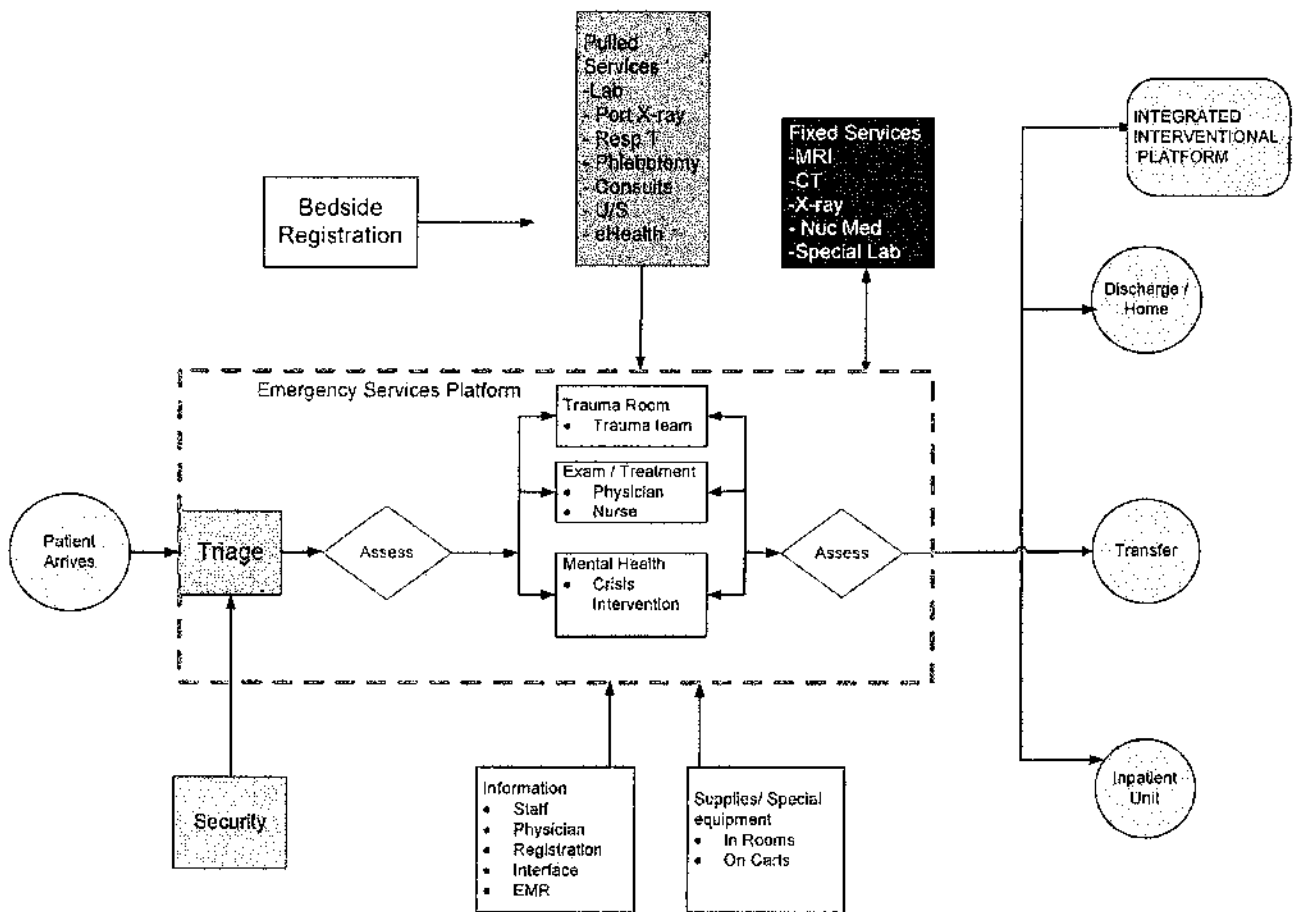
The following document contains the documentation in support of Lean planning for the Dawson Creek & District Hospital Master Plan project. Planning has been projected to 2036.

December 2013



LEAN HEALTHCARE 101

Planning sustainable hospitals



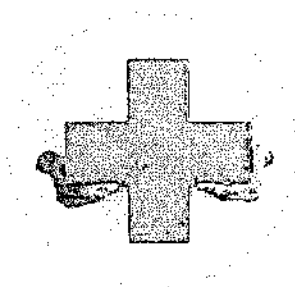
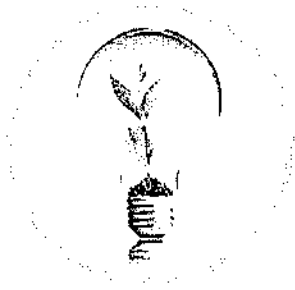
Example of an emergency services future state flow diagram

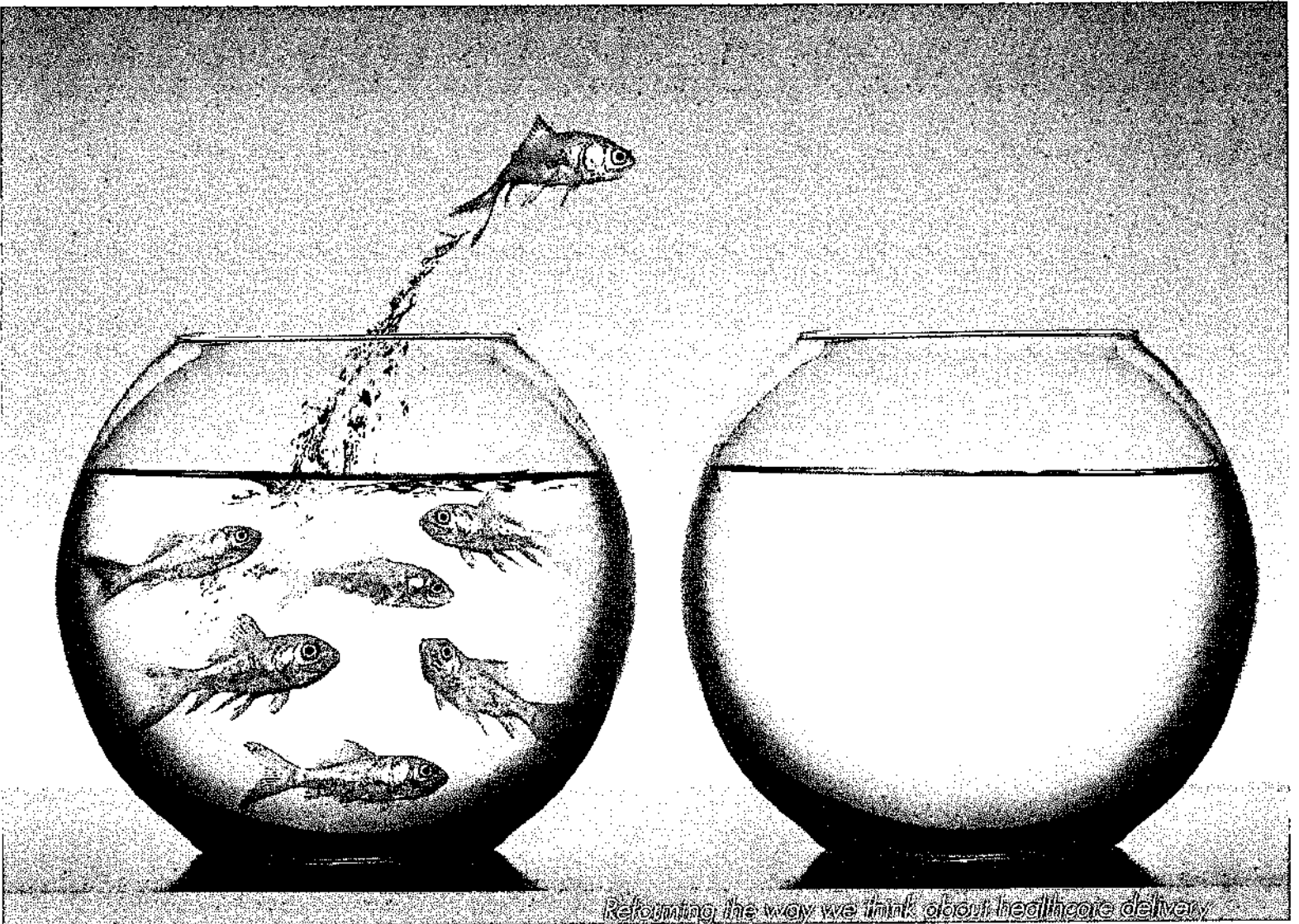
"There is no such thing as an architect or construction firm that can build you a Lean hospital. Lean is not a building. It comes from within."

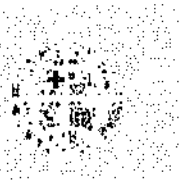
- Kathryn Correia
Senior Vice President, ThedaCare

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- 2 5 Big Ideas
- 3 Lean Process Improvement
- 4 Eliminating Silos
- 6 Seven Flows of Healthcare
- 8 Waste
- 10 Key Tools for Lean Healthcare Planning
- 18 Platform Summary
- 24 Case Studies







Q: WHAT IS LEAN PRODUCTION?

"Lean production" or Toyota Production System (TPS) is based on production/manufacturing methods developed in Japan after WWII by the Toyota Motor Corporation. In short, Lean is a strategy where all parts of a system are focused on eliminating waste out of a system, while continuously increasing the amount of 'value-added' work.¹ Although it had its beginnings in optimizing efficiencies within the production and manufacturing industry, Lean can be thought of as an operational or management system that can be applied to virtually any industry.

The Lean production strategy has been successfully applied to health care environments across North America since 1996. This short summary booklet provides a basis for understanding Lean as a means of supporting optimized healthcare delivery, through an operationally efficient lens.

Q: WHY DO WE NEED LEAN IN HEALTHCARE?

"...waste in the healthcare system is any expenditure of time or resources that does not contribute to the efficient delivery of quality healthcare to the patient. In the typical medical centre today, waste is found in the traditional structure, policies and practices of daily operations"²

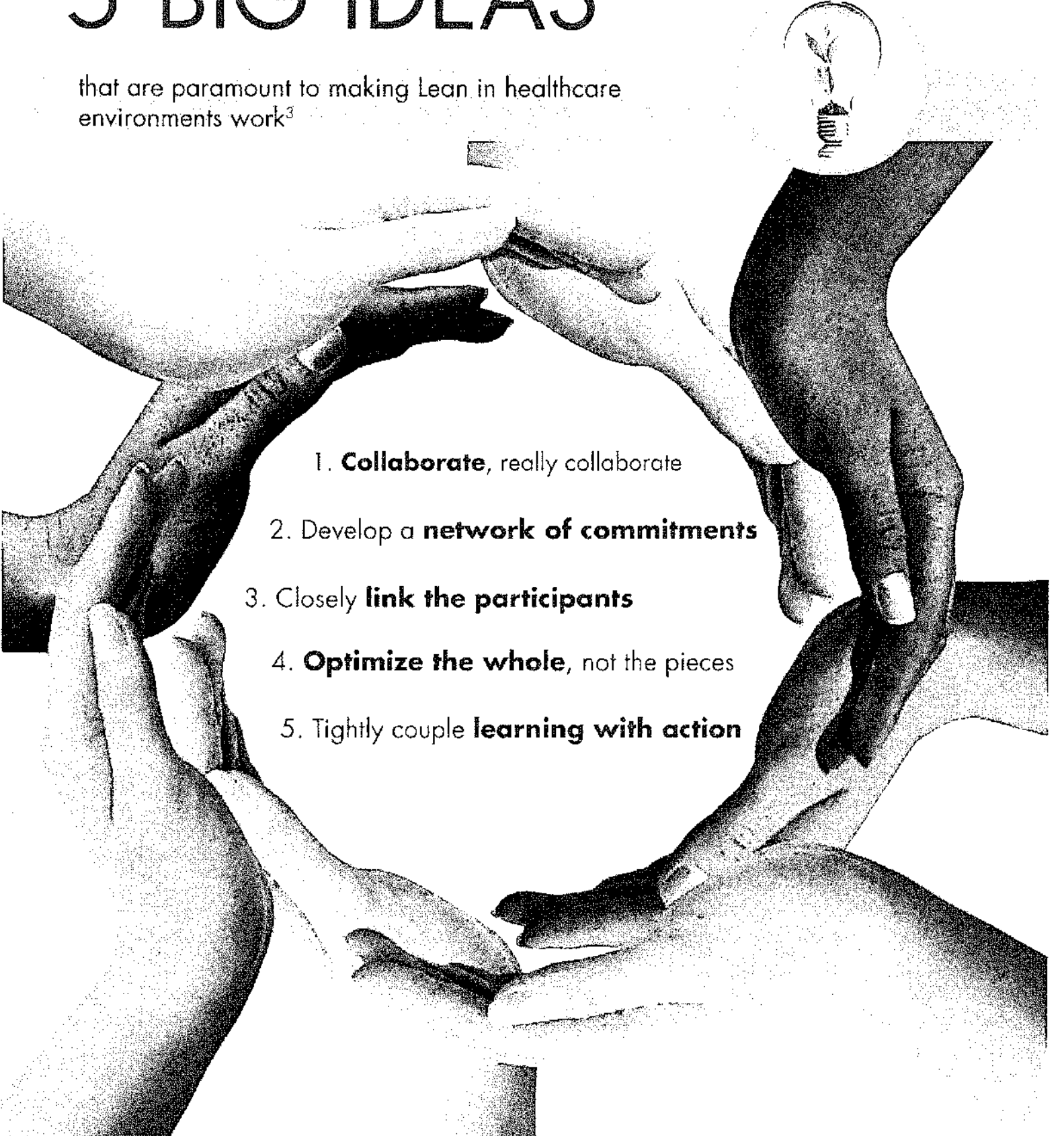
Healthcare is rapidly changing due to technological advances, increasing acuity of patients, and an aging population. All of these factors have a direct and profound impact on the planning of facilities and the delivery of services. With the increasing demand of healthcare services, hospital facilities also are facing a reduction of available healthcare professionals and increasing funding pressures. The imbalance of a growing demand on healthcare services, coupled with a shrinking workforce and funding demands a new way of delivering healthcare.

¹Chambers, David (2009) Efficient Healthcare: Overcoming Broken Paradigms. Rice University, Houston. Page 4.

²Black, John. R. (2008). The Toyota Way to Healthcare Excellence: Increase Efficiency and Improve Quality with Lean. Healthcare Administration Press. Page 14.

5 BIG IDEAS

that are paramount to making Lean in healthcare environments work³

- 
1. **Collaborate**, really collaborate
 2. Develop a **network of commitments**
 3. Closely **link the participants**
 4. **Optimize the whole**, not the pieces
 5. Tightly couple **learning with action**

³Chambers, David (2009) Efficient Healthcare: Overcoming Broken Paradigms. Rice University, Houston. Page 19.

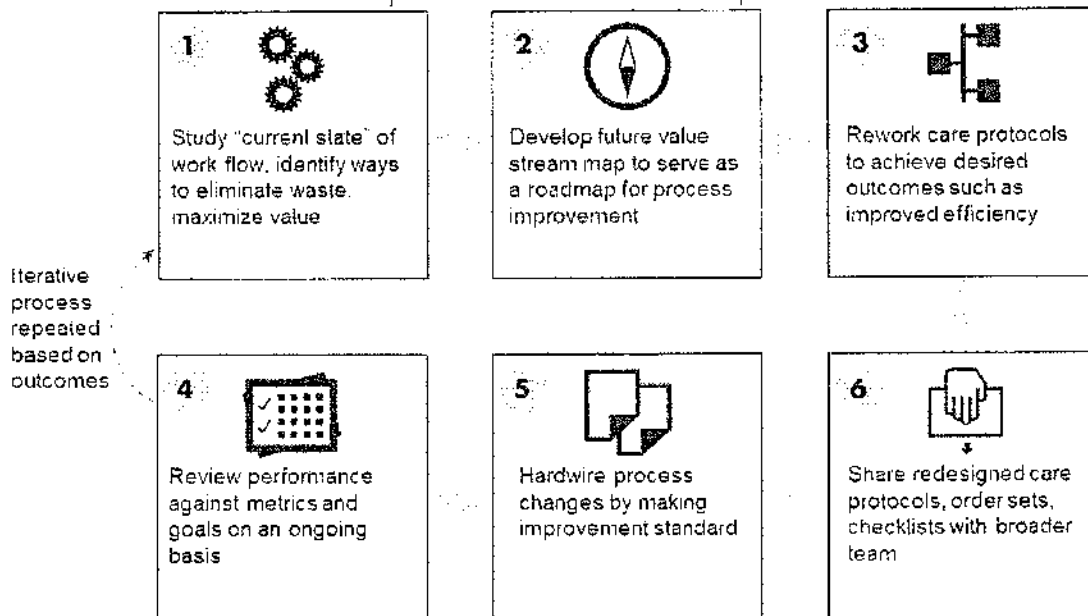
Establishing the foundation for care transformation through

Lean Process Improvement

The built environment is an essential driver of operational efficiency. Physical layouts that are well-aligned with client needs not only remove barriers to work, but they also allow for potential changes in demand and technology. Innovative design elements make it easier for clinicians to treat patients and minimize the risk of adverse events that negatively impact the delivery of care.

However, facility planners cannot simply build a Lean hospital. It is essential for architecture and design firms to go where the work is actually done, in order to assess opportunities for improvement early-on with clients. Pre-design begins when architects actively collaborate with front-line staff, clinicians, administrators, and operations consultants to explore services impacted by the project and evaluate how these services can be delivered more efficiently moving forward.⁴

Example of Lean Process Improvement



⁴HKS, "Traditional versus 'Lean-Driven' Operational Process Improvement based Hospital Design", 2013, available at: <http://www.hksmarthealthcare.com/2013/05/02/traditional-versus-lean-driven-operational-process-improvement-based-hospital-design/>



INTRODUCTION TO LEAN HEALTHCARE

Q: HOW CAN LEAN PLANNING IN HEALTHCARE ENVIRONMENTS AVOID CREATING SILOS?

Traditionally hospitals have been organized by departments with specialized care units. Often this approach creates systemic problems, such as redundant work, medication errors, inconsistent information in systems, etc. The ideal approach to planning process flow is to create a holistic solution where the interdependence of services is acknowledged and actively understood through the planning based on a care platform. This approach breaks down the traditional departmental “silo effect” by linking key patient care processes and creating staffing efficiencies. The integration of clinical functions transforms people and processes to provide maximum efficiency of flow and function.

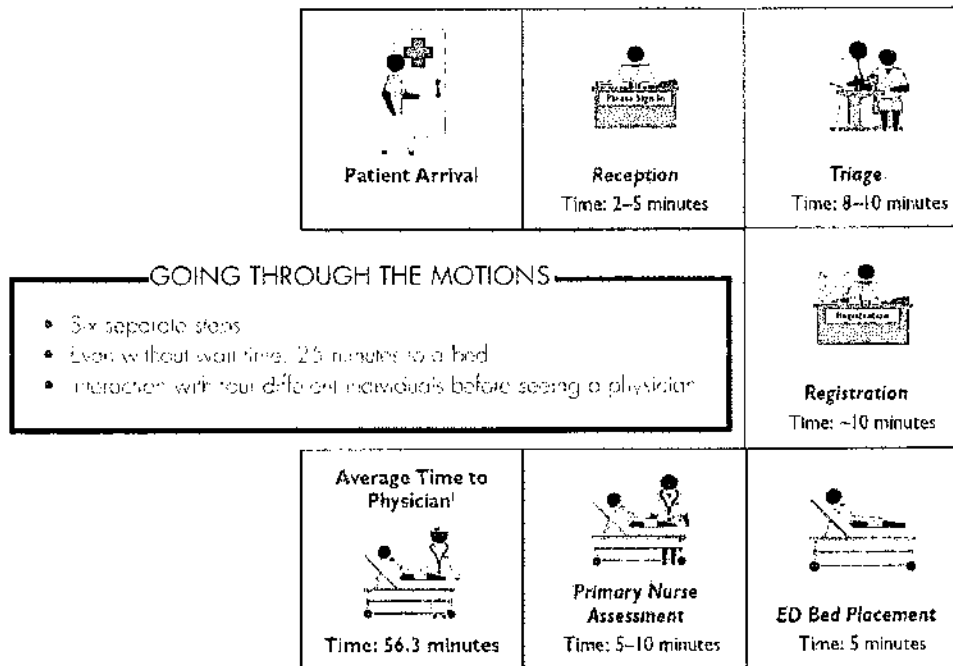
Using the care platform as the planning framework optimizes safety and quality, creating and facilitating:

- Patient centered environments
- Metric driven management
- Team based care models
- Reduced cycle times
- Behind-the-scene support services and logistics
- Integrated technologies
- Minimal unnecessary patient movements or handoffs
- Maximized “caregiver to patient” interaction time
- Elimination of redundancies

There are several key patient flow processes that impact the patient’s hospital experience and provide a framework to maximize patient throughput and capacity that:

- Maintain the highest levels of quality care and patient satisfaction
- Create a reliable service model for unscheduled patient care
- Build lasting and supportive relationships between the organization and its internal and external communities

Conventional ED Patient Pathway



Example of how a patient can be forced through tedious encounters

Q: WHAT ARE MDSTs?

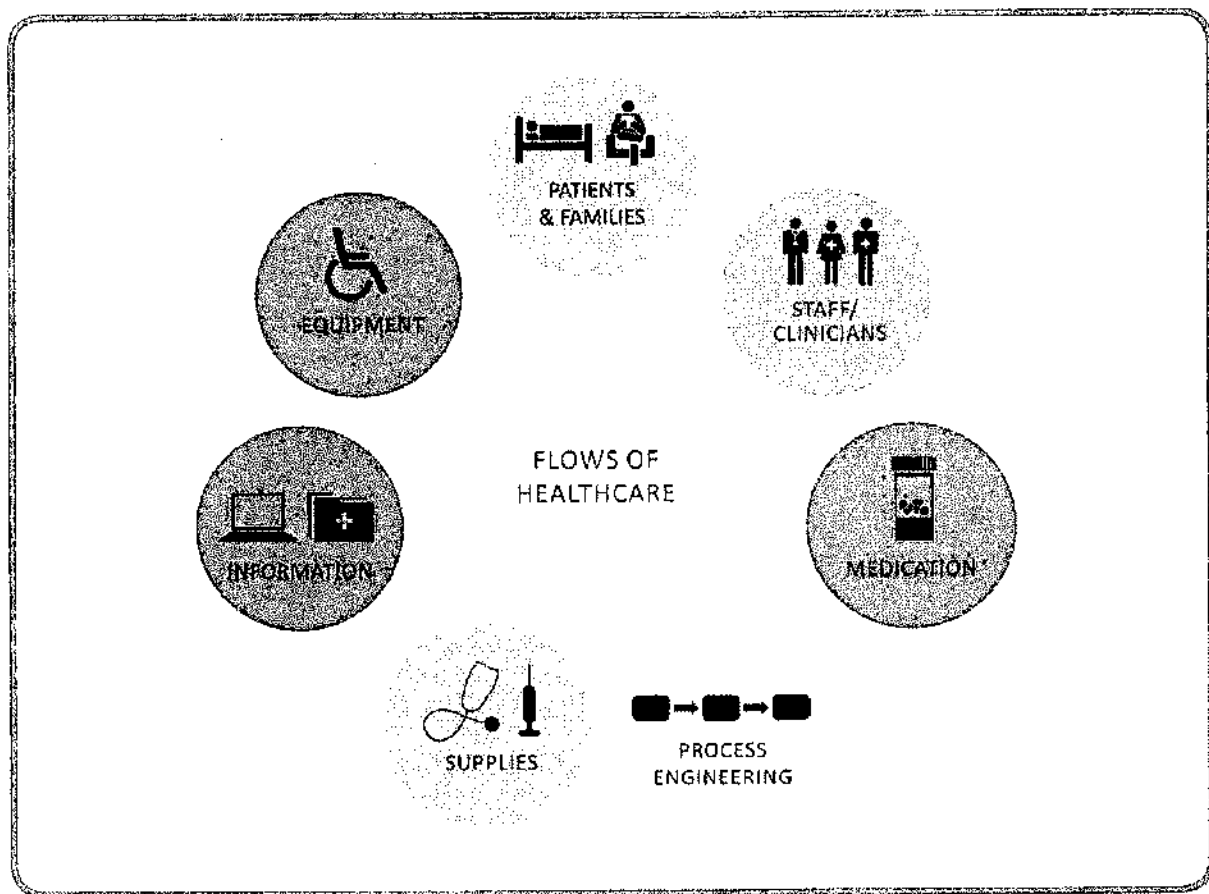
Multidisciplinary Study Teams are engaged to envision opportunities for deep collaboration or "teams" based on optimization of process. MDSTs are comprised of a cross-section of key stakeholders from various services, versus a traditional concept of interviewing separate departments, or components, thereby continuing the 'silo affect' on planning. For example, an MDST may be comprised of: physician, nurse, physiotherapist, housekeeping staff, Lab technician etc.; all of these stakeholders can accurately voice their part of the process.



FLOWS OF HEALTHCARE

Flow is a key concept in any Lean system. Planning which is based on optimized flows must be facilitated through a patient-centred perspective, and must look beyond the needs of any one particular department. There are seven flows of healthcare, explained below.

- 1) Flow of patients
- 2) Flow of clinicians
- 3) Flow of medication
- 4) Flow of supplies
- 5) Flow of information
- 6) Flow of equipment
- 7) Flow of process engineering





1) Flow of patients = Flow of patients in any healthcare setting should be simple, natural and quick. Some examples of ways to improve patient flow include: minimize patient walking and bring services to the patient, create flexible spaces that can be reconfigured based on the patient and the procedure, treat patients on a first-in/first-out basis and eliminate schedulers/planners, STOP the process when and if problems occur.

2) Flow of Clinicians = The flow of clinicians between various work settings (clinic, hospital etc.) should be quick, easy and stress-free for both clinician and patient. Some of the ways this type of flow can be improved include: cross-train employees, where an employee in one area can float into another area and perform the job if someone is absent, understand cycle times and level the workload appropriately, eliminate wasted motion of staff in areas – process steps should fall in a sequential and logical order, design work areas that are ergonomic.

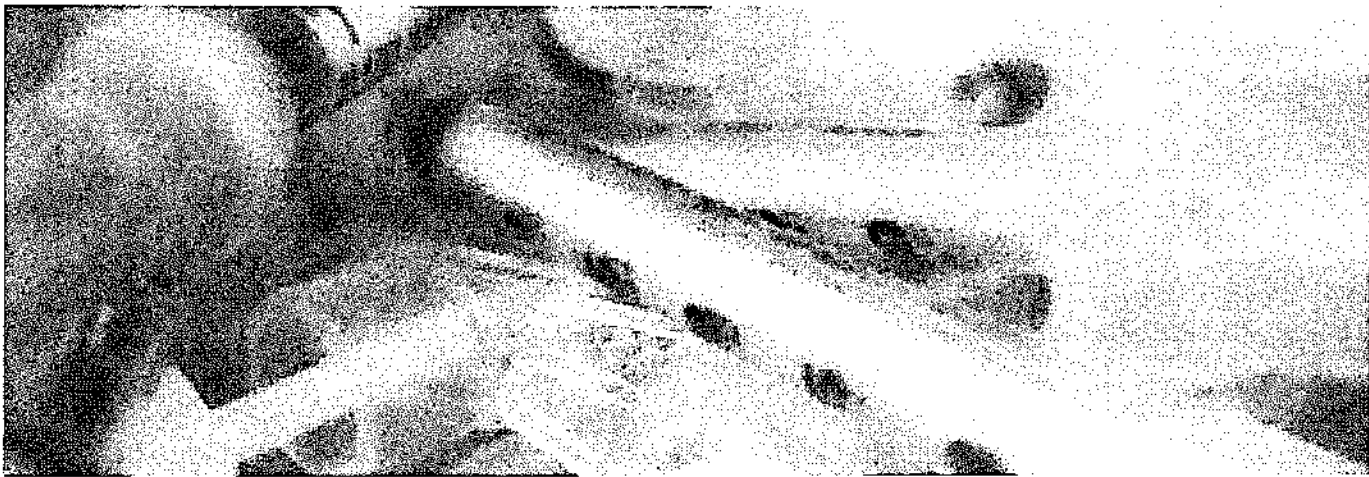
3) Flow of Medication = Ideally, medications will flow through any system at a Just-In-Time need basis, the correct medication being delivered where it is needed, when it is needed at just the right amount. Some ways to improve this flow include: locate medications as close as possible to the point of use, create small, satellite pharmacies wherever possible, ensure Point-of-Use is employed.

4) Flow of Supplies = the main concept here is that the right amount of supplies are delivered to the right area at the right time, a quick and easy flow. Ways to improve this flow type include: ensure point-of-use is employed, Deliver supplies on a just-in-time (JIT) basis, use a Kanban type system to signal when supplies are needed, use the 5S system (see tools) for visual clarity and control.

5) Flow of Information = a break in this flow can adversely affect patient flow (i.e. missing patient chart or lab results). Ways to improve on this flow include: ensuring that information travels with the patient, minimize the amount of information that is pulled along with the patient to any specific service (i.e. entire patient history is not required).

6) Flow of Equipment = Medical equipment needs to be accessible, in working condition and kept in the same location whenever it is required. Ways to improve this flow include: make a maintenance schedule for equipment to ensure it is in working condition, optimize equipment use for 24/7 operational schedule, avoid locating highly-used equipment in a location that is far away and requires a lot of walking to get to.

7) Flow of Process Engineering = The continuous application of lean process improvement is a key flow that helps establish a new culture of continuous improvement.



Q: WHAT IS CONSIDERED AS “WASTE” IN HEALTHCARE - AND WHAT ARE “MUDAS”?

The term ‘Muda’ is the Japanese term for ‘waste’. When we refer to ‘Mudas’ in Healthcare, this simply refers to different types of waste that can be found in any healthcare system.

There are eight wastes, or Mudās, identified in Lean healthcare planning, these include⁵ :

1. Overproduction
2. Unnecessary Waiting
3. Transportation
4. Complexity
5. Inventory
6. Wasted Motion
7. Under Use of Staff
8. Defects

⁵ Black, John. R. (2008). The Toyota Way to Healthcare Excellence: Increase Efficiency and Improve Quality with Lean. Healthcare Administration Press. Page 17-25.



In the last decade, Lean principles have been integrated into health care from the Toyota Production System, which standardized assembly line processes to deliver a lower-cost, better quality product to consumers. Lean rests on two fundamental pillars: continuous process improvement, and respect for people. Continuous improvement applies the scientific method in designing, performing, and changing the work provided, leading to greater value for patients and families.⁶ This means evaluating current work flow to identify areas of waste, proposing and testing strategies to increase efficiency, and making those successful improvements the new status quo.

EIGHT WASTES IN HEALTHCARE



Defects

Variation in outcomes, medication errors



Over-Production

Redundant work, duplicate charts or forms



Unnecessary Waiting

Patient queues; staff idle time



Confusion

Best clinical, operational practice unclear



Transportation

Delayed delivery of supplies and materials



Inventory

Excess supplies and unused medications



Wasted Motion

Unnecessary movement by clinicians, staff or patients



Excess Processing

More work or complexity than is required



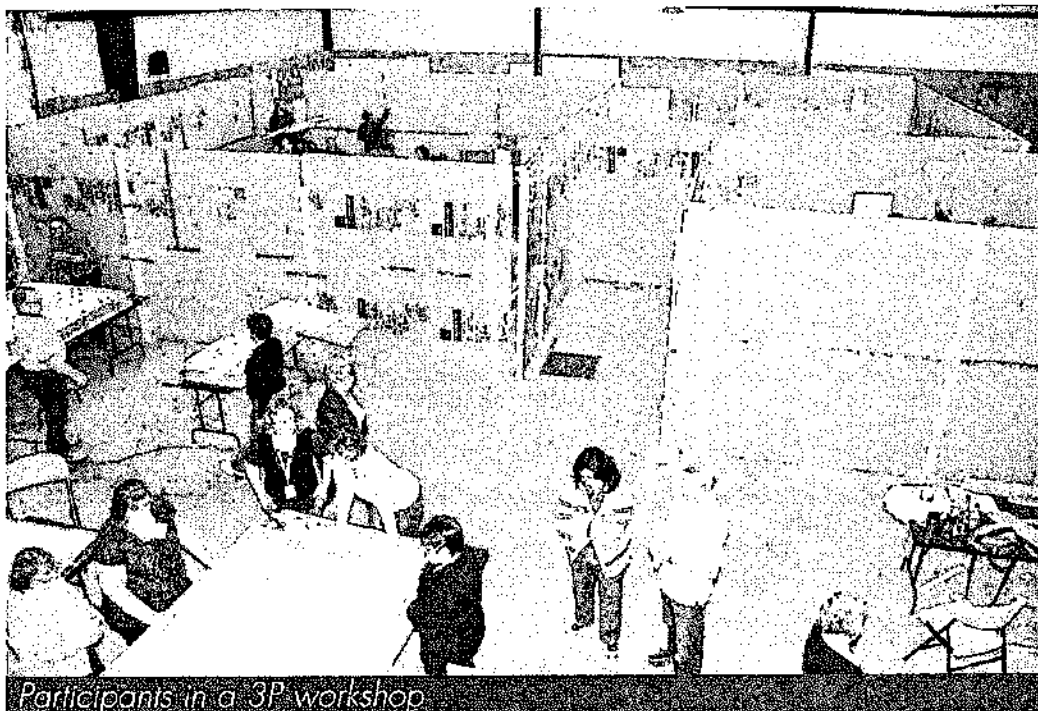
⁶ John Toussaint & Leonard Berry, "The Promise of Lean in Health Care", Mayo Clinic Foundation for Medical Education and Research, January 2013, 88(1):74-82.

Q: BESIDES ELIMINATING "WASTE" IN THE HEALTHCARE SYSTEM, WHAT OTHER STRATEGIES ARE USED IN LEAN PLANNING FOR HEALTHCARE SETTINGS?

Although the 'goal' of Lean is to eliminate waste out of a system, there are several other tools of practice that aide us in planning for a Lean healthcare environment:

3P (PRODUCTION, PREPARATION, PROCESS)

The purpose of the 3Ps is to structure defect-free, and quality patient care that is delivered at the required patient demand volume, just-in-time, using simple and defect-free processes. The tools listed below are all a part of using a 3P system.²



²Black, John R. (2008). The Toyota Way to Healthcare Excellence: Increase Efficiency and Improve Quality with Lean. Healthcare Administration Press. Page 69-71.

USE OF PULLED SERVICES

The concept of moving clinical services to the patient as much as possible enables reduced cycle times for procedures as it reduces waste associated with transporting patients within the hospital. This in turn, helps manage risks associated with hand-offs between care givers such as lost information and delays in treatment. 'Pull' refers to the actual patient demand that drives any process, and is a system which is based on a cascading process from 'downstream' to 'upstream' activities, where nothing happens in the upstream process until a downstream process signals a need. An example would be: patient testing is scheduled and based on when the patient requires them, rather than batching and storing samples.⁸

A3

Helps frontline teams analyze problems to their root causes, envision a better way to work, and devise countermeasures and experiments to get there. It is a one-page, hand-drawn document that relies on observation and teamwork and doubles as both guide to scientific process and as an easy, visual communication tool for consensus building.⁹

Title: *What are you talking about?*

Date: Latest Draft	Checker: Preparer of the A3
Approval Date:	Manager Approved

BACKGROUND

- Why are you talking about it?
- What is the business case? What business problem are you trying to solve or analyze? Be very concise – communicate WHY you are addressing this issue.

CURRENT CONDITIONS

- What is going on?
- Use facts, data.
- Be visual – use Pareto charts, pie charts, sketches
- Make the problem clear

GOAL

- State the specific target(s). State in measurable or identifiable terms.

ANALYSIS

- Use the simplest problem-analysis tool that will suffice to find the root cause of the problem: Five whys, fishbone diagram, problem or process analysis tree, 7 QC tools (old or new), tools from the Six Sigma, Kepner-Tregoe, Shainin, Taguchi, TRIZ or other toolbox of your choice

PROPOSAL

- Your proposed countermeasures

PLAN

- Timeline with who, what, when, where, how.

FOLLOW UP

- What issues or remaining problems can you anticipate?

Example of an A3 worksheet template

⁸Ibid. Page 10 and 59.

⁹Grunden, N., & Hagwood, C. (2012). *Lean-led Hospital Design: Creating the Efficient Hospital of the Future*. CRC Press. Page 287.

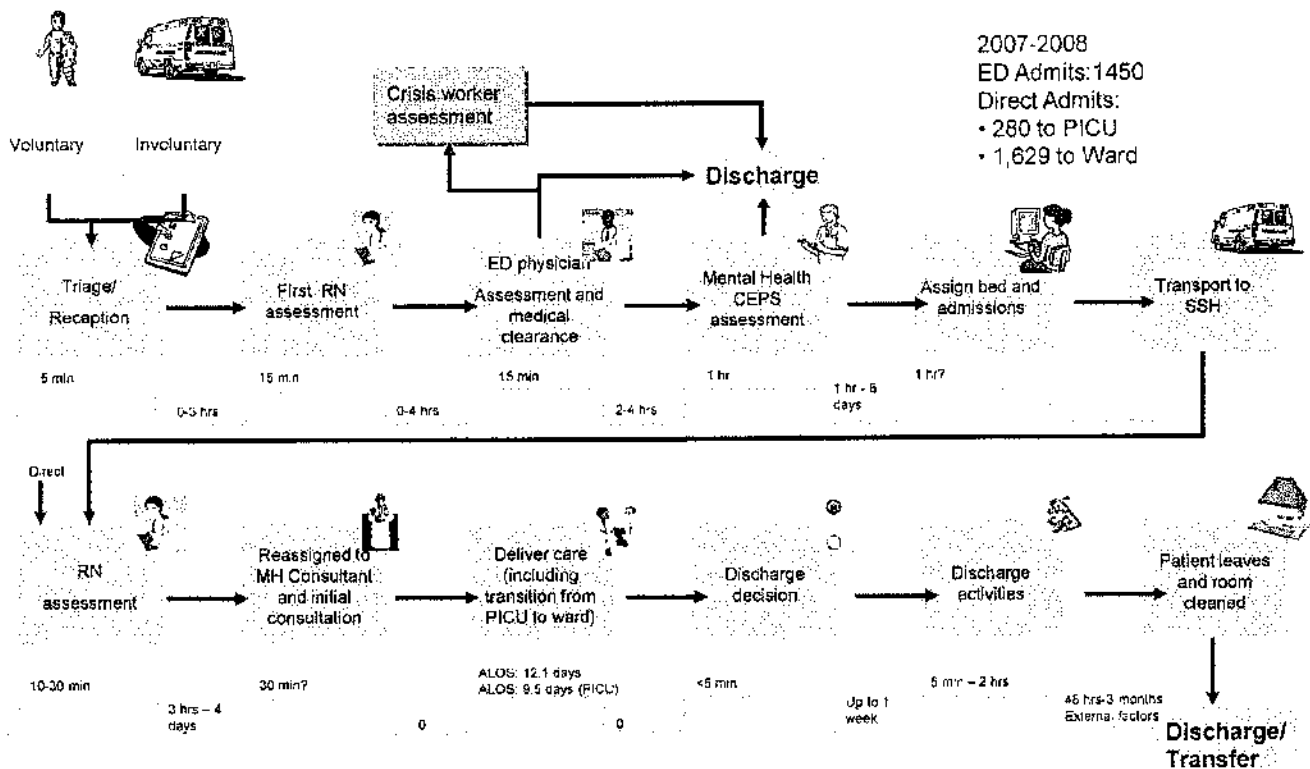
VALUE STREAM MAPPING (VSM)

This is one of the main tools used to implement Lean in any environment or system. VSM enables organizations to see and convert their processes from a push to pull system. A VSM strategy follows any service from beginning to end, and draws a visual representation or diagram of every process along the way, following the various 'flows of healthcare'. Startec uses the approach of workshops with stakeholders, using 'Current State' process maps, followed by 'Future State Process Improvement Maps'. These are examples of VSM, with the end goal of eliminating any waste that is found within any given process, with the stakeholders.

Value Stream Mapping

Value Stream Mapping – ED to Inpatient Mental Health

Patient flow through the ED – Mental Health process



Source: Ontario Ministry of Health and Long Term Care (2010). ED PIP: Diagnostic Phase. Tools: Value Stream Mapping, page 9. Retrieved from http://www.patientflowtoolkit.ca/ToolkitDoc/Diagnostic_PDF/Tools/Value%20Stream%20Mapping.pdf

Example of a Value Stream Flow Map

KANBAN SYSTEM

'Kanban' means 'signboard' or 'billboard' in Japanese. Kanban is a system which maintains inventory levels; a signal is sent to produce and deliver a new shipment as material is consumed. These signals are tracked through the replenishment cycle and bring extraordinary visibility to suppliers and consumers or patients. Kanban is consistent with and dependent on a 'Pull' system- the demand of the patient causes a service to be provided. An example of the use of Kanban would be 'cards' to signal the need for replenishment of a supply product, or inventory, therefore helping to create a demand-driven system.¹⁰

A KanBan card is a visual aid to assist inventory management. It provides high visibility for stock on hand and acts as an indicator for the re-ordering of stock (paper, gloves, surgical equipment, etc.)

- **Kan** means color
- **Ban** means card used for inventory

INVENTORY ALERT	
PRODUCT NAME	PHOSm
STORAGE LOCATION	Storeroom Cart G Shelf G3
VENDOR	Beckman PS/Cat# PS 220155
REORDER POINT	5 ORDER QUANTITY 10
DROP THIS CARD IN THE KANBAN BIN	

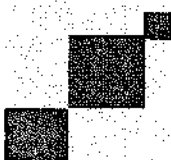
Kanban Card I

Surgical Pathology	
30cc Syringe	
Vendor:	
Name	(000000000000)
Part #:	0000-00
People Soft #:	13022
Cart Count #:	N/A
Reorder At:	1 box
Quantity to Order:	1 box
Price	\$0.00
Surgical Pathology	

Kanban Card II

Example of 1st generation (left) and 2nd generation (right) Kanban cards

¹⁰Black, John. R. (2008). The Toyota Way to Healthcare Excellence: Increase Efficiency and Improve Quality with Lean. Healthcare Administration Press. Page 129-130



KEY TOOLS

UNIVERSALLY EQUIPPED SPACES

Although more a physical strategy versus operational, the concept of using program adaptable spaces is a key component in creating a Lean environment. These spaces allow the environment to respond to daily fluctuations in utilization of space by 'like' programs. For example, clinic space could be used, in off hours, as Emergency Services space to allow for an increase in capacity at its evening peak times. The benefit of understanding the operations and utilization of each service team is the opportunity to increase capacity within existing physical space. Standardization of room typologies provides opportunities to maximize operational efficiency, patient safety, and the built environment.

STANDARDIZATION OF PATIENT CARE

AND SUPPORT PROCESSES

Wherever possible, the organization should be striving to standardize both clinical and non-clinical processes. Benefits include: improved overall quality (including safety); reduced variance in practice, minimization of waste, and improved staff flexibility. Standardization is part of the 5S process (see below).

REDUCE THE NUMBER OF STEPS IN CARE

PROCESS

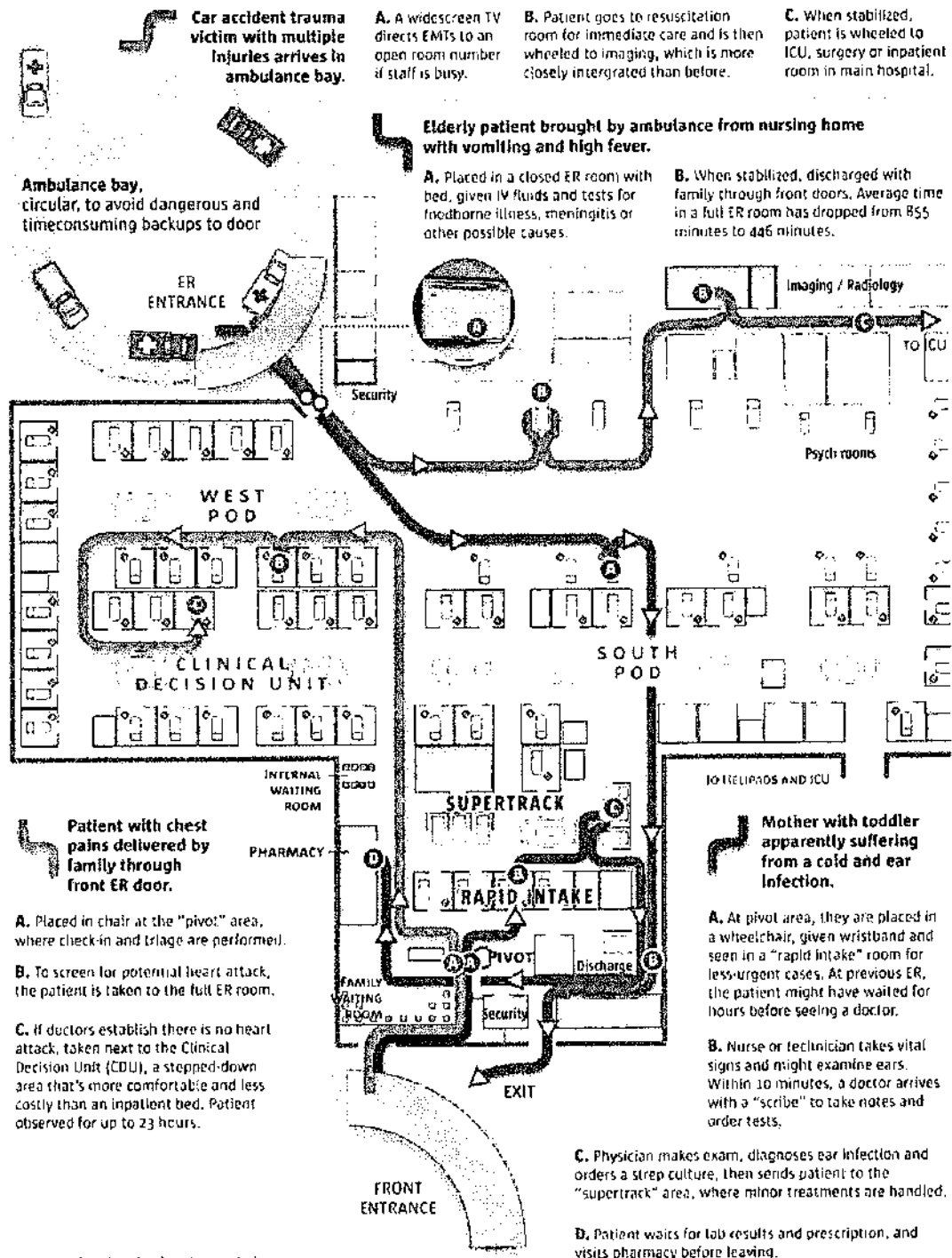
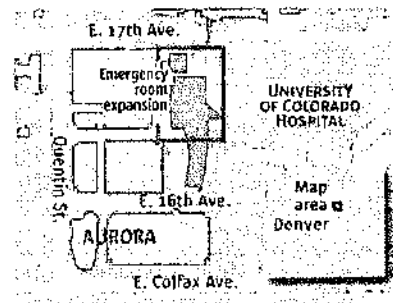
(Patient Steps and Hand-offs). An outcome of pulling services is the significant reduction in the number of steps in the patient journey as well the elimination of multiple entries entry of information each time a patient travels to receive a procedure. Hand-offs are also potential opportunities for information to be missed or reentered incorrectly or for delay in receiving care in each case exposing the patient to additional risk. Point of care access for supplies and medications is also important as it significantly reduces clinician/caregiver time in travelling to get supplies and medications as well as disposing of soiled supplies.

USE OF LEVELED PRODUCTION

(Also called Levelled Scheduling). This strategy means the scheduling of services in such a way as to eliminate bottlenecks within a system, and hence maximizing throughput. This includes scheduling patients in accordance with the overall rate of demand. This strategy allows the organization to meet current demand for service efficiently, and allows capacity to increase demand.

Expansion cuts door-to-doctor time

University of Colorado's new hospital emergency room - doubling the capacity of the previous ER and reducing average wait times from 77 minutes to 10 minutes - was designed to improve patient flow and experience. Below are four scenarios showing how the changes affect patients:



Source: University of Colorado Hospital

Michael Booth, Severiano Galván, The Denver Post

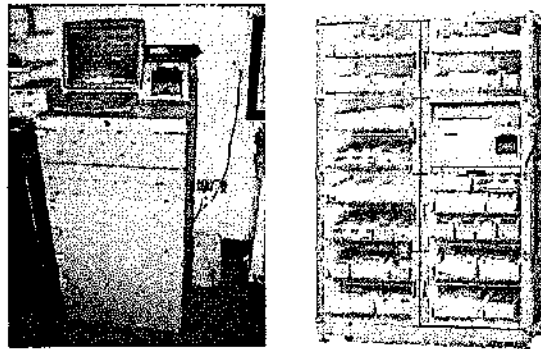
Example of how reducing the number of steps in the care process can maximize efficiency

USE OF JUST IN TIME (JIT) PRODUCTION

JIT refers to provision of a required service or material good, only when that service or good is needed, in just the right amount, when it is needed, and where it is needed. For example, during a surgery, JIT would mean providing the surgeon with the correct instrument exactly when it is needed, or conversely NOT hunting for the instrument when it is needed.

USE OF TECHNOLOGY

'Jidoka' is a concept which refers to maximizing the use of technology to aid in creating a defect-free environment. An example would be use of an automated medication dispensing cabinet (i.e. PIXUS) for dispensing medications, versus dispensing medication by hand. The potential for error is greatly reduced.



Examples of different Pyxis models

"STOP-THE-LINE"

is part of creating a 'defect-free' environment. This refers to employees having the responsibility to stop any process if they believe proceeding would adversely affect patient safety or negatively impact operations. An example is if a nurse notices that a patient has not had their vital signs checked, the nurse should stop the patient from proceeding from getting any further treatment, until this step has been accomplished.

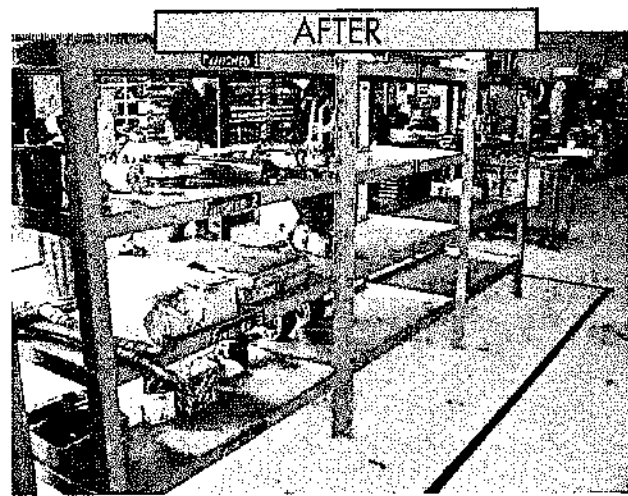
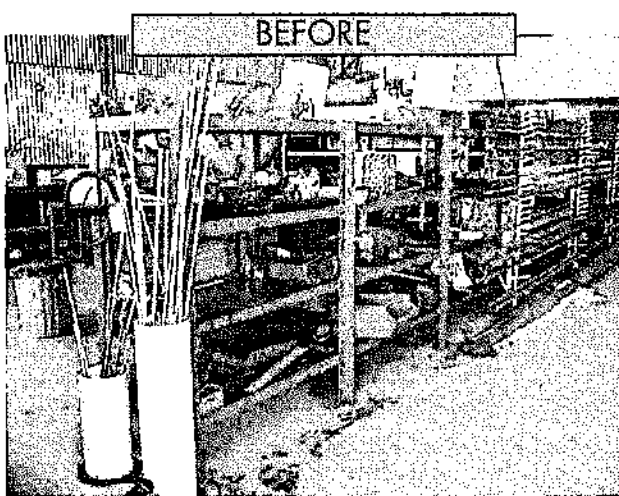
VISUAL MANAGEMENT SYSTEMS

these systems enable anyone to immediately assess the current status of a procedure, activity or process at a glance, regardless of their knowledge of the process. The 5S system is an example of a Visual Management System.

5S

5S is a five-level standard for organization of a work environment. The focus of 5S is to organize the work environment in order to make it more productive, its aim is to eliminate waste associated with waiting, searching, variation and uncontrolled processes. By establishing order in the workplace, 5S helps improve conditions for employees by making things tidier, cleaner, brighter and safer. In turn, the outcomes include a pleasant work environment for employees, improving morale as well as productivity. The five levels (or 5S's) include:

- S1) Sort= 'clearing up' or eliminating any materials, supplies or equipment and paperwork that are not required or being used. Sort out what is needed and what is not needed, or 'when in doubt, throw it out'.
- S2) Set in Order= organizing or defining a place for everything. Arrange essential things in order and with easy access.
- S3) Shine= Cleaning, eliminating dirt, dust or fluid leaks. Keep equipment and work areas clean and tidy.
- S4) Standardize= making all spaces and places the same. Make cleaning and checking a routine practice.
- S5) Sustain= maintaining continued compliance. Make the 5S a way of life- a type of discipline.



Example of an application of the 5S system



PLATFORMS

Q: WHAT ARE "PLATFORMS"? ARE THESE DEPARTMENTS WITHIN A HEALTHCARE FACILITY?

Traditional service boundaries are based on clinical specialty (such as cardiology, endocrinology), procedures (such as dialysis and heart surgery), and stages of care (such as inpatient, outpatient, rehab), resulting in a fragmented structure (silos).

In modeling a lean healthcare environment, Stantec has developed a 'Cellular Care Hospital' in which the silos have been broken down to reveal patient care teams. These teams are multi-disciplinary and focus on producing specific and pre-defined outcomes. Based on optimized patient flows, patient care teams pull services to the patient to create improvements to the operational efficiency, space utilization, patient movement, and handoffs between departments. The spaces that have been determined to support the delivery of these outcomes are called platforms.

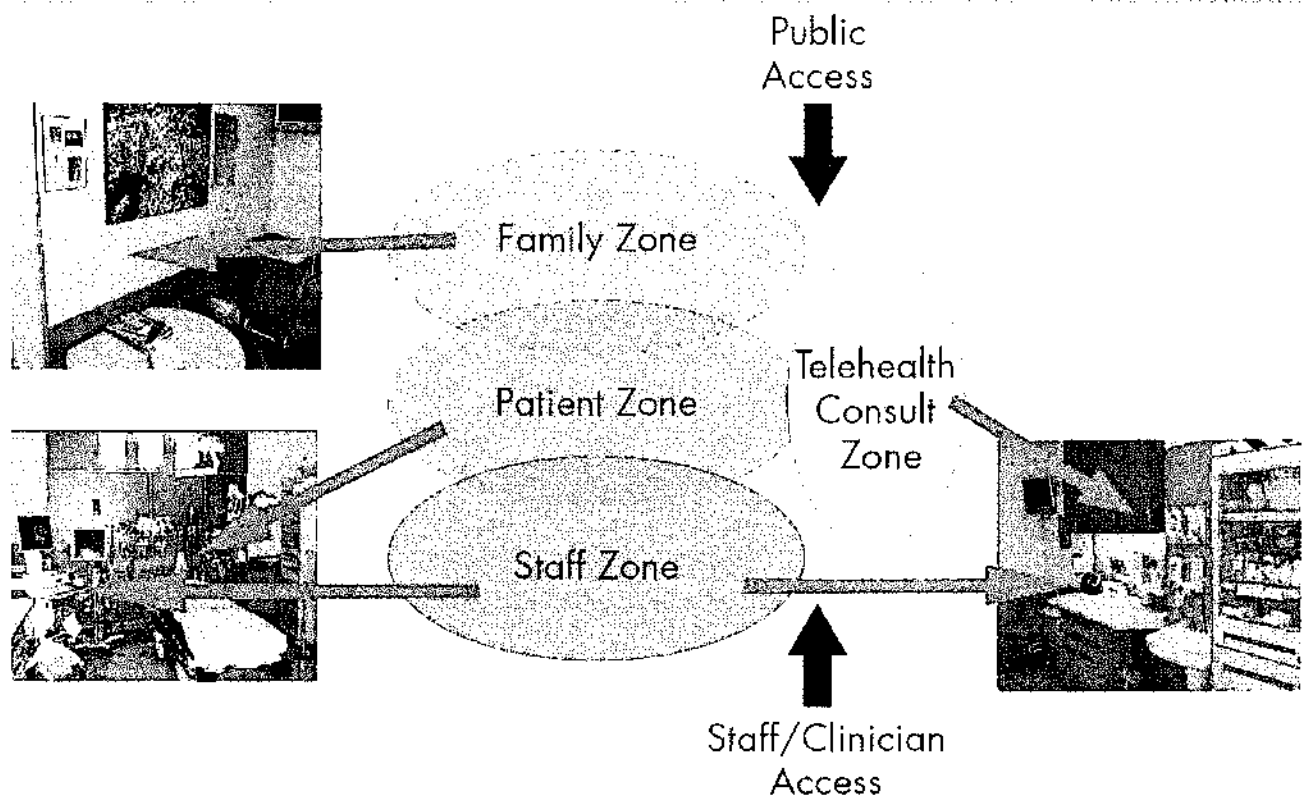
Rather than formulating space requirements based on traditional departments, platforms group a series of spaces required to produce defined outcomes. Another important factor in this model is that staff, teams, and traditional departments do not have ownership of space, but rather have the opportunity to utilize resources (including space) to respond to patient care needs.

The three most important platforms where the majority of clinical space occurs are listed below and described in the following pages. Other platforms (i.e Logistics Platform) vary between facilities.

- Universal Care Platform (UCP),
- Procedures Platform (PP),
- Inpatient Services Platform (ISP).

Q: WHAT ARE UNIVERSAL SPACES?

Critical to the success of the Cellular Care Hospital concept is an understanding of the importance of universal spaces. Through creating universal space typologies that are program adaptable, the hospital can manage fluctuations in patient needs and populations, as well as maximize space utilization over the continuum of the daily, weekly, and yearly cycles. The majority of care space for patients can be seen in the 'Universal Care Platform' and the 'Inpatient Services Platform'. The UCP focuses primarily on the care of ambulatory patients, while the ISP is structured to support the provision of all inpatient services. An example of a Universal Space, is an Inpatient room that is large enough to support any one of: Medical, Surgical, Antenatal, Pediatric, special observation/Critical Care and Palliative care admitted patient. All rooms are private rooms that are standardized to the extent possible, with same-handed headwalls, staff hand wash sink by door, standardized storage of med/surg supplies and clean linen, nurse/consultant charting space, modest accommodation for family and ceiling lifts. This Universal space type improves efficiencies for staff while decreasing medical errors.

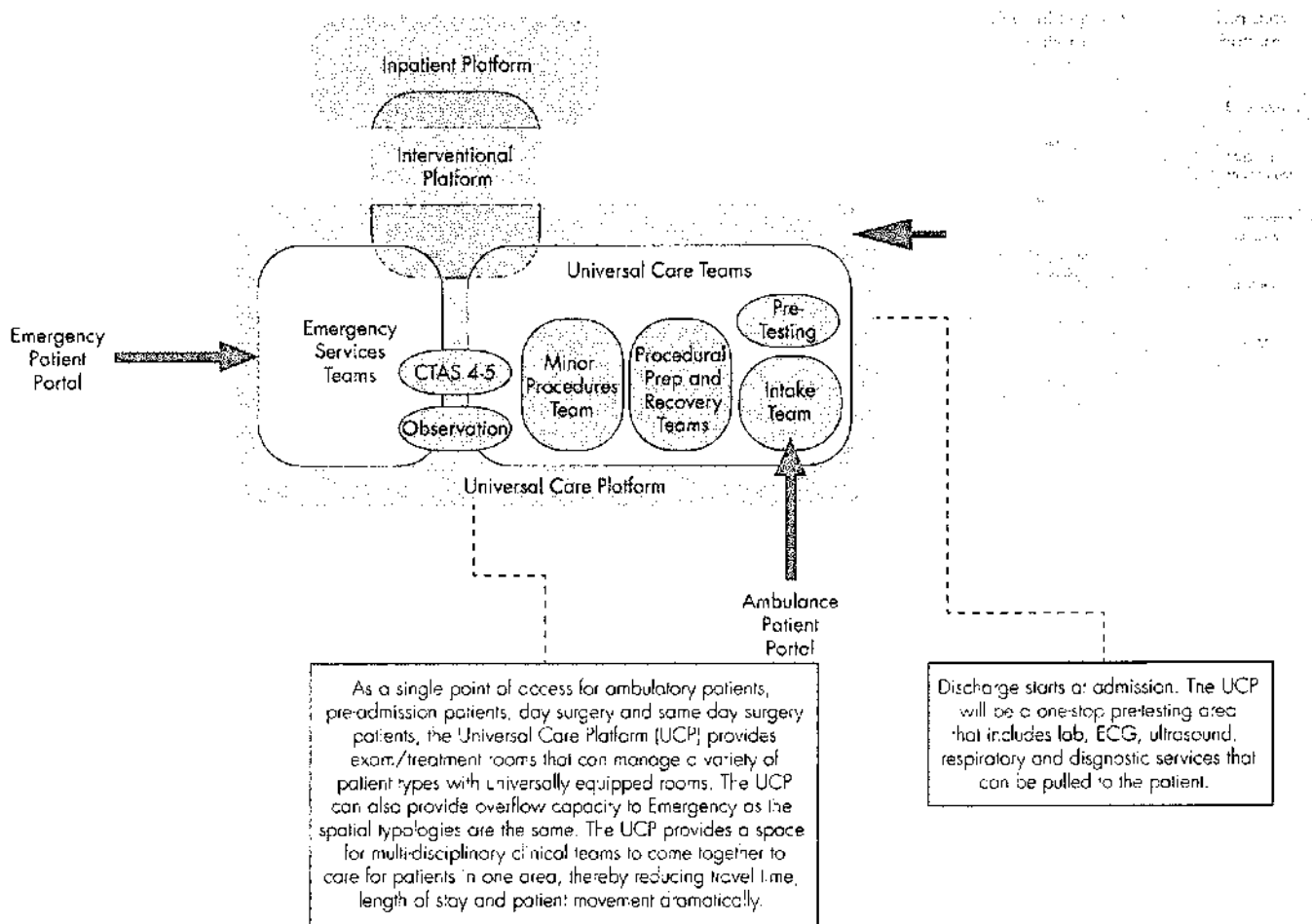


Flexible Rooms

EXAMPLES OF CARE PLATFORMS

UNIVERSAL CARE PLATFORM

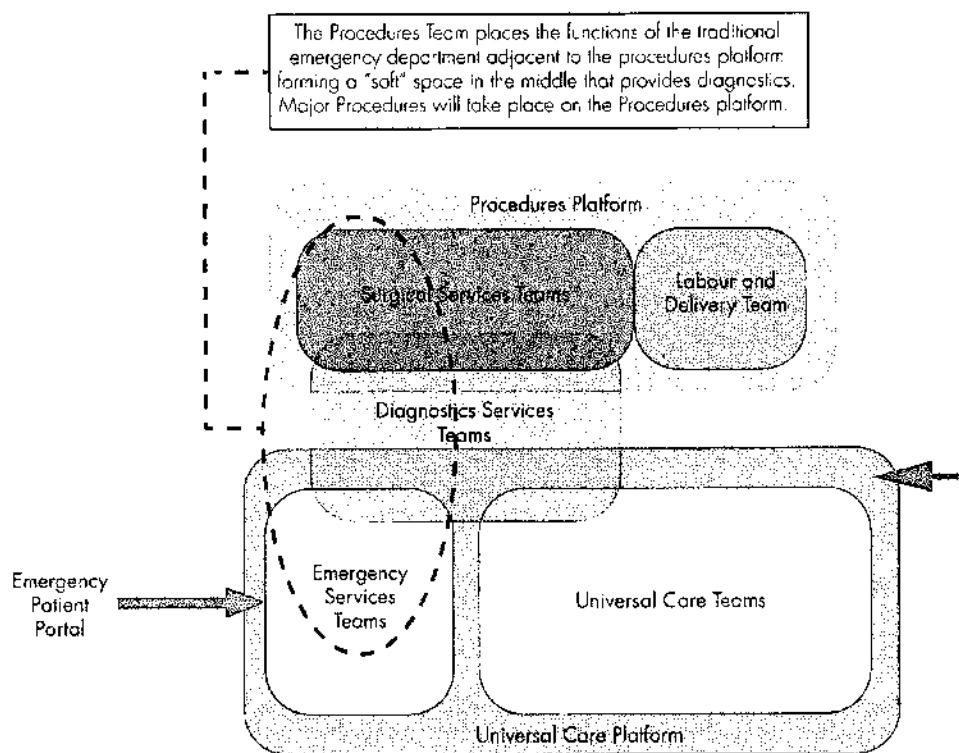
The Universal Care Platform (UCP) provides a single point of access for Outpatients, Day Surgery Patients and Emergency Care. Services are grouped into Universal Care Teams. Patient movement falls dramatically as services, once separated, are consolidated at single points of service. Caregiver teams are built to function together completely within the Platform. A primary concept in the UCP is providing standardized room typologies that can be used for a variety of processes. This enables the management of workflow cycles and allows individual Platforms within the UCP to expand as necessary to meet the demands of the moment.



Universal Care Platform - Platform & Team Structure

PROCEDURES PLATFORM

The Procedures Platform is where all procedures requiring specialized equipment and space are to be completed. The Procedures Platform provides several space typologies that support varying acuities of patient conditions. The Procedures Platform supports both diagnostic procedures including medical imaging and surgical interventions. It also places the functions of the traditional emergency department (resuscitation) adjacent to the Procedures Platform forming a 'soft space' in the middle that provides diagnostics. Procedures diagnostics will take place on the Procedures Platform. There will be a separation between sterile and non-sterile areas. Scheduled and non-emergent patients will not enter the emergency room area of this Platform, however they will be pre-admitted. In addition, certain patients who are presenting could be redirected from the emergency room and proceed directly to the Universal Care Platform (UCP) and other locations. This platform has strong connections with the Universal Care Platform and Inpatient Services Platform (ISP).



Procedures Platform - Platform & Team Structure

INPATIENT SERVICES PLATFORM

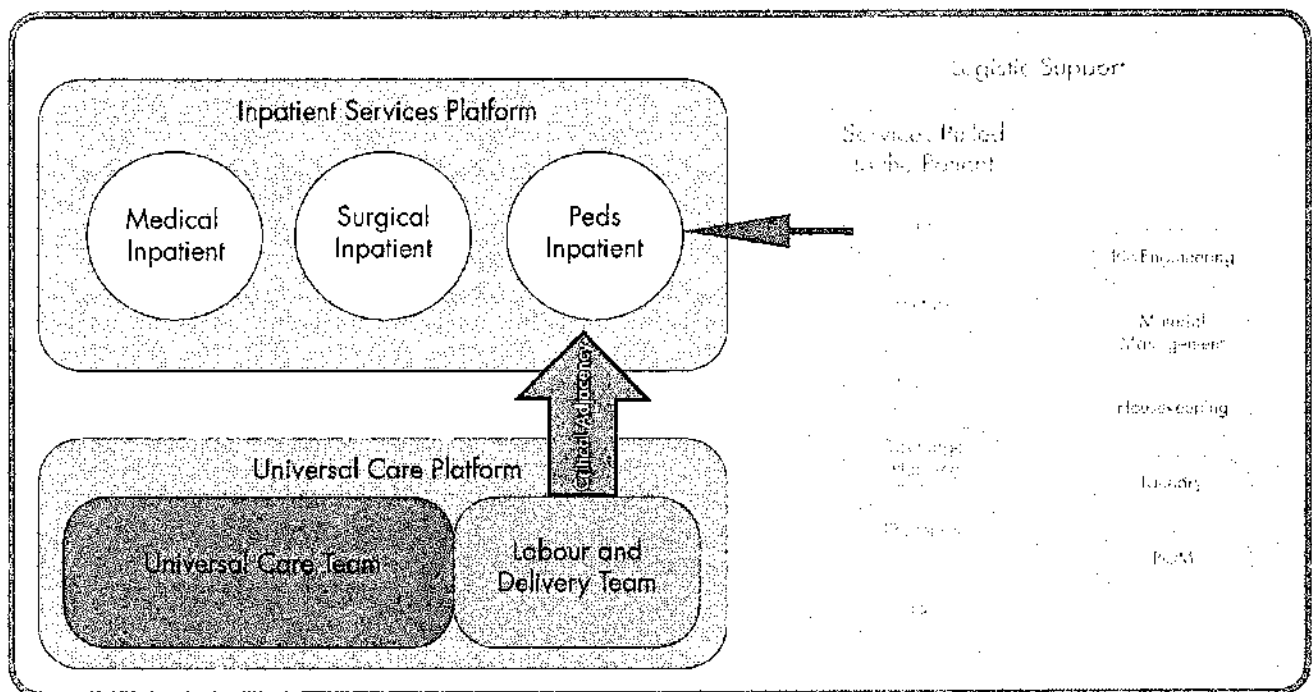
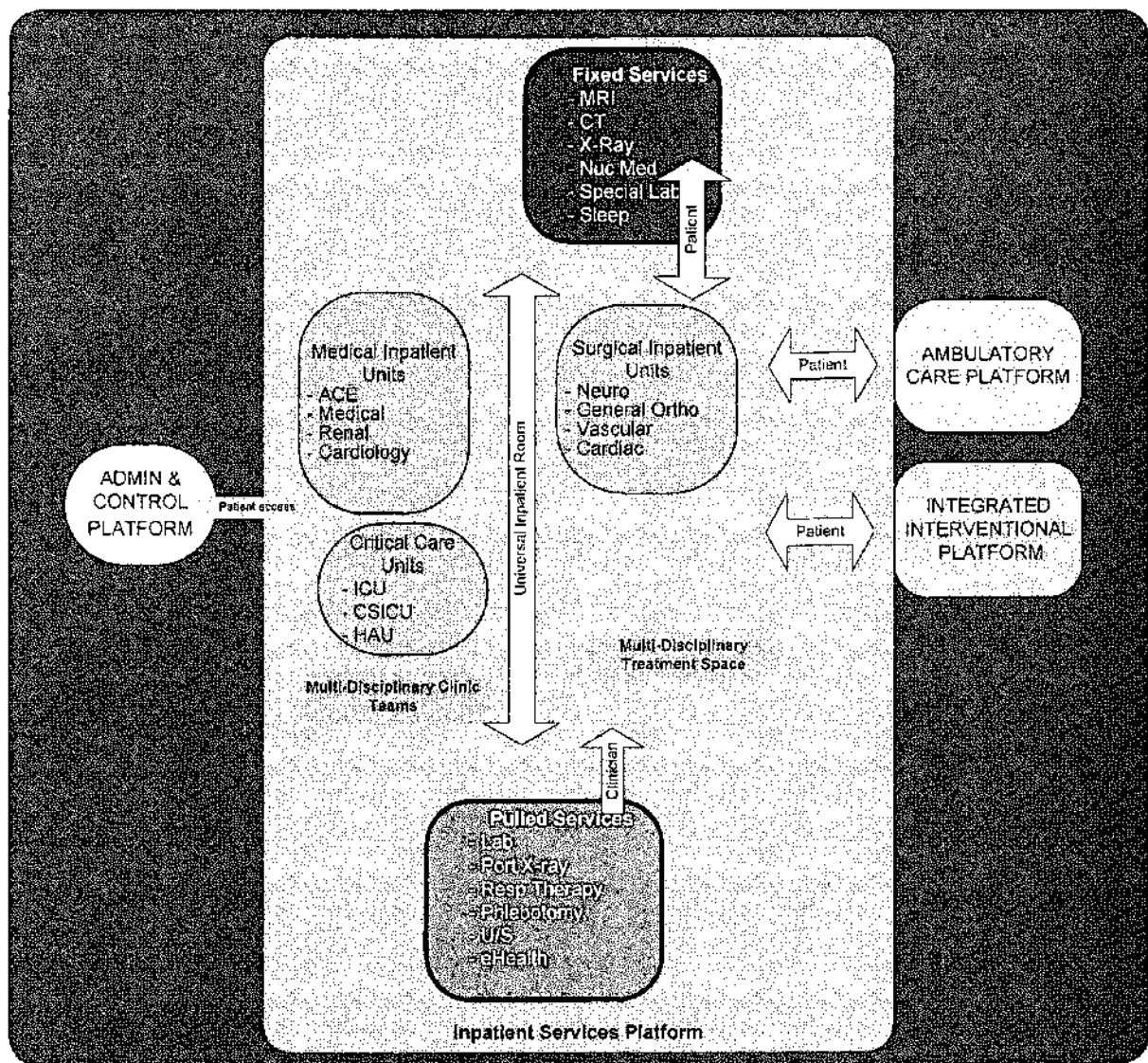
The Inpatient Services Platform consists of program adaptable rooms capable of managing all inpatient requirements with the exception of Mental Health & Addictions which will require specific design requirements to meet patient safety needs. This provides the flexibility to have various operational teams needs grow and contract based on workload volumes.

The patient room is the center of the Platform and can be used in a program adaptable operating paradigm reducing patient room transfers. Care givers treating a patient no longer have to leave the patient room to complete tasks designing out interruptions, wasted motion, while promoting patient safety (Storage of equipment, supplies, and information will be located in the room).

Inpatients have same handed rooms, room servers with patient specific medications, supplies, clean linen, soiled waste, equipment and nurse/consultant charting space with visual access to the patient outside of every patient room.

Care delivery will be based on a patient-centered, family-involved service supported by an interdisciplinary team. Higher or lower levels of care may be required for selected patients, but care is anticipated to always be lower than for critical care patients.





Examples of inpatient services care platforms

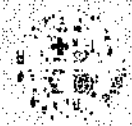
NORTH YORK GENERAL HOSPITAL



North York General Hospital staff from across disciplines at a value stream mapping kaizen event

- NYGH's Lean journey began with the SARS (severe acute respiratory syndrome) crisis – NYGH became the epicenter of the SARS 2 epidemic, leaving the organization and its staff devastated after five months of caring for SARS patients
- This crisis provided an opportunity for institutional change
- With thorough consultation from staff, MDs, community, patients and family, the senior management team was able to come up with a Current State, and also to define their desired Future State
- Regular In-house meetings for all 120 managers and leaders were rolled out to try to break through the 'silos'; it didn't take long before a true commitment to cultural change was in place for NYGH
- Culture Transformation became a top priority for the organization
- Strategy execution included multiple process transformation activities, using Lean Kaizen events – one of the main areas that was targeted was the ED/GIM
- 8 value stream analyses, 20 kaizen events and 3 vertical value streams and 3 cause & effect analysis events have been conducted since October 2006
- For the ED/GIM the following success rates have been outcomes of Lean transformation:
 - 49% increase in the number of patients that physicians were able to care for
 - 52% reduction in time from when a patient leaves a bed to when the bed is available for the next patient
 - 27% reduction in patient length of stay for sub-acute patients (from 8.3 to 6.1 hours)
 - 86% reduction in the time from when a patient leaves a bed to when that bed is assigned to the next patient
 - 73% reduction in time from when a bed is assigned to when the patient is in the bed (from 167 to 45 minutes)
 - 19% reduction in the time from patient arrival to patient discharge in the ED

Source: "Strategy, Leadership and Change: The North York General Hospital Transformation Journey." Healthcare Quarterly 11(3): 50-53. Retrieved from <http://www.longwoods.com/content/19856>



WINDSOR REGIONAL HOSPITAL: EMERGENCY DEPARTMENT

- WRH was experiencing long wait times in its ER waiting room- hospital challenged itself by aiming to improve ER process as a top priority
- ER team traveled to various Emergency Departments across Canada and US and discovered Michigan Manufacturing Technology Center's LEAN Healthcare Systems and Six Sigma philosophies; some ER staff became lean champions and achieved their Six Sigma Black Belts
- Kaizen events were held with every department that interacted with the ER, identifying many processes that could be improved
- One outcome included: "As part of a new way of providing direct patient care, the ER established an Ambulatory Care area for patients not requiring a stretcher for treatment however, still be treated effectively in less time while still maintaining the highest levels of care for stretcher patients," stated Theresa Morris, director of the Emergency Department at Windsor Regional Hospital.
- New projects will embrace ongoing continuous improvements as a way of doing business from this point on – with the ongoing goal to eventually eliminate wait times altogether

Source: Foster, R. 2007. "Windsor Regional Hospital Emergency Department Revolutionized." Hospital News August: 1, 8. Retrieved April 8, 2009. <http://www.hospitalnews.com/windsor-regional-hospital-emergency-department-revolutionized/>

HOTEL-DIEU GRACE HOSPITAL

- Fall 2005 the 278 bed hospital held a lean workshop for the ER, five other departments had already kicked off their own lean implementations (Diagnostic imaging, Clinical teaching Unit, central sterilizing and reprocessing, mental health and orthopedics)
- Cross-functional teams participated in 3-day workshops creating current and future state maps, highlighting gaps that represented the biggest problems, and collectively earmarking kaizen projects to tackle critical issues
- With each workshop, the teams fought through traditional departmental boundaries, and found new ways to communicate and improve
- "Lean has provided an approach that cuts across departments, personalities, hierarchies and the complexities of hospitals", says Neil McEvoy, CEO of Hôtel-Dieu Grace. "You have to get together very different groups to make change happen."
- A few key criteria were established for lean initiatives

Source: http://www.lean.org/admin/km/documents/58bf73d5-8c2d-4f9f-859e-0a35c27d2e0e-lean_hospital_hotel_dieu_grace_success_story_11.pdf

