



# COMMUNITY DEVELOPMENT DEPARTMENT

45175 Ten Mile Road  
Novi, MI 48375  
(248) 347-0415 Phone  
(248) 735-5600 Facsimile  
[www.cityofnovi.org](http://www.cityofnovi.org)

## ZONING BOARD OF APPEALS STAFF REPORT

FOR: City of Novi Zoning Board of Appeals

ZONING BOARD APPEALS DATE: March 14, 2017

REGARDING: 41935 Twelve Mile Road (PZ17-0004)

BY: Larry Butler, Deputy Director Community Development

### I. GENERAL INFORMATION:

**Applicant**

C&S Twelve Mile Center, LLC

**Variance Type**

DIMENSIONAL VARIANCE

**Property Characteristics**

Zoning District:	Office Service Technology
Location:	south of Twelve Mile Road and west of Meadowbrook Road
Parcel #:	50-22-14-200-025

**Request**

The applicant is requesting a variance from the CITY OF NOVI ZONING ORDINANCE Section 4.19 to allow for the installation of an accessory use structure in the side yard. This property is zoned Office Service Technology (OST).

### II. STAFF COMMENTS:

*Applicants request is a side yard variance for accessory structure within 6 feet of property line 6 feet is allowed.*

### III. RECOMMENDATION:

The Zoning Board of Appeals may take one of the following actions:

1. I move that we ***grant*** the variance in Case No. **PZ17-0004**, sought by \_\_\_\_\_, for \_\_\_\_\_ because Petitioner has shown practical difficulty requiring \_\_\_\_\_.
- (a) Without the variance Petitioner will be unreasonably prevented or limited with respect to use of the property because \_\_\_\_\_.
- (b) The property is unique because \_\_\_\_\_.
- (c) Petitioner did not create the condition because \_\_\_\_\_.

- \_\_\_\_\_.
- (d) The relief granted will not unreasonably interfere with adjacent or surrounding properties because\_\_\_\_\_.
  - (e) The relief if consistent with the spirit and intent of the ordinance because\_\_\_\_\_.
  - (f) The variance granted is subject to:
    - 1. \_\_\_\_\_.
    - 2. \_\_\_\_\_.
    - 3. \_\_\_\_\_.
    - 4. \_\_\_\_\_.

2. I move that we **deny** the variance in Case No. **PZ17-0004**, sought by \_\_\_\_\_, for\_\_\_\_\_ because Petitioner has not shown practical difficulty requiring \_\_\_\_\_.

- (a) The circumstances and features of the property including\_\_\_\_\_ are not unique because they exist generally throughout the City.
- (b) The circumstances and features of the property relating to the variance request are self-created because\_\_\_\_\_.
- (c) The failure to grant relief will result in mere inconvenience or inability to attain higher economic or financial return based on Petitioners statements that \_\_\_\_\_.
- (d) The variance would result in interference with the adjacent and surrounding properties by\_\_\_\_\_.
- (e) Granting the variance would be inconsistent with the spirit and intent of the ordinance to\_\_\_\_\_.

Should you have any further questions with regards to the matter please feel free to contact me at (248) 347-0417.

Larry Butler  
Deputy Director Community Development  
City of Novi



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## ZONING BOARD OF APPEALS APPLICATION

**APPLICATION MUST BE FILLED OUT COMPLETELY**

<b>I. PROPERTY INFORMATION (Address of subject ZBA Case)</b>				Application Fee: _____	
PROJECT NAME / SUBDIVISION Yanfeng Autotmoitve Interiors				Meeting Date: _____	
ADDRESS 41935 W. Twelve Mile Road, Novi, MI		LOT/SIUTE/SPACE #		ZBA Case #: PZ _____	
SIDWELL # 50-22-14 - 200 - 025		May be obtain from Assessing Department (248) 347-0485			
CROSS ROADS OF PROPERTY 12 Mile Road west of Meadowbrook road and east of Novi Road					
IS THE PROPERTY WITHIN A HOMEOWNER'S ASSOCIATION JURISDICTION? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			REQUEST IS FOR: <input type="checkbox"/> RESIDENTIAL <input checked="" type="checkbox"/> COMMERCIAL <input type="checkbox"/> VACANT PROPERTY <input type="checkbox"/> SIGNAGE		
DOES YOUR APPEAL RESULT FROM A NOTICE OF VIOLATION OR CITATION ISSUED? <input type="checkbox"/> YES <input type="checkbox"/> NO					
<b>II. APPLICANT INFORMATION</b>					
<b>A. APPLICANT</b>		EMAIL ADDRESS jbridges@thomasduke.com		CELL PHONE NO. 313-433-2611	
NAME C&S Twelve Mile Center, LLC				TELEPHONE NO. 248-476-3700	
ORGANIZATION/COMPANY c/o Thomas Duke Company				FAX NO. 248-470-3560	
ADDRESS 37000 Grand River, Ste 360		CITY Farmington Hills		STATE MI	ZIP CODE 48335
<b>B. PROPERTY OWNER</b> <input checked="" type="checkbox"/> CHECK HERE IF APPLICANT IS ALSO THE PROPERTY OWNER					
Identify the person or organization that owns the subject property:		EMAIL ADDRESS		CELL PHONE NO.	
NAME				TELEPHONE NO.	
ORGANIZATION/COMPANY				FAX NO.	
ADDRESS		CITY		STATE	ZIP CODE
<b>III. ZONING INFORMATION</b>					
<b>A. ZONING DISTRICT</b>					
<input type="checkbox"/> R-A <input type="checkbox"/> R-1 <input type="checkbox"/> R-2 <input type="checkbox"/> R-3 <input type="checkbox"/> R-4 <input type="checkbox"/> RM-1 <input type="checkbox"/> RM-2 <input type="checkbox"/> MH <input type="checkbox"/> I-1 <input type="checkbox"/> I-2 <input type="checkbox"/> RC <input type="checkbox"/> TC <input type="checkbox"/> TC-1 <input checked="" type="checkbox"/> OTHER <u>OST</u>					
<b>B. VARIANCE REQUESTED</b>					
INDICATE ORDINANCE SECTION (S) AND VARIANCE REQUESTED:					
1. Section <u>4.19</u>		Variance requested		<u>Accessory Uses - construct within 6' of property line</u>	
2. Section _____		Variance requested		_____	
3. Section _____		Variance requested		_____	
4. Section _____		Variance requested		_____	
<b>IV. FEES AND DRAWINGS</b>					
<b>A. FEES</b>					
<input type="checkbox"/> Single Family Residential (Existing) \$200 <input type="checkbox"/> (With Violation) \$250 <input type="checkbox"/> Single Family Residential (New) \$250 <input type="checkbox"/> Multiple/Commercial/Industrial \$300 <input type="checkbox"/> (With Violation) \$400 <input type="checkbox"/> Signs \$300 <input type="checkbox"/> (With Violation) \$400 <input type="checkbox"/> House Moves \$300 <input type="checkbox"/> Special Meetings (At discretion of Board) \$600					
<b>B. DRAWINGS 1-COPY &amp; 1 DIGITAL COPY SUBMITTED AS A PDF</b>					
<ul style="list-style-type: none"> <li>• Dimensioned Drawings and Plans</li> <li>• Site/Plot Plan</li> <li>• Existing or proposed buildings or addition on the property</li> <li>• Number &amp; location of all on-site parking, if applicable</li> </ul>			<ul style="list-style-type: none"> <li>• Existing &amp; proposed distance to adjacent property lines</li> <li>• Location of existing &amp; proposed signs, if applicable</li> <li>• Floor plans &amp; elevations</li> <li>• Any other information relevant to the Variance application</li> </ul>		



# ZONING BOARD OF APPEALS APPLICATION

## V. VARIANCE

### A. VARIANCE (S) REQUESTED

DIMENSIONAL     USE     SIGN

There is a five-(5) hold period before work/action can be taken on variance approvals.

### B. SIGN CASES (ONLY)

Your signature on this application indicates that you agree to install a **Mock-Up Sign ten-(10) days** before the schedule ZBA meeting. Failure to install a mock-up sign may result in your case not being heard by the Board, postponed to the next schedule ZBA meeting, or cancelled. A mock-up sign is **NOT** to be actual sign. Upon approval, the mock-up sign must be removed within five-(5) days of the meeting. If the case is denied, the applicant is responsible for all costs involved in the removal of the mock-up or actual sign (if erected under violation) within five-(5) days of the meeting.

### C. ORDINANCE

#### City of Novi Ordinance, Section 3107 – Miscellaneous

No order of the Board permitting the erection of a building shall be valid for a period longer than one-(1) year, unless a building permit for such erection or alteration is obtained within such period and such erection or alteration is started and proceeds to completion in accordance with the terms of such permit.

No order of the Board permitting a use of a building or premises shall be valid for a period longer than one-hundred and eighty-(180) days unless such use is establish within such a period; provided, however, where such use permitted is dependent upon the erection or alteration or a building such order shall continue in force and effect if a building permit for such erection or alteration is obtained within one-(1) year and such erection or alteration is started and proceeds to completion in accordance with the terms of such permit.

### D. APPEAL THE DETERMINATION OF THE BUILDING OFFICIAL

PLEASE TAKE NOTICE:

The undersigned hereby appeals the determination of the Building Official / Inspector or Ordinance made

CONSTRUCT NEW HOME/BUILDING     ADDITION TO EXISTING HOME/BUILDING     SIGNAGE

ACCESSORY BUILDING

USE

OTHER \_\_\_\_\_

## VI. APPLICANT & PROPERTY SIGNATURES

### A. APPLICANT

Applicant Signature

Date

### B. PROPERTY OWNER

**If the applicant is not the owner, the property owner must read and sign below:**

The undersigned affirms and acknowledges that he, she or they are the owner(s) of the property described in this application) and is/are aware of the contents of this application and related enclosures.

Property Owner Signature

Date

## VII. FOR OFFICIAL USE ONLY

### DECISION ON APPEAL:

GRANTED

DENIED

The Building Inspector is hereby directed to issue a permit to the Applicant upon the following and conditions:

Chairperson, Zoning Board of Appeals

Date



## Community Development Department

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## REVIEW STANDARDS DIMENSIONAL VARIANCE

The Zoning Board of Appeals (ZBA) will review the application package and determine if the proposed Dimensional Variance meets the required standards for approval. In the space below, and on additional paper if necessary, explain how the proposed project meets each of the following standards. (Increased costs associated with complying with the Zoning Ordinance will not be considered a basis for granting a Dimensional Variance.)

### Standard #1. Circumstances or Physical Conditions.

Explain the circumstances or physical conditions that apply to the property that do not apply generally to other properties in the same zoning district or in the general vicinity. Circumstances or physical conditions may include:

- a. **Shape of Lot.** Exceptional narrowness, shallowness or shape of a specific property in existence on the effective date of the Zoning Ordinance or amendment.

**Describe below:**

OR

- b. **Environmental Conditions.** Exceptional topographic or environmental conditions or other extraordinary situations on the land, building or structure. **Describe below:**

We would like to put the switch gear for the backup generator 1'-10" off the property line near the rear of the building. We do not comply with the 6'-0" setback for accessory structures that the City of Novi requires. This location is where the DTE underground feed turns onto the property heading toward the existing building, and because of the current parking lot layout the only reasonable and feasible location.

OR

- c. **Abutting Property.** The use or development of the property immediately adjacent to the subject property would prohibit the literal enforcement of the requirements of the Zoning Ordinance or would involve significant practical difficulties. **Describe below:**

## **Standard #2. Not Self-Created.**

Describe the immediate practical difficulty causing the need for the Dimensional Variance, that the need for the requested variance is not the result of actions of the property owner or previous property owners (i.e., is not self-created).

We need to get the dimensional variance, due to the location of the DTE underground line its position in relation to our generator and building.

## **Standard #3. Strict Compliance.**

Explain how the Dimensional Variance in strict compliance with regulations governing area, setback, frontage, height, bulk, density or other dimensional requirements will unreasonably prevent the property owner from using the property for a permitted purpose, or will render conformity with those regulations unnecessarily burdensome.

We will not meet the 6'-0" setback for accessory structures that the City of Novi requires. The reason we need to re-locate the switch gear is based on the incoming tenants future plans for a vehicle lift.

## **Standard #4. Minimum Variance Necessary.**

Explain how the Dimensional Variance requested is the minimum variance necessary to do substantial justice to the applicant as well as to other property owners in the district.

We have positioned the switch gear so it is as far away from the property line while still aligning with the DTE underground feed.

## **Standard #5. Adverse Impact on Surrounding Area.**

Explain how the Dimensional Variance will not cause an adverse impact on surrounding property, property values, or the use and enjoyment of property in the neighborhood or zoning district.

Because the position of the switch gear is near the rear/side of the property and is being screened with mid-sized arborvitaes, it will not cause adverse impact on the surrounding properties. The adjacent property also has their switch gear in a similar location.



# PLAN REVIEW CENTER REPORT

January 31, 2017

## Planning Review

Yanfeng Automotive - Generator  
JSP17-05

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### Petitioner

C&S Twelve Mile Center, LLC on behalf of Yanfeng Automotive

### Review Type

Preliminary/Final Site Plan

### Property Characteristics

- Site Location: 41935 Twelve Mile Road
- Site School District: Walled Lake Consolidated School District
- Site Zoning: OST, Office Service Technology
- Site Use(s): Office and Research
- Adjoining Zoning: West is RC, Regional Center; East is OST, Office Service Technology; North is RA, Residential Acreage; South is OST
- Site Size: 7.42 acres
- Site Plan Date: 01-20-2017

### Project Summary

The applicant is proposing to remove the generator from the side of the building and put a new generator with fuel tank behind the building at the southeast corner. The applicant is also proposing to remove a 500-gallon fuel tank currently located at the northeast corner of the building and to move switchgear from the east side of the building to the east parcel lot line.

### Recommendation

Approval of the Preliminary/Final Site Plan is **recommended** contingent on items in this and other review letters being addressed on the Final Stamping Set and ZBA variances being approved. Please see Landscape and Fire review letters for additional comments to be addressed.

### Ordinance Standards

This project was reviewed for conformance with the Zoning Ordinance with respect to Article 3 (Zoning Districts), Article 4 (Use Standards), Article 5 (Site Standards), and any other applicable provisions of the Zoning Ordinance. Items in **bold** below must be addressed and incorporated as part of the final stamping sets.

1. Administrative Approval (Sec. 6.1.C): A site plan may be reviewed for approval administratively without formal review by the approving body under the following circumstances: when the site is already the subject of a previously approved site plan and the reviewed plan only proposes the construction of an accessory structure. *This plan qualifies for administrative approval.*
2. Location (Sec. 4.19.2.A): All accessory structures are to be located in the rear yard. *The generator is proposed in the rear yard, which meets standards. **The switchgear is proposed in the interior side yard, which is not allowed. The applicant is pursuing a ZBA variance for the location of the switchgear in the side yard.***
3. Accessory Structure/Building Setback (Sec. 4.19.1.G/Sec. 3.1.18.D): A detached accessory building shall not be located closer than 10 ft. to any main building and shall not be located closer than 6 ft. to any interior side or rear lot line. The applicant is proposing the generator to

be 9 ft. from the building and the switchgear to be less than 6 ft. from the parcel lot line. **It is recommended that the applicant move the generator to be 10 ft. from the building, which would then meet distance from building requirements.** If the applicant continues to pursue the proposed plan, with the generator only 9 ft. from the building, then the applicant would need to provide a masonry enclosure that matches the building materials and is 1 ft. taller than the generator. **It is recommended that the applicant seek an alternate location for the switchgear that is further than 6 ft. from the parcel lot line. The applicant should show the measurement from the switchgear to the lot line.** If the applicant continues to pursue the proposed plan, with the switchgear only a few feet from the parcel lot line, then the applicant will need to seek a ZBA variance. **The applicant is pursuing a ZBA variance for the location of the switchgear.**

4. Screening (Landscape Design Manual 1.e): All utility structures are to be screened by the building, landscaping, or an enclosure constructed to match the building. *The applicant has proposed mid-sized arborvitae along three sides of the generator and switchgear, which meet standards.* **Please note the additional comments by landscaping regarding screening and plantings that may be required off-site if the switchgear remains as shown. Also Fire requires a protective barrier between the generator and parking areas.**
5. Noise Levels (5.14.10.A.ii): The receiving zoning districts that surround the parcel are OST, Office Service Technology and RC, Regional Center. The OST and RC districts have a maximum permitted decibel level of 75 during daytime hours and 70 during nighttime hours. **The applicant should provide the decibel level of the unit and the distance from the generator to all lot lines, in order for Planning staff to calculate the decibel levels at that distance and confirm that the decibel levels will be under the maximum allowed to be received in the OST/RC zoning districts.**

### Next Steps

The applicant is to provide a written response to the outstanding items and how the applicant will address these on the final stamping set. If ZBA approves the variances, then the applicant can **submit electronic stamping sets for informal review** prior to printing final stamping sets. Stamping sets are still required for this project. After receiving all the necessary approvals, please submit 4 size 24" x 36" copies with original signature and original seals, to the Community Development Department for final stamping set approval.

### Pre-Construction Meeting

Prior to the start of any work on the site, Pre-Construction meetings must be held with the applicant's contractor and the City's consulting engineer. Pre-Con meetings are generally held after Stamping Sets have been issued and prior to the start of any work on the site. There are a variety of requirements, fees and permits that must be issued before a Pre-Con can be scheduled. If you have questions regarding the checklist or the Pre-Con, please contact Sarah Marchioni [248.347.0430 or [smarchioni@cityofnovi.org](mailto:smarchioni@cityofnovi.org)] in the Community Development Dept.

### Chapter 26.5

Chapter 26.5 of the City of Novi Code of Ordinances generally requires all projects be completed within two years of the issuance of any starting permit. Please contact Sarah Marchioni for additional information on starting permits. The applicant should review and be aware of the requirements of Chapter 26.5 before starting construction.

If the applicant has any questions concerning the above review or the process in general, do not hesitate to contact me at 248.347.0484 or [kmellem@cityofnovi.org](mailto:kmellem@cityofnovi.org).



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Kirsten Mellem, Planner





# PLAN REVIEW CENTER REPORT

January 30, 2017

## Preliminary Site Plan - Landscaping

Yanfeng Automotive Generator

### Review Type

Preliminary Site Plan Landscape Review

### Property Characteristics

- Site Location: 41935 West Twelve Mile Road
- Site Acreage: 7.42 acres
- Site Zoning: OST
- Adjacent Zoning: North-RA; East, South-OST, West-RC
- Plan Date: 1/20/2017
- Build Date: 1980

### Ordinance Considerations

This project was reviewed for conformance with Chapter 37: Woodland Protection, Zoning Article 5.5 Landscape Standards, the Landscape Design Manual and any other applicable provisions of the Zoning Ordinance. Items in **bold** below must be addressed and incorporated as part of the Final Site Plan submittal. Please follow guidelines of the Zoning Ordinance and Landscape Design Guidelines. This review is a summary and not intended to substitute for any Ordinance.

**As this is an existing site with only incremental changes being proposed, the applicant is not being asked to comply with all of the landscape ordinance requirements. The comments below are restricted to the additional generator and gear box.**

In addition to the below, the owner of the site should bring the site's landscaping up to the standard of the approved Final Site Plan, dated xxxx. Currently, there are a number of missing parking lot trees that need to be replaced, as well as other missing landscaping that should be replaced. A copy of the original plan is available upon request. Also, the straps and stakes should be removed from existing trees on the site.

### Recommendation

This project is **recommended for approval** provided that the bold items below are addressed satisfactorily. Due to the limited extent of the required landscaping, a separate landscape plan created by a landscape architect, is not required.

### Requested Additions

#### Utility Box Screening (Landscape Design Manual 1.e)

1. Please screen east side of utility gear box on east side of parking lot if Novi Lakes Wellness desires the screening, which would probably have to be on their property. If they do, and the screening would need to be on the Novi Lakes property, a landscape easement from Novi Lakes will be required to plant the required screening.
2. The screening shrubs are to be planted per the attached detail, which should be added to the plans.

Plant List, Planting Notations and Details(LDM 2.h. and t.)

1. Please provide a plant list specifying the species/cultivar and quantities to be planted.
2. Stakes probably won't be required for the arborvitae to be planted. The detail can be modified if desired.
3. Please add the following landscape notes to the plan:
  - a. All proposed plant substitutions are to be approved by the City in writing.
  - b. All plantings are to be guaranteed for 2 years from the date of landscaping approval.
  - c. All plantings shall be northern nursery grown, Number 1 grade, and installed according to accepted planting procedures.
  - d. All plant materials shall meet current American Association of Nurserymen Standards.
  - e. The shrubs should be maintained at a height at least as tall as the screened utilities.
  - f. Miss Dig must be notified to locate all underground utilities before planting begins.

If the applicant has any questions concerning the above review or the process in general, do not hesitate to contact me at 248.735.5621 or rmeader [rmeader@cityofnovi.org](mailto:rmeader@cityofnovi.org).



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Rick Meader – Landscape Architect



February 15, 2017

TO: Barbara McBeth- City Planner  
Sri Ravali Komaragiri- Plan Review Center  
Kirsten Mellem- Plan Review Center

**CITY COUNCIL**

**Mayor**  
Bob Gatt

**Mayor Pro Tem**  
Dave Staudt

Gwen Markham

Andrew Mutch

Wayne Wrobel

Laura Marie Casey

Brian Burke

**City Manager**  
Pete Auger

**Director of Public Safety  
Chief of Police**  
David E. Molloy

**Director of EMS/Fire Operations**  
Jeffery R. Johnson

**Assistant Chief of Police**  
Erick W. Zinser

**Assistant Chief of Police**  
Jerrold S. Hart

RE: Yanfeng Automotive - Generator

PSP# 17-05

**Project Description:**

Add a new generator and remove existing generator and underground tank.

**Comments:**

**Must install a protective barrier around the new generator.**

**Recommendation:**

**APPROVED WITH CONDITIONS.**

Sincerely,

Kevin S. Pierce-Fire Marshal  
City of Novi – Fire Dept.

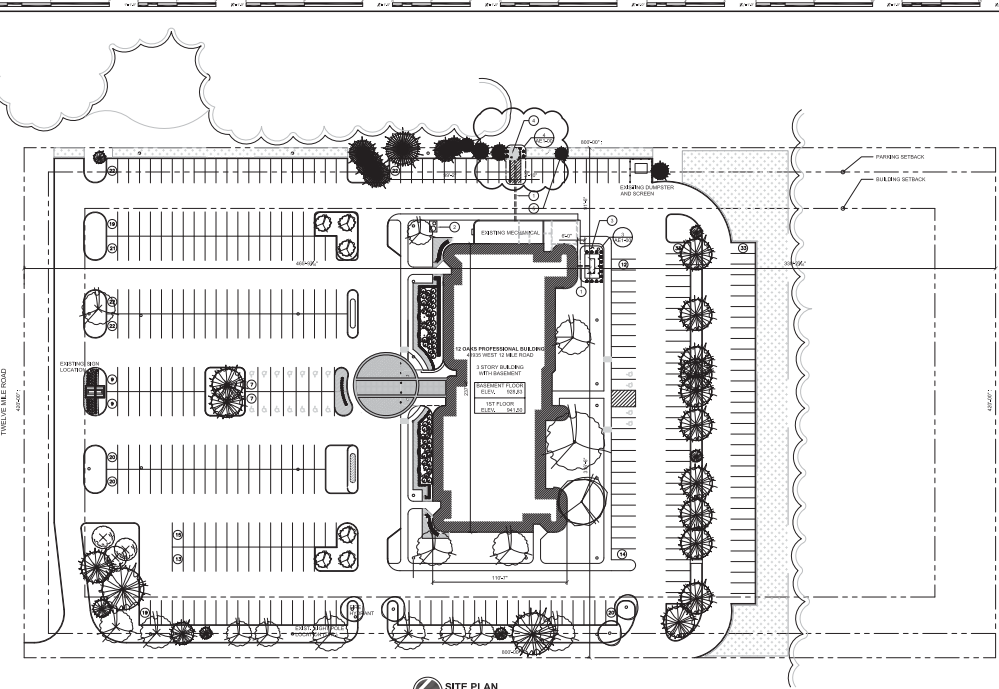
cc: file

**Novi Public Safety Administration**  
45125 W. Ten Mile Road  
Novi, Michigan 48375  
248.348.7100  
248.347.0590 fax

cityofnovi.org



<p>FRACTAL-DESIGNS          706 FLORENCE AVE.          ROYAL OAK, MI 48067          248-946-1622</p>	<p><b>TWELVE OAKS PROFESSIONAL CENTER</b>          41935 WEST 12 MILE ROAD          NOVI, MI 48374 USA</p>			<p>THOMAS DUKE COMPANY          COMMERCIAL PROPERTY          37000 GRAND RIVER          STE. 200          248.476.3700          WWW.THOMASDUKE.COM          41935 W. 12 MILE DR.          PROFESSIONAL CENTER</p>
	<p>ISSUED FOR: ADDENDUM NO.3</p>	<p>ISSUE DATE: 03/01/2017</p>	<p>Project Number: 167002.002</p>	



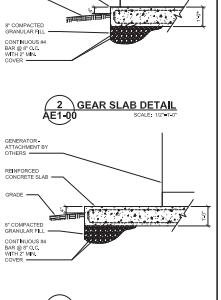
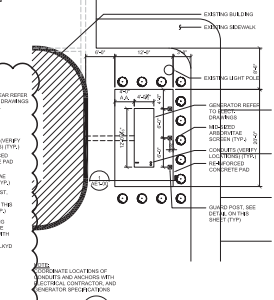
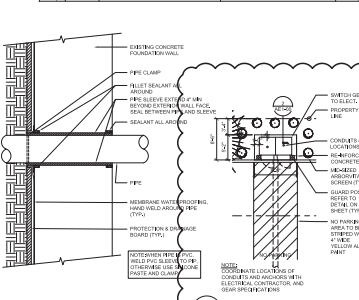
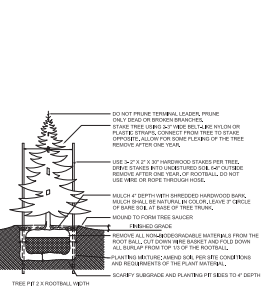
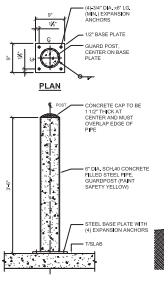
THIRTEEN MILE ROAD  
ADJACENT



- GENERAL NOTES:**
- ALL INFORMATION TAKEN FROM A SURVEY PROVIDED BY THOMAS DUKE DATED OCT. 28, 2014
  - OWNER HAS GUARANTEED THE TRUE AND CORRECT LOCATION OF THE SOCIAL UNDERGROUND UTILITIES.
  - ALL EXISTING UTILITIES AND OTHER IMPROVEMENTS SHALL REMAIN UNLESS NOTICED OTHERWISE.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR THE DEPTH OF ALL UTILITIES AND THE EXISTING REGULATIONS AND STANDARDS.
  - PROTECT ALL EXISTING IMPROVEMENTS, LANDSCAPING, STRUCTURES AND UTILITIES TO REMAIN.
  - SETBACKS OR CLEARANCES ALL EXISTING IMPROVEMENTS, LANDSCAPING, STRUCTURES AND UTILITIES TO REMAIN SHALL BE MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION.
  - ALL PLANT MATERIAL SHALL BE LOCAL, NORTH-SOUTH OR WEST-WEST, NATIVE PLANT MATERIAL. THE USE OF NON-INDIGENOUS PLANT MATERIALS SHALL BE PLANTED ACCORDING TO ACCEPTED PLANTING PROCEDURES.
  - REMOVE ALL SOIL, CONCRETE, ASPHALT REMOVED FOR TRUCKS TO APPROXIMATE 12" DEPTHS TO BE REUSED OR RECYCLED. ALL EXISTING CONCRETE SHALL BE RECYCLED TO 10% BELOW FINISH AND PARALLEL TO ALL EXISTING UTILITIES AND IMPROVEMENTS.
  - ALL PROPOSED PLANTING SHALL BE APPROVED BY THE CITY OF HOUSTON.
  - ALL PLANTINGS ARE TO BE GUARANTEED FOR 2 YEARS FROM THE DATE OF LANDSCAPING AND INSTALLATION.
  - ALL PLANT MATERIAL SHALL MEET CURRENT AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS.
  - THE TREES SHOULD BE MAINTAINED AT A HEIGHT AT LEAST AS TALL AS THE EXISTING TREES.
  - NO NEW TREES SHOULD BE PLANTED TO LOCATE ALL UNDERGROUND UTILITIES BEFORE PLANTING TREES.
- ACCESSIBLE PARKING:**
- # REQUIREMENTS PROVIDED
- SITE PLAN KEY NOTES:**
1. 12" TRENCH LOCAL TRENCH REMOVE MATERIAL, REMOVE EXISTING MATERIAL, TRENCH IN ACCESSIBLE PARKING AREAS, CONCRETE AND REINFORCED INDUSTRIAL CONCRETE FOR CONCRETE LOCATIONS TYPE "C"
  2. EXISTING LOCAL UNDERGROUND UTILITIES SHALL BE EXPOSED - CONSULT ENVIRONMENTAL ENGINEER.
  3. MARK-PAINTED PAVED AREAS SHALL BE EXPOSED TO THE LOCATION, MARK TO MARK SPTS.
  4. EXISTING TREES TO BE REMOVED
  5. NEW SPRUCE TREE TO MATCH TREE REMOVED

**SITE PLAN**  
SCALE: 1/8" = 1'-0"

SYMBOL	QUANTITY	COMMON NAME	SCIENTIFIC NAME	DBH
○	04	PROSPERITY - SWEET GUM	TRINIA ALCOCKIAE "SWEET GUM"	12.0"
○	1	SPRUCES	PRUNUS	12.0"



**GUARD POST**  
SCALE: 1/4" = 1'-0"

**PLANTING DETAIL**  
SCALE: 3/8" = 1'-0"

**PENETRATION DETAIL**  
SCALE: 1/2" = 1'-0"

**4 ENLARGED PLAN - GEAR**  
SCALE: 1/8" = 1'-0"

**3 ENLARGED PLAN - GENERATOR**  
SCALE: 1/8" = 1'-0"

**1 GENERATOR SLAB DETAIL**  
SCALE: 1/2" = 1'-0"

**THOMAS DUKE COMPANY**  
COMMERCIAL PROPERTY

37000 GRAND RIVER STE. 300  
248.478.3700  
WWW.THOMASDUKE.COM

**41935 W. 12 MILE DR. 12 OAKS PROFESSIONAL CENTER**

**FRACTAL-DESIGNS**  
706 FLORENCE AVE.  
ROYAL OAK, MI 48067

CONSULTANT INFORMATION

PROFESSIONAL

**ARCHITECTURAL SITE PLAN & DETAILS**  
**AE1-00**

**Specification sheet**

# Diesel Generator set QSB7 series engine

100-200 kW 60 Hz



**Description**

Cummins Power Generation commercial generator sets are fully integrated power generation systems providing optimum performance, reliability and versatility for stationary standby and prime power applications.

**Features**

**Cummins® heavy-duty engine** - Rugged 4-cycle, industrial diesel delivers reliable power, low emissions and fast response to load changes.

**Alternator** - Several alternator sizes offer selectable motor starting capability with low reactance 2/3 pitch windings, low waveform distortion with non-linear loads and fault clearing short-circuit capability.

**Control system** - The PowerCommand® 1.1 electronic control is standard equipment and provides total genset system integration including automatic remote starting/stopping, precise frequency and voltage regulation, alarm and status message display, output metering, auto-shutdown at fault detection and NFPA 110 Level 1 compliance. The optional PowerCommand 2.2 control is UL 508 Listed and provides AmpSentry™ protection.

**Cooling system** - Standard integral set-mounted radiator system, designed and tested for rated ambient temperatures, simplifies facility design requirements for rejected heat.

**Enclosures** - Optional weather protective and sound attenuated enclosures are available.

**NFPA** - The genset accepts full rated load in a single step in accordance with NFPA 110 for Level 1 systems.

**Warranty and service** - Backed by a comprehensive warranty and worldwide distributor network.

Model	Standby rating		Prime rating		Continuous rating		Data sheets	
	60 Hz kW (kVA)	50 Hz kW (kVA)	60 Hz kW (kVA)	50 Hz kW (kVA)	60 Hz kW (kVA)	50 Hz kW (kVA)	60 Hz	50 Hz
<b>DSGAA</b>	100 (125)		90 (113)				D-3349	
<b>DSGAB</b>	125 (156)		113 (141)				D-3350	
<b>DSGAC</b>	150 (188)		135 (169)				D-3351	
<b>DSGAD</b>	175 (219)		160 (200)				D-3516	
<b>DSGAE</b>	200 (250)		180 (225)				D-3517	

## Generator set specifications

Governor regulation class	ISO 8528 Part 1 Class G3
Voltage regulation, no load to full load	± 1%
Random voltage variation	± 0.5%
Frequency regulation	Isochronous
Random frequency variation	± 0.25%
Radio frequency emissions compliance	Meets requirements of most industrial and commercial applications

## Engine specifications

Bore	107 mm (4.21 in)
Stroke	124.0 mm (4.88 in)
Displacement	6.69 L (408 in <sup>3</sup> )
Configuration	Cast iron, in-line, 6 cylinder
Battery capacity	1100 amps minimum at ambient temperature of -18 °C to 0 °C (0 °F to 32 °F)
Battery charging alternator	100 amps
Starting voltage	12 volt, negative ground
Fuel system	Direct injection: number 2 diesel fuel, fuel filter, automatic electric fuel shutoff
Fuel filter	Single element, 10 micron filtration, spin-on fuel filter with water separator
Air cleaner type	Dry replaceable element
Lube oil filter type(s)	Spin-on, full flow
Standard cooling system	High ambient radiator

## Alternator specifications

Design	Brushless, 4 pole, drip proof, revolving field
Stator	2/3 pitch
Rotor	Single bearing, flexible discs
Insulation system	Class H
Standard temperature rise	150 °C standby at 40 °C ambient
Exciter type	Torque match (shunt) standard, PMG optional
Phase rotation	A (U), B (V), C (W)
Alternator cooling	Direct drive centrifugal blower fan
AC waveform total harmonic distortion	< 5% no load to full linear load, < 3% for any single harmonic
Telephone influence factor (TIF)	< 50 per NEMA MG1-22.43
Telephone harmonic factor (THF)	< 3

## Available voltages

60 Hz Three phase line-neutral/line-line				60 Hz Single phase line-neutral/line-line		
• 110/190	• 115/230 Delta	• 127/220	• 240/416	• 110/220	• 115/230	• 120/240
• 110/220	• 120/208	• 139/240	• 255/440			
• 115/200	• 120/240 Delta	• 220/380	• 277/480			
		• 230/400	• 347/600			

(not available with DSGAD or DSGAE)

Note: Consult factory for other voltages.

## Generator set options and accessories

### Engine

- 120 V 150 W lube oil heater
- 120/240 V 1500 W coolant heater

### Fuel System

- 24 hour sub-base tank (dual wall)

### Alternator

- 105 °C rise
- 125 °C rise
- 120 V 100 W anti-condensation heater
- PMG excitation
- Single phase

### Exhaust system

- Heavy duty exhaust elbow
- Slip on exhaust connection

### Generator set

- Battery
- Battery charger
- Enclosure: aluminum, steel, weather protective or sound attenuated
- Main line circuit breaker

- Remote annunciator panel
- Spring isolators
- 2 year prime power warranty
- 2 year standby power warranty
- 5 year basic power warranty

Note: Some options may not be available on all models - consult factory for availability.

## Control system PowerCommand 1.1



**PowerCommand control** is an integrated generator set control system providing voltage regulation, engine protection, operator interface and isochronous governing (optional). Major features include:

- Battery monitoring and testing features and smart starting control system.
- Standard PCCNet interface to devices such as remote annunciator for NFPA 110 applications.
- Control boards potted for environmental protection.
- Control suitable for operation in ambient temperatures from -40 °C to +70 °C (-40 °F to +158 °F) and altitudes to 5000 meters (13,000 feet).
- Prototype tested; UL, CSA, and CE compliant.
- InPower™ PC-based service tool available for detailed diagnostics.

### Operator/display panel

- Manual off switch
- Alpha-numeric display with pushbutton access for viewing engine and alternator data and providing setup, controls and adjustments (English or international symbols)
- LED lamps indicating genset running, not in auto, common warning, common shutdown, manual run mode and remote start
- Suitable for operation in ambient temperatures from -20 °C to +70 °C
- Bargraph display (optional)

### AC protection

- Over current warning and shutdown
- Over and under voltage shutdown
- Over and under frequency shutdown
- Over excitation (loss of sensing) fault
- Field overload

### Engine protection

- Overspeed shutdown
- Low oil pressure warning and shutdown
- High coolant temperature warning and shutdown
- Low coolant level warning or shutdown
- Low coolant temperature warning
- High, low and weak battery voltage warning
- Fail to start (overcrank) shutdown
- Fail to crank shutdown
- Redundant start disconnect
- Cranking lockout
- Sensor failure indication
- Low fuel level warning or shutdown
- Fuel-in-rupture-basin warning or shutdown

### Alternator data

- Line-to-line and line-to-neutral AC volts
- 3-phase AC current
- Frequency
- Total kVA

### Engine data

- DC voltage
- Lube oil pressure
- Coolant temperature
- Engine speed

### Other data

- Genset model data
- Start attempts, starts, running hours
- Fault history
- RS485 Modbus® interface
- Data logging and fault simulation (requires InPower service tool)

### Digital governing (optional)

- Integrated digital electronic isochronous governor
- Temperature dynamic governing

### Digital voltage regulation

- Integrated digital electronic voltage regulator
- 2-phase line-to-line sensing
- Configurable torque matching

### Control functions

- Time delay start and cooldown
- Cycle cranking
- PCCNet interface
- (2) Configurable inputs
- (2) Configurable outputs
- Remote emergency stop
- Glow plug control (some models)

### Options

- Auxiliary output relays (2)
- 120/240 V, 100 W anti-condensation heater
- Remote annunciator with (3) configurable inputs and (4) configurable outputs
- PMG alternator excitation
- PowerCommand iWatch web server for remote monitoring and alarm notification (loose)
- Auxiliary, configurable signal inputs (8) and configurable relay outputs (8)
- Digital governing
- AC output analog meters (bargraph)
  - Color-coded graphical display of:
    - 3-phase AC voltage
    - 3-phase current
    - Frequency
    - kVa
- Remote operator panel
- PowerCommand 2.2 control with AmpSentry protection

For further detail see document S-1531.



## Ratings definitions

### Emergency standby power (ESP):

Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

### Limited-time running power (LTP):

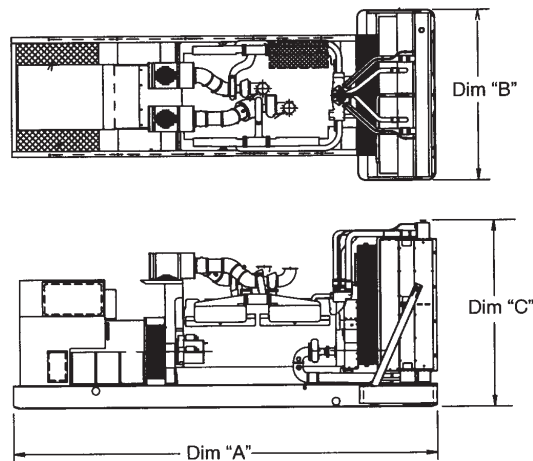
Applicable for supplying power to a constant electrical load for limited hours. Limited Time Running Power (LTP) is in accordance with ISO 8528.

### Prime power (PRP):

Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

### Base load (continuous) power (COP):

Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271 and BS 5514.



This outline drawing is for reference only. See respective model data sheet for specific model outline drawing number.

**Do not use for installation design**

Model	Dim "A" mm (in.)	Dim "B" mm (in.)	Dim "C" mm (in.)	Set Weight* dry kg (lbs)	Set Weight* wet kg (lbs)
DSGAA	2656 (104.6)	1100 (43.3)	1549 (61)		1180 (2602)
DSGAB	2656 (104.6)	1100 (43.3)	1549 (61)		1225 (2700)
DSGAC	2656 (104.6)	1100 (43.3)	1549 (61)		1263 (2784)
DSGAD	2656 (104.6)	1100 (43.3)	1549 (61)		1361 (3000)
DSGAE	2656 (104.6)	1100 (43.3)	1549 (61)		1361 (3000)

\* Note: Weights represent a set with standard features. See outline drawings for weights of other configurations.

## Codes and standards

Codes or standards compliance may not be available with all model configurations – consult factory for availability.

	<p>This generator set is designed in facilities certified to ISO 9001 and manufactured in facilities certified to ISO 9001 or ISO 9002.</p>	<p><b>UL2200</b></p>	<p>The generator set is available listed to UL 2200.</p>
	<p>The Prototype Test Support (PTS) program verifies the performance integrity of the generator set design. Cummins Power Generation products bearing the PTS symbol meet the prototype test requirements of NFPA 110 for Level 1 systems.</p>	<p><b>U.S. EPA</b></p>	<p>Engine certified to Stationary Emergency U.S. EPA New Source Performance Standards, 40 CFR 60 subpart IIII Tier 3 exhaust emission levels. U.S. applications must be applied per this EPA regulation.</p>
<p><b>CSA</b></p>	<p>All low voltage models are certified to CSA C22.2 No.100 and CSA C22.2 No.14.</p>	<p><b>International Building Code</b></p>	<p>The generator set package is available certified for seismic application in accordance with the following International Building Code: IBC2000, IBC2003 IBC2006, IBC2009 and IBC2012.</p>

**Warning:** Back feed to a utility system can cause electrocution and/or property damage. Do not connect to any building's electrical system except through an approved device or after building main switch is open.

### North America

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**Model: DSGAE**  
**Frequency: 60**  
**Fuel type: Diesel**  
**KW rating: 200 standby**  
**180 prime**  
**Emissions level: EPA NSPS Stationary Emergency Tier 3**

➤ **Generator set data sheet**



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<b>Exhaust emission data sheet:</b>	<b>EDS-1124</b>
<b>Exhaust emission compliance sheet:</b>	<b>EPA-1173</b>
<b>Sound performance data sheet:</b>	<b>MSP-1102</b>
<b>Cooling performance data sheet:</b>	<b>MCP-210</b>
<b>Prototype test summary data sheet:</b>	<b>PTS-285</b>
<b>Standard set-mounted radiator cooling outline:</b>	<b>A035C611</b>
<b>Optional set-mounted radiator cooling outline:</b>	
<b>Optional heat exchanger cooling outline:</b>	
<b>Optional remote radiator cooling outline:</b>	

<b>Fuel consumption</b>	<b>Standby</b>				<b>Prime</b>				<b>Continuous</b>
	<b>kW (kVA)</b>				<b>kW (kVA)</b>				<b>kW (kVA)</b>
<b>Ratings</b>	200 (250)				180 (225)				
<b>Load</b>	<b>1/4</b>	<b>1/2</b>	<b>3/4</b>	<b>Full</b>	<b>1/4</b>	<b>1/2</b>	<b>3/4</b>	<b>Full</b>	<b>Full</b>
<b>US gph</b>	5.20	8.67	11.63	14.79	4.79	8.16	10.81	13.36	
<b>L/hr</b>	19.7	32.8	44.0	56.0	18.1	30.9	40.9	50.6	

<b>Engine</b>	<b>Standby rating</b>	<b>Prime rating</b>	<b>Continuous rating</b>
Engine manufacturer	Cummins		
Engine model	QSB7-G5 NR3		
Configuration	Cast iron, in-line, 6 cylinder		
Aspiration	Turbocharged and air-to-air aftercooled		
Gross engine power output, kWm (bhp)	242 (324)	208 (279)	
BMEP at set rated load, kPa (psi)	2255 (327)	2033 (295)	
Bore, mm (in)	107 (4.21)		
Stroke, mm (in)	124 (4.88)		
Rated speed, rpm	1800		
Piston speed, m/s (ft/min)	7.4 (1464)		
Compression ratio	17.2:1		
Lube oil capacity, L (qt)	17.5 (18.5)		
Overspeed limit, rpm	2100		
Regenerative power, kW	19		

<b>Fuel flow</b>		
Maximum fuel flow, L/hr (US gph)	106 (28)	
Maximum fuel flow with C174, L/hr (US gph)		
Maximum fuel inlet restriction with clean filter, mm Hg (in Hg)	127 (5)	
Maximum return restriction, mm Hg (in Hg)	152 (6)	

<b>Air</b>	<b>Standby rating</b>	<b>Prime rating</b>	<b>Continuous rating</b>
Combustion air, m <sup>3</sup> /min (scfm)	15.8 (557)	15.3 (539)	
Maximum air cleaner restriction with clean filter, kPa (in H <sub>2</sub> O)	3.7 (15)		
Alternator cooling air, m <sup>3</sup> /min (cfm)	41.3 (1460)		

### Exhaust

Exhaust flow at set rated load, m <sup>3</sup> /min (cfm)	40.5 (1428)	37.7 (1332)	
Exhaust temperature, °C (°F)	510 (949)	484 (903)	
Maximum back pressure, kPa (in H <sub>2</sub> O)	10 (40)	10 (40)	

### Standard set-mounted radiator cooling

Ambient design, °C (°F)	50 (122)		
Fan load, kW <sub>m</sub> (HP)	9.7 (13.0)		
Coolant capacity (with radiator), L (US Gal)	23 (6.1)	23 (6.1)	
Cooling system air flow, m <sup>3</sup> /min (scfm)	351 (12400)		
Total heat rejection, MJ/min (Btu/min)	9.90 (9376)	8.95 (8481)	
Maximum cooling air flow static restriction, kPa (in H <sub>2</sub> O)	0.12 (0.5)		

### Optional set-mounted radiator cooling

Ambient design, °C (°F)			
Fan load, kW <sub>m</sub> (HP)			
Coolant capacity (with radiator), L (US Gal.)			
Cooling system air flow, m <sup>3</sup> /min (scfm)			
Total heat rejection, MJ/min (Btu/min)			
Maximum cooling air flow static restriction, kPa (in. H <sub>2</sub> O)			

### Optional heat exchanger cooling

Set coolant capacity, L (US Gal.)			
Heat rejected, jacket water circuit, MJ/min (Btu/min)			
Heat rejected, aftercooler circuit, MJ/min (Btu/min)			
Heat rejected, fuel circuit, MJ/min (Btu/min)			
Total heat radiated to room, MJ/min (Btu/min)			
Maximum raw water pressure, jacket water circuit, kPa (psi)			
Maximum raw water pressure, aftercooler circuit, kPa (psi)			
Maximum raw water pressure, fuel circuit, kPa (psi)			
Maximum raw water flow, jacket water circuit, L/min (US Gal/min)			
Maximum raw water flow, aftercooler circuit, L/min (US Gal/min)			
Maximum raw water flow, fuel circuit, L/min (US Gal/min)			
Minimum raw water flow at 27 °C (80 °F) inlet temp, jacket water circuit, L/min (US Gal/min)			
Minimum raw water flow at 27 °C (80 °F) inlet temp, aftercooler circuit, L/min (US Gal/min)			
Minimum raw water flow at 27 °C (80 °F) inlet temp, fuel circuit, L/min (US Gal/min)			
Raw water delta P at min flow, jacket water circuit, kPa (psi)			
Raw water delta P at min flow, aftercooler circuit, kPa (psi)			
Raw water delta P at min flow, fuel circuit, kPa (psi)			
Maximum jacket water outlet temp, °C (°F)			
Maximum aftercooler inlet temp, °C (°F)			
Maximum aftercooler inlet temp at 25 °C (77 °F) ambient, °C (°F)			

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D-3517 (8/11)



<b>Optional remote radiator cooling<sup>1</sup></b>	<b>Standby rating</b>	<b>Prime rating</b>	<b>Continuous rating</b>
Set coolant capacity, L (US gal)			
Max flow rate at max friction head, jacket water circuit, L/min (US gal/min)			
Max flow rate at max friction head, aftercooler circuit, L/min (US gal/min)			
Heat rejected, jacket water circuit, MJ/min (Btu/min)			
Heat rejected, aftercooler circuit, MJ/min (Btu/min)			
Heat rejected, fuel circuit, MJ/min (Btu/min)			
Total heat radiated to room, MJ/min (Btu/min)			
Maximum friction head, jacket water circuit, kPa (psi)			
Maximum friction head, aftercooler circuit, kPa (psi)			
Maximum static head, jacket water circuit, m (ft)			
Maximum static head, aftercooler circuit, m (ft)			
Maximum jacket water outlet temp, °C (°F)			
Maximum aftercooler inlet temp at 25 °C (77 °F) ambient, °C (°F)			
Maximum aftercooler inlet temp, °C (°F)			
Maximum fuel flow, L/hr (US gph)			
Maximum fuel return line restriction, kPa (in Hg)			

<b>Weights<sup>2</sup></b>	
Unit dry weight kgs (lbs.)	
Unit wet weight kgs (lbs.)	1361 (3000)

**Notes:**

<sup>1</sup> For non-standard remote installations contact your local Cummins Power Generation representative.

<sup>2</sup> Weights represent a set with standard features. See outline drawing for weights of other configurations.

<b>Derating factors</b>	
<b>Standby</b>	Engine power available up to 1707 m (5600 ft) at ambient temperature up to 40° C (104° F) and 732 m (2400 ft) at 50° C (122° F). Consult your Cummins Power Generation distributor for temperature and ambient requirements outside these parameters.
<b>Prime</b>	Engine power available up to 1707 m (5600 ft) at ambient temperature up to 40° C (104° F) and 732 m (2400 ft) at 50° C (122° F). Consult your Cummins Power Generation distributor for temperature and ambient requirements outside these parameters.
<b>Continuous</b>	

**Ratings definitions**

<b>Emergency standby power (ESP):</b>	<b>Limited-time running power (LTP):</b>	<b>Prime power (PRP):</b>	<b>Base load (continuous) power (COP):</b>
Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.	Applicable for supplying power to a constant electrical load for limited hours. Limited Time Running Power (LTP) is in accordance with ISO 8528.	Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.	Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) is in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271 and BS 5514.

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## Alternator data

Three Phase Table <sup>1</sup>		105° C	105° C	105° C	125° C	125° C	125° C	150° C	150° C	150° C			
Feature Code		B418	B415	B304	B417	B414	B303	B416	B413	B419			
Alternator Data Sheet Number		212	212	212	212	212	212	211	211	211			
Voltage Ranges		110/190 Thru 120/208 220/380 Thru 240/416	120/208 Thru 139/240 240/416 Thru 277/480	347/600	110/190 Thru 120/208 220/380 Thru 240/416	120/208 Thru 139/240 240/416 Thru 277/480	347/600	110/190 Thru 120/208 220/380 Thru 240/416	120/208 Thru 139/240 240/416 Thru 277/480	347/600			
Surge kW		212	212	215	212	212	215	212	205	214			
Motor Starting kVA (at 90% sustained voltage)	Shunt	770	770	770	770	770	770	672	672	672			
	PMG	920	920	920	920	920	920	791	791	791			
Full Load Current - Amps at Standby Rating		<u>120/208</u> 694	<u>127/220</u> 656	<u>139/240</u> 602	<u>220/380</u> 380	<u>240/416</u> 347	<u>254/440</u> 328	<u>277/480</u> 301	<u>347/600</u> 241				

<sup>1</sup> Single phase power can be taken from a three phase generator set at up to 2/3 set rated 3-phase kW at 1.0 power factor.

## Formulas for calculating full load currents:

### Three phase output

$$\frac{\text{kW} \times 1000}{\text{Voltage} \times 1.73 \times 0.8}$$

### Single phase output

$$\frac{\text{kW} \times \text{Single Phase Factor} \times 1000}{\text{Voltage}}$$

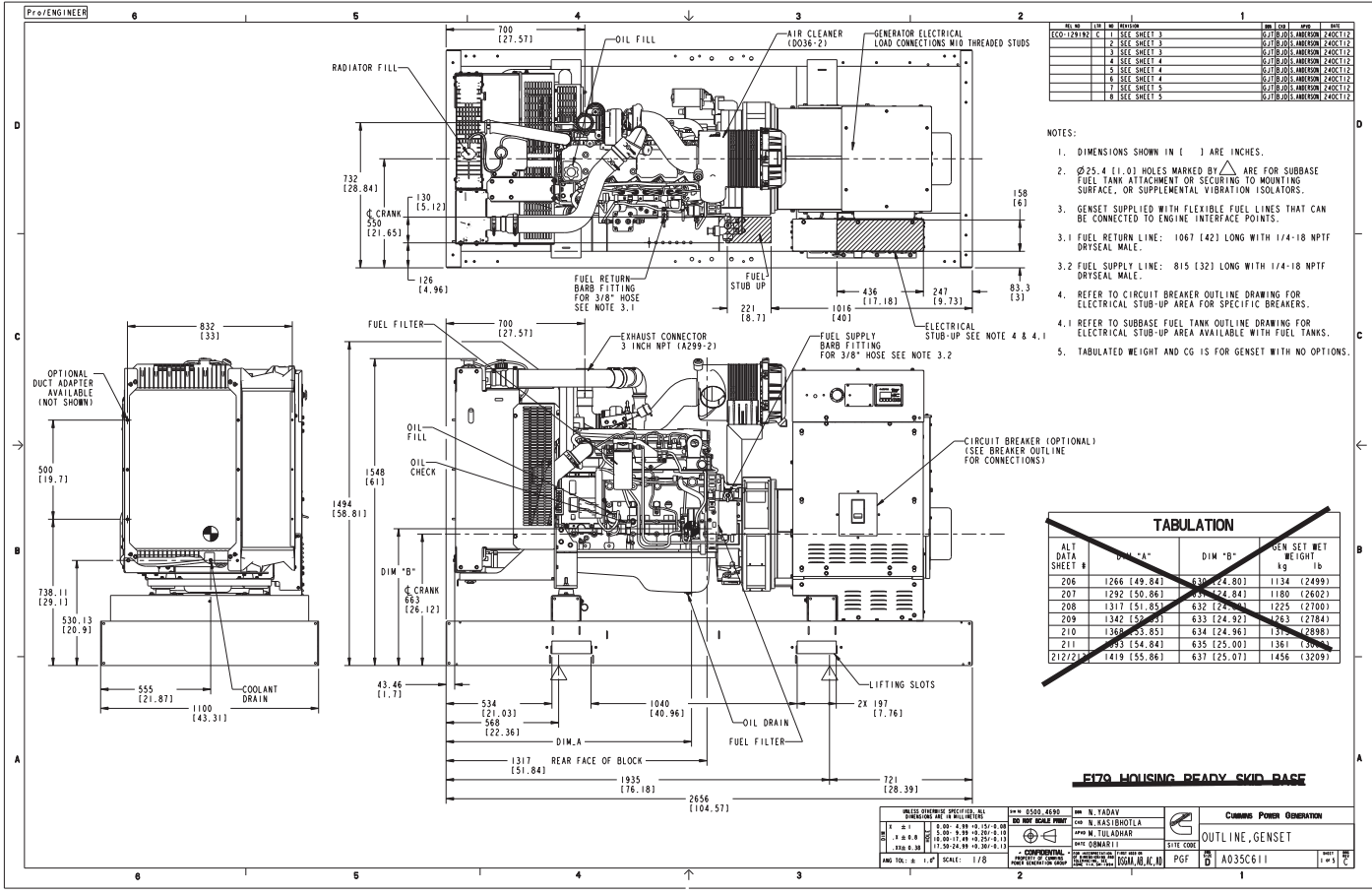
### Cummins Power Generation

1400 73<sup>rd</sup> Avenue N.E.  
Minneapolis, MN 55432 USA  
Telephone: 763 574 5000  
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**Warning:** Back feed to a utility system can cause electrocution and/or property damage. Do not connect to any building's electrical system except through an approved device or after building main switch is open.

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**Part A035C611 C**

Description	Legacy Name	External Regulations	Application Status	Release Phase Code	Security Classification	Alternates
OUTLINE.GENSET	A035C611	None	Production & Service	Production	Proprietary	

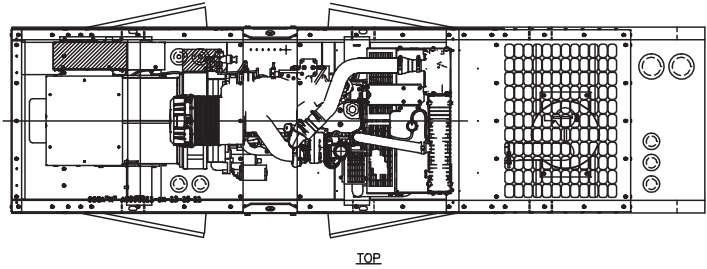
**Part Specifications :A035C611 C**

Name	Description	Legacy Name
A035B356	SPECIFICATION.MATERIAL	CES10903
A035C612	DRAWING.ENGINEERING	A035C612

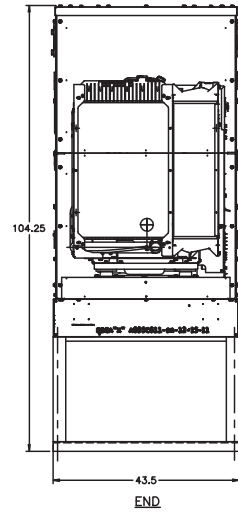
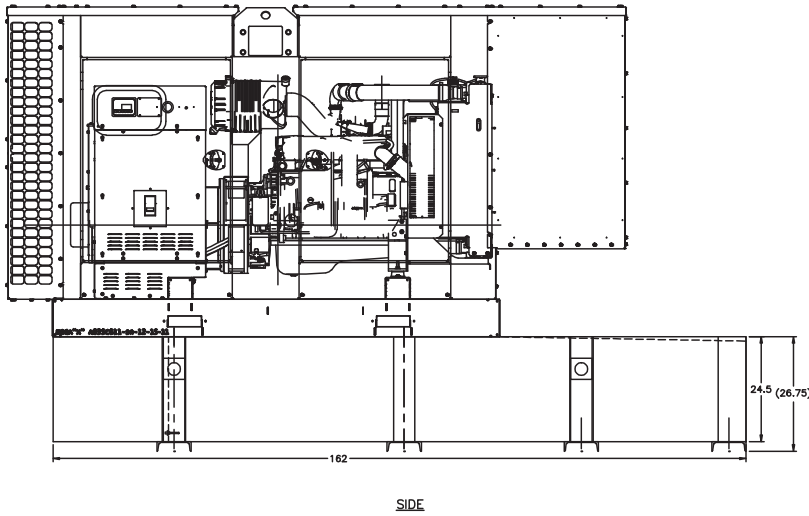


QUOTE #	TANK CAPACITY	GENSET MODEL	GENSET FOOTPRINT	TANK WEIGHT
AAAQ10427	400 GAL	200DSGAE	43.5" X 144.8"	X LBS

PRELIMINARY DRAWING



RADIATOR END



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REVISIONS			REVISIONS		
REV	DATE	CHANGE MADE	REV	DATE	CHANGE MADE

**SUB BASE TANK W/ RUPTURE BASIN & STUB UP**  
 CUSTOMER/ID: CUMMINGS BRIDGEWAY  
 JOB REF: CMS BAD AXE  
 DRAWING REF: X  
 DWG #: AAAQ10427  
 DATE: 10/21/14  
 DRAWN BY: AWM



Global Power Components, Inc.  
 11111  
 11111



FRACTAL-DESIGNS  
 706 FLORENCE AVE.  
 ROYAL OAK, MI 48067

**TWELVE OAKS PROFESSIONAL CENTER**

41935 WEST 12 MILE ROAD  
 NOVI, MI 48374 USA

THOMAS DUKE COMPANY  
 COMMERCIAL PROPERTY

37000 GRAND RIVER  
 STE. 200  
 248.476.3700  
 WWW.THOMASDUKE.COM  
 41935 W. 12 MILE DR.  
 PROFESSIONAL CENTER

ISSUED FOR: PERMITS

ISSUE DATE: 01/20/2017

Project Number: 167002.003





Model: 8808AE  
Frequency: 60  
Full Name: 880-1133  
KW rating: 850 standby  
850 prime  
Emissions level: EPA 60/65 Stationary Emergency Tier 3  
100 prime  
100 standby

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Request estimate site sheet: 880-1134  
Request estimate equipment sheet: 880-1135  
Request performance site sheet: 880-1136  
Request performance equipment sheet: 880-1137  
Request start-up and/or shut-down schedule: 880-1138  
Request start-up and/or shut-down schedule equipment: 880-1139  
Request start-up and/or shut-down schedule equipment: 880-1140  
Request start-up and/or shut-down schedule equipment: 880-1141

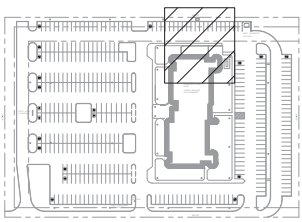
Fuel consumption	Rating	Prime	Standby
Max (GPH)	4.0	3.0	3.0
Max (LPH)	150.0	110.0	110.0
Max (GPD)	240.0	180.0	180.0
Max (LPH)	20.0	15.0	15.0

**Height**

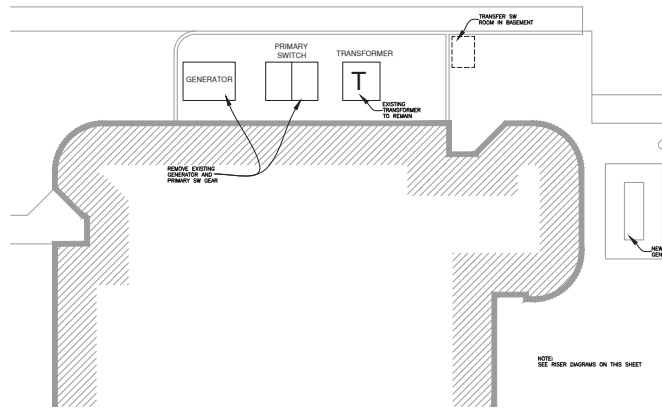
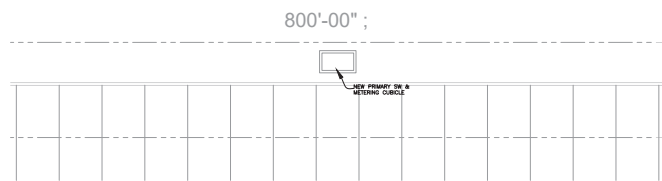
Category	Height	Equipment Rating
Start-up	1.5	1.5
Standby	1.5	1.5
Prime	1.5	1.5
Max (GPH)	4.0	3.0
Max (LPH)	150.0	110.0
Max (GPD)	240.0	180.0
Max (LPH)	20.0	15.0

**Notes**

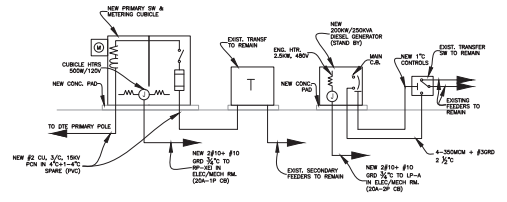
- 1. All fuel consumption rates are based on 20% excess air.
- 2. All fuel consumption rates are based on 20% excess air.
- 3. All fuel consumption rates are based on 20% excess air.
- 4. All fuel consumption rates are based on 20% excess air.
- 5. All fuel consumption rates are based on 20% excess air.



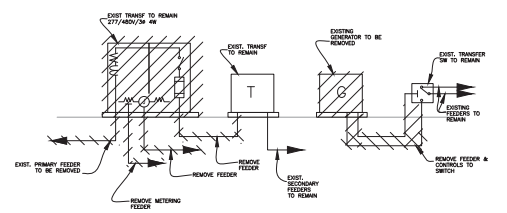
**KEY PLAN**  
SCALE: NONE



**SITE ELECTRICAL PLAN**  
SCALE: 1/8" = 1'



**REVISED RISER DIAGRAM**



**EXISTING RISER DIAGRAM**

REVISIONS

NO.	DATE	DESCRIPTION

DATE: 10/20/2023  
DRAWN BY: JENNIFER BRUCE  
CHECKED BY: JENNIFER BRUCE  
DATE: 10/20/2023