DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

CITY OF PORTLAND

BUILDING PERMIT

This is to certify that **JEREMY& FISCHER**

Located At **111 BANCROFT ST**

Job ID: **2011-05-1104-ALTR**

CBL: **193 - - A - 013 - 001 - - - - -**

has permission to 10' x 12' deck & removal of windows

provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statues of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission procured before this building or part thereof is lathed or otherwise closed-in. 48 HOUR NOTICE IS REQUIRED.	A final inspection must be completed by owner before this building or part thereof is occupied. If a certificate of occupancy is required, it must be

06/23/2011

Fire Prevention Officer **Code Enforcement Officer / Plan Reviewer**

THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY

PENALTY FOR REMOVING THIS CARD

BUILDING PERMIT INSPECTION PROCEDURES

Please call 874-8703 or 874-8693 (ONLY)

or email: buildinginspections@portlandmaine.gov

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the city of Portland Inspections Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need to be confirmed by this office.

- **Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.**
- **Permits expire in 6 months. If the project is not started or ceases for 6 months.**
- **If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue.**

1. Footings/ Setbacks
2. Close-In: (Electrical, Plumbing, Framing)
3. Final Inspection

The project cannot move to the next phase prior to the required inspection and approval to continue, REGARDLESS OF THE NOTICE OF CIRCUMSTANCES.

IF THE PERMIT REQUIRES A CERTIFICATE OF OCCUPANCY, IT MUST BE PAID FOR AND ISSUED TO THE OWNER OR DESIGNEE BEFORE THE SPACE MAY BE OCCU0PIED.

PORTLAND MAINE

Strengthening a Remarkable City, Building a Community for Life • www.portlandmaine.gov

Director of Planning and Urban Development
Penny St. Louis

Job ID: 2011-05-1104-ALTR **Located At:** 111 BANCROFT **CBL:** 193 - - A - 013 - 001 - - - - -

Conditions of Approval:

Zoning

1. This permit is being approved on the basis of plans submitted including the revised plans submitted June 17, 2011. Any deviations shall require a separate approval before starting that work.
2. This property shall remain a single family dwelling. Any change of use shall require a separate permit application for review and approval.

Building

1. **R502.6 Bearing.** The ends of each joist, beam or girder shall have not less than 1.5 inches (38 mm) of bearing on wood or metal and not less than 3 inches (76 mm) on masonry or concrete except where supported on a 1-inch-by-4-inch (25.4 mm by 102 mm) ribbon strip and nailed to the adjacent stud or by the use of *approved* joist hangers.
2. R311.5.1 Attachment. Exterior landings, decks, balconies, stairs and similar facilities shall be positively anchored to the primary structure to resist both vertical and lateral forces or shall be designed to be self-supporting. Attachment shall not be accomplished by use of toenails or nails subject to withdrawal.
3. A graspable handrail (34-38 inches in height) shall be provided on at least one side of each continuous run of treads or flight with four or more risers. Fall protection (36 inches) from exterior decks may be required if floor joist are at or above thirty (30) inches from grade.
4. The maximum riser height shall be 7 3/4 inches; the minimum tread depth shall be 10 inches.
5. Frost protection must be installed per the enclosed detail as discussed w/owner/contractor (at least 4' from grade). A qualified installed per Manufacturers' recommendation is required for the proposed Techno® Post.

City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, FAX: (207) 8716

Job No:	Date Applied:	CBL:	
2011-05-1104-ALTR	**5/16/2011**	**193 - - A - 013 - 001 - - - - -**	
Location of Construction: **111 BANCROFT ST**	Owner Name: **JEREMY & SARAH FISCHER**	Owner Address: **111 BANCROFT ST PORTLAND, ME 04102**	Phone: 207-551-3383
Business Name:	Contractor Name: Lane Plissy	Contractor Address: 17 Edward St., Augusta ME 04330	Phone: 207-749-9254
Lessee/Buyer's Name:	Phone:	Permit Type: **BLDG - Building**	Zone: **R-3**
Past Use: Single Family home	Proposed Use: Single Family home – replace window with patio door & build 10' x 12' deck w/ steps	Cost of Work: **7000.00**	CEO District:
		Fire Dept: ___ Approved ___ Denied ✓ N/A Signature:	Inspection: Use Group: R3 Type: 5B IRC,2009 Signature:
Proposed Project Description: **111 Bancroft St. – build 12' x 10' deck**		Pedestrian Activities District (P.A.D.)	
Permit Taken By:		**Zoning Approval**	

1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.
2. Building Permits do not include plumbing, septic or electrial work.
3. Building permits are void if work is not started within six (6) months of the date of issuance. False informatin may invalidate a building permit and stop all work.

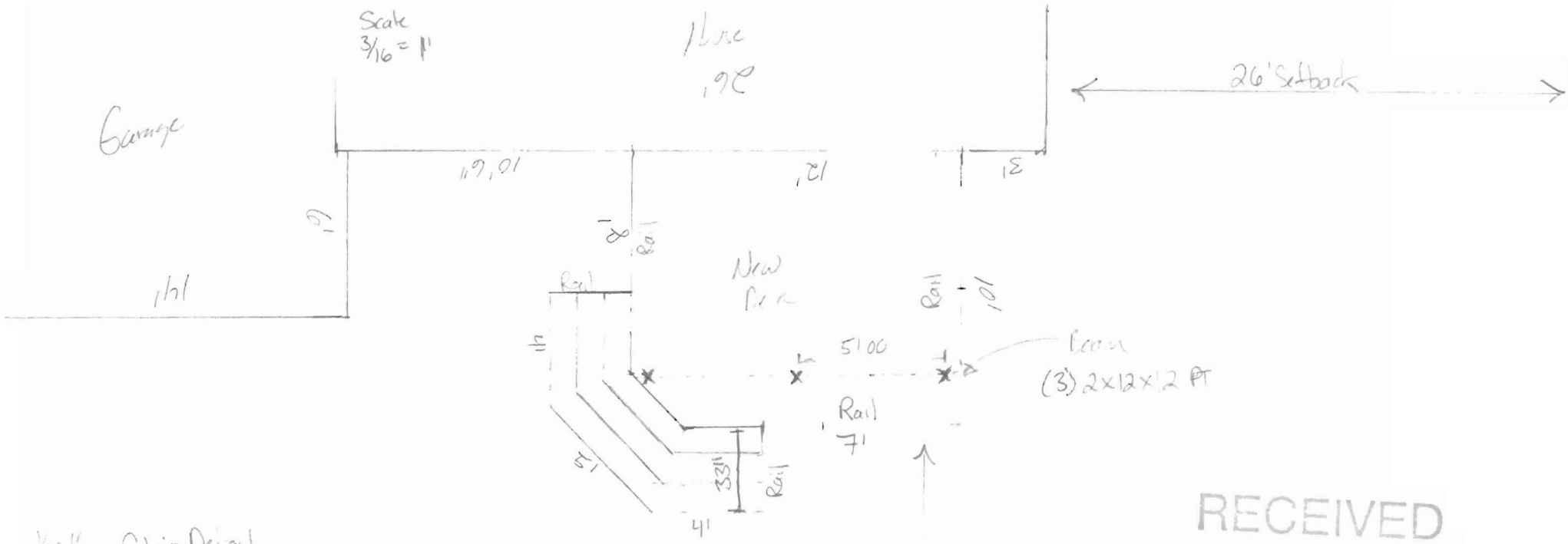
Special Zone or Reviews	Zoning Appeal	Historic Preservation
___ Shoreland	___ Variance	✓ Not in Dist or Landmark
___ Wetlands	___ Miscellaneous	___ Does not Require Review
___ Flood Zone	___ Conditional Use	___ Requires Review
___ Subdivision	___ Interpretation	___ Approved
___ Site Plan	___ Approved	___ Approved w/Conditions
___ Maj ___ Min ___ MM	___ Denied	___ Denied
Date: OK w/ condition 6/23/11 ABM	Date:	Date: ABM

CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the appication is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT ADDRESS DATE PHONE

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE DATE PHON



Jeremy + Sarah Fischer
111 Bancroft St.

Jeremy + Sarah Fischer
111 Bancroft St.
Portland

Beam - 3x 2x12x16 → Cantilever @ 2'
Footings = 4/x Techno Metal Pst's @ 5' centers
Railings + Stairs → To Code
Framing = 2x10x12

* Planned deck size reduced to 8x10 with steps.

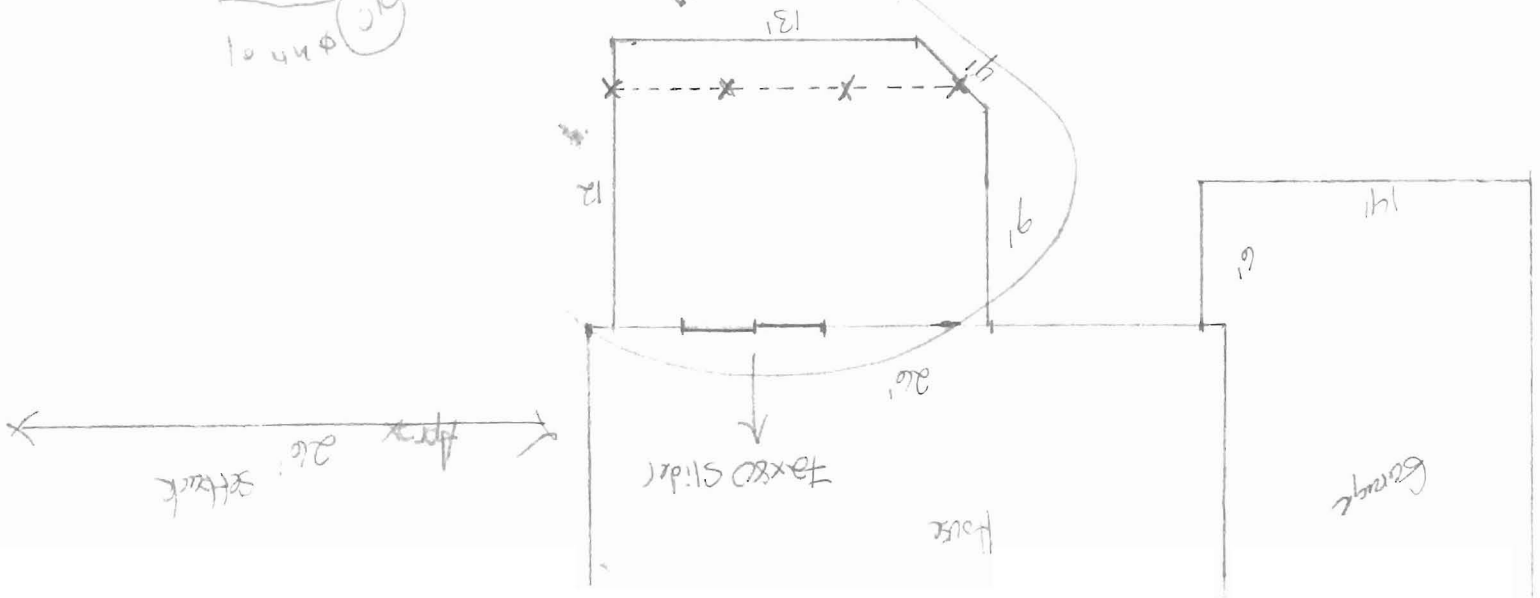
R-3
lot size - 8500
front setback N/A
rear setback - 25' - 44' given (probably less but check)
side " - 8' - 21' given
lot coverage - 35% = 2975

house = 729
deck = 80
1029 ✓

8x10
7x2
½(5x2)
96
14
5
10 44 ✓

Approx 44' setback

* see plot plan submitted 6/17/11 for size of deck



General Building Permit Application

If you or the property owner owes real estate or personal property taxes or user charges on any property within the City, payment arrangements must be made before permits of any kind are accepted.

Location/Address of Construction: 111 Bancroft St.		
Total Square Footage of Proposed Structure/Area approx 10 x12 deck w/ Steps (150 sq ft)	Square Footage of Lot	Number of Stories 2
Tax Assessor's Chart, Block & Lot Chart# Block# Lot#	Applicant *must be owner, Lessee or Buyer* Name Sarah & Jeremy Fischer Address 111 Bancroft St City, State & Zip Portland 04102	Telephone: 207-551-3383
Lessee/DBA (If Applicable)	Owner (if different from Applicant) Name Address City, State & Zip	Cost Of Work: $ 7000.00 C of O Fee: $ — Total Fee: $ 90.00

Current legal use (i.e. single family) single family Number of Residential Units 1
If vacant, what was the previous use? —
Proposed Specific use: same (deck addition)
Is property part of a subdivision? — If yes, please name ____
Project description: Removal of window, installation of patio door. Build 10x12 deck with steps and rails to code. See enclosed sketches.

Contractor's name: Lane Plissey
Address: 17 Edward St
City, State & Zip Augusta, ME 04330 Telephone: 207-749-9254
Who should we contact when the permit is ready: Sarah Fischer Telephone: 207-551-3383
Mailing address: 111 Bancroft St, Portland, ME 04102

Please submit all of the information outlined on the applicable Checklist. Failure to do so will result in the automatic denial of your permit.

In order to be sure the City fully understands the full scope of the project, the Planning and Development Department may request additional information prior to the issuance of a permit. For further information or to download copies of this form and other applications visit the Inspections Division on-line at www.portlandmaine.gov, or stop by the Inspections Division office, room 315 City Hall or call 874-8703.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

Signature: Sarah Fischer Date: 6/14/2011

This is not a permit; you may not commence ANY work until the permit is issued

Revised 01-20-10

Sarah Fischer

111 Bancroft St. Portland, ME 04102 Phone: 207-551-3383

June 14, 2011

City of Portland
Inspections Division
Room 315, City Hall
Portland, ME 04101

To Whom It May Concern:

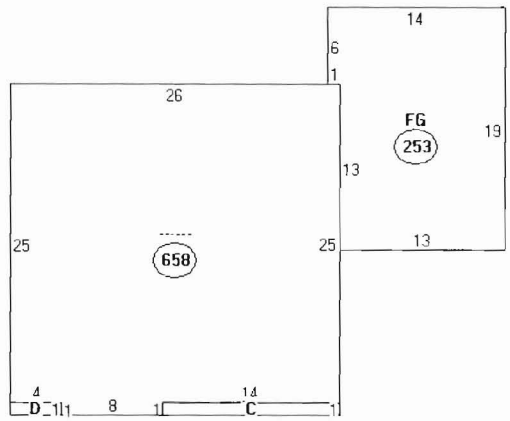
Please find enclosed a revised General Building Permit Application for construction of a deck at 111 Bancroft St, Portland, ME.

This application details revisions to the original application dated 5/11/2011. A check for $17.00 is included to cover the increased fee; original check #1269 in the amount of $73.00 was mailed with the original application.

We look forward to your response; please do not hesitate to contact me with any questions.

Sincerely,

Sarah Fischer



Descriptor/Area

A: .....
658 sqft

B: FG
253 sqft

C: .....
14 sqft

D: .....
4 sqft

929

* see revised application 6/17/11

General Building Permit Application

If you or the property owner owes real estate or personal property taxes or user charges on any property within the City, payment arrangements must be made before permits of any kind are accepted.

Location/Address of Construction: 111 Bancroft St

Total Square Footage of Proposed Structure/Area	Square Footage of Lot	Number of Stories
8x10 deck w/ steps (110 sq ft approx)		2

Tax Assessor's Chart, Block & Lot	Applicant *must be owner, Lessee or Buyer*	Telephone:
Chart# 193 Block# A Lot# 013	Name Sarah & Jeremy Fischer	207-551-3383
	Address 111 Bancroft St	
	City, State & Zip Portland 04102	

Lessee/DBA (If Applicable)	Owner (if different from Applicant)	Cost Of Work: $ 5300.00
RECEIVED MAY 16 2011 Dept. of Building Inspections City of Portland Maine	Name	C of O Fee: $ —
	Address	Total Fee: $ 93.00
	City, State & Zip	

B4 Mar. 1

Current legal use (i.e. single family) single family Number of Residential Units 1

If vacant, what was the previous use? —

Proposed Specific use: same (deck addition)

Is property part of a subdivision? — If yes, please name

Project description: Removal of window, installation of patio door. Build (8x10 deck with steps and rails to code. (see revised)

Contractor's name: Lane Plissey

Address: 17 Edward St

City, State & Zip Augusta, ME 04330 Telephone: 207-749-9254

Who should we contact when the permit is ready: Sarah Fischer Telephone: 207-551-3383

Mailing address: 111 Bancroft St, Portland, ME 04102

Submitted 6/17/11

Please submit all of the information outlined on the applicable Checklist. Failure to do so will result in the automatic denial of your permit.

In order to be sure the City fully understands the full scope of the project, the Planning and Development Department may request additional information prior to the issuance of a permit. For further information or to download copies of this form and other applications visit the Inspections Division on-line at www.portlandmaine.gov, or stop by the Inspections Division office, room 315 City Hall or call 874-8703.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

Signature: Sarah Fischer Date: 5/10/2011

This is not a permit; you may not commence ANY work until the permit is issued

Revised 01-20-10

NRC·CNRC
Institute for Research in Construction

Evaluation Report
CCMC 13059-R

MASTERFORMAT DIVISION	31 62 16.01
Issued	2002-04-08
Re-evaluated	2009-03-08
Re-evaluation due	2011-04-08

Techno Pieux™/Techno Metal Post

1. Opinion

It is the opinion of the Canadian Construction Materials Centre (CCMC) that "Techno Pieux™/Techno Metal Post" when used as as an auger-installed steel pile as a foundation system in accordance with the conditions and limitations stated in Section 3 of this Report, complies with the National Building Code of Canada (NBC) 2005:

- Clause 1.2.1.1.(1)(b), Division A, as an alternative solution that achieves at least the minimum level of performance required by Division B in the areas defined by the objectives and functional statements attributed to the following applicable acceptable solutions:
  - Subclause 9.4.1.1.(1)(c)(i)
  - Clause 4.2.3.8.(1)(e)
  - Sentence 4.2.3.10.(1)
  - Sentence 4.2.4.1.(1)

This opinion is based on CCMC's evaluation of the technical evidence in Section 4.1 provided by the Report holder.

2. Description

"Techno Pieux™/Techno Metal Post" is an earth anchor constructed of helical-shaped, circular steel blades welded to a steel shaft. The blades are constructed as a helix with a carefully controlled pitch. The helix blades are available in diameters of 150 mm to 600 mm. The anchors come with single, double or triple helical blades. The diameter and number of blades are chosen based on the bearing capacity of the soil and the load the auger-installed steel pile is designed to support. The central shaft is used to transmit torque during installation and to transfer axial loads to the helical plates. The central shaft also provides most of the resistance to lateral loading. The shaft is available in diameters of 47.6 mm, 60.3 mm, 88.9 mm and 101.6 mm, and wall thicknesses of 3.7 mm, 3.9 mm, 5.5 mm and 5.7 mm respectfully. The foundation system comes with various other accessories such as support plates to adapt to the building structure, extension shafts and connectors. The shaft is covered with a ribbed polyethylene pipe, which acts as a frost sleeve to isolate the pile from being jacked up by annual frost heave in the surrounding soil.

The steel shaft conforms to ASTM A 500, grade C, and the blades and accessories conform to CAN/CSA-G40.21-M98.

Figure 1 shows a typical steel pile with a single helix.

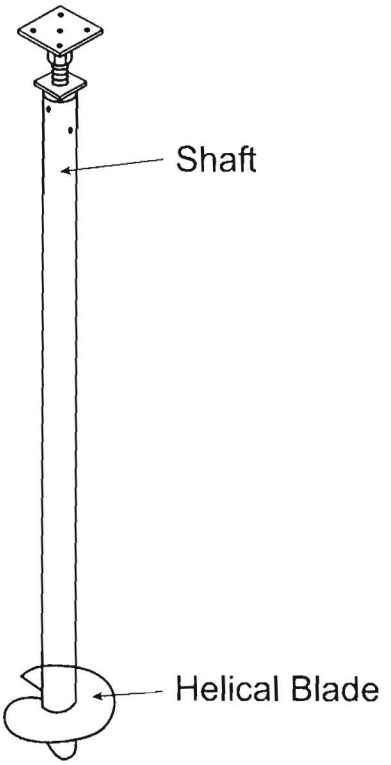


Figure 1. "Techno Pieux™/Techno Metal Post"

3. Conditions and Limitations

CCMC's compliance opinion in Section 1 is bound by the "Techno Pieux™/Techno Metal Post" being used in accordance with the conditions and limitations set out below.

- "Techno Pieux™/Techno Metal Post" may be used as a foundation system to support various constructions, provided that it is installed according to the manufacturer's current instructions and within the scope of this Evaluation Report.
- When the "Techno Pieux™/Techno Metal Post" is installed in granular soil or silt, there is a direct relationship between the applied torque and the allowable compressive and tensile loads. Table 1 indicates the allowable compressive and tensile loads as a function of the applied torque.
- When the auger-installed steel pile is installed in a cohesive soil such as clay, the relationship between the applied torque and the allowable compressive and tensile loads is not as predictable. When it is installed in such soils the allowable compressive and tensile loads have to be confirmed by agreed-upon theoretical calculations and onsite load tests. These load tests are also required if the allowable loads need to be greater than those stated in Table 1. The tests need to be conducted under the direct supervision of a professional registered geotechnical engineer skilled in such design and licensed to practice under the appropriate provincial or territorial legislation.
- In all cases, a registered professional engineer skilled in such design and licensed to practice under the appropriate provincial or territorial legislation must determine the number and spacing of the auger-installed steel piles required to carry the load. A certificate attesting to the conformity of the installation and the allowable loads for the piles must be provided.

Table 1. Allowable Compressive and Tensile Loads for the "Techno Pieux™/Techno Metal Post" Auger-Installed Pile in Granular Soil or Silt[1]

Applied Torque		Allowable Loads			
		Compression		Tension	
Nm	(lbf)	kN	(lb)	kN	(lb)
678	500	10	2250	5.0	1125
1017	750	15	3375	7.5	1688
1356	1000	20	4500	10.0	2250
1695	1250	25	5625	12.5	2813
2034	1500	30	6750	15.0	3375
2373	1750	35	7875	17.5	3938
2712	2000	40	9000	20.0	4500
3051	2250	45	10125	22.5	5063
3390	2500	50	11250	25.0	5625
3728	2750	55	12375	27.5	6188
4067	3000	60	13500	30.0	6750
4406	3250	65	14625	32.5	7313
4745	3500	70	15750	35.0	7875

Note to Table 1:

(1) The allowable loads identified in this Table are only valid when the "Techno Pieux™/Techno Metal Post" is installed in granular soil or silt. The applied torque is the average of the values attained within the last 600 mm of installation. Special attention is required when the auger-installed steel piles are installed in a recently backfilled site or in cohesive soils. In these cases, Table 1 does not apply and the allowable loads need to be determined by on-site confirmatory testing.

- The installation of the auger-installed steel pile shall be carried out as per the manufacturer's instructions. The anchors are screwed into the ground using mechanized equipment. The anchor is rotated into the ground with sufficient applied downward pressure (crowd) to advance the anchor one pitch distance per revolution. The anchor is advanced until the applied torque value attains a specified value. Extensions are added to the central shaft as needed. The applied loads may be tensile (uplift), compressive (bearing), shear (lateral), or a combination thereof. Helical anchors are rapidly installed in a wide variety of soil formations using a variety of readily available equipment. They are immediately ready for loading after installation.

- When "Techno Pieux™/Techno Metal Post" is installed in a soil where the conditions are corrosive to steel, adequate protection to the exposed steel shall be provided.

- The installer of the "Techno Pieux™/Techno Metal Post" auger-installed steel piles must be certified by Techno Pieux Inc. Using approved equipment, the installer must follow the manufacturer's installation instructions and the uses and limitations specified in this Report. Each installer shall carry a certification card bearing their signature and photograph.

- Each "Techno Pieux™/Techno Metal Post" auger-installed steel pile shall be identified with a label containing the following information:
  - manufacturer's identification; and
  - the phrase "CCMC 13059-R."

4. Technical Evidence

CCMC's Technical Guide for "Augered-Installed Steel Piles" sets out the nature of the technical evidence required by CCMC to enable it to evaluate a product as an acceptable or alternative solution in compliance with the NBC 2005. The Report holder has submitted test results and engineering analysis for CCMC's evaluation. Testing was conducted at an independent laboratory recognized by CCMC. The corresponding test results for "Techno Pieux™/Techno Metal Post" are summarized below.

4.1 NBC 2005 Compliance Data for "Techno Pieux™/Techno Metal Post" on which CCMC Based its Opinion in Section 1

"Techno Pieux™/Techno Metal Post" auger–installed steel piles were tested to ASTM D 1143-81 (1994)el, "Standard Test Method for Piles Under Static Axial Compressive Load," ASTM D 3689-90 (1995), "Standard Test Method for Individual Piles Under Static Axial Tensile Load," and ASTM D 3966-90, "Standard Test Method for Piles Under Lateral Loads."

Testing was conducted on three different sites. The first site had granular soil, the second had clay and the third was silt. A series of 14 tests were performed. The intent of the testing was to determine a correlation between the torque applied during installation and the allowable loads. In the granular and silt-based soils, there was a good correlation between the torque applied during installation and the allowable loads. For the compressive loads noted in Table 1, the factor of safety varied from 1.93 to 2.6. For the tensile loads, the factor of safety varied from 2.1 to 3.1. For the lateral loads no correlation was possible. For the testing that was conducted on the auger-installed steel pile in a cohesive soil such as clay, the correlation between the applied torque and the allowable loads was not as predictable.

Report Holder: Techno Pieux Inc.
1895, boul. Frontenac Est
Thetford Mines (Québec)
G6G 5M6

Tel.: (418) 332-2139
Fax: (418) 332-4330

Plant: Thetford Mines (Québec)

Ledger: 2x8x12ft; Attached through sheathing to Rim Joist w/ ½ x 5¼ Riser Lags 12" OC

Joists: 2x8x10PT@ 16 OC W 2x8 Hangers @ Both Ends

Beam: (3) 2x12x12 Laged Together w/ ½ x 4 Riser Lags @12" OC

Footings: (3) Techno Metal Posts Set @ 5' OC. W/6x6 Post to Beam Junctions Installed @ 4' Depth (Below Frost Line)