URBAN DESIGN PANEL MINUTES

DATE: Aug 8, 2018
TIME: 4:00 pm
PLACE: Town Hall Meeting Room, City Hall

PRESENT: MEMBERS OF THE URBAN DESIGN PANEL:
Helen Besharat
Yinjin Wen
Muneesh Sharma
Colette Parsons
Jim Huffman
Derek Neale
Leslie Shieh
Grant Newfield

REGRETS: Amela Brudar
Marie-France Venneri
Susan Ockwell

RECORDING SECRETARY: K. Cermeno

ITEMS REVIEWED AT THIS MEETING

1. 878-898 W Broadway
2. 1261 Hornby Street - Burrard Gateway Tower C
3. 58 W Hastings Street
BUSINESS MEETING
Chair Helen Avini-Besharat, called the meeting to order at 4:15 p.m. and noted the presence of a quorum. A formal welcome was read by the Chair, “We acknowledge that we are on the unceded homelands of the Musqueum, Squamish, and Tsleil-Waututh nations and we give thanks for their generosity and hospitality on these lands.

1. Address: 878-898 W Broadway
   Permit No. RZ-2018-00018
   Description: To develop the site for a mixed-use development comprising of two hotel buildings (13-storey and 11-storey) with commercial uses at grade and 438 hotel units above (258 short-term and 180 long-term stay); all over six levels of underground parking with 485 vehicular stalls, 35 bicycle spaces, and on-site loading. The proposed floor space ratio (FSR) is 8.38 and the maximum building height is 43m (142 ft). This application is being considered under the Metro Core Jobs and Economy Land Use Plan.

   Zoning: C-3A to CD-1
   Application Status: Rezoning Application
   Review: First
   Architect: Arno Matis Architecture
   Delegation: Chris Mramor, Landscape Architect, PFS Studio
   Daniel Funa, Bunt K Associates
   Staff: Sarah Crowley & Karen Campbell

EVALUATION: Support with Recommendations

• Introduction:
Development Planner, Karen Campbell, described the project base-zone as C3-A and the project sub-area as Fairview Slopes Area within the C3-A Design Guidelines. The Fairview Slopes area of C3-A anticipates the following urban design objectives for new developments: a) maximization of sun penetration and views to the North, b) limiting shadowing on the North sidewalk of Broadway. City Staff ask that panel members keep these objectives in mind in consideration of this proposal.

The Proposal is for two hotel towers with a 3 storey podium. The taller east tower is 13 storeys high and the wider tower on the west is 11 storeys. There is proposed ground-floor retail fronting along Broadway and restaurants along the North elevation at Level 2. Due to the sloping nature of the site, parking access is from Level 2 along the Lane (centre of the site). There is a proposed hotel drop-off from Laurel (on the west) that connects to the Lane.

The hotel program proposes traditional hotel rooms for short stays in the west building (along Laurel) and hotel rooms for long-term stays (include kitchenettes) in the east building. Amenity space is proposed on L3, L4 as well as on the roof.

The project has a proposed FSR OF 8.38; C3-A anticipates a maximum of 3.0 FSR (in C3-A density is earned if, according to the Director of Planning, the height/massing and bulk are appropriate for the context, and if an ample amount of open space is provided). The proposed height is 142ft for the taller east building, and approximately 115ft for the west building; this compares to the maximum of 120ft maximum height anticipated in this area of C3-A. The height is also constrained by flight path for the VGH helicopter.

The west (11 storey) shorter building is 150ft long & the 13 storey building ranges from 70ft in length along Broadway to 90ft along the lane. The tower widths proposed are longer than anticipated in C3-A Fairview slopes region which proposes slimmer towers that are widely spaced to help maximize sun penetration.
The 3 storey street wall height (podium) is also taller than anticipated in C3-A (which anticipates a maximum 30ft two storey podium) to limit shadowing on the North Sidewalk of Broadway. The proposed podium height is approximately 33ft along Laurel and increases too approximately 41ft on the east.

Separation between the towers varies from approximately 50ft at the narrowest point with an average separation of approximately 60ft. There is no minimum tower separation listed in the C3-A base zone for non-residential use, however, as mentioned above, the base zone does limit tower width in relation to site length.

Advice from the Panel on this application is sought on the following:

1. Do you support the form of development (density, overall height and massing)?
2. Do you support the tower widths and street wall height as proposed?
3. Do you believe the proposed tower separation is adequate to accommodate livability requirements of the long-term stay units.
4. Please comment on the quality of the public open space, specifically along Laurel.

The planning team then took questions from the panel.

• Applicant’s Introductory Comments:
The hotel that exists on the current site serves the VGH cliente, the new proposal is to provide an expanded hotel service to the VGH.

The entire thinking around hotel is providing accommodation that would benefit the hospital patient or out of town family member. The actual room count was generated carefully working with hotel operators. Number of rooms presented has to do with creating a viable hotel without the 5 star price ranges.

The room count constraint with the height restraint became more challenging when discovering the existing helicopter equipment is not as modern which added to the height limit.

The reason why one building is higher than the other because under the flight path study there is a trajectory that needs to be obtained, therefore the study allowed for slightly greater height in one zone for taking off of the heliport.

Tried to create two tower mid-rise building blocks on top of a podium which conforms with the 30ft C-3A guidelines. In terms of building separation, there are some newer projects along Broadway that have been built along the 16 ft. tightness. There is a 20 foot set back on Laurel that is required by engineering to increase the sidewalk width.

Presently the Park inn has parking access facing Broadway; it is a hostile street front with a driveway entrance crossing over Broadway. This will all be pushed back up onto the lane, this will allow for a new replaced street edge. The street edge will be a combination of a lower lobby and office space which ties up to an upper lobby and commercial retail frontage.

Level 3 includes a café terrace, well supported by interior programming, a gym and media room. There is an outdoor dining space and urban gardens. Level 3 fronts onto west Broadway.
Level 4 includes a garden edge on the east side. The hotel units and patios front the gardens. The idea is to create a wellness/nature path to contribute to the theme of health and wellness. Additionally there is a children’s play area and scented gardens/small forest. The hotel units off on the east side have deep patios. The rooftop also provides a Wellness path.

Off of Broadway there will be new street trees right up onto the CRU units. On the ground floor some planting along the edge acts as a buffer. There is a bike share, left a bit of buffer space on the lane to organize the circulation.

Trying to achieve a well and Leed certification which layers on top of the sustainability standards. The forward thinking is on wellness and health, contributes to the additional outdoor amenity spaces and cleaner water and air.

Sustainability going with option B which is energy efficient building. It is a simple skin with a mix of sun shading, panel spandrels, and vision glass. The idea is to keep the skin simple and express a sun shading element on the façade.

The applicant team then took questions from the panel.

- **Panel’s Consensus on Key Aspects Needing Improvement:**
  Having reviewed the project it was moved by Mr. Sharma and seconded by Mr. Jerke and was the decision of the Urban Design Panel:

  THAT the Panel SUPPORT the project with the following recommendations to be reviewed by City Staff:

  - Look at enhancing the massing on all facades, especially on the east façade to deal with major privacy issues;
  - Review sun penetration and privacy of the gap on the courtyard;
  - Review major livability issues on the east façade;
  - Increase the quality of public open space, major improvements required for Laurel, Broadway and the lane;
  - Explore the potential of two different buildings.

- **Related Commentary:**
  In general the concept was well received with short term and long stay close to Vancouver General Hospital. The concept of the project was felt to be much needed and under-utilized.

  The parti is strong, however still needs resolution to how it will respond to the sun orientation. The roof space did not have enough detail. The use of cedar on the wellness building for revitalization was much appreciated; however the design detail is still lacking, and appears more of an old hotel.

  There were mixed comments about proposed density amongst the panel, some members were comfortable and others did not see justification at present time to increase from a 3 to 8 FSR. A panelist noted the buildings were overshadowing Broadway.

  The panel was not so much concerned about the height but with the enhancement of the massing and how it will affect the density. Especially on the East façade there is already privacy issues and on Laurel St and Broadway, it is rather relentless in terms of massing along the frontage and above it. Broadway is an un-walkable stretch. Laurel is presently aggressive, struggling with the two curve cuts down on the street. It could benefit from some better articulation; a panelist felt this would improve the livability especially on the east façade. Panelists noted the east façade major privacy issues, most probably needs to be a solid wall. Moving forward more detail analysis is needed.
There was a suggestion to angle to the north side wall to face north.

A panelist noted their support for the major circulation on the lane however should have more of a presence on Broadway. Additionally, would be nice to see if there is a way to do it so crossings aren't on Laurel St.

More design development was needed on the long term space. It is challenging to take care of someone when you feel you are in a glass box, if designing a glass box, should look at different orientations carefully especially with the Sustainability. Look for a feature that can contribute to the façade shading and good ventilation (i.e. Juliet balconies).

There were some comments about the potentiality of two different buildings. The two different buildings should look different as it is meant for different clientele. Presently the two buildings are similar.

The tower separation is less about the distance but more about the amenities for the long term stay. Think about the courtyard for the long term amenity space if this is what will stay. Perhaps more attention to the public open space on Laurel could lead to hotel lobby on back.

The lobby on the corner should be in the middle of the building and incorporated more with the landscape. The exit stairs of one of the tower carries onto the main floor, ensure to deal with the exiting.

A panelist noted concern about sun penetration with the gaps in the courtyard. Increase the quality of the public open space, felt like it was a good start but need major improvements. Presently there are little outdoor amenities for the public. Project needs to have better contribution to the public there are many missed opportunities to provide to the public, especially all along the Broadway and Laurel frontage.

The building will benefit from an elegant weather protection at street level and it would be good to get the public engaged in the base of the building. A panelist noted it was unfortunate the City was requiring having a bike share.

- **Applicant’s Response:** The applicant team thanked the panel for their comments.
2. Address: 1261 Hornby Street - Burrard Gateway Tower C  
Permit No. DP-2018-00485  
Description: To develop a 35-storey mixed-use building consisting of retail at grade, office, and 233 dwelling units (206 market strata and 27 market rental); all over nine levels of underground parking. The proposed total floor area is 21,140 sq. m (227,559 sq. ft.) and the building height is approximately 112.17 m (368 ft.).  
Zoning: CD-1  
Application Status: Complete Development Application  
Review: Fourth (First as DP)  
Architect: IBI Group  
Owner: Jon Stovell, Reliance  
Maasa Adib, Architect, IBI Group Architects  
Bryce Gauthier, Landscape Architect, EGLA  
Daniel Roberts, LEED Consultant, Kane Consultants  
Staff: Patrick O’Sullivan

EVALUATION: Support with Recommendations

- Introduction:
Development Planner, Patrick O’Sullivan, introduced the project as a DP application following a rezoning. The CD-1 (588) has two sub-areas; the first, Sub-Area A, is the tower and podium under construction and this proposal is for Sub-Area B. The size of the sub-area is 125’ x 120’.

The proposal is a 35 storey mixed-use tower with a program that includes a residential entrance and lobby on the west side at the main level, two CRU entries. The CRU is of double height. Office use is proposed on levels 3 through 5, and residential use from levels 6 to 34. 9 levels of underground parking are proposed.

The office levels also connect to the office levels in Sub-Area A to the south.

The vehicle access to the development is provided from Hornby via on-site connection that extends to the lane and accesses underground parking beneath the tower. This passage is also intended for pedestrian use to access the pedestrian mews directly west and connects through to the mews west of the lane and through to Burrard Street.

There is bike storage on Levels P1 and P2. The parking intends to connect to parking of Sub-area A. There are 2 Class A loading spaces and 2 class B loading spaces on level one at the lane.

Tower separation complies to 92 ft. to the building under construction at the narrowest 40 ft. to the interior PL to the north. The other 40 ft. for any future tower would be provided on the site to the east.

The FSR is 17.29. For the height the CD-1 sets a maximum height of 368 ft. The DP complies. Floorplate is approximately 6,600 sq. ft.

There are 6 shades of aluminum metal panel, aluminum louvres on the Hornby podium and black ceramic frit at edges of the glazing.
There is a shared outdoor space, for all the residential, located on top of the podium. Amenity access to the podium is off Level 6. There is a shared fitness area and outdoor seating areas located in the podium of the building currently under construction.

The public realm setback is 20 ft. from the Hornby St to the curb.

Advice from the Panel on this application is sought on the following:

1. Please comment on the proposal’s detailed design, particularly the architectural expression, and materiality.

2. Please comment on the interface of the design of the proposed podium and the podium of the building under construction to the south.

3. Please comment on the proposed landscape design including the landscaped outdoor amenity space on the podium and the treatment of the public realm.

The planning team then took questions from the panel.

• **Applicant’s Introductory Comments:**

The continuity concept with this project is for this building along with the surrounding two buildings, under construction, to be considered as one development and building with shared amenities and open spaces which occur on Drake St and Burrard. Though the present building is fairly tight it contributes by its surroundings and the rest of Burrard Place.

The geometry has changed to a simple prism. It is a nice and more silent foil. The geometry of the building is a clean modern glass tower; this enables to modulate what would be a repetitive system.

The office entrance is in Tower A and the whole connection from Tower A to the site is on all the podium levels. The amenities are on level 6 and the outdoor amenities are accessed from both towers and the office space.

The goal was to get to 50 percent of an opaque insulated wall. The renderings are 50 percent opaque. The idea is to take the areas where one can deploy the solids, in the bigger strips which articulate the divisions, and look at how to modulate the buildings as a series of three story volumes. There is spandrel on every three floors which is part of the dark grey aluminum, and in between there is silver and low iron glass to create a high contrast graphic project. Started to view the building as a film strip where light plays out from each unit. The building will be more about the life inside.

At each module we introduced a diagonal as well as a radius of the ceramic frit, to give the project a sense of movement. This is a building with a lot of refinement. It is a fully curtain wall project. Will be replacing glass with a metal panel and going inside the building creating a built up wall with full insulation. This will enclose the building in both a simple and efficient way.

Looked to change the way a podium supports the tower on top. We have let the podium move through, this allows to book end the project, aligning the soffits and diversifying the building.

The Public realm started with the South Downtown Vancouver guidelines. The public realm consists of a lot of uniformity and repetition. We brought in the repetition of materials and the 6 shades of greys in term of the different paving. There is a small water feature and small seating areas. As we go under the Porte Cochere planting becomes less and less effective. To create an Urban space there is a number of art, water, lighting and hardscaping to draw you through the site.
The whole internal circulation system allows tenants to interact with all the open communal space systems. In addition there are private decks and a green roof primarily meant for urban agriculture.

The focus is a passive response of 50 percent window too wall ratio. Added horizontal and vertical elements due to a massive shading that is present adjacent to the building. This building will perform well in regards to the Teddy number.

The applicant team then took questions from the panel.

- **Panel’s Consensus on Key Aspects Needing Improvement:**
  Having reviewed the project it was moved by Ms. Parsons and seconded by Mr. Neale and was the decision of the Urban Design Panel:

  THAT the Panel **SUPPORT** the project with the following recommendations to be reviewed by City Staff:

  - Improve the retail façade along Hornby Street, contributing to street culture including design of pedestrian canopy and main entrance canopy;
  - Provide additional entries and potential for seating of the CRU space along the Hornby Street frontage;
  - Design development needed for detailed study of materials of the podium interface to the podium of sub-area A;
  - Project will benefit from simplification;
  - Improve clarity area of the shared nature of the shared rooftop for use of residents.

- **Related Commentary:**
  There was general support from all the panel members. Generally the architectural design was found to be in the right direction, unique, and an improvement from the previous submission at the rezoning stage.

  Comments in regards to the architectural design included, the subtle color shift is nice. The frit on the curve on the window will stand out and go a long way. A member noted the proportion of spandrel panel to glazing was appropriate and did not overtake the other buildings. The materials and composition were generally felt to work well. The lane elevation of rigid boxes at the podium level with simple but strong design language was supported.

  A panel member noted the podium to the interface and other buildings appear as completely different developments. There are different horizontals, different glazing conditions, different setbacks and balconies crashing into each other. More thought should have gone into how the building comes together with the base of the other buildings, especially on the Hornby street side and lane side. Another panel member noted the materials and detailing at the interface between the two podia on the Hornby frontage needs more design study, noting that it’s a necessity to connect the two buildings visually. However some panel members agreed that the proposed tower meets the ground with distinction and that the difference in podium expression was acceptable.

  A panel member noted as long as the interface between the patios and residential towers and the side of the podium piece in the middle is dealt with properly, and not having any conflicts with residential windows and residents looking in to the concrete wall, should be fine.

  There was overall concern with the very simple retail façade along Hornby St. Not a very friendly element and could use more texture to take advantage if the sunny side and broad sidewalk. The detailing of the glazing at street level requires attention to make it functional and interesting enough for people to walk by.
There was a suggestion to move around the bike stalls to create more outdoor seating for cafes seating.

A panel member noted that the outdoor amenity space on the 6th floor, should be made to appear more accessible.

Acknowledge the landscape presents a challenge with the limit amount of ground plane, however there are concerns at grade and would expect it to be lusher. A member found the landscape with the pavers very walkable.

Additional comments include encourage implementing a dedicated bike elevator as Vancouver is becoming a bike community. One panel member expressed an interest in more beautiful and better designed canopies in the city of Vancouver, and that the design of the current canopies should be taken to the next level by making it user friendly.

- **Applicant’s Response:** The applicant team thanked the panel for their comments.
EVALUATION: Support with Recommendations

- **Introduction:**
  Development Planner Patrick Chan began with the project’s history to refresh and update the panel. In particular, how the project has been approved at Council in January 2018, and this current UDP session is to assess how the project has responded to the previous UDP recommendations.

  Chan then reintroduced the site context and the proposal as low-income housing with clinical-office use. He followed with a review of the relevant policies used to guide and evaluate this project, especially the Downtown Eastside Plan which calls for inclusion of vulnerable citizens, and the Victory Square Policy Plan and Guidelines which calls for new buildings to respect the area’s scale, rhythm and materiality. The panel was then informed that in April 2018, after the rezoning approval, the Housing Policy Group organised Design Focus Sessions with local Downtown Eastside and Chinatown residents to get input on how the building can sensitively incorporate indigenous and Chinese elements.

  With the introduction cleared, Chan described how the building responded to the Victory Square Policy Plan and Guidelines as well as the previous UDP session’s recommendations. Responding to previous UDP recommendations, this iteration’s Hastings elevation is divided into five distinct sections to appear as a series of different narrower buildings. This was achieved by push-and-pulling the wall-planes and varying the placement, thickness and profiles of each section’s cornice lines. The top two floors are also differently setback to give the appearance of a saw-tooth roof-line when viewed at ground level. And, different materials are also used to reinforce this variation. This finer rhythm is produced by the utilisation of a 23 ft. spaced gridline as a generative-organisational tool. The aim is to break down its expansive horizontality and institutional appearance.

  Advice from the Panel on this application is sought on the following:

  1. How well has the revised massing, material choices and composition adequately addressed the previous UDP session as well as the Victory Square Policy Plan and Guidelines’ recommendations for new developments to reflect the prevalent streetscape, historical references, roof-lines and finer scale? Hence, is the revised design better presenting as a residence and community hub rather than an institution?

  2. Is the general interior layout (including balcony design) and programming helpful in fostering a sense of home to restore dignity for its future residents?

  3. How successfully is the building affording privacy and minimizing noise for the residences across the lane?
4. How can the socio-cultural expressions of the local community - indigenous and Chinese - be incorporated into the design?

The planning team then took questions from the panel.

- **Applicant’s Introductory Comments:**
The applicant, represented architect Mr. Wing T. Leung, noted this is an interesting and challenging social housing development project that has been a learning experience for the team.

Mr. Leung then said Vancouver Coastal health requested 69 square feet for clinical use. Changes to the ground floor design changed from the previous iteration of having two separate entries to the clinic to one central entry at the middle of the building. Locating the clinic’s entry and elevator core to the centre also meant the reduction of the total number of residential units above from the previous 231 to 230.

The general approach is that this project comprises of two ‘separate’ buildings for the purpose of more efficient management and running of the building. There are still two elevator cores and two entrances which help break up the building’s horizontality and scale. The architect re-introduced a 23 foot spaced grid to better articulate the building on this the 268 foot wide site. Using the basic 23 foot width of the micro units and studios as an organizing element, the architect developed a push-and-pull system to break up the volume. Additionally, by relocating the two cores there arise the opportunity to create two “wings” at the rear, which in turn gave the space to create more two bedroom units with more than one exterior wall.

The main materials include a mixture of masonry and concrete, and the use of a few different basic colors. Mr. Leung also noted there is a fairly high wall-to-window ratio to better respond to the prevalent composition in the neighborhood. The sidewalk surface along the Hastings street frontage uses saw-cut finished concrete.

With regards to the amenity spaces on the fourth floor roof terrace, there are two different kinds of space - play spaces and urban agriculture. The applicant wanted to maintain enough play space while also providing sufficient space for urban agriculture. The goal is to maximize the 4th floor’s amenity usable space, especially with the urban agricultural space. To achieve this, the previous iteration has been revised to make room for 66 urban agriculture plots. This roof patio on the south side is good because it has the optimal amount of sunlight. The applicant then noted part of the landscape design was created with input from the community advisory council.

On the building’s roof top, a mechanical room and mechanical space has been added; pathways with stepping stones connect to them from the elevator. Additional items include a potting table with a built in compost and tool storage shed.

In terms of tree retention, the London Plain trees at the front of the building are saved, and in fact more are planted, to make the street-front more livable. There are additional bike racks. However, there are no benches to along the front in order to discourage individuals from sleeping on the street, and instead enter the housing.

The applicant then noted BC Hydro clearance issues that could affect the lane elevation and potentially portions of the fourth floor roof terrace. These issues are still pending resolution.

Lastly, the applicant noted their sustainability strategy is LEED GOLD.

The applicant team then took questions from the panel.
• Panel’s Consensus on Key Aspects Needing Improvement:
  Having reviewed the project it was moved by Mr. Huffman and seconded by Ms. Parsons and was the decision of the Urban Design Panel:

  THAT the Panel SUPPORT the project with the following recommendations to be reviewed by City Staff:

  • Improve experience of crew on both the Hastings façade and back lane;
  • Decrease the amount of urban agriculture to increase the amount of space for informal social gathering;
  • Increase the height of the retail space to create a more welcoming space;
  • Revisit the floor to ceiling height and see if main level height can be increased.

• Related Commentary:
  In general, the panel found the proposed project’s approach to breaking down the scale, as well as the material and colour decisions, to be successful including. It was a much improved project from the previous submission. The panel understood the project is challenging when a lot is being asked for with a limited budget.

  A panel member found the brick portions and the punch openings of the building successful. Another panelist found the saw tooth roof-line to be successful, and greatly improved than the previous submission in terms of fitting into the neighbourhood context.

  The floor / units plans, and micro-suites were well received. Some panelists liked the big balconies on the south side which can help keep the units cool. Overall the planning makes sense and improved the liveability.

  Panelists also commended the applicant on incorporating the VCH component without it feeling like a hospital, and also on how the applicant’s approach to the project’s social aspects were all done with the consultation with the public.

  A panel member did comment that the middle portion of the building along Hastings could be stronger in the way it is expressed. It was noted that the Juliet balconies in this middle portion with the yellow guardrails came across flat. A suggestion was to break them up with vertical frames not dissimilar to the elements on the two end volumes of the building. In terms of improving privacy, a panel member suggested considering some privacy screens to be provided between the units.

  There was a panelist who strongly felt the building was not appropriate - it is a big building on a small building area. The panelist elaborated this by pointing out the materials shown are not rich enough, and the dominance of concrete will not help with the streetscape, and the bright colours do not seem to suit the neighborhood. As such, materials should be more durable and industrial to give a rich toughness to them. It was also pointed out the ground floor ceiling height is too low, and increased height is needed to make those ground floor retail pieces more inviting. And, the clinic frontage is too wide for the neighbourhood’s finer grain scale, and smaller units and entries not unlike those across the street could benefit the pedestrian realm. There were also comments that some of the windows do not seem to be rightly proportioned for this neighbourhood. In this sense, the question should be more than whether it meets the policies, and expanded to, “Does it promote a rich urban fabric?” With a richer urban fabric, individuals would feel prouder of where they live. Some panelists suggested developing a richer ground-plane experience by introducing some recesses. Various panelists also remarked that the lane should be treated like a street rather than a left-over space.

  With regards to cultural policy, some panelists felt the most important aspect is respecting the materials, and providing an architectural design that respects the surrounding neighborhood and
cultural groups. One panelist found the proposed building successfully referenced the area’s historical urban context.

In terms of landscape, there was support continuing to retain the London Plains on Hasting Street. However, there will also concerns the amount of urban agriculture is taking away from the social spaces for the residents. Because of the user group and number of units suggest reducing the amount of urban agriculture.

- **Applicant’s Response:** The applicant team thanked the panel for their comments. In regards to height we cannot go higher because coastal health has requirements for minimal height. The cost of project went up by 40 percent from the start of the project.