



City of
Courtenay

Development Industry Meeting March 20 2025

Presented by:
Paul Preston, City of Courtenay



Agenda

1. Zero Carbon Step Code & CleanBC
2. Professional Reliance Model
3. Capacity Model
4. Reminder on DP amendments and impact on Building
5. Smart Forms
6. Update Downtown Vitalization Local Area Plan- May
14 public and interest holder meetings
7. Update on DPA 1-2 – Council report April 2
8. Short Term Rentals- Council report April 2
9. Q&A



City of
Courtenay

Zero Carbon Step Code

Presented by:
Paul Preston, City of Courtenay



Presentation Overview

1. Council Motions
2. Zero Carbon Step Code & CleanBC
3. Code update
4. Discussion
5. Options

Council Motion – February 28, 2024

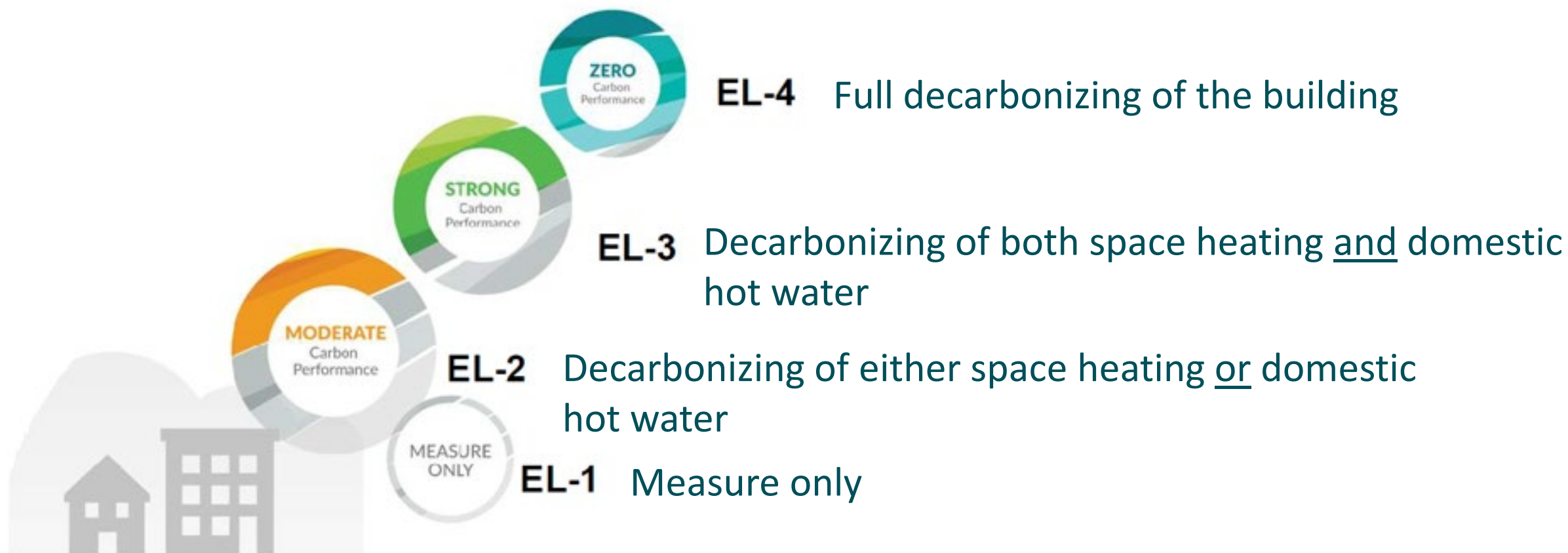
“That in keeping with the City’s Official Community Plan, Council direct staff to incorporate into the 2025 work plan and budget the staff resources and funding required for the engagement and policy development needed to accelerate the adoption of levels EL3 and EL4 of the Zero Carbon Step Code”

Council Motion - February 14, 2024

THAT Council adopt the Provincial Zero Carbon Step Code;

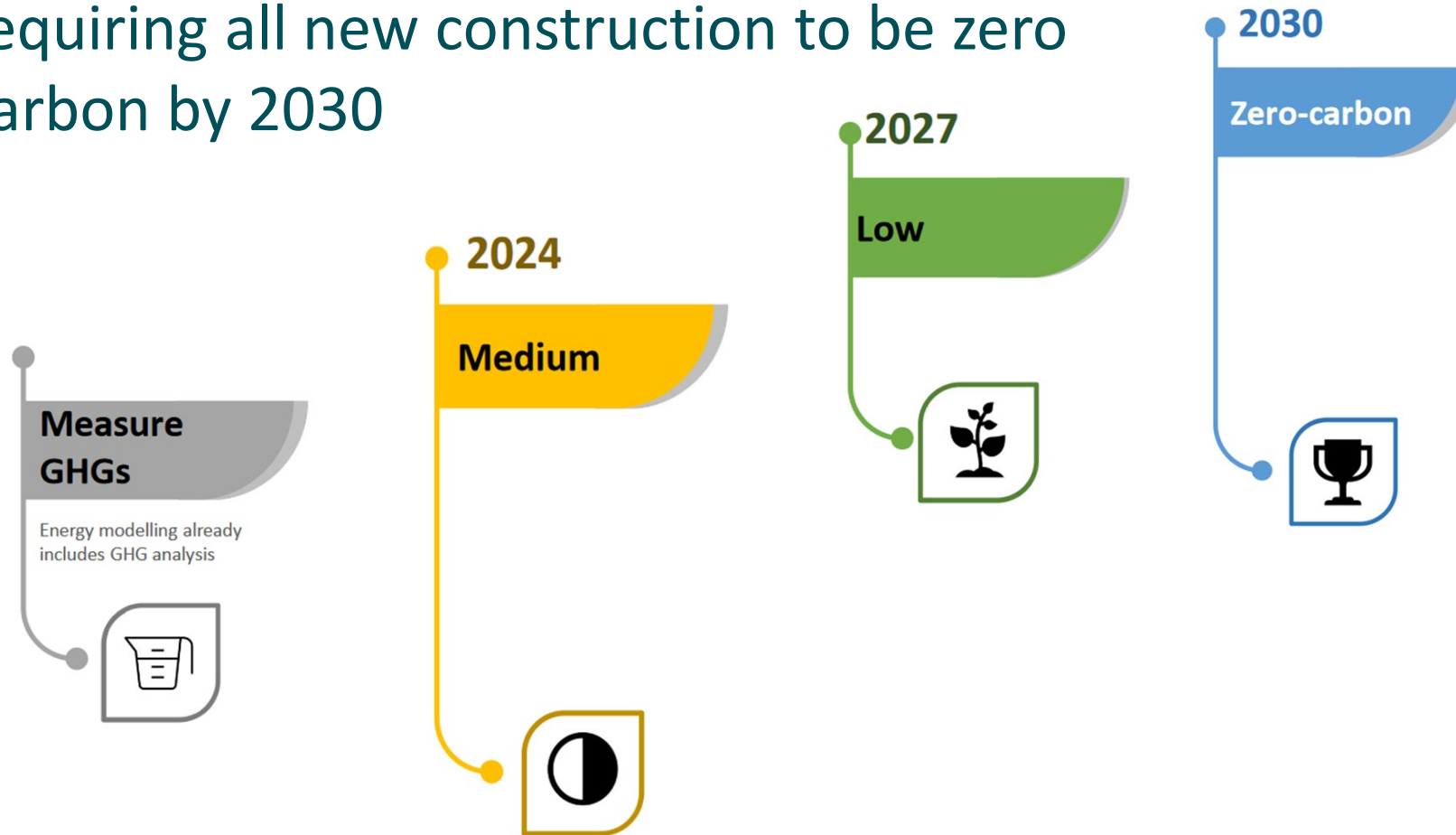
AND THAT Council direct staff to amend “Building Bylaw No. 3114, 2023” to include the Zero Carbon Performance Levels in accordance with the timelines established in the CleanBC Road Map for all applicable Part 3 and Part 9 buildings starting with EL2 in 2024 and EL3 in 2027 and EL 4 in 2030;

Local Governments have the option to regulate carbon requirements

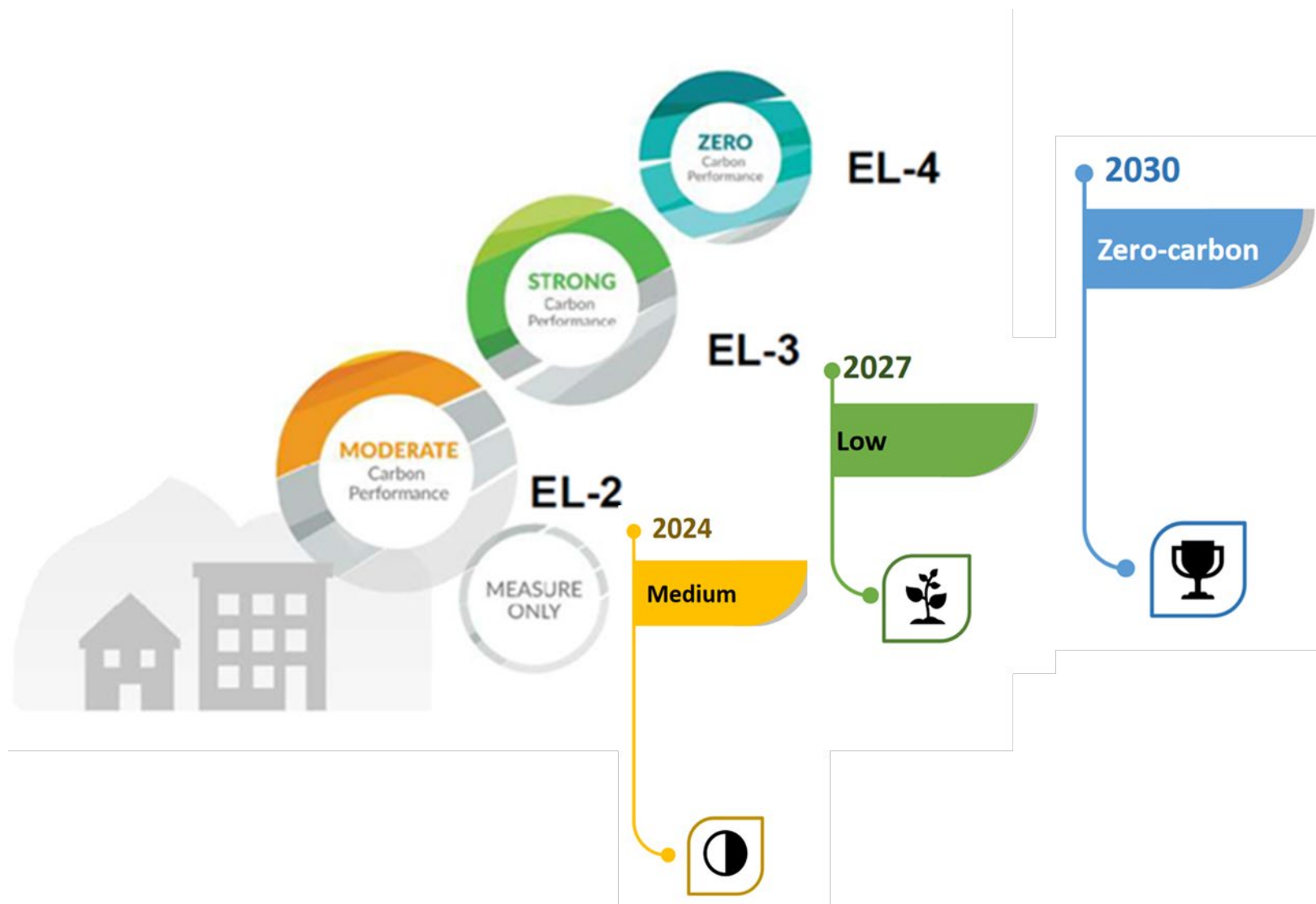


Potential Provincial Timeline for BC-Wide Requirements

CleanBC Roadmap to 2030 commits to requiring all new construction to be zero carbon by 2030



Alignment of the CleanBC Road Map with the ZCSC Emission Levels



Code Update

BCBC revision 5 – January 27, 2025

Effective March 10, 2025, new buildings must meet
EL-1 of the ZCSC

Buildings shall conform to the requirements of any of GHG Emission Levels EL-1, EL-2, EL-3 or EL-4 and shall be designed and constructed to conform to one of the GHG emission compliance options in Table 9.37.1.3.

DISCUSSION

- Nanaimo, Saanich, Victoria, Qualicum have introduced EL-4
- Forms are in place
- No extra work for Energy advisors
- Potential challenges

OPTIONS

- Follow BC Building Code revisions
- Clean BC Road map targets 2027 (EL-3) and 2030 (EL-4)
- Establish an EL-3 and EL-4 timeline
- Straight to EL-4

RECOMMENDED OPTION

Zero Carbon Performance for all applicable Part 3 and Part 9 buildings starting with EL-3 in 2026 and EL-4 in 2028

Thank you and please provide you input



<https://engagecomoxvalley.ca/zero-carbon-step-code-survey>

Development Engineering Presentation Overview

1. Infrastructure Capacity Modelling Update
2. Professional Reliance Model for civil submissions

Discussion

1. Infrastructure Capacity Modelling Update
 - A. Water/Sewer modelling development applications
 - I. Criteria
 - II. Request Form
 - III. 3 Types
 - a) Simple low density residential lot
 - b) < 10 units simple ICI
 - c) > 10 units
 - B. Water / Sewer Model update to support Master Plans

Discussion

Water and Sewer Model Criteria

March 6, 2025 V4

1.0 General Hydraulic Network Considerations

Where development will be serviced by the existing water and/or sanitary sewer system, the City will conduct a hydraulic analysis using the City's network model(s), at the expense of the Applicant. The analysis will review system flows, pressures and velocities for conformance to City specifications and guidelines. The intention of the model is to determine capacity of the system and its components and identify constraints in the system such that the approval of the development by the Approving Officer may be conditional on the constraints being addressed.

The persons per unit (household) is to be based on the most recent related City documentation related to population/growth but shall not be less than 1.6 persons per unit for multifamily (1.1 studio/micro, 1.6 Apartment, 2.1 all others) and 2.4 persons per unit for single family. The preferred population/growth study is to be the most recent completed and be confirmed by City staff as acceptable such as, but not limited to:

- OCP
- Complete Communities Growth Assessment

Discussion

2.0 Water System Capacity Modelling

- The water network needs to be analysed to an appropriate boundary location to determine lowest pressure in the system resulting from the proposed works. The analysis needs to consider related pump stations, reservoirs and controls such as pressure reducing valves and settings.
- Upgrades are not limited to the frontage of the proposed development. The extent of the upgrade is determined based on the capacity of the system and may impact pipe sizes, pump stations, pressure zone controls and reservoir storage capacity.
- For water systems (per MMCD) the maximum static pressure during Average Day Demand will be 123 psi, minimum static pressure during Peak Hour Demand will be 44 psi and minimum residual pressure during Peak Hour Demand + Fire Flow Demand will be 22 psi. Fire flow will be determined by the Fire Underwriters Study unless the application is at area or neighbourhood level, and then MMCD can be used. Storage requirements will be as per the most recent Water Master Plan and Regional Water provision capacity.

Discussion

3.0 Sewer System Capacity Modelling

- The downstream sewer system needs to be analysed to an appropriate boundary location as proposed by the applicants engineer and approved by City staff to determine the extent and location of potential sewer upgrades. The analysis needs to account for the entire catchment, not just the proposed development and will be completed for both pre and post-development scenarios.
- Upgrades are not limited to the frontage of the proposed development. The extent of the upgrade is determined based on the capacity of the sewer system; therefore, the upgrade may be located a distance downstream of the proposed development.
- For sanitary sewers if total Peak Wet Weather Flow (PWWF) > Pipe Capacity (i.e. $q/Q > 1.0$ – exceeds capacity), assume the sanitary sewer will need to be upgraded. At the discretion of City staff, other factors may influence when upgrades are assigned, for example when a new area is added to an existing sewershed or when the proposed development is contributing the majority of the flows in a pipe. Pipes that are nearing capacity may also be identified for upgrading.
- I/I to utilise 0.26 L/s/ha as determined by the 2020 Sanitary Master Plan (Table 2.9)

Discussion

HYDRAULIC MODEL APPLICATION FORM	
PROPERTY DESCRIPTION	
Legal Description:	
Civic Address: 111 First Avenue	
APPLICANT INFORMATION	
Model Contact: John Doe P.Eng.	
Mailing Address:	
Primary Contact No.:	Cell:
Email:	
DEVELOPMENT TYPE (provide units for all that apply)	
_____ units - Single Family Dwelling (2.4 PDU)	___8___ units - Low to Medium Density Multi-Family Residential (2.2
_____ units - High Density Residential (1.8 PDU)	_____ sq.m. or _____ max occupant - Commercial
_____ sq.m. Industrial	_____ sq.m. or _____ max occupant Institutional
Water Demand and fire flow to use site specific data related to development or zoning, service size determined by fixture units	
Water ADD 635 L/c/d, Peak Day 2100 L/c/d, Peak Hour 3000 L/c/d	
Water demand for commercial, institutional to use max. occupant load	
Sewer flows to use site specific data related to development or zoning, and use harmon peaking factor, infiltration to use MMCD	
Calculated Max Day Water Demand _____ 0.41 _____ L/s	Peak Hour Water Demand _____ 0.59 _____ L/s
Calculated Sanitary Peak Wet Weather Flow _____ 0.41 _____ L/s	
FIRE PROTECTION	
Calculated Fire Flow Requirement (FUS) _____ L/s	
Strategy? (ie: Sprinklers/Hydrants):	
PROPOSAL INFORMATION (briefly describe your proposal)	
APPLICANT CONFIRMATION	
1. Applicable detailed design drawings and payments must be submitted PRIOR to water or sewer model completion.	
2. As applicant or approved agent, I confirm that I have read all relevant Bylaws and policies and that this application is in conformance (unless a Bylaw amendment forms part of this application).	
3. I accept responsibility for processing delays caused by incorrect or insufficient submission materials.	
I have read and understand the above conditions _____ (please initial)	
Signature of Applicant:	Date:

DISCUSSION

3 Types of Sewer/Water System Assessments

1. 0\$ - Simple low density residential / ICI No impact
2. \$2,500 Sewer/\$2,500 water < 10 units simple ICI
3. Approx. \$4,500 each > 10 units, complex, broader system impacts

DISCUSSION

2. Professional Reliance Model for civil submissions

- A. Letters of Assurance similar to BCBC to be provided
- B. Check List to be Standardized by City
- C. Check List to include list of variances/deviations from standards being sought
- D. Service Report Reviews will continue
- E. Drawing Submissions will not be reviewed
- F. Substantial and Final Inspections will continue
- G. Variances to Standards/Bylaws will not be accepted when identified at Substantial/Final Inspection similar to BCBC requirements