

¹A.D. Mutaliyev*, ¹K.I. Samoilov, ²O.N. Priemets

¹Satbayev University, Almaty, Kazakhstan

²Kazakh Head Academy of architecture and Civil engineering, Almaty, Kazakhstan

*e-mail: alisher.mutaliev@gmail.com

**THE INTERPRETATION OF THE PRINCIPLES OF "GREEN ARCHITECTURE"
IN THE CONCEPT OF TRANSREGIONAL MONO-STYLISM COMPANY
"SKIDMORE, OWINGS AND MERRILL"**

Abstract. The concept of trans-regional monostilism is considered in the work of Skidmore, Owings & Merrill, which is considered on the example of 22 works. One of the oldest companies in the modern architectural market – «Skidmore, Owings & Merrill» – has consistently interpreted the concept of "International style" for more than eighty years, focusing on the work of L.Mies van der Rohe. The visual lightness of glass and metal surfaces formed by standard, unified elements, the relative simplicity of the shape geometry, and the accentuated utilitarianism have become recognizable features of the company's corporate identity. Additional aspects for shaping are provided by the interpretation of techniques for improving the energy efficiency of buildings.

Keywords: green architecture, energy efficiency, wind generators, solar panels, corporate identity, creative concept.

The modern world architectural process is characterized by the presence of an active dialectical interaction of two phenomena. On the one hand, this is a highly personalized practice of individual project groups focused on one or more architects, and on the other – the work of large design or construction companies, where individual creativity is blurred in a kind of collective. A facet of this specificity is the vision of approaches to architectural and artistic shaping, which ranges from rigid stylistic binding to contextually determined polystylism, which is manifested in both individual and collective creativity [1]. This is combined with one or another interpretation of the principles of sustainable architecture [2; 3; 4; 5].

One of the oldest companies in the modern architectural market – Skidmore, Owings and Merrill – for more than eighty years of work consistently interprets the concept of "International style", focusing on the work of Ludwig Mies van der Rohe ("Skidmore, Owings and Merrill" / "SOM": American company, opened in 1936: arch. Louis Skidmore, Nathaniel Owings) [6; 7]. The visual lightness of glass and metal surfaces formed by standard, unified elements, the relative simplicity of the shape geometry, and the accentuated utilitarianism have become recognizable features of the company's corporate identity [8]. At the same time, the desire to use various options for improving energy efficiency is becoming more and more evident in projects. Among them, the use of wind flows and solar energy stands out most clearly.

However, the initially advertised rejection of classical decorations and ornaments bearing regional characteristics has recently been transformed. For example, in the complex "Esentai tower", built in Almaty (Kazakhstan) in the middle of the first decade of our century, the national ornament is applied. Its elements, made by special treatment of the glass surface, are present in the architectural and artistic solution, although they are not accentuated (maybe this was not in the project, and the ornament is just an addition made by the building owners – in the context of the specifics of the architecture of the Almaty city [9]).



Figure 1. 1, 2. Multifunctional complex "al-Gamra tower", Kuwait, Kuwait, "SOM", 2011 [8].

The original "geometric simplicity of forms" has also evolved into rather complex three-dimensional compositions that interpret the previously ignored regional specificity in a peculiar way. A typical example of this is the multifunctional complex "al-Gamra tower", built in Kuwait (Kuwait). The composition is based on a combination of horizontal and vertical volumes of a parallelepiped shape with rounded corners. The smooth surface of solid glazing has horizontal metric floor divisions in the 77-story volume and vertical – in the 5-story volume. The crown of the tower is made as a compositionally non-centered inclined section. However, the part of the building facing the inner courtyard and oriented to the constantly illuminated by the sun is made in the form of a characteristic diagonal cutout, the shadow on the inner part of which is formed by the outer face of the dissected lapidary surface. In the tower part, it is a broken surface lined with stone and finely perforated with a floor grid of window openings, which has a ledge in the upper third of the facade. Moreover, depending on the function of the floor, the dimensions of the staggered rectangular openings differ in height, and their one-, two- and multi-storey groups are accentuated on the facade. The openings themselves are made in the form of prismatic niches of trapezoidal and parallelogram cross-section, which allows you to get shading located in the depth of the window opening itself. In a horizontally extended volume, the cutout is formed by deep, gallery-forming loggias, with metrically arranged vertical ribs on the outside. The image of the building is perceived as a fabric developing in the wind. Shown in figure 1.

An example, of interpretation of the use of aerodynamic features of the terrain to improve the energy efficiency of construction is the multifunctional building "Pearl Tower" in Guanjou (Guangdong, China) [10]. The three-part composition of the front parts of a narrow parallelepiped is formed by hyperbolic paraboloids that have solid glazing, and airflows from the prevailing wind direction are directed into the horizontal "slots" between them due to the flow around them. In these "slots", the wind is further split by an elliptical surface into two streams that go directly to the wind generators. Narrow end facades are formed by elongated triangular prisms with a peak-like narrowing

up. The three-part composition on these facades is accentuated by diagonally turned cross-shaped elements located at the level of wind-receiving "slots" of wide facades. Commissioned in the same year 2013 as the pearl Tower, the Nanjingkain center Office building in Nanjing (Juangsu, China) is an Orthodox concept of regional neutrality in an "International style". The tower, which has solid glazing, is divided into fourteen five-story levels, each of which has a diagonal break formed by triangular planes. A kind of compositional non-necessity of the folded facade is illustrated visually by a random completion in the form of a simple cut-off of the metric row after the fourteenth level.

The combination of two-story parallelepipeds, made with some displacement relative to each other and the presence of a break in one of the upper volumes, emphasized by a deep loggia under it, demonstrates a four-story Higher education institution in Elizabeth (New Jersey, USA). The lower two floors have different-sized openings and accentuated square wall cladding of dark brown stone. The upper two levels are designed on the contrast of sections of solid stained glass and alternating single paired rectangular Windows on the smooth surface of light gray walls. The courtyard, located on the third floor, is bounded by solid stained glass surfaces, contrasting with small blind areas that have a square stone lining.

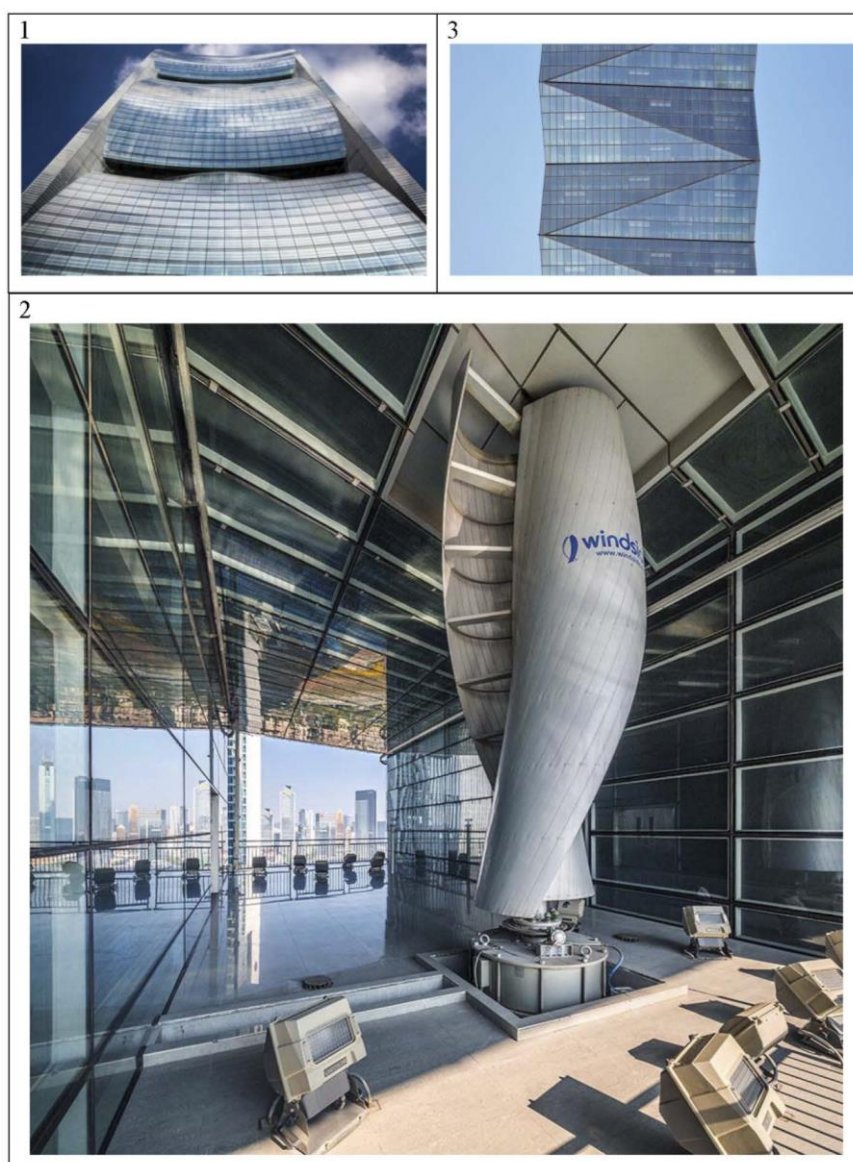


Figure 2. 1, 2. Multifunctional building "Pearl River tower", Guanzhou, Guangdong, China, "SOM", 2013 [8; 10]; 3. Office building "Nanjing Kain center", Nanjing, Juangsu, China, "SOM", 2013 [8].

Clear metric vertical divisions formed by developed pilasters are demonstrated by the Medical center in Cincinnati (Ohio, USA). Horizontal accents are made by combining three floors of blocks. Moreover, if the block of 2-3-4 floors has the same surface as the pylons, then the crowning block of 6-7-8 floors has cantilever extensions on the sides and is contrastingly glazed with pronounced stripes of window sills. Shown in figure 2.

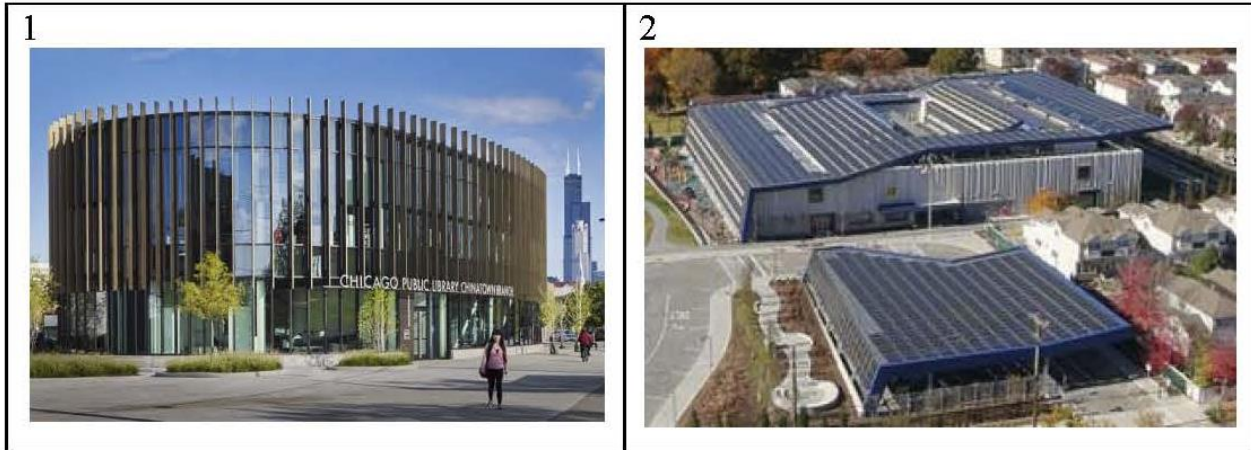


Figure 3. 1. Public library, Chicago, Illinois, USA, "SOM", 2015 [8]; **2.** Catlan Grimm School, State island, New York city, USA, "SOM", 2015 [8].

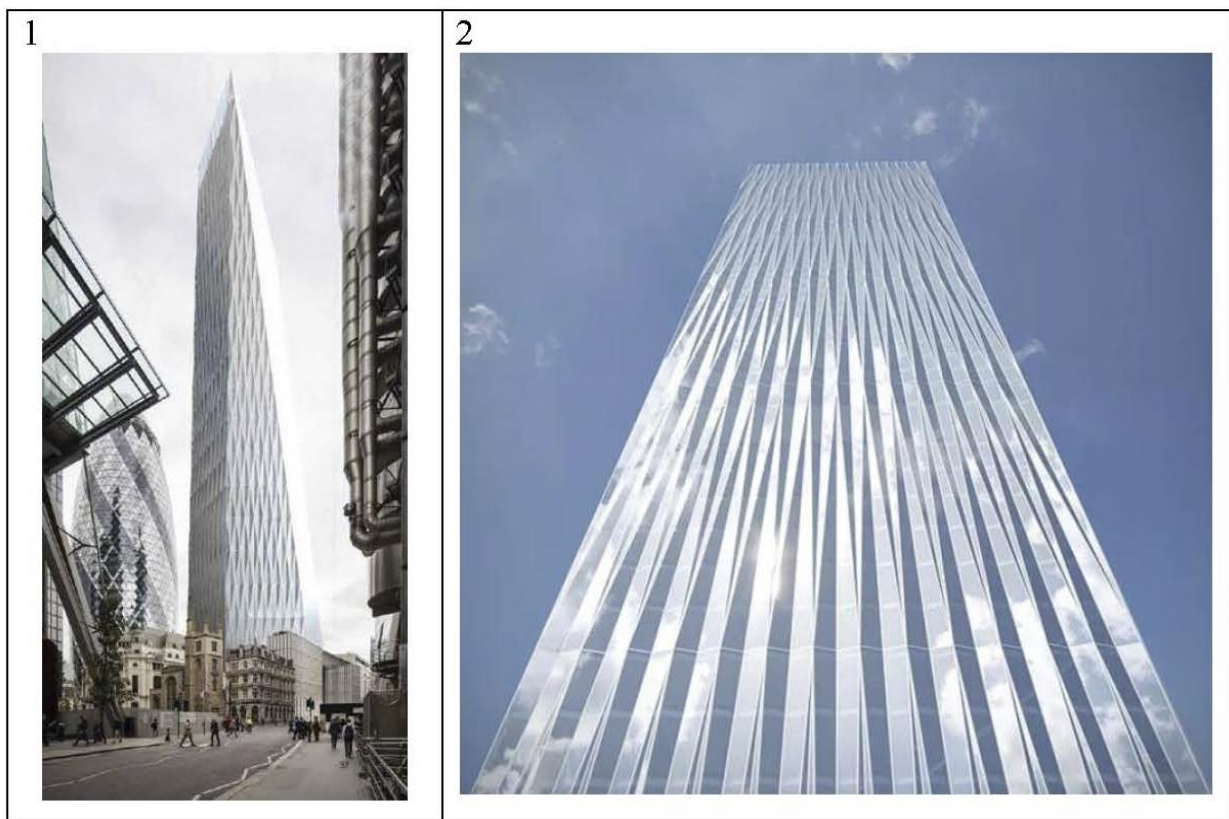


Figure 4. 1, 2. Office building "100 Laidenhall street", London, United Kingdom, "SOM", 2017 [8].

The Public library in Chicago (Illinois, USA) has an oval volume in plan, with thin ribs placed in front of the solid glazing of the second and third floors. Both two-story buildings of the Kathleen Grim School on Staten Island (New York, USA) have a developed, broken flat roof on which solar

generators are located. At the main building, the roof fracture forms a covered space on the second floor floor. From the side that has constant sunlight, the roof is extended to the ground surface. The main volume of each building is a parallelepiped. High rectangular Windows have multi-colored platbands. Shown in figure 3.

Diagonally cut volume of high parallelepiped and pyramid is an Office building "100 Liadenhall Street" in London (United Kingdom). The multi-storey structure with diagonal links alternating every seven floors is visually disguised as having frequent, vertically elongated narrow breaks, with a solid semi-mirrored stained glass window. On the first floors, these diagonal connections are open. The vertical communication node is accentuated by a thick element grid that has floor-by-floor divisions with portal connections. Shown in figure 4.

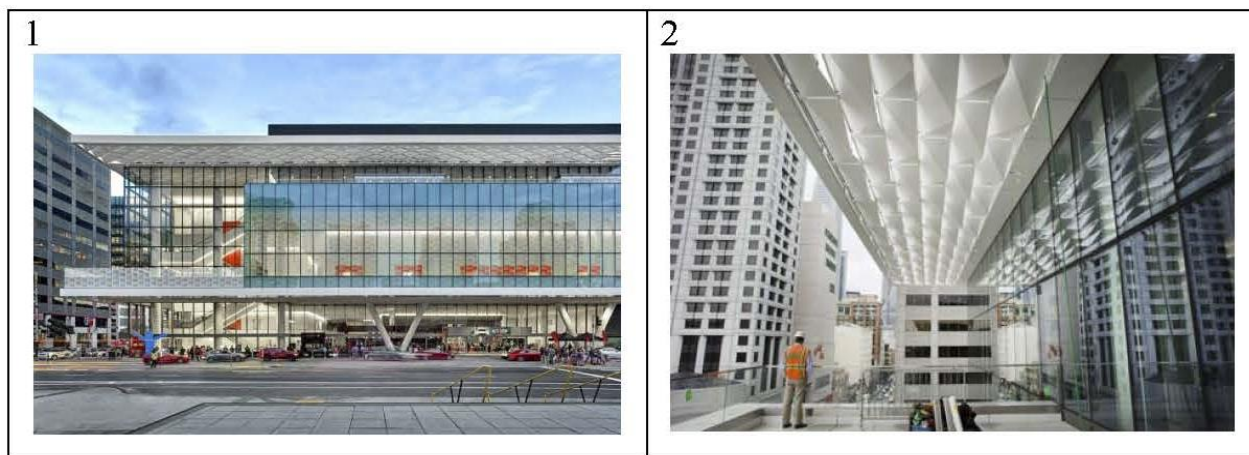


Figure 5. 1, 2. Office building "Moscone center for improvement", San Francisco, California, USA, "SOM", 2018 [8].

The five-story parallelepiped almost completely transparent volume of the Moscone improvement center Office building in San Francisco (California, USA), which has solid stained-glass Windows, is divided at the third floor level by a wide encircling balcony and topped by a thin horizontal roof with large ledges of the cornice. A rib structure with holes is accentuated in the cornice. An active role in the appearance of the building is played by specially illuminated and visible from the outside bright red elements of partitions. Shown in figure 5.

Interestingly, the displaced volumes of the parallelepipeds surrounding the triangular courtyard are indicative of the building of the G. T. I. Headquarters in Geneva (Switzerland). The skew is accentuated by slightly visible impostes of smooth solid stained-glass Windows. In the raised part, the semi-open space is structured by frame columns and diagonal links. Sections of the flat roof that correspond to the slope of the blocks are green. On the roof of the two blocks, between sloping lawns, there are flat operated platforms partially covered by canopies.

Two vertically elongated parallelepipeds connected by three different-height inserts with through openings between them determine the spatial solution of the hotel "Four seasons hotel" in Manama (Bahrain). The lowest, smallest insert protrudes beyond the vertical parallelepiped faces and is located at the level of the fourth and fifth floors and forms a kind of developed canopy over the main entrance area of the building. The next inset is smaller than the faces of the parallelepipeds, and occupies the space between the twelfth and thirty-fourth floors. It has a solid glazing with slightly visible floor divisions with an emphasis on every fourth floor. The upper inset is located between the forty-fifth and forty-eighth floors. The narrow ends of the parallelepipeds have solid glazing throughout the entire height with pronounced accents on the floor-to-floor ceilings and vertical posts.

The psychological training center of the air force Academy in Colorado springs (USA) looks like a combination of a flat parallelepiped with a truncated oblique, rectangular pyramid in cross

section. The lower one-story volume has an accentuated frame with a developed cornice due to the sunken stained-glass glazing. Completely glazed with large-relief glass, having a single volume inside, the pyramid is structured by a triangular grid of imposts, developed inside the room in the form of wide flat ribs.

The building of the Bronx district administration in new York (new York, USA) is formed in a cube-shaped volume with a low prefix in the form of a trapezoidal prism. This prism has developed ribs in the form of wide beams and posts sloping inwards, framing the solid stained glass of the lobby. The main blind volume is covered with metrically arranged small folds, in some places of which, in accordance with the floor structure, there are single or multi-numbered groups of differently high narrow window openings. Shown in figure 6.

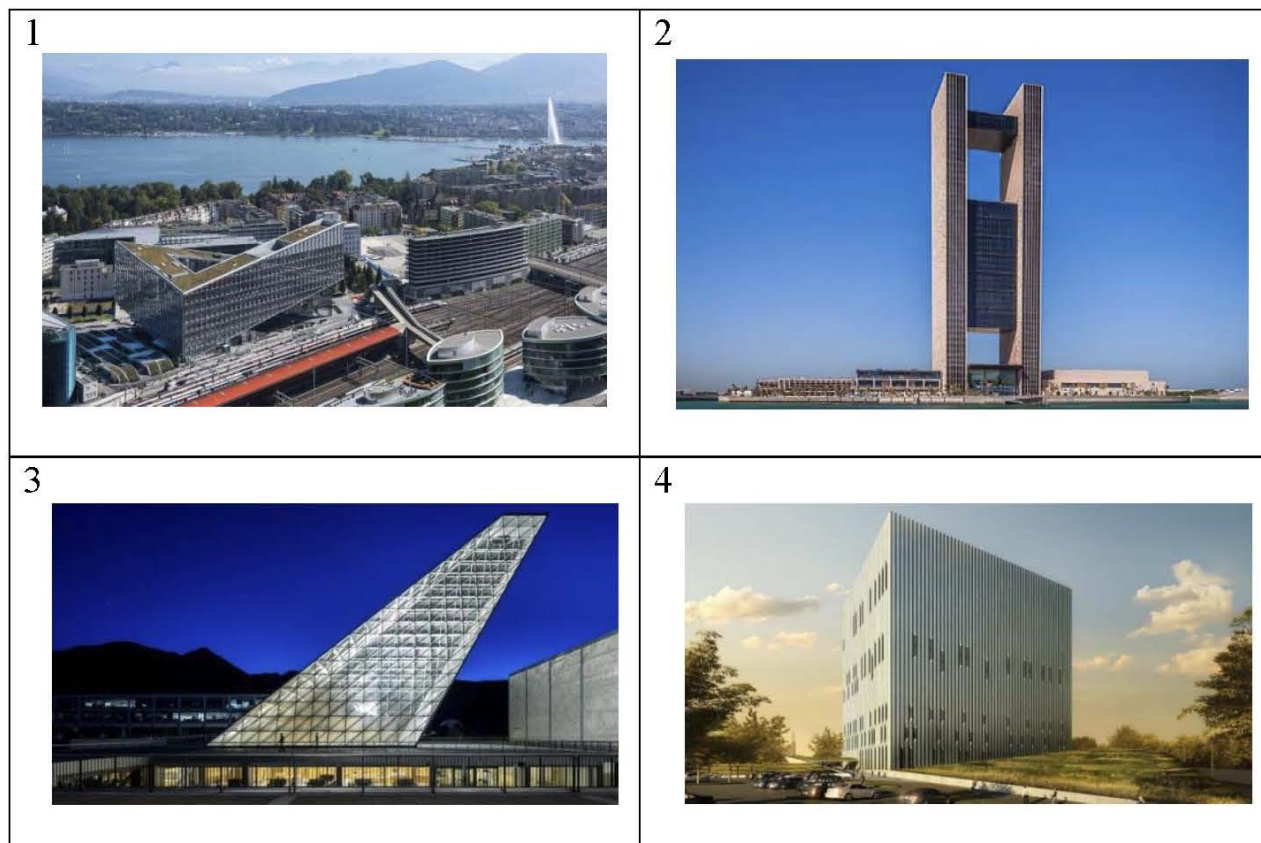


Figure 6. 1. G.T.I. Headquarters, Geneva, Switzerland, "SOM", 2015 [8]; 2. Four seasons hotel, Manama, Bahrain, "SOM", 2015 [8]; 3. Air force Academy psychological training Center, Colorado springs, Colorado, USA, "SOM", 2016 [8]; 4. Bronx district administration Building, New York city, USA, "SOM", 2016 [8].

A large cube placed on two low parallelepipeds is a three-dimensional composition of the Federal courthouse In Los Angeles (California, USA). Low parallelepipeds form two-story blind volumes with deep alternating niches of entrances. The above cube is a multi-story volume. Floors have different heights and different patterns of window openings: from solid floor-to-ceiling glazing to small rectangular and square Windows placed with different rhythms on blind surfaces. This structure is masked by a neutral uniformly folded surface located on the outside, formed by smooth and vertically coarsely grooved glass alternating in levels. The external glass folding fence with developed vertical and thinner horizontal imposts rises one floor above the internal volume, visually hiding the small pavilions and units of the building's engineering support systems placed on the roof.



Figure 7. 1. Federal courthouse, Los Angeles, California, USA, "SOM", 2016 [8]; 2. Multifunctional building "Beijing Greenland center", Beijing, China, "SOM", 2016 [8].

Staggered glass pyramids connected by square bases form the faces of a high parallelepiped of the Multifunctional building "Beijing Greenland center" in Beijing (China). Each pyramid has a height of one floor, which is indicated by a weakly plastically expressed scheme of impost. The surface formed by pyramids starts directly from the site adjacent to the building, goes uniformly along the entire height and is crushed in the area of the upper floor and the high fence of the roof being operated. Shown in figure 7.

The axial composition with alternating rectangular blocks is shown at the headquarters of the North Atlantic Alliance in Brussels (Belgium). Eight-story blocks in the Central part have an arc roof that descends to the first floor to the edges. They are United along the axis by intermediate seven-story blocks with a flat roof. In the courtyards that are formed by alternating blocks, open on one side, there are four-story blocks with green roofs that are used. Vertical surfaces are made in the form of solid stained glass Windows with different impost sizes. So, in the extreme blocks in the zones of floor halls, the imposts have the minimum necessary protrusion from the glazing plane for design reasons. The stained glass itself in these parts is located at some distance from the inter-floor ceilings, which creates the effect of a semi-open space. In other parts of the impost have a large value. The stained glass window itself has transparent glazing only in the "working area", and the window sill, including the area of floor-to-floor ceilings, is made with internal opaque glass, emphasizing the floor divisions. In some places in the structure of the stained glass Windows are replaced by paired height bars.

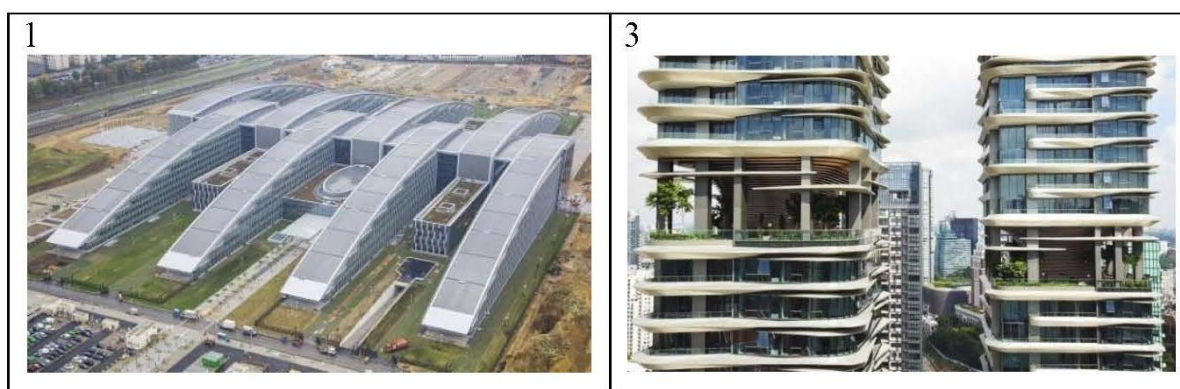


Figure 8. 1. NATO Headquarters, Brussels, Belgium, "SOM", 2017 [8]; 2. Multifunctional building, Singapore, Singapore, "SOM", 2017 [8].

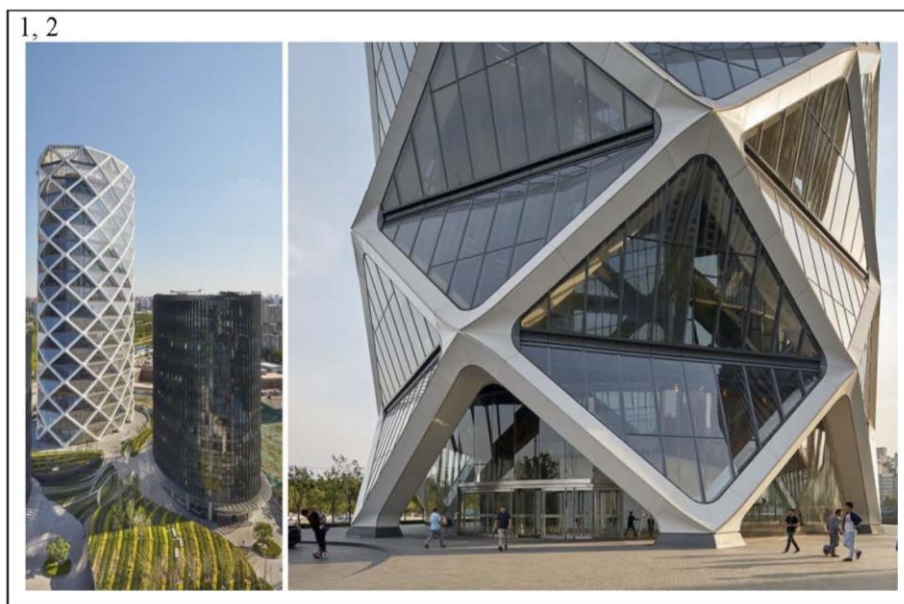


Figure 9. 1, 2. Poly international Plaza Multifunctional building, Beijing, China, SOM, 2016 [8].

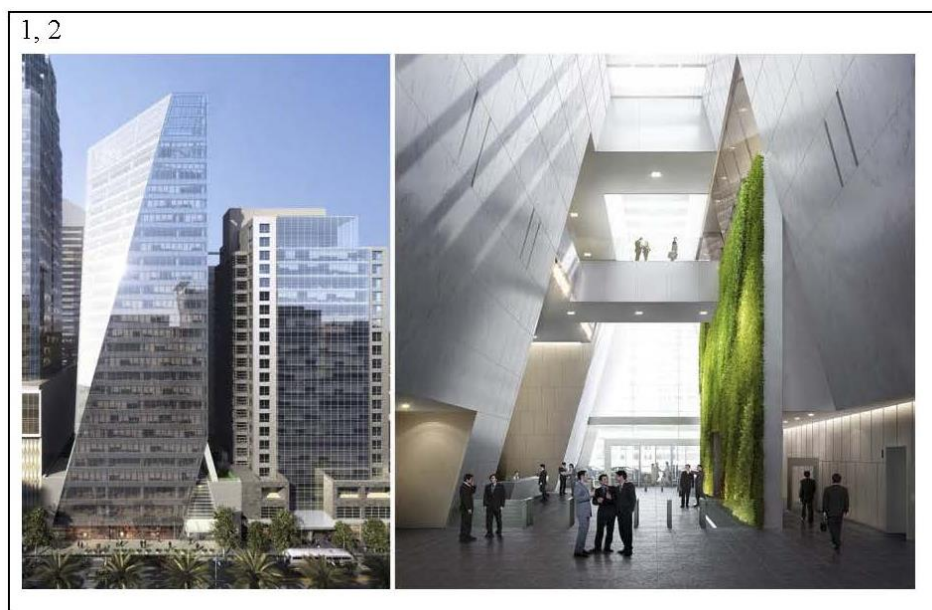


Figure 10. 1, 2. Multifunctional building, Manila, Philippines, "SOM", 2018 [8].

Multifunctional building in Singapore (Singapore) is a pair of two-tower volume, combined on the first three floors. The interstitial floors are accentuated by undulating cantilevered bifurcated disks. Solid, perimeter disks are located every two floors. The disks located between them are interrupted in the inner corners of the tower volumes. Each floor has solid stained glass Windows. At the level of the twelfth and thirteenth floors, there is an open space, in the depth of which there are stairwells and Elevator shafts with blind surfaces. Shown in figure 8.

Poly international Plaza multi-purpose building in Beijing (China) is a tower volume, the cellular surface of which is formed by triangles paired with a break. Each triangle with solid glazing encloses the outer surface of one floor. The upper eighteenth and nineteenth floors are open spaces with green areas and blocks of building engineering systems. The developed massive external sides

of the paired triangles form pyramidal cells that accentuate the multi-story confirmatively square structure. Shown in figure 9.

Multifunctional building in Singapore (Singapore) is a pair of two-tower volume, combined on the first three floors. The interstitial floors are accentuated by undulating cantilevered bifurcated disks. Solid, perimeter disks are located every two floors. The disks located between them are interrupted in the inner corners of the tower volumes. Each floor has solid stained glass Windows. At the level of the twelfth and thirteenth floors, there is an open space, in the depth of which there are stairwells and Elevator shafts with blind surfaces. Shown in figure 8.

Poly international Plaza multi-purpose building in Beijing (China) is a tower volume, the cellular surface of which is formed by triangles paired with a break. Each triangle with solid glazing encloses the outer surface of one floor. The upper eighteenth and nineteenth floors are open spaces with green areas and blocks of building engineering systems. The developed massive external sides of the paired triangles form pyramidal cells that accentuate the multi-story confirmatively square structure. Shown in figure 9.

A beveled parallelepiped resembling a propeller forms the volume of a multi-Purpose building in Manila (Philippines). Solid exterior glazing forms a clearly perceived multi-story structure with wide window sills and alternating columns. One of the lower corners of the volume is open to a height of five floors. It emphasizes the outer edge, which has a relatively large cross-section. From this corner, the entrance to a multi-colored semi-open hall is formed, the space of which is crossed by transition galleries on several levels. The hall railings are dominated by blank surfaces, some sections of which have vertical landscaping panels. Shown in figure 10.

The step solution has a tower volume of the Multifunctional building "400 lake shore drive" in Chicago (Illinois, USA). The surface is divided into large segments of the same size, which are separated by wide ribs. Each cell of the segment is formed by developed arc impostes at the level of floor-to-floor overlappings. The stained glass Windows located between them are divided into three parts. The narrow sides coincide with the arc, and the wide Central parts coincide with the chord. In this case, the side parts, in contrast to the Central part, have a horizontal impost at the level of the window sill. The top of the volume is not accentuated. The open area on the roof has a high fence, which is a continuation of the facade stained glass. Open green areas are located on the ledges. Shown in figure 11.

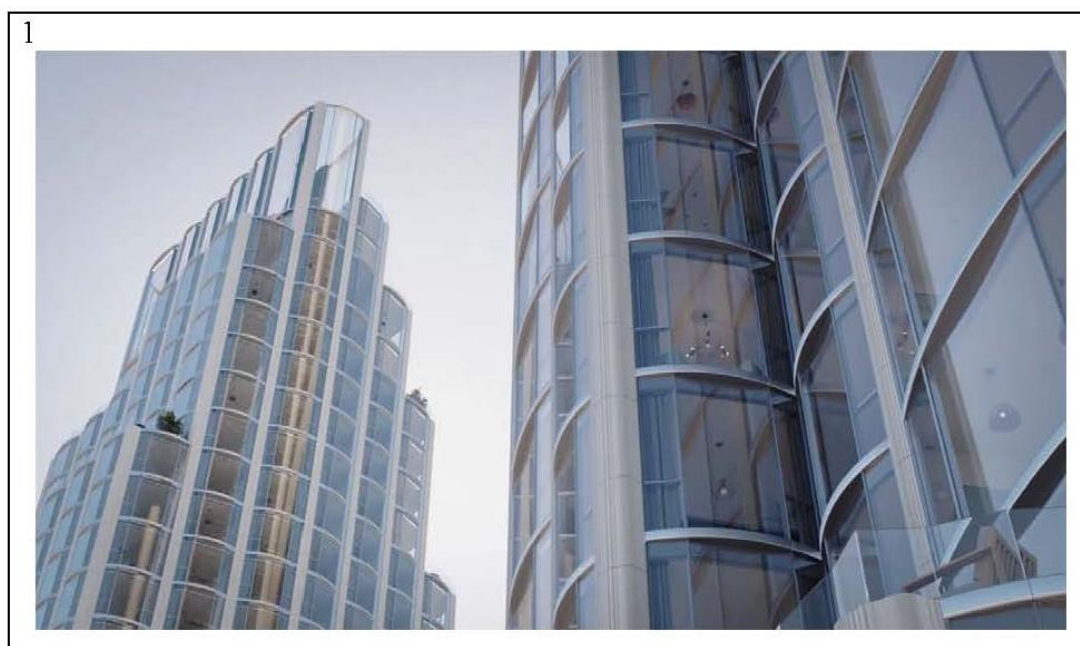


Figure 11. 1. Multifunctional building "400 lake shore drive", Chicago, Illinois, USA, "SOM", 2018 [8].

Accentuated exterior elements of the frame dominate the appearance of a Commercial building in Sydney (Australia), which has the shape of a rectangle in the plan. The developed columns located at the ends are connected by thin diagonal elements every six floors. On the front part of the facade, this division leaves a wide strip of protruding inter-floor overlap. At the same time, the first two floors of the building are completely open, and the first floor itself has a double height relative to the upper floors. Due to the slope of the terrain, a semi-open space of the ground floor appears on one side. This spatial grid encloses a thirty-four-story parallelepiped with solid glazing and thin vertical pillars. The areas between floors are highlighted by opaque panels on the inside of the stained glass window. Shown in figure 12.



Figure 12. 1, 2. Commercial building, Sydney, Australia, "SOM", 2019 [8].

The company "SOM" interprets international style regardless of the region with the maximum use of solid stained glass on buildings that have the shape of parallelepipeds and prisms of various sizes. Solid stained glass in a flat or differently folded form is either an element of the outer wall, or serves as a screen that masks window openings of various sizes and shapes. A characteristic feature of the corporate style of the company "SOM" is the lack of emphasis on the wedding of the facade, which is simply an interrupted stained glass window that encloses the roof with superstructures. In the objects of the 2010s, the forms of buildings designed by "SOM" become more complex, preserving the main features of the corporate style. Surfaces occupied by solar panels are becoming an increasingly important element of the composition. The architectural forms themselves are formed taking into account the possibility of using wind energy. The corporate identity of the company "SOM" opens up the possibility of re-applying projects for another site.

REFERENCES

- [1] Volichenko, O. V., Omuraliev, D. D. The mainstream of the latest architecture is the twenty-first century. - Saarbrücken: Palmarium Academic Publishing, 2013. -- 449 p.(Volichenko, O.V., Omuraliev, D.D. Meinstrimy novejšei arhitektury - dvadsat pervyi vek. - Saarbrücken: Palmarium Academic Publishing, 2013. - 449 s).
- [2] Nadeeva I.A., Samoilov K.I. "Ecological orientation of architecture: from natural necessity to conscious need" // Problems of the ancient world and the present / Almaty center of antique studies. Interuniversity scientific collection, vol. IV. - Almaty: Almaty branch of the non-state educational institution of higher professional education "St. Petersburg Humanitarian University of Trade Unions", 2013. - P.498-503.(Nadeeva I.A., Samoilov K.I. «Ekologicheskaya orientasiya arhitektury: ot estestvennoi neobходимosti k osoznannoi potrebnosti» // Problemy antichnogo mira i sovremennost / Almatinskii sentr antikovedeniya. Mezhvuzovskii nauchnyi sbornik, vyp. IV. – g.Almaty: Almatinskii filial negosudarstvennogo obrazovatel'nogo uchrejdeniya vysshego professional'nogo obrazovaniya «Sankt-Peterburgskii gumanitarnyi universitet profsozov», 2013. – S.498-503)
- [3] Nadeeva I.A., Samoilov K.I. "Methods of designing energy-efficient buildings" // scientific journal Bulletin of KazGASA №1 (47) section Architecture - Almaty: Publishing house of KazGASA "Architecture and Design", 2013.(Nadeeva I.A., Samoilov K.I. «Priemy proektirovaniya energoeffektivnyh zdaniy» // nauchnyi jurnal Vestnik KazGASA №1 (47) seksii Arhitektura – g.Almaty: Izd.d KazGASA «Arhitektura i Dizain», 2013.)
- [4] Mutaliev, A.D., Samoilov, K.I. Interpretation of sustainable development principles in modern architecture // Science and Education Today, No. 12 (47), 2019. - P.97-101.(Mutaliev, A.D., Samoilov, K.I. Interpretation of sustainable development principles in modern architecture // Nauka i obrazovanie segodnya, № 12 (47), 2019. - S.97-101.)
- [5] O.Priemets, K.Samoilov, I.Zayats, Zh.Kenessarina, E.Yssembayeva Innovations in Kazakhstan's Architecture // International Journal of Innovative Technology and Exploring Engineering (IJITEE). - Volume-8 Issue-10, August 2019. – P. 2305-2313. - ISSN: 2278-3075
- [6] SOM / Skidmore, Owings & Merrill LLP. – URL: <https://www.som.com>
- [7] "Architect Magazine Names SOM its Number One Architecture Firm in the United States". SOM.com. May 2010. Archived from the original on June 13, 2012. – URL: https://web.archive.org/web/20120613184050/http://www.som.com/content.cfm/architect_magazine_names_som_number_one_firm
- [8] Kuzenbaev D.Sh., Sadvokasova G.K., Samoilov K.I. Architectural concepts of design firms (a style aspect) - Almaty: "Construction and Architecture", 2019. - 186 p.(Kuzenbaev D.Ş., Sadvokasova G.K., Samoilov K.I. Arhitekturnye konsepsii proektnyh firm (stilevoi aspekt) = Architectural concepts of design firms (a style aspect) – Almaty: «Stroitelstvo i Arhitektura», 2019. – 186 s.)
- [9] Priemets, O.N., Samoilov, K.I. The development of ornament in the architecture of Almaty = The ornament evolution in the Almaty architecture. - Almaty: Publishing house "Building and Architecture", 2019. - 208 p.(Priemets, O.N., Samoilov, K.I. Razvitiye ornamenta v arhitekture Almaty = The ornament evolution in the Almaty architecture. – Almaty: Izdatelskii dom «Stroitelstvo i Arhitektura», 2019. – 208 s)
- [10] Cruickshank, A. World's smartest buildings: Pearl River Tower, Guangzhou // PlaceTech. - 30 Aug 2018. – URL: <https://placetech.net/analysis/worlds-smartest-buildings-pearl-river-tower-guangzhou/>

А. Муталиев, К.И. Самойлов, О.Н. Приемец

Satbayev University, Алматы, Қазақстан

Қазақ бас сәулет-құрылыс академиясы, Алматы, Қазақстан

*e-mail: alisher.mutaliev@gmail.com

**"СКИДМОР, ОУИНГС ЭНД МЕРРИЛЛ" КОМПАНИЯСЫНЫҢ
ТРАНСӨңІРЛІК МОНОСТИЛИЗМ ТҰЖЫРЫМДАМАСЫНДАҒЫ "ЖАСЫЛ
СӘУЛЕТ" ҚАҒИДАТТАРЫН ТҮСІНДІРУ**

Андатпа. Скидмор, Оуингс және Мерриллдің шығармашылығындағы трансаймақтық моностилизм тұжырымдамасы қарастырылған, ол 22 жұмыс мысалында қарастырылған. Заманауи сәулет нарығындағы ең ежелгі компаниялардың бірі - Skidmore, Owings & Merrill - сексен жылдан

астам уақыт бойы Халықаралық стиль тұжырымдамасын Л.Мис ван дер Роэнің шығармашылығына тоқталып, үнемі түсіндіріп келеді. Стандартты, біртұтас элементтерден қалыптасқан шыны металл беттердің визуалды жеңілдігі, формалар геометриясының салыстырмалы қарапайымдылығы, акцентуацияланған утилитаризм компанияның корпоративті ерекшелігінің танымал белгілері болды. Пішіндеудің қосымша аспектілері ғимараттардың энергия тиімділігін арттыру әдістерін түсіндіру арқылы қамтамасыз етіледі.

Негізгі сөздер: жасыл сәулет, энергия тиімділігі, жел генераторлары, күн панельдері, фирмалық стиль, шығармашылық тұжырымдама.

А. Муталиев, К.И. Самойлов, О.Н. Приемец

Satbayev University, Алматы, Казахстан

Казахская головная архитектурно-строительная академия, Алматы, Казахстан

*e-mail: alisher.mutaliev@gmail.com

ИНТЕРПРЕТАЦИЯ ПРИНЦИПОВ «ЗЕЛЕННОЙ АРХИТЕКТУРЫ» В КОНЦЕПЦИИ ТРАНСРЕГИОНАЛЬНОГО МОНОСТИЛИЗМА КОМПАНИИ «СКИДМОР, ОУИНГС ЭНД МЕРРИЛЛ»

Аннотация. Рассмотрена концепция трансрегионального моностилизма в работе компании «Скидмор, Оуингс энд Меррилл», которая рассмотрена на примере 22 произведений. Одна из старейших компаний на современном архитектурном рынке – «Скидмор, Оуингс энд Меррилл» – на протяжении более чем восьмидесяти лет работы последовательно интерпретирует концепцию «Интернационального стиля», ориентируясь на творчество Л.Мис ван дер Роэ. Визуальная легкость стеклянно-металлических поверхностей, образованных стандартными, унифицированными элементами, относительная простота геометрии форм, акцентируемый утилитаризм стали узнаваемыми чертами фирменного стиля компании. Дополнительные аспекты для формообразования дает интерпретация приемов повышения энергоэффективности зданий.

Ключевые слова: зелёная архитектура, энергоэффективность, ветрогенераторы, солнечные батареи, фирменный стиль, творческая концепция.