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01. SKATEPARK'S SURROUNDINGS



02. EVERYTHING ABOUT SKATEPARKS

The idea The idea of skateboarding comes straight from California, and its roots date back to the 1970s. Initially, the first boards were used to ride in empty pools, then they served as transport tool to help surfers reach the beach. With the growing interest in this sport, professional skate parks were designed and built. The fashion for skateboarding came to Poland with a long delay and, in fact, only for several years we can talk about a dynamic increase in the popularity of skateboarding, roller skates, and BMX bikes. Skateparks, by contractors and investors, are still called innovative sports facilities, the construction of which requires a lot of experience and commitment.

Division of skateparks - wood, metal or concrete?

Initially, only wooden skateparks were built in Poland, guaranteeing about 5 years of use. The generally applicable standard, the criteria of which must be met by the emerging skatepark is the norm PN-EN 14974+A1:2010. Devices for users of roller equipment - safety requirements and test methods. The good quality of the skatepark will be guaranteed by a company whose devices are certified by an independent unit, accredited by PCA. Each new skatepark should be equipped with an manual and regulations defining the rules of use, behavior, and safety. The construction and assembly of a wooden and metal skatepark lasts, depending on its size and the number of devices, from 2 to 6 weeks. After several years of building plywood and composite parks, a new fashion has come to Poland - concrete skateplases and skate parks. The use of the highest quality poured concrete allowed to improve the comfort and quality of riding, to obtain the character of the urban infrastructure and the shape of park alleys, thanks to which the most demanding riders felt their natural skate environment.

Such facilities are usually created directly on the construction site, and the duration of the investment is from 3 to 12 months (work on the park design and organization of the necessary permits ranges from 1 to 4 months). The monolithic slab of elements is fused into the surface, and small elements, handrails or benches are screwed to the concrete, which allows for a uniform shape, durability and safety.

The size of the skatepark and the size of the city

For architects and officials, responsible for the appearance of urban infrastructure, the implementation of such an investment is primarily a long decision-making process. Below we present the most important information on the construction and design of skateparks.

The size of skateparks

The average skatepark area in relation to the city's population is presented in the table below:

POPULACJA	CAŁKOWITA POWIERZCHNIA SKATEPARKU
poniżej 2.500	200 m2
2.500 do 5.000	200 m2 do 800 m2
5.000 do 20.000	800 m2 do 1300 m2
20.000 do 50.000	1.300 m2 do 1.800 m2
50.000 do 100.000	1.800 m2 do 2.500 m2
100.000 do 250.000	2.500 m2 do 4.500 m2
250.000 do 500.000	4.500 m2 do 7.500 m2
500.000 do 1.000,000	7.500 m2 do 11.000 m2
1.000,000 do 2.000,000	11.000 m2 do 16.000 m2

*In the case of smaller towns, it is recommended to build a skatepark with an area of min. 200 m2. In larger cities, the total area of all skateparks (even 5 - 15 objects per city) should be from 11,000 - 16,000 m2.

05. TYPES OF SKATEPARKS

SKATEPOINT - Skatepoint- those are obstacles adapted to the existing buildings, well integrated into the existing urban architecture, e.g. parks, squares, or recreational areas. An example of such obstacles are concrete benches with metal angles placed along the alleys. The skatepoint can be used by 3-5 people at the same time. They occupy an area of approx. 80 - 100 m2.



SKATESPOT - - the skatespot consists of a small number of obstacles, arranged to ensure a smooth ride from one element to the other. Similar to the skatepoint, it will fit perfectly into urban architecture, but its area ranges from 200 m2 to 450 m2. Skatespot can complement recreational areas and sports facilities. When building it, it is recommended to install lighting and small architecture.



COMMUNITY SKATEPARK - the most common type of skatepark. Its area varies between 500 m2 and 900 m2. Places of this type should be lit and equipped with small architecture, such as benches and litter bins. Depending on the type, size and number of elements, a dozen or so to several dozen people can stay in the skatepark at once.



REGIONAL SKATEPARK - the largest in area, usually exceeding 2000 m2. Such facilities should have facilities enabling the organization of competitions and events, small architecture (benches, litter bins), parking and gastronomy facilities. The larger area of the skatepark allows for better design of obstacles that are tailored to the needs of users.



04. DIVISION OF SKATEPARKS BY STYLE

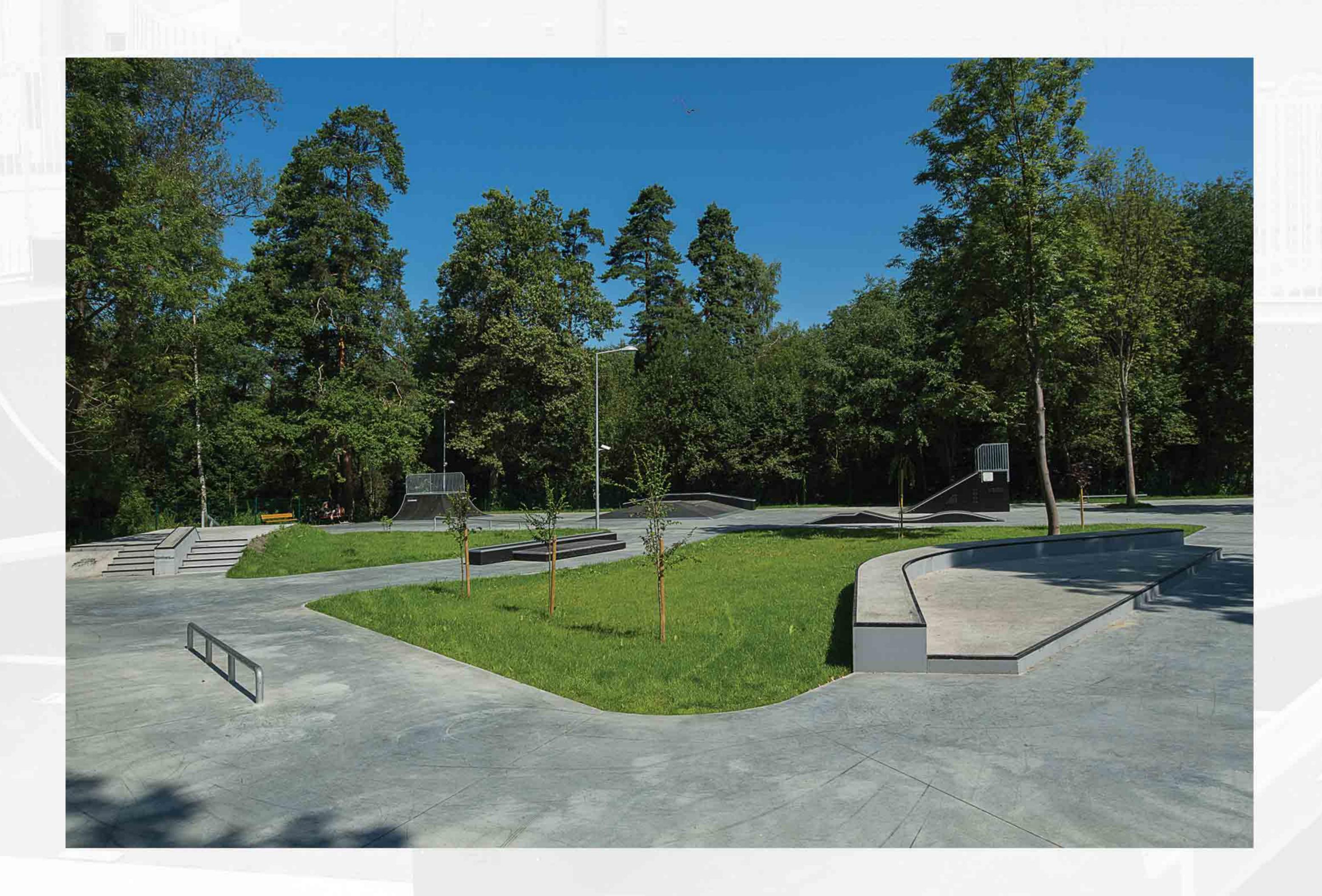
SKATEART - the very idea combines a passion for skateboarding with design and public utility. The project is aimed at architects and people responsible for the appearance, aesthetics and functionality of parks, alleys and other urban facilities. Thanks to the use of the best solutions, it was possible to connect the sports device with the surrounding space. SkateART are special skateboard obstacles that have public functions: the design of a bench, monument, or fountain.

SKATEPLAZA — is an object imitating a street and elements of urban infrastructure. Obstacles of atypical and irregular shapes can be easily integrated into the existing buildings. To maintain a natural look, the skateplase is built of unusual materials with the use of colored concrete and natural stones. Often in the park itself, green zones are placed like: lawns and flowerbeds.

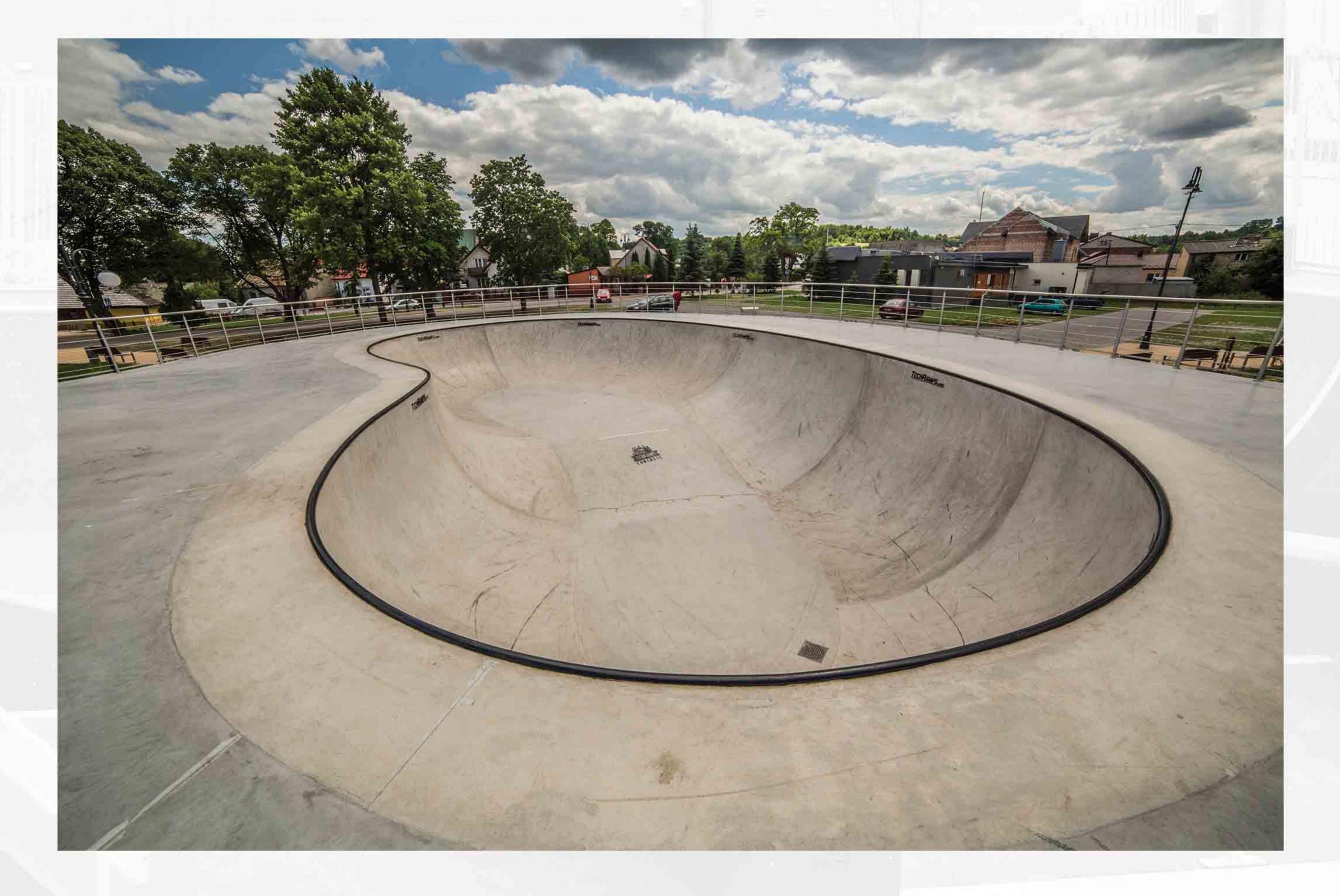




CLASSIC SKATEPARKS - designed to meet the expectations of even the most demanding users. The size and type of obstacles should only be designed after the designer has first consulted with local youth. Classic skateparks are made in two options: concrete and wooden. The designs of such facilities are adapted to the existing surface or are created from scratch, taking into account various types of ground.



BOWLS, RAMPS, MINIRAMPS - those are obstacles that create an independent ridable place. Well-designed, they can be skatepark devices or be treated as free-standing elements. They are perfect for supplementing facilities in recreation and sports centers, at swimming pools, sports fields or city parks. Ramps and miniramps look like part of a cut pipe. They can be of different height and width, adjusted to the preferences of users and the contracting authority's budget. The bowls are imitations of pools, popular in California already in the 70s. They are characterized by a rounded shape, dedicated to riders with more experience.



05. ABOUT SELECTION OF SPECIALISTS FOR THE CONSTRUCTION OF CONCRETE SKATEPARKS

BASIC INFORMATION

Over the last few years, several hundred facilities for skateboarding, rollerblades and BMX bikes have been built in Poland, unfortunately, many of them do not meet the quality standards. Often, despite good designers, skateparks, which were made by companies without adequate experience, did not meet the expectations of their users.

Very often, contractors undertake activities without appropriate knowledge, experience and equipment, which results in a lack of attention to detail and quality of workmanship. Many disadvantages are not noticed at first glance, and they have a huge impact on riding on such a facility. This translates into the end result and evaluation of the entire investment.

Often, the rules of the tender allow companies that do not have experience in the construction of such facilities to build skate parks, and placing a price as one of the most important tender factors lowers the quality of construction.

One of the solutions that can guarantee the expected results is the introduction of a requirement to have references in the construction of specific types of skateparks, significantly different from each other. This applies in particular to the technology of production, e.g. a monolithic skatepark, cast by shotcrete method, is significantly different from a skatepark made of prefabricated concrete or wooden structures.

Contractors very often declare that they have appropriate qualifications, but improperly performed investments result from insufficient knowledge about the construction of such specialized facilities.

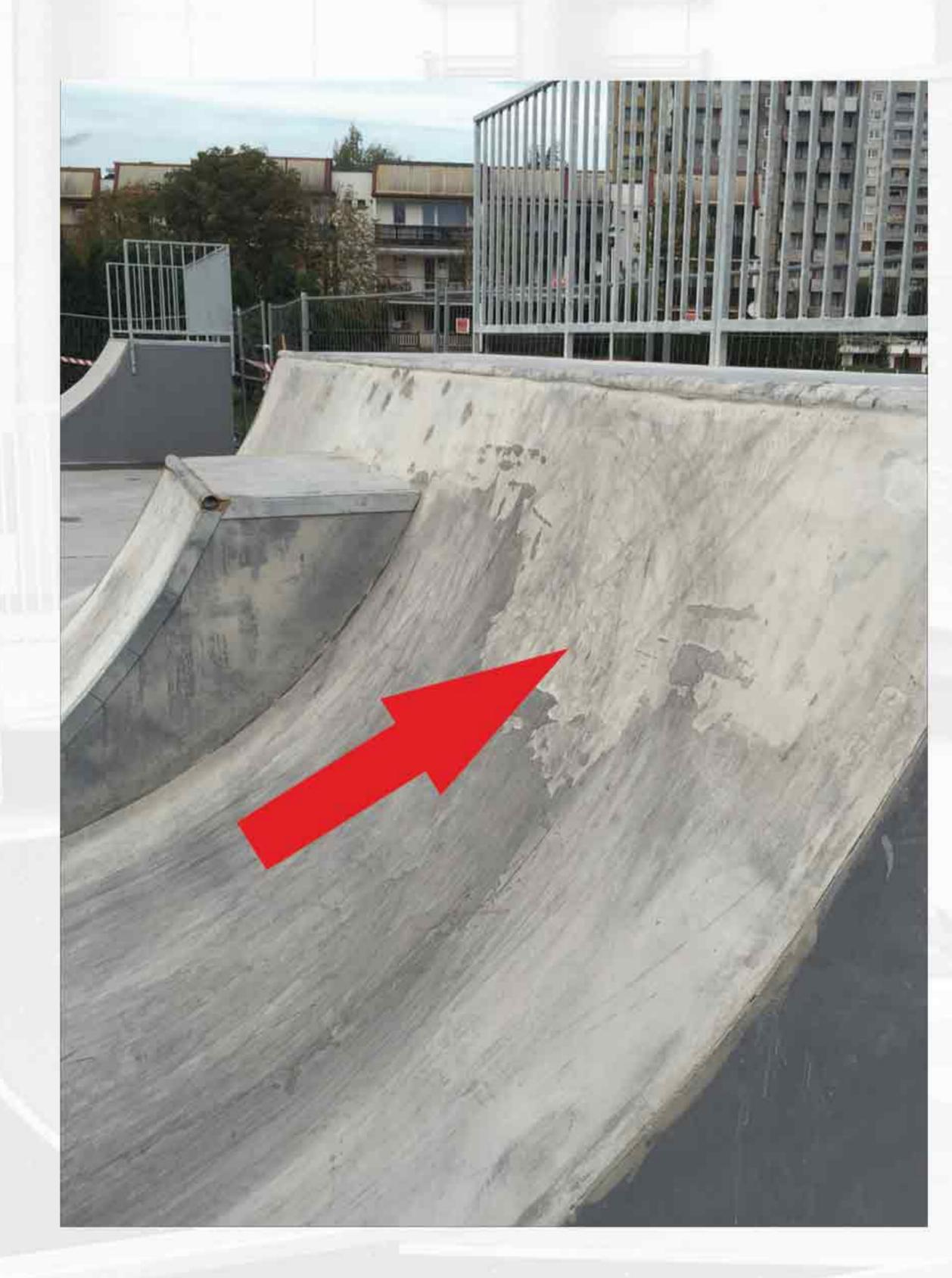
The experience of building skateparks in Poland shows that contractors often do not understand the essence and seriousness of the task they have to perform. They often treat the construction of a skatepark as ordinary reinforced concrete (construction) work, possible to be performed by untrained employees.

They don't know how, or they can't make key details. Work on building skateparks must be done patiently and at a high level. Many projects show that contractors do not fulfill the task entrusted to them and many times the huge amount of work put into designing, public consultations or raising funds for the construction of the facility is wasted, the final effect of the entire investment, despite its good assumptions, is not satisfactory.

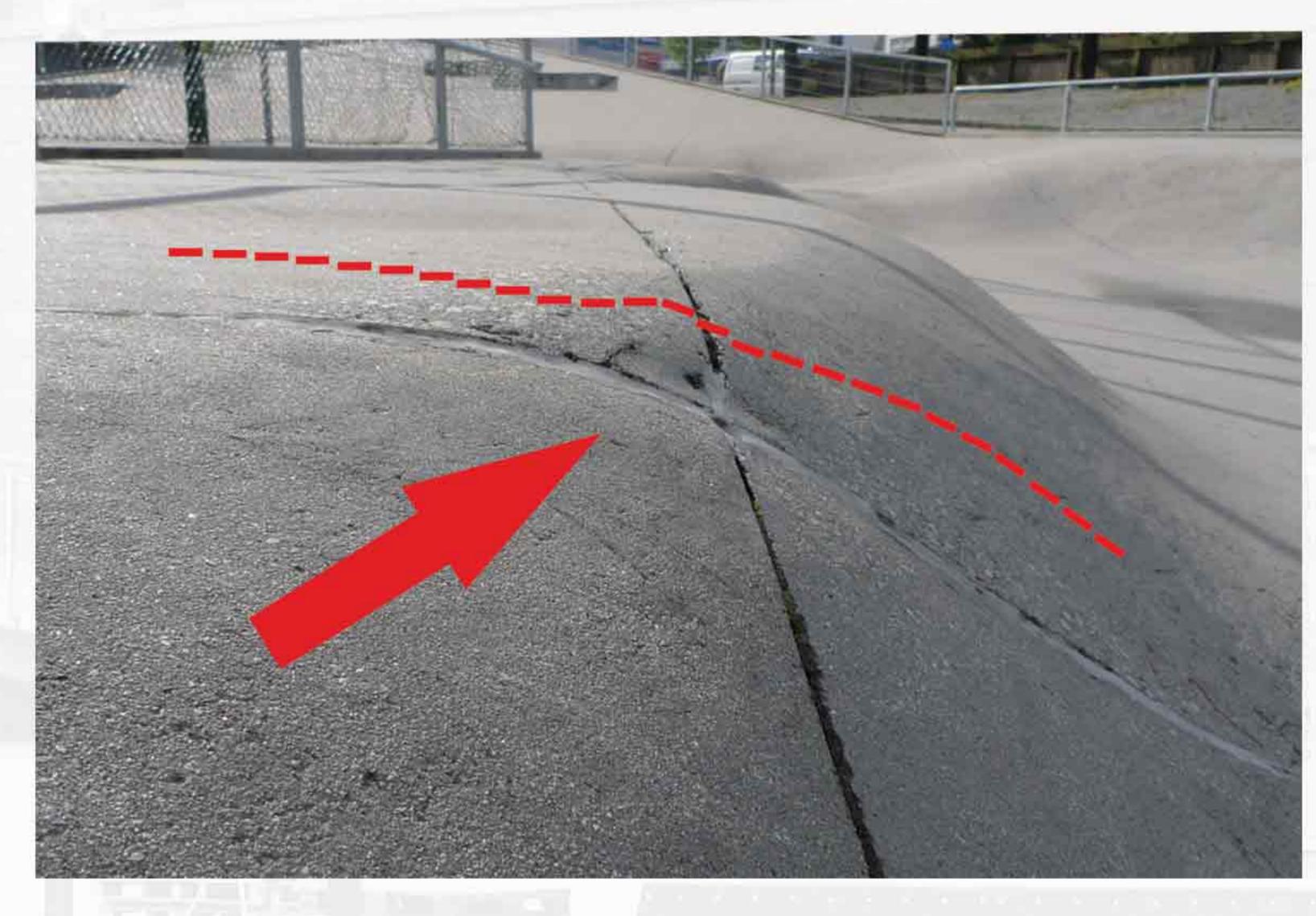
THE MOST COMMON MISTAKES MADE BY UNQUALIFIED CONSTRUCTION COMPANIES

1. UNEVEN DRIVING SURFACE

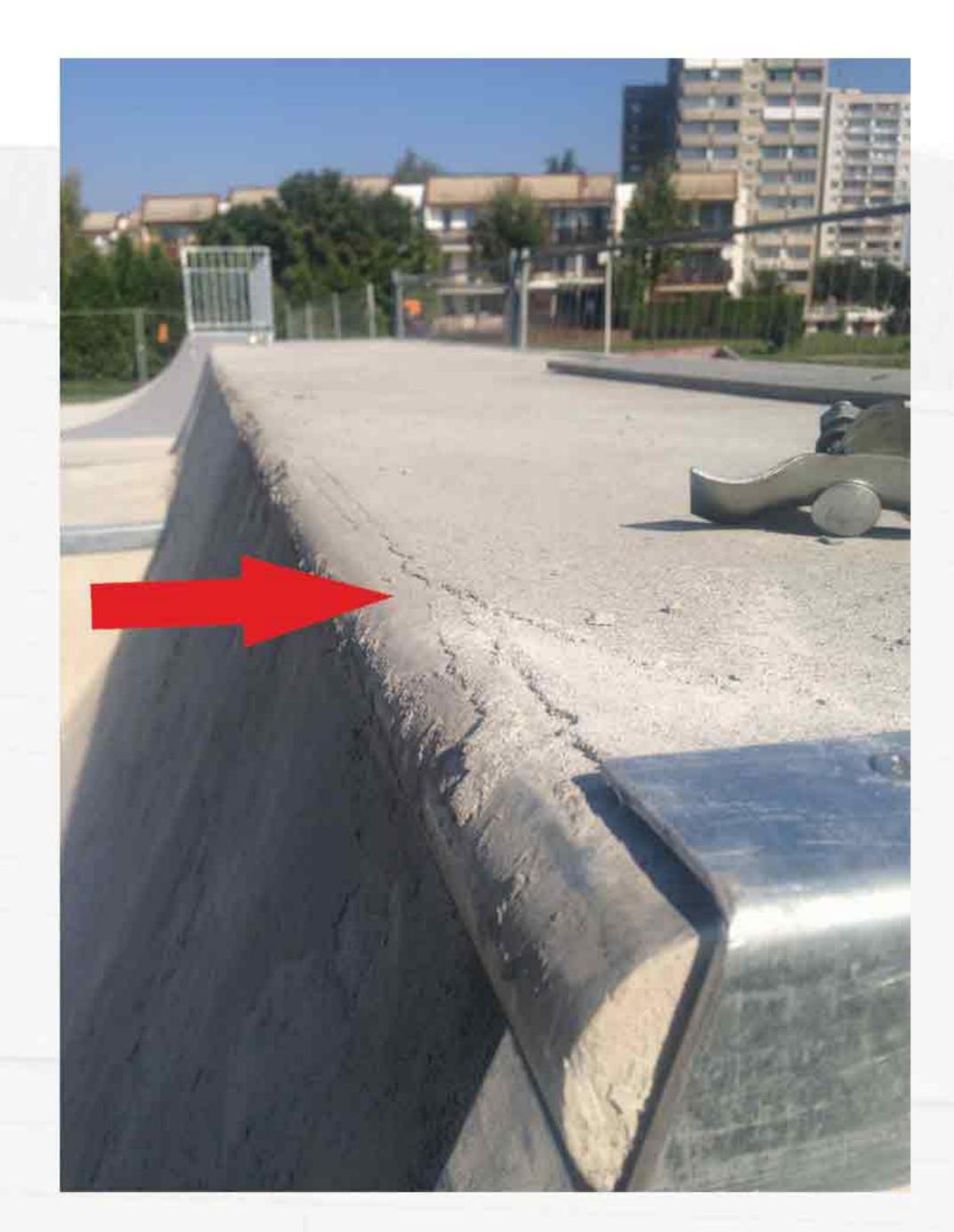
A common mistake is uneven and bumpy curves. Workers without experience and specialized equipment (e.g. shotcrete machines) are not able to make rays, bevels or precise bends on the top of the surface.



Device with badly scuffed surface, unusable - visible places of imprecise concrete scuffing.



An improperly scuffed device causes a loss of grip while driving, which leads to many injuries.



The edge of the device flattens at a critical point at the top of the obstacle, which results in a loss of take-off force and a negative effect on ride quality.



Device with poorly scuffed surface is unusable. Poorly scuffed device causes a large number of injuries to users and excessive wear of the equipment.

2. INCORRECT PLACEMENT OF PIPES ON THE EDGES OF DEVICES

This is one of the most common mistakes. The pipes at the edge of the curved structures must be very precisely placed between 6 and 10 mm on the outside. The coping (pipe) protrudes too much over the edge and not enough in the second case.





The pipes at the "edge" (coping) does not The coping pipe sticks out too much. Both the stick out. The entire descent is unusable. rim and the entire obstacle are unusable.

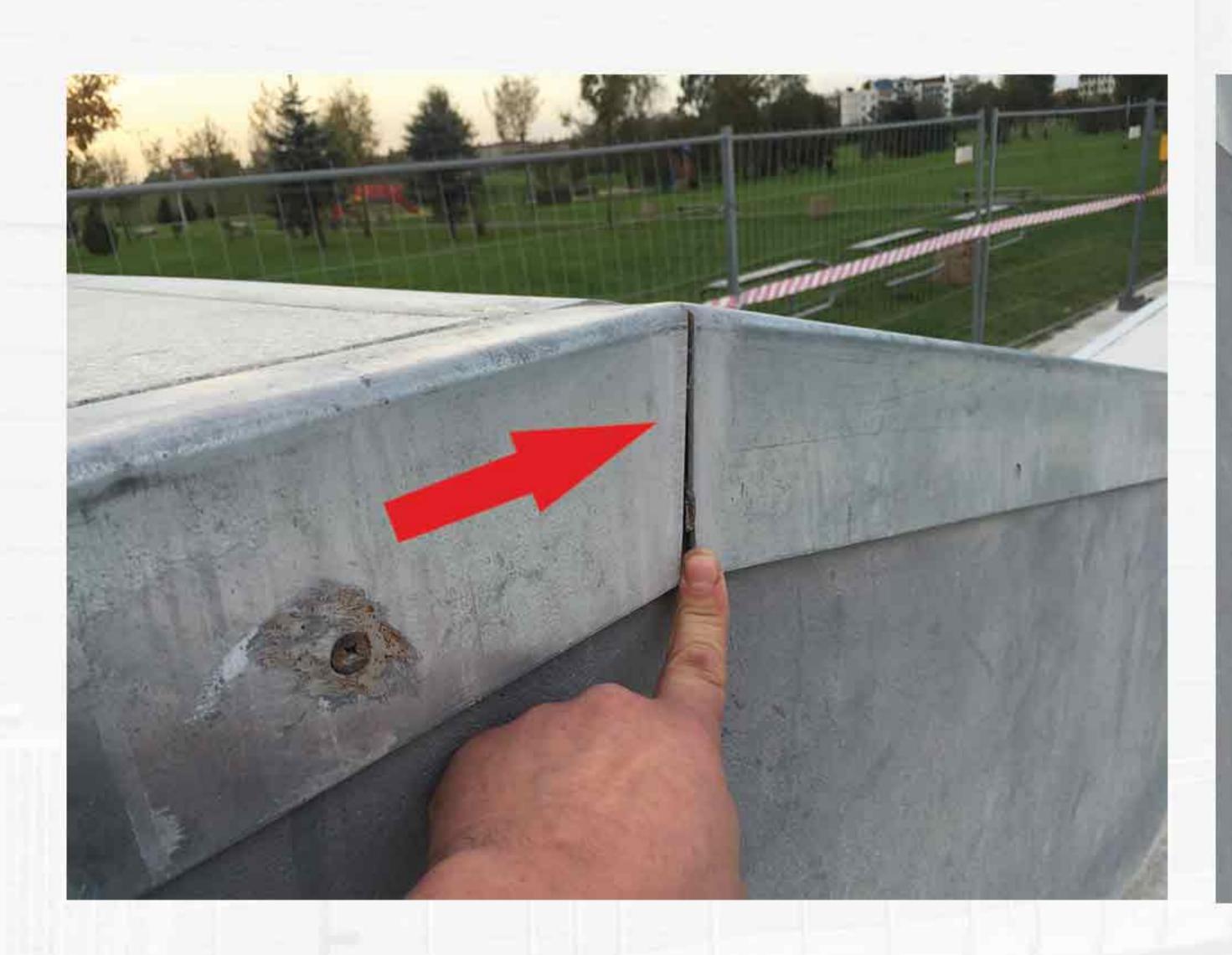
3. BAD SLOPE - NO WATER DRAINAGE

Water prevents riding on the object. Standing water on the skatepark plate does not favor its users - wet surface causes loss of grip, which poses a threat to riders. The skateboard which is made of wood and bearings, has been damaged by water. Appropriate slopes of the riding surfaces must drain the water into the grates. It is very rare for contractors to drain properly, which causes water to collect on some obstacles and around the grates.



4. DANGEROUS FINISH

Finishing of metal elements such as angles, flat bars and copings are extremely important. They must not protrude above the level of the obstacle and have sharp edges. Angles should be firmly anchored and embedded in concrete, otherwise these elements will fall off.









Above you can see incorrect finishing of steel elements.

5. GRINDING AND HONING

Riding surface for skateboard, rollers and BMX should be smoothed (scuffed) right after pouring concrete — it is mistake to scuff it after a few days.

Unexperienced contractors, often, repair imperfections by grinding uneven surface, which negatively affects the further use of the skatepark. Smoothing skills are essential when building this type of facility. Badly obliterated surface is similar to sandpaper and its unsafe in use. Standard technic of falling becoming useless, and user loss not only concentration but also enjoyment from riding.

6. CONSTRUCTION TIME

At the planning stage of the investment, always remember that rushing is not the way to achieve a good result. The complexity and variety of skateboarding area, and the accuracy with which you must demonstrate your job, mean you have to make smaller castings than usual one.

Smooth mechanical troweling is a real race against time, and troweling concrete that has set is a very big mistake. Contractors usually run out of time if they have too many square meters to do and too few competent hands to work.

The construction of a skatepark with an area of, for example, 500 m2, takes 10 to 14 weeks, depending on weather and geological conditions and the complexity of the project, and the facility with a large number of arched surfaces (bowls, quaters) can last even twice as long. The date when concrete works are planned must be a frost-free period (preferably at temperatures above +5 C). Therefore, the works should take place in the period from April to November. Using heated tents protects against low temperatures, but increases the cost of construction significantly.



The application of concrete on curved and sloped obstacles should be performed by shotcreting with the use of appropriate equipment.



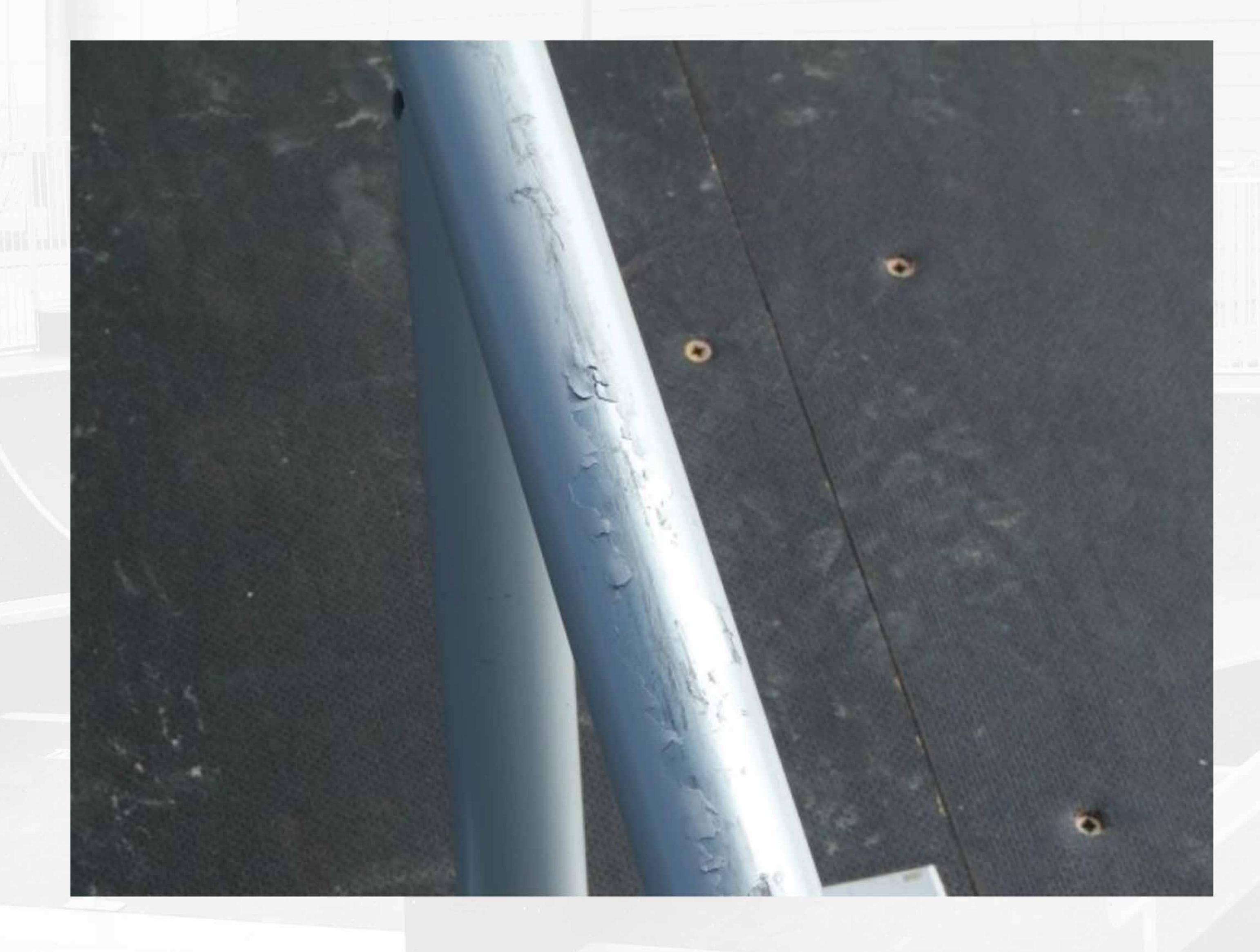
It is unacceptable to apply concrete by gravity - directly from a pump or shovel.

06. ABOUT SELECTION OF SPECIALISTS - WOOD

THE MOST COMMON MISTAKES MADE BY UNQUALIFIED CONSTRUCTION COMPANIES

1. Inappropriate painting of devices

Handrails painted in this way do not have the appropriate slip when performing tricks, and the paint peeling does not protect the device against corrosion.

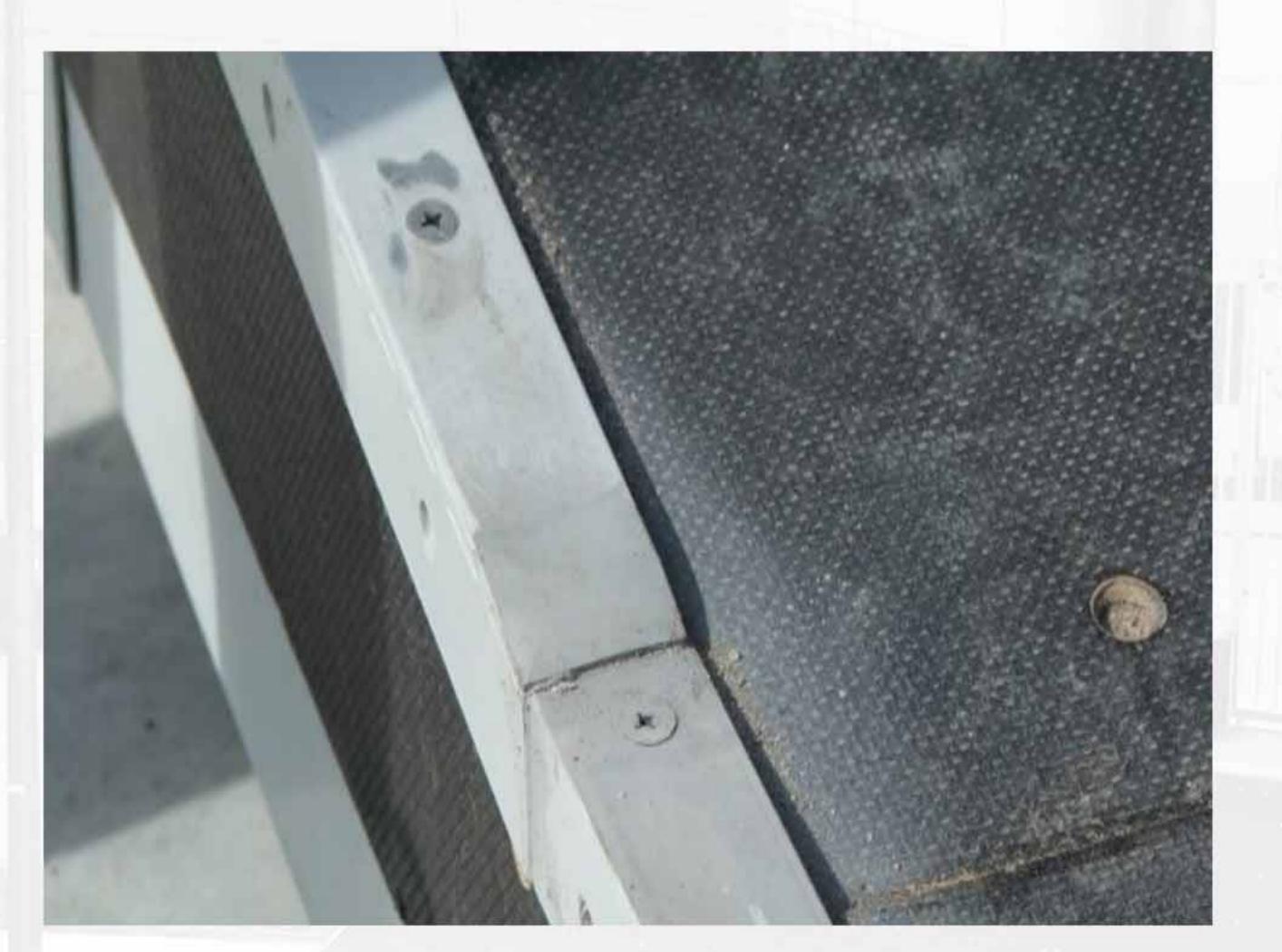


The device was painted with the wrong type of paint, not adapted to this type of elements and using an inappropriate technique.

2. Inadequate assembly of angles and profiles

This is one of the most common mistakes. Companies without experience in the construction and assembly of skateparks do not pay attention to such important details as the assembly of angle bars. This is very important because they are elements for riding (sliding). An improperly mounted profile or angle is a frequent cause of injury.

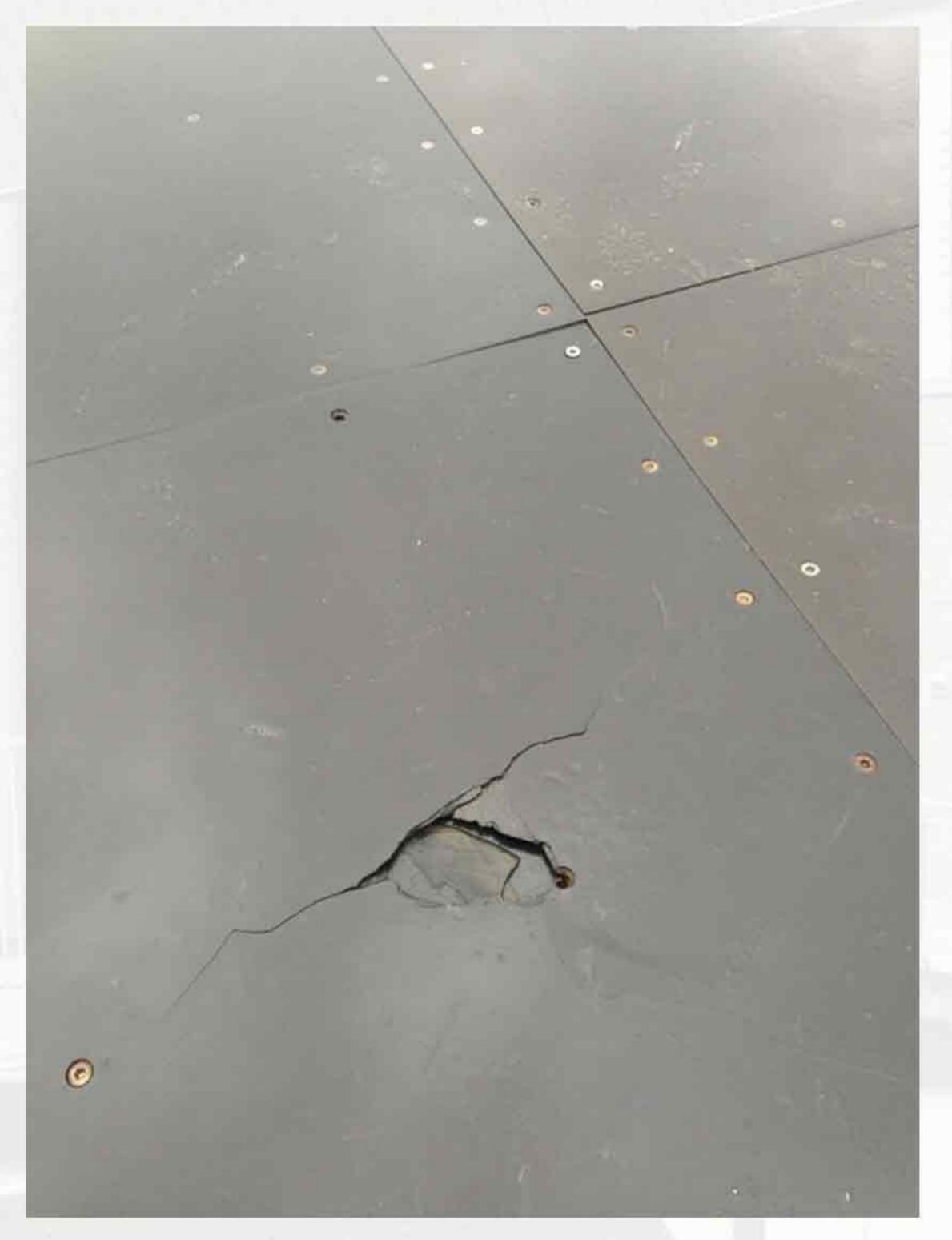




The gaps between the angles are very dangerous for users. The angle bar on the device must form one whole, otherwise riding on such an obstacle becomes impossible and may cause a stop during the evolution, with the direct consequence of the rider falling. The same applies to the height of the angle protruding above the obstacle level.

3. Riding surface

Companies that do not specialize in building skateparks do not have knowledge about the appropriate materials that are used in this type of facilities.



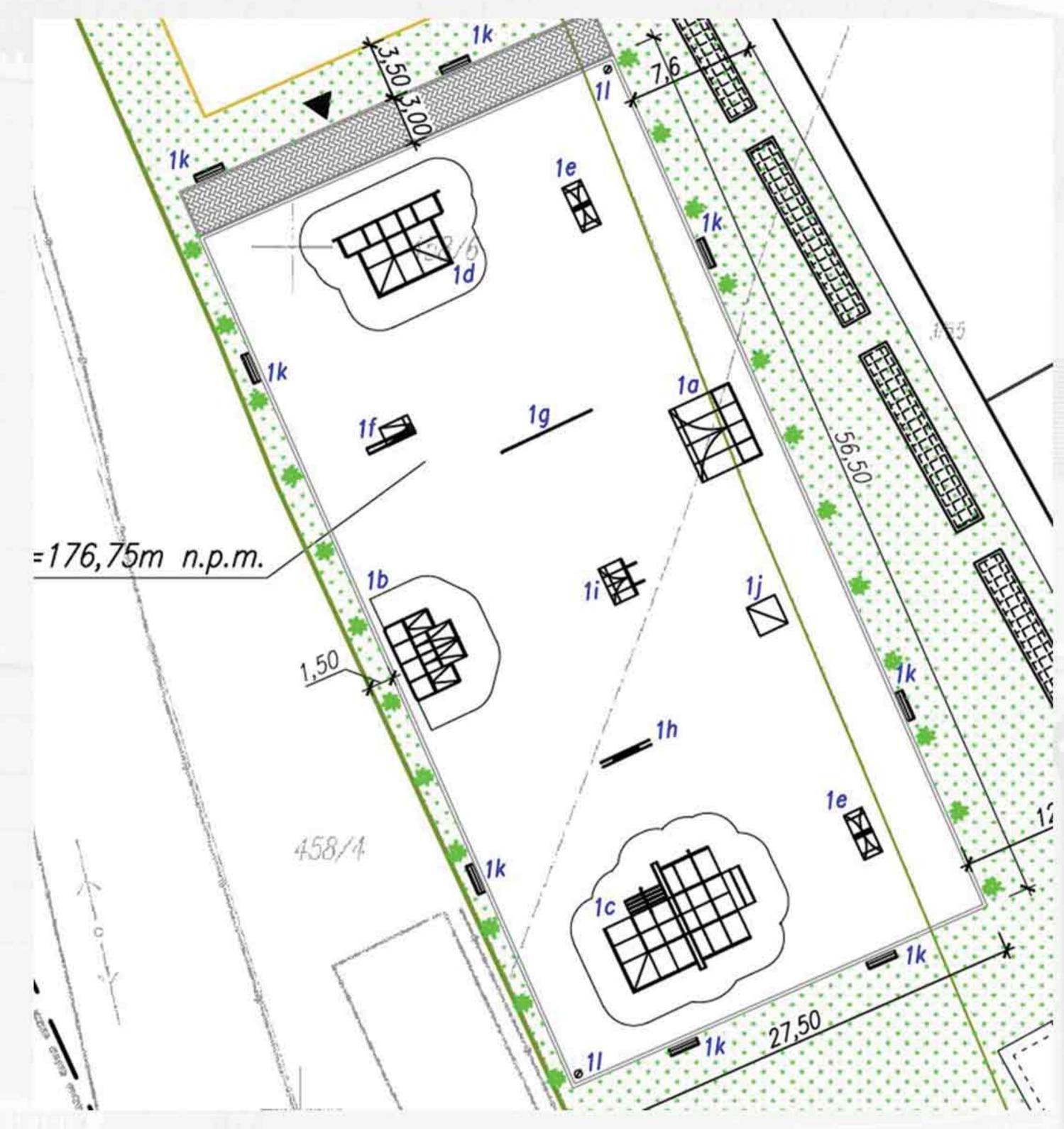


The use of inappropriate material causes rapid wear of the skatepark element and its riding surface, which directly affects the safety of users and the quality of driving.

Bad connection of the plates in the elements of the skatepark causes the edges to peel off, which speed up the process of destroying the entire device, and as a result poses a threat to users.

Professional companies which specialize in building skateparks, use CNC machines, which largely eliminates assembly errors.

4. Wrong placement and setting of obstacles



OZNACZENIA:

1a — Quarter Pipe 48 nr 141848, 1 szt.
1b — Zestaw Quarter 3 nr 109398, 1 szt.
1c — Zestaw Fun Box 3 nr 107370, 1 szt.
1d — Zestaw Fun Box 8 nr 107870, 1 szt.
1e — Spine—ramp nr 121280, 2 szt.
1f — Grind—box skośny na Bank 700 nr 151398 + 151270,
1g — Rail nr 100960, 1 szt.
1h — Lawka Skate nr 104, 1 szt.
1i — Wall Ramp nr 172408, 1 szt.
1j — Corner nr 155270, 1 szt.
1k — Lawka z rur giętych z oparciem nr 0096, 8 szt.
1l — Kosz na śmieci nr 220, 2 szt.

Above shows the wrong placement of the skatepark elements. Devices are positioned in such a way that the riders are unable to use its potential. The inroads and departures are too short or too long, which prevents smooth driving and make the skatepark useless. It is very important that the company that designs and builds the skatepark has PCA (Polish Center for Accreditation) accreditation certificates. The selection of such a contractor assures the investor that the created skatepark complies with the standard, and the arrangement of the elements will be correct.

The skatepark project should be commissioned to a specialized company that has designed a large number of such facilities.

5. Barriers on devices

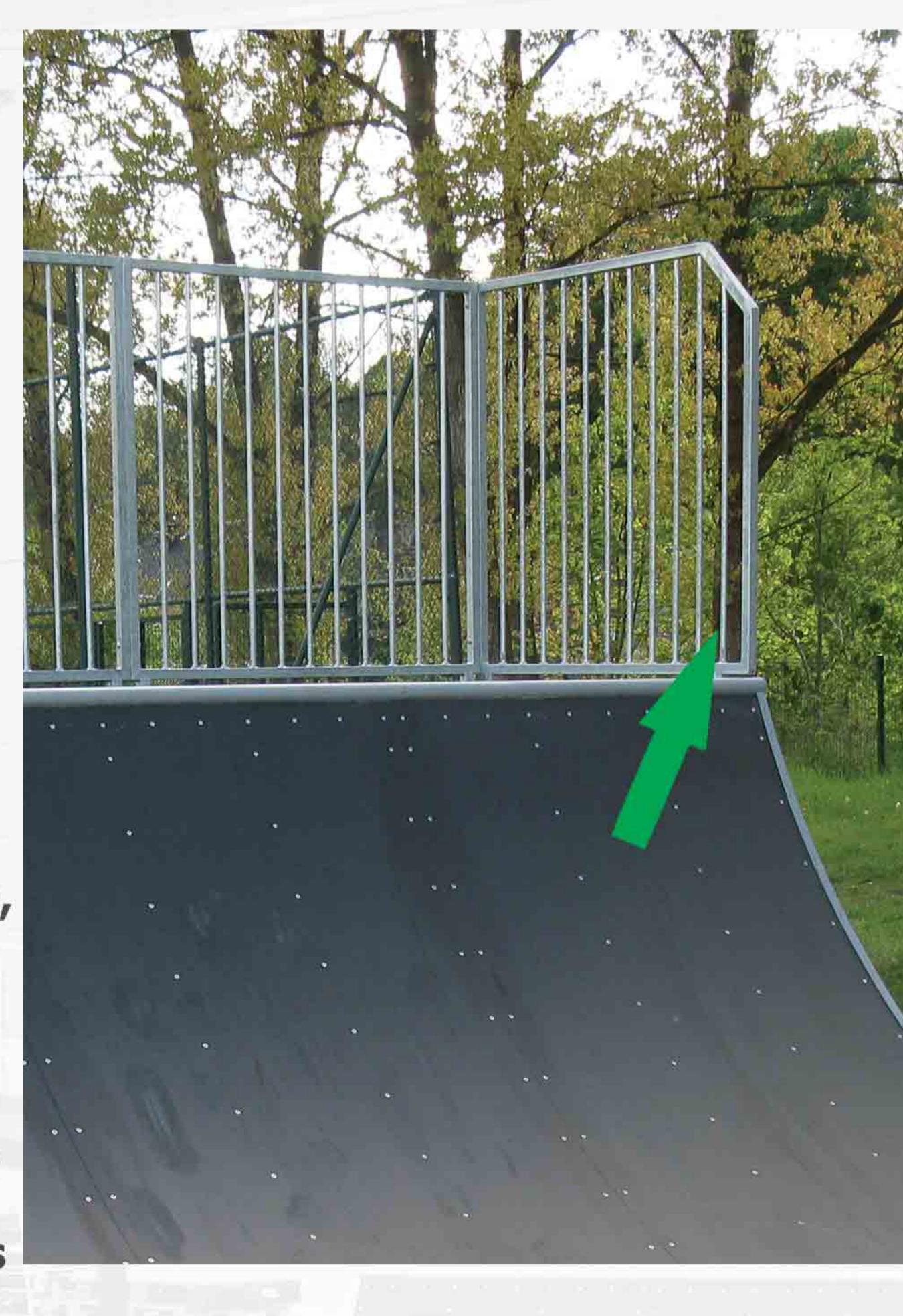
INCORRECT BARRIERS



Barriers have the gaps that are too large, which creates dangerous rifts.

Additionally, the ends of the barriers are perpendicular, which is inconsistent with the applicable standard and is dangerous for users (sharp edge).

CORRECT BARRIERS



The gaps between the rails are appropriate and the ends are cut in accordance with the applicable standard.

THE BEST SOLUTION!

The solution is to select a company that can document previous implementation of a similar project. Selecting specialists should be done in the same way as for other special projects. Good planning and design of an object is not enough if it is completely poorly done. Then the entire investment is wasted. The municipality pays for a Ferrari and gets an old Dacia. Anyway, users lose the most - receiving a bad skatepark. It is equally important to commission the conceptual and executive design of the entire facility to a company that has experience in this type of services.

O7. RECOMMENDED REQUIREMENTS OF TENDER FOR CONCRETE OBJECTS

Recommended requirements for tenders for concrete objects
- knowledge and experience

Due to the specification of the skatepark facility, high expectations of users and the risks associated with practicing extreme sports, special attention should be paid to the accurate and safe execution of the object.

There are several companies on the market, such as: Concrete Skateparks, Altramps, MPG, Techramps, KBskatelab, BGramps, wich have accurate knowledge and experience in building such as objects.

Clear tender requirements, which will allow for the good execution of the facility, will not restrict competition and will not eliminate these companies from the tender procedure. It can only eliminate potential contractors who have nothing to do with the construction of skateparks, and by convincing Investor to choose their company with a low price, they will only cause problems for the owner of the investment and later use of the facility.

We recommend familiarising yourself with the appendix "About the choice of skatepark construction" - developed by the Cool Team Association in cooperation with design offices.

What should be paid attention to:

- 1. Knowledge and experience of the contractor
- 2. Certificates
- 3. Knowledge and experience of the contractor
- 4. Qualifications of employees
- 5. Price

1. The knowledge and experience of the contractor

The contractor who provides references that he made 2 or 3 skateparks, has not yet had the necessary knowledge and experience to build a large concrete object.

This applies in particular to the technology of construction, e.g. a monolithic skatepark poured with shotcrete method is significantly different from a skatepark made of prefabricated concrete or wooden structures.

2. Certificates

Contractors should have certificates for equipment, which means that devices should be marked with the Conformity Mark*, which guarantees that the product and its production process are tested and supervised by an independent Certification Body.

- * This mark and the related certificate emphasize the importance of the products, constituting an additional guarantee of their safety and high quality, and confirming compliance with the PN-EN 14974: 2019 standard
 - 3. Equipment requirements, used machines and devices

it is very important that the contractor has the right equipment for shotcreting

- that is, applying concrete under pressure to obstacles. With such
a requirement, we eliminate companies that apply concrete, e.g. with shovels
or directly from the pump-bulb. This method is not recommended
as the concrete that is not pressurized on the curved and vertical elements
will drain and the obstacles will be wavy and uneven. This will have
a very large impact on the ride quality of future skatepark users,
and thus a bad assessment of the facility.

Applying concrete under pressure is also required due to its compaction

- in the non-compacted obstacles, internal voids are created, which during use may lead to the destruction of the skatepark elements.

4. Employee qualifications

The personnel of the company that enters the tender is very important.

They should be employees trained specifically for the construction of skateparks, who know the specificity of the facilities performed.

5. Price

Price should not be the main determinant when choosing a company to contract a given facility. More attention should be paid to the factors mentioned in the points above, which will give us the certainty of the park's performance in accordance with all standards, and above all with benefits for its later users.

Scoring in the assessment of contractors:

- e.g. the longer the warranty, the more points,
- e.g. the more realizations, the greater the knowledge and more points,
- e.g. skilled personnel (documenting participation in a large number of projects)
- the more projects, the more points.

PROPOSED REQUIREMENTS FOR TENDER IN CONCRETE FACILITIES

Example 1

KNOWLEDGE AND EXPERIENCE

- 1. The contractor proves that in the period of five years before the deadline for submitting offers (exception the company operates for a shorter period, we take into account its duration), it performed: min. 3 construction works involving the construction of a monolithic concrete skatepark with the value of works not less than PLN 900,000 gross PLN each. It is required to provide the date and place of the skatepark, and attach documents confirming that these works were carried out in accordance with the principles of good construction and properly completed.
- 2. The contractor will prove that he has a piston concrete pump with a working pressure from 68 bar to 76 bar and a capacity of at least 16 m3 / h to a maximum of 31 m3 / h. The contractor will prove that he has equipment for spraying concrete (shotcreting) and that he employs an employee authorized to operate this type of machinery, ie a concrete mix pump operator.
- 3. The contractor will add to the offer certificates for skatepark equipment issued by a unit with PCA accreditation (Polish Center for Accreditation), e.g. COBRABID-BBV, TUV certificate, etc. certificates confirming the compliance of the product with the standard. In this type of facilities, devices must have Certificates, i.e. devices must be marked with the Conformity Mark *, which guarantees that the product and its manufacturing process are tested and supervised by an independent Certification Body.
- * This mark and the associated certificate emphasize the importance of the products, providing an additional guarantee of their safety and high quality, and confirming compliance with the PN-EN 14974:2019 standard
- 4. The contractor will prove that it has at least two employees who have experience in making at least 10 monolithic concrete skatepark objects. Required CV is with a description of the facilities, the employee's function in the performance of the given facility and the employee's signature.

PROPOSED REQUIREMENTS FOR TENDER IN CONCRETE FACILITIES

Example 2

KNOWLEDGE AND EXPERIENCE

- 1. The contractor will prove that in the last five years before the deadline for submitting offers (exception the company operates for a shorter period of time we take into account the period of its existence), it has performed construction works involving the construction of concrete-monolithic skateparks with a total value of works of not less than PLN 10 million gross.
- 2. The contractor will prove that he has a piston concrete pump with a working pressure from 68 bar to 76 bar and a capacity of at least 16 m3 / h to a maximum of 31 m3 / h. The contractor will prove that he has equipment for spraying concrete (shotcreting) and that he employs an employee authorized to operate this type of machinery, ie a concrete mix pump operator.
- 3. The contractor will add to the offer certificates for skatepark equipment issued by a unit with PCA accreditation (Polish Center for Accreditation), e.g. COBRABID-BBC, TUV certificate, etc. It is not allowed to prove technical decisions issued by associations or experts, as they are not authorized to issue certificates confirming the compliance of the product with the standard.

In such facilities, devices must have Certificates, i.e. devices must be marked with the Conformity Mark *, which guarantees that the product and its production process are tested and supervised by an independent Certification Body.

- * This mark and the associated certificate emphasize the importance of the products, providing an additional guarantee of their safety and high quality, and confirming compliance with the PN-EN 14974:2019standard
- 4. The contractor will prove that it has at least two employees who have experience in making at least 10 monolithic concrete skatepark objects. Required CV is with a description of the facilities, the employee's function in the performance of the given facility and the employee's signature.

PROPOSED REQUIREMENTS FOR TENDER IN CONCRETE FACILITIES

08. TENDER REQUIREMENTS - WOOD

Example 3 KNOWLEDGE AND EXPERIENCE

- 1. The contractor proves that in the period of five years before the deadline for submitting offers (exception the company operates for a shorter period, we take into account its duration), it performed: min. 5 construction works involving the construction of a monolithic concrete skatepark with the value of works not less than PLN 600,000 gross PLN each. It is required to provide the date and place of the skatepark, and attach documents confirming that these works were carried out in accordance with the principles of good construction and properly completed.
- 2. The contractor will prove that he has a piston concrete pump with a working pressure from 68 bar to 76 bar and a capacity of at least 16 m3 / h to a maximum of 31 m3 / h. The contractor will prove that he has equipment for spraying concrete (shotcreting) and that he employs an employee authorized to operate this type of machinery, ie a concrete mix pump operator.
- 3. The contractor will add to the offer certificates for skatepark equipment issued by a unit with PCA accreditation (Polish Center for Accreditation), e.g. COBRABID-BBV, TUV certificate, etc. certificates confirming the compliance of the product with the standard. In this type of facilities, devices must have Certificates, i.e. devices must be marked with the Conformity Mark *, which guarantees that the product and its manufacturing process are tested and supervised by an independent Certification Body.
- * This mark and the associated certificate emphasize the importance of the products, providing an additional guarantee of their safety and high quality, and confirming compliance with the PN-EN 14974:2019 standard
- 4. The contractor will prove that it has at least two employees who have experience in making at least 10 monolithic concrete skatepark objects. Required CV is with a description of the facilities, the employee's function in the performance of the given facility and the employee's signature.

PROPOSED REQUIREMENTS FOR THE TENDER IN WOOD-COMPOSITE FACILITIES

Example 1 KNOWLEDGE AND EXPERIENCE

- 1. The contractor proves that in the last three years before the deadline for submitting offers (exception the company operates shorter we take into account the period of its existence), it performed: at least 2 deliveries with assembly of wooden and composite skatepark equipment with a value of not less than 400,000 gross PLN each. It is required to provide the date and place of the skatepark, and to attach documents confirming that these works were carried out in accordance with the principles of construction art and correctly completed.
- 2. The contractor will add to the offer certificates for skatepark equipment issued by a unit with PCA accreditation (Polish Center for Accreditation), e.g. COBRABID-BBV, TUV certificate, etc. certificates confirming the compliance of the product with the standard. In this type of facilities, devices must have Certificates, i.e. devices must be marked with the Conformity Mark *, which guarantees that the product and its manufacturing process are tested and supervised by an independent Certification Body.
- * This mark and the associated certificate emphasize the importance of the products, providing an additional guarantee of their safety and high quality, and confirming compliance with the PN-EN 14974:2019 standard
- 3. The contractor proves that the foreman/installation manager has experience in the construction/assembly of at least 10 skateparks in the last 5 years by attaching at least 10 installation certificates.

PROPOSED REQUIREMENTS FOT THE TENDER IN WOOD-COMPOSITE FACILITIES

Example 2 KNOWLEDGE AND EXPERIENCE

- 1. The contractor proves that in the last three years before the deadline for submitting offers (exception the company operates shorter we take into account the period of its existence), it performed delivery with assembly of wooden and composite skatepark equipment with a value of not less than 2 million gross PLN. It is required to provide the date and place of the skatepark, and to attach documents confirming that these works were carried out in accordance with the principles of construction art and correctly completed.
- 2. The contractor will add to the offer certificates for skatepark equipment issued by a unit with PCA accreditation (Polish Center for Accreditation), e.g. COBRABID-BBV, TUV certificate, etc. certificates confirming the compliance of the product with the standard. In this type of facilities, devices must have Certificates, i.e. devices must be marked with the Conformity Mark *, which guarantees that the product and its manufacturing process are tested and supervised by an independent Certification Body.
- * This mark and the associated certificate emphasize the importance of the products, providing an additional guarantee of their safety and high quality, and confirming compliance with the PN-EN 14974:2019 standard
- 3. The contractor proves that the foreman/installation manager has experience in the construction/assembly of at least 10 skate parks in the last 5 years by attaching at least 10 installation certificates.

PROPOSED REQUIREMENTS FOT THE TENDER IN WOOD-COMPOSITE FACILITIES

Example 3 KNOWLEDGE AND EXPERIENCE

- 1. The contractor proves that in the last three years before the deadline for submitting offers (exception the company operates shorter we take into account the period of its existence), it performed: at least 3 deliveries with assembly of wooden and composite skatepark equipment with a value of not less than 150 000 gross PLN each. It is required to provide the date and place of the skatepark, and to attach documents confirming that these works were carried out in accordance with the principles of construction art and correctly completed.
- 2. The contractor will add to the offer certificates for skatepark equipment issued by a unit with PCA accreditation (Polish Center for Accreditation), e.g. COBRABID-BBV, TUV certificate, etc. certificates confirming the compliance of the product with the standard. In this type of facilities, devices must have Certificates, i.e. devices must be marked with the Conformity Mark *, which guarantees that the product and its manufacturing process are tested and supervised by an independent Certification Body.
- * This mark and the associated certificate emphasize the importance of the products, providing an additional guarantee of their safety and high quality, and confirming compliance with the PN-EN 14974:2019 standard
- 3. The contractor proves that the foreman/installation manager has experience in the construction/assembly of at least 10 skate parks in the last 5 years by attaching at least 10 installation certificates.

09. TENDER REQUIREMENTS - STYROFOAM

Example 1

KNOWLEDGE AND EXPERIENCE

- 1. The contractor proves that in the period of five years before the deadline for submitting offers (exception the company operates for a shorter period, we take into account its duration), it performed: min. 2 construction works involving the construction of a concrete and monolithic skatepark on a styrofoam structure with the value of works not less than PLN 160 000 gross PLN each. It is required to provide the date and place of the skatepark, and attach documents confirming that these works were carried out in accordance with the principles of good construction and properly completed.
- 2. The contractor will prove that he has a piston concrete pump with a working pressure from 68 bar to 76 bar and a capacity of at least 16 m3 / h to a maximum of 31 m3 / h. The contractor will prove that he has equipment for spraying concrete (shotcreting) and that he employs an employee authorized to operate this type of machinery, ie a concrete mix pump operator.
- 3. The contractor will add to the offer certificates for skatepark equipment issued by a unit with PCA accreditation (Polish Center for Accreditation), e.g. COBRABID-BBV, TUV certificate, etc. certificates confirming the compliance of the product with the standard. In this type of facilities, devices must have Certificates, i.e. devices must be marked with the Conformity Mark *, which guarantees that the product and its manufacturing process are tested and supervised by an independent Certification Body.
- * This mark and the associated certificate emphasize the importance of the products, providing an additional guarantee of their safety and high quality, and confirming compliance with the PN-EN 14974:2019 standard
- 4. The contractor will prove that it has at least two employees who have experience in making at least 10 monolithic concrete skatepark objects. Required CV is with a description of the facilities, the employee's function in the performance of the given facility and the employee's signature

PROPOSED REQUIREMENTS FOR THE TENDER IN CONCRETE FACILITIES ON A STYROFOAM

Example 2

KNOWLEDGE AND EXPERIENCE

- 1. The contractor proves that in the period of five years before the deadline for submitting offers (exception the company operates for a shorter period, we take into account its duration), it performed construction works involving the construction of a concrete and monolithic skatepark on a polystyrene structure with the value of works not less than PLN 1 000 000 gross PLN. It is required to provide the date and place of the skatepark, and attach documents confirming that these works were carried out in accordance with the principles of good construction and properly completed.
- 2. The contractor will prove that he has a piston concrete pump with a working pressure from 68 bar to 76 bar and a capacity of at least 16 m3 / h to a maximum of 31 m3 / h. The contractor will prove that he has equipment for spraying concrete (shotcreting) and that he employs an employee authorized to operate this type of machinery, ie a concrete mix pump operator.
- 3. The contractor will add to the offer certificates for skatepark equipment issued by a unit with PCA accreditation (Polish Center for Accreditation), e.g. COBRABID-BBV,

 TUV certificate, etc. certificates confirming the compliance of the product with the standard.

 In this type of facilities, devices must have Certificates, i.e. devices must be marked with the Conformity Mark *, which guarantees that the product and its manufacturing process are tested and supervised by an independent Certification Body.
- * This mark and the associated certificate emphasize the importance of the products, providing an additional guarantee of their safety and high quality, and confirming compliance with the PN-EN 14974:2019 standard
- 4. The contractor will prove that it has at least two employees who have experience in making at least 10 monolithic concrete skatepark objects. Required CV is with a description of the facilities, the employee's function in the performance of the given facility and the employee's signature.

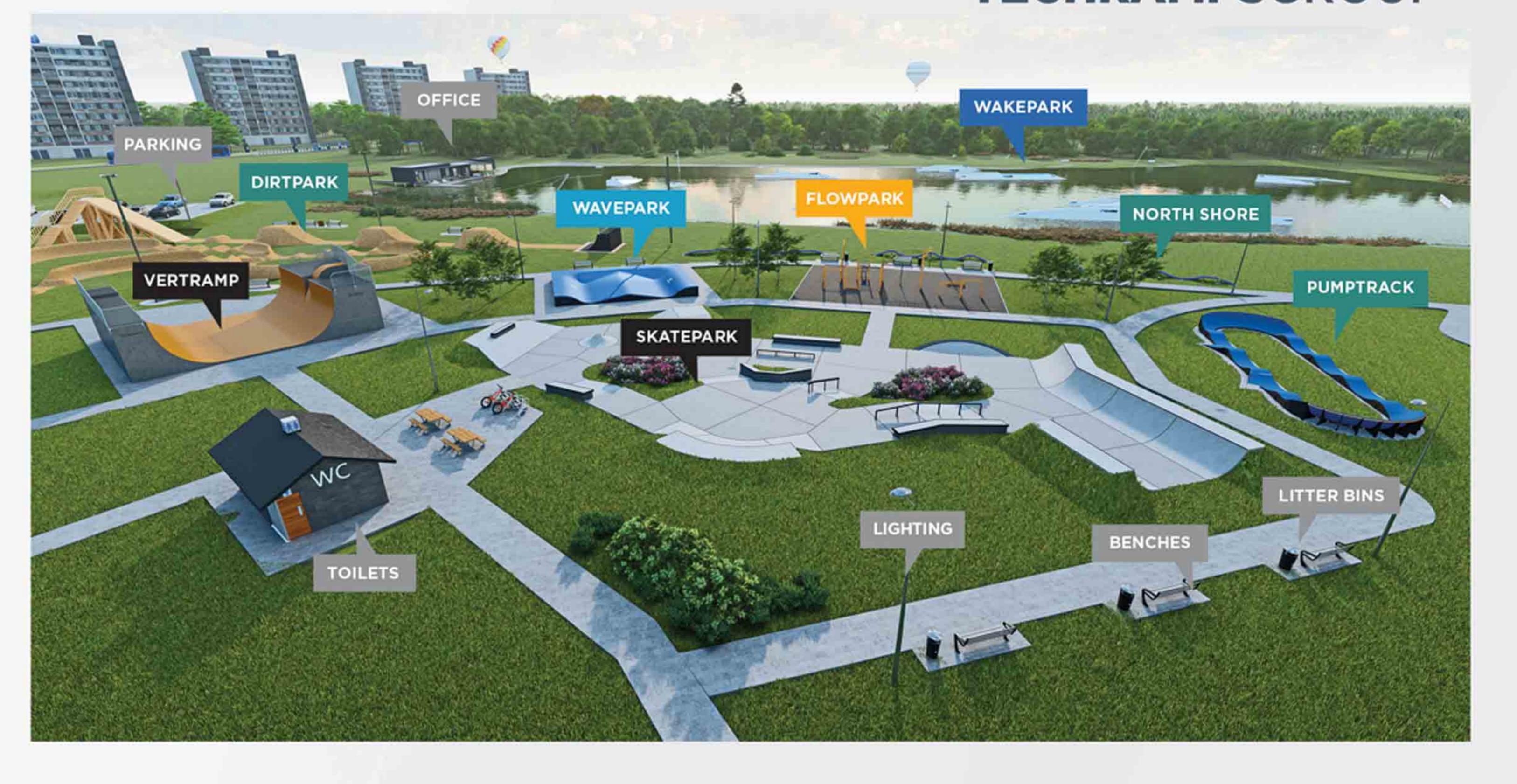
PROPOSED REQUIREMENTS FOR THE TENDER IN CONCRETE FACILITIES ON A STYROFOAM

Example 3 KNOWLEDGE AND EXPERIENCE

- 1. The contractor proves that in the period of five years before the deadline for submitting offers (exception - the company operates for a shorter period, we take into account its duration), it performed: min. 3 construction works involving the construction of a concrete and monolithic skatepark on a polystyrene structure with the value of works not less than PLN 320 000 gross PLN each. It is required to provide the date and place of the skatepark, and attach documents confirming that these works were carried out in accordance with the principles of good construction and properly completed.
- 2. The contractor will prove that he has a piston concrete pump with a working pressure from 68 bar to 76 bar and a capacity of at least 16 m3 / h to a maximum of 31 m3 / h. The contractor will prove that he has equipment for spraying concrete (shotcreting) and that he employs an employee authorized to operate this type of machinery, ie a concrete mix pump operator.
- 3. The contractor will add to the offer certificates for skatepark equipment issued by a unit with PCA accreditation (Polish Center for Accreditation), e.g. COBRABID-BBV, TUV certificate, etc. certificates confirming the compliance of the product with the standard. In this type of facilities, devices must have Certificates, i.e. devices must be marked with the Conformity Mark *, which guarantees that the product and its manufacturing process are tested and supervised by an independent Certification Body.
- *This mark and the associated certificate emphasize the importance of the products, providing an additional guarantee of their safety and high quality, and confirming compliance with the PN-EN 14974:2019 standard
- 4. The contractor will prove that it has at least two employees who have experience in making at least 10 monolithic concrete skatepark objects. Required CV is with a description of the facilities, the employee's function in the performance of the given facility and the employee's signature.

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