



SESSION #CT-05

SEPTEMBER 20, 2013 | 8:00 AM

Lessons from the DBFM Trenches



**The
Future
Is Now:
Alternative
Project Delivery**

AIA AAJ NATIONAL CONFERENCE

PORTLAND, OR | SEPTEMBER 18-21 2013



THE AMERICAN INSTITUTE
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Lessons From the DBFM trenches

Based on the experience learned from 7 justice related DBFM pursuits, both wins and loses, the challenges of this delivery method for the consultant architect will be examined bringing to light factors that impact project development not usually confronted in the traditional design bid model.

Good design
makes a difference™



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Learning Objectives

1. General understanding of the DBFM process
2. Risks for the architect and how to mitigate some of those risks.
3. Achieving Design Excellence in this delivery method
4. Understanding the new Contractor-Designer relationship in DBFM..





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AGENDA

Pursuit

- Prequalification
- Quality of Team Partners
- Structure of the Team
- Where is the Client/User in This
- Pursuit Deliverables
- Pursuit Fees
- Pursuit Hours
- Scoring Process
- Pursuit Examples
- Liquidated Damages
- Staff Burn Out
- Why is it so Difficult

Post Pursuit

- New Contractor/Architect Relationship
- New Client/Architect Relationship
- Design Excellence & Imperfect Standards
- Challenges of Maintaining quality in the P4 Environment



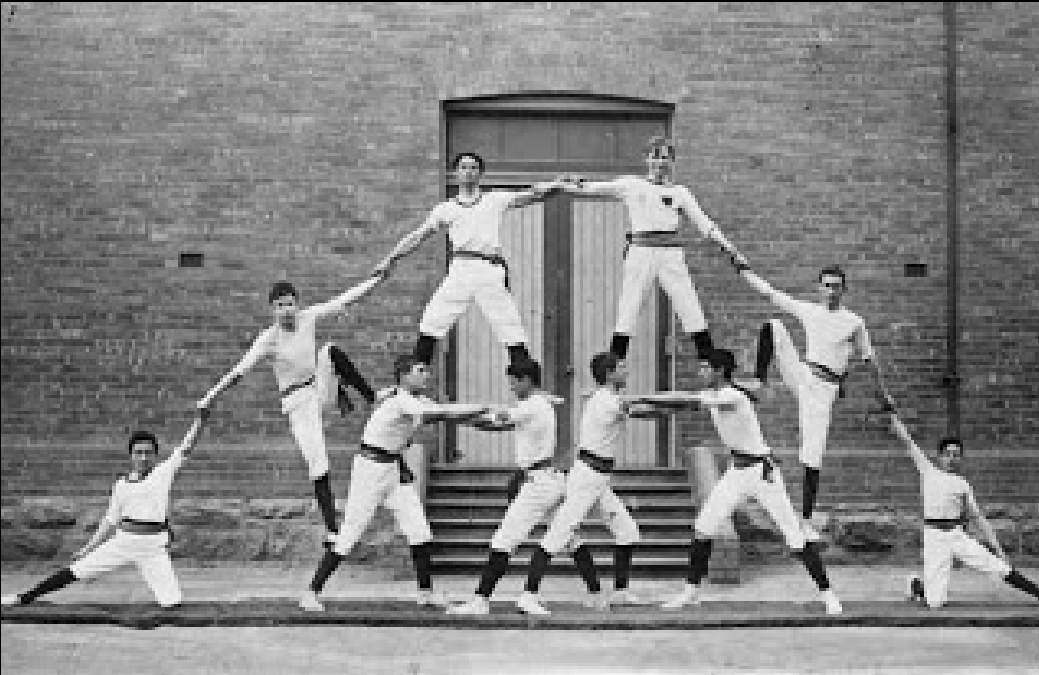
Pre- qualification

- Identify opportunities before they hit the street
- Identify and sell yourself to the best developer/contractor team
- Who leads the submission?

Quality of the Team Partners



- The ultimate team sport
- Only as good as the weakest member of the team
- The architect cannot win on their own



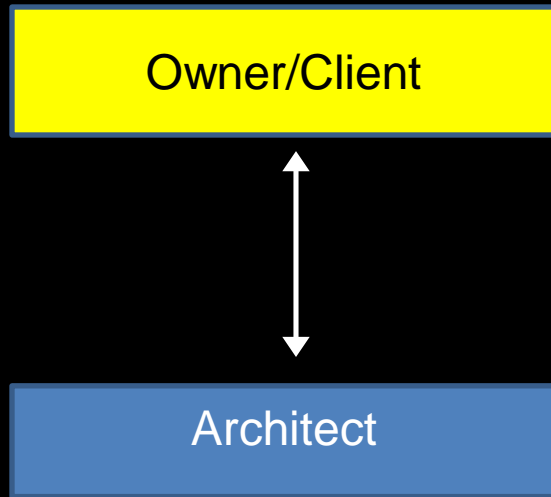
The Structure of the Team

- Varies by contractor/developer team and pursuit
- Structure changes from pursuit to execution phase
- Alignment of interests in the pursuit is challenged in post pursuit

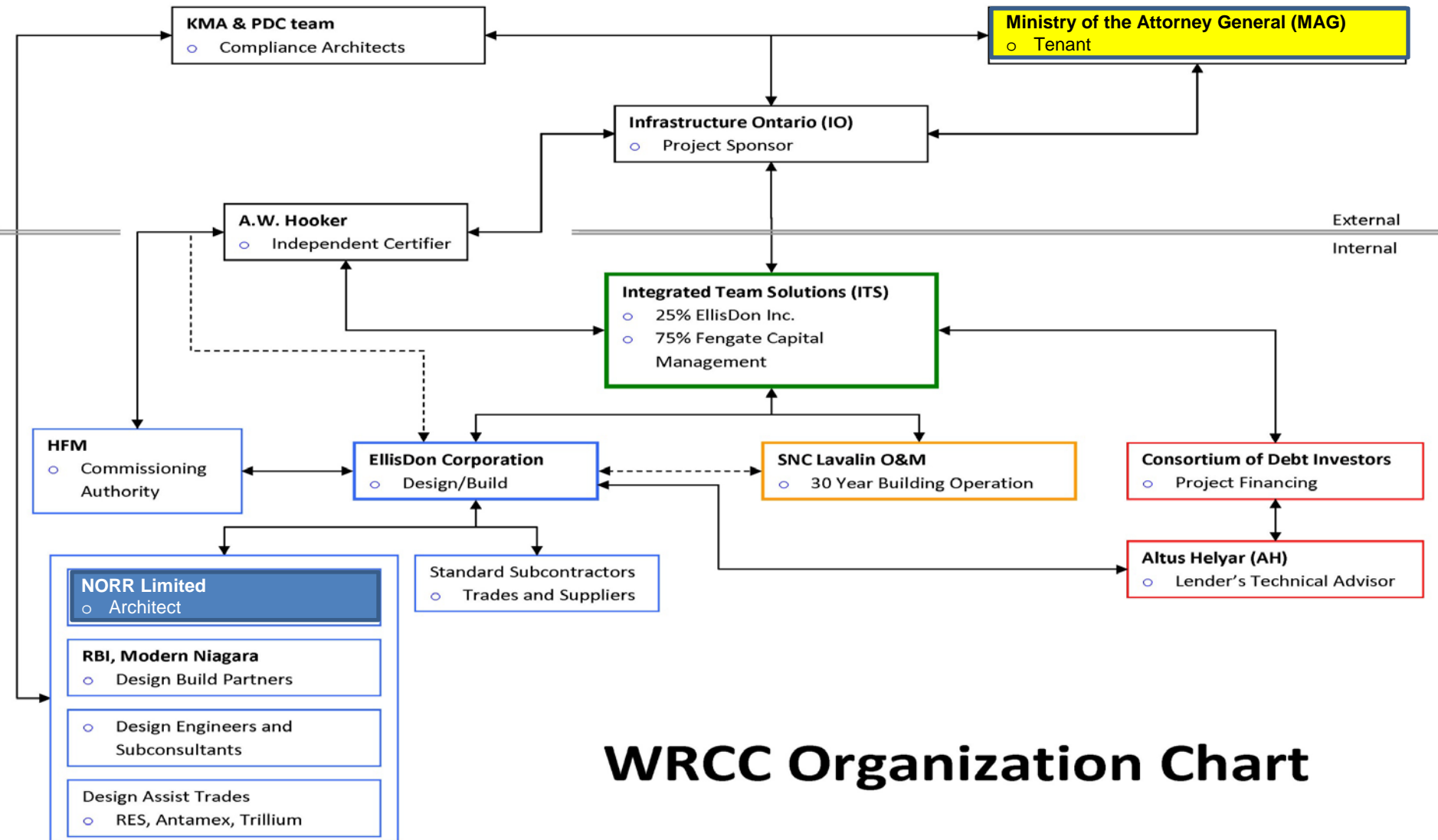
Where is the Client/User in This ?



Owner - Architect Relationship



Traditional Design - Bid –
Build relationship



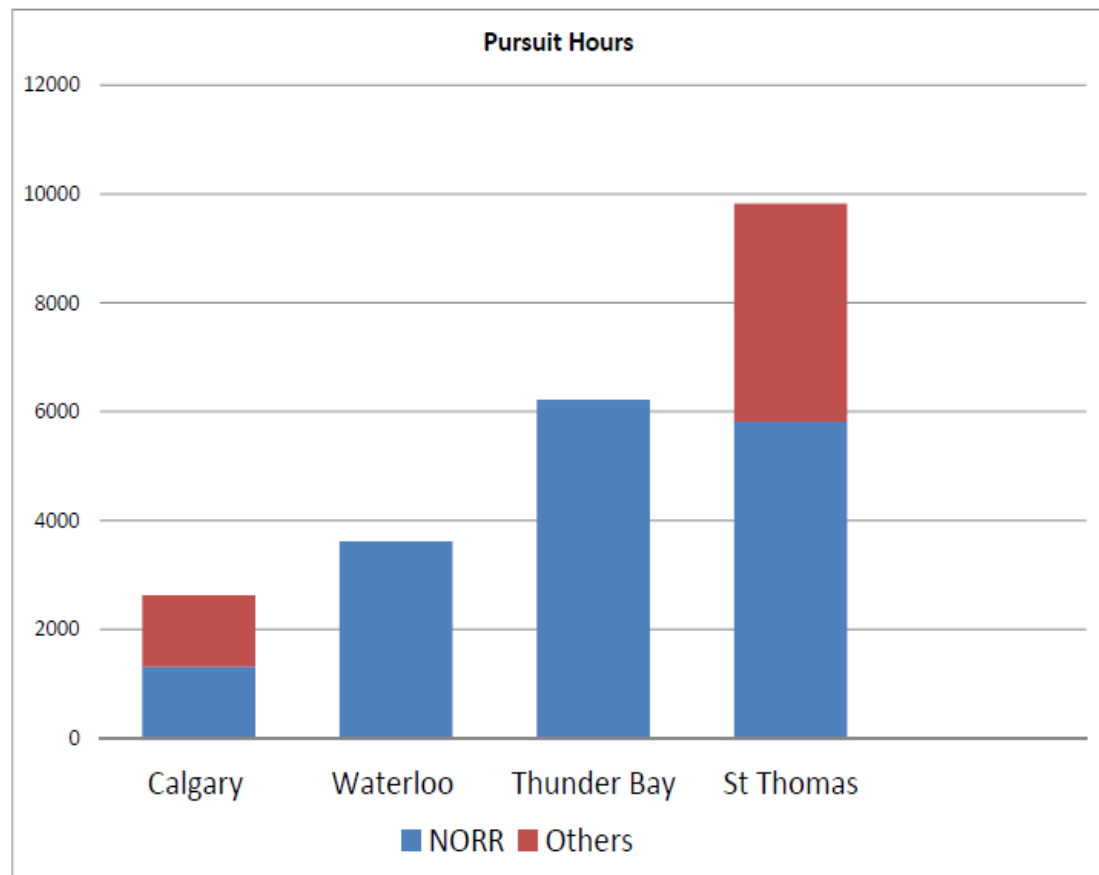
WRCC Organization Chart

Pursuit Deliverables



Pursuit Fees





Pursuit Hours

The Scoring Process



The Scoring Process

• Technical Submission			
• Project Management & Construction	50	50	110
• Design	300	300	250
• Facilities Management	250	150	140
• Financial Submission	400	500	500
• Total	1000	1000	1000

The Scoring Process

Minimum scores

70% of available points for Design (210)

70% of available points for Operations plan (150)

60% of available points for Project Management (35)

500 for perfect verses 395 for minimum performance
or in other words 90 discretionary design points

The Scoring Process

3.1 Net Present Value

The lowest NPV will be awarded the maximum points available for NPV (450 points) and the Sponsors will deduct 30 points from the maximum points available for NPV (450 points) for every percentage point by which the Proponent's NPV exceeds the lowest NPV.

Therefore 1 design point equals .0333% of NPV

Pursuit examples

P3 Courthouse Pursuits



CALGARY COURTHOUSE



DURHAM REGION COURTHOUSE



WATERLOO REGION COURTHOUSE



THUNDER BAY COURTHOUSE



ST THOMAS COURTHOUSE

Calgary Courts Centre

Lessons Learned



- NORR Associate Architect
- Kasian Architecture Interior Design & Planning Inc. Architect of Record
- Carlos Ott Design Consultant
- Spillis Candela DMJM Courthouse Consultant
- CANA Contractor
- GWL
- Pursuit 2003
- Completion 2007
- Gross area 1,000,000 s.f.
- 73 Courtrooms
- 13,700 sf per courtroom
- Total Cost \$280,000,000
- \$3,835,000 Cost per courtroom

Calgary Courts Centre

Lessons Learned

- First P-3 Courthouse project in Canada
- Complex and multi-headed pursuit team assembled years in advance
- Combination of local and international experts reflecting the need for both skill sets
- Involved direct and relatively informal meetings with the judges unlike more formal and controlled process that has evolved in more recent pursuits
- Operating cost factors drove decisions towards things like triple glazing
- Was not fully executed changed to Design Build after completion of pursuit phase

Calgary Courts Centre

Lessons Learned



Calgary Courts Centre

Lessons Learned



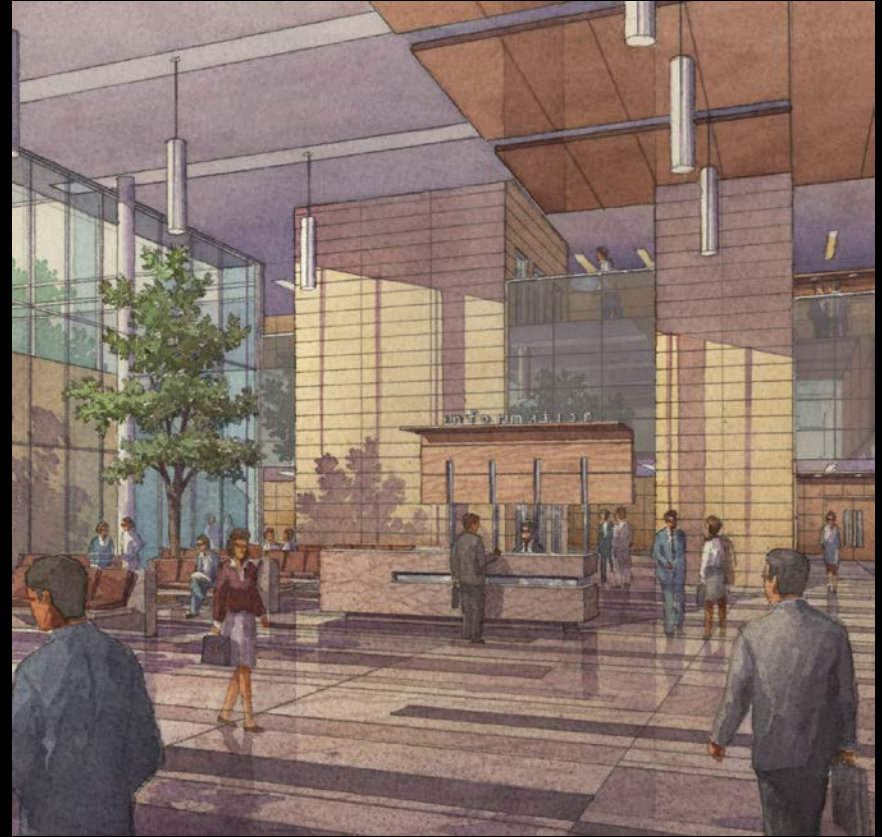
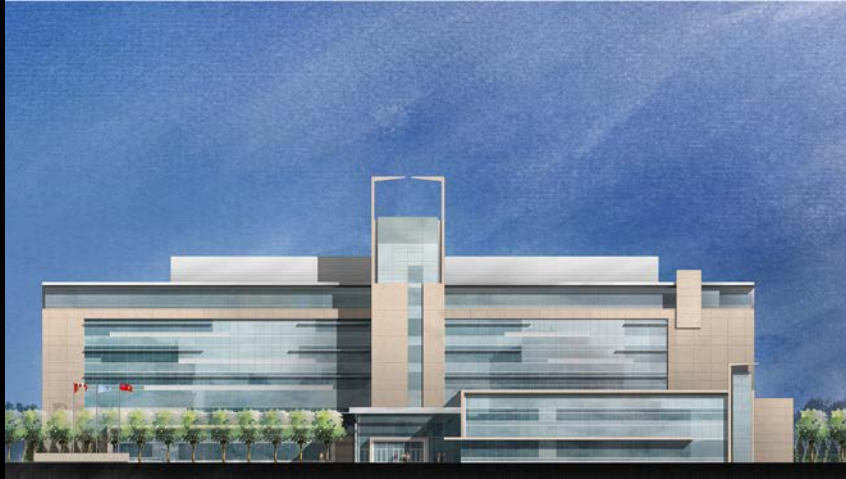
Durham Region Consolidate Courthouse

We Lost



Durham Region Consolidate Courthouse

We Lost



Durham Region Consolidate Courthouse

We Lost

- Low construction cost
- 2nd place in Design
- Financing shortfall
- 3rd Place operations

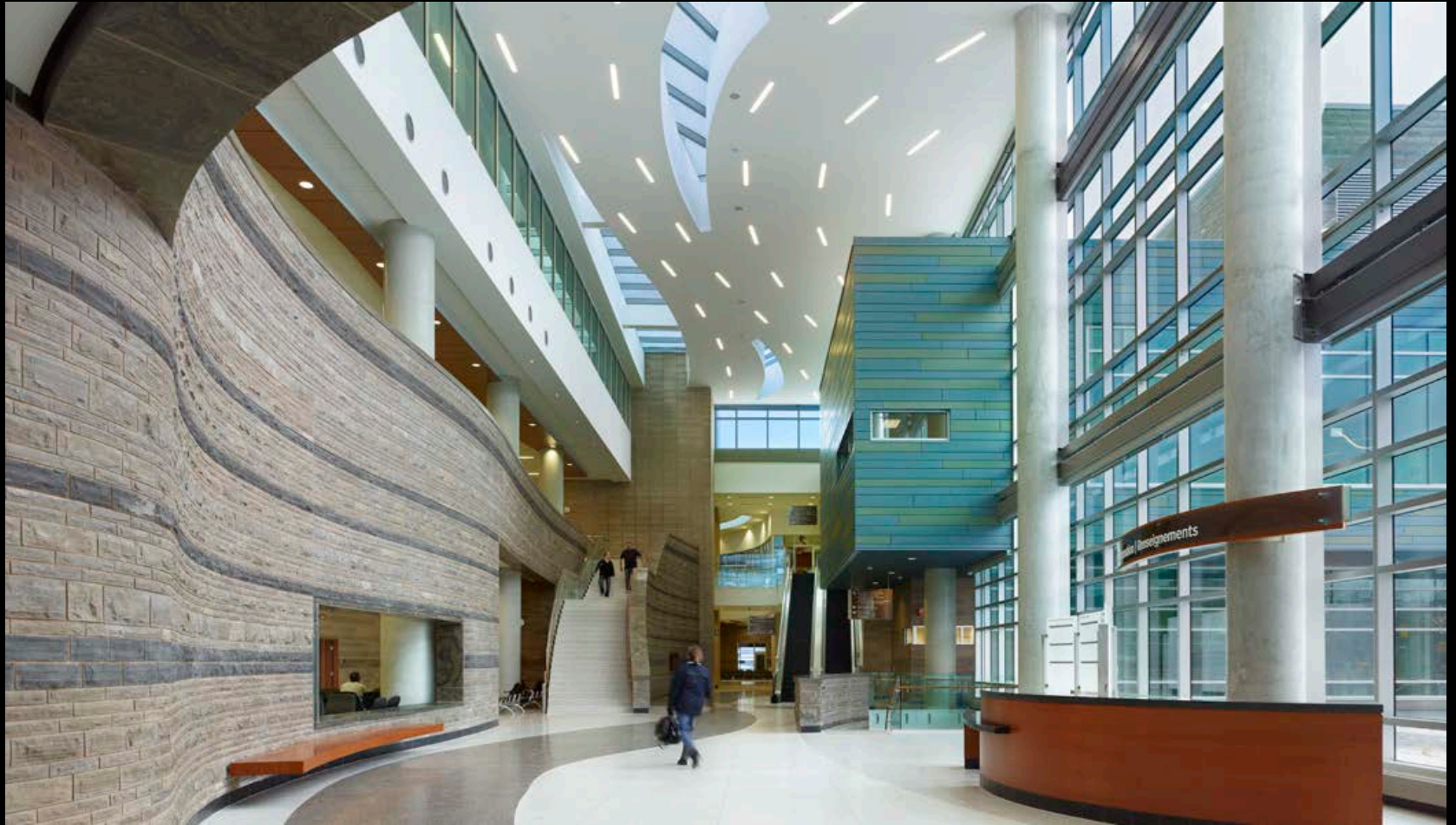
Waterloo Region Courthouse

We Won



Waterloo Region Courthouse

We Won



Waterloo Region Courthouse

We Won

- Sweet spot between design, cost, operations and finance
- Design revisions in negotiations phase

Thunder Bay Courthouse

We Lost



Thunder Bay Courthouse

We Lost



Thunder Bay Courthouse

We Lost

- 2nd place in design
- 2nd place in cost
- Aboriginal content
- New compliance team, new compliance documents
- Different approach to design excellence

St. Thomas Courthouse

We Won



St. Thomas Courthouse

We Won



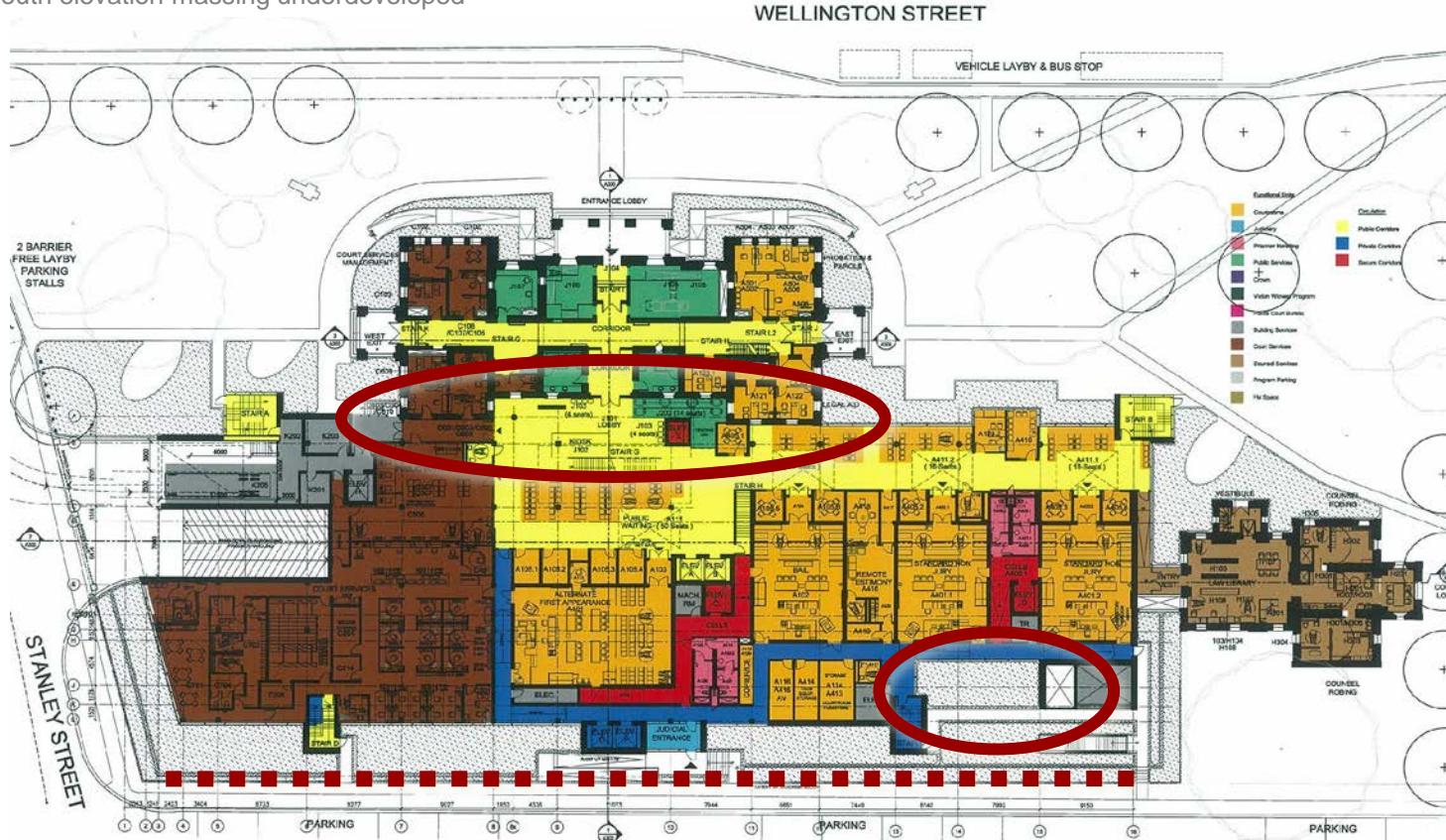
St. Thomas Courthouse

We Won

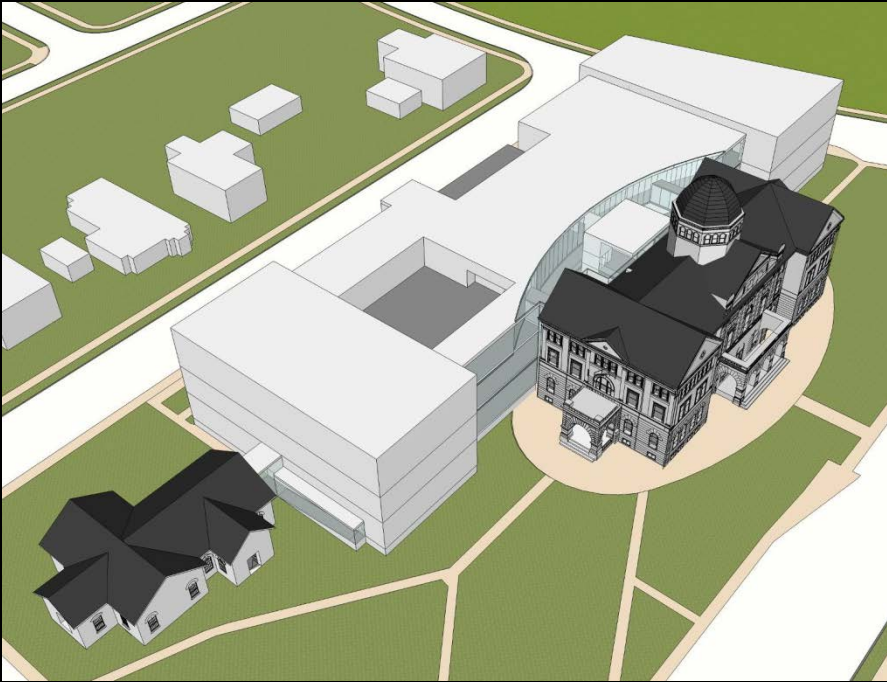
- First P-3 involving an existing heritage context
- Exemplar design
- Need to achieve a site plan agreement with the municipality on tight site
- Challenge of a non compliant exemplar design

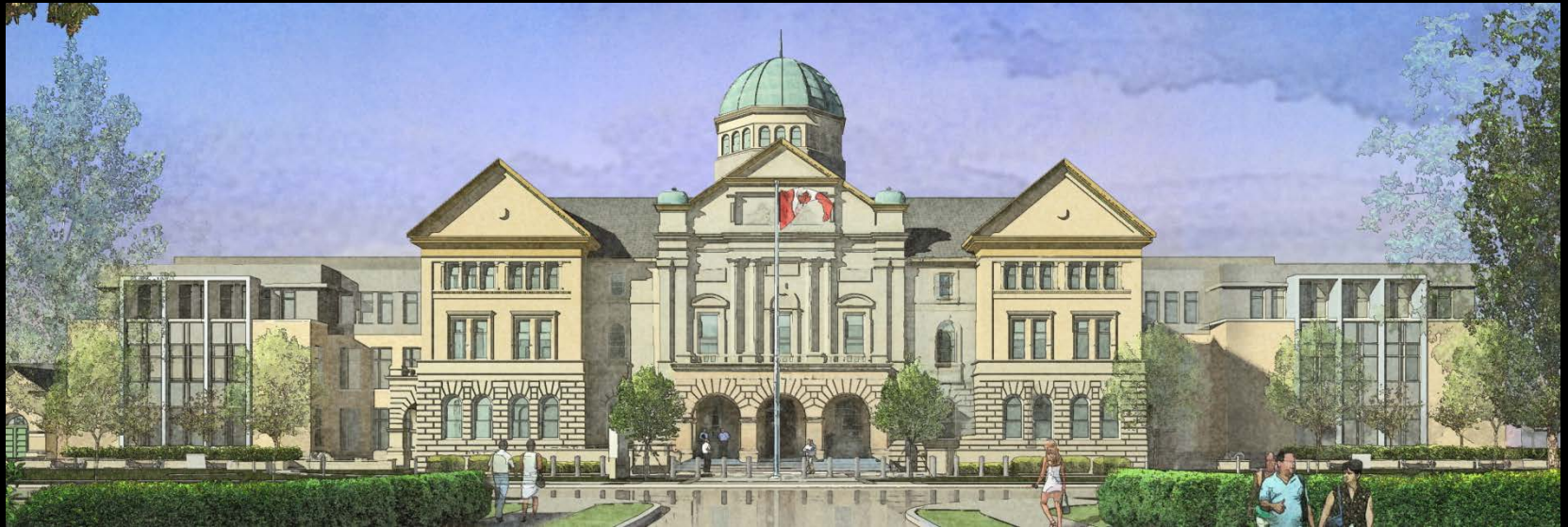
Illustrative, exemplar or blank slate

- Illustrative, exemplar or blank slate
St. Thomas Courthouse



Illustrative, exemplar or blank slate
St. Thomas Courthouse





Ontario Provincial Police Modernization

Other P3 Experience



South West Detention Other P3 Experience



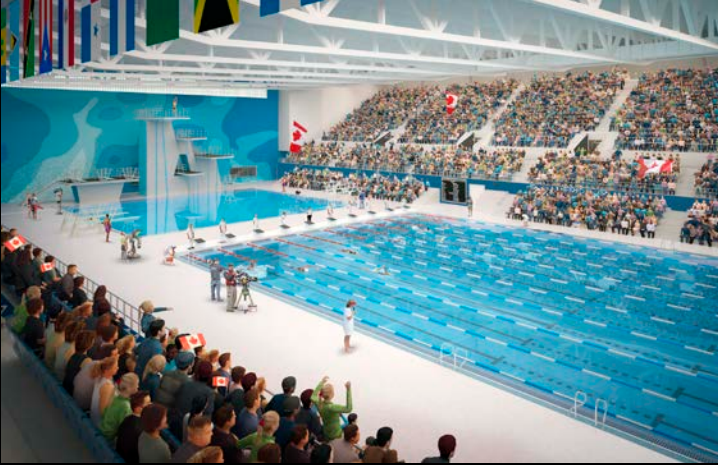
Iqaluit Airport

Other P3 Experience



Pan Am Aquatics Centre

Other P3 Experience



Liquidated Damages



Staff Burn Out



Why is it so difficult



Post Pursuit

Post Pursuit

Post Pursuit

Post Pursuit

Post Pursuit

Post Pursuit

Post Pursuit

Post Pursuit

Post Pursuit

Post Pursuit

Post Pursuit

Introduction:

The new P3 Compliance Arena





Introduction:

The new P3 Compliance Arena

- The new Contractor/Architect relationship
- The new Client/Owner relationship
- Design Excellence and Imperfect Standards
- The transition from pursuit to construction documents
- The challenge of quality control in a P3 environment

The new Contractor/Architect relationship



- Focus shift from GFA reduction to schedule risk
- Built-in drafting service
- Construction site representation
- Preferred construction methods

The new Client/Architect Relationship



- Loss of direct contact with the end user/owner
- User/owner represented by compliance architects (PDC)
- Puts and Takes List
- The paper trail importance

Design Excellence & Imperfect Standards



Design Excellence & Imperfect Standards



- Mandating Design Excellence
- The Courtroom Evolution
- Security Measures
- STCC Partition Design
- PSOS versus Local requirements



Design Excellence & Imperfect Standards

2.2 Waterloo Region Consolidated Courthouse Design Principles

The defining principles are intended to convey to proponents the significance that excellence in design has for the Ministry of Energy and Infrastructure, the Ministry of the Attorney General, Infrastructure Ontario, and the host community - the City of Kitchener.

Good courthouse design is an essential component of a fair, accessible, efficient and well-managed system of justice. Courthouse design will reflect excellence in design in keeping with the importance of the functions within.

The following principles will govern the design of the Waterloo Region Consolidated Courthouse:

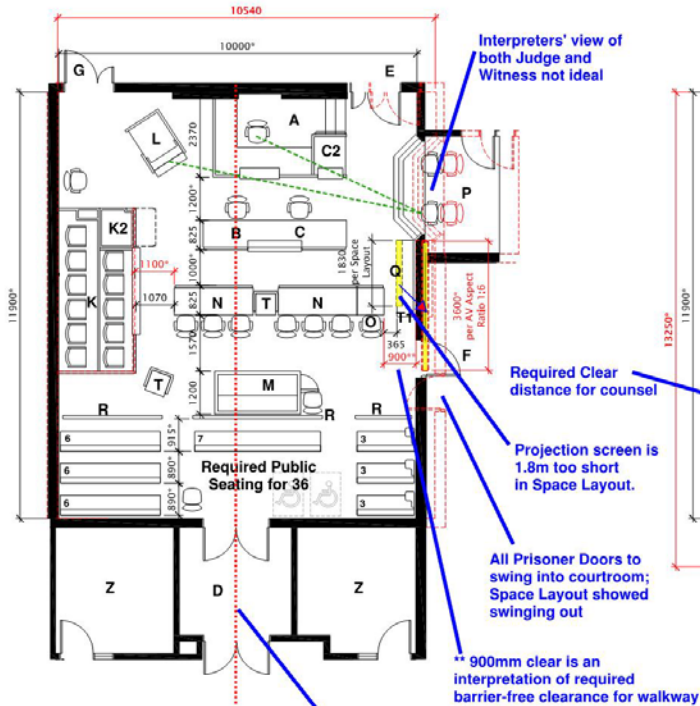
The Courtroom Evolution



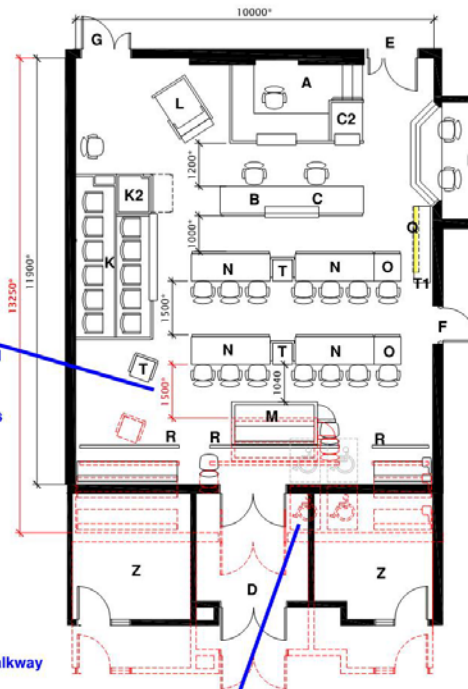
- Ontario Building Code (OBC)
- Ontario Realty Corporation (ORC)
- Facility Accessibility Design Standards (FADS)
- Province of Ontario Architectural Design Standards for Court Houses (AODS)
- Crime Prevention Through Environmental Design (CPTED)

The Courtroom Evolution

"Day 1" Standard Courtroom Layout with Simultaneous Interpretation Booth



Alternate Standard Courtroom Layout with Additional Row of Counsel Tables



LEGEND

- A Judicial Dias
- B Court Clerk/ Registrat Desk
- C Court Reporter Desk
- D Courtroom Entry Vestibule (Doors to be centred on Dias)
- E Judge's Entry
- F Prisoner Entry
- G Jury/Staff Entry
- K Jury Box
- K2 Removable Chair: BF Juror
- L Witness Box (Portable)
- M Prisoner's Box
- N Counsel Table
- O Counsel Table Extension Piece
- P Simultaneous Interpretation Booth
- Q Motorized Projection Screen (Ceiling)
- R Public Rail (Removable)
- T Lectern
- T1 Evidence Presentation Station
- Z Interview Room

All dimensions with * are required by Space Layout, written text of Design Brief, or Barrier-free Standard

Jury Courtrooms create non-symmetrical courtroom layouts if Courtroom Doors centred on Dias where symmetry was advocated

Security Measures: Blast Design (exterior wall, structural redundancy)



Security Measures: Cell Wall Design



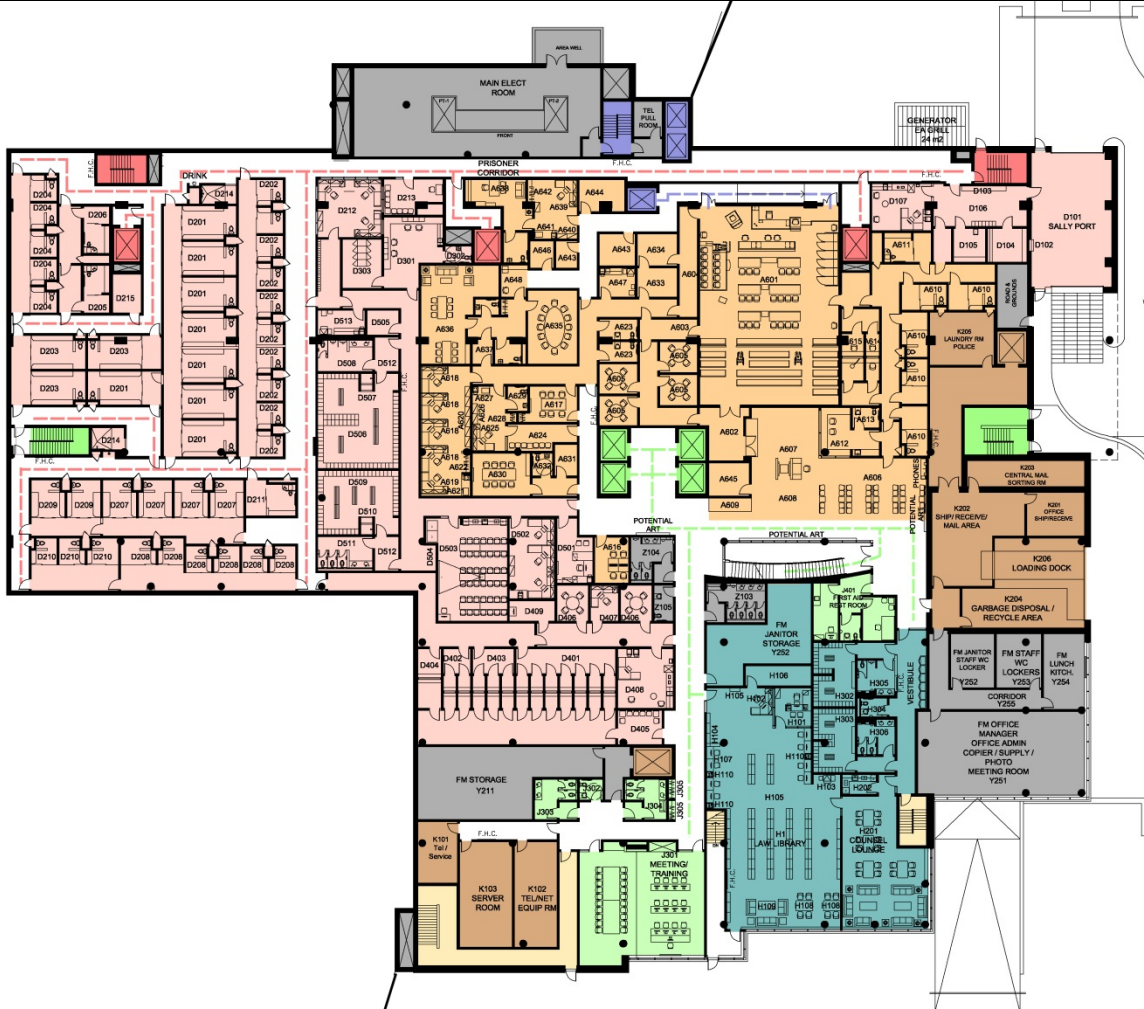
Secure Measures: Poor Acoustics



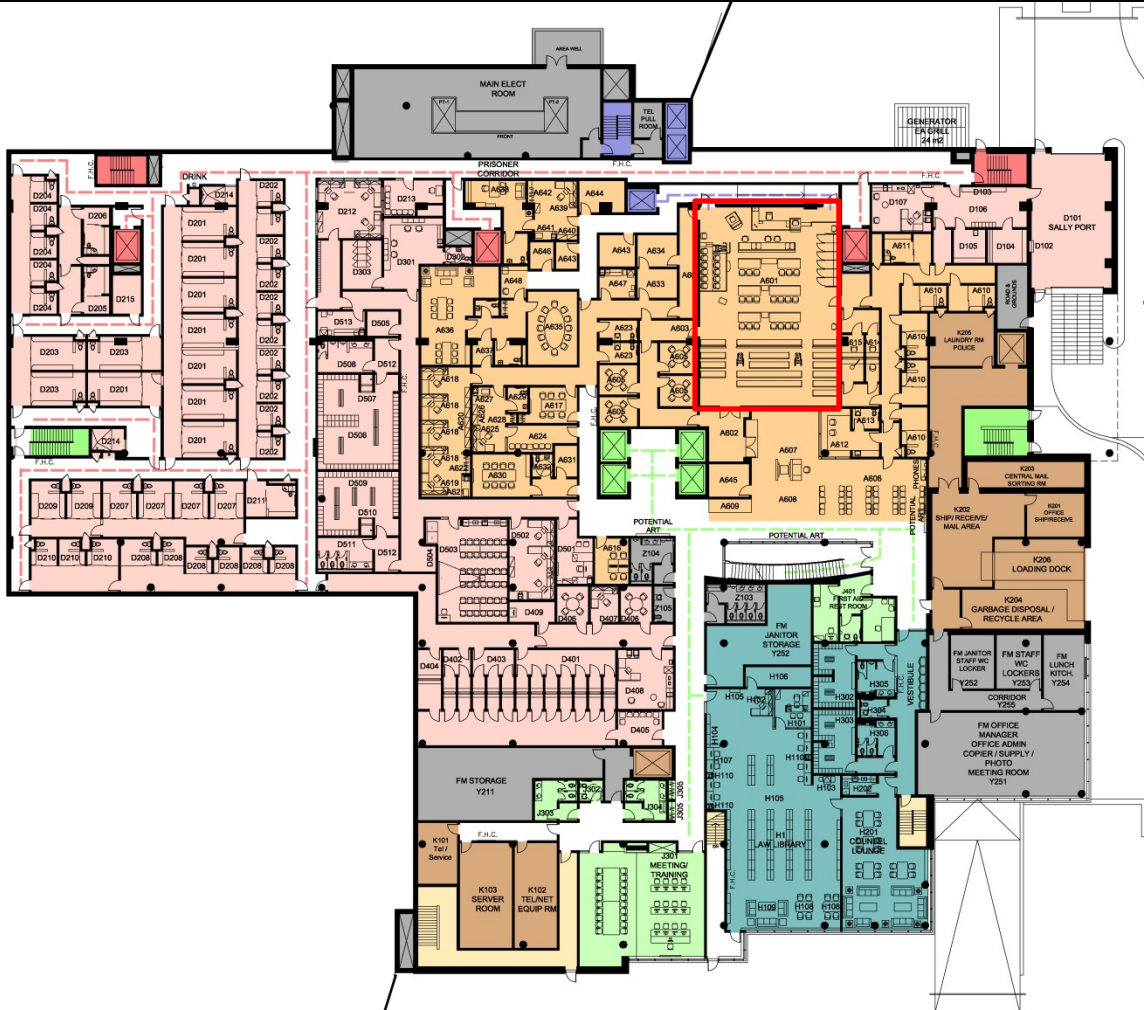
STCC ratings: Wall vs Room & Door ratings



PSOS versus Local requirements: Adjacencies



PSOS versus Local requirements: Adjacencies



PSOS versus Local requirements: Privacy versus Safety



PSOS versus Local requirements: Appropriate Scaling of Public Services



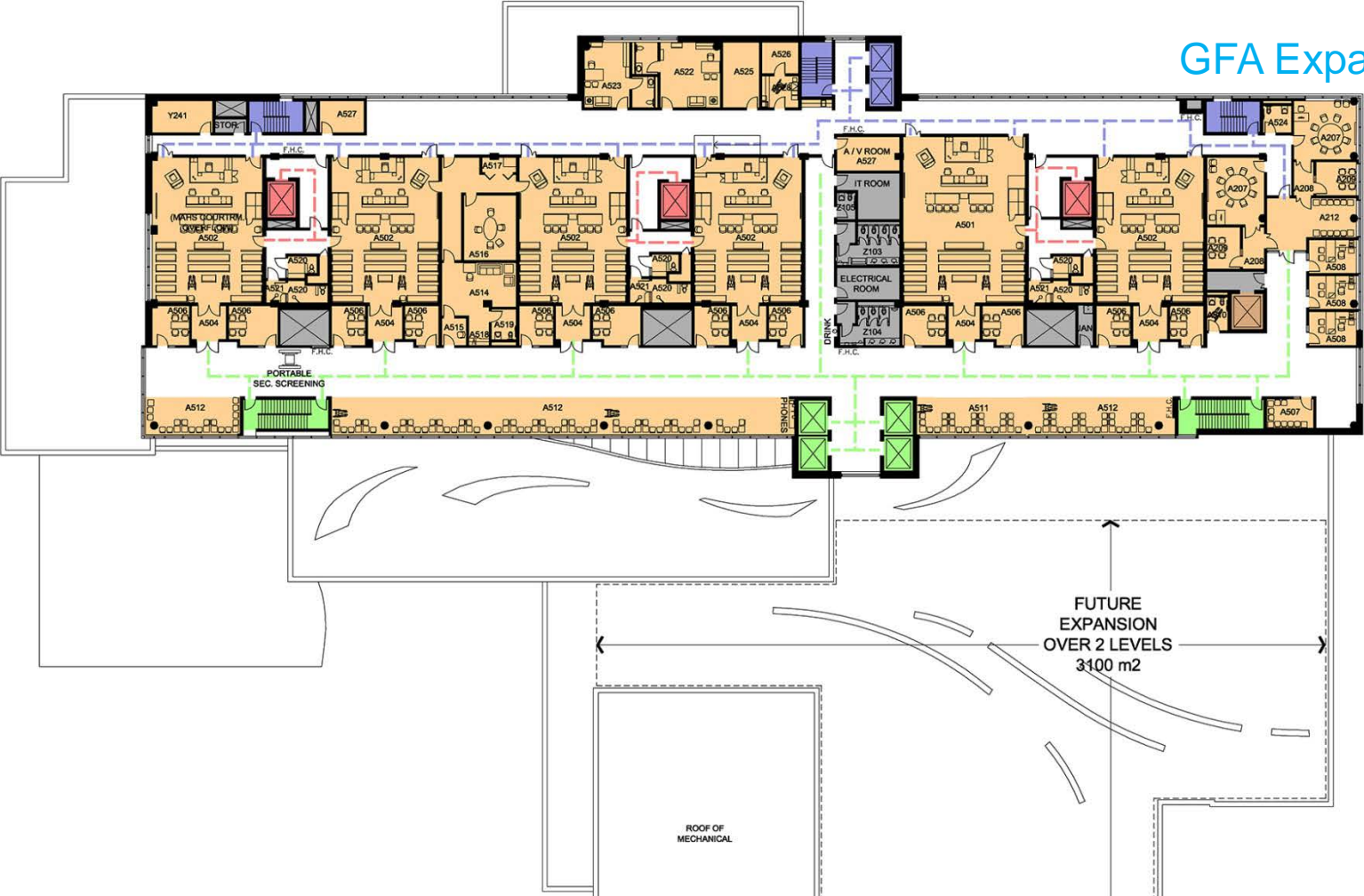
The transition from pursuit to Construction Documents

- GFA Expansion
- Proper Documentation from Existing Site Conditions



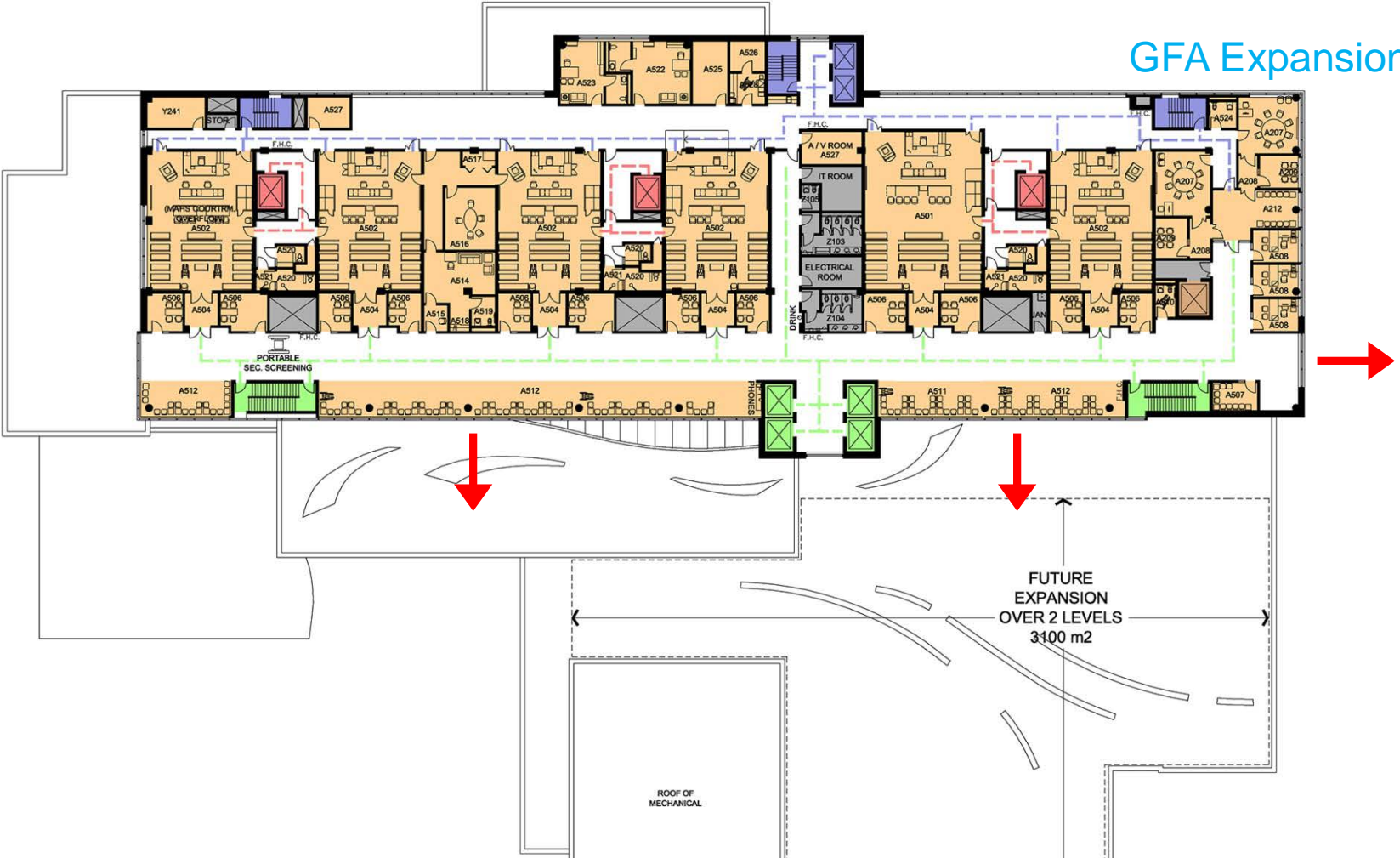
The Transition from Pursuit to Construction Documents:

GFA Expansion



The Transition from Pursuit to Construction Documents:

GFA Expansion



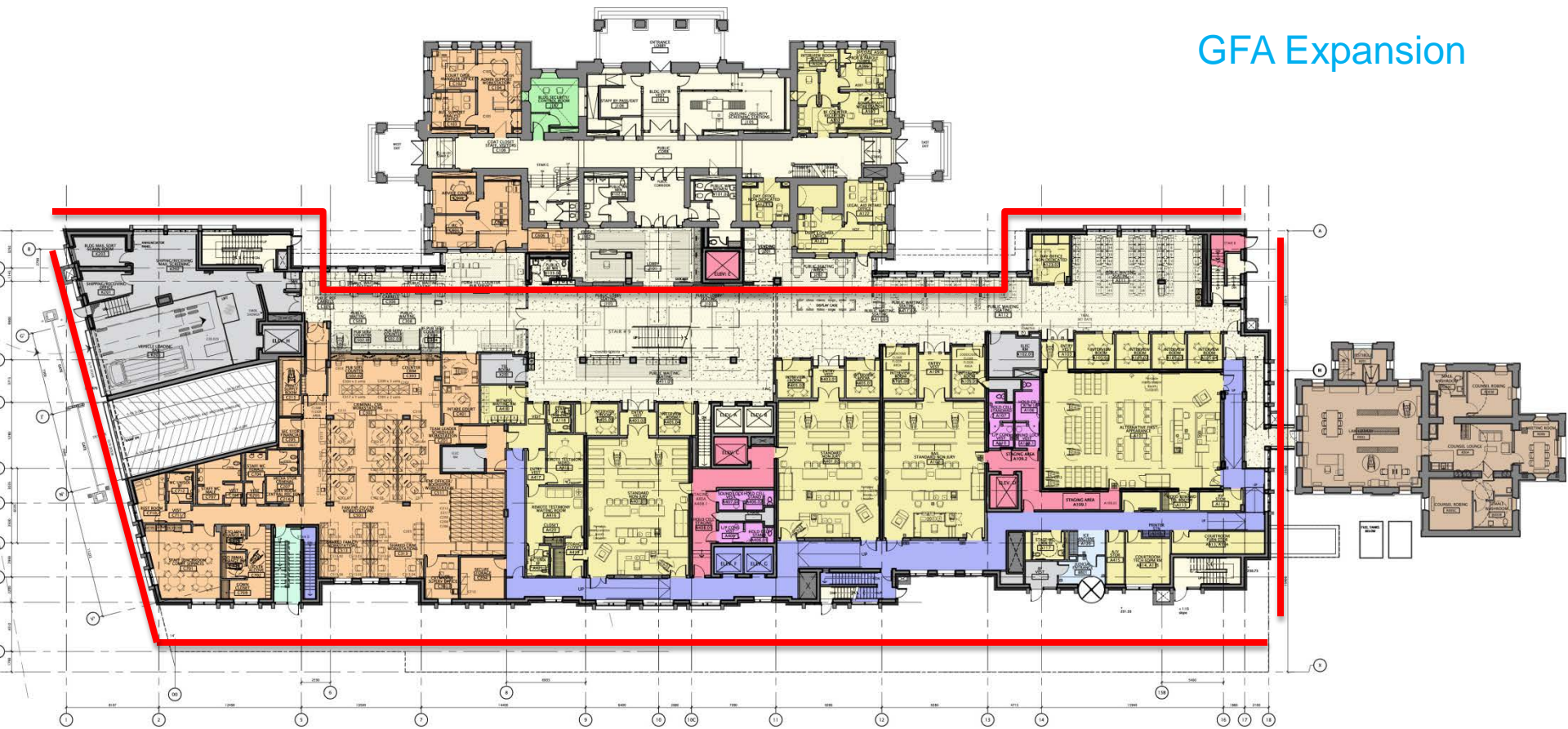
The Transition from Pursuit to Construction Documents:

GFA Expansion



The Transition from Pursuit to Construction Documents:

GFA Expansion



The transition from pursuit to Construction Documents: Proper Site Documentation



The Challenge of Maintaining Quality in the P3 Environment



The Challenge of Maintaining Quality in the P3 Environment



- Sub-Consultant Control
- Fast Track Construction
- The Importance of Mock-ups

Sub-Consultants Control:



Fast-Track Construction:



Mock-Ups:



Mock-Ups:





Discussion / **Questions**

Thank You