

**DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK
CITY OF PORTLAND**

Please Read
Application And
Notes, If Any,
Attached

BUILDING INSPECTION

PERMIT

Permit Number: 071431

This is to certify that BPI REALTY LLC / Patco Construction

has permission to 32' x 8' steel entrance structure attached to existing building

AT 1039 RIVERSIDE ST UNIT #4

L 331 A001004 DEC 18

provided that the person or persons who accept this permit shall comply with all of the provisions of the Statutes of the State and of the Ordinances of the City of Portland regulating the construction, maintenance and use of buildings and structures, and of the application on file in this department.

Apply to Public Works for street line and grade if nature of work requires such information.

Notification of inspection must be given and when permission is procured before this building or part thereof is occupied or any enclosed-in-
OUR NOTICE REQUIRED.

A certificate of occupancy must be procured by owner before this building or part thereof is occupied.

OTHER REQUIRED APPROVALS

Fire Dept. Craig Cass

Health Dept. _____

Appeal Board _____

Other _____

Department Name

James Burke 12/18/07
Director - Building & Inspection Services

PENALTY FOR REMOVING THIS CARD

City of Portland, Maine - Building or Use Permit Application

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

Permit No: 07-1431	Issue Date:	CBL: 331 A001004
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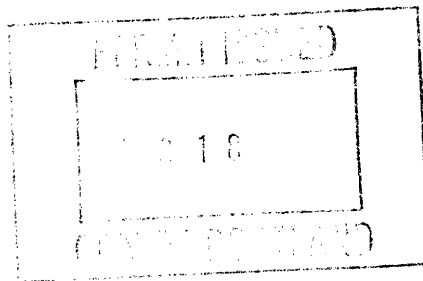
Location of Construction: 1039 RIVERSIDE ST UNIT #4	Owner Name: BPI REALTY LLC	Owner Address: 4 WASHINGTON ST	Phone:
Business Name:	Contractor Name: Patco Construction	Contractor Address: 1293 Main St Sanford	Phone: 2073245574
Lessee/Buyer's Name	Phone:	Permit Type: Additions - Commercial	Zone: I-M

Past Use: Commercial - BIOPROCESSING - Unit #4	Proposed Use: Commercial - BIOPROCESSING - Unit #4 - 32' x 8' steel entrance structure attached to existing building	Permit Fee: \$370.00	Cost of Work: \$35,000.00	CEO District: 5
Proposed Project Description: 32' x 8' steel entrance structure attached to existing building		FIRE DEPT: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied	INSPECTION: Use Group: B Type: 2B FBL-2003	
		Signature: <i>[Signature]</i> Date: 12/18/07		
PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)				
Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied				
Signature: _____ Date: _____				

Permit Taken By: Idobson	Date Applied For: 11/26/2007	Zoning Approval		
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- This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.
- Building permits do not include plumbing, septic or electrical work.
- Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..

Special Zone or Reviews <input type="checkbox"/> Shoreland <input type="checkbox"/> Wetland <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input checked="" type="checkbox"/> Site Plan Exemption 2007-205 Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/> Date: 11/26/07 <i>ARM</i>	Zoning Appeal <input type="checkbox"/> Variance <input type="checkbox"/> Miscellaneous <input type="checkbox"/> Conditional Use <input type="checkbox"/> Interpretation <input type="checkbox"/> Approved <input type="checkbox"/> Denied Date: _____	Historic Preservation <input checked="" type="checkbox"/> Not in District or Landmark <input type="checkbox"/> Does Not Require Review <input type="checkbox"/> Requires Review <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied Date: <i>ARM</i>
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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 application 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	PHONE

City of Portland, Maine - Building or Use Permit

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

Permit No: 07-1431	Date Applied For: 11/26/2007	CBL: 331 A001004
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Location of Construction: 1039 RIVERSIDE ST UNIT #4	Owner Name: BPI REALTY LLC	Owner Address: 4 WASHINGTON ST	Phone:
Business Name:	Contractor Name: Patco Construction	Contractor Address: 1293 Main St Sanford	Phone (207) 324-5574
Lessee/Buyer's Name	Phone:	Permit Type: Additions - Commercial	

Proposed Use: Commercial - BIOPROCESSING - Unit #4 - 32' x 8' steel entrance structure attached to existing building	Proposed Project Description: 32' x 8' steel entrance structure attached to existing building
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Dept: Zoning	Status: Approved with Conditions	Reviewer: Ann Machado	Approval Date: 11/29/2007
Note:	Ok to Issue: <input checked="" type="checkbox"/>		
1) This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.			
Dept: Building	Status: Approved with Conditions	Reviewer: Jeanine Bourke	Approval Date:
Note:	Ok to Issue: <input type="checkbox"/>		
1) Special inspections report required for final inspection			
2) Separate Permits shall be required for any new signage.			
Dept: Fire	Status: Approved	Reviewer: Capt Greg Cass	Approval Date: 12/05/2007
Note:	Ok to Issue: <input checked="" type="checkbox"/>		

Comments:
11/29/2007-amachado: Gave site plan exemption to planning.
12/18/2007-jmb: Note entered into exemption module on 12/10/07.....received granted site exemption. /gg (filed in site plan cabinet)



General Building Permit Application

Unit #4

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: <u>1039 Riverside Street</u>		
Total Square Footage of Proposed Structure/Area <u>254 sq. ft.</u>		Square Footage of Lot <u>N/A</u>
Tax Assessor's Chart, Block & Lot Chart# <u>331</u> <u>335</u> Block# <u>A</u> Lot# <u>1</u>	Applicant * <u>must</u> be owner, Lessee or Buyer* Name <u>Gary Goodrich</u> Address <u>1045 Riverside St.</u> City, State & Zip <u>Portland, Me 04103</u>	Telephone: <u>457-0025</u>
Lessee/DBA (If Applicable) <u>N/A</u>	Owner (if different from Applicant) Name <u>same</u> Address City, State & Zip	Cost Of Work: \$ <u>35,000.00</u> C of O Fee: \$ Total Fee: \$ <u>370.00</u>
Current legal use (i.e. single family) <u>business / light manf.</u> If vacant, what was the previous use? <u>N/A</u> Proposed Specific use: <u>same</u> Is property part of a subdivision? <u>yes</u> If yes, please name <u>Second Tee Condominium</u> Project description: <u>entrance structure</u> <u>Asse. Business Park</u> <u>32' long by 8' wide steel canopy attached to existing building.</u>		
Contractor's name: <u>Patco Construction Inc.</u> Address: <u>1293 Main St.</u> City, State & Zip: <u>Sanford, Me. 04073</u> Telephone: <u>324-5574</u> Who should we contact when the permit is ready: <u>Dennis Waters</u> Telephone: <u>651-0798</u> Mailing address: <u>same</u>		

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: Dennis M. Waters Date: 11/16/07

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



November 16, 2007

Building Department
City of Portland
389 Congress Street
Portland, ME 04101

Subject: 1039 Riverside Street Canopy Permit

To Whom It May Concern:

Attached, please find our building permit application for a proposed entrance canopy for the BioProcessing building at 1039 Riverside Street. The building was constructed in 2005. A canvas awning that the building owner installed to protect the main entrance has proven to be problematic, so they desire a more substantial structure.

The building is located in the "Second Tee Condominium Association Business Park" (Hardy Pond), Building #4. We have included site plans showing the location of the building and the proposed canopy. The owner spoke with the Planning Department and they recommended that we fill out the Application for Exemption from Site Plan review due to the minor nature of the construction. The completed form is attached.

The cost of construction is under \$50,000.00, but we have included stamped engineer's drawings nonetheless, as well as their statement of special inspections, and the completed "Certificate of Design Application."

The geotechnical report, by SW Coles, that was used for the main building is also included. This project calls for construction of four independent reinforced concrete piers immediately adjacent to the main building. SW Cole will verify soils conditions during their special inspections.

We hope that you find this application complete. Please call if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Dennis M. Waters", written in a cursive style.

Dennis M. Waters.
Vice President



Certificate of Design Application

From Designer:

STEVEN R. GRANT, P.E.

SRG ENGINEERING, INC.

Date:

NOV. 16, 2007PO BOX 925
GRAY, ME 04039

Job Name:

BIOPROCESSING CANOPY

Address of Construction:

1039 RIVERSIDE ST. PORTLAND, ME

2003 International Building Code

Construction project was designed to the building code criteria listed below:

Building Code & Year IBC 2003 Use Group Classification (s) B (per JOHN ENSIEDLER - ARCHITECT)

Type of Construction 2 UNPROTECTED

Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2003 IRC NO

Is the Structure mixed use? NO If yes, separated or non separated or non separated (section 302.3) N/A

Supervisory alarm System? NO Geotechnical/Soils report required? (See Section 1802.2) YES TIME BY S.W. COLE
4-1-07

Structural Design Calculations

NOT KEPT Submitted for all structural members (106.1 - 106.11)
(see PE STAMPA PLAN)

Design Loads on Construction Documents (1603)

Uniformly distributed floor live loads (7603.11, 1807)
Floor Area Use Loads Shown

Floor Area Use	Loads Shown
<u>N/A</u>	

Wind loads (1603.1.4, 1609)

YES Design option utilized (1609.1.1, 1609.6)

100 MPH Basic wind speed (1809.3) V₃₅

II, 1.00 Building category and wind importance Factor, I_w
table 1604.5, 1609.5)

B Wind exposure category (1609.4)

N/A Internal pressure coefficient (ASCE 7)

N/A Component and cladding pressures (1609.1.1, 1609.6.2.2)

USED 20 MPH Main force wind pressures (7603.1.1, 1609.6.2.1) ←
minimum

Earth design data (1603.1.5, 1614-1623)

YES Design option utilized (1614.1)

I Seismic use group ("Category")

0.365, 0.160 Spectral response coefficients, S_D & S_{D1} (1615.1)

D Site class (1615.1.5) (Assumed per code)

(30 PSF NET UPLIFT ON ROOF) ←

N/A Live load reduction

N/A Roof live loads (1603.1.2, 1607.11)

168 TPA Roof snow loads (1603.7.3, 1606) (B + SLUING)

60 Ground snow load, P_g (1608.2)

46 PSF If P_g > 10 psf, flat-roof snow load P_f

1.0 If P_g > 10 psf, snow exposure factor, C_e

1.0 If P_g > 10 psf, snow load importance factor, I_s

1.1 Roof thermal factor, C_t (1608.4)

N/A Sloped roof snowload, P_s (1608.4)

C Seismic design category (1616.3)

moment frames Basic seismic force resisting system (1617.6.2)

3, 3 Response modification coefficient, R_v and
deflection amplification factor, C_d (1617.6.2)

Eq. 17.6.1 Analysis procedure (1616.6, 1617.5)

1.2 kips Design base shear (1617.4, 1617.5.1)

Flood loads (1803.1.6, 1612)

N/A Flood Hazard area (1612.3)

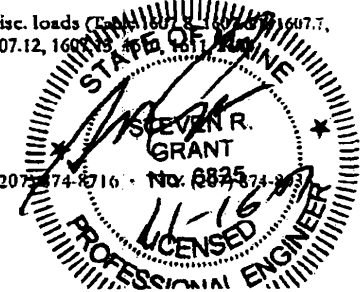
N/A Elevation of structure

Other loads

N/A Concentrated loads (1607.4)

N/A Partition loads (1607.5)

Misc. loads (1607.7, 1607.8, 1607.9, 1607.10, 1607.11, 1607.12, 1607.13)





Certificate of Design

Date: NOVEMBER 15, 2007

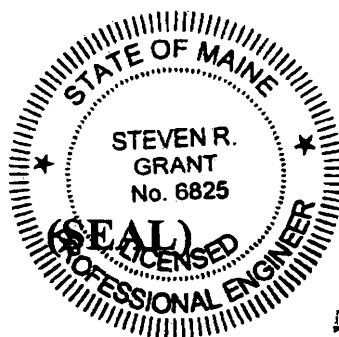
From: STEVEN R. GRANT, P.E.

SRG ENGINEERING, INC.
PO BOX 925
GRAY, ME 04039

These plans and / or specifications covering construction work on:

BIOPROCESSING CANOPY
1039 RIVERSIDE ST.

Have been designed and drawn up by the undersigned, a Maine registered Architect / Engineer according to the *2003 International Building Code* and local amendments.



Signature: [Handwritten Signature]

Title: President

Firm: SRG ENGINEERING, INC.

Address: PO BOX 925
GRAY, ME 04039

Phone: 207-657-7323

For more information or to download this form and other permit applications visit the Inspections Division on our website at www.portlandmaine.gov



SRG Job#07-094

To: City of Portland Code Enforcement Department
From: Steven R. Grant, President
Date: November 16, 2007
Subject: Bioprocessing Canopy: Quality Assurance Plan
Project Location: 1039 Riverside Street, Portland

Seismic and wind resisting lateral support will be provided by Rigid Frames in each direction.

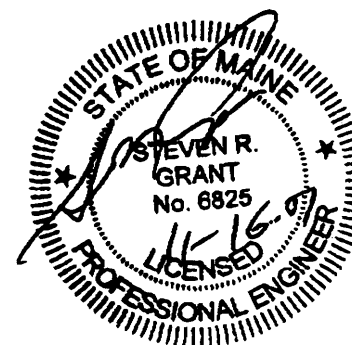
SRG Engineering has subcontracted with S.W. Cole Engineering (contact Craig Turcotte or Roger Domingo at 657-2866) to provide metal roof deck and structural steel connection review, frame bolts, and anchor bolts. Bolts at moment connections will be checked for proper tension/torque and shear connections will be checked for all plies to be in firm contact per AISC. In addition, S.W. Cole Engineering is to provide field review of foundation reinforcing (footings/piers) and anchor bolt placement. Site visits by S.W. Cole and SRG Engineering are planned to be on a limited basis throughout the construction of the foundation and building structure. In addition, SRG Engineering budgeted for a maximum of four (4) site visits to observe construction for conformance with contract documents as well.

We have asked that PATCO Construction notify SRG Engineering and S.W. Cole Engineering a minimum of 48 hours prior to all required site visits.

Please call should you have questions.

Steven R. Grant, P.E.
President

SRG:srg



Statement of Special Inspections

Project: BIOPROCESSING CANOPY
 Location: 1039 RIVERSIDE ST., PORTLAND, ME
 Owner: PATEO CONST. INC

Design Professional in Responsible Charge: SRG ENGINEERING / STEVEN R. GRANT, P.E.

This *Statement of Special Inspections* is submitted as a condition for permit issuance in accordance with the Special Inspection and Structural Testing requirements of the Building Code. It includes a schedule of Special Inspection services applicable to this project as well as the name of the Special Inspection Coordinator and the identity of other approved agencies to be retained for conducting these inspections and tests. This *Statement of Special Inspections* encompass the following disciplines:

Structural Mechanical/Electrical/Plumbing
 Architectural Other: _____

The Special Inspection Coordinator shall keep records of all inspections and shall furnish inspection reports to the Building Official and the Registered Design Professional in Responsible Charge. Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official and the Registered Design Professional in Responsible Charge. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

Interim reports shall be submitted to the Building Official and the Registered Design Professional in Responsible Charge.

A *Final Report of Special Inspections* documenting completion of all required Special Inspections, testing and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy.

Job site safety and means and methods of construction are solely the responsibility of the Contractor.

Interim Report Frequency:

or per attached schedule.

Prepared by:

STEVEN R. GRANT

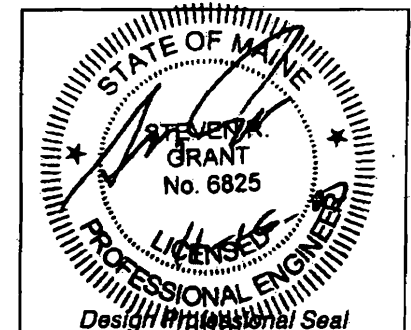
(type or print name)

[Signature]

Signature

11-16-07

Date



Owner's Authorization:

Building Official's Acceptance:

Signature

Date

Signature

Date

Schedule of Inspection and Testing Agencies

This Statement of Special Inspections / Quality Assurance Plan includes the following building systems:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Soils and Foundations | <input type="checkbox"/> Spray Fire Resistant Material |
| <input checked="" type="checkbox"/> Cast-in-Place Concrete | <input type="checkbox"/> Wood Construction |
| <input type="checkbox"/> Precast Concrete | <input type="checkbox"/> Exterior Insulation and Finish System |
| <input type="checkbox"/> Masonry | <input type="checkbox"/> Mechanical & Electrical Systems |
| <input checked="" type="checkbox"/> Structural Steel | <input type="checkbox"/> Architectural Systems |
| <input type="checkbox"/> Cold-Formed Steel Framing | <input type="checkbox"/> Special Cases |

Special Inspection Agencies	Firm	Address, Telephone, e-mail
1. Special Inspection Coordinator <i>STEVEN R GRANT</i>	SRG ENGINEERING, INC. PO BOX 925 GRAY, ME 04039	207-657-7323 207-657-7342 (Fax) 207-233-6261 (Cell)
2. Inspector		<i>srge@srgeig.com</i>
3. Inspector		
4. Testing Agency <i>Roger Domingo</i> or <i>CHANG TURCOTTE</i>	<i>J. W. COLE ENGINEERING</i>	<i>286 PORTLAND ROAD</i> <i>GRAY, ME 04039</i> <i>(207) 657-2866</i> <i>rdomingo@swcole.com</i>
5. Testing Agency		
6. Other		

Note: The inspectors and testing agencies shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official, prior to commencing work.

R. D. P. is BEING RETURNED BY PATCO CONSTRUCTION

Quality Assurance Plan

Quality Assurance for Seismic Resistance

Seismic Design Category **C**

Quality Assurance Plan Required (Y/N) — **See ATTACHED**

Description of seismic force resisting system and designated seismic systems:

RIGID FRAMES IN BOTH DIRECTIONS AT COLUMN LINES

Quality Assurance for Wind Requirements

Basic Wind Speed (3 second gust) **100 mph**

Wind Exposure Category **B**

Quality Assurance Plan Required (Y/N)

Description of wind force resisting system and designated wind resisting components:

SAME AS SEISMIC ABOVE

Statement of Responsibility

Each contractor responsible for the construction or fabrication of a system or component designated above must submit a Statement of Responsibility.

*STRUCTURAL STEEL FABRICATOR AND WELDER MUST
SUBMIT THIS → SEE PART 05 CONSTRUCTION.*

*(NOTE: ALL WELDS BY AISC CERTIFIED WELDERS, AND MUST BE
INSPECTED BY CERTIFIED WELD INSPECTOR — NO EXCEPTIONS.)*

Qualifications of Inspectors and Testing Technicians

The qualifications of all personnel performing Special Inspection and testing activities are subject to the approval of the Building Official. The credentials of all Inspectors and testing technicians shall be provided if requested.

Key for Minimum Qualifications of Inspection Agents:

When the Registered Design Professional in Responsible Charge deems it appropriate that the individual performing a stipulated test or inspection have a specific certification or license as indicated below, such designation shall appear below the *Agency Number* on the Schedule.

PE/SE	Structural Engineer – a licensed SE or PE specializing in the design of building structures
PE/GE	Geotechnical Engineer – a licensed PE specializing in soil mechanics and foundations
EIT	Engineer-In-Training – a graduate engineer who has passed the Fundamentals of Engineering examination

American Concrete Institute (ACI) Certification

ACI-CFTT	Concrete Field Testing Technician – Grade 1
ACI-CCI	Concrete Construction Inspector
ACI-LTT	Laboratory Testing Technician – Grade 1&2
ACI-STT	Strength Testing Technician

American Welding Society (AWS) Certification

AWS-CWI	Certified Welding Inspector
AWS/AISC-SSI	Certified Structural Steel Inspector

American Society of Non-Destructive Testing (ASNT) Certification

ASNT	Non-Destructive Testing Technician – Level II or III.
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International Code Council (ICC) Certification

ICC-SMSI	Structural Masonry Special Inspector
ICC-SWSI	Structural Steel and Welding Special Inspector
ICC-SFSI	Spray-Applied Fireproofing Special Inspector
ICC-PCSI	Prestressed Concrete Special Inspector
ICC-RCSI	Reinforced Concrete Special Inspector

National Institute for Certification In Engineering Technologies (NICET)

NICET-CT	Concrete Technician – Levels I, II, III & IV
NICET-ST	Soils Technician - Levels I, II, III & IV
NICET-GET	Geotechnical Engineering Technician - Levels I, II, III & IV

Exterior Design Institute (EDI) Certification

EDI-EIFS	EIFS Third Party Inspector
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Other

Soils and Foundations

Item	Agency # (Qualif.)	Scope
1. Shallow Foundations	PE/GE 4	Inspect soils below footings for adequate bearing capacity and consistency with geotechnical report. Inspect removal of unsuitable material and preparation of subgrade prior to placement of controlled fill
2. Controlled Structural Fill	PE/GE 4	Perform sieve tests (ASTM D422 & D1140) and modified Proctor tests (ASTM D1557) of each source of fill material. Inspect placement, lift thickness and compaction of controlled fill. Test density of each lift of fill by nuclear methods (ASTM D2922) Verify extent and slope of fill placement.
3. Deep Foundations NA	PE/GE	Inspect and log pile driving operations. Record pile driving resistance and verify compliance with driving criteria. Inspect piles for damage from driving and plumbness. Verify pile size, length and accessories. Inspect installation of drilled pier foundations. Verify pier diameter, bell diameter, lengths, embedment into bedrock and suitability of end bearing strata.
4. Load Testing NA		
4. Other:		

Cast-In-Place Concrete

Page 5 of 6

Item	Agency # (Qualif.)	Scope
1. Mix Design	(2) (4) ACI-CCI ICC-RCSI	Review concrete batch tickets and verify compliance with approved mix design. Verify that water added at the site does not exceed that allowed by the mix design.
2. Material Certification	(2) (4)	
3. Reinforcement Installation 1	(4) ACI-CCI ICC-RCSI	Inspect size, spacing, cover, positioning and grade of reinforcing steel. Verify that reinforcing bars are free of form oil or other deleterious materials. Inspect bar laps and mechanical splices. Verify that bars are adequately tied and supported on chairs or bolsters
4. Post-Tensioning Operations NA	ICC-PCSI	Inspect placement, stressing, grouting and protection of post-tensioning tendons. Verify that tendons are correctly positioned, supported, tied and wrapped. Record tendon elongations.
5. Welding of Reinforcing NA	AWS-CWI	Visually inspect all reinforcing steel welds. Verify weldability of reinforcing steel. Inspect preheating of steel when required.
6. Anchor Rods	(4)	Inspect size, positioning and embedment of anchor rods. Inspect concrete placement and consolidation around anchors.
7. Concrete Placement	(4) ACI-CCI ICC-RCSI	Inspect placement of concrete. Verify that concrete conveyance and depositing avoids segregation or contamination. Verify that concrete is properly consolidated.
8. Sampling and Testing of Concrete	(4) ACI-CFTT ACI-STT	Test concrete compressive strength (ASTM C31 & C39), slump (ASTM C143), air-content (ASTM C231 or C173) and temperature (ASTM C1064).
9. Curing and Protection	(4) ACI-CCI ICC-RCSI	Inspect curing, cold weather protection and hot weather protection procedures.
10. Other:		

Structural Steel

Page 6 of 6

Item	Agency # (Qualif.)	Scope
1. Fabricator Certification/ Quality Control Procedures <input type="checkbox"/> Fabricator Exempt	② ④ AWS/AISC- SSI ICC-SWSI	Review shop fabrication and quality control procedures.
2. Material Certification	② ④ AWS/AISC- SSI ICC-SWSI	Review certified mill test reports and identification markings on wide-flange shapes, high-strength bolts, nuts and welding electrodes
3. Open Web Steel Joists		Inspect installation, field welding and bridging of joists.
4. Bolting	④ AWS/AISC- SSI ICC-SWSI	Inspect installation and tightening of high-strength bolts. Verify that splines have separated from tension control bolts. Verify proper tightening sequence. Continuous inspection of bolts in slip-critical connections.
5. Welding	④ AWS-CWI ASNT	Visually inspect all welds. Inspect pre-heat, post-heat and surface preparation between passes. Verify size and length of fillet welds. <u>Ultrasonic testing of all full-penetration welds.</u>
6. Shear Connectors NA	AWS/AISC- SSI ICC-SWSI	Inspect size, number, positioning and welding of shear connectors. Inspect studs for full 360 degree flash. Ring test all shear connectors with a 3 lb hammer. Bend test all questionable studs to 15 degrees.
7. Structural Details	② ④ PE/SE	Inspect steel frame for compliance with structural drawings, including bracing, member configuration and connection details.
8. Metal Deck <i>e Roof</i>	④ AWS-CWI	Inspect welding and side-lap fastening of metal roof and floor deck.
9. Other:		

**S.W. COLE**
ENGINEERING, INC.

• Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

04-0238

April 1, 2004

Hardy Pond Construction
Attention: Bob Goudreau
1039 Riverside Street, Suite 11
Portland, Maine 04103

Subject: Preliminary Geotechnical Engineering Services
Limited Investigation
Bearing Capacity Assessment
Proposed Second Tee Business Park
1039 Riverside Street
Portland, Maine

Dear Mr. Goudreau:

As requested, S. W. COLE ENGINEERING, INC. has observed a subsurface investigation for the proposed Second Tee Business Park located at 1039 Riverside Street in Portland, Maine. The purpose of our work was to observe the subsurface conditions at the site and provide a preliminary assessment of allowable soil bearing capacity. The contents of this report are subject to the limitations set forth in Attachment A.

PROPOSED CONSTRUCTION

We understand that a new business park is proposed on a 16-acre parcel of land at 1039 Riverside Street in Portland, Maine. The parcel will be developed for 10 structures measuring from 6,000 to 25,000 square feet. The structures will be one story metal buildings with finish floor grades within 1 to 2 feet of existing grade and light floor loading.

EXPLORATION AND TESTING

As requested, we observed four test pits made at the site on March 26, 2004. The explorations were selected and located in the field by Hardy Pond Construction. The approximate locations of the explorations are shown on the "Exploration Location Sketch" attached as Sheet 1.

AUGUSTA, ME OFFICE

555 Eastern Avenue, Augusta, ME 04330-6700 ■ Tel (207) 626-0600 ■ Fax (207) 626-0700 ■ E-Mail infoaugusta@swcole.com ■ www.swcole.com

Other offices in Bangor, Caribou and Gray, Maine & Somersworth, New Hampshire



04-0238
April 1, 2004

Logs of the explorations, based on our observations and laboratory testing are attached as Sheets 2 and 3. A key to the notes and symbols used on the logs is attached as Sheet 4.

Laboratory testing was performed on selected samples recovered from the explorations. One grain size analysis was performed and the results are presented on Sheets 5 and 6.

SUBSURFACE CONDITIONS

Test Pits TP-1 through TP-4 generally encountered 0.5 to 1.0 feet of dark brown sandy silt with organics overlying 4 to 6 feet of brown silty fine to medium sand. The silty sand overlies gray silty sand with silt and clay layers. Test Pits TP-1 through TP-3 were terminated in the gray silty sand at a depth of 8.5, 8.0 and 6.0 feet, respectively. Test Pit TP-4 encountered gray silty clay at a depth of 7 feet and was terminated at 8.0 feet.

Groundwater was observed in the explorations at depths of about 4 to 4.5 feet at the time of the fieldwork. The soils were generally wet below the ground surface. Long-term groundwater information is not available.

EVALUATIONS AND RECOMMENDATIONS

Based on our observations and shallow groundwater conditions encountered, we recommend that the footings be placed on 8 inches of crushed stone over a geotextile fabric placed on the undisturbed native silt sand. We further recommend that a smooth edged bucket be utilized to excavate to subgrade in order to reduce disturbance of the bearing soils. Footings should be placed at a depth of at least 4.5 feet below exterior finish grade to provide frost protection. Based on the findings at the widely spaced test pits, we recommend that preliminary foundation design consider a net allowable bearing contact pressure not exceeding 2.5 ksf. All footings should be at least 24 inches in width.

Groundwater will be encountered during excavation work. Sumping and pumping dewatering techniques should be adequate to control groundwater below footing subgrade elevation. Controlling the water levels to a at least one foot below subgrade elevations will help stabilize the subgrade and provide a more suitable working surface during construction.

Our services have been limited by the client to widely spaced test pits and providing a preliminary assessment of allowable soil bearing capacity at those locations. Other services were specifically not requested by the client. We recommend that additional explorations



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including test pits and/or test borings be made specific to each structure proposed at the site. This is to determine if soil conditions are consistent with those found at these explorations.

S. W. COLE ENGINEERING, INC. should be on-site to observe subgrades prior to fill or concrete placement in the event that subsurface conditions are found to differ from those anticipated. S. W. COLE ENGINEERING, INC. is available to provide field and laboratory testing of soils, concrete, asphalt, masonry, spray-applied fire-proofing and structural steel.

CLOSING

It has been a pleasure to be of assistance to you with this phase of your project. If you have any questions or if we may be of further assistance, please do not hesitate to contact us.

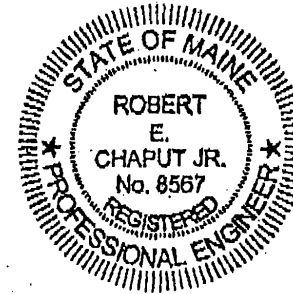
Sincerely,

S. W. COLE ENGINEERING, INC.

Robert E. Chaput, Jr., P.E.
Vice President

REC:kml

PA8wc-2004104-0238/04-0238 Report.doc



ATTACHMENT A

Limitations

This report has been prepared for the exclusive use of Hardy Pond Construction for specific application to the Proposed Second Tee Business Park at 1039 Riverside Street in Portland, Maine as described herein. Our services were limited by Hardy Pond Construction to an assessment of soil bearing capacity only and a deeper soils investigation to evaluate settlement and other geotechnical considerations was specifically excluded by Hardy Pond Construction. Hardy Pond Construction has agreed to protect and hold harmless S.W.COLE ENGINEERING, INC. from any and all claims, including third-party claims, for damages or consequential damages due to underlying soil conditions including but not limited to post-construction settlement. S.W.COLE ENGINEERING, INC. has endeavored to conduct the work in accordance with generally accepted soil and foundation engineering practices. No other warranty, expressed or implied, is made.

The soil profiles described in the report are intended to convey general trends in subsurface conditions. The boundaries between strata are approximate and are based upon interpretation of exploration data and samples. Observations have been made during exploration work to assess site groundwater levels. Fluctuations in water levels will occur due to variations in rainfall, temperature, and other factors.

The analyses performed during this investigation and recommendations presented in this report are based in part upon the data obtained from subsurface explorations made at the site. Variations in subsurface conditions may occur between explorations and may not become evident until construction. If variations in subsurface conditions become evident after submission of this report, it will be necessary to evaluate their nature and to review the recommendations of this report.

S.W.COLE ENGINEERING, INC.'s scope of work has not included the investigation, detection, or prevention of any Biological Pollutants at the project site or in any existing or proposed structure at the site. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria, and viruses, and the byproducts of any such biological organisms.

Recommendations contained in this report are based substantially upon information provided by others regarding the proposed project. In the event that any changes are made in the design, nature, or location of the proposed project, S.W.COLE ENGINEERING, INC. should review such changes as they relate to analyses associated with this report. Recommendations contained in this report shall not be considered valid unless the changes are reviewed by S.W.COLE ENGINEERING, INC.



TEST PIT LOGS

PROJECT/CLIENT: PROPOSED SECOND TEE BUSINESS PARK / HARDY POND CONSTRUCTION

PROJECT NO.: 04-0238

LOCATION: 1039 RIVERSIDE STREET, PORTLAND, MAINE

SWC REP.: TJG

BACKHOE FIRM: HARDY POND CONSTRUCTION

OPERATOR: BOB GOUDREAU

TEST PIT TP-1			
DATE: 3/28/2004		SURFACE ELEVATION: NOT AVAIL	
		LOCATION: SEE SHEET 1	
SAMPLE NO.	DEPTH	STRATUM DESCRIPTION	TEST RESULTS
	1.0'	DARK BROWN SANDY SILT, TRACE GRAVEL WITH ORGANICS	
		LIGHT BROWN SILTY FINE TO MEDIUM SAND	
	6.0'		
S-1	7'	GRAY SILTY FINE SAND WITH SILT AND CLAY LAYERS	
	8.5'	BOTTOM OF EXPLORAT'IN AT 8.5'	
COMPLETION DEPTH: 8.5'		DEPTH TO WATER: 4'	

TEST PIT TP-2			
DATE: 3/28/2004		SURFACE ELEVATION: NOT AVAIL	
		LOCATION: SEE SHEET 1	
SAMPLE NO.	DEPTH	STRATUM DESCRIPTION	TEST RESULTS
	1.0'	DARK BROWN SANDY SILT WITH ORGANICS	
		LIGHT BROWN SILTY FINE TO MEDIUM SAND	
	5.0'		
S-2	4'	GRAY SILTY FINE SAND WITH SILT AND CLAY LAYERS	
	8.0'	BOTTOM OF EXPLORATOIN AT 8'	
COMPLETION DEPTH: 8'		DEPTH TO WATER: 4.5'	



S.W. COLE

ENGINEERING, INC.

TEST PIT LOGS

PROJECT/CLIENT: PROPOSED SECOND TEE BUSINESS PARK / HARDY POND CONSTRUCTION
 LOCATION: 1039 RIVERSIDE STREET, PORTLAND, MAINE
 BACKHOE FIRM: HARDY POND CONSTRUCTION OPERATOR: BOB GOUDREAU

PROJECT NO.: 04-0238
 SWC REP.: TJG

TEST PIT <u>TP-3</u>			
DATE: <u>3/26/2004</u>		SURFACE ELEVATION: <u>NOT AVAIL.</u>	LOCATION: <u>SEE SHEET 1</u>
SAMPLE NO.	DEPTH (FT)	STRATUM DESCRIPTION	TEST RESULTS
	0.5'	BROWN SAND AND GRAVEL, TRACE COBBLES	
		ORANGE/BROWN SILTY FINE TO MEDIUM SAND	
	4.5'		
S-3	5.5'	GRAY FINE SAND WITH SILT AND CLAY LAYERS	
	6.0'	BOTTOM OF EXPLORATION AT 6'	
COMPLETION DEPTH: <u>6'</u>		DEPTH TO WATER: <u>4'</u>	

TEST PIT <u>TP-4</u>			
DATE: <u>3/26/2004</u>		SURFACE ELEVATION: <u>NOT AVAIL.</u>	LOCATION: <u>SEE SHEET 1</u>
SAMPLE NO.	DEPTH (FT)	STRATUM DESCRIPTION	TEST RESULTS
	8"	DARK BROWN SANDY SILT WITH ORGANICS	
		LIGHT BROWN FINE SANDY SILT	
	3.5'	BROWN SILTY SAND	
	6.5'		
	7.0'	GRAY SILTY FINE SAND WITH SILT AND CLAY LAYERS	
S-4	7.5'		
	8.0'	GRAY SILTY CLAY	
		BOTTOM OF EXPLORATION AT 8'	
COMPLETION DEPTH: <u>8'</u>		DEPTH TO WATER: <u>NO FREE WATER OBSERVED</u>	



KEY TO THE NOTES & SYMBOLS
Test Boring and Test Pit Explorations

All stratification lines represent the approximate boundary between soil types and the transition may be gradual.

Key to Symbols Used:

w	-	water content, percent (dry weight basis)
q _u	-	unconfined compressive strength, kips/sq. ft. - based on laboratory unconfined compressive test
S _v	-	field vane shear strength, kips/sq. ft.
L _v	-	lab vane shear strength, kips/sq. ft.
q _p	-	unconfined compressive strength, kips/sq. ft. based on pocket penetrometer test
O	-	organic content, percent (dry weight basis)
W _L	-	liquid limit - Atterberg test
W _P	-	plastic limit - Atterberg test
WOH	-	advance by weight of hammer
WOM	-	advance by weight of man
WOR	-	advance by weight of rods
HYD	-	advance by force of hydraulic piston on drill
RQD	-	Rock Quality Designator - an index of the quality of a rock mass. RQD is computed from recovered core samples.
γ _T	-	total soil weight
γ _B	-	buoyant soil weight

Description of Proportions:

0 to 5% TRACE
5 to 12% SOME
12 to 35% "Y"
35+% AND

REFUSAL: Test Boring Explorations - Refusal depth indicates that depth at which, in the drill foreman's opinion, sufficient resistance to the advance of the casing, auger, probe rod or sampler was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

REFUSAL: Test Pit Explorations - Refusal depth indicates that depth at which sufficient resistance to the advance of the backhoe bucket was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

Although refusal may indicate the encountering of the bedrock surface, it may indicate the striking of large cobbles, boulders, very dense or cemented soil, or other buried natural or man-made objects or it may indicate the encountering of a harder zone after penetrating a considerable depth through a weathered or disintegrated zone of the bedrock.



S.W. COLE
ENGINEERING, INC.

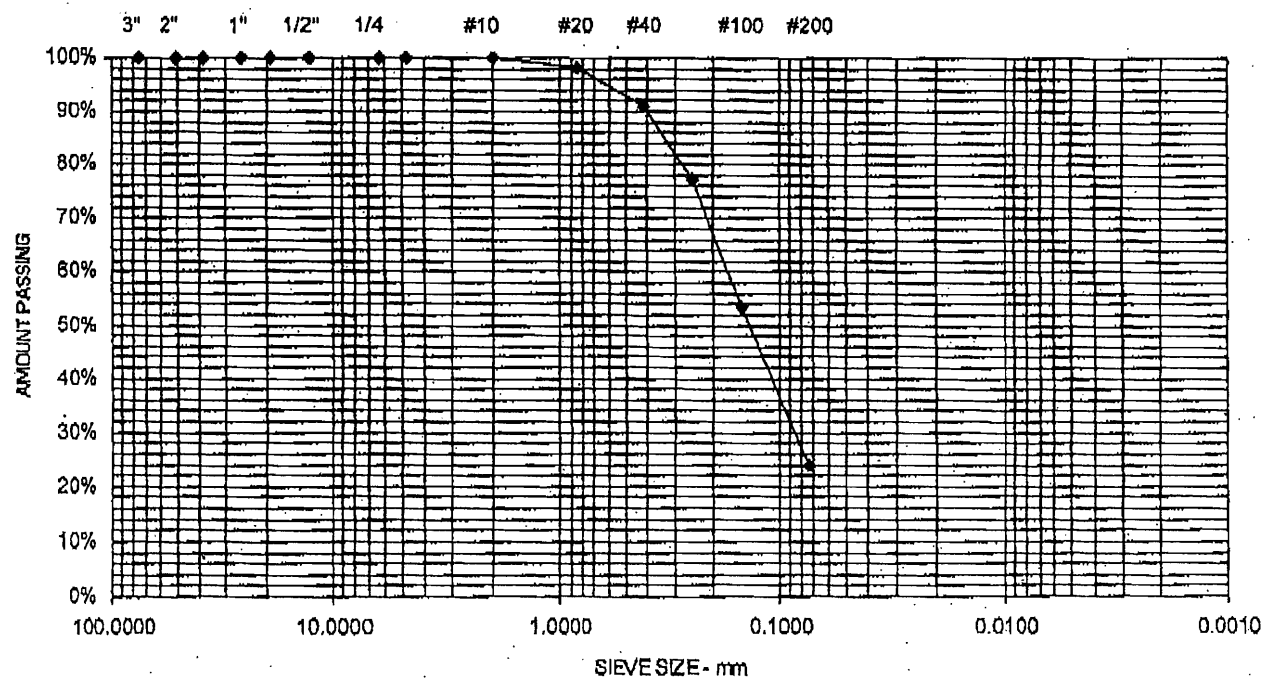
Report of Gradation

ASTM C-117 & C-136

Project Name HARDYPOND PORTLAND RIVERSIDE COMMERCIAL SUBDIVISION
SSI
Client HARDYPOND CONSTRUCTION INC
Exploration TP-2,8-2,4.0'
Material Source

Project Number 04-0238
Lab ID 984A
Date Received 3/28/2004
Date Completed 3/29/2004
Tested By RYAN BRAGG

SIEVE OPENING (mm)	SIEVE SIZE	AMOUNT PASSING (%)	
152.4	6"	100	
127	5"	100	
101.6	4"	100	
76.1	3"	100	
50.8	2"	100	
38.1	1-1/2"	100	
25.7	1"	100	
19	3/4"	100	
12.7	1/2"	100	
6.35	1/4"	100	
4.76	No. 4	100	0% Gravel
2	No. 10	100	
0.841	No. 20	98	
0.42	No. 40	91	76.3% Sand
0.25	No. 60	77	
0.149	No. 100	53	
0.074	No. 200	23.7	23.7% Fines



Comments



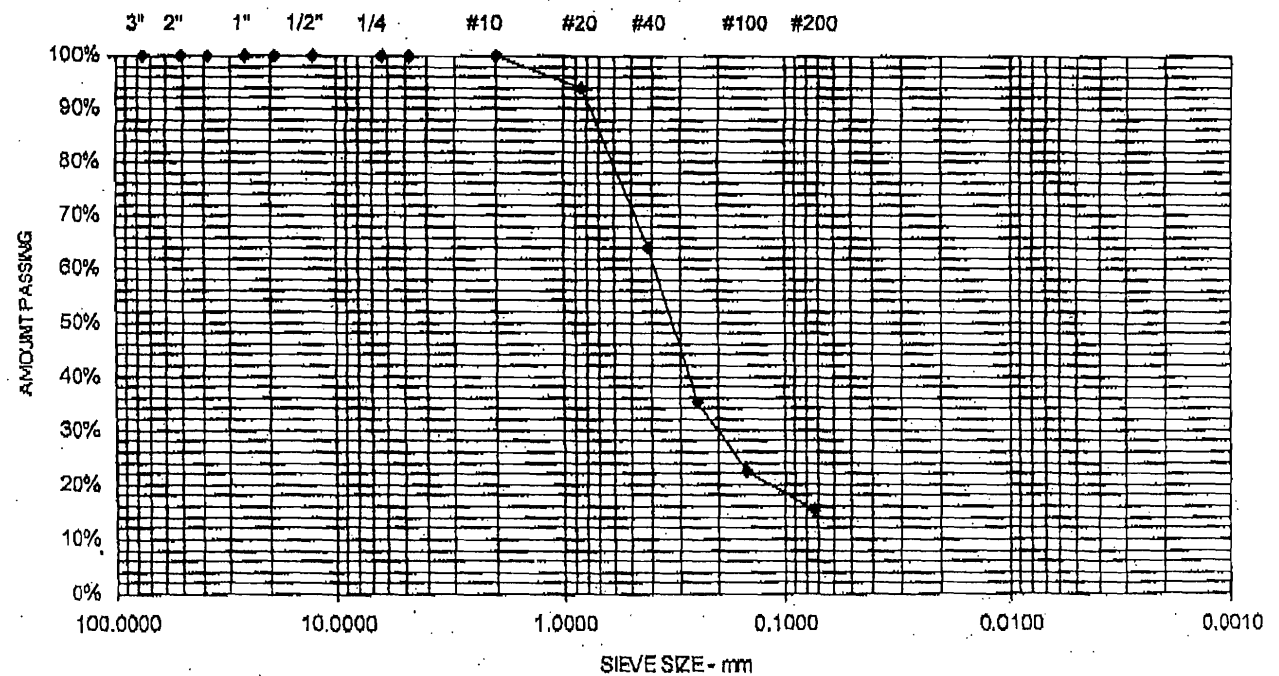
Report of Gradation

ASTM C-117 & C-136

Project Name HARDYPOND PORTLAND RIVERSIDE COMMERCIAL SUBDIVISION
 SSI
 Client HARDYPOND CONSTRUCTION INC
 Exploration TP-3,S-3,5,6'
 Material Source

Project Number 04-0238
 Lab ID 985A
 Date Received 3/26/2004
 Date Completed 3/29/2004
 Tested By RYAN BRAGG

SIEVE OPENING (mm)	SIEVE SIZE	AMOUNT PASSING (%)	
152.4	6"	100	
127	5"	100	
101.6	4"	100	
76.1	3"	100	
50.8	2"	100	
38.1	1-1/2"	100	
25.7	1"	100	
19	3/4"	100	
12.7	1/2"	100	
6.35	1/4"	100	
4.76	No. 4	100	0% Gravel
2	No. 10	100	
0.841	No. 20	94	84.5% Sand
0.42	No. 40	64	
0.25	No. 60	35	
0.149	No. 100	23	
0.074	No. 200	15.5	15.5% Fines



Comments

Sheet 6

INSTALL FULL DEPTH
PAVEMENT SECTION

INSTALL GRANITE CURB (TYP.)

INSTALL BITUMINOUS
CONCRETE CURB

PROPOSED STRUCTURE
10,000 S.F. (100' x 100')
(TYP. OF 8 PLACES)

EXISTING CURB

PROPOSED 8'-0" x 31'-10"
ENTRANCE CANOPY
SEE SHEET A-9
FOR DETAILS

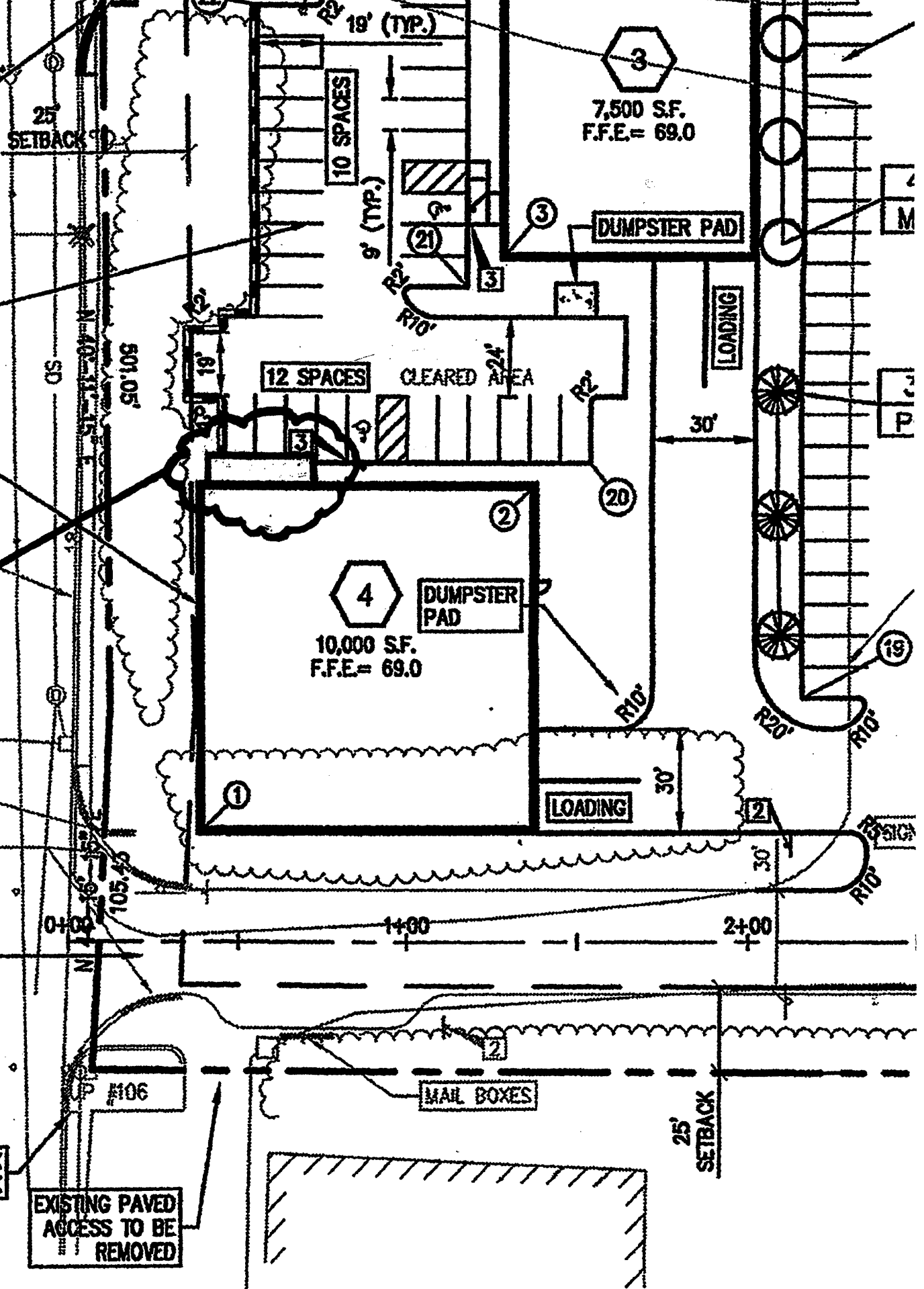
BUSINESS SIGNS

GRANITE CURB

EXISTING 30' WIDE
PAVED ACCESS
ENTRANCE DRIVE

EXISTING SIDEWALK
LIMIT OF WORK

EXISTING PAVED
ACCESS TO BE
REMOVED



N/F
NEILS SORENSON
8153/117