

302-A-6

236 Lane Avenue

Site Alteration

FEMA (Darcy Bingham

#2012-643



General Building Permit Application

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

Location/Address of Construction: 236 LANE AVENUE, PORTLAND, ME 04103		
Total Square Footage of Proposed Structure/Area 320 SF (EQUIPMENT MODULES) / 2,040 SF PROJECT AREA		Square Footage of Lot 1,426,742 SF
Tax Assessor's Chart, Block & Lot Chart# Block# Lot# 302 A006001	Applicant * must be owner, Lessee or Buyer * Name KBR - MICHAEL MULLEN Address 63 SOUTH ROYAL ST, SUITE 200 City, State & Zip MOBILE, AL 36602	Telephone: 251-450-7896
Lessee/DBA (If Applicable) NOT APPLICABLE	Owner (if different from Applicant) Name SAGA COMMUNICATIONS OF NEW ENGLAND INC Address 420 WESTERN AVENUE City, State & Zip SOUTH PORTLAND, ME 04106	Cost Of Work: \$ 800,000 C of O Fee: \$ 75 Total Fee: \$ 8,095
Current legal use (i.e. single family) <u>COMMUNICATIONS (RADIO TRANSMITTER SITE)</u> If vacant, what was the previous use? <u>NOT APPLICABLE</u> Proposed Specific use: <u>COMMUNICATIONS (RADIO TRANSMITTER SITE)</u> Is property part of a subdivision? <u>NO</u> If yes, please name _____ Project description: FEMA is upgrading the Emergency Radio Network by installing equipment for emergency use at the existing WGAN radio transmitter site. The new equipment includes a generator and a transmitter module, each protected by a pre-cast concrete shelter, an above ground fuel storage tank, and a second site generator.		
Contractor's name: <u>KELLOGG BROWN & ROOT SERVICES, INC (ROBERT TAPSCOTT)</u> Address: <u>2451 CRYSTAL DRIVE, SUITE 675</u> City, State & Zip <u>ARLINGTON, VA 22202</u> Telephone: <u>703-526-7853</u> Who should we contact when the permit is ready: <u>MICHAEL MULLEN</u> Telephone: <u>251-450-7896</u> Mailing address: <u>63 SOUTH ROYAL ST, SUITE 200, MOBILE, AL 36602</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:

Michael L. Mullen

Date:

11/09/2012

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



New Commercial Permit Application Checklist

All of the following information is required and must be submitted. Checking off each item as you prepare your application package will ensure your package is complete and will help to expedite the permitting process.

One (1) complete Set of construction drawings must include:

Note: Construction documents for costs in excess of \$50,000.00 must be prepared by a Design Professional and bear their seal.

- Cross sections w/framing details See (2) Sets of Pre-cast Concrete Shelter Drawings by Cellxion
- Detail of any new walls or permanent partitions See (2) Sets of Pre-cast Concrete Shelter Drawings by Cellxion
- Floor plans and elevations See (2) Sets of Pre-cast Concrete Shelter Drawings by Cellxion
- Window and door schedules See (2) Sets of Pre-cast Concrete Shelter Drawings by Cellxion
- Foundation plans with rebar specifications and required drainage and damp proofing (if applicable) Drawings S-101 & S-102
- Detail egress requirements and fire separations NA - No occupancy of Equipment Shelters
- Insulation R-factors of walls, ceilings, floors and U-factors of windows as per the IEEC 2000 NA - No occupancy of Equipment Shelters
- Complete the Accessibility Certificate and The Certificate of Design Attached
- A statement of special inspections as required per the IBC 2003 NA - Special Inspections not required for minor concrete footings supporting equipment
- Complete electrical and plumbing layout. See Drawings M-101 & E101 to E105
- Mechanical drawings for any specialized equipment such as furnaces, chimneys, gas equipment, See Highland HVAC equipment (air handling) or other types of work that may require special review. Tank Drawings
- Reduced plans or electronic files in PDF format are required if originals are larger than 11" x 17". (9) 11' x 17" reduced size sets included
- Per State Fire Marshall, all new bathrooms must be ADA compliant. NA - No new bathrooms required

Separate permits are required for internal & external plumbing, HVAC and electrical installations.

Nine (9) copies of the minor (< 10,000 sf) or major (> 10,000 sf) site plan application is required that includes:

- A stamped boundary survey to scale showing north arrow, zoning district and setbacks to a scale of $\geq 1" = 20'$ on paper $\geq 11" \times 17"$ See Drawing G-101, and Stamped Survey of project area by Sebago Technics
- The shape and dimension of the lot, footprint of the proposed structure and the distance from the actual property lines. Photocopies of the plat or hand draw footprints not to scale will not be accepted. See Drawing G-101
- Location and dimensions of parking areas and driveways, street spaces and building frontage See G-101 - No new parking, driveways or street spaces
- Finish floor or sill elevation (based on mean sea level datum) See top of concrete elev. - S-301
- Location and size of both existing utilities in the street and the proposed utilities serving the building No Utilities impacted by project
- Existing and proposed grade contours See Drawing C-102
- Silt fence (erosion control) locations See Drawing C-101

APPLICANT:

PROJECT CIVIL/STRUCTURAL
ENGINEER:

Michael L. Mullen
63 S Royal St, Suite 200
Mobile, AL 36602
251-450-7896

Denise C. Brown, P.E.
63 S Royal St, Suite 200
Mobile, AL 36602
251-450-7920

Fire Department requirements.

The following shall be submitted on a separate sheet:

- Name, address and phone number of applicant **and** the project architect. Please see contact information above
- Proposed use of structure (NFPA and IBC classification) NFPA: Storage; IBC: U Trans. Module, H-2 Generator Module
- Square footage of proposed structure (total and per story) 140 SF (Generator Shelter); 180 SF (Transmitter Shelter)
- Existing and proposed fire protection of structure. Pre-cast concrete shelters are separate from existing building, and their walls and roof have a 2-hour fire rating.
- Separate plans shall be submitted for
 - a) Suppression system NA
 - b) Detection System (separate permit is required) Transmitter Shelter contains detection system, see Cellxion drawings for 10' x 18' Concrete Shelter
- A separate Life Safety Plan must include:
 - a) Fire resistance ratings of all means of egress
 - b) Travel distance from most remote point to exit discharge
 - c) Location of any required fire extinguishers
 - d) Location of emergency lighting
 - e) Location of exit signs
 - f) NFPA 101 code summary

Life Safety Plan is not applicable for equipment shelters with occupant load = 0
- Elevators shall be sized to fit an 80" x 24" stretcher. NA

For questions on Fire Department requirements call the Fire Prevention Officer at (207) 874-8405.

Please submit all of the information outlined in this application checklist. If the application is incomplete, the application may be refused.

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Permit Fee: \$30.00 for the first \$1000.00 construction cost, \$10.00 per additional \$1000.00 cost

This is not a Permit; you may not commence any work until the Permit is issued.



Certificate of Design Application

From Designer: KBR TECHNICAL SERVICES, INC
 Date: NOVEMBER 8, 2012
 Job Name: FEMA EMERGENCY RADIO NETWORK ON WGAN PORTLAND, MAINE
 Address of Construction: 236 LANE AVENUE, PORTLAND, ME 04103

2003 International Building Code

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

Building Code & Year IBC 2003 Use Group Classification (s) GROUP: U (Transmitter Module), H-2 (Generator Module)
 Type of Construction V-B (FOR PRE-CAST CONCRETE MODULES)
 Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2003 IRC NO, EXEMPT
 Is the Structure mixed use? NO If yes, separated or non separated or non separated (section 302.3) _____
 Supervisory alarm System? YES Geotechnical/Soils report required? (See Section 1802.2) YES (REPORT ATTACHED)

Structural Design Calculations

YES Submitted for all structural members (106.1 - 106.11)
(Structural Calculation for Modules by Module Manufacturer)

Design Loads on Construction Documents (1603)

Uniformly distributed floor live loads (7603.11, 1807)

Floor Area Use	Loads Shown
<u>OFFICE - TRANS. MODULE</u>	<u>9.0KIPS (50PSF) DWG S-001</u>
<u>OFFICE - GENSET MODULE</u>	<u>7.0KIPS (50PSF) DWG S-001</u>
<u>FUEL TANK - FLUID LOAD</u>	<u>51.2KIPS DWG S-001</u>
<u>GENERATOR - FLUID LOAD</u>	<u>1.8KIPS DWG S-001</u>

<u>OFFICE - TRANS. MODULE</u>	<u>9.0KIPS (50PSF) DWG S-001</u>
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Wind loads (1603.1.4, 1609)

ASCE 7- Method 2 Design option utilized (1609.1.1, 1609.6)
156 mph Basic wind speed (1809.3) (Project required higher wind speed)
IV, Iw = 1.15 Building category and wind importance Factor, I_w (table 1604.5, 1609.5)
C Wind exposure category (1609.4)
0.18 Internal pressure coefficient (ASCE 7)
NA (Fdn. Design) Component and cladding pressures (1609.1.1, 1609.6.2.2)
+41 to -65 psf Main force wind pressures (7603.1.1, 1609.6.2.1)

Earth design data (1603.1.5, 1614-1623)

Equiv. Lat. Force Design option utilized (1614.1)
III Seismic use group ("Category")
0.83 & 0.43 Spectral response coefficients, S_D & S_{D1} (1615.1)
D Site class (1615.1.5) (Project required higher seismic loading than required for site specific design)

NA Live load reduction
NA Roof *live* loads (1603.1.2, 1607.11)
73 psf Roof snow loads (1603.7.3, 1608)
80 psf Ground snow load, P_g (1608.2)
73 psf If $P_g > 10$ psf, flat-roof snow load P_f
0.9 If $P_g > 10$ psf, snow exposure factor, C_e
1.2 If $P_g > 10$ psf, snow load importance factor, I_s
1.2 Roof thermal factor, C_t (1608.4)
NA Sloped roof snowload, P_s (1608.4)
D Seismic design category (1616.3)
1B Basic seismic force resisting system (1617.6.2)
5 & 5 Response modification coefficient, R , and deflection amplification factor, C_d (1617.6.2)
ASCE 7 Analysis procedure (1616.6, 1617.5)
Multiple Equip. Fdns Design base shear (1617.4, 1617.5.1)
See DWG S-001
Flood loads (1803.1.6, 1612)
Zone X Flood Hazard area (1612.3)
73.08' NAVD88 Elevation of structure
Other loads
NA Concentrated loads (1607.4)
NA Partition loads (1607.5)
NA Misc. loads (Table 1607.8, 1607.6.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404)



Accessibility Building Code Certificate

NOT APPLICABLE FOR ADDITION OF EQUIPMENT
OUTSIDE EXISTING BUILDING

Designer: _____

Address of Project: _____

Nature of Project: _____

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. Residential Buildings with 4 units or more must conform to the Federal Fair Housing Accessibility Standards. Please provide proof of compliance if applicable.

(SEAL)

Signature: _____

Title: _____

Firm: _____

Address: _____

Phone: _____

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



Certificate of Design

Date: November 9, 2012

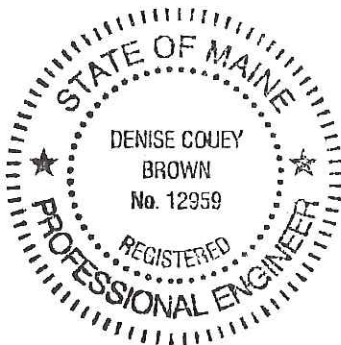
From: Denise Brown, P.E.

These plans and / or specifications covering construction work on:

FEMA EMERGENCY RADIO NETWORK ON WGAN PORTLAND, MAINE

LOCATED AT THE WGAN TRANSMITTER FACILITY AT 236 LANE AVENUE, PORTLAND, ME 04103

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: *Denise Couey Brown*

Title: Civil / Structural Engineer

Firm: KBR Technical Services, Inc.

Address: 63 South Royal St, Suite 200

Mobile, AL 36602

Phone: 251-450-7920

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



PORTLAND MAINE

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

Planning & Urban Development Department
Jeff Levine, AICP, Director

Planning Division
Alexander Jaegerman, FAICP, Director

January 4th, 2013

Denise Brown, P.E.
KBR
63 South Royal Street, Suite 200
Mobile, AL 36602

**RE: 236 Lane Avenue
FEMA Equipment Installation**
(transmitter module, two generators, and a 6000 gallon fuel tank to provide power for radio transmission during major emergencies)

**Level I Site Alteration Site Plan Review
Application ID Number: 2012 -643**

Dear Ms Brown:

I refer to the Level I Site Alteration application submitted by FEMA for the installation of equipment near the existing transmitter building on the *Saga Communication of New England* land at the above address. The proposals are being reviewed at an administrative level under the provisions of the Site Plan ordinance, particularly 14-526 and 14-527.

This letter confirms the review comments as previously indicated in e-mails dated 12.20.2012 and 12.26.2012. Please note that the site plan review cannot be completed until further information/revisions are received.

I would note that the location for this proposal is very close to an established residential area with many homes able to view the site and therefore it is not remote as described in the cover letter. The existing transmitter building is a residential-style building with no existing "utility" character (see photo right), and part of the site falls within a residential zone. Therefore most of the following comments are related to the objective of avoiding adverse impacts for the immediate neighbors.



1. **Right, title and interest:** We require evidence that the applicant has rights to install and maintain the equipment as well as the fencing and landscaping as finally proposed. Therefore, the owner (*Saga Communication of New England*) will be requested to provide a letter confirming agreement. Since the loan agreement is only for ten years, a condition of any approval will be that if the license/agreement should lapse/not be renewed, the Planning Authority must be notified and can review the matter again at that time.

2. Zoning:
The proposals are located within both the B4 Commercial zone and the R-3 Residential zone and have been reviewed by the City's Zoning Administrator, Marge Schmuckal. She has determined that there is approximately 20 feet of the project development located within the R-3 zone. However, the City's Ordinance Section 14-51 allows a 30 foot expansion of the less restricted zone (B-4) into the most restricted zone (R-3). It appears that there is approximately 178 foot of road frontage along Lane Avenue, and therefore the applicant has the ability to adjust the B-4 zone line into the R-3 zone without any further zoning review as such an extension is allowed by the Ordinance if the conditions are met. The Zoning Administrator believes the conditions are being met. We request a revised plan showing a dotted line of the 30 foot extension (of B-4 into R-3) for our records.
3. Storm water Management: Please address the attached comments of the Peer Engineering Reviewer. Please note that the previous comments forwarded to you on 12.26.2012 did not clarify the Urban Impaired Stream standards that apply to this site. I have received updated comments from the Peer Engineering reviewer and these are attached.
4. Landscape:
The new installation will be very visible from nearby homes and we would request the following to provide some screening:
 - Black vinyl chain link fencing for all of the fencing around the fuel tank, larger generator and transmitter unit, with black vinyl slats added on the north side and no barbed wire or razor wire;
 - Planting along the Lane Avenue (north) frontage/property line using 'Techny' Arborvitae 4-5' High, spaced 6' on center. The number required to be effective will depend on how near to the facility they are planted, with maybe 10 required if near the installation and more needed if the planting is closer to Lane Avenue;
 - Please enclose the site generator (solid white fencing?) that is located next to the garage.
5. Sound impacts from the Generators: Please send information that shows the individual and combined projected sound levels (in dBA) of the generators when both are operating, with mufflers or other mitigation (ie landscaping) as proposed (please clarify what mufflers or mitigation is proposed for each of the projected dBAs. The sound levels must not exceed the maximum noise allowances of the B-4 zone. In addition, any final approval will include a condition limiting the times for testing of the generators.
6. Fire Department: We request an analysis that shows that the location and installation details comply with NFPA 1. The above-ground fuel tank will require a state fire marshal permit and this will be a condition of any approval.

Please do not hesitate to telephone or e-mail me to clarify any of the above points or if there are any questions; I can be reached on (207) 874 8728 or jf@portlandmaine.gov.

Sincerely,



Jean Fraser,
Planner

Attachment: Peer Engineer Review comments 1.3.2013

Cc

Barbara Barhydt, Development Review Services Manager; Marge Schmuckal, Zoning Administrator; David Senus, Woodard & Curran (Peer Engineering reviewer); David Margolis-Pineo, Department of Public Services; Jeff Tarling, City Arborist

cc. Applicant: Darcy Bingham, FEMA, 500 C Street SW, Washington, DC 20472

**COMMITMENT & INTEGRITY
DRIVE RESULTS**41 Hutchins Drive
Portland, Maine 04102
www.woodardcurran.comT 800.426.4262
T 207.774.2112
F 207.774.6635**MEMORANDUM**

TO: Jean Fraser, Planner
FROM: Ashley Auger, E.I.T. & David Senus, P.E.
DATE: January 3, 2013 (as updated)
RE: Lane Avenue Radio Tower, Level I Site Alteration Application

Woodard & Curran has reviewed the Level I Site Alteration Application for the Lane Avenue Radio Tower project located in Portland, Maine. The project consists of the addition of a transmitter module, generator module, and 6,000 gallon fuel tank for critical power generation within an improved, fenced-in area of the site.

Documents Reviewed by Woodard & Curran

- Site Plan Application and attachments dated November 21, 2012, prepared by KBR, on behalf of Darcy Bingham.
- Engineering Plans, Sheets G-001, G-101, C-101, C-102, & C-301, dated November 1, 2012, prepared by KBR, on behalf of Darcy Bingham.

Comments

- 1) A Level I Site Plan Submission is required to include a stormwater management plan and a soil erosion control plan (*City of Portland Land Use Code, Article V. Site Plan, Section 14-527(b) (12) and (13)*). Level 1 Site Alteration Plans are required to conform with City Code of Ordinances, Section 14-526(b) 3, Environmental Quality Standards; specifically the Basic, General, Flooding and Urban Impaired Stream standards defined in Section 5 of the Technical Manual. We offer the following comments related to each of these Standards:
 - a) Basic Standards: A plan has been provided to address erosion and sediment control, maintenance requirements, and good housekeeping practices in general accordance with Appendix A, B, & C of MaineDEP Chapter 500.
 - b) General Standards: The project proposes a small area of clearing that would be considered new "developed" area, and a gravel surface within a fenced area for the new transmitter module, generator, and fuel tank that would be considered new "impervious" area. The new equipment would also be considered new "impervious" surface. Based on the plan dimensions, we estimate approximately 2,000 sq ft of new impervious area will be generated by the project. The project must include water quality treatment measures in conformance with the General Standards to treat the new developed and impervious areas. The fenced equipment area appears to have a similar level of use as an electrical utility substation. The MaineDEP has previously provided a ruling to allow a 4" depth of ¾" to 1-½" crushed stone over 18" of clean, granular gravel (MDOT 703.06 Type A) to count as treatment under the General Standards for electrical substations. The Applicant can propose this surface as a means of achieving treatment for the project area; or they may propose to construct a stormwater best management practice in accordance with Volume III of the MaineDEP BMP Technical Design Manual.
 - c) Flooding Standard: Installation of a water quality best management practice (per the General Standards above) will decrease the rate of stormwater discharge from the project site. With the installation of a water quality BMP, the project will generate in an insignificant increase in runoff from the site, and as such, the project qualifies for a waiver from the flooding standard.
 - d) Urban Impaired Stream (UIS) Standard: The project is located within the Capisic Brook Watershed, which is identified as an Urban Impaired Stream by the Maine DEP. To meet the UIS Standard, in addition to providing storm water quality treatment required under the "General Standards", the Applicant must either pay a compensation fee to the City of Portland OR mitigate project impacts by treating, reducing, or eliminating an off-site or on-site pre-development impervious stormwater source. Section 5 of the City's Technical Manual includes MaineDEP Chapter 500 guidance on



how to meet the UIS Standard (Section 5, §III(6) *Compensation fees and mitigation credit*). If the Applicant chooses to pay a compensation fee to meet the UIS Standard, the fee would be calculated by multiplying any new Non-roof Impervious Area (in acres) by \$5,000, multiplying any new Roof Area (in acres) by \$2,000, and multiplying any new Landscaped Area (in acres) by \$1,000, and adding these three values together.

**COMMITMENT & INTEGRITY
DRIVE RESULTS**

41 Hutchins Drive
Portland, Maine 04102
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

MEMORANDUM



TO: Jean Fraser, Planner
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Jean Fraser - Lane Ave - FEMA

From: Marge Schmuckal
To: Jean Fraser
Date: 1/4/2013 2:20 PM
Subject: Lane Ave - FEMA

Hi Jean,
Here are my most recent comments:

236 Lane Ave B-4 Zone (primary) and R-3 Zone (sub)
#2012-643
1/4/2013

I reviewed the submitted plan showing the R-3 zone line. The line does bisect the project area. There is approximately 20 feet of the project area located currently within the R-3 zone. However, 14-51 allows a 30 foot expansion of the less restricted zone (B-4) into the most restricted zone (R-3). It appears that there is approximately 178 foot of road frontage along Lane Avenue, and therefore the applicant has the ability to adjust the B-4 zone line into the R-3 zone. We should get a revised plan showing a dotted line of the 30 foot extension for our records. There is no special steps for the applicant to take regarding the zone extension. Such an extension is allowed by Ordinance if the conditions are met. I believe the conditions are being met.

The project still must not exceed the maximum noise allowances of the B-4 zone. The applicant should submit projected dBAs accounting for required landscaping.

Marge Schmuckal
Zoning Administrator



PORTLAND MAINE

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

Planning & Urban Development Department

Jeff Levine, AICP, Director

Planning Division

Alexander Jaegerman, FAICP, Director

to BB
1-3-13
4:20

DRAFT January 4th, 2013

Denise Brown, P.E.

KBR

63 South Royal Street, Suite 200

Mobile, AL 36602

**RE: 236 Lane Avenue
FEMA Equipment Installation**
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3. Storm water Management: Please address the attached comments of the Peer Engineering Reviewer. Please note that the previous comments forwarded to you on 12.26.2012 did not clarify the Urban Impaired Stream standards that apply to this site. I have received updated comments from the Peer Engineering reviewer and these are attached.
4. Landscape:
The new installation will be very visible from nearby homes and we would request the following to provide some screening:
 - Black vinyl chain link fencing for all of the fencing, with black vinyl slats added on the north side and no barbed wire or razor wire;
 - Planting along the Lane Avenue (north) frontage/property line using 'Techny' Arborvitae 4-5' High, spaced 6' on center. The number required to be effective will depend on how near to the facility they are planted, with maybe 10 required if near the installation and more needed if the planting is closer to Lane Avenue;
 - Please enclose the site generator (solid white fencing?) that is located next to the garage.
5. Sound impacts from the Generators: Please send information that shows the individual and combined sound levels (in dBA) of the generators when both are operating, with mufflers or other mitigation as proposed (please clarify what mufflers or mitigation is proposed for each sound level, giving options if appropriate). The sound levels should meet our noise standards for these zones. Any final approval will include a condition limiting the times for testing of the generators.
6. Fire Department: We request an analysis that shows that the location and installation details comply with NFPA 1. The above-ground fuel tank will require a state fire marshall permit and this will be a condition of any approval.

Please do not hesitate to telephone or e-mail me to clarify any of the above points or if there are any questions; I can be reached on 874 8728 or jf@portlandmaine.gov.

Sincerely,

Jean Fraser,
Planner

Attachment: Peer Engineer Review comments 1.3.2013

Cc

Barbara Barhydt, Development Review Services Manager
Marge Schmuckal, Zoning Administrator
David Senus, Woodard & Curran (City consultant reviewer)
David Margolis-Pineo, Department of Public Services
Tom Errico, T Y Lin (City consultant reviewer)
Jeff Tarling, City Arborist

cc. Applicant: Darcy Bingham, FEMA, 500 C Street SW, Washington, DC 20472

**COMMITMENT & INTEGRITY
DRIVE RESULTS**

41 Hutchins Drive
Portland, Maine 04102
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

MEMORANDUM

TO: Jean Fraser, Planner
FROM: Ashley Auger, E.I.T. & David Senus, P.E.
DATE: January 3, 2013
RE: Lane Avenue Radio Tower, Level I Site Alteration Application



Woodard & Curran has reviewed the Level I Site Alteration Application for the Lane Avenue Radio Tower project located in Portland, Maine. The project consists of the addition of a transmitter module, generator module, and 6,000 gallon fuel tank for critical power generation within an improved, fenced-in area of the site.

Documents Reviewed by Woodard & Curran

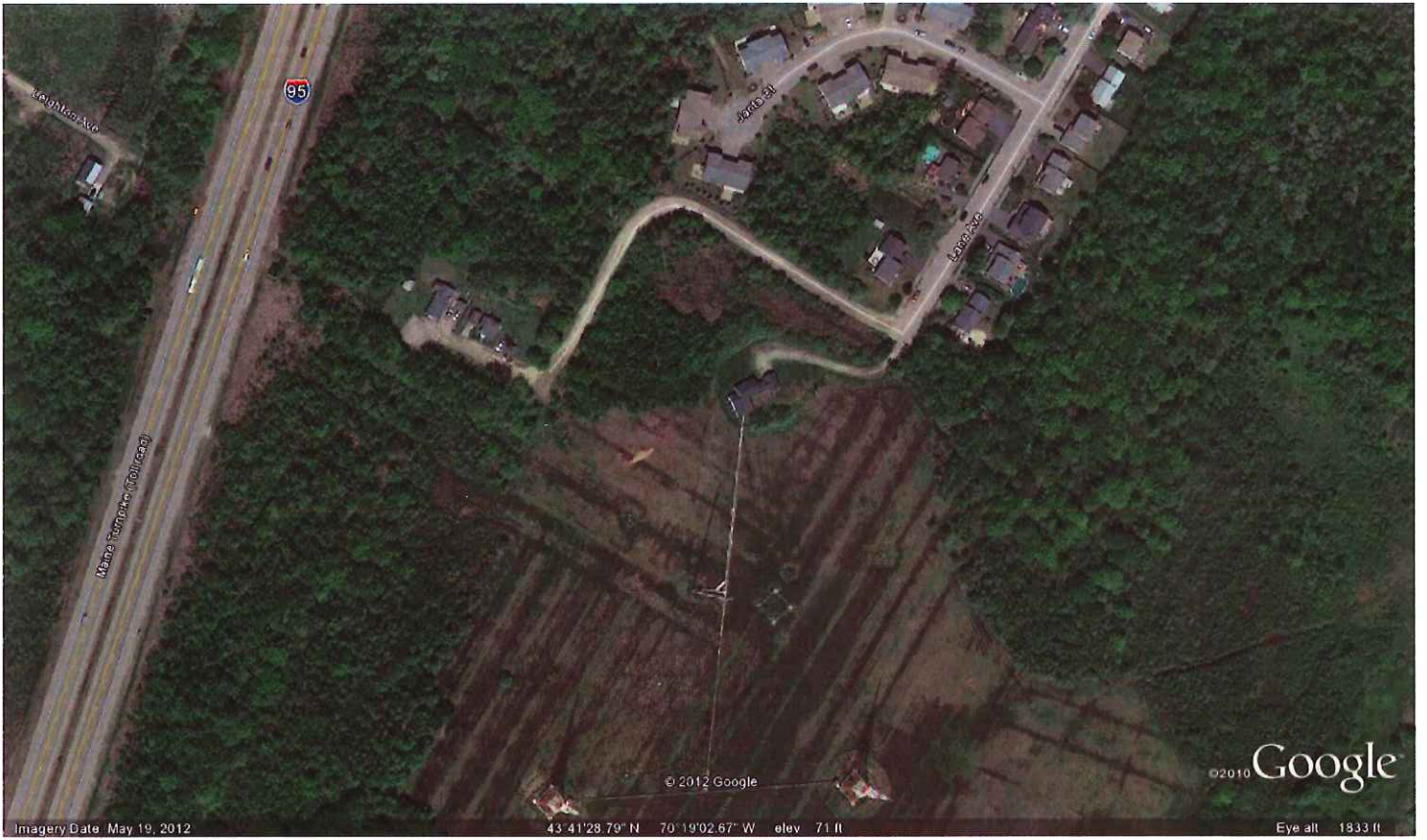
- Site Plan Application and attachments dated November 21, 2012, prepared by KBR, on behalf of Darcy Bingham.
- Engineering Plans, Sheets G-001, G-101, C-101, C-102, & C-301, dated November 1, 2012, prepared by KBR, on behalf of Darcy Bingham.

Comments

- 1) A Level I Site Plan Submission is required to include a stormwater management plan and a soil erosion control plan (*City of Portland Land Use Code, Article V. Site Plan, Section 14-527(b) (12) and (13)*). Level 1 Site Alteration Plans are required to conform with City Code of Ordinances, Section 14-526(b) 3, Environmental Quality Standards; specifically the Basic, General, Flooding and Urban Impaired Stream standards defined in Section 5 of the Technical Manual. We offer the following comments related to each of these Standards:
 - a) Basic Standards: A plan has been provided to address erosion and sediment control, maintenance requirements, and good housekeeping practices in general accordance with Appendix A, B, & C of MaineDEP Chapter 500.
 - b) General Standards: The project proposes a small area of clearing that would be considered new "developed" area, and a gravel surface within a fenced area for the new transmitter module, generator, and fuel tank that would be considered new "impervious" area. The new equipment would also be considered new "impervious" surface. Based on the plan dimensions, we estimate approximately 2,000 sq ft of new impervious area will be generated by the project. The project must include water quality treatment measures in conformance with the General Standards to treat the new developed and impervious areas. The fenced equipment area appears to have a similar level of use as an electrical utility substation. The MaineDEP has previously provided a ruling to allow a 4" depth of ¾" to 1-½" crushed stone over 18" of clean, granular gravel (MDOT 703.06 Type A) to count as treatment under the General Standards for electrical substations. The Applicant can propose this surface as a means of achieving treatment for the project area; or they may propose to construct a stormwater best management practice in accordance with Volume III of the MaineDEP BMP Technical Design Manual.
 - c) Flooding Standard: Installation of a water quality best management practice (per the General Standards above) will decrease the rate of stormwater discharge from the project site. With the installation of a water quality BMP, the project will generate in an insignificant increase in runoff from the site, and as such, the project qualifies for a waiver from the flooding standard.
 - d) Urban Impaired Stream (UIS) Standard: The project is located within the Capisic Brook Watershed, which is identified as an Urban Impaired Stream by the Maine DEP. To meet the UIS Standard, in addition to providing storm water quality treatment required under the "General Standards", the Applicant must either pay a compensation fee to the City of Portland OR mitigate project impacts by treating, reducing, or eliminating an off-site or on-site pre-development impervious stormwater source. Section 5 of the City's Technical Manual includes MaineDEP Chapter 500 guidance on



how to meet the UIS Standard (Section 5, ¹⁰⁵ III(6) *Compensation fees and mitigation credit*). If the Applicant chooses to pay a compensation fee to meet the UIS Standard, the fee would be calculated by multiplying any new Non-roof Impervious Area (in acres) by \$5,000, multiplying any new Roof Area (in acres) by \$2,000, and multiplying any new Landscaped Area (in acres) by \$1,000, and adding these three values together.



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Jean Fraser - Re: Photos of site/review letter re FEMA Emergency Radio network, 236 Lane Ave, Portland Maine (#2012-643)

From: David Margolis-Pineo
To: Barbara Barhydt; Jean Fraser
Date: 1/3/2013 12:28 PM
Subject: Re: Photos of site/review letter re FEMA Emergency Radio network, 236 Lane Ave, Portland Maine (#2012-643)
CC: DSenus@woodardcurran.com; Jeff Tarling; Marge Schmuckal

Jean,

Sorry for not getting comments to you.

Please ask the applicant to submit the different options for sound baffling devices (mufflers) and stating the decibel levels of each. We should request that the generator exercise period (usually one half hour) be on a Saturday morning. Typically the Super Critical muffler emits the least sound.

>>> Jean Fraser 1/3/2013 12:01 PM >>>
 Barbara

Further to the Dev Rev discussions, I have sent the following photos to the applicant's engineer and explained that the proximity to established residential area and visibility of the existing building/proposed site of new structures (as shown in the photos) will mean that landscaping is essential.

I have promised her a review letter today as the application was received on Nov 21; it will include:

- Confirmation of zoning and what review/review standards apply (awaiting confirmation from Marge); if requires cond use permit from ZBA under R3 a requirement is to be "suitably screened and landscaped so as to ensure compatibility with the surrounding neighborhood;"
- Request info re generator sound and mitigation (B4 does not exempt so I assume should meet B4 sound standards; will mention any approval would include a condition re testing times
- Fire Code NFPA 1 analysis
- Addressing stormwater quality treatment (fee or measure; DS to send updated memo incl ref to fee)
- Require fence inserts and no barbed wire (also one generator is outside the fence enclosure and nearest to residential - so ask re screening for that)
- Confirm landscaping requirements (screen planting along property boundary to north at least)

The attached photos show:

1. The existing building as viewed from the end of the residential street (single family home seen on right; picture taken in front yard of another single family home)
2. View looking up the street from the entrance to the transmitter property at Lane Ave
3. The condo building immediately across the road from the existing building (around the bend in Lane Ave)
4. Home nearest the gate of the access from Lane
5. Close up of existing building

Jean

Jean Fraser - FEMA Site

From: Jeff Tarling
To: Jean Fraser
Date: 1/3/2013 2:47 PM
Subject: FEMA Site
CC: David Margolis-Pineo

Hi Jean -

Yes, I agree. I went to the site today and it is pretty open. Much more than I noticed the last time when the foliage was out. Recommendation is that the facility be screened using 'Techny' Arborvitae 4-5' High, spaced 6' on center along the Lane Avenue frontage. Ideally, the facility should also use black vinyl chain link fence to screen the site.

Jeff

>>> Jean Fraser 1/3/2013 12:01 PM >>>
Barbara

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Jean

Jean Fraser - Notice/Right, Title and Interest

From: Danielle West-Chuhta
To: Barhydt, Barbara
Date: 1/2/2013 3:03 PM
Subject: Notice/Right, Title and Interest
CC: Fraser, Jean

Barbara:

1) Workshop Notice - under the City Code you are only required to give notice of the issue at least seven days before the public hearing on the matter so I think that it could be added to the agenda. I would post something up in City Hall regarding the change as well as on the website.

2) FEMA Tower - All FEMA needs to show is some right, title or interest in the property in order to have standing to apply for the permit/approval. This can be shown through a property deed, a lease, or a written option or contract to purchase the property. The document must give FEMA a "legally cognizable expectation" of having the power to use the property in the ways that would be authorized if the application/permit was approved. So, the lease document you mention needs to confer on FEMA the right to use the property to place (and subsequently fix/repair) the tower, access the tower, and you may even want to confirm that FEMA has sufficient property around the tower to act as a buffer (if required by the City Code).

Thanks,

Danielle

From: William Clark
To: Barbara Barhydt
Date: Thu, Sep 20, 2007 4:42 PM
Subject: Re: Leighton Avenue - single family house

1-2-13
 emailed Bill re
 exact boundaries
 Lane (Lane Ext) accepted +
 Leighton now accepted at
 corner

Barbara,

I looked at the 240 Lane Avenue Address on the GIS viewer. It links to the house on Leighton Ave. Lane Ave stops short and away from the house.

Checking the street acceptances at DPW.

Lane Ave was accepted for only 1200 feet. The rest of it is a paper street Pine Tree Terrace and Lane Ave Extension (continued in 1997) to the southerly corner of Tax Map Lot 308-A-56.

For the formal letter to Michelle. I would say that Bill Clark "reviewed City DPW Records as well as Cumberland County Registry deeds provided to the City by Michelle". I don't want them to think I conducted a full title search as I worked from here at DPW with the best info I had available. Penny can change it as she sees fit.

Sorry I don't anything of help.

Will be back on Monday morning.

Bill

>>> Barbara Barhydt September 19, 2007 4:15 PM >>>

Thank you Bill. I am out of the office tomorrow, but will be back on Friday. Enjoy your day off. The zoning map shows the street as Leighton Avenue, but her address in the assessing records is Lane Ave. Thank you for checking on this.

Barbara

>>> William Clark Wednesday, September 19, 2007 3:42 PM >>>

I just got to my desk and started to review the draft letter, when your email popped up.

we concluded the Archivist interviews, have an offer out there, so I have some more time.

240 Lane Ave. wow. Will clean off the projects and get this done tomorrow, as I have Friday off at Small Point for one last breath of beach air.

Will look at the Lane Ave acceptances, may change things.

Bill

>>> Barbara Barhydt September 19, 2007 3:32 PM >>>

Michele called me this morning and I gave her an overview of the letter. She asked why we kept calling it Leighton Avenue, because her mailing address is 240 Lane Avenue. Bill, I hate to ask it, but could you see whether Lane Avenue is dedicated to her property? The cbl is 308- A -005.

Thank you

Barbara

>>> Penny Littell Wednesday, September 19, 2007 9:39 AM >>>

my suggested redlined changes

>>> Barbara Barhydt 9/19/2007 8:23:09 AM >>>

Hi:

After Bill, Penny and I met, I said I would draft a letter for Michele Andreoli. I worked on it a bit last week and she e-mailed yesterday asking for an update. I am going to talk with her this afternoon, but I want to follow-up in writing. Attached is the draft letter I have prepared which touches on Bill's research and Marge's comments from the past. Could you please review this and make an editorial changes you feel necessary.

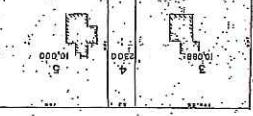
Thanks.

Barbara

CC: Penny Littell

CITY OF PORTLAND
ASSESSORS PLAN
SCALE = 1" = 50'
REVISED 4/11/79

LEIGHTON AVENUE SHEET 305-A



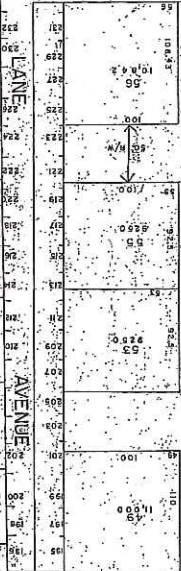
SHEET 305-A

LEIGHTON AVENUE (RELOCATED)

EASTERN LIMIT OF METERS

FARNHAM AVENUE

AVENUE



SHEET 302-A

SHEET 299-A

No 308

Jean Fraser - Re: Photos of site/review letter re FEMA Emergency Radio network, 236 Lane Ave, Portland Maine (#2012-643)

From: Barbara Barhydt
To: Fraser, Jean; Margolis-Pineo, David
Date: 1/3/2013 1:00 PM
Subject: Re: Photos of site/review letter re FEMA Emergency Radio network, 236 Lane Ave, Portland Maine (#2012-643)
CC: DSenus@woodardcurran.com; Schmuckal, Marge; Tarling, Jeff

Typically we have asked commercial site to test during weekly business hours, so the weekends are not disturbed.

Barbara

>>> David Margolis-Pineo Thursday, January 03, 2013 12:28 PM >>>
 Jean,

Sorry for not getting comments to you.

Please ask the applicant to submit the different options for sound baffling devices (mufflers) and stating the decibel levels of each. We should request that the generator exercise period (usually one half hour) be on a Saturday morning. Typically the Super Critical muffler emits the lease sound.

>>> Jean Fraser 1/3/2013 12:01 PM >>>
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Jean

Jean Fraser - Re: Lane Ave where it meets Leighton

From: William Clark
To: Jean Fraser
Date: 1/2/2013 3:45 PM
Subject: Re: Lane Ave where it meets Leighton
CC: Barbara Barhydt; David Margolis-Pineo

Hi Jean,

Lane Avenue has only been accepted for 1200 feet from Forest Avenue. The remainder is a Continued Paper Street as per City Council Order # 84 from 1997. The 1200 foot distance is close to the northerly boundary line of #100 Lane Avenue.

Approximately 1700 feet (More or Less) remains unaccepted running southwesterly towards the Communications Tower Land.

To get an exact distance will require a field survey.

FYI Jarita Court is Private, and Label Avenue is a Continued Paper Street as per order #84.

Bill

>>> Jean Fraser January 2, 2013 2:36 PM >>>

Bill

Barbara and I urgently need to know the exact boundaries (near SW corner of Lot 308-A-56) between the accepted part of Lane Ave (or Lane Ave Ext) and the unaccepted part of Leighton Ave.; we need this marked on a map if at all possible.

This is in connection to our need to determine the frontage and access to the SAGA Communication land at 236 Lane where we have a FEMA site plan application for generators, fuel tank, fencing etc.

Many thanks
Jean

**Jean Fraser - RE: FEMA Emergency Radio network, 236 lane Ave, Portland
Maine (#2012-643)**

From: "Denise Brown" <Denise.Brown@kbr.com>
To: "Jean Fraser" <JF@portlandmaine.gov>
Date: 12/26/2012 1:49 PM
Subject: RE: FEMA Emergency Radio network, 236 lane Ave, Portland Maine
(#2012-643)

Jean,

Thank you for the feedback. Most of our folks are out this week also. If you don't mind, I will need to get back with you next week after I talk to the mechanical engineer about the tank and the electrical engineer about the generators. We should be able to address the stormwater concern and I will talk to FEMA about the landscaping. I know they have been hesitant at other sites to add landscaping if not absolutely required due to the use of public funds. I will bring it up and see what they say. They certainly want to be good stewards in the neighborhood.

Thanks again and have a wonderful New Year's holiday.

Denise Brown, P.E.
KBR
63 S. Royal Street, Suite 200
Mobile, AL 36602
251-450-7920
denise.brown@kbr.com

From: Jean Fraser [mailto:JF@portlandmaine.gov]
Sent: Wednesday, December 26, 2012 11:30 AM
To: Denise Brown
Subject: RE: FEMA Emergency Radio network, 236 lane Ave, Portland Maine (#2012-643)

Denise

Usually we try to get all of the reviewer comments together in one letter but the holidays are making that difficult. Therefore I am writing with a "status comment" on the reviews so that you may be able to respond now without waiting for a comprehensive letter.

1. Zoning: the Zoning Administrator is reviewing the plans with the zone line marked on them but I will not be able to advise you of her determination until next week.
2. Stormwater: The project results in additional impervious surface and therefore requires water quality treatment; please see the attached review comments for a detailed explanation of this requirement. Please note this site is located within the Capisic Brook Urban Impaired Stream Watershed.
3. Generator Sound: Please send information that shows the individual and combined sound levels of the generators when both are operating, as we need to determine if they would meet our noise standards for these zones; please confirm what sound attenuation/mitigation measures have been incorporated/assumed to be in

place re the sound information. Also please confirm when there would be testing of the emergency generators.

4. Fire Department: The above-ground fuel tank will require a state fire marshall permit and this will be a condition of any approval. We would like (as part of the site plan review) to see an analysis that shows that the location and installation details comply with NFPA 1.

5. Landscaping: I asked a few questions in my previous e-mail and have one further question- could there be some landscaping along Lane Ave to screen the facility from the surrounding residential area? I confirm that at this stage we have not set out any final requirements and will not be able to do that until next week- but we would like to better understand the constraints from your viewpoint.

You may feel a telephone conversation would be helpful; I should be in most of this week and all of next week except Jan 1 (tuesday) if you want to call.

Thank you

Jean

*Jean Fraser, Planner
City of Portland
(207) 874 8728*

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**Jean Fraser - RE: FEMA Emergency Radio network, 236 lane Ave, Portland
Maine (#2012-643)**

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Denise Brown, P.E.
KBR
63 S. Royal Street, Suite 200
Mobile, AL 36602
251-450-7920
denise.brown@kbr.com

From: Jean Fraser [mailto:JF@portlandmaine.gov]
Sent: Wednesday, December 26, 2012 11:30 AM
To: Denise Brown
Subject: RE: FEMA Emergency Radio network, 236 lane Ave, Portland Maine (#2012-643)

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Jean Fraser - 2nd reply Re: Lane Ave - #2012-643

From: Jean Fraser
To: Schmuckal, Marge
Date: 12/26/2012 11:13 AM
Subject: 2nd reply Re: Lane Ave - #2012-643
CC: Barhydt, Barbara

Marge

This is in the B4 zone and I don't see any exemption for generators re noise except for air raid sirens. I will ask then for the sound info and forward it when it is submitted.

Jean

>>> Marge Schmuckal 12/24/2012 9:20 AM >>>

Hi Jean,

As stated several times, I would prefer not to make a determination until I have ALL the facts. Having the applicant put a zone line on their site plan is a must. I am not sure at this time whether the applicant can use the 30' zone line extension or not. I will consider that allowance. If worse comes to worse, there is a "solution" in the R-3 zone as a conditional use appeal to the ZBA. But I am not telling them to do that yet.

I also mentioned previously that I would like something in writing as to when there would be testing of the emergency generators. On the I-M side there are maximum allowances for noise that is generated. Even though this is an emergency generator and there are exemptions for noise, it is helpful knowing what kind of impact there will be on neighboring residential folks.

Marge

Jean Fraser - Re: Lane Ave - #2012-643

From: Jean Fraser
To: Schmuckal, Marge
Date: 12/26/2012 10:27 AM
Subject: Re: Lane Ave - #2012-643
CC: Barhydt, Barbara
Attachments: Portland G-101 with zoning line.pdf

Marge

The applicant has sent the plan with the zone line on it and I sent that to you on 12.20.2012 and am attaching it again for your comments. This attachment is from the applicant.

I am trying to get a review letter written to them asking for other information and that is why I wanted to know about the basic zoning status. They will send the sound/noise info when I ask for it- but I am still trying to get reviewer comments so I can ask for information.

thanks
Jean

>>> Marge Schmuckal 12/24/2012 9:20 AM >>>

Hi Jean,

As stated several times, I would prefer not to make a determination until I have ALL the facts. Having the applicant put a zone line on their site plan is a must. I am not sure at this time whether the applicant can use the 30' zone line extension or not. I will consider that allowance. If worse comes to worse, there is a "solution" in the R-3 zone as a conditional use appeal to the ZBA. But I am not telling them to do that yet.

I also mentioned previously that I would like something in writing as to when there would be testing of the emergency generators. On the I-M side there are maximum allowances for noise that is generated. Even though this is an emergency generator and there are exemptions for noise, it is helpful knowing what kind of impact there will be on neighboring residential folks.

Marge

MEMORANDUM



TO: Jean Fraser, Planner
FROM: Ashley Auger, E.I.T. & David Senus, P.E.
DATE: December 20, 2012
RE: Lane Avenue Radio Tower, Level I Site Alteration Application

Woodard & Curran has reviewed the Level I Site Alteration Application for the Lane Avenue Radio Tower project located in Portland, Maine. The project consists of the addition of a transmitter module, generator module, and 6,000 gallon fuel tank for critical power generation within an improved, fenced-in area of the site.

Documents Reviewed by Woodard & Curran

- Site Plan Application and attachments dated November 21, 2012, prepared by KBR, on behalf of Darcy Bingham.
- Engineering Plans, Sheets G-001, G-101, C-101, C-102, & C-301, dated November 1, 2012, prepared by KBR, on behalf of Darcy Bingham.

Comments

- 1) A Level I Site Plan Submission is required to include a stormwater management plan and a soil erosion control plan (*City of Portland Land Use Code, Article V. Site Plan, Section 14-527(b) (12) and (13)*). Level 1 Site Alteration Plans are required to conform with City Code of Ordinances, Section 14-526(b) 3, Environmental Quality Standards; specifically the Basic, General, and Flooding standards defined in Section 5 of the Technical Manual. We offer the following comments related to each of these Standards:
 - a) Basic Standards: A plan has been provided to address erosion and sediment control, maintenance requirements, and good housekeeping practices in general accordance with Appendix A, B, & C of MaineDEP Chapter 500.
 - b) General Standards: The project proposes a small area of clearing that would be considered new "developed" area, and a gravel surface within a fenced area for the new transmitter module, generator, and fuel tank that would be considered new "impervious" area. The new equipment would also be considered new "impervious" surface. Based on the plan dimensions, we estimate approximately 2,000 sq ft of new impervious area will be generated by the project. The project must include water quality treatment measures in conformance with the General Standards to treat the new developed and impervious areas. The fenced equipment area appears to have a similar level of use as an electrical utility substation. The MaineDEP has previously provided a ruling to allow a 4" depth of ¾" to 1-½" crushed stone over 18" of clean, granular gravel (MDOT 703.06 Type A) to count as treatment under the General Standards for electrical substations. The Applicant can propose this surface as a means of achieving treatment for the project area; or they may propose to construct a stormwater best management practice in accordance with Volume III of the MaineDEP BMP Technical Design Manual.
 - c) Flooding Standard: Installation of a water quality best management practice (per the General Standards above) will decrease the rate of stormwater discharge from the project site. With the installation of a water quality BMP, the project will generate in an insignificant increase in runoff from the site, and as such, the project qualifies for a waiver from the flooding standard.

December 21, 2012

TO: Jean Fraser
Barbara Barhydt
FROM: David Margolis-Pineo – Department of Public Services
RE: Review Comments: FEMA Project – Lane Ave

The Department of Public Services has the following review comments.

1. Sheet C-102: Note 10 states that the wetlands were not delineated and were based on [very course] National Wetlands Inventory mapping. This is insufficient for site level wetlands impact evaluation. Please refer to Section 8.2 of Portland's Tech/Design Standards, which states that "All wetlands shall be delineated and mapped according to the U.S. Army Corps of Engineers Wetlands Delineation Manual (1987)." Also note that the applicant will, at the very least, need a permit by rule for construction activities within a wetland.
2. Does the level of disturbance or increase in impervious area trigger any stormwater management/treatment requirements? If so, we will need a stormwater management plan, maintenance agreement, etc.
3. The site is located within the Capisic Brook Watershed, so per our applicability statement, the project is subject to the Urban Impaired Stream Standard under Section V Stormwater Mgt Stds. Reminder: We have a Compensation Fee Utilization Plan and fund for collecting fees under this standard.

We have no further comments at this time.

*See
D Series
Comments*



PORTLAND MAINE

Planning Division
Jean Fraser, Planner

12-21-12

discussion w/ Barbara

- 1) Stormwater - OK pass on
- 2) Wetlands - discuss DM-P -
does seem that this covered in app.
- 3) Landscape - buffer along lane?
BB feels this might be better
- 4) fire - ask for analysis
- 5) generator sound - ask
for decibel levels +
mitigation measures.
- 6) zoning - clarify whether
OK for lots in R3 -
message left w/ Marge

Pull together for review (tr/dw) /
applicant on wed.

December 21, 2012

TO: Jean Fraser
Barbara Barhydt
FROM: David Margolis-Pineo – Department of Public Services
RE: Review Comments: FEMA Project – Lane Ave

The Department of Public Services has the following review comments.

1. Sheet C-102: Note 10 states that the wetlands were not delineated and were based on [very course] National Wetlands Inventory mapping. This is insufficient for site level wetlands impact evaluation. Please refer to Section 8.2 of Portland's Tech/Design Standards, which states that "All wetlands shall be delineated and mapped according to the U.S. Army Corps of Engineers Wetlands Delineation Manual (1987)." Also note that the applicant will, at the very least, need a permit by rule for construction activities within a wetland.
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We have no further comments at this time.

From: Chris Pirone
To: Fraser, Jean
Date: 12/21/2012 2:17 PM
Subject: Re: Need comments - Fwd: FEMA Emergency Radio network, 236 lane Ave, Portland
Maine (#2012-643)

Jean,

Any above ground fuel tanks need a state fire marshall permit.

The engineer/architect needs to review NFPA 1 which will guide the installation based on property line setbacks and many other requirements.

Fire Comments:

All construction and installation shall comply with 2009 NFPA 1, 2009 NFPA 101.

All construction and installation shall comply with City of Portland Fire Department Building Regulations. <http://www.portlandmaine.gov/fireprevention/fdrulesandregulations.pdf>

All construction and installation shall comply with City Code Chapter 10.
<http://www.portlandmaine.gov/citycode/chapter010.pdf>

Captain Chris Pirone
Portland Fire Department
Fire Prevention Bureau
380 Congress Street
Portland, ME 04101
(t) 207.874.8405
(f) 207.874.8410

Jean Fraser - RE: FEMA Emergency Radio network, 236 lane Ave, Portland Maine (#2012-643)

From: Jean Fraser
To: Brown, Denise
Date: 12/20/2012 4:51 PM
Subject: RE: FEMA Emergency Radio network, 236 lane Ave, Portland Maine (#2012-643)

Denise,

Thank you for the plan with the zone line on it and I have forwarded it to the Zoning Administrator along with your questions.

Please consider the other comments preliminary as reviewers have not given me firm comments.

Regarding the landscape issue, I have spoken with the City Arborist and he recommends that the fence be black vinyl chain link with black vinyl slats that provide screening (this may not be needed on all sides). I guess we also have a couple questions:

- Will the proposed generators/fuel storage tank show above the fencing?
- What is the FEMA concern about landscaping- is it a security issue?
- Will there be surveillance cameras?

Right now I am not sure re the razor/barbed wire issue- I think if there is a particular need for this that can not be achieved any other way we would try to be flexible.

I should also mention that we do consult all property owners within 500 ft and I anticipate there will be some public comment.

The most fundamental issue is the zoning question and I will get back to you as soon as I have heard back from the Zoning Administrator.

Jean

*Jean Fraser, Planner
City of Portland
(207) 874 8728*

>>> "Denise Brown" <Denise.Brown@kbr.com> 12/19/2012 5:43 PM >>>

Good afternoon Jean,

Thank you for helping us with the application review. I have attached a plan sheet with the zoning line shown. Please let me know if this is what you needed. We were unaware that a northern portion of the property was zoned differently than the rest. Will this require a zoning hearing?

What do we need to do to address the other comments? If I can get FEMA to agree to remove the barbed wire/razor wire, would we be able to proceed without landscaping?

I will certainly need your guidance on this process. Thank you for keeping us informed and please let me know what other information you may need from us.

Sincerely,
Denise

Denise Brown, P.E.
KBR
63 S. Royal Street, Suite 200
Mobile, AL 36602
251-450-7920
denise.brown@kbr.com

From: Jean Fraser [mailto:JF@portlandmaine.gov]
Sent: Wednesday, December 19, 2012 3:10 PM
To: Denise Brown; Mike Mullen - Mobile
Subject: FEMA Emergency Radio network, 236 lane Ave, Portland Maine (#2012-643)

Mike/Denise (not sure to whom this should be addressed) :

I confirm that the Level I Site Alteration Development Review application is currently under review and I am writing to ask for some additional information and highlight some of our initial concerns.

1. The proposed structure appears to be partly within a residential zone (R3) rather than in the B4 commercial zone as indicated in the letter. Please annotate one of the site plans (that shows all of the proposal) with the **R3** zone boundary and send as soon as possible (it can be sent to me by pdf)- as this is needed for our Zoning Administrator so she can complete her review of the project. The link to the City of Portland GIS Zoning map is: <http://click.portlandmaine.gov/portlandzoning/>
2. The aerial included in your submissions does not show the existing residential area near the proposal site (see Google Earth image attached); the proposed generators (one 35kW; one 75kW) and 6000 gal above ground fuel tank are about 200 feet from the nearest dwelling and there are about 14-15 homes within 500 feet of the proposed installation; therefore we do not necessarily agree with the characterization that this proposal is located in a remote area. Staff are considering the potential impacts and safety implications for the nearby residential area.
3. The proposed structure is visible from a public road and homes and if acceptable otherwise, I anticipate we would require landscaping, especially if the barbed wire/razor wire is included.

I am awaiting reviewer comments on the project and will write again with more formal and detailed comments.

Thank you.

Jean

Jean Fraser, Planner
City of Portland
874 8728

Notice: Under Maine law, documents - including e-mails - in the possession of public officials or city employees about government business may be classified as public records. There are very few exceptions. As a result, please be advised that what is written in an e-mail could be released to the public and/or the media if requested.

This e-mail, including any attached files, may contain confidential and privileged information for the sole use of the intended recipient. Any review, use, distribution, or disclosure by others is strictly prohibited. If you are not the intended recipient (or authorized to receive information for the intended recipient), please contact the sender by reply e-mail and delete all copies of this message.

Jean Fraser - FEMA Tower

From: Jeff Tarling
To: Jean Fraser
Date: 12/20/2012 3:34 PM
Subject: FEMA Tower

Hi Jean -

The "landscape" function of the proposed FEMA tower & building is problematic as it is important to have some visibility into the site for security reasons.

Wanted to see if they could use a black vinyl chain link material vs regular chain link...

I would be OK with having the black vinyl fencing which can also has some screening value or is less obtrusive.

Thanks,

Jeff Tarling

Jean Fraser - Need comments - Fwd: FEMA Emergency Radio network, 236 lane Ave, Portland Maine (#2012-643)

From: Jean Fraser
To: Margolis-Pineo, David; Pirone, Chris; Schmuckal, Marge; Tarling, Jeff
Date: 12/19/2012 4:30 PM
Subject: Need comments - Fwd: FEMA Emergency Radio network, 236 lane Ave, Portland Maine (#2012-643)
Attachments: LAne Ave near radio trans.jpg

Hi- pl see my e-mail to the applicants agent - looking at this more closely I can see some issues and need some comments asap (plans are in e-plan):

Chris: See para 2 below (underlined) which is based on my measurements- I think we need to document that if these (2 large generators and 6000 gal above ground fuel tank) are approved so close to homes, that all reasonable measures have been requested to protect the nearby residents.

Marge: the proposed structure is definitely partly in R3- what does that mean in terms of your comments?

David M-P: These generators- how loud would they be? They don't appear to be enclosed. Even in an emergency I think we need to avoid unbearable levels of noise for the residents- can you offer some guidance on this?

Jeff: they are asking for a waiver to add razor wire or barbed wire to the chain link fence and not put in vinyl slats; also asking for a waiver from any landscaping. So I need detailed comments on this.

I guess we need to recognize this is for FEMA and is to keep a radio station running to alert and warn people in situations of war, terrorist attack or natural disaster. I am not sure why they did not locate these on the side of the existing building toward the radio towers to maximize distance away from residential. The designers/engineers are based in Alabama.

thanks
Jean

>>> Jean Fraser 12/19/2012 4:10 PM >>>
Mike/Denise (not sure to whom this should be addressed) :

I confirm that the Level I Site Alteration Development Review application is currently under review and I am writing to ask for some additional information and highlight some of our initial concerns.

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I am awaiting reviewer comments on the project and will write again with more formal and detailed comments.

Thank you.

Jean

*Jean Fraser, Planner
City of Portland
874 8728*

MEMORANDUM



TO: Jean Fraser, Planner
FROM: Ashley Auger, E.I.T. & David Senus, P.E.
DATE: December 20, 2012
RE: Lane Avenue Radio Tower, Level I Site Alteration Application

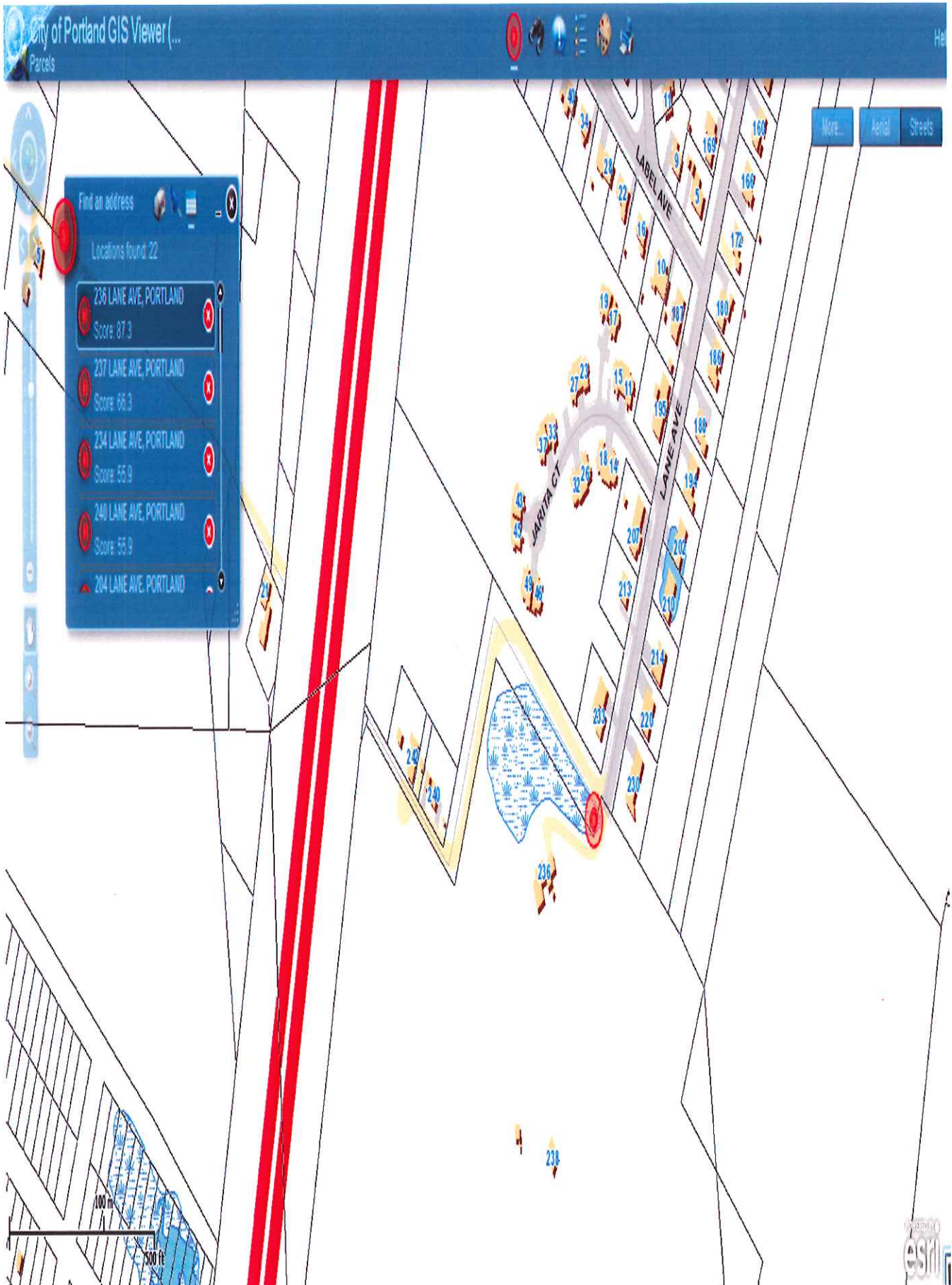
Woodard & Curran has reviewed the Level I Site Alteration Application for the Lane Avenue Radio Tower project located in Portland, Maine. The project consists of the addition of a transmitter module, generator module, and 6,000 gallon fuel tank for critical power generation within an improved, fenced-in area of the site.

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- 1) A Level I Site Plan Submission is required to include a stormwater management plan and a soil erosion control plan (*City of Portland Land Use Code, Article V. Site Plan, Section 14-527(b) (12) and (13)*). Level 1 Site Alteration Plans are required to conform with City Code of Ordinances, Section 14-526(b) 3, Environmental Quality Standards; specifically the Basic, General, and Flooding standards defined in Section 5 of the Technical Manual. We offer the following comments related to each of these Standards:
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 - c) Flooding Standard: Installation of a water quality best management practice (per the General Standards above) will decrease the rate of stormwater discharge from the project site. With the installation of a water quality BMP, the project will generate in an insignificant increase in runoff from the site, and as such, the project qualifies for a waiver from the flooding standard.



Level I Site Alteration

MINOR SITE PLAN DEVELOPMENT REVIEW

Final review and sign off

PROJECT: FEMA ^{tank + gens} lane ^{Avp} (saga land) Application #: 2012-643
 Date of completion: Feb 1, 2013.

Review item	Status	Who signed off on this
Evidence of Right, Title & Interest	awaited; D&W-C advised what was req. in rev. ltr 1-4-13	
MDEP/MP etc issues		
Additional info provided as requested:	Yes incl. zone lines, fire code & sound levels.	✓
Access and parking layout (including contributions)	No change + no traffic	N/A.
Bicycle parking		N/A
Stormwater Management	Renewed + comments addressed	D Seneca. 1-30-13 needs word re fee
Other engineering issues	DMP raised issues which have been addressed.	<u>not abs. nec.</u>
Zoning	Project straddles zone lines but OK if 14-51 applied	need final signoff MS
Fire Department		need final signoff CR agreed at 2-6-13 review
Building materials etc	only tanks + gen + fencing.	N/A
Landscape	Review comments have been addressed.	Jeff Tarlingo 1-31-13.
Two trees/lot; two foundation plantings per lot	—	N/A
Lighting	utility installation	N/A
Letter of financial capability	Fed. govt funding	N/A.
Capacity letter water		N/A
Capacity letter sewer	None	N/A
Sidewalk/Curbing	Does not front a street	N/A
Dumpster location and enclosure/waste collection	Not needed.	N/A.
Other issues Conditions req'd	① Stormwater qual fee. ② Re sound from gens? monitoring? times for testing ③ Req for State fire marshal permit + any others as apply	

draft approval letter in 'O' drive 2-1-13 awaiting RTI + last reviewer signoffs.

Jean Fraser - draft approval letter FEMA equipment, Lane Ave

From: Jean Fraser
To: Margolis-Pineo, David; Pirone, Chris; Schmuckal, Marge
Date: 2/5/2013 11:16 AM
Subject: draft approval letter FEMA equipment, Lane Ave
Attachments: draft app ltr FEMA.docx; Appl. response 1.24.2013re FEMA Emer#2012-643).pdf; WGAN Site Alteration Review response to comments.pdf

Hi

I would like to issue the attached draft approval letter and have all the other reviewer signoffs - so I need your sign off on this please- esp re the conditions I have included which relate to noise and fire marshall.

David- your december comments appear to be covered by David Senus sign off. UI won't allow me to put you both into that system at the moment (we will get that fixed).

The latest plans came in on Jan 24th- I attach the e-mail and cover letter for reference (which includes noise info) - and the plans are in e-plan.

thanks

Jean

Jean Fraser - Copy of Review Ltr- FEMA equip installation 236 Lane Ave

From: Jean Fraser
To: DSenus@woodardcurran.com; Margolis-Pineo, David; Schmuckal, Marge; Ta...
Date: 1/4/2013 4:05 PM
Subject: Copy of Review Ltr- FEMA equip installation 236 Lane Ave
CC: Barhydt, Barbara
Attachments: Review Ltr 1.4.2012 FEMA Equip. Install. WGAN Trans site 236 Lane Ave Portland ME.pdf

Thanks to all of you for your input into this; I anticipate some new submissions and we will need to finalize the conditions of approval.

Jeff- the north frontage is some 250-300 feet with houses on the other side along most of that so maybe we need to revisit the tree screening once we get a response. You will see I indicated we might want more....

Jean

Jean Fraser - Review Letter RE: FEMA Emer. Radio network, 236 Lane Ave, Portland Maine (#2012-643)

From: Jean Fraser
To: Brown, Denise
Date: 1/4/2013 3:41 PM
Subject: Review Letter RE: FEMA Emer. Radio network, 236 Lane Ave, Portland Maine (#2012-643)
CC: darcy.bingham@fema.gov
Attachments: Review Ltr 1.4.2012 FEMA Equip. Install. WGAN Trans site 236 Lane Ave Portland ME.pdf

Hello Denise,

I attach the "formal" review letter regarding this project which contains our site plan review comments - which were finalized following consideration of the additional information you recently sent.

Paper copies will go out in the mail on Monday.

Please note that any revised plans and further information should be sent by e-mail to me in the first instance. Ideally they would be in one bundle with a cover letter, but if time is of the essence then send piecemeal with cover e-mails (although I think we need to review the landscape and sound info together).

I am in the office all next week and can send you other info (eg extracts from the Ordinance) if you need them or otherwise follow up.

Thank you
Jean

*Jean Fraser, Planner
City of Portland, Maine
(207) 874 8728*

Jean Fraser - Re: re review of FEMA Emer. Radio network, 236 Lane Ave, Portland Maine (#2012-643)

From: Jeff Tarling
To: Jean Fraser
Date: 1/31/2013 3:07 PM
Subject: Re: re review of FEMA Emer. Radio network, 236 Lane Ave, Portland Maine (#2012-643)

Hi Jean -

The proposed FEMA radio project is improved with the recent landscape and fencing treatment, these features reduce the impact to the neighborhood.

I recommend approval with these changes.

Jeff Tarling

MEMORANDUM



TO: Jean Fraser, Planner
FROM: David Senus, P.E.
DATE: January 30, 2013
RE: Lane Avenue Radio Tower, Level I Site Alteration Application

Woodard & Curran has reviewed the Response to Comments on the Level I Site Alteration Application for the Lane Avenue Radio Tower project located in Portland, Maine. The project consists of the addition of a transmitter module, generator module, and 6,000 gallon fuel tank for critical power generation within an improved, fenced-in area of the site.

Documents Reviewed by Woodard & Curran

- Response to Comments Letter and attachments dated January 24, 2013, prepared by KBR, on behalf of Darcy Bingham.
- Engineering Plans, Sheets G-001, G-101, C-101 through C-103, & C-301, revised January 16, 2013, prepared by KBR, on behalf of Darcy Bingham.

Comments

- 1) The Applicant's response to comments letter and revised plan submittal adequately addresses the comments contained in Woodard & Curran's memo dated January 3, 2013

Jean Fraser - RE: Review Letter RE: FEMA Emer. Radio network, 236 Lane Ave, Portland Maine (#2012-643)

From: Jean Fraser
To: Brown, Denise
Date: 1/30/2013 4:00 PM
Subject: RE: Review Letter RE: FEMA Emer. Radio network, 236 Lane Ave, Portland Maine (#2012-643)

Denise

The revised proposals look good and I am just waiting for the technical reviewers to send me their final "sign off". I have one question and one comment.

Question: could you help me locate where- on the plans- the details of the white vinyl fencing and the slats in the black chain link fencing are located?

Comment: I note the testing of the generators is indicated to be for 1 hour (maximum). In our experience with other generators here, the tests are 10 mins or so. So just checking that 1 hour is really likely. We would like to place a condition on the testing that it be weekdays only between 7am and 9pm- would that be OK? Also there may be a sound monitoring condition- which is because we have found that the manufacturer's predicted sound is often not what happens in reality.

thank you
Jean

*Jean Fraser, Planner
City of Portland
(207) 874 8728*

*Fraser
Rev
Rev
doc.*

Jean Fraser - Fwd: RE: Review Letter RE: FEMA Emer. Radio network, 236 Lane Ave, Portland Maine (#2012-643)

From: Jean Fraser
To: DSenus@woodardcurran.com; Margolis-Pineo, David; Pirone, Chris; Tarli...
Date: 1/25/2013 4:00 PM
Subject: Fwd: RE: Review Letter RE: FEMA Emer. Radio network, 236 Lane Ave, Portland Maine (#2012-643)
CC: Barhydt, Barbara; Schmuckal, Marge
Attachments: WGAN Revised drawings 01-23-13.pdf; WGAN Site Alteration Review response to comments.pdf; Review Ltr 1.4.2012 FEMA Equip. Install. WGAN Trans site 236 Lane Ave Portland ME.pdf

Hi

I will be uploading these into e-plan but I wanted to make you aware that they had been submitted and now need to be reviewed. This will be on the Dev Rev agenda for Jan 30th.
 I attach (3rd attachment to this) the review letter that she has responded to, for reference (I also sent it before).

thanks
 Jean

>>> "Denise Brown" <Denise.Brown@kbr.com> 1/24/2013 10:49 AM >>>

Good morning Jean,

I'm sorry it has taken me so long to get this to you! We have addressed all of the comments except the first one - the letter from the property owner. We are still waiting on the response from Saga Communications but FEMA sent them a reminder on Tuesday so I'm hopeful we will have that soon. I wanted to address the other comments so we might move forward on those areas.

The 80 kW generator (located east of the existing building) has not yet been ordered but we purchase these from only three vendors so I included noise data on all three selections. The enclosures for these models have similar sound levels. The small 35 kW generator is housed within a HEMP-shielded concrete module in the main project area.

Please let me know what else you may need from me. The drawings attached are the new and revised drawings only. I did not resend the drawings which were not affected by the comments. If you would like me to send a whole new set, I can certainly do so on a CD.

Thanks for all your help on this! I really appreciate it.

Denise Brown, P.E.
KBR
 63 S. Royal Street, Suite 200
 Mobile, AL 36602
 251-450-7920
denise.brown@kbr.com

From: Jean Fraser [mailto:JF@portlandmaine.gov]
Sent: Friday, January 04, 2013 2:41 PM
To: Denise Brown
Cc: darcy.bingham@fema.gov
Subject: Review Letter RE: FEMA Emer. Radio network, 236 Lane Ave, Portland Maine (#2012-643)

Hello Denise,

I attach the "formal" review letter regarding this project which contains our site plan review comments - which were finalized following consideration of the additional information you recently sent.

Paper copies will go out in the mail on Monday.

Please note that any revised plans and further information should be sent by e-mail to me in the first instance. Ideally they would be in one bundle with a cover letter, but if time is of the essence then send piecemeal with cover e-mails (although I think we need to review the landscape and sound info together).

I am in the office all next week and can send you other info (eg extracts from the Ordinance) if you need them or otherwise follow up.

Thank you
Jean

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Jean Fraser - Fwd: RE: Review Letter RE: FEMA Emer. Radio network, 236 Lane Ave, Portland Maine (#2012-643)

From: Jean Fraser
To: DSenus@woodardcurran.com; Margolis-Pineo, David; Pirone, Chris; Tarli...
Date: 1/25/2013 4:00 PM
Subject: Fwd: RE: Review Letter RE: FEMA Emer. Radio network, 236 Lane Ave, Portland Maine (#2012-643)
CC: Barhydt, Barbara; Schmuckal, Marge
Attachments: WGAN Revised drawings 01-23-13.pdf; WGAN Site Alteration Review response to comments.pdf; Review Ltr 1.4.2012 FEMA Equip. Install. WGAN Trans site 236 Lane Ave Portland ME.pdf

Hi

I will be uploading these into e-plan but I wanted to make you aware that they had been submitted and now need to be reviewed. This will be on the Dev Rev agenda for Jan 30th.
I attach (3rd attachment to this) the review letter that she has responded to, for reference (I also sent it before).

thanks
Jean

>>> "Denise Brown" <Denise.Brown@kbr.com> 1/24/2013 10:49 AM >>>

Good morning Jean,

I'm sorry it has taken me so long to get this to you! We have addressed all of the comments except the first one - the letter from the property owner. We are still waiting on the response from Saga Communications but FEMA sent them a reminder on Tuesday so I'm hopeful we will have that soon. I wanted to address the other comments so we might move forward on those areas.

The 80 kW generator (located east of the existing building) has not yet been ordered but we purchase these from only three vendors so I included noise data on all three selections. The enclosures for these models have similar sound levels. The small 35 kW generator is housed within a HEMP-shielded concrete module in the main project area.

Please let me know what else you may need from me. The drawings attached are the new and revised drawings only. I did not resend the drawings which were not affected by the comments. If you would like me to send a whole new set, I can certainly do so on a CD.

Thanks for all your help on this! I really appreciate it.

Denise Brown, P.E.
KBR
63 S. Royal Street, Suite 200
Mobile, AL 36602
251-450-7920
denise.brown@kbr.com

From: Jean Fraser [mailto:JF@portlandmaine.gov]
Sent: Friday, January 04, 2013 2:41 PM
To: Denise Brown
Cc: darcy.bingham@fema.gov
Subject: Review Letter RE: FEMA Emer. Radio network, 236 Lane Ave, Portland Maine (#2012-643)

Hello Denise,

I attach the "formal" review letter regarding this project which contains our site plan review comments - which were finalized following consideration of the additional information you recently sent.

Paper copies will go out in the mail on Monday.

Please note that any revised plans and further information should be sent by e-mail to me in the first instance. Ideally they would be in one bundle with a cover letter, but if time is of the essence then send piecemeal with cover e-mails (although I think we need to review the landscape and sound info together).

I am in the office all next week and can send you other info (eg extracts from the Ordinance) if you need them or otherwise follow up.

Thank you
Jean

*Jean Fraser, Planner
City of Portland, Maine
(207) 874 8728*

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January 24, 2013

Ms. Jean Fraser
Planning & Urban Development, Planning Division Office
Portland City Hall
389 Congress Street
Portland, ME 04101

RE: WGAN Transmitter Site
236 Lane Avenue
Portland, ME 04103
FEMA Emergency Radio Network Project
Level 1 Site Alteration Application 2012-643

Dear Ms. Fraser:

We have received your letter dated January 4, 2013 in response to our Level I Site Alteration Site Plan Review for the FEMA project at the WGAN transmitter site. Below are the comments received and our response to each:

1. Right, Title and Interest

Comment: We require evidence that the applicant has rights to install and maintain the equipment as well as the fencing and landscaping as finally proposed. Therefore, the owner (Saga Communication of New England) will be requested to provide a letter confirming agreement. Since the loan agreement is only for ten years, a condition of any approval will be that if the license/agreement should lapse/not be renewed, the Planning Authority must be notified and can review the matter again at that time.

Response: We have not yet received the letter from Saga Communication but will forward it as soon as possible. We realize this is an outstanding item and the final approval will not be granted until the letter has been received and reviewed by the City.

2. Zoning

Comment: The proposals are located within both the B4 Commercial zone and the R-3 residential zone and have been reviewed by the City's Zoning Administrator. She has determined that there is approximately 20 feet of the project development located within the R-3 zone. However, the City's Ordinance Section 14-51 allows a 30 foot expansion of the less restricted zone (B-4) into the most restrictive zone (R-3). It appears that there is approximately 178 foot of road frontage along Lane Avenue, and therefore the applicant has the ability to adjust the B-4 zone line into the R-3 zone without any further zoning review as such an extension is allowed by the Ordinance if the conditions are met. The Zoning Administrator believes the conditions are being met. We request a revised plan showing a dotted line of the 30-foot extension (of B-4 into R-3) for our records.



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Response: Please see the attached revised Site Plan G-101, showing the 30 foot extension of B-4 into R-3.

3. Stormwater Management (Peer Engineering Reviewer):

Comment 3A: *Basic Standards:* A plan has been provided to address erosion and sediment control, maintenance requirements and good housekeeping practices in general accordance with Appendix A, B, & C of MaineDEP Chapter 500.

Response 3A: No further action appears to be required.

Comment 3B: *General Standards:* The project proposes a small area of clearing that would be considered new developed area and a gravel surface within a fenced area for the new transmitter module, generator and fuel tank that would be considered new impervious area. The new equipment would also be considered new impervious surface. Based on the plan dimensions, we estimate approx. 2000 sq ft of new impervious area will be generated by the project. The project must include water quality treatment measures in conformance with the General Standards to treat the new developed and impervious areas. The fenced equipment area appears to have a similar level of use as an electrical utility substation. The MaineDEP has previously provided a ruling to allow a 4" depth of ¾" to 1-1/2" crushed stone over 18" of clean, granular gravel (MDOT 703.06 Type A) to count as treatment under the General Standards for electrical substations. The Applicant can propose this surface as a means of achieving treatment for the project area; or they may propose to construct a stormwater best management practice in accordance with Volume III of the MaineDEP BMP Technical Design Manual.

Response 3B: The drawings have been revised to include the crushed stone over clean, granular gravel as described above. Please see the attached revised drawings: Stormwater Management Plan C-101, Civil Plan C-102, Civil Sections C-301, and references on structural drawings: S-101, S-301, and S-501.

Comment 3C: *Flooding Standard:* Installation of a water quality best management practice (per the General Standards above) will decrease the rate of stormwater discharge from the project site. With the installation of a water quality BMP, the project will generate an insignificant increase in runoff from the site, and as such, the project qualifies for a waiver from the flooding standard.

Response 3C: No further action appears to be required.

Comment 3D: *Urban Impaired Stream (UIS) Standard:* the project is located within the Capisic Brook Watershed, which is identified as an UIS by the MaineDEP. To meet the UIS Standard, in addition to providing storm water quality treatment required under the "General Standards", the Applicant must either pay a compensation fee to the City of Portland OR mitigate project impacts by treating, reducing or eliminating an off-site or on-site pre-development impervious stormwater source. Section 5 of the City's Technical Manual includes MaineDEP Chapter 500 guidance on how to meet the UIS Standard (Section 5, III(6)). If the Applicant chooses to pay a compensation fee to meet the UIS Standard, the fee would be calculated by multiplying any new



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Non-roof Impervious Area (in acres) by \$5000, multiplying any new Roof Area (in acres) by \$2000 and multiplying an new Landscaped Area (in acres) by \$1000, and adding these three values together.

Response 3D: Will meet UIS Standard through payment of compensation fee to the City of Portland.

Non-Roof Impervious Area (Acres)(\$5,000) = (0.05 ac)(\$5,000) = \$250

Roof Area (Acres)(\$2,000) = (0.01 ac)(\$2,000) = \$20

Landscape Area (Acres)(\$1,000) = (0.04 ac)(\$1,000) = \$40

Total Compensation Fee = \$310

If this meets with your approval, we will forward a check to the City of Portland.

4. Landscape:

Comment: *The new installation will be very visible from nearby homes and would require the following to provide some screening:*

Comment 4A - *Black vinyl chain link fencing for all of the fencing around the fuel tank, larger generator and transmitter unit, with black vinyl slats added on the north side and no barbed wire or razor wire;*

Response 4A: Please see the revised Sign and Fence Details, S-502, showing the black vinyl coated chain link fence with black vinyl slats around the fuel tank, smaller 35kW generator module and transmitter module. The barbed wire and razor wire have also been removed.

Comment 4B: *Planting along the Lane Avenue (north) frontage/property line using 'Techny' Arborvitae 4-5' high, spaced 6' on center. The number required to be effective will depend on how near to the facility they are planted, with maybe 10 required if near the installation and more needed if the planting is closer to Lane Avenue;*

Response 4B: Please see the new drawing C-103 Landscaping Plan, showing the addition of approximately 30 Techny Arborvitae along the northern fence line of the new project area and continuing along the northern side of the driveway.

Comment 4C: *Please enclose the site generator (solid white fencing?) that is located next to the garage.*

Response 4C: Please see the revised Site Generator Foundation Plan, S-102, showing the new site generator area screened by an 8' high white vinyl privacy fence.

5. Sound Impacts from Generators:

Comment: *Please send information that shows the individual and combined projected sound levels (in dBA) of the generators when both are operating, with mufflers or other mitigation (ie landscaping) as proposed (please clarify what mufflers or mitigation is proposed for each of the projected dBAs). The sound levels must not exceed the maximum noise allowances of the B-4*



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zone. In addition, any final approval will include a condition limiting the times for testing of the generators.

Response: According to the City of Portland Land Use Ordinance, the maximum sound level for the B-4 zone shall not exceed 65 dBA between 7:00 a.m. until 9:00 p.m. and 60 dBA between 9:00 p.m. and 7:00 a.m. The smaller 35kW generator is housed inside a pre-cast concrete structure (module) with 6-5/8" thick walls consisting of concrete, insulation and plywood. This generator will not run concurrently with the larger 80kW generator, located east of the existing building.

The 80 kW generator has not been purchased but is being specified with an insulated sound enclosure. The generator will be purchased from one of three major suppliers - Caterpillar, Kohler, and Cummings. These companies have listed sound levels using the sound enclosure under full load ranging between 67 and 73 dB(A) at a distance of 23 feet (see attached). Conservatively assuming the highest listed sound level (73 dB(A)), and assuming that the existing building wall will increase the sound level by 50%, the sound level at the nearest property line 120 feet away was calculated to be at or below the 60 dB(A) limit. The 8-foot high privacy fence surrounding the generator area will further reduce the sound level.

The 80 kW generator will be tested once a week for 1 hour (maximum) and be controlled by the site engineer. This generator will be operated only during a power outage. The 35 kW generator will be tested once a month for 1 hour (maximum) and be controlled by FEMA's contractor. This generator will only be operated during a critical event (situations of war, terrorist attack or natural disaster) which would render the larger generator inoperable.

6. Fire Department:

Comment: We request an analysis that shows that the location and installation details comply with NFPA 1. The above-ground fuel tank will require a state fire marshal permit and this will be a condition of any approval.

Response: The tank installation and location is in accordance with the State of Maine, 16-Department of Public Safety, 219-Office of State Fire Marshal, Chapter 34-Rules and Regulations for Flammable and Combustible Liquids. Chapter 34 incorporates, by reference, NFPA 30, 2008 Edition *Standards for Flammable and Combustible Liquids*. Where applicable, the State of Maine's exclusions to NFPA 30 were adhered to. Chapter 66 *Flammable and Combustible Liquids* of NFPA 1 is essentially NFPA 30. By complying with the State of Maine requirements, we are also in compliance with NFPA 1 Chapter 66.

The proposed 6000-gallon aboveground diesel fuel storage tank is a double-walled steel tank designed, constructed, tested, and installed in accordance with: UL 2085 Standard, "Protected Aboveground Tanks for Flammable and Combustible Liquids", NFPA 30, "Flammable and Combustible Liquids Code", and State of Maine, 16-Department of Public Safety, 219-Office of State Fire Marshal, Chapter 34-Rules and Regulations for Flammable and Combustible Liquids.



Maine's Chapter 34 has a more stringent requirement than NFPA 30 with regard to the location of the aboveground storage tank. Maine requires that this protected tank be 12.5 feet from the property line and 12.5 feet from any public way or nearest important building. NFPA 30 requires these distances to be 7.5 feet and 2.5 feet, respectively. This proposed storage tank is over 75 feet from the property line and approximately 20 feet from the nearest important building (the existing transmitter building).

This tank also meets the requirements set forth in the above referenced documents such as:

1. The capacity does not exceed 12,000 gallons; therefore the double wall construction provides the required secondary containment.
2. Steel support saddles are less than 12 inches at the lowest point.
3. A normal vent, terminating 12 feet above ground level, is provided to prevent over-pressure or vacuum from damaging the tank when it is being filled or product is being withdrawn.
4. Emergency venting is provided for the tank and separately for the enclosed interstitial space.
5. All piping is liquid tight.
6. All piping connections to the tank are made above the normal liquid level.
7. Aboveground piping is substantially supported. Underground piping is in compliance with Maine Department of Environmental Protection Regulations.
8. Tank is located inside a secure fenced area, separating it from being subject to vehicular impact.
9. All electrical wiring and equipment is in accordance with NFPA 70.
10. Ladder and platform are constructed of non-combustible materials – galvanized steel.
11. A mechanism is provided to prevent overfilling by sounding an alarm when the liquid level in the tank reaches 90% of capacity band and by automatically stopping the delivery of liquid to the tank when the level in the tank reaches 95% of capacity. In no case will these provisions restrict or interfere with the proper functioning of the normal vent or the emergency vent.
12. Tank and area will have proper signage showing the product stored in the tank, and the appropriate No Smoking signs.
13. A mechanism is provided to prevent the release of liquid from the tank by siphon flow.
14. A mechanism is provided for determining the level of liquid in the tank, which is accessible to the delivery operator.
15. Accessibility to perform a complete visual inspection of the exterior surface of the tank for cracks, corrosion, or other defects.
16. The secondary containment is designed to withstand the hydrostatic head resulting from a leak from the primary tank of the maximum amount of liquid that can be stored in the primary tank.
17. A Federal EPA Spill Prevention, Control and Countermeasure Plan (SPCC) will be developed for this facility.

Additionally, this system will have the following features:

1. Capability to monitor the interstitial space for leaks on a 24-hour basis.



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2. Capability to monitor the level in the tank on a 24-hour basis.

We do understand a State Fire Marshal permit will be required for this project.

Conclusion:

The following drawings and data have been included with this letter for your review.

<u>Drawing No.</u>	<u>Title</u>
G-101 Rev 1	Site Plan
C-101 Rev 1	Stormwater Management Plan
C-102 Rev 1	Civil Plan
C-103 Rev 0	Landscaping Plan
C-301 Rev 1	Civil Sections
S-101 Rev 1	Foundation and Fence Plan
S-102 Rev 1	Site Generator Foundation Plan
S-301 Rev 1	Miscellaneous Sections
S-501 Rev 1	Miscellaneous Details
S-502 Rev 1	Sign and Fence Details

Generator Noise data from Cummins, Kohler and Caterpillar

Please let me know if there are any comments or questions on our submittal or if you need additional information. The responses for the generators and storage tank questions were supplied by our mechanical and electrical engineers. If you would like them to correspond directly with any reviewers, please just let me know.

I truly appreciate your assistance with the permitting process. You may reach me at the contact information shown below.

Sincerely,

Denise Brown, PE
KBR
251-450-7920
denise.brown@kbr.com.

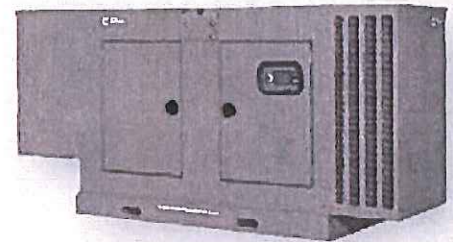
Choose from weather protective enclosure or three levels of sound attenuation:

Sound levels (dB(A))*				
kW	Model	Weather-protective	Level I	Level II
Diesel				
10	DSKAA	78	68	65
16	DSKAB	81	69	66
20	DSKBA	80	70	67
25	DSKFA	82	72	69
35	DGBB	82	71	63
35	DGGD	81	72	66
40	DGBC	82	72	63
40	DGHD	79	71	64
50	DGCA	83	72	68
50	DGHE	79	70	65
60	DGCB	84	73	67
60	DSFAD	87	79	71
80	DGCG	84	76	67
80	DSFAE	87	82	72
100	DGDB	86	77	70
100	DSGAA*	87	-	73
100	DSHAF	95	88	78
125	DGDK	86	80	71
125	DSGAB*	87	-	74
125	DSHAE	95	88	78
150	DGFA	89	77	72
150	DSGAC*	88	-	75
150	DSHAA	95	88	78
175	DGFB	90	78	72
175	DSHAB	95	88	78
200	DGFC	91	80	74
200	DSHAC	95	88	78
230	DGFS	91	81	75
230	DSHAD	96	89	78
250	DQDAA	90	86	71
275	DQDAB	89	86	71
275	DQHAA	86	85	74
300	DFCB	86	84	71
300	DQDAC	89	86	71
300	DQHAB	89	88	76
350	DFCC	87	85	72
350	DFEG	85	83	72
400	DFCE	89	85	73
400	DFEG	89	85	73
450	DFEJ	87	84	73
500	DFEK	88	85	76
600	DFGB	85	78	74
600	DQCA	87	79	74
750	DFGE	87	80	75
750	DFHA	91	81	77
750	DQCB	87	79	74
750	DQFAA	89	79	75
800	DFHB	91	81	77
800	DQCC	87	79	74
800	DQFAB	89	79	75
900	DFHC	93	83	78
900	DQFAC	88	80	76
1000	DFHD	90	80	76
1000	DQFAD	90	80	76

Sound levels (dB(A))*				
kW	Model	Weather-protective	Level I	Level II
Spark-ignited				
20	GGMA	77	N/A	66
25	GGMB	78	N/A	66
30	GGMC	79	N/A	67
35	GGFD	80	73	65
42/47	GGFE	83	73	66
60	GGHE	86	77	68
70/75	GGHF	87	77	69
85	GGHG	85	79	75
100	GGHH	86	80	76
125	GGLA	85	79	75
150	GGLB	85	79	75

* Also available Level III

100 kW	DSGAA	68 dB(A)
125 kW	DSGAB	69 dB(A)
150 kW	DSGAC	70 dB(A)

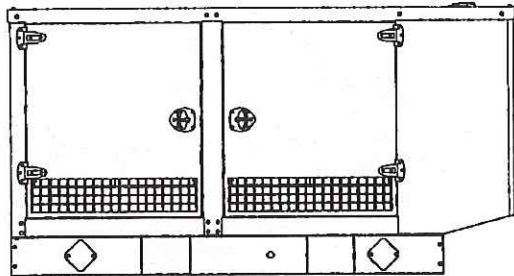


Diesel generator sets from 100 to 150 kW (models **DSGAA**, **DSGAB**, **DSGAC**) are available in Level III sound attenuation.

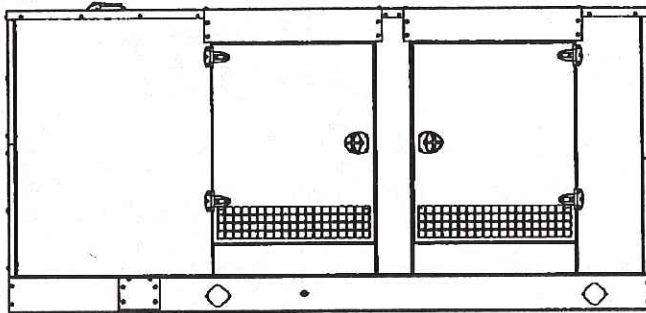
Shown: 100 kW Tier 3 diesel generator set (model DSGAA).

* Full load at 7 meters, steel enclosures

www.cumminspower.com



25-60 kW Enclosure



80-150 kW Enclosure

Applicable to the following:

- 25-100REZG
- 50-150REZGB
- 80/100REZGD and 80/100RZGD
- 125/150REZGC and 125/150RZGC

Weather Enclosure Standard Features

- Internal-mounted critical silencer and flexible exhaust connector.
- Skid-mounted, steel construction with hinged doors.
- Fade-, scratch-, and corrosion-resistant Kohler® cream beige powder-baked finish.
- Lockable, flush-mounted door latches.
- Vertical air inlet and outlet discharge to redirect air and reduce noise.
- High wind bracing, 241 kph (150 mph). Available on all models, except 80/100REZGB with steel enclosure and 80/100RZGB with steel enclosure.

Sound Enclosure Standard Features

- Includes all of the weather enclosure features with the addition of acoustic insulation material.
- Skid-mounted, steel or aluminum construction with hinged doors. Aluminum enclosures are recommended for high humidity and/or high salt/coastal regions.
- Acoustic insulation that meets UL 94 HF1 flammability classification and repels moisture absorption.
- Sound attenuated enclosure that uses up to 51 mm (2 in.) of acoustic insulation, acoustic-lined air inlet hoods, and acoustic-lined air discharge hood.

Weather and Sound Enclosure Specifications

Model	Max. Dimensions, mm (in.)			Weight, kg (lb.) *			Sound Enclosure, Sound Pressure at 7 m (23 ft.), dB(A) at 60 Hz, Full Load
	Length	Width	Height	Steel Weather Enclosure	Steel Sound Enclosure	Aluminum Sound Enclosure	
25REZG	2585(101.8)	1078 (42.4)	1513 (59.6)	855 (1880)	880 (1891)	768 (1689)	74
30REZG				919 (2021)	924 (2032)	832 (1830)	74
40REZG				977 (2149)	982 (2180)	890 (1958)	69
45REZG				1040 (2288)	1045 (2299)	953 (2096)	69
50REZGB				1122 (2475)	1127 (2486)	1035 (2283)	67
60REZGB				1122 (2475)	1127 (2486)	1035 (2283)	68
80REZGD/RZGD	3528(138.8)	1153 (45.4)	1694 (66.7)	1454 (3205)	1465 (3228)	1403 (3092)	71
100REZG	3508(138.0)	1156 (45.5)	1696 (66.8)	1715 (3781)	1725 (3803)	1539 (3393)	71
100REZGD/RZGD	3528(138.8)	1153 (45.4)	1694 (66.7)	1557 (3434)	1568 (3457)	1508 (3321)	71
125REZGB	3508(138.0)	1156 (45.5)	1696 (66.8)	1741 (3837)	1751 (3859)	1565 (3449)	71
125REZGC/RZGC	3528(138.8)	1153 (45.4)	1724 (67.9)	1739 (3834)	1758 (3876)	1592 (3509)	73
150REZGB	3508(138.0)	1156 (45.5)	1696 (66.8)	1856 (4091)	1866 (4113)	1680 (3703)	75
150REZGC/RZGC	3528(138.8)	1153 (45.4)	1696 (66.8)	1877 (4138)	1897 (4183)	1730 (3813)	73

80kW

* Weight includes the generator set (wet), enclosure, and silencer. The generator set weight represents using the largest alternator option. Note: Refer to the respective ADV drawings for details. Refer to TIB-114 for complete generator set sound data.

ENCLOSURES



ENCLOSURE SOUND LEVELS

Generator Set Model	1800 rpm (60 Hz)					
	15 m (50 ft)		7 m (23 ft)		1 m (3 ft)	
	No Load (dBA)	Full Load (dBA)	No Load (dBA)	Full Load (dBA)	No Load (dBA)	Full Load (dBA)
D25-8	57.3	59.6	63.3	65.6	73.3	76.0
D25-8S	57.3	59.6	63.3	65.6	73.3	76.0
D30-10	57.4	57.7	63.4	63.7	74.0	74.6
D30-8S	57.4	57.7	63.4	63.7	74.0	74.6
D40-6	63.5	63.8	69.5	69.8	79.2	79.6
D40-6S	63.6	64.0	69.6	70.0	79.3	79.9
D50-6	63.8	64.2	69.8	70.2	79.5	80.2
D50-6S	63.9	64.3	69.9	70.3	79.7	80.5
D60-6	65.5	66.4	71.5	72.4	81.7	82.4
D60-8S	65.7	66.7	71.7	72.7	81.9	82.6
80kW → D80-6	65.3	67	71.3	73	82.7	83.4
D80-2S	65.3	67	71.3	73	82.7	83.4
D100-6	65.3	67.7	71.3	73.7	82.7	83.9
D100-6S	65.3	67.7	71.3	73.7	82.7	83.9

The sound pressure level data shown is quoted as free field and is for guidance only. Actual levels produced may vary according to site conditions.

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