

City of Portland, Maine - Building or Use Permit Application

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

Permit No: 04-0191	Issue Date: MAR 10 2004	BL: 302 A006001
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PERMIT ISSUED

CITY OF PORTLAND

Location of Construction: 236 Lane Ave	Owner Name: Saga Communications Of	Owner Address: 420 Western Ave	Phone: CITY OF PORTLAND
Business Name:	Contractor Name: CPM Constructors	Contractor Address: 30 Bonney Rd. Freeport	Phone: 2078650000
Lessee/Buyer's Name	Phone:	Permit Type: Radio/Telecommunications Tower	Zone: B4

Past Use: Radio Tower	Proposed Use: Radio Tower: Amendment to permit # 04-0137: move location of tower 10'	Permit Fee:	Cost of Work: \$0.00	CEO District: 5
		FIRE DEPT: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied	INSPECTION: Use Group: U Type: JC 3/9/04	

Proposed Project Description: Amendment to permit # 04-0137: move location of tower 10'	Signature: <i>[Handwritten Signature]</i>	Signature: <i>[Handwritten Signature]</i>
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: kwd	Date Applied For: 03/03/2004	Zoning Approval	
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<p>1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.</p> <p>2. Building permits do not include plumbing, septic or electrical work.</p> <p>3. 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..</p>	<p>Special Zone or Reviews</p> <p><input type="checkbox"/> Shoreland</p> <p><input type="checkbox"/> Wetland</p> <p><input type="checkbox"/> Flood Zone</p> <p><input type="checkbox"/> Subdivision</p> <p><input type="checkbox"/> Site Plan</p> <p>Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/></p> <p>Date: <i>3/4/04</i></p>	<p>Zoning Appeal</p> <p><input type="checkbox"/> Variance</p> <p><input type="checkbox"/> Miscellaneous</p> <p><input type="checkbox"/> Conditional Use</p> <p><input type="checkbox"/> Interpretation</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Denied</p> <p>Date: _____</p>	<p>Historic Preservation</p> <p><input checked="" type="checkbox"/> Not in District or Landmark</p> <p><input type="checkbox"/> Does Not Require Review</p> <p><input type="checkbox"/> Requires Review</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Approved w/Conditions</p> <p><input type="checkbox"/> Denied</p> <p>Date: <i>[Handwritten Signature]</i></p>
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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: 04-0191	Date Applied For: 03/03/2004	CBL: 302 A006001
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Business Name:	Contractor Name: CPM Constructors	Contractor Address: 30 Bonney Rd. Freeport	Phone (207) 865-0000
Lessee/Buyer's Name	Phone:	Permit Type: Radio/Telecommunications Tower	

Proposed Use: Radio Tower: Amendment to permit # 04-0137: move location of tower 10'	Proposed Project Description: Amendment to permit # 04-0137: move location of tower 10'
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Dept: Zoning	Status: Approved	Reviewer: Marge Schmuckal	Approval Date: 03/04/2004
Note:	Ok to Issue: <input checked="" type="checkbox"/>		
Dept: Building	Status: Approved with Conditions	Reviewer: Mike Nugent	Approval Date: 03/09/2004
Note: 1) Same conditions as permit # 040137 apply	Ok to Issue: <input checked="" type="checkbox"/>		
Dept: Fire	Status: Pending	Reviewer: Lt. MacDougal	Approval Date: 03/08/2004
Note:	Ok to Issue: <input checked="" type="checkbox"/>		

04-0191

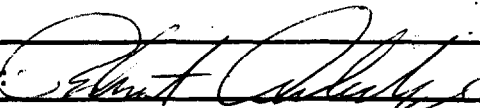
All Purpose Building Permit Application

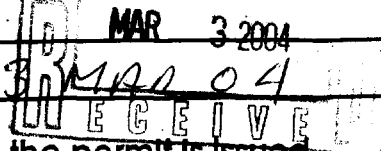
If you or the property owner owes real estate or personal property taxes or user charges on any property within the City, payment arrangements must be made before permits of any kind are accepted.

Location/Address of Construction: 236 LANE AVENUE		
Total Square Footage of Proposed Structure 86 FT²	Square Footage of Lot 32.35 ACRES ±	
Tax Assessor's Chart, Block & Lot Chart# Block# Lot# 302 A 006	Owner: SAGA COMMUNICATIONS OF NEW ENGLAND	Telephone: (207) 774-4561
Applicant name, address & telephone: ROBERT ARLEDGE ASSOCIATED DESIGN PARTNERS 80 LEIGHTON ROAD FALMOUTH, ME 04105		Cost Of Work: \$ Ø Fee: \$ 30.00
Current use: RADIO TOWER (207) 878-1751		
If the location is currently vacant, what was prior use: N/A Amendment #		
Approximately how long has it been vacant: N/A permit # 04-0137		
Proposed use: REPLACEMENT RADIO TOWER (SAME HEIGHT)		
Project description: MOVE LOCATION OF REPLACEMENT TOWER 10'-0" EAST TO SAME LOCATION OF EXISTING TOWER (TO BE REMOVED)		
Contractor's name, address & telephone: CPM CONSTRUCTORS, 30 BONNEY ST., FREEPORT, ME 04032 (207) 865-0000		
Who should we contact when the permit is ready: ROBERT ARLEDGE		
Mailing address: ASSOCIATED DESIGN PARTNERS 80 LEIGHTON ROAD FALMOUTH, ME 04105		
We will contact you by phone when the permit is ready. You must come in and pick up the permit and review the requirements before starting any work, with a Plan Reviewer. A stop work order will be issued and a \$100.00 fee if any work starts before the permit is picked up. PHONE: (207) 878-1751		

IF THE REQUIRED INFORMATION IS NOT INCLUDED IN THE SUBMISSIONS THE PERMIT WILL BE AUTOMATICALLY DENIED AT THE DISCRETION OF THE BUILDING/PLANNING DEPARTMENT, WE MAY REQUIRE ADDITIONAL INFORMATION IN ORDER TO APPROVE THIS PERMIT.

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 comply with 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 of applicant: 	Date: MAR 04 2004
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This is NOT a permit, you may not commence ANY work until the permit is issued. If you are in a Historic District you may be subject to additional permitting and fees with the Planning Department on the 4th floor of City Hall

*Bob Adlebe
878-1751*

Form # P 04

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

Please Read
Application And
Notes, If Any,
Attached

BUILDING INSPECTION

PERMIT

Permit Number: 040137

This is to certify that Saga Communications Of/CPM Constructors
has permission to Erect 364' high radio tower with six guy anchors and remove existing 364' high radio tower.
AT Q Lane Ave CBL 302 A006001

provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statutes of Maine 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 written permission procured before this building or part thereof is lathed or otherwise closed-in. 24 HOUR NOTICE IS REQUIRED.

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

OTHER REQUIRED APPROVALS


Fire Dept. JLK P.F.D. 2/2/04
Health Dept. _____
Appeal Board _____
Other _____
Department Name

[Signature]
Director - Building & Inspection Services
2/20/04

PENALTY FOR REMOVING THIS CARD

3/4/04 - footings poured Counter Clockwise from Bldg
10 o'clock outer & inner & 7 o'clock outer
& inner

· Pouring today 2:30 o'clock inner Ring
Pouring 3/5 @ 2:30 o'clock outer Ring
on wheel, special inspector S.W. Cole (Craig Turatto)

3/4/04 Spoke w/ Craig Turatto @ Cole - He will
send us copies of all special Inspr Reports 



CITY OF PORTLAND
BUILDING CODE CERTIFICATE
389 Congress St., Room 315
Portland, Maine 04101

TO: Inspector of Buildings City of Portland, Maine
Department of Planning & Urban Development
Division of Housing & Community Service

FROM DESIGNER: ASSOCIATED DESIGN PARTNERS, INC.
80 LEIGHTON ROAD, FALMOUTH, MAINE

DATE: 17 FEBRUARY 2004

Job Name: WGAN TOWER REPLACEMENT

Address of Construction: 236 LANE AVENUE

THE BOCA NATIONAL BUILDING CODE / 1999 (FOURTEENTH EDITION)

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

Building Code and Year BOCA-99 Use Group Classification(s) UTILITY & MISC

Type of Construction ^{GUYED} SPACEFRAME Bldg. Height 364 FT Bldg. Sq. Footage 86 FT²

Seismic Hazard Exposure Group I Seismic Performance Category C

Roof Snow Load Per Sq. Ft. N/A Dead Load Per Sq. Ft. N/A

Basic Wind Speed (mph) 90 Effective Velocity Pressure Per Sq. Ft. 21 to 41

Floor Live Load Per Sq. Ft. N/A

Structure has full sprinkler system? Yes No Alarm System? Yes No

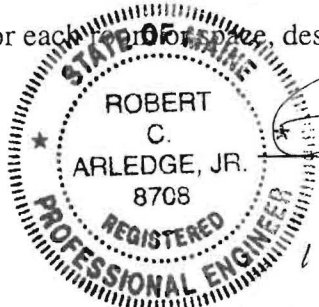
Sprinkler & Alarm systems must be installed according to BOCA and NFPA Standards with approval from the Portland Fire Department.

Is Structure being considered unlimited area building: Yes No

If mixed use, what subsection of 313 is being considered: N/A

List Occupant loading for each ~~type of~~ ^{space} designed into this project. N/A

(SEAL)



Robert Arledge
Designers Stamp & Signature

17 FEB 04



CITY OF PORTLAND
BUILDING CODE CERTIFICATE
389 Congress St., Room 315
Portland, Maine 04101

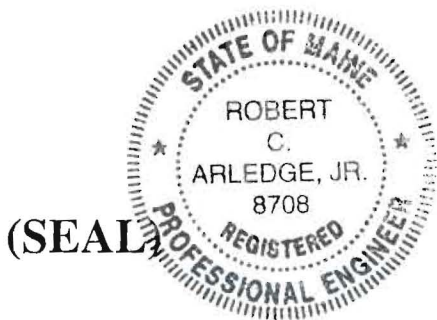
ACCESSIBILITY CERTIFICATE

Designer: ASSOCIATED DESIGN PARTNERS, INC.

Address of Project: 236 LANE AVENUE

Nature of Project: GUYED SPACE FRAME RADIO
TOWER REPLACEMENT

The technical submissions covering the proposed construction work as described above have been designed in compliance with applicable referenced standards found in the Maine Human Rights Law and Federal Americans with Disability Act.



Signature: *Robert Arledge*

Title: STRUCTURAL ENGINEER

Firm: ASSOCIATED DESIGN PARTNERS

Address: 80 LEIGHTON ROAD

FALMOUTH, MAINE 04105

Phone: (207) 878-1751



CITY OF PORTLAND
BUILDING CODE CERTIFICATE
389 Congress St., Room 315
Portland, Maine 04101

TO: Inspector of Buildings City of Portland, Maine
Department of Planning & Urban Development
Division of Housing & Community Service

FROM: ASSOCIATED DESIGN PARTNERS, INC.

RE: Certificate of Design

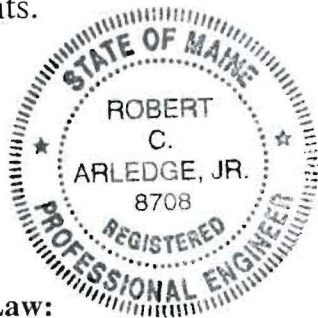
DATE: 17 FEB 2004

These plans and / or specifications covering construction work on:

WGAN TOWER REPLACEMENT

Have been designed and drawn up by the undersigned, a Maine registered Architect / Engineer according to the BOCA National Building Code / 1999 (Fourteenth Edition) and local amendments.

(SEAL)



Signature: [Handwritten Signature]

Title: STRUCTURAL ENGINEER

Firm: ASSOCIATED DESIGN PARTNERS

As per Maine State Law:

\$50,000.00 or more in new construction, repair expansion, addition, or modification for Building or Structures, shall be prepared by a registered design Professional.

Address: 80 LEIGHTON ROAD
FALMOUTH, MAINE 04105

04014 WGAN Tower Replacement Project

Schedule of Special Inspections

Reports of special inspections to conform to §1705.1.2 of BOCA 1999

Tower Fabrication (To be performed by W. Gray Hodge, Maine P.E.)

- Review quality control procedures
- Review fabrication control procedures
- Confirm that fabrication conforms to approved drawings, project specifications, BOCA-99 and ANSI/TIA/EIA-222-F
- Verify that welds conform to AWS D1.1-98

Anchor Rod Fabrication (To be performed by Robert Arledge, Maine P.E.)

- Review quality control procedures
- Review fabrication control procedures
- Confirm that fabrication conforms to approved drawings, project specifications, BOCA-99 and ANSI/TIA/EIA-222-F

Tower and Anchor Foundations (To be performed by Robert Arledge, Maine P.E.)

- Verify that reinforcing steel is the grade and configuration as shown on the drawings
- Verify that the excavations to earth-form the anchors are the proper depth and dimensions
- Verify that embedments are set properly
- Review concrete mix design and delivery invoice
- Provide for quality testing of concrete delivered on site

Tower Erection (To be performed by Robert Arledge, Maine P.E.)

- Verify that the tower components were not damaged in transit
- Verify that the tower is erected in conformance with ANSI/TIA/EIA-222-F

Pile Driving (To be performed by Tim Boyce, Maine P.E.)

- Verify pile spacing and location
- Verify pile size and material are in accordance with construction documents
- Supervise driving of the piles and cut-off elevation
- Verify that piles have been installed per BOCA-99, §1816 et. Seq.

PILE SET CRITERIA
WGAN TOWER FOUNDATION
LANE AVE
PORTLAND, ME
FEBRUARY 19, 2004

H.B. FLEMING
Contracting · Engineering
SO. PORTLAND, MAINE

ENGINEERING NEWS RECORD FORMULA

HAMMER 2,300 LB DROP HAMMER

$$P = 2WH / (S + 0.1)$$

$P = 40 \text{ TON} / 80,000 \text{ LB}$ pile capacity

$W = 2,300 \text{ LB}$ RAM WEIGHT

$H = 6 \text{ FOOT}$ STROKE

$S = \text{SET CRITERIA}$ (inches/blow)

$$S = \frac{2(2,300)6}{80,000} - 0.1 = .245 \text{ inches/blow} \text{ or } 4.08 \text{ blows/inch}$$

- USE 5 blows/inch FOR 6 CONSECUTIVE INCHES WITH A 6 FOOT HAMMER STROKE OR 6 BLOWS FOR ANY $\frac{1}{2}$ " OF MOVEMENT OR 2 BLOWS WITH NO MOVEMENT.



A handwritten signature in black ink, appearing to read "Dean A. Schiarappa".

2/19/04



DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LAND AND WATER QUALITY

FIELD DETERMINATION ID 24

Field Determination Form

CONTACT

ROBERT ARLEDGE
80 LEIGHTON ROAD
FALMOUTH ME 04105
TELEPHONE

DIRECTIONS

Forrest avenue west from interstate. Past
Riverside School take a left onto Lane
Avenue. Proceed to end.

PROPERTY OWNER

PORTLAND RADIO GROUP
ME

TOWN PORTLAND

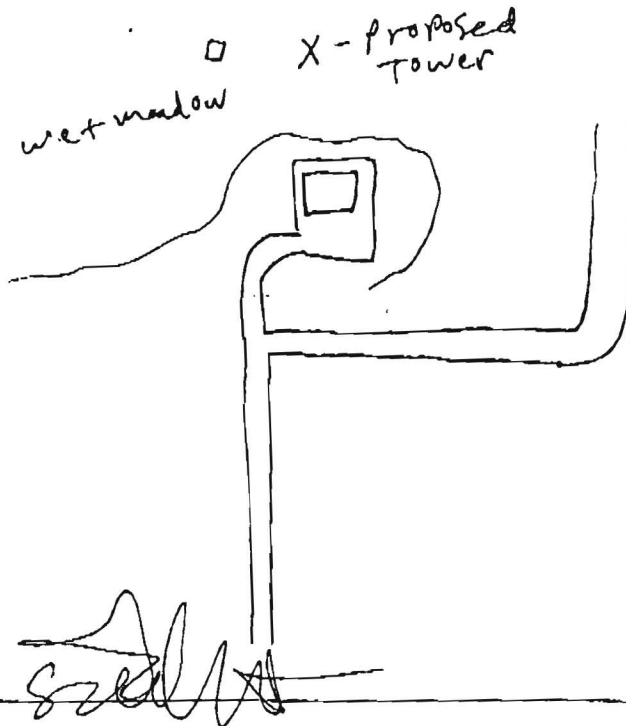
MAP 302 LOT 6

STAFF GALLANT II, FRED

RESOURCE FW

MEMO

Erosion control devices must be installed and maintained on the project site during any soil disturbance activity. This property contains wet meadow and scrub-shrub wetland. The proposal to construct a new radio tower on the property would not trigger the need for a permit from the Department if less than 4,300 square feet of wetland is altered during construction of the new tower.



Name: _____

RECEIVED 2/11/2004

SITE VISIT 2/11/2004

COMPLETED 2/11/2004

04014 WGAN Tower Replacement Project

Schedule of Special Inspections

Reports of special inspections to conform to §1705.1.2 of BOCA 1999

Tower Fabrication (To be performed by W. Gray Hodge, Maine P.E.)

- Review quality control procedures
- Review fabrication control procedures
- Confirm that fabrication conforms to approved drawings, project specifications, BOCA-99 and ANSI/TIA/EIA-222-F
- Verify that welds conform to AWS D1.1-98

Anchor Rod Fabrication (To be performed by Robert Arledge, Maine P.E.)

- Review quality control procedures
- Review fabrication control procedures
- Confirm that fabrication conforms to approved drawings, project specifications, BOCA-99 and ANSI/TIA/EIA-222-F

Tower and Anchor Foundations (To be performed by Robert Arledge, Maine P.E.)

- Verify that reinforcing steel is the grade and configuration as shown on the drawings
- Verify that the excavations to earth-form the anchors are the proper depth and dimensions
- Verify that embedments are set properly
- Review concrete mix design and delivery invoice
- Provide for quality testing of concrete delivered on site

Tower Erection (To be performed by Robert Arledge, Maine P.E.)

- Verify that the tower components were not damaged in transit
- Verify that the tower is erected in conformance with ANSI/TIA/EIA-222-F



04-0059

February 13, 2004

Associated Design Partners
Attn: Bob Arledge, P.E.
80 Leighton Road
Falmouth, Maine 04105

Subject: Preliminary Geotechnical Recommendations
WGAN Guyed Tower
Lane Avenue
Portland, Maine

Dear Bob,

As requested, this letter is provided in advance of our geotechnical report in order to assist the project schedule. The purpose of our work was to provide geotechnical recommendations relative to foundations associated with the proposed guyed tower. The contents of this letter are subject to the limitations set forth in Attachment A.

SUBSURFACE FINDINGS

At this time, we have completed a subsurface investigation of the tower site and soils laboratory testing is nearing completion. Our subsurface investigation included the making of seven test boring locations at the approximate locations shown on the plan attached as Sheet 1. Logs of the explorations are attached as Sheets 2 through 9. A log of a rock core sample obtained at B-4 is attached as Sheet 10. A key to the notes and symbols on the logs is attached as Sheet 11.

PRELIMINARY EVALUATION AND RECOMMENDATIONS

Based on our understanding of the project and the subsurface findings, we recommend the tower base be founded on HP8x36 driven 50 ksi steel H-piles with an allowable axial capacity of 80 kips or less. The H-pile should be fitted with cast steel driving tips and driven to practical refusal on sound bedrock. Based on the subsurface findings, we recommend the reinforced concrete guy anchors be designed considering a net allowable soil bearing pressure of 1.0 ksf or less with a base friction factor of 0.3. For guy anchors cast against undisturbed native stiff to very stiff brown silty clay (earth



04-0059
February 13, 2004

formed), we recommend a passive earth pressure coefficient of 1.0 and a buoyant unit weight of soil of 58 pcf with a design water level at foot above existing ground. As discussed, we recommend the base of the concrete guy anchors be cast 5 feet below existing grade with a one-foot deep base key to increase passive resistance extending below the base of the guy anchor. S.W.COLE ENGINEERING, INC. must observe the guy anchor subgrade and perform hand vane shear tests to a depth of at least 5 feet below the subgrade prior to placing foundation concrete.

For frost protection, we recommend the concrete guy anchors and tower base be cast at least 5 feet below exterior grades. We recommend that a horizontal layer of 2-inch thick extruded polystyrene foundation insulation be installed over the guy anchor and tower base foundations to provide additional frost protection. The foundation insulation should be covered with at least 2 feet of clay fill soils with the surface sloped to promote surface drainage away from the guy anchors and tower base.

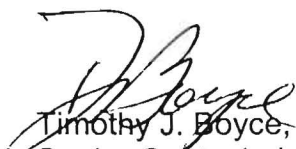
Based on preliminary laboratory results, we estimate the guy anchors may experience 1 to 2 inches of post-construction settlement if founded on properly prepared subgrades. As discussed, we recommend that guy anchors be surveyed on an annual basis to assess post-construction settlement and the need to adjust the guy wires. During the first year, the guy anchors should be monitored quarterly for settlement.

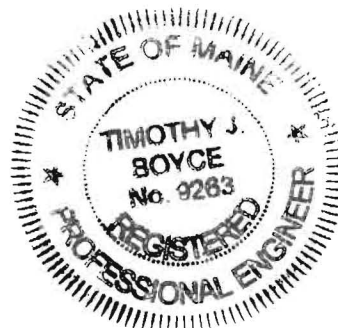
CLOSURE

We trust this letter meets your current needs. We anticipate completion of our geotechnical report following completion of our laboratory testing during the week of February 23, 2004. Please call if you have any question or require additional assistance.

Sincerely,

S.W.COLE ENGINEERING, INC.


Timothy J. Boyce, P.E.
Senior Geotechnical Engineer



Enc(11)

Attachment A
Limitations

This report has been prepared for the exclusive use of Associated Design Partners for specific application to the Proposed WGAN Guyed Tower on Lane Avenue in Portland, Maine as described herein. 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.



BORING LOG

BORING NO.. 1
 SHEET 1
 PROJECT NO.. 04
 DATE START: 1/2
 DATE FINISH: 1/2
 ELEVATION: NO SI

PROJECT / CLIENT: PORTLAND RADIO GROUP TOWER / ASSOCIATED DESIGN PARTNERS
 LOCATION: 236 LANE AVENUE, PORTLAND, MAINE
 DRILLING CO.: GREAT WORKS TEST BORING, INC. DRILLER: PETE MICHAUD

CASING: TYPE NW SIZE I.D. 4" HAMMER WT. 140lb HAMMER FALL 30"
 SAMPLER: SS 1 3/8" 140lb 30"
 CORE BARREL:

SWC REP.. KE
 WATER LEVEL INFORMATION
 SOILS SATURATED AT 8' +/-

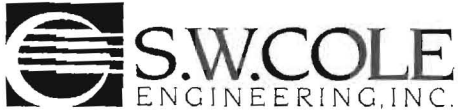
CASING BLOWS PER FOOT	SAMPLE				SAMPLER BLOWS PER 6"				DEPTH	STRATA & TEST DATA	
	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24			
CASING									5'	BROWN CLAYEY TOPSOIL WITH ORGANICS	
↓	1D	24"	24"	4.0'	3	6	5	6		MOTTLED BROWN SILTY CLAY WITH SAND SEAMS DESICCATED -VERY STIFF- q _p = 4 - 5 ksf	
OPEN HOLE	2D	24"	22"	7.0'	3	7	7	8			
↓	3D	24"	24"	9.0'	9	11	9	9	9.5'	-STIFF- q _p = 3 - 5 ksf	
	4D	24"	24"	12.0'	WOH/24"						GRAY SILTY CLAY WITH SAND SEAMS -MEDIUM- q _p < .5 ksf
				3.5" x 7" VANE	13.8'					S _v = .54 / .08 ksf	
				3.5" x 7" VANE	14.6'					S _v = .78 / .08 ksf	
	5D	24"	24"	17.0'	WOR/18"		WOH		20.2'		
	6D	20"	20"	21.3	1	2	35/4"		21.0'	-LOOSE- GRAY SILTY SAND AND CLAY	
									23.0'	WEATHERED ROCK [ADVANCED BORING WITH ROLLER CONE]	
										REFUSAL AT 23.0' PROBABLE BEDROCK	

SAMPLES: SOIL CLASSIFIED BY: REMARKS: 2- FEET OF FROST PRESENT DURING EXPLORATION WORK

D = SPLIT SPOON
 C = 3" SHELBY TUBE
 U = 3.5" SHELBY TUBE

DRILLER - VISUALLY
 SOIL TECH. - VISUALLY
 LABORATORY TEST

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.



BORING LOG

BORING NO. E
 SHEET 10
 PROJECT NO. 04-
 DATE START 1/2
 DATE FINISH 1/2
 ELEVATION: NO SU
 SWC REP. KE
 WATER LEVEL INFORMATION
 SOILS SATURATED AT 8' +/-

PROJECT / CLIENT: PORTLAND RADIO GROUP TOWER / ASSOCIATED DESIGN PARTNERS
 LOCATION: 236 LANE AVENUE, PORTLAND, MAINE
 DRILLING CO.: GREAT WORKS TEST BORING, INC. DRILLER: PETE MICHAUD

	TYPE	SIZE I.D.	HAMMER WT	HAMMER FALL
CASING:	NW	4"		
SAMPLER:	SS	1 3/8"	140lb	30"
CORE BARREL:				

CASING BLOWS PER FOOT	SAMPLE				SAMPLER BLOWS PER 6"				DEPTH	STRATA & TEST DATA	
	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24			
CASING									.5'	BROWN CLAYEY TOPSOIL WITH ORGANICS	
↓	1D	24"	24"	4.0'	4	4	6	8		MOTTLED BROWN SILTY CLAY WITH SAND SEAMS DESICCATED q _p = 5 ksf	
OPEN HOLE	2D	24"	24"	7.0'	5	8	9	9		-VERY STIFF- q _p = 6 - 7 k	
↓	3D	24"	24"	9.0'	10	11	11	9		q _p = 4 - 4.5	
	4D	24"	24"	12.0'	WOH / 24"				11.0'	-MEDIUM- q _p = .5 ksf	
				2" x 3.5" VANE						S _v = .28 / .06 ksf	GRAY SILTY CLAY WITH SAND SEAMS q _p < .5 ksf
				2" x 3.5" VANE						S _v = .28 / .06 ksf	-SOFT-
	5D	24"	24"	17.0'	1	1	1 / 12"		15.0'	GRAY SILTY SAND AND CLAY -LOOSE-	
									22.5'		
									23.0'	WEATHERED ROCK REFUSAL AT 23.0' PROBABLE BEDROCK	

SAMPLES: SOIL CLASSIFIED BY:
 D = SPLIT SPOON
 C = 3" SHELBY TUBE
 U = 3.5" SHELBY TUBE

<input type="checkbox"/>	DRILLER - VISUALLY
<input checked="" type="checkbox"/>	SOIL TECH. - VISUALLY
<input type="checkbox"/>	LABORATORY TEST

REMARKS: 2- FEET OF FROST PRESENT DURING EXPLORATION WORK
 STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.



BORING LOG

BORING NO.: **B-4**
 SHEET: 1 OF
 PROJECT NO.: 04-005
 DATE START: 1/29/04
 DATE FINISH: 1/29/04
 ELEVATION: NO SURV
 SWC REP.: KBG

PROJECT / CLIENT: PORTLAND RADIO GROUP TOWER / ASSOCIATED DESIGN PARTNERS
 LOCATION: 236 LANE AVENUE, PORTLAND, MAINE
 DRILLING CO.: GREAT WORKS TEST BORING, INC. DRILLER: PETE MICHAUD

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	NW	4"		
SAMPLER:	SS	1 3/8"	140lb	30"
CORE BARREL:	N	2"		

WATER LEVEL INFORMATION
 SOILS SATURATED AT 8' +/-

CASING BLOWS PER FOOT	SAMPLE				SAMPLER BLOWS PER 6"				DEPTH	STRATA & TEST DATA
	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24		
CASING									.5'	3/4-INCH CRUSHED STONE (FILL)
									1.0'	BROWN FINE SAND TRACE SILT (FILL)
	1D	24"	23"	4.0'	2	5	6	7		MOTTLED BROWN SILTY CLAY WITH SAND SEAMS DESICCATED
										$q_p = 3 - 5 \text{ ksf}$
OPEN HOLE	2D	24"	24"	7.0'	3	3	3	4		DESICCATED
										$q_p = 2.5 - 3 \text{ ksf}$
	3D	24"	24"	9.0'	5	5	9	6		~STIFF~
										$q_p = 3 \text{ ksf}$
									10.8'	~MEDIUM~
	4D	24"	24"	12.0'	1	1	1	1		
										GRAY SILTY CLAY WITH SAND SEAMS
	1C	24"	24"	15.0'						~SOFT~
	2" x 3.5" VANE			15.5'						$S_v = .31 / .06 \text{ ksf}$
	2" x 3.5" VANE			16.0'						$S_v = .28 / .06 \text{ ksf}$
	2" x 3.5" VANE			20.5'						$S_v = .25 / .03 \text{ ksf}$
	2" x 3.5" VANE			21.0'						$S_v = .19 / .03 \text{ ksf}$
									24.0'	
										GRAY SILTY SAND AND CLAY
	5D	24"	20"	27.0'	1 / 12"	1 / 12"				~LOOSE~
									27.5'	
									28.5'	WEATHERED ROCK
										BEDROCK
										[SEE SHEET 10 FOR ROCK CORE LOG]
	1R	60"	60"	33.5'					33.5'	BOTTOM OF EXPLORATION AT 33.5'

SAMPLES: SOIL CLASSIFIED BY:
 D = SPLIT SPOON
 C = 3" SHELBY TUBE
 U = 3.5" SHELBY TUBE

DRILLER - VISUALLY
 SOIL TECH. - VISUALLY
 LABORATORY TEST

REMARKS: 2- FEET OF FROST PRESENT DURING EXPLORATION WORK

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.



BORING LOG

BORING NO. B-5
 SHEET 1 OF
 PROJECT NO. 04-001
 DATE START 1/29/0
 DATE FINISH 1/29/0
 ELEVATION NO SUR
 SWC REP. KBG

PROJECT / CLIENT: PORTLAND RADIO GROUP TOWER / ASSOCIATED DESIGN PARTNERS
 LOCATION: 236 LANE AVENUE, PORTLAND, MAINE
 DRILLING CO.: GREAT WORKS TEST BORING, INC. DRILLER: PETE MICHAUD

CASING: _____
 SAMPLER: SS 1 3/8" 140lb 30"
 CORE BARREL: _____

WATER LEVEL INFORMATION
 SOILS SATURATED AT 8' +/-

CASING BLOWS PER FOOT	SAMPLE				SAMPLER BLOWS PER 6"				DEPTH	STRATA & TEST DATA	
	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24			
SSA									.5'	BROWN CLAYEY TOPSOIL WITH ORGANICS	
↓	1D	24"	24"	4.0'	2	4	6	6		MOTTLED BROWN SILTY CLAY WITH SAND SEAMS DESICCATED $q_p = 4 - 5 \text{ ksf}$	
	2D	24"	22"	7.0'	3	5	7	7		-VERY STIFF- $q_p = 5 - 6 \text{ ksf}$	
	3D	24"	24"	9.0'	7	6	6	6	9.0'	-STIFF TO MEDIUM- $q_p = 1.5 - 3 \text{ ks}$	
	4D	24"	24"	12.0'	WOH / 24"						GRAY SILTY CLAY WITH SAND SEAMS $q_p < .5 \text{ ksf}$
	2" x 3.5" VANE			12.5'							$S_v = .37 / .03 \text{ ksf}$
	2" x 3.5" VANE			13.0'							$S_v = .34 / .03 \text{ ksf}$
ROD											
PROBE										ROD PROBE:	
↓										HYD PUSH TO 31'	
										31' - 32' 7	
										32' - 33' 5	
										33' - 34' 6	
										34' - 35' 6	
										35' - 36' 7	
										36' - 37' 11	
										37' - 38' 26	
									38.0'	REFUSAL AT 38.0' PROBABLE BEDROCK	

SAMPLES: _____ SOIL CLASSIFIED BY: _____
 D = SPLIT SPOON DRILLER - VISUALLY
 C = 3" SHELBY TUBE SOIL TECH. - VISUALLY
 U = 3.5" SHELBY TUBE LABORATORY TEST

REMARKS: 2-FEET OF FROST PRESENT DURING EXPLORATION WORK

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.



BORING LOG

BORING NO.. **B**
 SHEET: **1 C**
 PROJECT NO.. **04-C**
 DATE START: **1/29**
 DATE FINISH: **1/29**
 ELEVATION: **NO SU**
 SWC REP.. **KB**

PROJECT / CLIENT: PORTLAND RADIO GROUP TOWER / ASSOCIATED DESIGN PARTNERS
 LOCATION: 236 LANE AVENUE, PORTLAND, MAINE
 DRILLING CO.: GREAT WORKS TEST BORING, INC. DRILLER: PETE MICHAUD

WATER LEVEL INFORMATION
 SOILS SATURATED AT 8' +/-

CASING: _____
 SAMPLER: SS 1 3/8" 140lb 30"
 CORE BARREL: _____

CASING BLOWS PER FOOT	SAMPLE				SAMPLER BLOWS PER 6"				DEPTH	STRATA & TEST DATA
	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24		
SSA									5'	BROWN CLAYEY TOPSOIL WITH ORGANICS
↓	1D	24"	24"	4.0'	3	5	5	5		MOTTLED BROWN SILTY CLAY WITH SAND SEAMS DESICCATED $q_p = 4 - 6 \text{ ks}$
	2D	24"	24"	7.0'	3	4	4	6		-VERY STIFF- $q_p = 4.5 - 6..$
	3D	24"	24"	9.0'	4	5	8	8		
									10.8'	-STIFF- $q_p = 2.5 - 3.5$
	4D	24"	24"	12.0'	1	1	1	1		GRAY SILTY CLAY WITH SAND SEAMS $q_p < .5 \text{ ksf}$
				2" x 3.5" VANE	13.0'					$S_v = .53 / 16 \text{ ksf}$
				2" x 3.5" VANE	13.5'					$S_v = .56 / .22 \text{ ksf}$ -MEDIUM-
ROD										
PROBE										ROD PROBE:
↓										HYD PUSH TO 22'
										22' - 23' 11
										23' - 24' 7
										24' - 25' 8
									25.5'	REFUSAL AT 25.5' PROBABLE BEDROCK

SAMPLES: _____ SOIL CLASSIFIED BY: _____ REMARKS: **2-FEET OF FROST PRESENT DURING EXPLORATION WORK**

D = SPLIT SPOON DRILLER - VISUALLY
 C = 3" SHELBY TUBE SOIL TECH. - VISUALLY
 U = 3.5" SHELBY TUBE LABORATORY TEST

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.. **B-6**



BORING LOG

BORING NO.. B-7
 SHEET 1 OF
 PROJECT NO.. 04-005
 DATE START 1/29/0.
 DATE FINISH 1/29/0.
 ELEVATION. NO SURV
 SWC REP. KBG

PROJECT / CLIENT: PORTLAND RADIO GROUP TOWER / ASSOCIATED DESIGN PARTNERS
 LOCATION: 236 LANE AVENUE, PORTLAND, MAINE
 DRILLING CO. GREAT WORKS TEST BORING, INC. DRILLER: PETE MICHAUD

WATER LEVEL INFORMATION
 SOILS SATURATED AT 8' +/-

CASING: _____
 SAMPLER: SS 1 3/8" 140lb 30"
 CORE BARREL: _____

CASING BLOWS PER FOOT	SAMPLE				SAMPLER BLOWS PER 6"				DEPTH	STRATA & TEST DATA
	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24		
SSA									.5'	BROWN CLAYEY TOPSOIL WITH ORGANICS
↓	1D	24"	24"	4.0'	3	5	6	7		MOTTLED BROWN SILTY CLAY WITH SAND SEAMS DESICCATED -VERY STIFF- -STIFF TO MEDIUM- ROD PROBE: PROBABLE GRAY SILTY CLAY HYD PUSH TO 13'
	2D	24"	24"	7.0'	5	7	6	6		$q_p = 4.5 - 5.5 \text{ k}$ $q_p = 5 - 6 \text{ ksf}$ $q_p = 3 - .5 \text{ ksf}$
	3D	24"	24"	11.0'	3	2	2	2		
				2" x 3.5" VANE					12.0'	$S_v = .78 / .22 \text{ ksf}$
ROD PROBE										
↓										13' - 14' 2 19' - 20' 20 14' - 15' 2 20' - 21' 6 15' - 16' 2 21' - 22' 6 16' - 17' 3 22' - 23' 7 17' - 18' 3 18' - 19' 3
									23.2'	REFUSAL AT 23.2' PROBABLE BEDROCK

SAMPLES: _____ SOIL CLASSIFIED BY: _____
 D = SPLIT SPOON DRILLER - VISUALLY
 C = 3" SHELBY TUBE SOIL TECH. - VISUALLY
 U = 3.5" SHELBY TUBE LABORATORY TEST

REMARKS: 2- FEET OF FROST PRESENT DURING EXPLORATION WORK
 STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.



ROCK CORE LOG

BORING NO. B-4
 PROJECT NO. 04-0059
 SHEET 1 OF
 CORE SIZE NQ / 2"

PROJECT NAME / LOCATION: PORTLAND RADIO GROUP TOWER / LANE STREET PORTLAND, MAINE

LOGGED BY KBG DATE 1/30/04

CHECKED BY GWB DATE 1/30/04

DEPTH BELOW SURFACE (ft)	CORE RUN	CORE INTERVAL (in)	CORE RECOVERY (in)	RQD%	ROCK QUALITY	GRAPHIC LOG	ROCK DESCRIPTION AND IDENTIFICATION
28.5'	1R	60	60	43 / 60 72%	FAIR		<p>INTERBEDDED SANDSTONE AND LIMESTONE LIGHT GRAYISH BLACK</p> <p>SLIGHTLY WEATHERED MODERATELY HARD</p> <p>FRACTURE ANGLES 0 - 10° FROM HORIZONTAL</p>
33.5'							<p>BOTTOM OF EXPLORATION AT 33.5'</p>



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
HSA	-	Hollow Stem Auger
HW	-	4" Casing
NW	-	3" Casing
SS	-	split-spoon sampler

Description of Proportions:

0 to 5% TRACE

5 to 12% SOME

12 to 35% "Y"

35+% AND

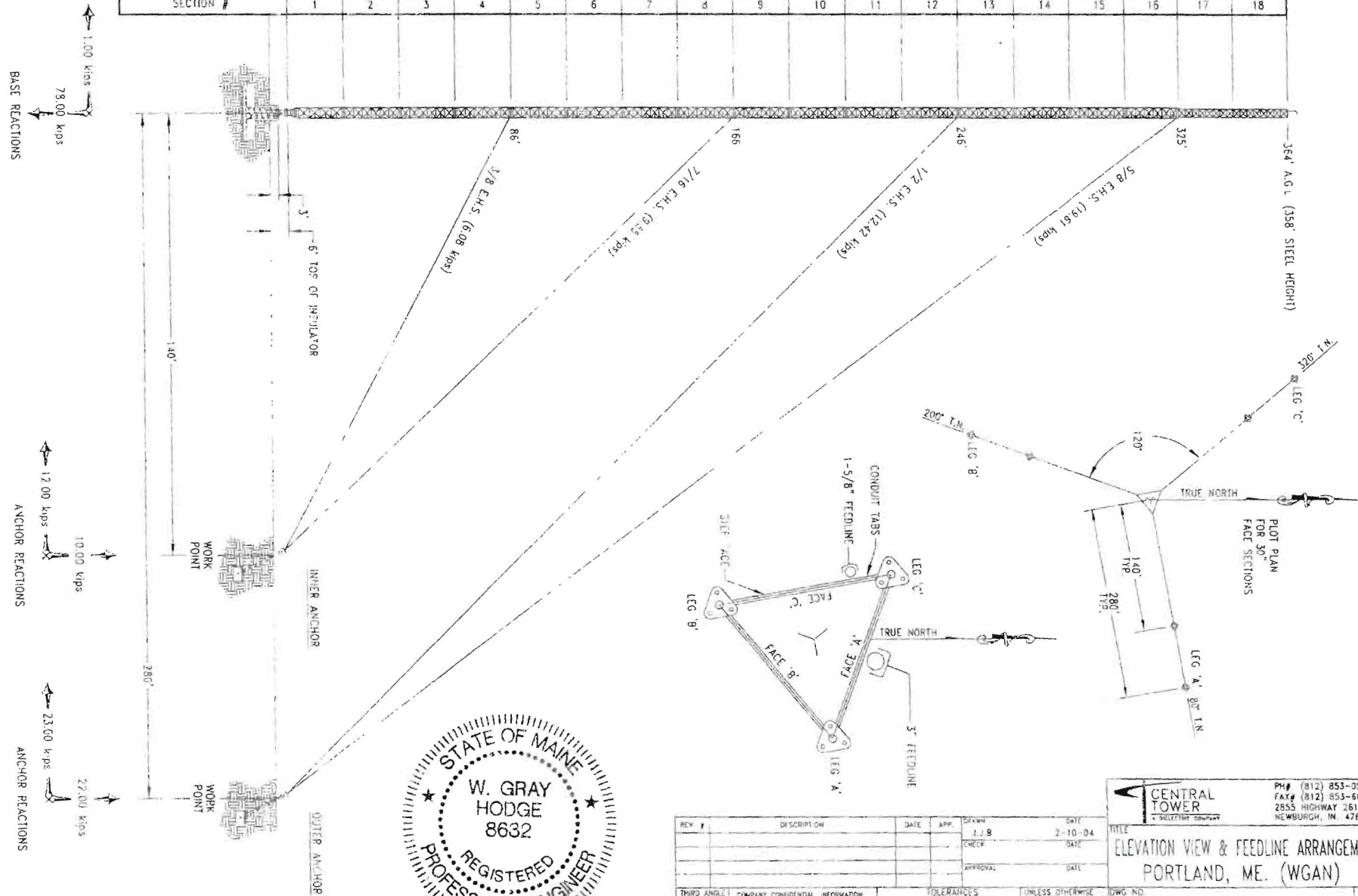
REFUSAL: Test Boring Explorations - Refusal depth indicates that depth at which, in the drill foreman's opinion, sufficient resistance to the advance of the casing, auger, probe rod or sampler was encountered to render further advance impossible or impracticable by the procedures and equipment being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

DETAILED INFORMATION CHART

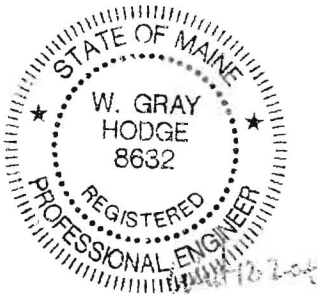
PAIN BAND WIDTH (51.14')	ORANGE		WHITE		ORANGE		WHITE		ORANGE		WHITE		ORANGE					
LIGHTING	A-2/3 RED LIGHTS																	
CONFIGURATION																		
SECTION #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18



BASE REACTIONS
 1.00 kips
 78.00 kips

ANCHOR REACTIONS
 12.00 kips
 10.00 kips

ANCHOR REACTIONS
 23.00 kips
 22.00 kips



REV #	DESCRIPTION	DATE	APP.	BY	DATE

CENTRAL TOWER
 A RECEIPT COMPANY

PH# (812) 853-0595
 FAX# (812) 853-6652
 2855 HIGHWAY 261
 NEWBURGH, IN. 47630

TITLE
ELEVATION VIEW & FEEDLINE ARRANGEMENT
 PORTLAND, ME. (WGAN)

DWG NO.
G2043T-1

REV
 0

DO NOT SCALE DRAWING

GUY CHART

GUY ELEVATION	GUY SIZE	PREFORM SIZE	ROCKET SOCKET	T-BUCKLE SIZE	OPEN BRIDGE STRAND SOCKET	HIMBLE SIZE	SHACKLE SIZE	POURED SOCKET SIZE	GUY EAR PLATE	GUY EAR HOLE Ø	GUY EAR WELD SIZE	GUY WIRE LENGTHS			GUY WIRE TOTAL FT	INITIAL TENSION, (LBS.)		
												LEG "A"	LEG "B"	LEG "C"		30' F	60' F	90' F
86'	3/8 E.H.S.	3/8 E.H.S.	N/A	3/4	N/A	1/2	N/A	N/A	5-9-075-21K9 (5 X 9 X 3/4)	7/8	3/8	195'	195'	195'	585'	1770	1540	1310
166'	7/16 E.H.S.	7/16 E.H.S.	N/A	3/4	N/A	1/2	N/A	N/A	5-9-075-30K8 (5 X 9 X 3/4)	7/8	3/8	250'	250'	250'	750'	2270	2080	1890
246'	1/2 E.H.S.	1/2 E.H.S.	N/A	7/8	N/A	5/8	N/A	N/A	5-9-075-47KN (5 X 9 X 3/4)	1-3/8	3/8	405'	405'	405'	1215'	3015	2690	2365
325'	5/8 E.H.S.	5/8 E.H.S.	N/A	1	N/A	3/4	N/A	N/A	5-9-075-42MN (5 X 9 X 3/4)	1-3/8	3/8	460'	460'	460'	1380'	4625	4240	3855

TOWER MEMBERS CHART

CONFIGURATION	ELEVATION	FACE	LEG	DIAGONALS	GIRTS				TYP. WEIGHT (LBS.) PER 20' SECTION
					FACE 1 (CONDUIT/FEEDLINE)	FACE 2 (FEEDLINE)	FACE 3 (STANDARD)	STEPS	
1	6' - 306'	30	1-3/4	5/8	5/8 SEE NOTE (6)	5/8 SEE NOTE (5)	5/8	3/4	825
2	306' - 325'	30	1-3/4	5/8	5/8	5/8 SEE NOTE (5)	5/8	3/4	825
3	325' - 344.5'	24	1-3/4	3/4	5/8	5/8 SEE NOTE (5)	5/8	3/4	875
4	344.5' - 364'	24	1-3/4	5/8	5/8	5/8	5/8	3/4	825

TOWER INSULATOR CHART

GUY ELEV	INSULATED ANCHOR		INSULATED TOWER		INSULATED GUY WIRE		JOHNNY BALL SPACING (STARTING FROM TWR.)
	INSULATOR SIZE	# REQ'D	INSULATOR SIZE	# REQ'D	J.B. SIZE	# REQ'D	
86'	N/A	N/A	21 kip X 3'	3	20 kip	6 TOTAL	65'
166'	N/A	N/A	30 kip X 3'	3	35 kip	9 TOTAL	65'
246'	N/A	N/A	42 kip X 3'	3	35 kip	15 TOTAL	65'
325'	N/A	N/A	42 kip X 3'	3	50 kip	18 TOTAL	65'

*** FIRST JOHNNY BALL SPACED 65' FROM TOWER END, THEN 65' SPACING THEREAFTER TO ANCHOR.

ANTENNA INFORMATION

ANTENNA	ELEVATION	LINE
(1) DCR-C4R (FM)	@ 359' - 329'	3
(1) 6' GRID DISH	@ 300'	1-5/8

GUY & MEMBER CHART NOTES:

- 1) ALL MATERIAL IS MADE OF SOLID ROUND UNLESS NOTED OTHERWISE.
- 2) ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE.
- 3) ALL LEG & LEG FLANGE PL MATERIAL IS A-572 GRADE 50 (Fy ≥ 50 ksi). ALL INNER MEMBER & PLATE MATERIAL IS ASTM A36 (Fy ≥ 36 ksi).
- 4) ALL SECTIONS ARE 6-BAY X-BRACED (3B-1/2" BAYS).
- 5) INTEGRAL TABS REQUIRED ON FACE 2 FOR FEEDLINE FROM 0' - 338.5'
- 6) INTEGRAL TABS REQUIRED ON FACE 1 FOR FEEDLINE FROM 0' - 300'
- 7) 1-1/8" Ø HORIZONTALS REQUIRED ABOVE AND BELOW ALL GUY POINTS.

MARKING NOTES:

- 1) BASE SECTION IS TO BE STAMPED @ THE BASE PLATE. ALL OTHER SECTIONS ARE STAMPED AT THE TOP.
- 2) SECTION LABELING SYSTEM INFORMATION IS GIVEN IN THE DETAILED INFORMATION CHART. THE LABELING SYSTEM IS TO BE USED FOR PROPER IDENTIFICATION OF ALL SECTIONS AND TO ENSURE PROPER INSTALLATION.

THIS STRUCTURE IS DESIGNED TO MEET ANSI/CIA-222-F STANDARDS FOR A BASIC WIND SPEED OF 90 MPH WITH 1/2" ICE.

THIS STRUCTURE IS DESIGNED IN ACCORDANCE TO BOCA 99 STANDARDS FOR A WIND SPEED OF 90 MPH



REV #	DESCRIPTION	DATE	APP.	DRAWN	DATE
				J.J.D.	2-10-04
				CHECK	DATE
				APPROVAL	DATE

THIRD ANGLE PROJECTION	COMPANY CONFIDENTIAL INFORMATION CONTAINED HEREIN IS CONFIDENTIAL AND IS TO BE USED SOLELY FOR THE PURPOSE PROVIDED AND IT IS NOT TO BE DISCLOSED TO OTHERS WITHOUT THE PRIOR WRITTEN CONSENT OF SPX CORPORATION	TOLERANCES UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
		.XX 1/32" ANGLES ± .2 .XXX 1/32" DRILLED HOLES ± .02" .XXX 1/16" BURNED HOLES ± .015"	

<p>CENTRAL TOWER ELECTRIC COMPANY</p>	PH# (812) 853-0595 FAX# (812) 853-6652 2855 HIGHWAY 261 NEWBURGH, IN 47630
	TITLE DETAIL INFORMATION CHART PORTLAND, ME. (WGAN)
DWG NO. G2043T-2	REV 0
DO NOT SCALE DRAWING	

ERITower Hodge Design Associates, P.C. 22 Chestnut Street Evansville, Indiana 47713-1022 Phone: 812.422.2558 FAX: 812.422.3337	Job 358' Guyed Tower for Central Tower (HDA 04G-0007 CT1 16347 G2043)	Page 1 of 3
	Project Portland (Westbrook), Cumberland County, ME (for SAGA Communications)	Date 16:00:40 02/17/04
	Client Central Tower, A Dielectric Company	Designed by Gray Hodge

Tower Pressures - No Ice

$G_H = 1.077$

Section Elevation	z	K _Z	q _z	A _D	F a c e	A _F	A _R	A _{leg}	Leg %	C _d A _A In Face ft ²	C _d A _A Out Face ft ²
ft	ft		psf	ft ²		ft ²	ft ²	ft ²			
L1 358'-338'6"	348'3"	1.961	41	41.844	A	0.000	8.980	5.688	63.33	0.000	0.000
					B	0.000	8.980		63.33		
					C	0.000	10.457		54.39		
L2 338'6"-319'	328'9"	1.929	40	41.844	A	0.000	11.880	5.688	47.87	0.000	0.000
					B	0.000	9.647		58.96		
					C	0.000	11.094		51.27		
T1 319'-300'	309'6"	1.896	39	50.271	A	0.000	13.534	5.542	40.95	0.000	0.000
					B	0.000	9.142		60.62		
					C	0.000	10.601		52.28		
T2 300'-280'	290'	1.861	39	52.917	A	0.000	13.846	5.833	42.13	0.000	0.000
					B	0.000	9.176		63.57		
					C	0.000	13.800		42.27		
T3 280'-260'	270'	1.823	38	52.917	A	0.000	13.846	5.833	42.13	0.000	0.000
					B	0.000	9.176		63.57		
					C	0.000	13.800		42.27		
T4 260'-240'	250'	1.783	37	52.917	A	0.000	14.135	5.833	41.27	0.000	0.000
					B	0.000	9.499		61.41		
					C	0.000	14.089		41.40		
T5 240'-220'	230'	1.741	36	52.917	A	0.000	14.135	5.833	41.27	0.000	0.000
					B	0.000	9.499		61.41		
					C	0.000	14.089		41.40		
T6 220'-200'	210'	1.697	35	52.917	A	0.000	13.846	5.833	42.13	0.000	0.000
					B	0.000	9.176		63.57		
					C	0.000	13.800		42.27		
T7 200'-180'	190'	1.649	34	52.917	A	0.000	13.846	5.833	42.13	0.000	0.000
					B	0.000	9.176		63.57		
					C	0.000	13.800		42.27		
T8 180'-160'	170'	1.597	33	52.917	A	0.000	14.135	5.833	41.27	0.000	0.000
					B	0.000	9.499		61.41		
					C	0.000	14.089		41.40		
T9 160'-140'	150'	1.541	32	52.917	A	0.000	14.135	5.833	41.27	0.000	0.000
					B	0.000	9.499		61.41		
					C	0.000	14.089		41.40		
T10 140'-120'	130'	1.48	31	52.917	A	0.000	13.846	5.833	42.13	0.000	0.000
					B	0.000	9.176		63.57		
					C	0.000	13.800		42.27		
T11 120'-100'	110'	1.411	29	52.917	A	0.000	13.846	5.833	42.13	0.000	0.000
					B	0.000	9.176		63.57		
					C	0.000	13.800		42.27		
T12 100'-80'	90'	1.332	28	52.917	A	0.000	14.135	5.833	41.27	0.000	0.000
					B	0.000	9.499		61.41		
					C	0.000	14.089		41.40		
T13 80'-60'	70'	1.24	26	52.917	A	0.000	14.135	5.833	41.27	0.000	0.000
					B	0.000	9.499		61.41		
					C	0.000	14.089		41.40		
T14 60'-40'	50'	1.126	23	52.917	A	0.000	13.846	5.833	42.13	0.000	0.000
					B	0.000	9.176		63.57		
					C	0.000	13.800		42.27		
T15 40'-20'	30'	1	21	52.917	A	0.000	13.846	5.833	42.13	0.000	0.000
					B	0.000	9.176		63.57		
					C	0.000	13.800		42.27		
T16 20'-16'8"	18'3"	1	21	8.819	A	0.000	2.272	0.972	42.79	0.000	0.000

ERITower Hodge Design Associates, P.C. 22 Chestnut Street Evansville, Indiana 47713-1022 Phone: 812.422.2558 FAX: 812.422.3337	Job 358' Guyed Tower for Central Tower (HDA 04G-0007 CT1 16347 G2043)	Page 2 of 3
	Project Portland (Westbrook), Cumberland County, ME (for SAGA Communications)	Date 16:00:40 02/17/04
	Client Central Tower, A Dielectric Company	Designed by Gray Hodge

Section Elevation	z	K_z	q_z	A_G	F a c e	A_F	A_R	A_{leg}	Leg %	$C_d A_A$ In Face	$C_d A_A$ Out Face
ft	ft		psf	ft ²	e	ft ²	ft ²	ft ²		ft ²	ft ²
1/32"	31/32"				B	0.000	1.490		65.27		
					C	0.000	2.264		42.94		
T17 16'-8-1/32"-13'-31/32"	15'	1	21	8.819	A	0.000	2.298	0.972	42.31	0.000	0.000
					B	0.000	1.519		44.02		
					C	0.000	2.290		42.45		
T18 13'-31/32"-10'	11'-8-1/32"	1	21	8.819	A	0.000	2.298	0.972	42.31	0.000	0.000
					B	0.000	1.519		64.02		
					C	0.000	2.290		42.45		
T19 10'-6'-8-1/32"	8'-3-1/32"	1	21	8.819	A	0.000	1.519	0.972	64.02	0.000	0.000
					B	0.000	1.519		64.02		
					C	0.000	1.519		64.02		
T20 6'-8-1/32"-5'	5'-9-31/32"	1	21	4.410	A	0.000	0.917	0.486	53.03	0.000	0.000
					B	0.000	0.917		53.03		
					C	0.000	0.917		53.03		
T21 5'-0'	2'-6"	1	21	7.002	A	4.086	1.533	1.518	27.02	0.000	0.000
					B	4.086	1.533		27.02		
					C	4.086	1.533		27.02		

Tower Pressure - With Ice

$G_H = 1.077$

Section Elevation	z	K_z	q_z	tz	A_G	F a c e	A_F	A_R	A_{leg}	Leg %	$C_d A_A$ In Face	$C_d A_A$ Out Face
ft	ft		psf	in	ft ²	e	ft ²	ft ²	ft ²		ft ²	ft ²
L1 358'-338'6"	348'3"	1.961	30	0.5000	43.469	A	0.000	17.498	8.938	51.08	0.000	0.000
						B	0.000	17.498		51.08		
						C	0.000	19.979		44.73		
L2 338'6"-319'	328'9"	1.929	30	0.5000	43.469	A	0.000	20.654	8.938	43.27	0.000	0.000
						B	0.000	18.165		49.20		
						C	0.000	20.585		43.42		
T1 319'-300'	309'6"	1.896	29	0.5000	51.854	A	0.000	22.632	8.708	38.48	0.000	0.000
						B	0.000	17.508		49.74		
						C	0.000	20.064		43.40		
T2 300'-280'	290'	1.861	29	0.5000	54.583	A	0.000	23.281	9.167	39.37	0.000	0.000
						B	0.000	17.798		51.50		
						C	0.000	24.608		37.25		
T3 280'-260'	270'	1.823	28	0.5000	54.583	A	0.000	23.281	9.167	39.37	0.000	0.000
						B	0.000	17.798		51.50		
						C	0.000	24.608		37.25		
T4 260'-240'	250'	1.783	28	0.5000	54.583	A	0.000	23.559	9.167	38.91	0.000	0.000
						B	0.000	18.121		50.59		
						C	0.000	24.874		36.85		
T5 240'-220'	230'	1.741	27	0.5000	54.583	A	0.000	23.559	9.167	38.91	0.000	0.000
						B	0.000	18.121		50.59		
						C	0.000	24.874		36.85		
T6 220'-200'	210'	1.697	26	0.5000	54.583	A	0.000	23.281	9.167	39.37	0.000	0.000
						B	0.000	17.798		51.50		
						C	0.000	24.608		37.25		
T7 200'-180'	190'	1.649	26	0.5000	54.583	A	0.000	23.281	9.167	39.37	0.000	0.000
						B	0.000	17.798		51.50		
						C	0.000	24.608		37.25		
T8 180'-160'	170'	1.597	25	0.5000	54.583	A	0.000	23.559	9.167	38.91	0.000	0.000
						B	0.000	18.121		50.59		
						C	0.000	24.874		36.85		

ERITower Hodge Design Associates, P.C. 22 Chestnut Street Evansville, Indiana 47713-1022 Phone: 812.422.2558 FAX: 812.422.3337	Job 358' Guyed Tower for Central Tower (HDA 04G-0007 CTI 16347 G2043)	Page 3 of 3
	Project Portland (Westbrook), Cumberland County, ME (for SAGA Communications)	Date 16:00:40 02/17/04
	Client Central Tower, A Dielectric Company	Designed by Gray Hodge

Section Elevation	z	Kz	qz	tz	AG	F a c e	AR	AR	A _{leg}	Leg _o	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
ft	ft		psf	in	ft ²	e	ft ²	ft ²	ft ²			
T9 160'-140'	150'	1.541	24	0.5000	54.583	A	0.000	23.559	9.167	38.91	0.000	0.000
						B	0.000	18.121		50.59		
						C	0.000	24.874		36.85		
T10 140'-120'	130'	1.48	23	0.5000	54.583	A	0.000	23.281	9.167	39.37	0.000	0.000
						B	0.000	17.798		51.50		
						C	0.000	24.608		37.25		
T11 120'-100'	110'	1.411	22	0.5000	54.583	A	0.000	23.281	9.167	39.37	0.000	0.000
						B	0.000	17.798		51.50		
						C	0.000	24.608		37.25		
T12 100'-80'	90'	1.332	21	0.5000	54.583	A	0.000	23.559	9.167	38.91	0.000	0.000
						B	0.000	18.121		50.59		
						C	0.000	24.874		36.85		
T13 80'-60'	70'	1.24	19	0.5000	54.583	A	0.000	23.559	9.167	38.91	0.000	0.000
						B	0.000	18.121		50.59		
						C	0.000	24.874		36.85		
T14 60'-40'	50'	1.126	18	0.5000	54.583	A	0.000	23.281	9.167	39.37	0.000	0.000
						B	0.000	17.798		51.50		
						C	0.000	24.608		37.25		
T15 40'-20'	30'	1	16	0.5000	54.583	A	0.000	23.281	9.167	39.37	0.000	0.000
						B	0.000	17.798		51.50		
						C	0.000	24.608		37.25		
T16 20'-16'-1/32"	8'-3'-31/32"	1	16	0.5000	9.097	A	0.000	3.791	1.528	40.30	0.000	0.000
						B	0.000	2.863		53.37		
						C	0.000	4.016		38.04		
T17 16'-8'-1/32"	13'-31/32"	1	16	0.5000	9.097	A	0.000	3.856	1.528	39.62	0.000	0.000
						B	0.000	2.938		52.00		
						C	0.000	4.078		37.46		
T18 13'-3'-31/32"-10'	11'-8'-1/32"	1	16	0.5000	9.097	A	0.000	3.856	1.528	39.62	0.000	0.000
						B	0.000	2.938		52.00		
						C	0.000	4.078		37.46		
T19 10'-6'-8'-1/32"	8'-3'-31/32"	1	16	0.5000	9.097	A	0.000	2.938	1.528	52.00	0.000	0.000
						B	0.000	2.938		52.00		
						C	0.000	2.938		52.00		
T20 6'-8'-1/32"-5'	5'-9'-31/32"	1	16	0.5000	4.549	A	0.000	1.878	0.764	40.67	0.000	0.000
						B	0.000	1.878		40.67		
						C	0.000	1.878		40.67		
T21 5'-0'	2'-6"	1	16	0.5000	7.431	A	4.458	2.409	2.385	34.73	0.000	0.000
						B	4.458	2.409		34.73		
						C	4.458	2.409		34.73		

BUILDING PERMIT INSPECTION PROCEDURES

Please call 874-8703 or 874-8693 to schedule your inspections as agreed upon

Permits expire in 6 months, if the project is not started or ceases for 6 months.

The Owner or their designee is required to notify the inspections office for the following inspections and provide adequate notice. Notice must be called in 48-72 hours in advance in order to schedule an inspection:

By initializing at each inspection time, you are agreeing that you understand the inspection procedure and additional fees from a "Stop Work Order" and "Stop Work Order Release" will be incurred if the procedure is not followed as stated below.

Pre-construction Meeting: Must be scheduled with your inspection team upon receipt of this permit. Jay Reynolds, Development Review Coordinator at 874-8632 must also be contacted at this time, before any site work begins on any project other than single family additions or alterations.

Footing/Building Location Inspection: Prior to pouring concrete

Re-Bar Schedule Inspection: Prior to pouring concrete

Foundation Inspection: Prior to placing ANY backfill

Framing/Rough Plumbing/Electrical: Prior to any insulating or drywalling

Final/Certificate of Occupancy: Prior to any occupancy of the structure or use. NOTE: There is a \$75.00 fee per inspection at this point.

Certificate of Occupancy is not required for certain projects. Your inspector can advise you if your project requires a Certificate of Occupancy. All projects DO require a final inspection

If any of the inspections do not occur, the project cannot go on to the next phase, REGARDLESS OF THE NOTICE OR CIRCUMSTANCES.

CERIFICATE OF OCCUPANICES MUST BE ISSUED AND PAID FOR, BEFORE THE SPACE MAY BE OCCUPIED

[Signature]
Signature of Applicant/Designee

20 FEB 04
Date

[Signature]
Signature of Inspections Official

2/20/04
Date

CBL: 302A006 Building Permit #: 04 0137



APPLICATION FOR EXEMPTION FROM SITE PLAN REVIEW

SAGA COMMUNICATIONS OF NEW ENGLAND LLC
 Applicant

2/13/04
 Application Date

CO/ PORTLAND RADIO GROUP
420 WESTERN AVE SO PORTLAND ME
 Applicant's Mailing Address

WGAN TOWER REFERENCE
 Project Name/Description

ROBERT ARLCOE
ASSOCIATED DESIGN PARTNERS
 Consultant/Agent/Phone Number

326 LANE AVENUE, PORTLAND
 Address of Proposed Site

BARRY J. HOBBS ESQ
HOBBS + CAEDNER
 282-5985

CBL: _____

Description of Proposed Development:

REPLACEMENT OF AN EXISTING 364' A.G.L. (358' STEEL HEIGHT) GUYED
RADIO TELECOMMUNICATIONS TOWER PRESENTLY USED BY WGAN AM.
REMOVAL OF EXISTING ABOVE REFERENCED TOWER

Please Attach Sketch/Plan of Proposal/Development

Criteria for Exemptions:
 See Section 14-523 (4) on back side of form

- a) Within Existing Structures; No New Buildings, Demolitions or Additions
- b) Footprint Increase Less Than 500 Sq. Ft.
- c) No New Curb Cuts, Driveways, Parking Areas
- d) Curbs and Sidewalks in Sound Condition/Comply with ADA
- e) No Additional Parking/ No Traffic Increase
- f) No Stormwater Problems
- g) Sufficient Property Screening
- h) Adequate Utilities

Applicant's Assessment (Yes, No, N/A)	Planning Office Use Only
* REPLACEMENT OF EXISTING TOWER REMOVAL OF EXISTING TOWER	✓
YES (* 80 SQ FEET)	✓
NONE	✓
N/A	✓
NONE	✓
NONE	✓
YES	✓
YES	✓



CITY OF PORTLAND, MAINE

Department of Building Inspections

_____ 3/3 20 04 _____

Received from Associates Design Partners

Location of Work 236 Lane Ave.

Cost of Construction \$ _____

Permit Fee \$ 30.00

Building (IL) Plumbing (I5) _____ Electrical (I2) _____ Site Plan (U2) _____

Other _____

CBL: 302-A-006 *Amendment to permit # 04-0137*

Check #: Cash Total Collected \$ 30.00

THIS IS NOT A PERMIT

No work is to be started until PERMIT CARD is actually posted upon the premises. Acceptance of fee is no guarantee that permit will be granted. PRESERVE THIS RECEIPT. In case permit cannot be granted the amount of the fee will be refunded upon return of the receipt less \$10.00 or 10% whichever is greater.

WHITE - Applicant's Copy
YELLOW - Office Copy
PINK - Permit Copy