

Susan Lomas  
*Board Member*

Marion Rayburn  
*Board Member*

Chris Rader  
*Board Member*

Regina Dunay  
*Chairwoman*

Wade Fischer  
*Board Member*

**PUBLIC NOTICE AND PLANNING AND ZONING BOARD AGENDA  
October 13, 2014**

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**WELCOME!** We are very glad you have joined us for today's Planning and Zoning meeting. The Planning and Zoning Board is an advisory board to City Council comprised of citizen members who voluntarily and without compensation devote their time and talents to a variety of zoning and land development issues in the community. All P&Z recommendations are subject to final action by City Council. The results of today's meeting will be presented at the City Council meeting on **October 21, 2014** for approval of recommended actions. Any person desiring to appeal a recommended action of the Board should observe the notice regarding appeals below. **CAUTION:** Untimely filing by any appellant shall result in an automatic denial of the appeal.

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The Planning and Zoning Board as the Local Planning Agency for the City of Edgewood will meet at 405 Larue Avenue, Edgewood, Florida, to consider the items of business listed herein at the time and date indicated below.

**Monday, October 13, 2014 6:30 P.M.**

1. CALL TO ORDER
2. PLEDGE OF ALLEGIANCE
3. NEW BUSINESS
  - (a) Approval of Minutes:
    - (i) May 12, 2014
    - (ii) June 9, 2014
    - (iii) July 14, 2014
  - (b) Russell Home Site Plan ~ 510 Holden Ave
  - (c) Comprehensive Plan Amendment Transmittal of Scriveners' Error
4. COMMENTS/ANNOUNCEMENTS

**FUTURE MEETINGS:** (SCHEDULE CONTINGENT UPON SUBMITTAL OF ITEMS THAT REQUIRE CONSIDERATION OF THE PLANNING & ZONING BOARD AS THE LOCAL PLANNING AGENCY FOR THE CITY OF EDGEWOOD)

- October 13, 2014 ~ P&Z Meeting
- October 21, 2014 ~ City Council Meeting
- November 10, 2014 ~ P&Z Meeting
- November 18, 2014 ~ City Council Meeting
- December 8, 2014 ~ P&Z Meeting
- December 16, 2014 ~ City Council Meeting

**GENERAL RULES OF ORDER**

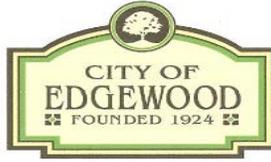
The Board is pleased to hear non-repetitive comments related to business before the Board; however, a five (5) minute time limit per person has been set by the Board. Large groups are asked to name a spokesperson. If you wish to appear before the Board, please fill out an Appearance Request/Lobbyist Registration Form and give it to the City Clerk. When recognized by the Chairman, state your name and address and speak directly into the microphone. The City is guided by ROBERTS RULES OF ORDER in governing the conduct of the meeting. Persons with disabilities needing assistance to participate in any of these proceedings should contact the City Clerk at 407-851-2920 at least 24 hours in advance of the meeting.

**WE ASK THAT ALL ELECTONIC DEVICES (IE. CELL PHONES, PAGERS) BE SILENCED DURING OUR MEETING!**

Thank you for participating in your government!

**APPEALS:** According to Edgewood City Code Section 26-24 (2), “any person aggrieved by any recommendation of the Board acting either under its general powers or as a Board of Adjustment may file a notice of appeal to the City Council within seven (7) days after such recommendation is filed with the City Clerk

You are welcome to attend and express your opinion. Please be advised that Section 286.0105, Florida Statutes state that if you decide to appeal a decision made with respect to any matter, you will need a record of the proceedings and may need to ensure that a verbatim record is made. In accordance with the American Disabilities Act (ADA), if any person with a disability as defined by the ADA needs special accommodation to participate in this proceeding, he or she should telephone the City Clerk at (407) 851-2920.



**Planning & Zoning Board  
May 12, 2014**

**Attendees:**

Regina Dunay, Chairwoman  
Susan Lomas, Board Member  
Marion Rayburn, Board Member  
Wade Fischer, Board Member

**Absent:**

Jon Van Voorhis, Board Member

**Staff:**

Cinnamon Wild, Administrative Assistant  
Drew Smith, City Attorney

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**CALL TO ORDER**

Chairwoman Regina Dunay called the Planning & Zoning Board meeting to order at 6:30 p.m., followed by the Pledge of Allegiance. Administrative Assistant Wild announced there is a quorum.

**APPROVAL OF MINUTES**

- December 9, 2013 Planning & Zoning Board Meeting Minutes

***Board Member Lomas made the Motion to approve; Seconded by Board Member Rayburn. Unanimously approved (4/0).***

**ORDINANCE NO. 2014-03 ESTATE SALES**

Chairwoman Dunay read Ordinance 2014-03 in title only. She noted that this is the first reading of Ordinances 2014-03 and 2014-04. Attorney Smith confirmed for Chairwoman Dunay that this is the only time that the P&Z Board will be reviewing the proposed ordinances.

Attorney Smith gave some background and reasons as to why the City would want to adopt a new ordinance.

Attorney Smith clarified for Board Member Lomas that two (2) consecutive weekends are allowed for estates sales due to rain outs.

The Board discussed how the language in the ordinance indicating no permit being required for the Estate Sales and Attorney Smith clarified that is the old language and it will need to be revised.

***Board Member Lomas made the Motion to recommend approval; Seconded by Board Member Fischer. Unanimously approved (4/0).***

Administrative Assistant Wild announced that Council will consider the first reading of this Ordinance in their May Council meeting.

**ORDINANCE 2014-04 – MEDICAL MARIJUANA**

Chairwoman Dunay read Ordinance 2014-04 in title only.

Attorney Smith gave an explanation of the history of the Medical Marijuana Bill. He explained the purpose of the Ordinance is not a permanent solution. He said you cannot make illegal zoning of this type of use. He noted that the City will have specific criteria that have to be met for this type of approval.

Attorney Smith noted there are some revisions he would like to see due to what was passed in the legislative session.

***Board Member Rayburn made the Motion to recommend approval; Seconded by Chairwoman Dunay. Unanimously approved 4/0.***

Chairwoman Dunay questioned Administrative Assistant Wild about future meetings and Administrative Assistant Wild noted the upcoming meetings to come before the P&Z Board.

**NEW BUSINESS**

None.

**COMMENTS/ANNOUNCEMENTS**

None.

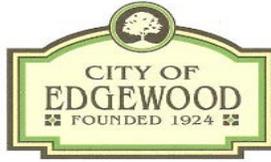
**ADJOURNMENT:**

With no further business or discussion, the Planning and Zoning Board meeting adjourned at 6:53 p.m.

\_\_\_\_\_  
Regina Dunay, Chairwoman

ATTEST

\_\_\_\_\_  
Bea L. Meeks, MMC, CPM  
City Clerk



**Planning & Zoning Board  
June 9, 2014**

**Attendees:**

Regina Dunay, Chairwoman  
Susan Lomas, Board Member  
Marion Rayburn, Board Member

**Absent:**

Jon Van Voorhis, Board Member  
Wade Fischer, Board Member

**Staff:**

Cinnamon Wild, Administrative Assistant  
Ray Bagshaw, Mayor  
Ellen Hardgrove, Planner  
Chris Francisco, Police Chief  
Drew Smith, City Attorney

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**CALL TO ORDER**

Mayor Bagshaw introduced to the audience and the Planning & Zoning Board the City's new Chief of Police, Chris Francisco.

Chairwoman Dunay called the Planning & Zoning Board meeting to order at 6:30 p.m., followed by the Pledge of Allegiance. Administrative Assistant Wild confirmed for Chairwoman Dunay that there is a quorum.

**APPROVAL OF MINUTES**

- March 3, 2014 – Special P&Z meeting for Russell Home.

***Chairwoman Dunay made the motion to approve the revision of minutes per hand-written instructions; Seconded by Board Member Rayburn. Unanimously approved 3/0.***

**NEW BUSINESS**

Chairwoman Dunay opened the meeting and noted that the board will be considering three applications submitted by Boise Cascade, located at 75 W. Holden Avenue (Application #2014-04 for Lot Split, Rezoning and Special Exception).

Planner Hardgrove came forward and presented her report. After discussion, Attorney Smith confirmed for Mayor Bagshaw that due to incorrect legal and improper placement of signage providing notice of meeting it would be best to table the meeting to July 14, 2014. Mayor Bagshaw made the announcement to invite residents to come forward and express their concerns and any questions they may have regarding the following applications for Boise Cascade:

- Lot Split
- Rezoning
- Special Exception

The following residents came forward to make comment:

- David Slaten, 4507 Forrestal Ave
- Jim Worthen, HAINC
- David Nesbit, 4360 Ilene Ct.
- William & Aileen Helger, 4521 Forrestal Ave
- Billie Fitzhugh, 4516 Forrestal Ave
- Randall Sumner, 305 Krueger St.

**COMMENTS/ANNOUNCEMENTS**

None.

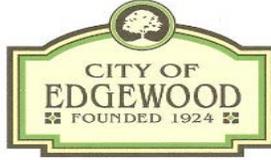
**ADJOURNMENT:**

With no further business or discussion, the Planning and Zoning Board meeting adjourned at 7:25 p.m.

\_\_\_\_\_  
Regina Dunay, Chairwoman

ATTEST

\_\_\_\_\_  
Bea L. Meeks, MMC, CPM  
City Clerk



**Planning & Zoning Board  
July 14, 2014**

**Attendees:**

Regina Dunay, Chairwoman  
Susan Lomas, Board Member  
Marion Rayburn, Board Member

**Absent:**

Jon Van Voorhis, Board Member  
Wade Fischer, Board Member

**Staff:**

Cinnamon Wild, Administrative Assistant  
Ray Bagshaw, Mayor  
Ellen Hardgrove, Planner  
Chris Francisco, Police Chief  
Drew Smith, City Attorney

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**CALL TO ORDER**

Chairwoman Dunay called the Planning & Zoning Board meeting to order at 6:30 p.m., followed by the Pledge of Allegiance. Administrative Assistant Wild confirmed for Chairwoman Dunay that there is a quorum.

**APPROVAL OF MINUTES**

- There were no minutes to be approved

**NEW BUSINESS**

Chairwoman Dunay noted that the Board will be considering the three applications submitted by Boise Cascade, located at 75 W. Holden Avenue (Application #2014-04 for Lot Split, Rezoning and Special Exception).

Planner Hardgrove came forward and presented her report, she noted that this request is for additional storage for Boise Cascade. Planner Hardgrove noted that the subject property is Fellowship Baptist Church. Planner Hardgrove explained to the Board and audience, in order for Boise to obtain the

additional outdoor storage, the Board will review and consider the following three (3) applications for approval:

- (1) Subdivision of church property (so Boise can purchase the new lot)
- (2) Rezoning of the new lot to C-3
- (3) Special Exception of C-3 lot for approval of outdoor storage.

Planner Hardgrove said that all three applications will be considered in this evening's meeting. Planner Hardgrove referred to a map in the P&Z packet, she provided an explanation of the map. Planner Hardgrove said that Staff is recommending approval of all three (3) requests subject to specific conditions of approval. Planner Hardgrove noted that the new lot must be used jointly with the adjacent property to provide standard access, because the new lot provides no access per subdivision regulations.

Below are the list of conditions of approval for the C-3 Approval, the rezoning application:

- (1) Staff recommends that the property is to be used with adjacent C-3 zoned land.
- (2) Staff recommends an 8' high wall to provide a permanent physical barrier and help maintain property value of the homes. Plus the recommendation of a wall of vegetation, one (1) shade tree per every 40' and an infill of shrubs that can archive a 25' height.
- (3) Recommendation for specific building setbacks, 30' from west property line (homes), 25' from south property line (church). Also that stored equipment shall not exceed one (1) story in height, to protect the adjacent property owners (homeowners).

Planner Hardgrove noted that all these conditions that go with the C-3 zoning will be documented in the Memorandum of Understanding (MOU). The MOU is signed by the property owner, applicant and the city. The MOU is to document the understanding and conditions for approval, for future use in the event that the property is sold.

Planner Hardgrove said the last request is the Special Exception, and that applicant is requesting outdoor storage for use of the new lot. She also stated that staff is recommending approval of this request, but they cannot exceed 35' in height within 100' of residentially zoned property.

Chris Mello from Boise Cascade came forward to speak, and he noted that they are requesting a 35' high storage area with the roof. He noted they usually don't exceed 24'. Mr. Mellow explained that due to the building being fire sprinklered, anything higher, the fire suppression system would not work.

Administrative Assistant Wild called the first person to speak.

The following resident's filled out speaker cards to address their concerns to the P&Z Board:

- David Slaten
  - His name was called but he declined to speak, and he deferred his Randy Sumner.
- Randall Sumner – 305 Kruegor St., Orlando, 32839 ~ President of South Lake Holden HOA
- Denver Bass – 4515 Forrestal Ave
  - His name was called to speak, but he declined to speak.
- Doris Click – 228 Doolittle St.
  - Her name was called to speak, but she declined to speak and deferred her time to Jim Worthen.
- Billie Marie Fitzhugh – 4516 Forrestal Ave
- David Nesbit – 4360 Ilene Ct.
- Jim Worthen ~ HAINC – P.O. BOX 568412, Orlando, 32856

Jim Worthen provided the conditions that the HOA would like to see, because as he stated “they (HAINC) felt that the conditions as provided in the Planner’s report were inadequate and not complete”. Mr. Worthen also provided a news article for the P&Z Board related to “bedroom communities” like Edgewood.

Chairwoman Dunay questioned the difference between Planner Hardgrove conditions for approval and HAINC’s requested conditions. Mr. Worthen compared the conditions as provided by Planner Hardgrove and HAINC. Chairwoman Dunay thanked Mr. Worthen for his comments.

Attorney Smith noted that Boise Cascade can come and speak and comment on what was commented previously.

Chris Mello, representative of Boise Cascade came forward and referenced how a resident had noted that a retention pond is full of water. He noted that SJRWMD comes out and monitors and cleans out the drain. He said that their landscape staff does maintain and take care of grass and weeds when they can.

He also noted the building height as referred to by another resident that they would need a minimum storage height of 24’. Mr. Mello confirmed for Chairwoman Dunay that the 24’ inside storage would equate to 35’ high building.

Mr. Mello noted that an 8’ high masonry wall could be installed, and that Boise Cascade is agreeable to following the requirements per the City code.

Chairwoman Dunay questioned the operational hours. Mr. Mello noted that there are no limits that he is aware of. He said they probably could operate 24 hours/7 days a week, but noted that they currently do not. He also said that he wasn’t aware that they had any restrictions on their hours of operation. Mr. Mello noted for Chairwoman Dunay that they usually start around 5 a.m., and are done by 7 or 8 p.m. He noted that there are occasions when they work as late as 9 or 10 p.m. He said that Boise is close to a 24 hour operational facility.

Board Member Lomas questioned Mr. Mello about the tractor trailers. Mr. Mello noted that he is aware that there is no thru traffic on Holden. He noted there is no through traffic from their trucks on Holden Ave. Mr. Mello stated that their trucks use the entrance on Holden and are not in violation of the law. Board Member Lomas noted that she remembered when Boise took over the property that no trucks were allowed on Holden Avenue, and that they would only enter and exit onto Orange Avenue. Mr. Mello noted that may have been before his time because in the two and a half years being with Boise, he has not been made aware of that. He stated if that is something they need to change to let them know.

Jim Worthen provided a letter for the record dated 06/20/2001 from Boise addressing the concerns of “No Right Turn” Mayor noted that Holden is a county road and not a city road so he would need to confirm with the County on the policy for the road. It was decided to re-address at a later time.

Chairwoman Dunay asked if there were questions or comments from the Board. Board Member Lomas noted that if there is room from where the retention pond is located, move the building over. She suggested that she would like to see it as far away from residential as possible. Mr. Mello said that it is approximately 70’. Planner Hardgrove said that where the retention pond is on the north, there is no visual buffer for the residents.

Chairwoman Dunay confirmed for resident Billie Fitzhugh, that the City can look into her concerns regarding traffic.

Planner Hardgrove came forward and went over the different zoning districts in the city and the building height allowed. She noted that any use is allowed to be 35' in height. She also noted that the City would need to be very specific, and possibly allow 35' for the whole property.

Planner Hardgrove referred to HAINC comments and she stated her recommendations of their concerns.

Chairwoman Dunay questioned if Mr. Worthen would like to come forward to speak, and he noted the hours of operation that are posted on the Boise Cascade gate. Attorney Smith confirmed for Board Member Lomas that if they operate outside of their hours of operation it would become a Code Enforcement issue. Chairwoman Dunay questioned Attorney Smith about limiting their hours of operation; Attorney Smith confirmed for Chairwoman Dunay that any restrictions for Boise would only be limited to the new portion of Boise property.

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Chairwoman Dunay questioned if there was any further discussion or questions. Attorney Smith reminded Chairwoman Dunay on the motions that will be required.

**Recommendation 1: Approve the subdivision with the following condition:**

Joint use of the "north lot" with an adjacent parcel that provides standard public road access to the property.

**Board Member Lomas made the motion to recommend approval based on conditions; Seconded by Chairwoman Dunay. Unanimously approved 3/0.**

**Recommendation 2: Approve C3 zoning on the north 194.4 feet of the church property (1.19 acres) with the following conditions:**

- (1) The property is to be used with adjacent C-3 zoned land;
- (2) An 8 feet high masonry wall shall be constructed along the west property boundary;
- (3) A landscape buffer shall be provided along the west property boundary to include irrigated, large non-deciduous trees and/or shrubs adjacent to the wall that will achieve a dense visual screening from 8 feet to at least 25 feet in height;
- (4) Building setback shall be 30 from residential zoned land west of the property and 25 feet from residential zoned land south of the property. Use of the specified setbacks shall be limited to landscaping and storm water management. Structures, including accessory buildings, shall not be allowed within the building setback;
- (5) Buildings shall be limited to one story and a maximum of 35 feet in height;
- (6) Operational hours shall be limited to 6:00 a.m. to 6:00 p.m.;
- (7) No cutting or sawing activities shall occur outside of a completely enclosed building; and,
- (8) The conditions of approval shall be notated on the City of Edgewood Zoning Map and shall run with the Subject property as documented in a Memorandum of Understanding (MOU) executed by the Owner, Applicant, and City. The Owner/Applicant shall cause the Memorandum of Understanding (MOU) to be recorded in order to place subsequent purchasers on notice of the additional zoning restrictions placed upon the Subject Property.

**Board Member Rayburn made the motion to approve based on conditions; Seconded by Chairwoman Dunay. Unanimously approved 3/0.**

**Recommendation 3: Approve a Special Exception in the C3 district for Outdoor Storage of merchandise, parts or other equipment with the following conditions:**

- (1) No materials, equipment or other goods stored outdoors shall exceed 24 feet in height.
- (2) Per Section 134-104, the special exception shall expire 12 months after the effective date of the approval unless the rights of the special exception granted have been exercised prior to the expiration date. Acquisition of necessary building permits/interior alterations, installation of required equipment or initiation of the activity granted shall be considered adequate exercising of the special exception rights. If the use is abandoned for a period of six months, such special exception is terminated.

**Board Member Lomas made the motion to approve based on conditions; Seconded by Chairwoman Dunay. Unanimously approved 3/0.**

Attorney Smith confirmed with Ellen Hardgrove that the re-zoning will go before the City Council meeting tomorrow evening. He said that the Lot Split and Special Exception application will be heard at the next City Council meeting in August. He noted that this is due to the rezoning requiring two (2) readings before adoption. All three (3) applications will be on the August City Council Agenda.

Administrative Assistant Wild confirmed for Chairwoman Dunay that there is no other business just the upcoming meetings as noted on the Agenda. Chairwoman Dunay announced the meetings and that they will be posted on the website.

**COMMENTS/ANNOUNCEMENTS**

None.

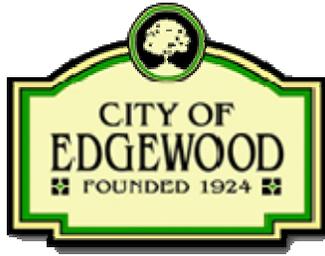
**ADJOURNMENT:**

With no further business or discussion, the Planning and Zoning Board meeting adjourned at 8:13 p.m.

\_\_\_\_\_  
Regina Dunay, Chairwoman

ATTEST

\_\_\_\_\_  
Bea L. Meeks, MMC, CPM  
City Clerk



405 Larue Avenue - Edgewood, Florida 32809-3406  
(407) 851-2920

## MEMORANDUM

**TO:** MS. BEA MEEKS, CITY CLERK

**FROM:** SAM J. SEBAALI, P.E., FLORIDA ENGINEERING GROUP, INC. - CITY ENGINEER

**DATE:** OCTOBER 8, 2014

**SUBJECT:** THE RUSSELL HOME – SITE PLAN APPLICATION REVIEW  
OWNER – RUSSELL HOME FOR ATYPICAL CHILDREN, INC.  
501 HOLDEN AVENUE  
FEG TA-13-036

Pursuant to your request, I have reviewed the site plans dated October 3, 2014, which were submitted by the applicant to the City of Edgewood and received by FEG on October 7, 2014. My review did not include the landscaping for the project as this component is being reviewed by the City Planning Consultant, Ellen Hardgrove.

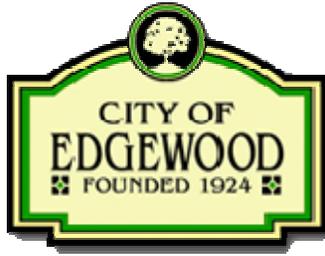
I recommend approval of the submitted plans subject to the following conditions:

### **CONDITIONS:**

1. Upon completion of the improvements, the Engineer of Record shall provide the City with an as-built record drawing of the completed project along with a letter certifying that the improvements were built in substantial compliance with the approved plans and permit documents.
2. The contractor is responsible for the notification, location and protection of all utilities that may exist within the project limits.
3. Per the construction site inspection requirements of the Orange County MS4 Permit FLS00001 [Part III(A)(9)(b)], the Contractor is to notify the City Engineer at SSebaali@feg-inc.us of their intended start of construction and construction duration. This notification should be provided a minimum of three (3) working days prior to commencement of construction.
4. Approval of these plans, if granted by the City of Edgewood, does not grant authority to enter, construct or otherwise alter the property of others, nor does it waive any permits that may be required by federal, state, regional, county, or other agencies that may have jurisdiction.
5. The applicant is responsible for all fees associated with the procurement of the site permits.

cc: Mayor  
Ellen Hardgrove, AICP, City Planning Consultant  
Applicant (by City Hall Staff)

FILE: FEG 11-081; TA-13-036



405 Larue Avenue - Edgewood, Florida 32809-3406  
(407) 851-2920

## MEMORANDUM

**TO:** MS. BEA MEEKS, CITY CLERK

**FROM:** SAM J. SEBAALI, P.E., FLORIDA ENGINEERING GROUP, INC. - CITY ENGINEER

**DATE:** OCTOBER 8, 2014

**SUBJECT:** THE RUSSELL HOME – TREE REMOVAL REVIEW  
OWNER – RUSSELL HOME FOR ATYPICAL CHILDREN, INC.  
501 HOLDEN AVENUE  
FEG TA-13-036

Pursuant to your request, I have reviewed the tree removal permit application re-submittal made by the applicant on October 7, 2014. As required by the Tree Management and Protection requirements of the City Code, Chapter 130, this permit is being reviewed as part of the site plan approval process.

According to the revised tree removal application, the applicant is proposing to remove a total of twelve (12) trees. None of the subject trees meet the size requirements for Historic Tree designation. The trees proposed for removal also fall within the proposed improvement areas, and their removal is necessary to construct the proposed improvements.

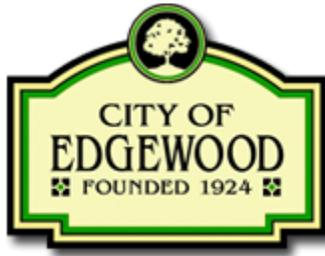
Adequate replacement trees are provided to mitigate the proposed tree removal. Therefore, the tree removal application can be approved.

The approval recommendation is subject to the following conditions:

1. No other trees, other than those shown on the Landscape Plan to be removed, are to be removed or relocated without City approval. Any additional trees, which are found to be removed at final inspection, will be subject to replacement requirements as outline in the Tree Management and Protection requirements of the City Code, Chapter 130.
2. Tree protection shall be provided during and after construction as required by the Tree Management and Protection requirements of the City Code, Chapter 130.
3. Final approval and issuance of Certificate of Occupancy for the building will be subject to inspection of the landscape installation and tree replacement as provided in the City Code.

cc: Mayor  
Ellen Hardgrove, AICP, City Planning Consultant  
Applicant (by City Hall Staff)

FILE: FEG 11-081; TA-13-036



405 Larue Avenue - Edgewood, Florida 32809-3406  
(407) 851-2920

To: Planning and Zoning Board  
From: Ellen Hardgrove, AICP, City Planning Consultant  
Date: October 9, 2014  
Subject: Site Plan Approval – Russell Home

## I. Introduction

On March 10, 2014, the City Council approved the recommendations of the Planning and Zoning Board related to requested variances for Russell Home renovations/expansion. The following provides a summary of the approval with the associated conditions of approval.

### **Variance #1 – Front Yard Setback: Approved for 26.5 feet.**

#### Conditions

- *Maintenance of a 6 feet high opaque fence along the north property line where adjacent to residentially used lots.*
- *Planting and clustering trees to fill in the gaps of existing trees on the adjacent property to the north. This will be applied during the site plan permitting stage. The intent is to create an illusion of depth and break up the bulk of the building, and buffering. “Understory trees should be used.”*
- *“Exterior lighting to be downlighting to minimize glare on adjacent properties.”*
- *Building height limited to one story within 30 feet of the north property line.*

### **Variance #2 – Rear Yard Setback (south): Approved for 26 feet.**

#### Conditions

- *The rear yard variance is only approved in the location of the existing playroom and the new addition as shown on the site plan dated 2/10/14.*
- *Maintenance of a 6 feet high opaque fence along south side where adjacent to residentially used property;*
- *Building height limited to one story within 35 feet of the south property line.*

### **Variance #3 – Dumpster location and screening: Approved to be located in front (north) yard.**

### **Variance #4 – Screening of Vehicle Use Area from residential property (south property line): Approved for no landscaping.**

#### Conditions

- *Orange County Fire Department approves the design for fire emergency vehicle turnaround [Letter to be submitted with site plan approval].*

- *Parking of any vehicle, including any Loading/unloading, in the “hammerhead” as shown by diagonal lines on the 2/10/14 site plan shall be prohibited.*
- *Installation of a 6 feet high opaque fence along the south property line adjacent to the emergency turnaround to the southeast corner of the property. If County objects to an opaque 6 feet high fence installed where adjacent to the County easement that extends from south of the south property line of the subject property, the existing chain link fence can be maintained in lieu of the opaque fence.*

Note: Variance #4 relates to the Code's required screening of Vehicle Use Areas. Where Code requires 7 feet of landscaped buffer, the approval was for total elimination of the buffer/ landscaping. The discussion at the hearing was the landscape buffer was not needed since there was to be at least 30 feet of what appears to be green space between the property line and vehicle use area created by the fire truck turnaround area on grass over a stabilized base.

The condition of the variance approval was to obtain a letter from the Fire Department that shows acceptance of this non-traditional material to accommodate their equipment. The City has received confirmation that the proposed stabilized ground material could be supported if the material can accommodate a 41 ton fire-vehicle. The Fire Department also noted the “green” area would need to be signed so that any responding apparatus would be aware that it was there.

**Variance #5 – Screening of Vehicle Use Area from residential property (east property line): Approved 6’ wide buffer width with 6’ high chain link fence.**

**Variance #6 – Impervious Surface Ratio: Approved for maximum 67% proposed with understanding drainage plan will be analyzed and approved during site plan review.**

## **II. Site Plan Conditions of Approval**

Development shall be consistent with Site Plan date stamped “Oct 03 2014 John Carson Kelly.” Any change to the plan, including but not limited to use of pervious stabilized base for fire-truck turn-around, must be resubmitted for City of Edgewood staff review and may require re-approval by City of Edgewood Council.

No Parking Fire Lane signs shall be spaced a maximum of 25 feet apart in fire vehicle turn-around area [east, south and west edges].

Landscaping shall be consistent with FNGLA Site Plan dated 9/19/14.

ESH

XC: Bea Meeks, City Clerk

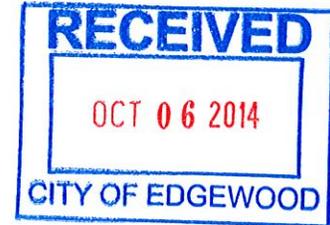
**Principals**

Wayne D. Chalifoux  
Donaldson K. Barton, Jr.  
Lucius J. Cushman, Jr.  
Jon S. Meadows  
Lawrence L. Smith, Jr.  
William T. Stone

October 6, 2014

**DRMP Job #11-0431.000**

Bea L. Meeks, MMC, CPM, CBTO, City Clerk  
City of Edgewood  
405 Larue Avenue  
Edgewood, FL 32809



Subject: The Russell Home – June 2014 Site Plan Review comments

Dear Bea:

Accompanying are revised plans and other items in response to

- 9/10/14 City Planner's Site Plan review comments
- 9/08/14 City Engineer's Site Plan review comments

**PLANNING COMMENTS**

**Screening of Vehicle use area comment**

To address the comment by OCFRD regarding the capacity of the turnaround area to accommodate OCFRD's 41 +/- ton truck, the following are attached:

- a) Calculation of required structural number vs provided structural number for the non-conventional surface, based on FDOT pavement design manual data.
- b) Manufacturer's data, including partial list of fire departments (nationally) accepting the product for fire lane use
- c) Static force sketch and calculation confirming ground pressure of vehicle less than Grasspave manufacturer's indicated product load limit

**Landscaping & Lighting**

As discussed with City's planner, the existing lights are Duke Energy equipment, not metered. The existing light on the east side of property is to be relocated a little southward to go on a new parking area landscape island. The existing light and power pole near the south boundary of the parking area is to be removed, but a light is shown near the south-eastern corner of the site, along the eastern boundary. We anticipate to be able to coordinate with Duke Energy to reuse the light from the south side pole. No other site lights are proposed under these plans.

A new landscape drawing is enclosed. We understand that the landscape designer has completely addressed the 9/10/14 comments.

Please see the attached email from Dave Richmond to Ellen Hardgrove for a recount of the conversations with neighbor Mr. Worthen.

**ENGINEERING COMMENTS**

1. DRMP has coordinated with the architect Mr. Johnson and Cuhaci-Peterson MEP engineers, and a rainwater collection system has been added to the building. The

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system will collect runoff from roof areas along the west and north sides, and will intercept the runoff which would have gone to those swales. A reduced copy of the C-P plan sheet is attached. The new roof collection system will discharge to the proposed parking lot inlet S-1. The separate system proposed to transmit rainfall from the atrium area is unchanged.

The area of *new* roof contributing runoff toward the south is shown on the enclosed mark-up of the architect's *Rainwater Diagram: 9/12/2014*. Runoff from the 23'x18' area at the southeastern corner of the building will be allowed to run off the roof, and this water drains eastward to the parking area where it will go to the existing inlet thence to the off-site SWM pond.

The new roof area of the storage room is approx.. 25 ft x 13.5 ft. The southern half of this roof pitching toward the south property line totals approx. 170 sf. This area runs off to the ground beside the south of the storage room. From there it has positive fall to the proposed swale at the western boundary. The attached hand sketch and calculation shows a conservative estimate of the western swale volume as 350 cu.ft., while the calculated runoff from portion of the roof in the design storm is 120 cu.ft.

2. The setback dimension of the building on C5.1 is corrected to 26.5ft
3. The existing conditions map is corrected, removing the two sheds. Those sheds have been removed.
4. Tree removal fee paid – acknowledged.
5. The Existing Conditions & Demolition Plan sheets shows the Cherry Laurel as “Tree #1”, near the northwest corner of the property.
6. Other agency approvals: We are diligently trying to get the plans through to County Building Department submittal, as the step to County Public Works review, for County PW staff to review and sign off on our revised discharge to the Cypress Grove Park SWM pond, which will be necessary to submit to Water Management District (since the Cypress Grove Park permit is held by Orange County). Regarding the OCFRD review, the emails with OCFRD reviewer since the 9/10/14 comments appear to bode well for the overall design layout – there seem to be no objections to the geometry or details, provided the strength of pavement is shown adequate.

Also, in addition to the responses above, please note two other items reflected in this plans revision:

- a) We now understand the building will not have a secondary electric service from the pole that is currently at the south boundary. This pole will be removed from this location and the plans are revised accordingly, in coordination with the MEP engineer. Previously, this pole was near the end of the emergency vehicle turnaround area.
- b) The MEP engineer has provided location and dimension of the proposed emergency generator near the north side of building and this is shown in our plans.

Thanks to all for continued review of this application. Please contact me with questions and comments.



Sincerely,  
**DRMP, Inc.**

Ross Galbraith, E.I.  
Project Manager

Attachments

CC: Dave Richmond, The Russell Home  
John C. Kelly, P.E.

Reference: FDOT Flexible Pavement Design Manual (Mar. 2008).

1. Comparative value of conventional vs. Grasspave (table 5.4)

<u>Conv.</u>	<u>Struct co-eff × thickness</u>	<u>Grasspave</u>	<u>Structural coeff × thickness</u>
i. 2" SP 9.5 asphalt	= 0.44 × 2	i. Assume Grasspave	= 0.
ii. 6" limerock base LBR 100	= 0.18 × 6	ii. 8" Limerock base assume LBR 70 since 95% Proctor	= 0.12 × 8
iii. 10" stabilized LBR 40	= 0.08 × 10	iii. 12" stabilized LBR 40	= 0.08 × 12
Total $SN_p = 2.76$		Total $SN_p = 1.92$	

Calculate  $SN_R$ .

- i. %R ⇒ Use 80% (as for collector). (Table 5.2).
- ii.  $M_R$  ⇒ Use  $M_{R(LBR 40)} = 12,000$  (table 5.1 - Max LBR for design)
- iii. Select  $M_{R(12)}$  (Table A.1A)
- iv. Use conservative  $ESAL_{100,000}$  (actual  $ESAL$  based on basic eqn is too low to calculate). (Basic eqn and Table A.1A.)
- v. From Table A.1A,  $SN_R = 1.77$

Conclusion:  $SN_{provided} = 1.92$

$SN_{req.} = 1.77$

$SN_p > SN_R$  OK.

TABLE 5.4

STRUCTURAL COEFFICIENTS FOR DIFFERENT PAVEMENT LAYERS

<u>Group</u>	<u>Layer Type</u>	<u>Layer Coef. Per unit Thickness</u>	<u>Spec. Sect.</u>
Friction Courses	FC-5	0.00	337
	FC-12.5, FC-9.5	0.44	337
Structural Courses	Superpave Type SP (SP-9.5, SP-12.5, SP-19.0)	0.44	334
Base Courses (General use)	Limerock (LBR 100)	0.18	200
	Cemented Coquina (LBR 100)	0.18	250
	Shell Rock (LBR 100)	0.18	250
	Bank Run Shell (LBR 100)	0.18	250
	Graded Aggregate (LBR 100)	0.15	204
	Type B-12.5	0.30	280
Base Courses (Limited use)	Limerock Stab. (LBR 70)	0.12	230
	Shell Stab. (LBR 70)	0.10	260
	Sand Clay (LBR 75)	0.12	240
	Soil Cement (500 psi)	0.20	270
	Soil Cement (300 psi)	0.15	270
Stabilization	Type B Stab. (LBR 40)	0.08	160-2
	Type B Stab. (LBR 30)	0.06	160-2
	Type C Stab.	0.06	160-2
Subgrade	Cement Treated (300 psi)	0.12	170
	Lime Treated	0.08	165

TABLE 5.2

RELIABILITY (%R) FOR DIFFERENT ROADWAY FACILITIES

<u>Facility</u>	<u>New</u>	<u>Rehabilitation</u>
Limited Access	80 - 95	95 - 99
Urban Arterials	80 - 90	90 - 97
Rural Arterials	75 - 90	90 - 95
Collectors	75 - 85	90 - 95

Notes

The type of roadway is determined by the Office Of Planning and can be obtained from the Roadway Characteristics Inventory (RCI).

The designer has some flexibility in selecting values that best fits the project when choosing the Reliability (%R).

Considerations for selecting a reliability level include projected traffic volumes and the consequences involved with early rehabilitation, if actual traffic loadings are greater than anticipated. A detailed discussion of reliability concepts can be found in the AASHTO Guide For Design Of Pavement Structures.

For traffic volume ranges, refer to Chapter 2, Design Geometrics and Criteria, of the Plans Preparation Manual - Topic No. 625-000-007.

#### 5.2.4 RESILIENT MODULUS ( $M_R$ ) FROM LBR

If a Design LBR or  $M_R$  Value is not available from the District Materials Office, and a series of LBR values are provided, the Pavement Design Engineer may select a Design LBR Value (not to exceed a maximum of 40 LBR) based on the 90th percentile. The following simple analysis is provided as an example.

#### GIVEN:

The following illustrates the mechanics of calculating the Resilient Modulus ( $M_R$ ) obtained from a set of LBR data.

#### DATA:

The following field data has been provided;

<u>Sample Number</u>	<u>LBR Values In Ascending Order</u>
1	22
2	22
3	23
4	24
5	24
6	24
7	25
8	25
9	25
10	26
11	26
12	27
13	27
14	40

TABLE 5.1

RELATIONSHIP BETWEEN RESILIENT MODULUS ( $M_R$ ) AND  
LIMEROCK BEARING RATIO (LBR) SAMPLE VALUES

The following are some Limerock Bearing Ratio (LBR) input values that were input into these equations to obtain Resilient Modulus ( $M_R$ ) values.

<u>Limerock Bearing</u>	<u>Resilient Modulus</u>
<u>Ratio (LBR)</u>	<u>PSI</u>
10	4500
12	5000
14	5500
16	6000
18	7000
20	7500
22	8000
24	8500
26	9000
28	9500
30	10000
32	10500
34	11000
36	11500
38	12000
40	12000

APPENDIX D

ESTIMATING DESIGN 18-KIPEQUIVALENT SINGLE  
AXLE LOADS (ESAL<sub>D</sub>)

## D.2 BASIC EQUATION

The  $ESAL_D$  required for pavement design purposes can be computed using the following equation:

$$ESAL_D = \sum_{y=1}^{y=x} (AADT \times T_{24} \times D_F \times L_F \times E_{18} \times 365)$$

where:

$ESAL_D$  = Number of accumulated 18-kip Equivalent Single Axle Loads in the design lane for the design period.

$y$  = The year that the calculation is made for.

When  $y=1$ , all the variables apply to year 1.

Most of the variables are constant except AADT which may change from year to year. Others may change when changes in the system occur. Such changes include parallel roads, shopping centers, truck terminals, etc.

$x$  = The Design Year.

AADT = Average Annual Daily Traffic.

$T_{24}$  = Percent Heavy Trucks during a 24 hour period. Trucks with 6 tires or more are considered in the calculations.

$D_F$  = Directional Distribution Factor. Use 1.0 if one way traffic is counted or 0.5 for two way traffic. This value is not to be confused with the Directional Factor use for planning capacity computations.

$L_F$  = Lane Factor converts directional trucks to the design lane trucks. Lane factors can be adjusted to account for unique features known to the designer such as roadways with designated truck lanes.  $L_F$  values can be determined from Table D.2.

$E_{18}$  = Equivalency factor which is the damage caused by one average heavy truck measured in 18 kip Equivalent Single Axle Loads. These factors will be periodically updated based on Weigh-In-Motion (WIM) data.  $E_{18}$  values can be determined from Table D.3.

TABLE A.1A

REQUIRED STRUCTURAL NUMBER (SN<sub>R</sub>)  
 75% RELIABILITY (%R)  
 RESILIENT MODULUS (M<sub>R</sub>) RANGE 4000 PSI TO 18000 PSI

RESILIENT MODULUS (M<sub>R</sub>), (PSI × 1000)

ESAL <sub>D</sub>	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
100 000	2.72	2.50	2.33	2.19	2.08	1.99	1.91	1.83	1.77	1.71	1.66	1.62	1.57	1.53	1.50
150 000	2.91	2.67	2.49	2.35	2.23	2.13	2.04	1.97	1.90	1.84	1.79	1.74	1.69	1.65	1.61
200 000	3.05	2.80	2.61	2.46	2.34	2.23	2.14	2.07	2.00	1.93	1.88	1.83	1.78	1.74	1.70
250 000	3.17	2.91	2.71	2.55	2.43	2.32	2.23	2.14	2.07	2.01	1.95	1.90	1.85	1.81	1.76
300 000	3.27	3.00	2.79	2.63	2.50	2.39	2.29	2.21	2.14	2.07	2.01	1.96	1.91	1.86	1.82
350 000	3.35	3.08	2.87	2.70	2.57	2.45	2.35	2.27	2.19	2.13	2.07	2.01	1.96	1.91	1.87
400 000	3.42	3.14	2.93	2.76	2.62	2.51	2.41	2.32	2.24	2.17	2.11	2.06	2.00	1.96	1.91
450 000	3.49	3.21	2.99	2.82	2.68	2.56	2.46	2.37	2.29	2.22	2.15	2.10	2.04	2.00	1.95
500 000	3.55	3.26	3.04	2.87	2.72	2.60	2.50	2.41	2.33	2.26	2.19	2.13	2.08	2.03	1.99
600 000	3.66	3.36	3.14	2.95	2.81	2.68	2.58	2.48	2.40	2.33	2.26	2.20	2.15	2.10	2.05
700 000	3.75	3.45	3.22	3.03	2.88	2.75	2.64	2.55	2.46	2.39	2.32	2.26	2.20	2.15	2.10
800 000	3.83	3.52	3.29	3.10	2.94	2.81	2.70	2.60	2.52	2.44	2.37	2.31	2.25	2.20	2.15
900 000	3.91	3.59	3.35	3.16	3.00	2.87	2.75	2.66	2.57	2.49	2.42	2.36	2.30	2.24	2.19
1 000 000	3.97	3.65	3.41	3.22	3.06	2.92	2.80	2.70	2.61	2.53	2.46	2.40	2.34	2.28	2.23
1 500 000	4.23	3.90	3.64	3.44	3.27	3.12	3.00	2.89	2.80	2.71	2.63	2.57	2.50	2.44	2.39
2 000 000	4.42	4.08	3.82	3.60	3.43	3.27	3.15	3.03	2.93	2.84	2.76	2.69	2.62	2.56	2.51
2 500 000	4.57	4.23	3.96	3.74	3.55	3.40	3.26	3.15	3.04	2.95	2.87	2.79	2.72	2.66	2.60
3 000 000	4.70	4.35	4.07	3.85	3.66	3.50	3.36	3.24	3.14	3.04	2.96	2.88	2.81	2.74	2.68
3 500 000	4.80	4.45	4.17	3.94	3.75	3.59	3.45	3.33	3.22	3.12	3.03	2.95	2.88	2.81	2.75
4 000 000	4.90	4.54	4.26	4.03	3.83	3.67	3.53	3.40	3.29	3.19	3.10	3.02	2.94	2.88	2.81
4 500 000	4.98	4.62	4.33	4.10	3.91	3.74	3.59	3.47	3.35	3.25	3.16	3.08	3.00	2.93	2.87
5 000 000	5.06	4.69	4.40	4.17	3.97	3.80	3.66	3.53	3.41	3.31	3.22	3.13	3.06	2.99	2.92
6 000 000	5.19	4.82	4.53	4.29	4.09	3.91	3.76	3.63	3.52	3.41	3.31	3.23	3.15	3.08	3.01
7 000 000	5.30	4.93	4.63	4.39	4.19	4.01	3.86	3.72	3.60	3.50	3.40	3.31	3.23	3.16	3.09
8 000 000	5.40	5.02	4.72	4.48	4.27	4.10	3.94	3.81	3.68	3.57	3.48	3.39	3.30	3.23	3.16
9 000 000	5.49	5.11	4.81	4.56	4.35	4.17	4.02	3.88	3.75	3.64	3.54	3.45	3.37	3.29	3.22
10 000 000	5.57	5.18	4.88	4.63	4.42	4.24	4.08	3.94	3.82	3.71	3.60	3.51	3.43	3.35	3.28
15 000 000	5.88	5.48	5.17	4.91	4.70	4.51	4.35	4.20	4.07	3.95	3.85	3.75	3.66	3.58	3.50
20 000 000	6.11	5.70	5.38	5.12	4.90	4.71	4.54	4.39	4.26	4.14	4.03	3.93	3.83	3.75	3.67
25 000 000	6.29	5.88	5.55	5.28	5.06	4.86	4.69	4.54	4.40	4.28	4.17	4.07	3.97	3.88	3.80
30 000 000	6.44	6.02	5.69	5.42	5.19	4.99	4.82	4.67	4.53	4.40	4.29	4.18	4.09	4.00	3.92
35 000 000	6.57	6.14	5.81	5.53	5.30	5.10	4.93	4.77	4.63	4.51	4.39	4.28	4.19	4.10	4.01
40 000 000	6.68	6.25	5.91	5.63	5.40	5.20	5.02	4.87	4.72	4.60	4.48	4.37	4.27	4.18	4.10
45 000 000	6.78	6.35	6.01	5.73	5.49	5.29	5.11	4.95	4.81	4.68	4.56	4.45	4.35	4.26	4.17
50 000 000	6.88	6.43	6.09	5.81	5.57	5.36	5.18	5.02	4.88	4.75	4.63	4.52	4.42	4.33	4.24
60 000 000	7.04	6.59	6.24	5.95	5.71	5.50	5.32	5.16	5.01	4.88	4.76	4.65	4.55	4.45	4.36
70 000 000	7.17	6.72	6.36	6.07	5.83	5.62	5.43	5.27	5.12	4.99	4.87	4.75	4.65	4.55	4.46
80 000 000	7.29	6.83	6.47	6.18	5.93	5.72	5.53	5.37	5.22	5.08	4.96	4.85	4.74	4.65	4.55
90 000 000	7.40	6.94	6.57	6.28	6.03	5.81	5.62	5.45	5.30	5.17	5.04	4.93	4.82	4.73	4.64
100 000 000	7.50	7.03	6.66	6.36	6.11	5.89	5.70	5.53	5.38	5.25	5.12	5.01	4.90	4.80	4.71

# Summary of Lab Test Results on Grasspave2

The attached summary of laboratory tests on bare and sand filled rings presents compression resistance data relate to the load bearing capacity of our rings for various applications. Test Data from A.G.Wassenaar, Inc., Geotechnical Consultants, Denver, Colorado, 30 April 1991.

This test used Forney Compression Testing Machine, 400,000 lb capacity, at rates of 200 lb/sec (unfilled rings) and 2000 lb/sec (filled rings).

## Physical Ring Data:

- 2.31" O.D. x 1" high (2.15" I.D.)
- 0.778 sq. in. of plastic surface contact area per ring
- 7.01 sq. in. surface contact area per 9 ring test section

## Physical Molded Unit Data (injection molded HDPE):

- 20" x 20" x 1" high (400 sq. in. per unit), 12.9 rings per sq. foot (avg. 11.1 sq.in. per ring) 17.8 oz per unit, 69.93 sq. in. surface contact area per 9 ring test section, filled.
- 40" x 40" x 1" high (1600 sq. in. per unit, 12.9 rings/sf (avg. 11.1 sq in/ring), 4.5 lbs per unit, 69.93 sq in surface contact area per 9 ring test section, filled.

## Lab Test Data: Bare Rings, with deflection stopped at 0.032" -

- 14,720 lbs load to test section (9 rings)
- 2,100 psi plastic resin strength (14,720/7.01)
- 1,635 lbs per ring (14720/9)
- 302,400 lbs per square foot load capacity (2100x144)

## Lab Test Data: Sand Filled Rings, with zero deflection -

- 400,000 lbs per test section area (max. machine load)
- 44,444 lbs per filled ring (400,000/9)
- 5,720 psi load over test section area (400,000/69.93)
- 823,680 lbs per square foot load capacity (5720x144)

## Examples of Usage - Grasspave2 and Gravelpave2

- Auto tires - 40 psi vs 5720 psi = 143x safety factor (6"x6" tire contact area)
- Truck tires - 110 psi vs 5720 psi = 52x safety factor (6.5"x6.5" tire contact area)
- DC 10 tires - 250 psi vs 5720 psi = 23x safety factor
- F-16 tires - 350 psi vs 5720 psi = 16x safety factor
- Fire Truck Outriggers - 70,000 lbs/4 = 17,500 lbs/(12"x18")  
= 81 psi vs 5720 psi = 71x safety factor

## Heavy Truck Axle Load Demand = 36,000 lbs on 4 tires (similar to old H-20 loading)

- (9"x9" tire contact area x 9000 lbs per tire at 110 psi tire pressure)
- GP2/GV2 "bare" capacity = 2100 psi x 81 sqin = 170,100 lbs/tire x 4 = 340 ton axle.
- GP2/GV2 "filled" capacity = 5700 psi x 81 sqin = 461,700 lbs/tire x 4 = 923 ton axle load.

## Note:

Actual load bearing capacities of pavements using these products must provide for a rigid base to receive and accommodate the design loads planned - which are transferred from the surface to the base course by the rings.

All load figures provided above for Grasspave2, Gravelpave2 and Asphaltpave are based upon lab tests conducted by A.G.Wassenaar, Inc., Denver, Colorado, 30 April 1991.

# Strength of Grass Paving Structures

Many designers have questioned the strength of grass paving reinforcement structures to determine suitability for specific traffic and load bearing applications, and to compare products made by different manufacturers.

We at Invisible Structures, Inc. would like to assure you about product strength as a design issue, and clarify all of the data contained in various forms of product information.

## All Grass Paving Structures are Strong Enough to Support the Heaviest Vehicles allowed on Highways!

This statement is made after analyzing all of the product specifications in this industry and translating the load bearing test data to a common factor.

We at ISI prefer to use pounds per square inch (psi, or kPa for metric), because it is easy to relate to on a personal level, and it relates directly to tire pressure ratings - the amount of pressure applied to a surface by the tire contact area.

### How Much Strength is Needed?

Heavy truck tire pressures for vehicles used on public highways is usually a maximum of 120 psi (827 kPa). These vehicles generally carry loads that average less than 5000 lbs (2268 kg) per tire, which means a contact area usually less than 6.5" x 6.5" (16.5 cm x 16.5 cm). Outriggers, found on fire trucks, are also designed to not exceed this pressure.

ISI's Grasspave<sup>2</sup> product has load bearing strength of 2100 psi (14,479 kPa) when empty, which provides a safety factor of nearly 17.5 x. Grasspave<sup>2</sup> has the least amount of structural mass to resist loads compared to any other plastic or concrete grass paver, making it the theoretical "weakest". It is the rigid circular "ring" form which maximizes the weight/load bearing ratio of Grasspave<sup>2</sup>.

Product	Grass Paver Strength Compared				
	psi	psf	US Ton/sf	kPa	M Ton/m <sup>2</sup>
Standard Truck Tire	120	17,280	8.64	827	0.73
Grasspave <sup>2</sup> (filled)	5,720	823,680	411.84	39,411	34.72

### Add Strength - Fill Paver

It is very rare that a grass paving structure will be used empty or unfilled. Load bearing strength is

increased dramatically when the product is filled with sand for part of the root zone medium. As an example, Grasspave<sup>2</sup> strength increased from 2100 psi to over 5700 psi (39,273 kPa) when filled with sand and ready for seed (or sand based sod). Thus, the design safety factor goes from 17.5x to over 47x.

### Base Strength is Critical

All grass paving reinforcement structures are designed for two primary functions -

- transfer loads through the walls of the structure to prevent compaction, and
- provide small cellular confinement areas for optimal growth and protection of the grass root zone.

As with other forms of pavement design, grass (porous) paving must be provided with a rigid base below the structure to receive and spread the loads transferred through the structure. Some measurable load spreading capacity exists on the bottom of all grass paving structures, including the flexible grid of Grasspave<sup>2</sup>, but we discount this value to simplify calculations and further increase the safety factor.

Calculating the depth and composition of materials for the base course incorporates the same design criteria as for other pavements, such as:

- load bearing capacity of native sub soil,
- plasticity or impact of moisture,
- frost heave potential,
- traffic frequency and/or duration.

Golf carts and pedestrian traffic may require a thin base course (perhaps nothing over sandy gravel soils) which may amount to 2" to 4" (5 - 10 cm) over very weak soils. Buses, trucks and fire trucks can easily require 8" to 12" (20 - 30 cm) or more depth of base course, and frequently the use of a geotextile below the base to prevent integration with sub soils.

### Load Factor Equivalents

Assuming a given tire pressure of 120 psi, the following load factors would be equal:

- 17,280 lbs per square foot
- 8.64 tons per square foot
- 20,000 lbs per axle (4 tires)
- 432% of H10 rear axle load
- 216% of H20 rear axle load

*Note: an H20 Design Vehicle is theoretical and does not really exist. The axle load would be illegal on most public highways.*

Ω

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**Partial List of Fire Departments  
Accepting Use of Grasspave2 for Firelanes**

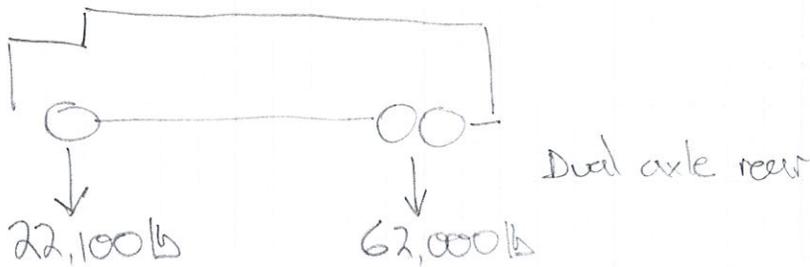
Aurora, Colorado Springs, and Denver, CO  
Phoenix, Chandler & Scottsdale, AZ  
Counties of Los Angeles, Orange, CA  
Riverside County and Palm Springs, CA  
Oakland, Sacramento & Fresno, CA  
San Francisco, San Jose, & Santa Clara, CA  
Portland & Salem, OR  
Seattle, Kirkland, Bellevue, Olyrnpi & Issaquah, WA  
Boise & Bellevue, ID  
Salt Lake City, Orem, & Farmington, UT  
Forest Lake & Maple Grove, MN  
Milwaukee & Brookfield/ WI  
Chicago, Wheeling, & Lombard, IL  
Naperville, Romeoville, & Bloomington, IL  
Indianapolis & Columbus, IN  
Detroit, Ann Arbor, & Plymouth, MI  
Cleveland, Cincinnati, Dayton, & Toledo, OH  
Covington & Elizabeth, KY  
Memphis & Brentwood, TN  
Boston, Weston, Framingham, & Waltham, MA  
Pittsburg, Bethlehem, Hazelton, Harrisburg & Philadelphia, PA  
Gaithersburg, Adelphia, Bethesda, Annapolis & Silver Spring, MD  
Fairfax County, VA  
Raleigh, Cary, Durham, and Wilmington, NC  
Athens, GA  
Boca Raton & Coral Gables, FL  
West Palm Beach & Jupiter, FL  
Orlando, Gainsville, & Tampa, FL  
Birmingham, AL  
Dallas, Austin, San Antonio, & Texarkana, TX  
Oklahoma City, OK  
Kansas City, Lenexa, and Topeka, KS

*Please note that the presence of a city or county's name on this list does not necessarily constitute their endorsement or "blanket" approval of the Grasspave2 Grass Paving System, only that they have permitted its use for one or more projects within their jurisdiction. Most fire departments require review and approval of alternative pavement materials with every project.*

"Bronto" unit of OCFRD.

41 tons per OCFRD; (80,000 lb GVW per Nate Gilman, Hall-Mark Fire, Ocala.)\*

Using 84,100 lb GVW spec per sheet attached;



Then:

Front load: 2 tires - 22,100 lb.

Assume tire width = 6.5"

Assume contact area  $6.5" \times 6.5" = 42.25 \text{ in}^2$  per tire

Ground press. =  $22,100 \text{ lb} \div 42.25 \text{ in}^2 \div 2 \text{ (tire)}$

= 261 psi vs 5720 psi OK.

Rear load: 8 tires - 62,000 lb

Ground press =  $62,000 \text{ lb} \div 42.25 \text{ in}^2 \div 8 \text{ tire}$

= 183 psi vs 5720 psi OK.

\* Nate Gilman: Orange Co. Rep for Hall-Mark Fire, Ocala.

Dealer of E-One vehicles to OCFRD.

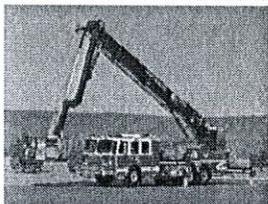
321 303 3970 cell

[n.gilman@hall-markfire.com](mailto:n.gilman@hall-markfire.com)

EMPLOYMENT


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## F114RLP BRONTO WITH SIDESTACKER BODY (AUGUST)



### LEFT SIDE

Upper Saucon Volunteer Fire Department (PA)

### CHASSIS FEATURES

Gross Vehicle Weight Rating: 84,100 lbs.

Wheelbase: 230"

Travel Height: 11'-9" +/- 1"

Travel Length: 43'-3"

Cab: Cyclone II\* Meets SAE J2422, SAE J2420 and ECE R29 crashworthiness standards

Air conditioning

Engine: Detroit Diesel 560 515 HP 2007 compliant w/Jacobs engine brake

Transmission: Allison EV54500P

Front Axle: Meritor 22,100 lb.

Rear Axle: Meritor 62,000 lb. with Ridewell Dynalastic Rear Suspension

Brakes: 17" disc front, S-cam rear with ABS front and rear

Alternator: Dual 270 amp Leece-Neville

Batteries: (6) Group 31 950CCA

Wheels: Aluminum wheels

Tires: Michelin - 445/65R front / 315/80R rear

Equipment: Federal Signal 535NFPA6P2 LED Viewpoint light bars

Federal Signal PA300 siren w/ MS100 speaker

Federal Signal® Q2B siren

Multiplex Modem kit

### PUMP FEATURES

Pump: Waterous S100 2,000 gpm w/ pressure governor

Plumbing: Akron electric valves with stainless steel manifolds and piping

### BODY FEATURES

Construction: Extruded aluminum, modular body

Compartments: Full height rescue style (Approx. 122 cubic ft.)

Hosebed: 46 Cu. Ft. for 800-900' of 5" LDH.

Ladder Storage: Center mounted rear tunnels w/115' of ground ladders

Tank: 300 gallon polypropylene water tank

Equipment: Onan® 15KW hydraulic generator with (7) 750W Magnafire® Qtz lts, (2) 200' 10/4 cord reels

Federal Signal IVP200F upper rear warning lights

Whelen 600 Super LED lower level warning lights

### AERIAL FEATURES

114' articulating platform

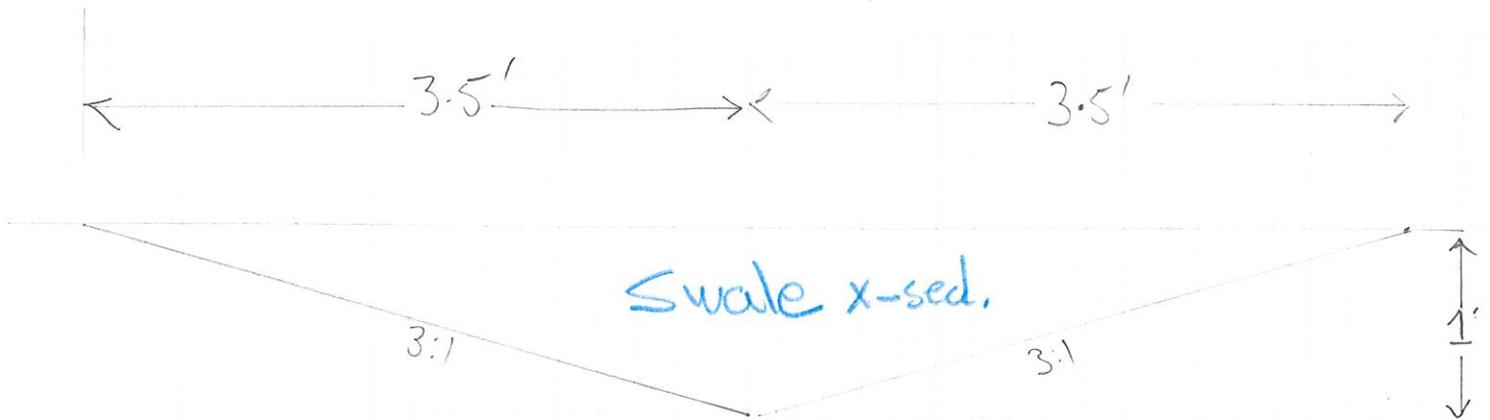
Articulating jib boom with 180 degree sweep

90 degree platform rotation

19'-8" jack spread with auto level

Rated capacity: 1000 lbs. + 210 lbs. equipment

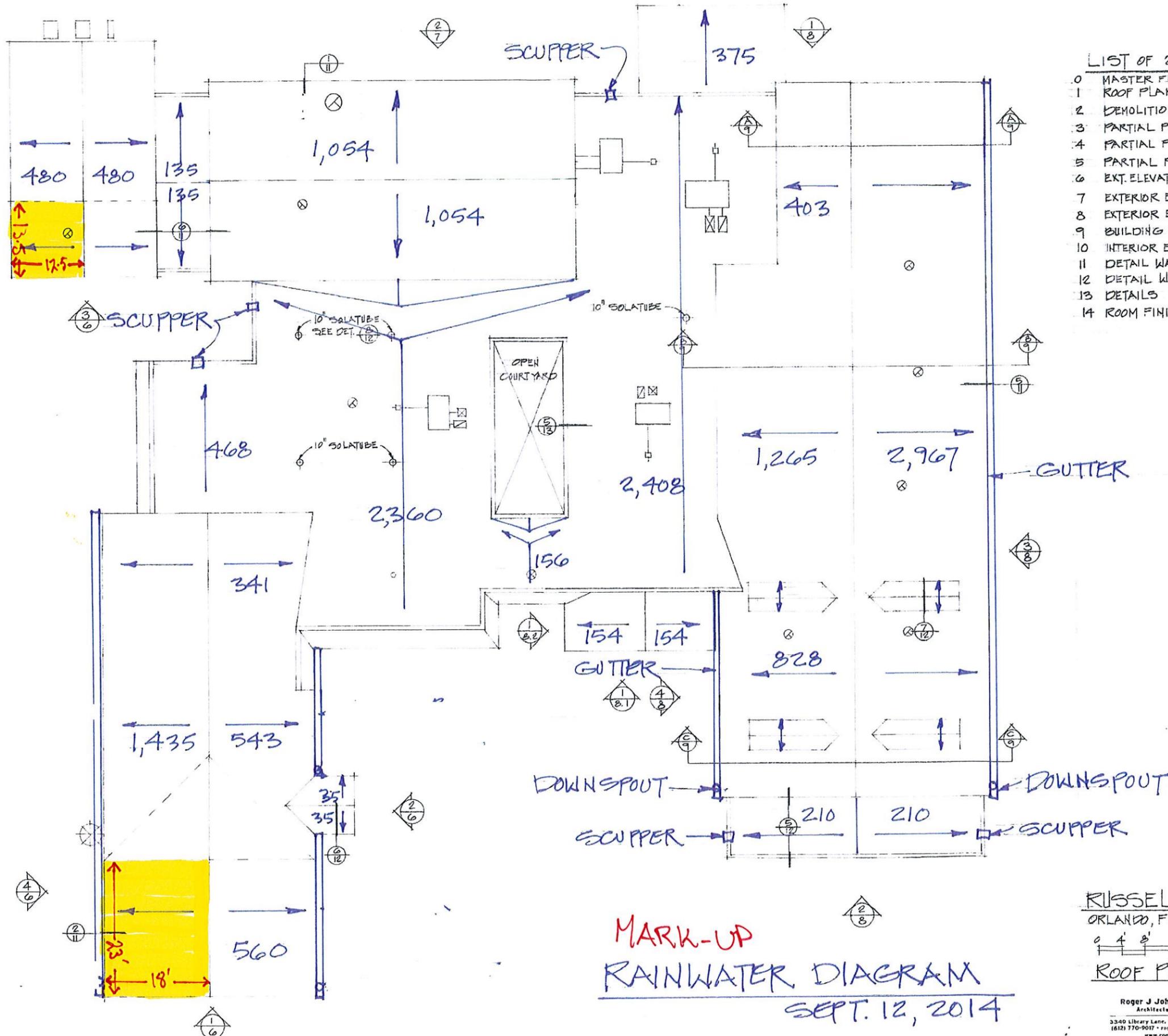
13 of 13



$$\begin{aligned}
 \text{x-sect} &= 3.5 \text{ sf.} \\
 \text{length} &= 100 \text{ ft.} \\
 &= \underline{350 \text{ cu.ft.}} \quad \text{swale capacity}
 \end{aligned}$$

$$\begin{aligned}
 \text{25-year / 24-hour design storm} &= 8.5 \text{ in.} \\
 \text{added roof area (new roof area} &= 170 \text{ sf.} \\
 \text{contributing to west swale)} &= \frac{8.5}{12} \text{ ft} \times 170 \text{ sf.} \\
 &= \underline{120 \text{ cu.ft.}}
 \end{aligned}$$

$\therefore$  Volume new runoff  $\leq$  swale volume.



- LIST OF 24"x36" DRAWINGS
- 0 MASTER FLOOR PLAN
  - 1 ROOF PLAN
  - 2 DEMOLITION PLAN
  - 3 PARTIAL PLAN S.E.
  - 4 PARTIAL PLAN WEST
  - 5 PARTIAL PLAN NORTH
  - 6 EXT. ELEVATIONS & WINDOW SCHEDULE
  - 7 EXTERIOR ELEV. & DOOR SCHEDULE
  - 8 EXTERIOR ELEVATIONS
  - 9 BUILDING SECTIONS
  - 10 INTERIOR ELEVATIONS
  - 11 DETAIL WALL SECTIONS
  - 12 DETAIL WALL SECTIONS
  - 13 DETAILS
  - 14 ROOM FINISH SCHEDULE

MARK-UP  
 RAINWATER DIAGRAM  
 SEPT. 12, 2014

RUSSELL HOME  
 ORLANDO, FL AUG. 25, 2014  
 0 4 8 16'  
 ROOF PLAN

Roger J Johnson AIA, LEED AP  
 Architecture and Planning  
 3340 Library Lane, St. Louis Park, MN, 55426  
 (612) 770-9017 • rj@rjdirect.com  
 www.rjdirect.com

SHEET 2082.



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**ORDINANCE 2014-10**

**AN ORDINANCE OF THE CITY OF EDGEWOOD, ORANGE COUNTY, FLORIDA; PROVIDING FOR A FUTURE LAND USE MAP AMENDMENT TO THE COMPREHENSIVE PLAN CHANGING THE DESIGNATION OF PROPERTY TOTALING 10.293 ACRES, MORE OR LESS, WHICH PROPERTY HAS ORANGE COUNTY PARCEL I.D. NUMBERS 13-23-29-0000-00-009, 13-23-29-0000-00-024, AND 13-23-29-0000-00-005, FROM LOW DENSITY RESIDENTIAL TO COMMERCIAL TO CORRECT A SCRIVENER'S ERROR; PROVIDING FOR CONFLICTING ORDINANCES, PROVIDING FOR SEVERABILITY; AND PROVIDING FOR AN EFFECTIVE DATE.**

15       **WHEREAS**, the City of Edgewood is committed to planning and managing the future  
16 growth and redevelopment of the City; and  
17

18       **WHEREAS**, the City of Edgewood has the authority to amend its Comprehensive Plan  
19 pursuant to Chapter 163, Part II, Florida Statutes; and  
20

21       **WHEREAS**, in its most recent EAR Based Amendments the City transmitted a Future  
22 Land Use Map that incorrectly and inadvertently identified the subject properties as Low Density  
23 Residential; and  
24

25       **WHEREAS**, it was not the intent nor the decision of the City Council of the City of  
26 Edgewood to amend the Future Land Use Map designations of the subject properties in the EAR  
27 Based Amendments; and  
28

29       **WHEREAS**, in order to ensure accurate reflection of the actual adopted Future Land Use  
30 Map designations of the subject properties, the City of Edgewood finds it necessary to process  
31 this Future Land Use Map amendment to correct the scrivener's error;  
32

33       **WHEREAS**, the Planning and Zoning Board, sitting as the Local Planning Agency held  
34 a public hearing on \_\_\_\_\_, to consider this amendment to the Future Land  
35 Use Map of the City of Edgewood Comprehensive Plan; and  
36

37       **WHEREAS**, the City Council, held public hearings to consider the amendment, in  
38 accordance with the controlling provisions of State law; and  
39

40       **WHEREAS**, the City of Edgewood has complied with all requirements and procedures  
41 of Florida law in processing this amendment to the City's Comprehensive Plan; and  
42

43       **WHEREAS**, the City of Edgewood hereby finds and determines that the amendment is  
44 internally consistent with the goals, objectives and policies of the City of Edgewood  
45 Comprehensive Plan and other controlling law to include, but not limited to, Chapter 163,

46 Florida Statutes, and the provisions of the State Comprehensive Plan as codified at Chapter 187,  
47 Florida Statutes.

48  
49 NOTE: Underlined words constitute additions to Policy 1.1.4 of the Future Land Use  
50 Element.

51  
52 **NOW THEREFORE, BE IT ENACTED BY THE CITY COUNCIL OF THE CITY**  
53 **OF EDGEWOOD, FLORIDA, AS FOLLOWS:**

54  
55 **Section 1:** The recitals set forth above are hereby adopted as legislative findings of  
56 the City Council of the City of Edgewood, Florida.

57  
58 **Section 2:** Comprehensive Plan Amendment – Future Land Use Map

59  
60 a) The City’s Future Land Use Map, and Ordinances which adopted and amended  
61 said Future Land Use Map, are hereby amended to designate the subject properties with Orange  
62 County Parcel ID numbers, 13-23-29-0000-00-009, 13-23-29-0000-00-024, and 13-23-29-0000-  
63 00-005, as more particularly described on Exhibit “A” attached hereto and incorporated herein,  
64 as Commercial on the Future Land Use Map.

65  
66 b) That portion of the Future Land Use Map of the City of Edgewood is hereby  
67 amended to designate the subject property from Low Density Residential to Commercial, as  
68 depicted on the Future Land Use Map attached hereto as Attachment “B” and by this reference  
69 incorporated herein.

70  
71 **Section 3:** Conflicts. All Ordinances or parts of Ordinances in conflict with any  
72 of the provisions of this Ordinance are hereby repealed to the extent of such conflict.

73  
74 **Section 4:** Severability. If any Section or portion of a Section of this Ordinance  
75 proves to be invalid, unlawful, or unconstitutional, it shall not be held to invalidate or impair the  
76 validity, force, or effect of any other Section or part of this Ordinance, it being the legislative  
77 intent that this Ordinance shall stand notwithstanding the invalidity of any part.

78  
79 **Section 5.** After the first public hearing, one paper copy hereof and two electronic PDF  
80 copies on a CD ROM shall be transmitted to the Department of Economic Opportunity, and a  
81 copy shall be submitted to each of: the East Central Florida Regional Planning Council, the St.  
82 Johns River Water Management District, the Department of Environmental Protection, the  
83 Department of State, the Department of Transportation, Orange County, and any other unit of  
84 local government or governmental agency in the State of Florida that has filed a written request  
85 with the Clerk of the City of Edgewood, Florida.

86  
87 **Section 6.** This Ordinance shall become effective 31 days after the Department of  
88 Economic Opportunity notifies the City that the Plan Amendment package is complete, or on the  
89 date a final order is issued by the Department of Economic Opportunity or Administration  
90 Commission finding the amendment in compliance, whichever occurs sooner. No development

91 permits or land uses dependent on this amendment may be issued or commence before it has  
92 become effective.  
93

94 **FIRST READING** on the \_\_\_\_\_ day of \_\_\_\_\_, 2014.

95 **ADOPTED** by the City Council of the City of Edgewood, Florida, this \_\_\_\_ day of  
96 \_\_\_\_\_, 2014.  
97

98

\_\_\_\_\_  
John Dowless, Council President

100  
101

102 *ATTEST:*

103  
104

\_\_\_\_\_  
Bea Meeks, MMC  
City Clerk

107  
108  
109  
110

## **Administrative Future Land Use Amendment (Large-Scale)**

Request: Assignment of a Comprehensive Plan Future Land Use Map Amendment designation from Low Density Residential (LDR) to **Commercial** to correct a scrivener's error

Location: Three parcels located at the Northwest Intersection of W. Mary Jess Road and Orange Avenue, also known as the CEMEX properties

Parcel IDs: 13-23-29-0000-00-009 [4.5 acres]  
13-23-29-0000-00-024 [0.834 acres]  
13-23-29-0000-00-005 [4.959 acres]

Please see the maps below, which reflects the existing uses of the properties, the adopted Future Land Use Designations of the properties, and the proposed (corrected) Future Land Use Designations.

### **Data and Analysis**

At the time the EAR-based amendments were adopted, the data and analysis used to prepare the amendments was based off the 2008 EAR, as well as a future land use ordinance history, and updated to reflect changes since that time.

The Future Land Use Map was updated to be current as of 2013, however, it was discovered following adoption of the EAR-based amendments, that there are errors on the three parcels that are the subject of this Large Scale Land Use Amendment. The combined acreage of the parcels is greater than ten acres (10.293 acres), which requires the Large Scale Land Use Amendment process to be followed per State law.

As part of the future land use ordinance history, Ordinance 2009-01 reflected amendments on these parcels to Low Density Residential from Commercial. This was transmitted to the State for review but were never adopted. These should not have been reflected as they currently show on the 2013 adopted Future Land Use Map.

The purpose of this Large Scale Land Use Amendment is to correct this scrivener's error and return the Map designation to the legal Future Land Use designation of Commercial for each of the three parcels.

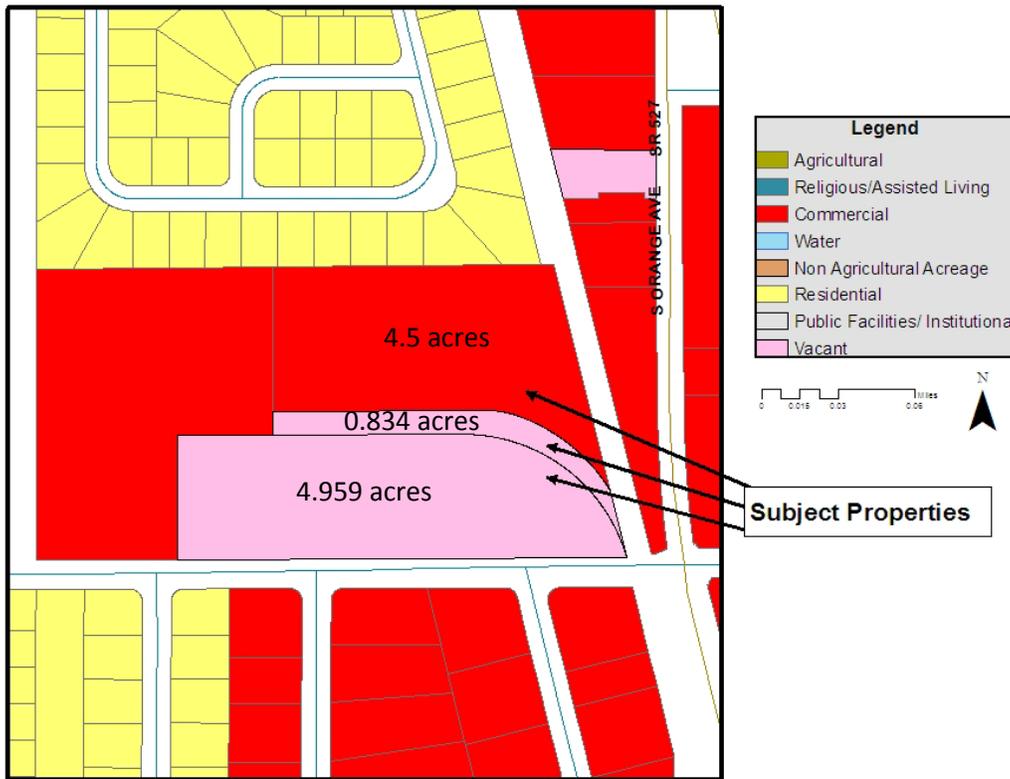
The data and analysis used to support this is the historical review of land use actions in the City. The properties in question were designated as Commercial through Ordinance No. 91-378, on December 17, 1991, which was the adoption of the City's original Comprehensive Plan.

All other parcels within the City have been reviewed to ensure that no other scrivener's errors exist.

The proposed amendments reflect the accurate legal standing of the parcels and bring the Future Land Use designations into consistency with the Comprehensive Plan and the zoning designations (C-3) of the properties.

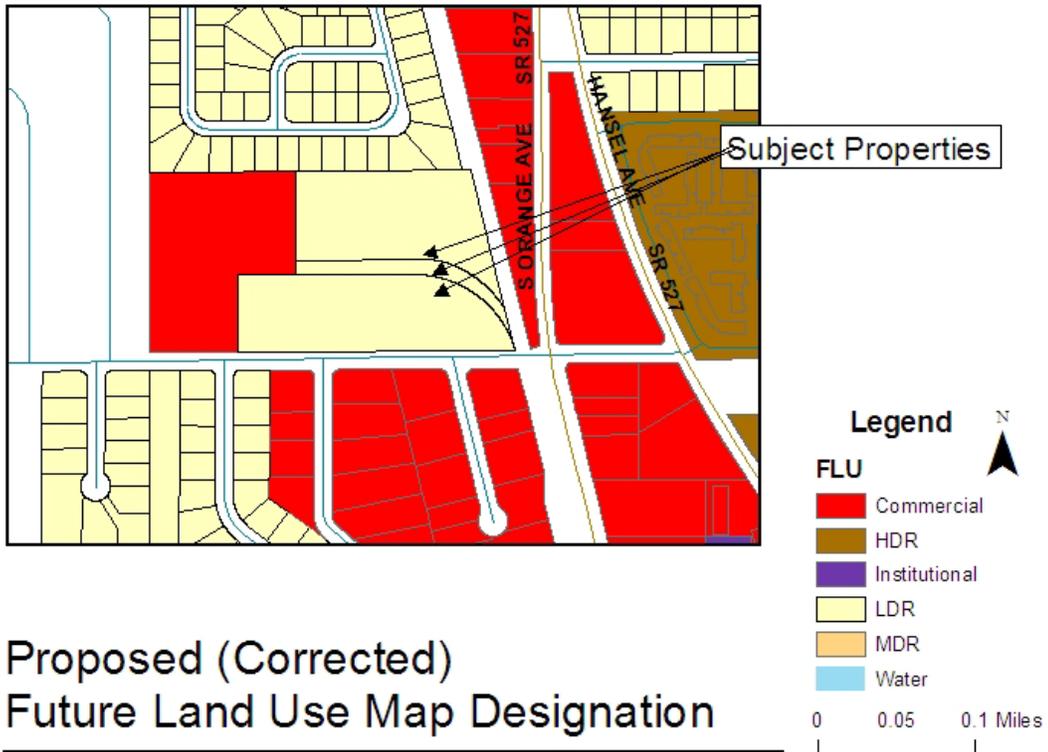
Because these proposed amendments correct a scrivener's error and return the properties to their legally and historically established Commercial Future Land Use designation, there is no affect or change to the availability of and the demand on sanitary sewer, solid waste, drainage, potable water and water supply, traffic circulation, and recreation. These remain the same.

## Existing Land Use

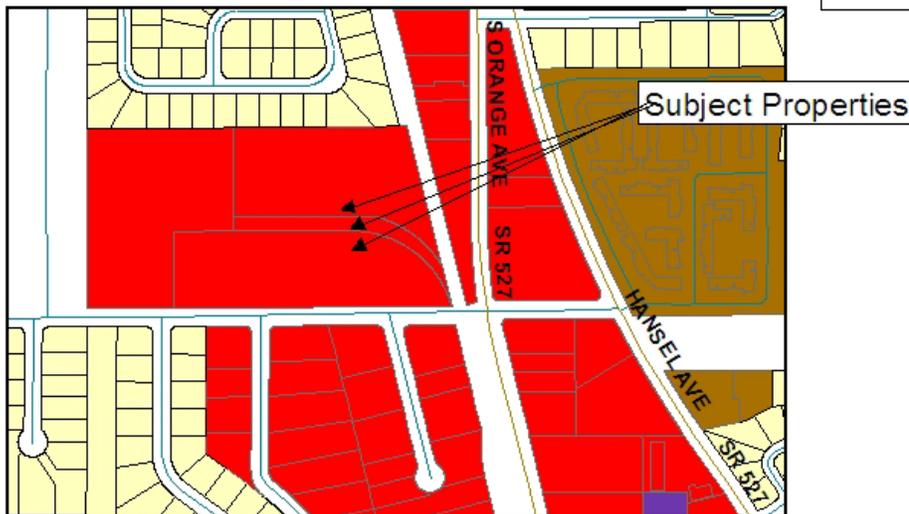


Prepared by April Fisher, May 2014

## Excerpt from the Adopted 2013 Future Land Use Map



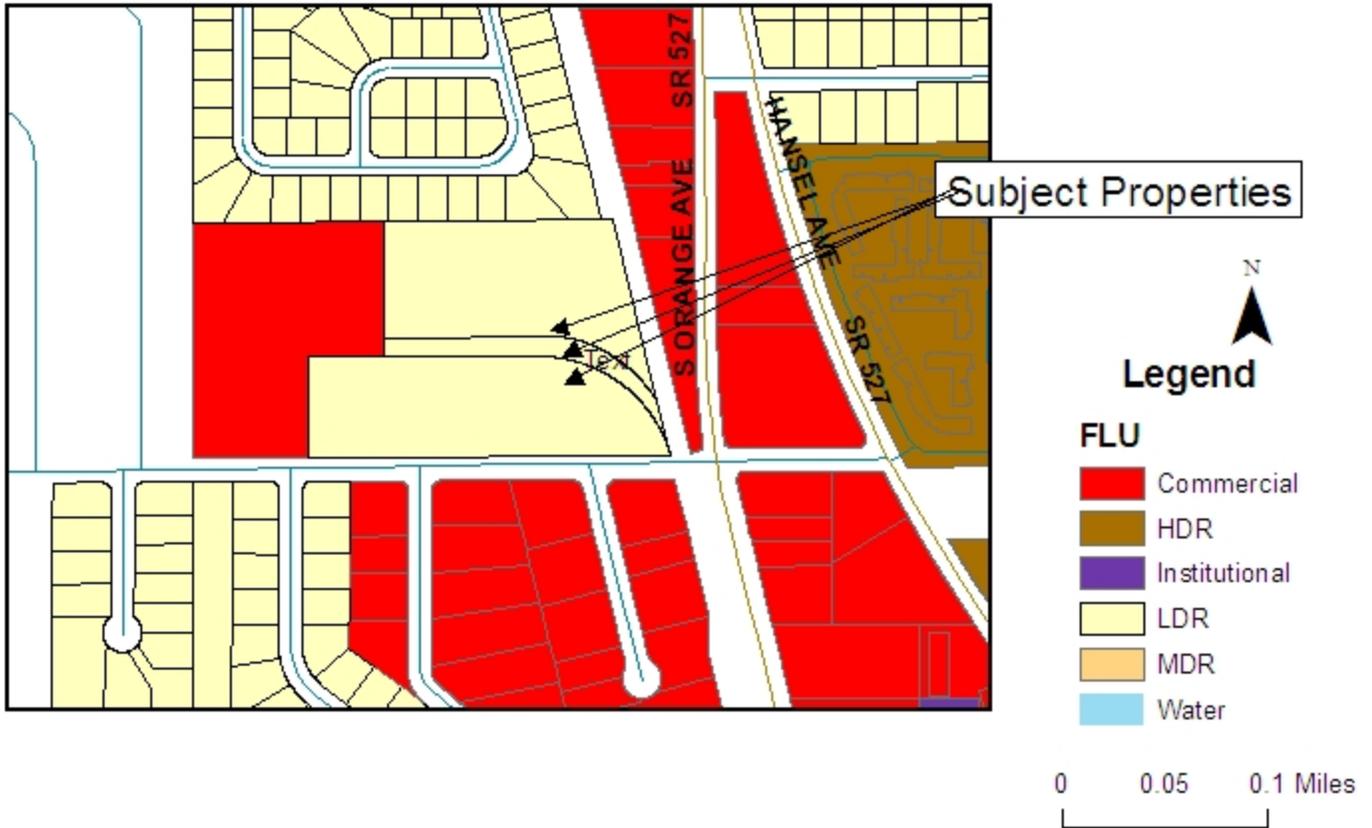
## Proposed (Corrected) Future Land Use Map Designation



Created by April Fisher, May 2014

# Exhibit "A"

## Excerpt from the Adopted 2013 Future Land Use Map



# Exhibit "B"

## Proposed (Corrected) Future Land Use Map Designation

