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CITY OF SEATTLE
2013 AUG 16 AM 11:23
CITY CLERK

City of Seattle
Notice of Appointment

Name: *Amarpreet Sethi*		☒ **Executive Appointment** ☐ **Reappointment** ☐ **Legislative Appointment** ☐ **Agency Appointment** ☐ **PDA Council** ☐ **PDA Constituency**
Residential Neighborhood: *Belltown*	**Zip Code:** *98121*	**Contact Phone No.:** *N/A*
Appointed to: *Living Building & Deep Green Pilot Technical Advisory Group*		**Date of Appointment:** *August 15, 2013*
Authority (Ord., Res.): *Resolution 31400*		**Term of Office:** **From:** *Confirmation* **To:** *8/31/15*

Background:

Amarpreet is a Senior Sustainability Analyst with DLR Group in Seattle. She holds a Bachelor's in Architecture with a focus in sustainable design and a Master of Science in Energy and Climate. She worked as an Architect for two years and after completing graduate school worked with a mechanical consulting firm with a focus on sustainable design. For the past six months she has also been working with an Integrated Design team as a Sustainability Lead.

Amarpreet will bring to the table the ideas and concerns from the perspective of an architect as well as an energy manager and someone with a thorough understanding of mechanical systems and their impact on the energy performance as well as their integration with the architecture. Her background in Energy Modeling will help share how some of these goals, specifically with regards to Energy and Indoor air quality (health), can be met. Her experience trying to achieve these goals in her projects will help highlight the challenges that are typically faced and that restrict teams from reaching for higher goals.

Authorizing Signature:	**Name and Title of Officer Making Appointment:** *Mayor Mike McGinn*

Amarpreet Sethi, CEM, BEMP, HBDP, LEED AP

EDUCATION

MS IN BUILDING DESIGN, Energy & Climate Concentration. (GPA: 3.97) **08/01 – 12/03**
Arizona State University, Arizona, USA

Research Thesis	Daylight performance evaluation and comparison of different types of Light shelves by means of computer simulation using Radiance

BACHELORS IN ARCHITECTURE (GPA: 3.6) **08/93 - 07/99**
T.V.B School of Habitat Studies, N.Delhi, India

Energy Design Unit	Design of a multi-use building that would minimize its embodied energy & environmental impact using passive thermal controls, solar techniques, & energy efficient materials.
Research Thesis	Relationship of climate and form in Desert Regions, focusing on the vernacular architecture of these regions.

CERTIFICATIONS

- CEM (AEE Certification), Certified Energy Manager, September 2012
- HBDP (ASHRAE Certification), High Performance Building Design Professional, August 2012
- BEMP (ASHRAE Certification), Building Energy Modeling Professional, October 2010
- LEED™ Accredited Professional– USGBC, October 2003
- Approved Energy Simulation Reviewer for CAGBC, approved list of energy simulation reviewers for LEED Canada (http://www.cagbc.org/AM/PDF/CaGBCs_Experienced_Modellers_List-EN.pdf)
- Registered Architect in New Delhi, India.

WORK EXPERIENCE

SENIOR SUSTAINABILITY ANALYST, DLR Group, Seattle, Washington **12/12 - till present**

- Leading the team in providing energy modeling services for projects for different phases including schematic design, design development, post occupancy evaluation
- Assisting the Architectural, Mechanical and energy modeling teams firm wide
- Energy and Life Cycle Analysis for the different energy conservation measures to apply for Incentives
- Peer Reviews for Energy Modeling projects for our other offices
- Energy analysis using appropriate simulation tools to optimize design and evaluate the HVAC, Building Envelope, Daylighting and other energy measures during initial stages of the design for design assistance
- Analysis of HVAC features and systems to compare and determine best and most efficient mechanical solutions eg, geothermal heat pump, heat recovery chillers, radiant systems, heat recovery, variable speed drives, operable windows, DOAS systems, Displacement Ventilation and more
- Natural Ventilation and thermal analysis for K-12, higher education, office buildings to reduce costs and optimize operable window area
- Peak load reduction and thermal comfort analysis for spaces with radiant heating and cooling
- LEED documentation including Energy and Atmosphere Credits, Water Credits and IAQ credits related to energy and Mechanical systems

SENIOR SUSTAINABLE DESIGN ANALYST, Stantec, Seattle, Washington **09/10 - 12/12**

- Proposals and fees estimates for Energy Modeling, Thermal Analysis for design assistance and LEED documentation, Energy Audits, Measurement & Verification.
- Managing the Seattle modeling team work load and leading the team in providing energy modeling services for projects in a number of Stantec offices including Vancouver, Butler, Philadelphia, Washington DC, San Francisco.
- Assisting the Architectural, Mechanical and energy modeling teams firm wide (Canadian and US offices).
- Peer review and supervision for CAGBC projects, as an approved CAGBC experienced modeler (these projects would not require an external review)
- Energy and Life Cycle Analysis for the different energy conservation measures to apply for Incentives from BC Hydro, NYSERDA and Commercial Building Partnership Programs (DOE). These studies and energy analysis included Hospitals, Lab buildings, Retail and Office Buildings.
- Peer Reviews for Energy Modeling projects including ice rinks, hospitals, lab buildings, office buildings
- Energy analysis using appropriate simulation tools to optimize design and evaluate the HVAC, Building Envelope, Daylighting and other energy measures during initial stages of the design for design assistance
- Analysis of HVAC features and systems to compare and determine best and most efficient mechanical solutions eg, geothermal heat pump, heat recovery chillers, radiant systems, heat recovery, variable speed drives, operable windows, DOAS systems, Displacement Ventilation and more

- Natural Ventilation and thermal analysis for K-12, higher education, office buildings to reduce costs and optimize operable window area
- Peak load reduction and thermal comfort analysis for spaces with radiant heating and cooling
- LEED documentation including Energy and Atmosphere Credits, Water Credits and IAQ credits related to energy and Mechanical systems

SUSTAINABLE BUILDING ANALYST, Stantec (formerly Keen Engineering), Seattle, Washington **1/04 – 09/10**

- Thermal analysis using simulation tools to design buildings for natural ventilation, Radiant systems with Dedicated Outdoor Air, Displacement Ventilation etc
- Energy analysis using simulation tools to optimize design. Various energy conservation measures including HVAC, Building Envelope, Daylighting and other design features are modeled to inform design and determine payback period
- Daylighting and Solar Shading analysis to optimize design of atriums, clearstory, openings, ceiling heights, lightshelves, glass properties
- Study of various architectural features like atriums, double façades etc to optimize energy and daylight performance
- Analysis of HVAC systems to compare and determine best and most efficient mechanical solution eg, geothermal heat pump, heat recovery chillers, radiant systems, heat recovery, variable speed drives etc
- Energy Life Cycle Cost Analysis for Federal and State Buildings
- LEED documentation for Energy and Atmosphere Credit 1.
- Charattes to assist architects

RESEARCH ASSISTANT, GREN A/E Consultants, Phoenix, Arizona. **12/02 – 12/03**

- Developing Green Specifications for the green building master specification system.
- Responsible for research and analysis of building products to establish their role in sustainability in regards to LEED and otherwise (toxicity and embodied energy).

TEACHING ASSISTANT, School of Architecture, A.S.U. **08/02 - 12/02**

- Teaching Assistant for the 'Building Systems III' for M.Arch students, for Prof. Harvey Bryan. The course focused on integration of building systems, mechanical, electrical, plumbing, fire protection in design.

RESEARCH ASSISTANT, School of Architecture, A.S.U. **06/02 – 08/02**

- Worked with Prof. Harvey Bryan on studying the energy code ASHARE 90.1 and Title 24 using eQUEST (DOE2), for the development of the Mexico energy code study.

RESEARCH ASSISTANT, Speech and Hearing Science Department, A.S.U. **08/01 – 12/02**

- Responsible for Web Design for the Department (Infant Child Research Program).

TEACHING ASSISTANT, School of Design, A.S.U. **07/01 - 12/01**

- Worked with Prof Jacques Giard as teaching assistant for the 'Design Awareness' course.

ARCHITECT, Space Design Consultants, N.Delhi, India. **01/01 – 07/01**

- Responsible for design of office interiors, construction & presentation drawings.

ARCHITECT, INDEPENDENT Practice. **(10/00 – 01/01) & (06/97- 08/98)**

- Responsible for design utilizing passive solar heating techniques, local materials, construction supervision, design of residential interiors & swimming pool complex, working drawings, procuring material & construction supervision, and installation of solar water heating systems.

ASSISTANT ARCHITECT, William Perry Architects Pvt. Ltd, N.Delhi, India. **08/99 – 11/00**

- Working drawings and coordination with MEP & structural consultants for residential, office interiors.

PAPERS AND CONFERENCES

- Authored Article in High Performance Buildings, Summer 2010, 'Old Concepts, New Tools, The Terry Thomas' –(http://www.nxtbook.com/nxtbooks/ashrae/hpb_2010summer/#/28)
- Presented at AIA 2030 Challenge Series, Case Studies on Climate Responsive Design, Seattle, July 2011
- Presented at the Seattle Energy Design Roundtable, October 2011, Seattle, WA
- Guest Lecturer for Daylighting Class (MS students, U.of WA)), April 2007, May 2010, April 2011
- Presented on 'Integrated Design' at LightFair conference at Las Vegas, NV, May 2006
- Presented 'Daylighitng in office buildings', at IES Arizona Chapter, Phoenix, AZ, October 2003
- Presented and published 'A study of daylighting techniques and their energy implications using a designer friendly simulation software' ASES, Austin, TX, June 2003. 'Best student authored paper' (by SBSE)

HONORS AND AWARDS

- 2010 ASHRAE technology award for The Terry Thomas, Commercial Buildings
- Scholarship: Southwest Illuminating Engineering Society, North America Section Light Scholarship 2003

- Scholarship: Fuller Moore Travel Scholarship to present a technical paper at the 2003 ASES conference.
- Design chosen for 'Design Excellence' exhibition (fall 2002)
- Scholarship: AEE (Association of Energy Engineers) scholarship, 2002.

SIMULATION AND GRAPHIC TOOLS

ENERGY TOOLS - IES Virtual Environment (Model IT, Apache Sim, Apache HVAC, Macroflow, Radiance, PRM Navigator), eQUEST, DOE 2.2, Energy Plus (IDF editor and Openstudio), Ecotect, EE4, Energypro, Windows, Therm, Radiance, Trane Trace 700, Energy 10, HAP, Revit (Revit to IES, eQUEST).

GRAPHIC TOOLS - AutoCAD, Sketchup, MS Office (Word, Excel, Powerpoint), Adobe (PageMaker, Photoshop, Illustrator), Dream weaver, Fireworks

OTHER INTERESTS

- Sailing, Travelling, Reading, Yoga

PROJECT EXPERIENCE

- Few example projects and role within the project, are included below for reference

Corporate / Office

Lakeview Office Phase 2, Kirkland WA, 180,000 sq ft - Energy Modeling for Architectural and Mechanical design guidance. Shading Analysis for Load Reduction, Energy Modeling of ECM's including Envelope, Lighting, HVAC – chilled Beam/DOAS, Energy Life Cycle Cost Analysis, Tenant ECM analysis, Preliminary LEED Energy Model (*EAp2, EAc1)*, Thermal Analysis for shading and chilled beam design, Daylighting Study. (Modeling tools - IES VE (ApacheSim, apache HVAC)

Everett Courthouse, Everett, WA, 20,000 SF - Energy Modeling for LEED Documentation, Energy Modeling of ECM's including Envelope, Lighting, HVAC – DOAS and VRF systems, LEED Energy Model (*EAp2, EAc1)*, (Modeling tools – Energypro)

*Edith Green Wendell Wyatt Federal Building, Portland, OR, 520,000 sq ft, Anticipated LEED® Platinum - Energy Modeling and Thermal Analysis for Architectural and Mechanical design guidance. Shading Analysis for Load Reduction, Double Façade Analysis, Energy Modeling of ECM's including Envelope, Lighting, HVAC - Radiant/DOAS and Ground Source Heat Pump system, Energy Life Cycle Cost Analysis, Sensitivity Analysis, Tenant ECM analysis, Preliminary LEED Energy Model (*EAp2, EAc1)*, Thermal Analysis for shading and radiant cooling design, Thermal Comfort Study. (Modeling tools - IES VE (ApacheSim), eQUEST, BLCC5, Ecotect, Window)

*The Terry Thomas, Seattle, WA, 60,000 sq ft
2009 ASHRAE Technology Award – First Place, LEED® Gold-certified
The Terry Avenue Office Building is a 4-story, 40,000-square-foot office building in the South Lake Union neighborhood of Seattle, Washington. The building features a fully passive cooling and ventilation system and hydronic heating. To facilitate the natural ventilation strategy, Stantec performed extensive thermal comfort modeling. Shallow floor plates allow ventilation and natural light to penetrate from the inside open air courtyard and from the exterior of the building. Concrete floor slabs add mass to help maintain comfortable temperatures inside. The building tenants control their environment by opening windows and adjusting radiator thermostats located under windows. High performance glazing with exterior shading allows daylight to enter the space while significantly reducing solar heat gains. Amarpreet's role included Shading and Thermal Analysis for Architectural and Mechanical design guidance. Thermal modeling and shading studies were used as a design tool to completely eliminate Cooling and, Mechanical Ventilation from the building. (Modeling tools - IES Virtual Environment (ApacheSim), Windows, eQUEST, Ecotect)

*Fire Station 6, Seattle, WA, 16,000 sq ft
Energy Analysis during Schematic Design for Mechanical Design Guidance, ECM's included envelope, lighting, Ground Source Heat Pump, heat recovery and LEED Energy Modeling (*EAp2, EAc1)*. (Modeling tools - eQUEST).

Research / Laboratories

*Corning DV Building, Sullivan Park, NY, 290,000 sq ft
Building Simulation for technical assistance studies in support of new construction program for NYSERDA incentive. ECM's including envelope, lighting, demand control ventilation, improved chiller performance, heat recovery, were modeled to determine energy, peak demand and cost savings. (Modeling tools – IESVE (ApacheSim, Apache HVAC).

*Jamestown Community College Science Building, Jamestown, NY, 24,000 sq ft
Energy Modeling for LEED Documentation (USGBC). (Modeling tools - IES VE (ApacheSim, Apache HVAC, PRM Navigator, Radiance)).

Cuyahoga Community College Westshore, Westlake, OH, 118,000 sq ft
Managed, reviewed and provided technical support for energy modeling for LEED Documentation (*EAp2, EAc1, 6 points achieved*). (Modeling tools - eQUEST).

Education

Conway School, Building 1000, Conway, WA, 15,000 sq ft
Energy Analysis for Design Assistance. ECM's included envelope, improved lighting, heat recovery and high efficiency water source heat pump (heating only) (Modeling tools - IES VE (ApacheSim, Apache HVAC).

Whitefish High School addition, Whitefish, MO, 120,000 sq ft
Energy Analysis for energy savings determination. ECM's included envelope, improved lighting, heat recovery and displacement ventilation (Modeling tools - eQUEST).

***Science West Building, Montgomery College Rockville, MD, 66,000 sq ft**
Energy Analysis for Design Assistance and LEED Documentation (ongoing). ECM's include envelope, improved lighting, heat recovery and high efficiency chiller (Modeling tools - IES VE (ApacheSim, Apache HVAC, PRM Navigator).

***New Campus Center, University of Mary, Fredericksburg, VA,119,000 sq ft**
Energy Analysis for Design Assistance and LEED Documentation (ongoing). . ECM's include envelope, improved lighting, heat recovery and high efficiency chiller (Modeling tools - IES VE (ApacheSim, Apache HVAC, PRM Navigator).

***Academic West Building, Bucknell University, Lewisburg, PA, 70,000 sq ft**
Energy Analysis for Design Assistance and LEED Documentation (ongoing). ECM's include envelope, improved lighting, heat recovery and central plant heating and cooling served by a central chiller and heat recovered from the Combined Heat and Power system on campus. (Modeling tools - IES VE (ApacheSim, Apache HVAC, PRM Navigator).

***Aliquippa Elementary and High School, Aliquippa, PA, 150,000 sq ft**
Energy Modeling for LEED Documentation (USGBC). **LEED® Gold-certified** (High School). Primarily existing building with major renovations. (Modeling tools - IES VE (ApacheSim, Apache HVAC).

***Brentwood Visual Arts Centre, Victoria, BC, 17,920 sq ft.**
Thermal and Natural Ventilation Analysis to optimize number of operable windows and trickle vents to meet cooling loads in summer and minimum ventilation requirements in winter. (Modeling tools - IES VE (ApacheSim, Macroflow)).

***BCIT Gateway Project, Vancouver, BC, 120,000 sq ft.**
Daylight Analysis for design guidance on atrium skylights, to reduce glare and improve daylight performance in atrium and adjacent spaces. (Modeling tools - IES VE (Suncast and Radiance)).

***Valley View Middle School, Snohomish, WA, 154,000 sq ft**
Energy Modeling during Schematic Design for Architectural and Mechanical Design Assistance. Various ECMS including envelope, daylighting, lighting and HVAC options were modeled. A two story design was also compared to a three story design to show estimated energy and utility savings. (Modeling tools - eQUEST).

***Sacred Heart SSLC, San Francisco, CA, 40,000 sq ft**
Shading Analysis to optimize design performance. Daylighting Analysis to optimize design of light shelves, clearstory windows, skylights and solartubes (Modeling tools - IES VE (Radiance)),

***Mobile Elementary School, Mesa, AZ**
Daylighting Analysis to optimize design of light shelves, clearstory windows, skylights and solartubes (Modeling tools - IES VE (Radiance))

***Thomas Jefferson, Roosevelt, Upson, Glenbrook, Euclid School District, Euiclid, OH, 70,000 sqft x 4.**
Managed, reviewed and provided modeling support for energy modeling for LEED Documentation for four schools. (*EAp2, EAc1, 7-8 points achieved*). (Modeling tools - eQUEST).

Healthcare

*Willow Pavillion, Vancouver General Hospital, Vancouver, BC Canada, 60,000 sq ft
Energy Modeling for the BC Hydro incentive program. Energy Modeling of ECM's including Envelope, Lighting, Daylighting, HVAC including Radiant with heat recovery, heat pump chiller, displacement ventilation etc. The studies were done using IES Virtual Environment to determine the savings of the proposed design / ECM's compared with a market baseline case (ASHRAE 90.1.2007). (Modeling tools - IES VE (ApacheSim, Apache HVAC).

*Best Practices Kaiser Template, Hayward, CA, 380,000 sq ft
Thermal Analysis for load reduction and natural ventilation study, Energy Modeling of ECM's including Envelope, Lighting, Daylighting, HVAC including Radiant with heat recovery, heat pump chiller, displacement ventilation etc. The studies were done for design guidance and to determine the savings of best practices template building compared with an existing template design. (Modeling tools - IES VE (ApacheSim,Macroflow), eQUEST).

Peace Country Regional Health, Grande Prairie, AB, 620,000 sq ft
Energy Modeling and Daylighting Analysis to optimize design. Energy modeling for loads, to estimate savings due to displacement ventilation, heat recovery and to determine savings for other ECM's. Daylighting analysis to optimize glazing percentage and design. (Modeling tools – eQUEST and IES VE (ApacheSim, Suncast, Radiance).

Central Alberta Cancer Center, Red Deer, AB, 50,000 sq ft
Managed, reviewed and provided modeling support for CaGBC LEED Energy modeling, CaGBC experienced modeler submission. (Modeling tools – EE4)

UBC Pharmacy, Vancouver, BC, 260,000 sq ft
Managed, reviewed and provided modeling support for CaGBC LEED Energy modeling, CaGBC experienced modeler submission. Included work-arounds to model heat recovery chiller and heat recovery from data center as well as air to water heat recovery from lab exhausts during the winter months. (Modeling tools – eQUEST)

Burnslake Hospital, Burnslake, BC Canada, 60,000 sq ft
Managed, reviewed and provided modeling support for the energy modeling and analysis for the BC Hydro incentive program. Energy Modeling of ECM's including Envelope, Lighting, Daylighting, HVAC including Radiant with heat recovery, heat pump chiller, The savings of the proposed design / ECM's were compared with a market baseline case (ASHRAE 90.1.2007). (Modeling tools - IES VE (ApacheSim, Apache HVAC).

Retail

Walmart Supercenter Prototype 150 and 180, Royse City and Hasslet Fortworth, TX, 160,000 & 220,000 sq ft
Energy Modeling Analysis of the prototype design to determine savings compared to ASHRAE 90.1.2007 as part of the Commercial Building Partnerships Program, for NREL. A number of ECM's were modeled to determine additional savings that may be achieved to meet greater than 50% energy savings goal. ECM's included Envelope, Lighting, Daylighting, HVAC options including heat recovery from refrigeration condenser loop and water source heat pumps in combination with roof top units. (Modeling tool used – Energy Plus)

Multi-Unit / Family Residential

YWCA Family Village at Issaquah, Issaquah, WA, 156,000 sq ft
The mixed use facility is a multi-family development, that consists of 146 units of affordable housing for working families; a partially subsidized childcare center; community outreach services; education and employment services; and a 4,000 sq ft community center. The project is targeting LEED NC Gold Certification and the first multi-family Built Green Five-Star Certification. Amarpreet's role included Energy Analysis during Schematic Design for mechanical design guidance, ECM's included envelope, lighting, HVAC options (including ground source heat pump, heat recovery) and low flow fixtures, energy star equipment and LEED Energy Modeling (*EAp2, EAc1*). The modeling was also done to estimate the utility bills for the residences and the non-residential spaces for rebate application. The EA C1 has achieved 5 points. (Modeling tools - eQUEST).

While at DLR Group

*While at KEEN Engineering / Stantec Consulting

Living Building and Deep Green Technical Advisory Committee

August 2013

10 members - 5 standing members & 5 alternates: Per *Resolution 31400,* all appointed by the Mayor and subject to City Council confirmation, terms are unofficially set at 2-years, but not specified by the Resolution.

- *10* Appointed by Mayor

D*	G	Position No.	Name	Appointed	Term Ends	Term #	Position	Appointed By
6	F		Amanda Sturgeon	8/15/13	8/31/15	1	Member	Mayor
1	F		Amarpreet Sethi	8/15/13	8/31/15	1	Member	Mayor
6	M		Andrew Lee	8/15/13	8/31/15	1	Member	Mayor
6	M		Chris Webb	8/15/13	8/31/15	1	Member	Mayor
6	F		Colleen Mitchell	8/15/13	8/31/15	1	Member	Mayor
6	M		Donald Horn	8/15/13	8/31/15	1	Member	Mayor
6	M		Joe Giampietro	8/15/13	8/31/15	1	Neighborhood Community Council Mem.	Mayor
6	F		Nancy Henderson	8/15/13	8/31/15	1	Member	Mayor
6	M		Tom Marseille	8/15/13	8/31/15	1	Member	Mayor
6	M		Tom Nelson	8/15/13	8/31/15	1	Member	Mayor

***Diversity**

	Men	Women	Vacant	Minority	(1) Asian-American	(2) African-American	(3) Hispanic Latina/o	(4) Native-American	(5) Other**	(6) Caucasian
Mayor	6	4		1	1					9
Council										
Other Bodies										
Total	*6*	*4*	*0*	*1*	*1*	*0*	*0*	*0*	*0*	*10*

***Other includes diversity in any of the following: race, gender and/or ability*