

techno Metal Post™

# WORLD LEADER IN HELICAL PILES



## TECHNICAL DOCUMENT

- Time-saving
- Specialized installation equipment
- In-house engineering services
- Certified & proven technology

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**AN EXPERIENCED AND  
RELIABLE NETWORK OF  
MORE THAN **150** DEALERS  
THROUGHOUT THE WORLD**

# INTRODUCTION

## A BIT OF HISTORY

Techno Metal Post (TMP) was founded in Thetford Mines, Quebec, Canada in 1993 and is still family-owned. Through the founders' vision, dedication, and hard work, TMP has grown from a local family business to a worldwide network of more than 150 professionally trained and certified dealers – all of whom are welcomed into the TMP community. Over the past 25 years, our dealers have completed over 3 million pile installations for projects throughout the world. They have installed helical piles in almost every soil type that exists throughout Canada, the United States, Europe, the Caribbean, New Zealand, and French Polynesia.

## OUR DEALER NETWORK - "THE ENGINE OF OUR ORGANIZATION"

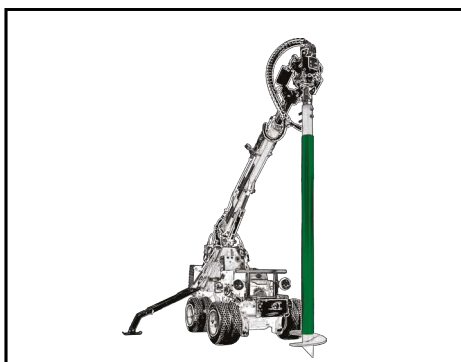
Through the expansion and progress of our worldwide network of dealers, Techno Metal Post has quickly become the world leader in helical piles. We understand that the organization's overall success is dependent on the individual success of our dealers. New dealers undergo a thorough and substantial hands-on training, equipping them with the skills and knowledge to succeed in their market. We also offer new dealers valuable support with marketing, equipment, engineering, and any other need that arises. This support continues after the training and extends throughout the life of the dealer's business. The most valuable support TMP provides is the collective experience, knowledge, and access to that knowledge, within our network of dealers. If a new dealer has a question, or faces a challenge, in starting their dealership, it is very likely another dealer has already overcome that issue and has shared their experience.

## QUALITY EQUIPMENT MAKES THE DIFFERENCE

Techno Metal Post recognizes that its investment in the production of its own line of equipment, for the sole purpose of installing helical piles, is one of many advantages over other companies. Our team of engineers designs and builds some of the most versatile equipment in the world. They also continually refine and improve the design so that the installation process is made easier and more effective in the field. Our engineers are always researching the next upgrade or feature to add to our equipment.

Because every helical pile project is different, TMP produces three machines varying in size, power, and capabilities; each of which is specially made for helical pile installations. No matter which machine you are using, you know that each is designed to deliver an accurate and reliable job. Every machine is built to precisely measure the torque produced during the installation process. From this information, our certified installers know the exact allowable load capacities of each helical pile after its installation.

TMP's latest innovation is the EM2, which we are now putting the final touches on. Some of the new features and upgrades on this model include: proportional joystick controls, lower emissions, lower fuel consumption, noise reduction, heat reduction, etc., resulting in a state-of-the-art machine.



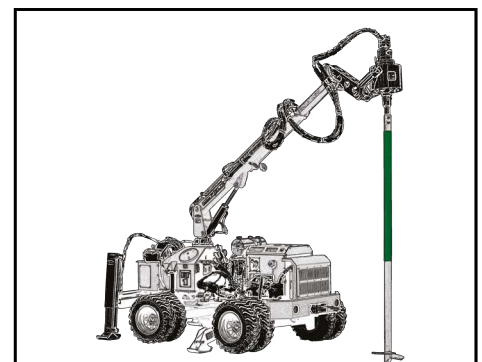
**R2D**

The smallest and lightest machine that can install helical piles in just about any location imaginable. Do not underestimate its size; this machine is surprisingly powerful!



**EM1**

The mid-sized tracked model offers more power when needed. This machine can access any job site more easily than normal-sized hydraulic equipment and will complete the installation faster with better precision.



**ET1**

The heavy-duty workhorse for industrial jobs. When engineers request higher load capacities, the ET1 is used. This machine also provides a much longer reach.

# TIMELINE COMPARISON

## TMP HELICAL PILES VS. CONCRETE

Time	TMP Helical Piles	Concrete Foundation
Day 1	<ul style="list-style-type: none"> <li>• Drive installation machine on to property</li> <li>• Install helical piles and record torque of each pile</li> <li>• Cut piles to final height and install brackets</li> <li>• Clean area and leave jobsite</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare site for excavation equipment</li> <li>• Remove obstacles (e.g.: gate, fence)</li> <li>• Protect landscaping</li> <li>• Excavate trench or dig holes for footings</li> <li>• Deliver forms and rebar to job site</li> <li>• Build rebar cages and forms or set sonotubes</li> <li>• Backfill</li> </ul>
Days 2-3	<ul style="list-style-type: none"> <li>• Send stamped installation report to building department</li> <li>• Ready to build</li> </ul>	<ul style="list-style-type: none"> <li>• Pre-concrete inspection by building department</li> <li>• Pour concrete &amp; remove excess fill material</li> </ul>
Day 3-4		<ul style="list-style-type: none"> <li>• Concrete cures; replace fence/gate</li> <li>• Do landscape remediation</li> </ul>
Day 5		<ul style="list-style-type: none"> <li>• Builder begins construction</li> </ul>

*"A solarium needs a foundation [...] a concrete slab on grade with posts driven through the slab to lock it in place, so it won't shift or move over time. But the kind of posts your contractor uses will make all the difference. We used Techno Metal Post's helical piles – three at the back of the solarium (the part that's away from the house). They're like giant metal screws, so the frost can't grab them and pull them up.*

*Only a certified technician can install these posts because specialized hydraulic machinery that measures soil conditions has to be used."*

**Mike Holmes - The Holmes Group / Pressmedia**

*"We first discovered helical pile technology during the past year. We used this technology to anchor our first two pedestrian bridges in 2013. We were surprisingly impressed by this technology, particularly for its ease of installation and competitive pricing. I would compare the simplicity of this technology to that of the wood screw. We intend to use this technology for all of our marine applications."*

**Alexandre de la Chevrotière, CEO - MAADI Group Inc.**

# A COMPLETE SOLUTION

## TECHNO METAL POST

### HELICAL PILES

The Techno Metal Post helical pile is a giant metal screw that is installed by our company's certified technicians using proprietary hydraulic machinery. The pile is screwed into the ground until the desired bearing capacity is achieved. Bearing capacity is confirmed on-site using the installation machinery, and an in-situ load test, when required.

The Techno Metal Posts are manufactured using structural steel according to ASTM A500 grade C, CSA G40.21-44W and welded according to CWB W47.1 and W59. They can be hot-dipped galvanized according to ASTM A123. The piles have been load tested according to ASTM standards in a variety of soil types around the world. The piles are designed to resist the calculated axial, lateral, and bending moment loads. The use of the helix maximizes the load bearing capacity of soil.

### CONNECTION SYSTEM

Different types of structures require different connection brackets. For post structures like decks, we offer adjustable height connectors for standard dimensional lumber sizes (4x4, 6x6, two plies, three plies). Techno Metal Post has also developed connection systems with integrated rebar for using helical piles to pin concrete foundations to deeply located load bearing soil.

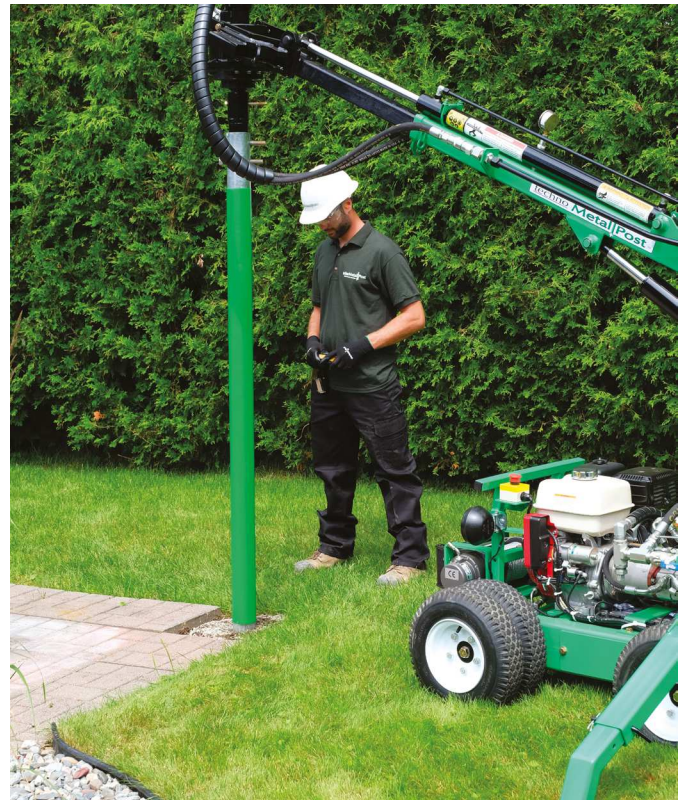
Techno Metal Post can also make custom brackets for special types of connections on request.

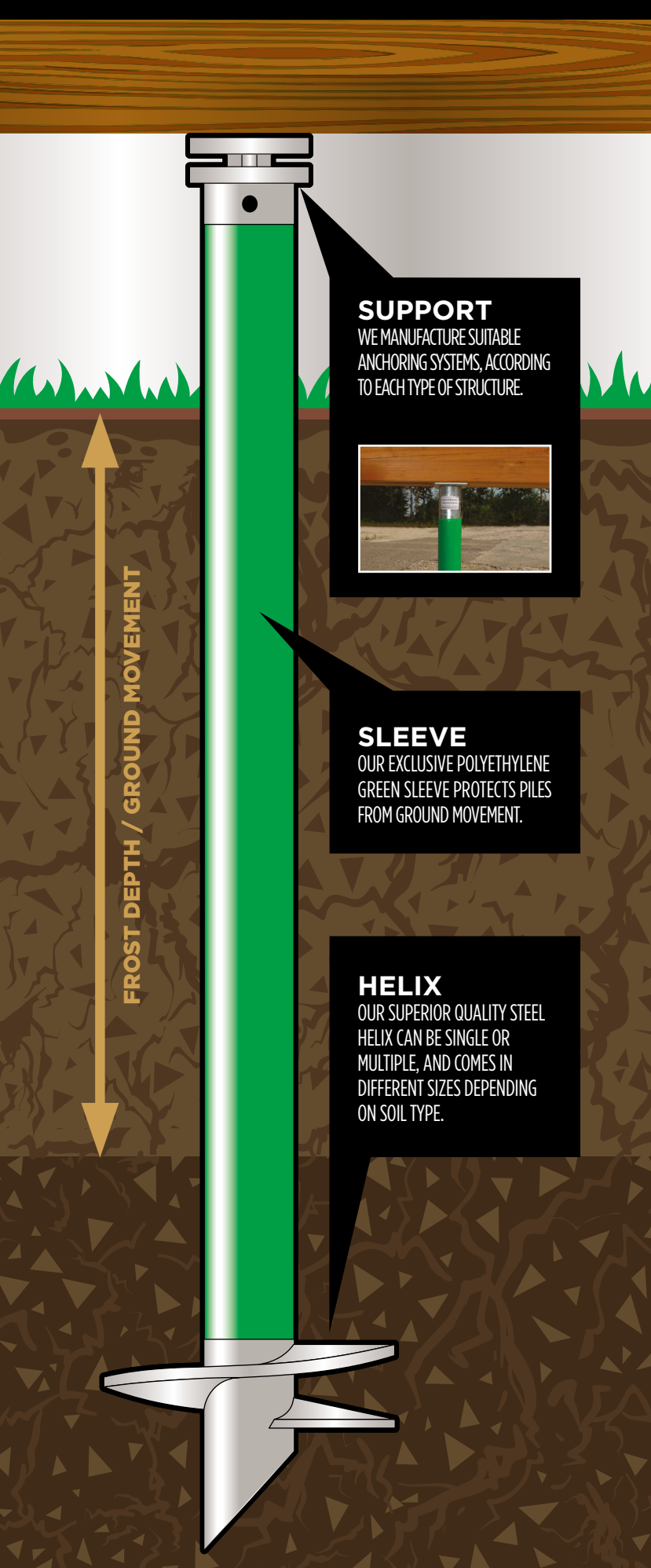
### HIGH DENSITY POLYETHYLENE SLEEVE

This sleeve is made of high density polyethylene, and has been specially designed to surround the Techno Metal Post helical piles. The principle is simple and proven: the polyethylene sleeve slides along the helical pile, allowing the pile to remain stable despite movement caused by periods of freezing, thawing, or drought. Your structure built on a Techno Metal Post foundation will not budge. Guaranteed.

### CORROSION PROTECTION SYSTEM

The galvanization already provides years of reliable long-term protection for TMP piles, but additional cathodic protection can ensure the integrity of the structure for an extended lifespan, if the application demands it. Techno Metal Post offers the installation of an anode protection system for deep pile installations.





**SUPPORT**  
 WE MANUFACTURE SUITABLE ANCHORING SYSTEMS, ACCORDING TO EACH TYPE OF STRUCTURE.



**SLEEVE**  
 OUR EXCLUSIVE POLYETHYLENE GREEN SLEEVE PROTECTS PILES FROM GROUND MOVEMENT.

**HELIX**  
 OUR SUPERIOR QUALITY STEEL HELIX CAN BE SINGLE OR MULTIPLE, AND COMES IN DIFFERENT SIZES DEPENDING ON SOIL TYPE.

# OUR UNIQUE PRODUCT

**Our helical piles** are designed, engineered, and tested to ensure the highest quality and standards. This guarantees that they will support heavy loads in various soil conditions.

**Our exclusive green sleeve** is slid onto the pile during installation. Throughout the frost/thaw cycles, the sleeve slides along the pile following the soil movement. The pile will not move, ensuring the stability of the structure.

**Our specialized machinery** is created and built by a highly competent design team, at our factory. Our unique, compact, and powerful machinery can access some of the most difficult areas, while ensuring Techno Metal Post's high-quality installation.

**Our Engineering Department** will review, analyze, and certify your projects. Our engineers determine which pile size is appropriate, depending on the structure, load requirements, and soil type.

**Our proven technology** is certified and recognized by industry authorities in many countries. Our quality and reliability are equally recognized by thousands of construction professionals, and customers worldwide.

**Our network of quality dealers** is professionally trained and certified to install our Techno Metal Post System. Over the years, we have developed a skilled and trusted network of more than 150 dealers throughout the world.

# SELECTION TABLE



Model (Outside Diameter)	Project Type	Maximum Allowable Bearing Capacity <sup>1 2 3 4</sup>		Allowable Lateral Capacity <sup>5</sup>	Maximum Installation Torque	Allowable Bending Resistance <sup>7</sup>
		Compression (lb)	Tension (lb)	lb	ft-lb	ft-lb
<b>P1</b> (1.9 in)	<b>Light Residential</b> (deck without roof, stairs, etc.)	6,700	3,350 to 4,450	250	1,336 <sup>8</sup>	785
<b>P2</b> (2.4 in)	<b>Medium Residential and Light Commercial</b> (deck, carport, sunroom, single story residential addition, etc.)	11,200	5,600 to 7,450	550	2,242 <sup>8</sup>	1,360
<b>P3</b> (3.5 in)	<b>Heavy Residential, Light to Medium Commercial and Industrial</b> (two-story residential addition, cottage, sign, carport, solar panel, new construction, underpinning, boardwalk, tie-back, etc.)	29,800 to 33,000	15,000 to 19,850	1,200	8,509 <sup>8</sup>	4,571
<b>P4<sup>6</sup></b> (4 in)	<b>Heavy Residential, Light to Medium Commercial and Industrial</b> (cottage, sign, light post, solar panel, new construction, boardwalk, tie-back, bollard, etc.)	36,000 to 45,000	18,000 to 30,000	1,500	11,000	6,371
<b>P3-HD<sup>6</sup></b> (3.5 in)	<b>Heavy Residential, Light to Heavy Commercial and Industrial</b> (new construction, underpinning, tie-back, etc.)	38,000 to 45,000	19,000 to 30,000	1,400	11,000	6,428
<b>P4-HD<sup>6</sup></b> (4 in)	<b>Heavy Residential, Light to Heavy Commercial and Industrial</b> (new construction, retaining wall, tie-back, etc.)	44,000 to 50,000	22,000 to 33,000	1,500	14,500	8,944
<b>P5<sup>6</sup></b> (5.6 in)	<b>Heavy Residential, Light to Heavy Commercial and Industrial</b> (cottage, sign, light post, new construction, boardwalk, solar panel, bollard, retaining wall, etc.)	30,000 to 50,000	15,000 to 33,000	2,750	14,500 <sup>9</sup>	14,713
<b>P6<sup>6</sup></b> (6.6 in)	<b>Heavy Residential, Light to Heavy Commercial and Industrial</b> (sign, light post, new construction, solar panel, bollard, retaining wall, etc.)	30,000 to 50,000	15,000 to 33,000	3,700	14,500 <sup>9</sup>	23,142

1. The maximum compressive bearing capacity (allowable load) includes a safety factor of 2.

2. The maximum bearing capacity (allowable load) is determined by the maximum torque applied by the installation equipment.

3. When the helical foundation is laterally unsupported (soil very loose / soft, liquefiable soils, water current and wind), the structural strength of the helical foundation must be approved by TMP Engineering Department.

4. For tension applications, the helical foundation must be installed such that the minimum depth from the ground surface to the helix is 12D, where D is the diameter of the helix. Contact TMP Engineering Department for tension applications when 12D cannot be maintained.

5. Lateral capacity is based on medium dense soils with free head condition with a maximum distance in air or fluid soils of 6" and embedment of 7 feet. Contact TMP Engineering Department for other conditions.

6. TMP Model P4, P3-HD, P4-HD, P5, and P6 are subject to site specific engineering. TMP Engineering Department approval is required to use the upper capacity values shown in table.

7. Allowable bending resistance is based on calculations assuming bare steel, 50 years corrosion per AC358 and 1.67 safety factor.

8. Maximum installation torque for P1, P2, and P3 are based on IAPMO-UES Evaluation report no. 481.

9. Maximum installation torque for P5 and P6 are limited to the maximum torque of the ET1 installation equipment.

**Comments:**

- Larger Techno Metal Posts can be used for applications requiring a lateral or bending resistance higher than shown in the selection table.

- For any technical questions, please contact the TMP Engineering Department.

# TECHNICAL SPECIFICATIONS

## HELICAL PILES

### EXAMPLE: MODEL P3 - HSS 3.5" (88.9 mm)

HD Steel Maximum Ultimate Capacity: 74,200 lbs (74.2 kips)\*

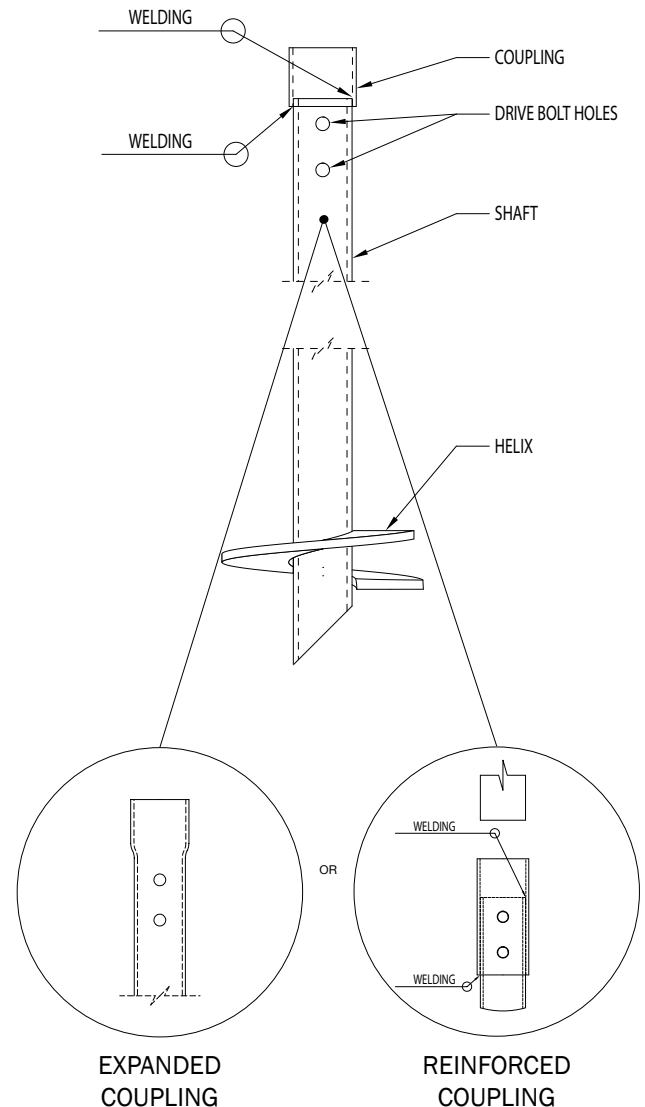
HD Steel Maximum Allowable Capacity: 37,100 lbs (37.1 kips)\*

\*For heavier loads, P4 - HSS 4" (101.6 mm) HD Steel offers Maximum Allowable Capacity up to 50,600 lbs (50.6 kips)

Techno Metal Post Model P3 is the helical pile which is commonly used for new construction and underpinning projects. This product is available in regular steel (0.216" wall thickness) and also in HD steel (0.300" wall thickness). It is also available in different lengths (7', 10.5' or 14' for regular steel and 8' and 12' for HD steel) and different helix configurations, which are a function of soil conditions and project requirements.

Techno Metal Post makes many other pile models (P1 to P10), so other products may be more appropriate for your project. The variety of brackets and pile caps that are commonly used with the pile model P3 are also shown hereafter. Techno Metal Post uses unique proprietary equipment for the installation of helical piles. We have 3 different types of equipment available, from the small lightweight machine for limited access areas or indoor projects, to the largest industrial machine for heavier jobs.

Components Specification	Standard Steel	Heavy Duty Steel (HD)
Shaft and Extensions	Round HSS 3.5" (88.9 mm) O.D. x 0.216" (5.5 mm) Wall thickness Standard: ASTM A500 Grade C - Circular steel section Fy=51 ksi min Available in 7' (2,134 mm), 10.5' (3,200 mm) or 14' (4,267 mm) long sections 50 years design life per AC358	Round HSS 3.5" (88.9 mm) O.D. x 0.300" (7.62 mm) Wall thickness Standard: ASTM A500 Grade C - Circular steel section Fy=51 ksi min Available in 8' (2,438 mm) or 12' (3,658 mm) long sections 50 years design life per AC358
Helix	1/2" (12.7 mm) thick / factory - welded helix Standard: ASTM G40.21-44W - Steel 3" (76 mm) pitch / Available in 8" (203.2 mm), 10" (254 mm) or 12" (304.8 mm) Diameter (Note: Other helix configuration could be considered with site specific engineering.) For multiple helical pile combinations, 2 or 3 helices are welded to the lead sections. Helix spacing along the shaft is 3.0 times helix diameter.	
Coupling	<b>Regular Coupling:</b> Round HSS 4" (101.6 mm) O.D. x 0.226" (5.7 mm) Wall thickness x 3.5" (88.9 mm) long Fy=51 ksi min. (350 MPa) <b>Expanded Coupling:</b> Round HSS 4" (101.6 mm) O.D. x 0.188" (4.8 mm) Wall thickness x 2.5" (64 mm) long Fy=60 ksi min. (414 MPa) <b>Reinforced Coupling:</b> Round HSS 4" (101.6 mm) O.D. x 0.226" (5.7 mm) Wall thickness x 9" (228.6 mm) long Fy=51 ksi min. (350 MPa) Coupling is welded on shaft and extension and installation torque validates field weld capacity. Bolted coupling available when welding is not possible.	
Coating	Available with a hot dipped galvanization coating compliant with ASTM A123 or Bare steel	
Additional Corrosion Protection	Cathodic Protection System available for additional corrosion protection	
Load Specifications	Standard Steel	Heavy Duty Steel (HD)
Kt factor	Kt factor = 7	Kt factor = 7
Max. Install. Torque (ft-lb)	9,400 ft-lb	11,000 ft-lb
Max. Ultimate Capacity	65.8 kips	74.1 kips
Max. Allowable Capacity**	32.9 kips	37.1 kips
CODE EVALUATION		
ICC-ES	ICC-ES (ESR-3418)	
IAPMO	IAPMO (ER-481)	



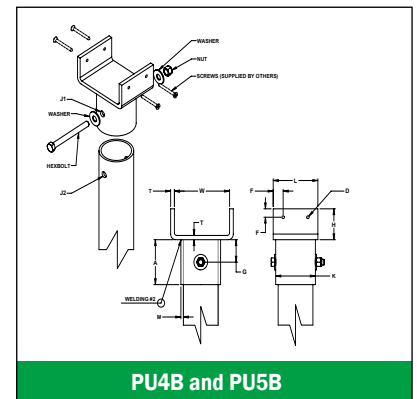
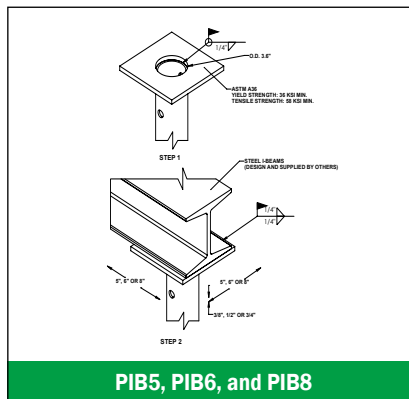
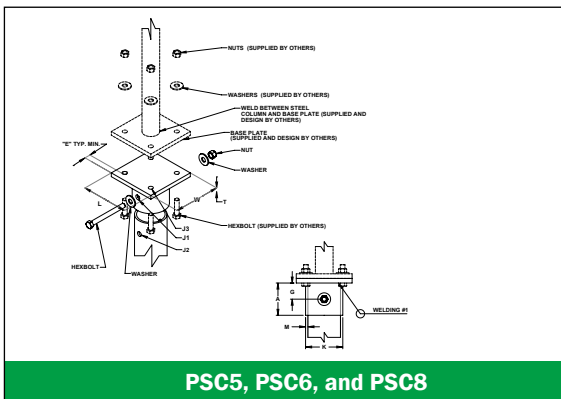
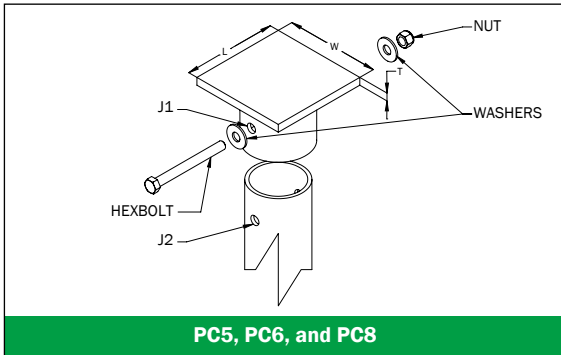
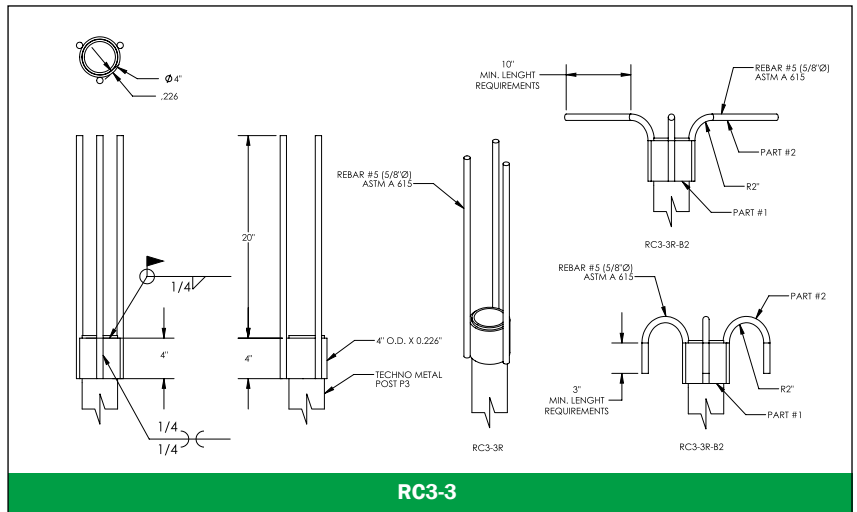
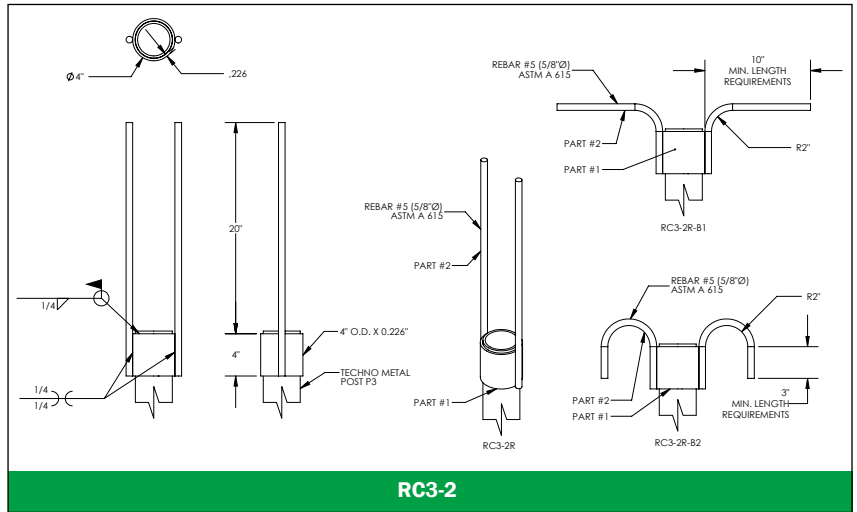
\*\* Higher load ratings could be considered with site-specific engineering.



# TECHNICAL SPECIFICATIONS

## FOUNDATION & NEW CONSTRUCTION BRACKETS

Components Specification	
Steel	Standard: ASTM G40.21-44W - Steel
Coating	Available with a hot dipped galvanization coating compliant with ASTM A123 or Bare steel
Additional Corrosion Protection	Cathodic Protection System available for additional corrosion protection when bracket is embedded in soil or in concrete
New Construction Brackets	
RC3-2 (Light Duty New Construction Bracket with 2 rebar)	Purpose: New construction bracket when embedded in concrete wall or beam Ultimate Load Capacity: 44 kips Allowable Load Capacity: 22 kips
RC3-3 (Heavy Duty New Construction Bracket with 3 rebar)	Purpose: New construction bracket when embedded in concrete wall or beam Ultimate Load Capacity: 67 kips Allowable Load Capacity: 33.5 kips
PC5, PC6, and PC8	Purpose: New construction bracket when embedded in concrete Allowable Load Capacity: 31 kips to 37 kips depending on concrete cover
PIB5, PIB6, and PIB8	Purpose: Flat plate pile cap supporting I-Beam Allowable Load Capacity: 6 kips to 25 kips depending on beam sizes
PSC5, PSC6, and PSC8	Purpose: Flat plate pile cap supporting Steel Column Allowable Load Capacity: 31 kips to 55 kips depending on column sizes
PU4B and PU5B	Purpose: U bracket supporting Wood Beam Allowable Load Capacity: 2 kips to 16 kips depending on beam characteristics



# INSTALLATION EQUIPMENT

Techno Metal Post mechanical engineers design and develop every piece of installation equipment that we offer. By ensuring the installation methods of each post, we can certify our product with 100% confidence. Each of our 3 proprietary installation machines offers unique size and power and we can assure there is an appropriate machine for every unique situation. Our objective is to incorporate your helical pile needs and vision, and to manufacture equipment that will help you meet your objectives.





## R2D

**Dimensions (L x W x H):**

98 1/2" x 29" x 59" (2,500 mm x 760 mm x 1,500 mm)

**Weight:**

1,653 lbs (750 kg)

**Maximal height of mast:**

133 7/8" (3,400 mm)

**Mast rotation:**

+/- 60°

**Minimum clearing required for installation:**

7" (178 mm)

**Maximal allowable bearing capacity  
in compression per installed TMP helical pile:**

20 kips



## EM1

**Dimensions (L x W x H):**

93" x 48" x 66" (2,362 mm x 1,219 mm x 1,676 mm)

**Weight:**

4,464 lbs (2,025 kg)

**Maximal height of mast:**

145" (3,683 mm)

**Mast rotation:**

360°

**Minimum clearing required for installation:**

8" (203 mm)

**Maximal allowable bearing capacity  
in compression per installed TMP helical pile:**

30 kips



## ET1

**Dimensions (L x W x H):**

168" x 68" x 84" (4,267 mm x 1,727 mm x 2,133 mm)

**Weight:**

8,900 lbs (4,037 kg)

**Maximal height of mast:**

180" (4,572 mm)

**Mast rotation:**

360°

**Minimum clearing required for installation:**

9" (229 mm)

**Maximal allowable bearing capacity  
in compression per installed TMP helical pile:**

50 kips

# ENGINEERING TEAM

Our **Engineering Team**, specialized in geotechnical and structural engineering, is here to assist and offer you personalized service – from small residential projects to large-scale industrial installations. Whenever you specify a helical pile foundation project, our engineers will determine the proper helical piles to use for each of your projects and will issue a certificate and guarantee the work according to standards.



**COMPRESSION LOAD TEST**



**Pascal Marceau, P. Eng.**

- Load capacity calculation
- Global expert in the field of helical pile foundations
- Author of "The Canadian standard for screw piles"
- More than 22 years experience in civil engineering
- Member of the OIQ, PEO, APEGA, APEGBC, APEGS, APEGNB, APEGM, PEGNL, APENS



**Jérôme Chabot, P. Eng.**

- Load capacity calculation
- Load capacity research and development
- Contributor to the drafting of the Evaluation Report U.S. standard (ICC AC358)
- More than 10 years experience in civil engineering
- Member of the OIQ, PEO, APEGA, APEGBC, APEGS, APEGNB, APEGM, PEGNL, APENS, APEPEI



**Valérie Groleau, P. Eng.**

- Load capacity calculation
- More than 10 years experience in civil engineering
- Member of the OIQ, PEO, APEGA, APEGBC, APEGS



**Raphaël Vachon, P. Eng.**

- Load capacity calculation
- More than 3 years experience in civil engineering
- Member of OIQ, APEGNB, APEGM, PEGNL

CANADA



**Techno Metal Post helical piles are engineered and guaranteed.**



**TENSION LOAD TEST**



**LATERAL LOAD TEST**

**USA**



**Michael Hutsenpiller, P. Eng.**

- Load capacity calculation
- Senior Engineer for Techno Metal Post U.S
- Specialist in structural, architectural, and foundation design
- More than 35 years experience in civil engineering



**Stéphane de Franssu, P. Eng.**

- Load capacity calculation
- More than 15 years experience in the industry and in construction
- More than 10 years experience in helical pile foundations
- Graduate of l'Institut Catholique des Arts et Métiers de Lille

**EUROPE**



**Guillaume Blestel, P. Eng.**

- Load capacity calculation
- Specialist in mechanical engineering and automation
- More than 5 years experience in the industry
- Graduate of the Institut National des Sciences Appliquées de Rennes, France (INSA-Rennes)



**Sébastien Planquart, P. Eng.**

- Load capacity calculation
- Specialist in geotechnology
- More than 5 years experience in geotechnical study
- Graduate of l'Université de Bordeaux

**UK**



**Kevin Lewis, CEng EIng**

- Load capacity calculation
- Specialist in structural engineering
- More than 25 years experience in the construction industry
- Graduate of Portsmouth University
- Member of MIEI

# CERTIFICATIONS

## UNITED STATES

### TECHNICAL CERTIFICATIONS - AN ASSURANCE OF QUALITY AND RELIABILITY

TMP has worked tirelessly to obtain the required accreditation and acceptance of its products throughout the world. Our engineers have spent countless hours ensuring that our products meet the strictest standards. TMP is the first helical pile company in the world to be recognized and to receive certifications from multiple countries.



### INTERNATIONAL CODE COUNCIL EVALUATION SERVICE (ICC-ES)

#### EVALUATION SERVICE REPORT #3418

ICC-ES is the International Code Council Evaluation Service. This organization is widely accepted and trusted to evaluate products and confirm the **compliance with building codes**. In November 2013, Techno Metal Post received an Evaluation Report (ESR-3418), which covers the P3 shaft (3.5" O.D.), in three helices size (8", 10", and 12"). The report confirms the compliance with 2015, 2012, 2009, and 2006 International Building Code (IBC). Since 2013, the Evaluation Report has been revised twice. Now the ESR-3418 covers double and triple helices, longer shafts (10'6" and 14'), as well as HD steel. All certification documents are easily available on our corporate website, under "Professionals" section, then "Certifications", where you can find and read the full ICC-ES Report.



**IAPMO UES ER-481**

### INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICERS (IAPMO)

#### EVALUATION REPORT #481

As of 2018, TMP is the first company in the world to receive the International Association of Plumbing and Mechanical Officers (IAPMO) ER-481 approval for its helical pile models P1 (1-7/8" O.D.), P2 (2-3/8" O.D.), and P3 (3.5" O.D.). This approval means our product is **compliant with the International Residential Code (IRC Code) 2015, 2012, and 2009**. This Evaluation Report is in accordance with IAPMO-UES Evaluation Criteria for Helical Foundations for use under the IRC, EC-027.

# CERTIFICATIONS AROUND THE WORLD



**International:** TMP has also been assessed and approved by **National Quality Assurance, U.S.A.**, against the provisions of: **ISO 9001**.



**Canada:** In 2002, TMP was the first helical pile company to receive a **Canadian Construction Material Centre (CCMC)** product evaluation stating that it is **compliant with the Canadian National Building Code**, subject to the condition of use described in the Evaluation Report.



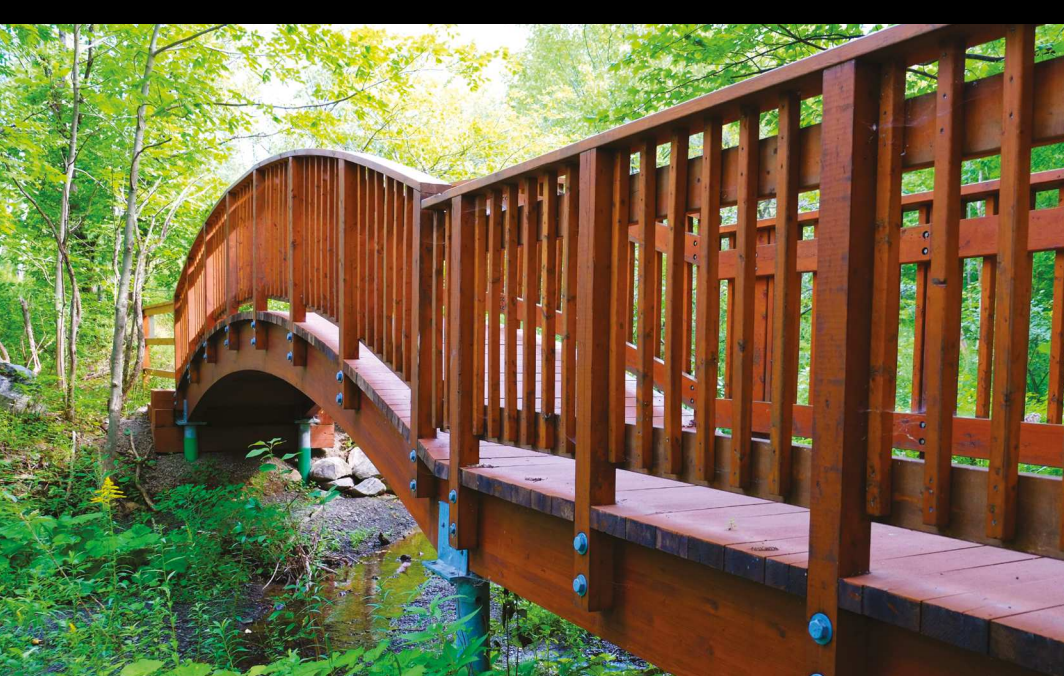
**France:** In 2006, Techno Metal Post's technology was the first to be granted **technical approval #3/16 873** by the **Commission Chargée de Formuler des Avis Techniques (CCFAT)**.



**Europe:** Techno Metal Post has received the certification which confirms its products fulfill all the prescribed requirements for the **European Norm EN 1090-1:2009 + A1:2011**, including **Execution Class 2 in EN 1090-2**.



**U.K.:** TMP was the first helical pile company to receive **BBA Approval Inspection Testing Certification (Certificate 18/5477)**, which is recognized in the United Kingdom by building control offices, government ministries, architects, specifiers and industry insurers.



**FOOTBRIDGES / TRAILS / BOARDWALKS**



**SOIL DECONTAMINATION**



**MONUMENTS**



**SLABS**

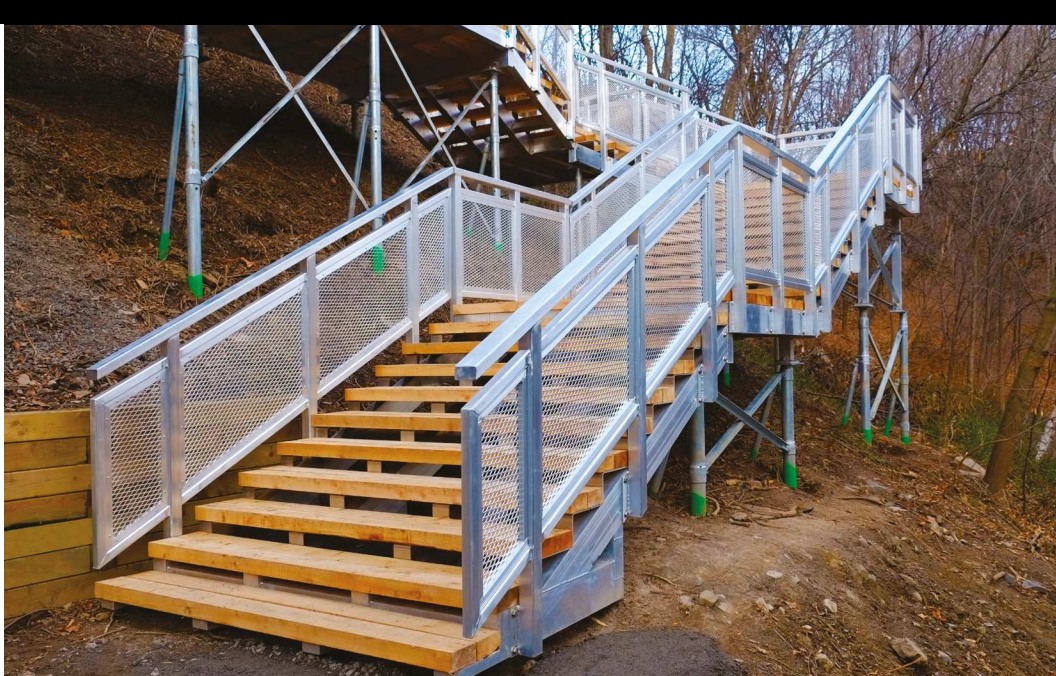


**MODULAR HOMES**

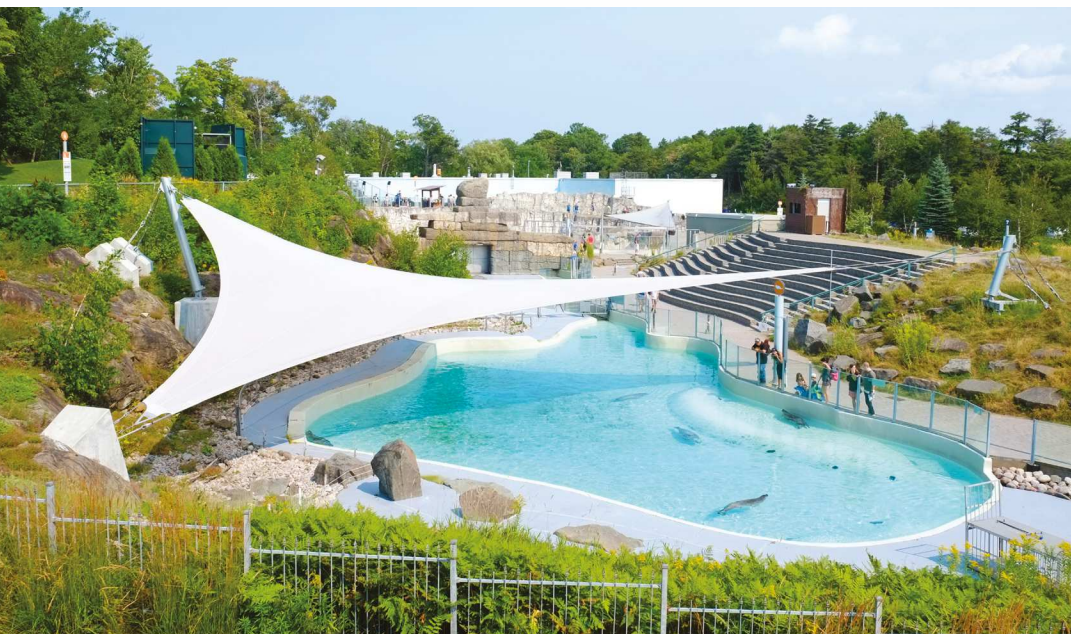




**UNDERPINNING**



**STAIRS**



**SHADE STRUCTURES**



**SIGNS**



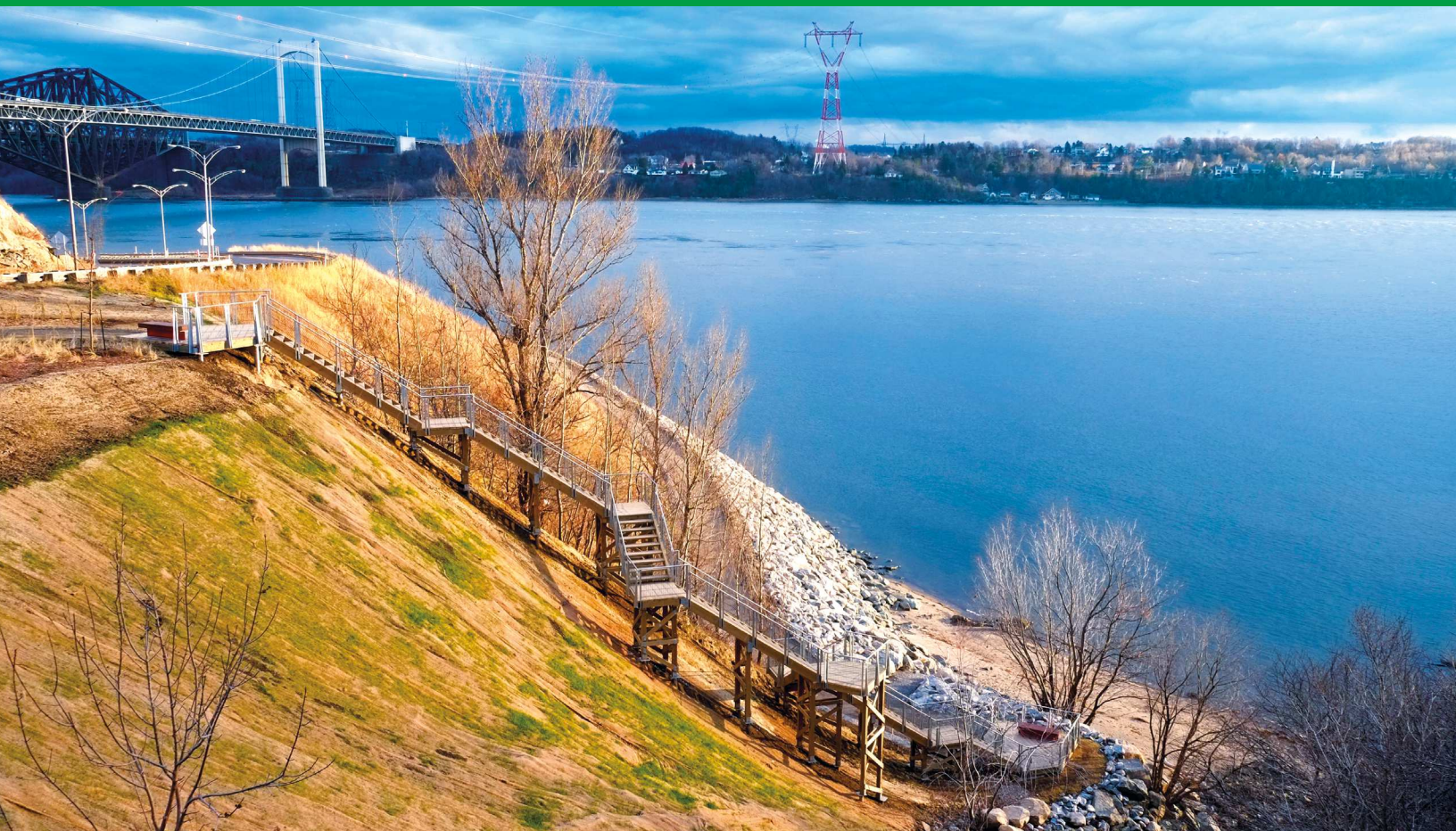
**TEMPORARY STRUCTURES**

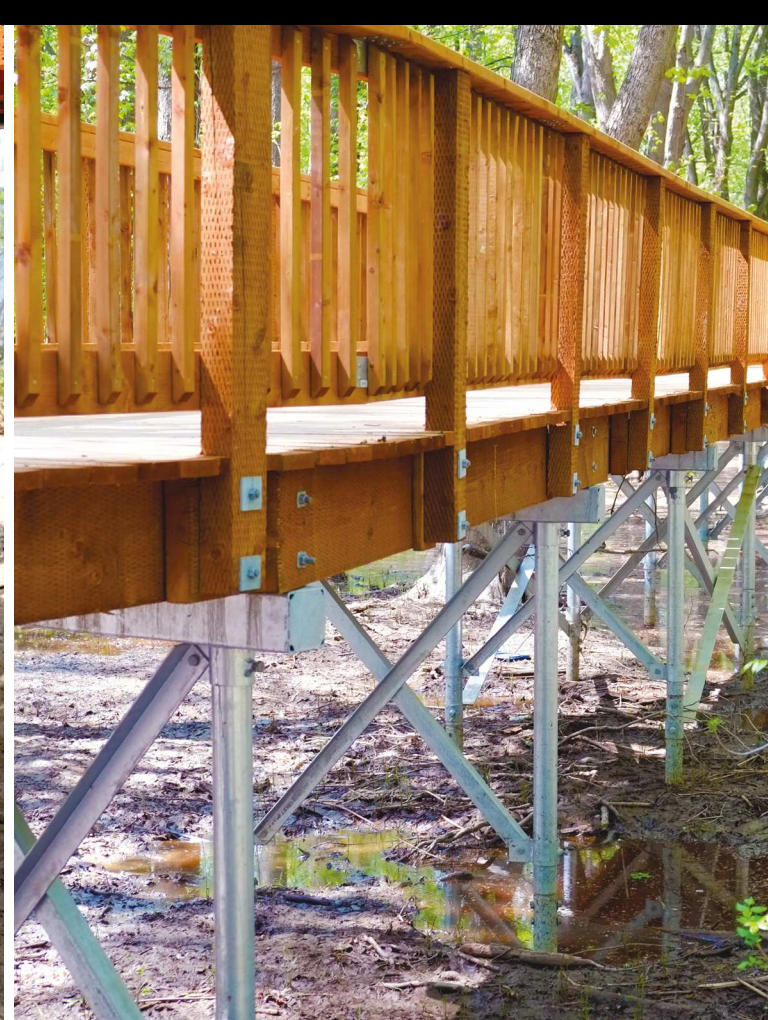


**PARKING AREAS**

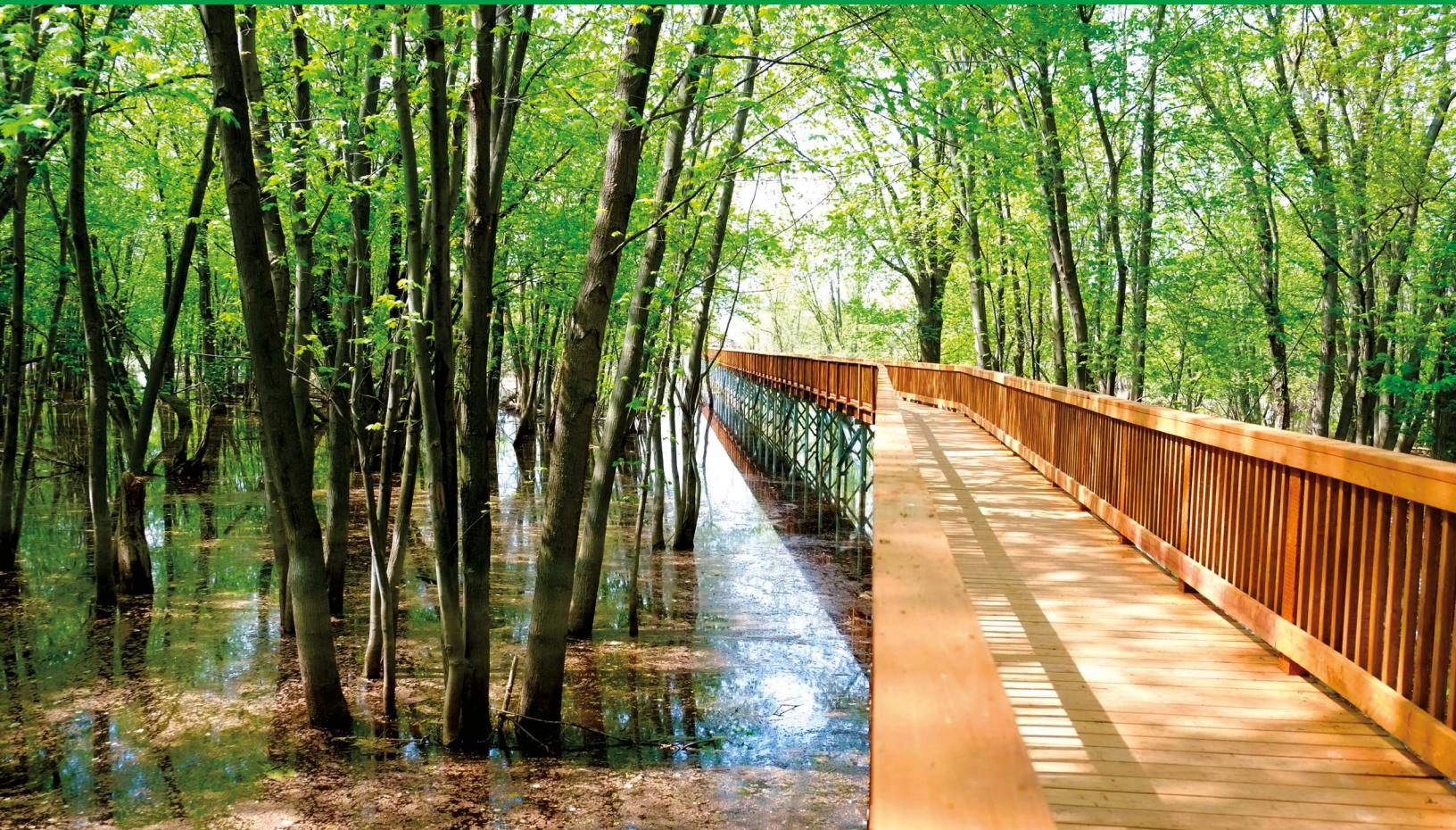


## STAIRS





## BOARDWALKS





## BUILDINGS





## SEISMIC DESIGNED STRUCTURES





## SEASONAL DOMES





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