

DATE 10/22/2009

## Columbia County Building Permit

PERMIT

This Permit Must Be Prominently Posted on Premises During Construction

000028157

APPLICANT DAN STELLER PHONE 904 545-2763  
ADDRESS 5570 FLORIDA MINING BLVD., SUITE 304 JACKSONVILLE FL 32257  
OWNER HENDRIX SMITH & KIRBY, LLC PHONE 755-4487  
ADDRESS 152 SE DEFENDER AVE LAKE CITY FL 32025  
CONTRACTOR COASTAL RECONSTRUCTION, INC. PHONE 954 553-5102  
LOCATION OF PROPERTY EAST ON BAYA, R DEFENDER, 2ND ON RIGHT

TYPE DEVELOPMENT REMODEL/COMM.BLDG ESTIMATED COST OF CONSTRUCTION 0.00  
HEATED FLOOR AREA                      TOTAL AREA                      HEIGHT                      STORIES 1  
FOUNDATION                      WALLS                      ROOF PITCH                      FLOOR                       
LAND USE & ZONING CI MAX. HEIGHT                       
Minimum Set Back Requirments: STREET-FRONT                      REAR                      SIDE                       
NO. EX.D.U.                      FLOOD ZONE N/A DEVELOPMENT PERMIT NO.                     

PARCEL ID 34-3S-17-07081-000 SUBDIVISION                       
LOT                      BLOCK                      PHASE                      UNIT                      TOTAL ACRES 0.81

CGC057545 Dan Steller  
Culvert Permit No.                      Culvert Waiver                      Contractor's License Number                      Applicant/Owner/Contractor                       
EXISTING X09-288 BK HD N  
Driveway Connection                      Septic Tank Number                      LU & Zoning checked by                      Approved for Issuance                      New Resident                     

COMMENTS: FIRE DAMAGE TO EXISTING BUILDING, NO CHARGE

FIRE REPORT ON FILE

Check # or Cash NO CHARGE

## FOR BUILDING &amp; ZONING DEPARTMENT ONLY

(footer/Slab)

Temporary Power                      Foundation                      Monolithic                       
                    date/app. by                      date/app. by                      date/app. by  
Under slab rough-in plumbing                      Slab                      Sheathing/Nailing                       
                    date/app. by                      date/app. by                      date/app. by  
Framing                      Insulation                       
                    date/app. by                      date/app. by  
Rough-in plumbing above slab and below wood floor                      Electrical rough-in                       
                    date/app. by                      date/app. by  
Heat & Air Duct                      Peri. beam (Lintel)                      Pool                       
                    date/app. by                      date/app. by                      date/app. by  
Permanent power                      C.O. Final                      Culvert                       
                    date/app. by                      date/app. by                      date/app. by  
Pump pole                      Utility Pole                      M/H tie downs, blocking, electricity and plumbing                       
                    date/app. by                      date/app. by                      date/app. by  
Reconnection                      RV                      Re-roof                       
                    date/app. by                      date/app. by                      date/app. by

BUILDING PERMIT FEE \$ 0.00 CERTIFICATION FEE \$ 0.00 SURCHARGE FEE \$ 0.00MISC. FEES \$ 0.00 ZONING CERT. FEE \$                      FIRE FEE \$ 0.00 WASTE FEE \$                     FLOOD DEVELOPMENT FEE \$                      FLOOD ZONE FEE \$                      CULVERT FEE \$                      TOTAL FEE 0.00INSPECTORS OFFICE                      CLERKS OFFICE                     

NOTICE: IN ADDITION TO THE REQUIREMENTS OF THIS PERMIT, THERE MAY BE ADDITIONAL RESTRICTIONS APPLICABLE TO THIS PROPERTY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY. AND THERE MAY BE ADDITIONAL PERMITS REQUIRED FROM OTHER GOVERNMENTAL ENTITIES SUCH AS WATER MANAGEMENT DISTRICTS, STATE AGENCIES, OR FEDERAL AGENCIES.

"WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT."

EVERY PERMIT ISSUED SHALL BECOME INVALID UNLESS THE WORK AUTHORIZED BY SUCH PERMIT IS COMMENCED WITHIN 180 DAYS AFTER ITS ISSUANCE, OR IF THE WORK AUTHORIZED BY SUCH PERMIT IS SUSPENDED OR ABANDONED FOR A PERIOD OF 180 DAYS AFTER THE TIME THE WORK IS COMMENCED. A VALID PERMIT RECIEVES AN APPROVED INSPECTION EVERY 180 DAYS. WORK SHALL BE CONSIDERED NOT SUSPENDED, ABANDONED OR INVALID WHEN THE PERMIT HAS RECIEVED AN APPROVED INSPECTION WITHIN 180 DAYS OT THE PREVIOUS INSPECTION.

The Issuance of this Permit Does Not Waive Compliance by Permittee with Deed Restrictions.

**PAUL S. LI, P.E.**

9218 Cypress Green Dr. Suite 10  
Jacksonville, FL 32256  
Tel/Fax: (904) 737-6876/737-2385  
paullieng@bellsouth.net

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Design & Consulting Engineer  
Structural, Civil & Mechanical

December 3, 2009

To: Building Official  
Columbia County Building Department

Re: Eastside Care Center Assisted Living Facility  
@152 S.E. Defender Dr  
Lake City, FL  
Project #: 091001  
Permit No. 28157


Dear Sir/Madam,

This letter is to address the building inspector's concerns in the field regarding the electrical wiring conduit requirements. The existing electrical wire was romex and not in conduit. Based on the 2007 Florida Building Code Existing Building, this project was a repair to an existing fire damaged building, and would be classified as a Repair. Per Section 507.1, Exception 1. "Existing electrical wiring and equipment undergoing repair shall be permitted to be repaired or replaced with like material.", conduit would not be required per the building code.

Based on the attached letter from the electrician, conduit would also not be required per the NFPA 70, National Electrical Code.

Thank you very much for your help in this matter. Should you have any further questions concerning this project, please call me @904 737-6876.

Sincerely,



Paul S. Li, P.E.  
PSL/mwl







# Jaguar Electric Inc.

P.O. Box 7748  
Jacksonville, FL 32238-0748  
904-778-9559

FL. EC 2219

GA. EN 8899

Dear Sir

I Louis Howard of Jaguar Electric, Inc.  
couldn't find anywhere in 2008 Code Book NEC.  
Where we couldn't wire these Bedrooms in  
Romex. I have supply a couple of Articles  
334.12 Uses Not Permitted and 517.10  
Part B Not Covered. I hope this clears things  
up somewhat. If I can be of any help in  
any way please contact me at 904-545-4094

Thank you  
L. H. Q.

12-2-09



**332.80 Ampacity.** The ampacity of Type MI cable shall be determined in accordance with 310.15. The conductor temperature at the end seal fitting shall not exceed the temperature rating of the listed end seal fitting, and the installation shall not exceed the temperature ratings of terminations or equipment.

**(A) Type MI Cable Installed in Cable Tray.** The ampacities for Type MI cable installed in cable tray shall be determined in accordance with 392.11.

**(B) Single Type MI Conductors Grouped Together.** Where single Type MI conductors are grouped together in a triangular or square configuration, as required by 332.31, and installed on a messenger or exposed with a maintained free air space of not less than 2.15 times one conductor diameter ( $2.15 \times \text{O.D.}$ ) of the largest conductor contained within the configuration and adjacent conductor configurations or cables, the ampacity of the conductors shall not exceed the allowable ampacities of Table 310.17.

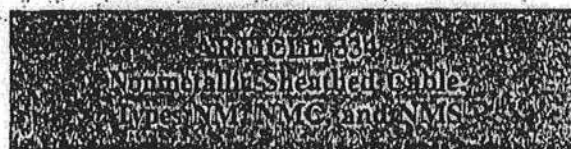
### III. Construction Specifications

**332.104 Conductors.** Type MI cable conductors shall be of solid copper, nickel, or nickel-coated copper with a resistance corresponding to standard AWG and kcmil sizes.

**332.108 Equipment Grounding Conductor.** Where the outer sheath is made of copper, it shall provide an adequate path for equipment grounding conductor. Where the outer sheath is made of nickel or nickel-coated copper, an equipment grounding conductor shall be provided.

**332.112 Insulation.** The conductor insulation in Type MI cable shall be a highly compressed refractory mineral that provides proper spacing for all conductors.

**332.116 Sheath.** The outer sheath shall be of a continuous construction to provide mechanical protection and moisture seal.



### I. General

**334.1 Scope.** This article covers the use, installation, and construction specifications of nonmetallic-sheathed cable.

### 334.2 Definitions.

**Nonmetallic-Sheathed Cable.** A factory assembly of two or more insulated conductors enclosed within an overall nonmetallic jacket.

**Type NM.** Insulated conductors enclosed within an overall nonmetallic jacket.

**Type NMC.** Insulated conductors enclosed within an overall, corrosion resistant, nonmetallic jacket.

**Type NMS.** Insulated power or control conductors with signaling, data, and communications conductors within an overall nonmetallic jacket.

**334.6 Listed.** Type NM, Type NMC, and Type NMS cables shall be listed.

### II. Installation

**334.10 Uses Permitted.** Type NM, Type NMC, and Type NMS cables shall be permitted to be used in the following:

- (1) One- and two-family dwellings.
- (2) Multifamily dwellings permitted to be of Types III, IV, and V construction except as prohibited in 334.12.
- (3) Other structures permitted to be of Types III, IV, and V construction except as prohibited in 334.12. Cables shall be concealed within walls, floors, or ceilings that provide a thermal barrier of material that has at least a 15-minute finish rating as identified in listings of fire-rated assemblies.

FPN No. 1: Types of building construction and occupancy classifications are defined in NFPA 220-2006, *Standard on Types of Building Construction*, or the applicable building code, or both.

FPN No. 2: See Annex E for determination of building types [NFPA 220, Table 3-1].

- (4) Cable trays in structures permitted to be Types III, IV, or V where the cables are identified for the use.

FPN: See 310.10 for temperature limitation of conductors.

**(A) Type NM.** Type NM cable shall be permitted as follows:

- (1) For both exposed and concealed work in normally dry locations except as prohibited in 334.10(3).
- (2) To be installed or fished in air voids in masonry block or tile walls.

**(B) Type NMC.** Type NMC cable shall be permitted as follows:

- (1) For both exposed and concealed work in dry, moist, damp, or corrosive locations, except as prohibited by 334.10(3).
- (2) In outside and inside walls of masonry block or tile.
- (3) In a shallow chase in masonry, concrete, or adobe protected against nails or screws by a steel plate at least 1.59 mm ( $1/16$  in.) thick and covered with plaster, adobe, or similar finish.



(C) **Type NMS.** Type NMS cable shall be permitted as follows:

- (1) For both exposed and concealed work in normally dry locations except as prohibited by 334.10(3)
- (2) To be installed or fished in air voids in masonry block or tile walls

### 334.12 Uses Not Permitted.

(A) **Types NM, NMC, and NMS.** Types NM, NMC, and NMS cables shall not be permitted as follows:

- (1) In any dwelling or structure not specifically permitted in 334.10(1), (2), and (3)

*Exception: Types NM, NMC, and NMS cable shall be permitted in any one- and two-family and multifamily dwellings where installed within raceways permitted to be installed in Type I and II construction.*

- (2) Exposed in dropped or suspended ceilings in other than one- and two-family and multifamily dwellings
- (3) As service-entrance cable
- (4) In commercial garages having hazardous (classified) locations as defined in 518.3
- (5) In theaters and similar locations, except where permitted in 518.4(B)
- (6) In motion picture studios
- (7) In storage battery rooms
- (8) In hoistways or on elevators or escalators
- (9) Embedded in poured cement, concrete, or aggregate
- (10) In hazardous (classified) locations, except where permitted by the following:
  - a. 501.10(B)(3)
  - b. 502.10(B)(3)
  - c. 504.20

(B) **Types NM and NMS.** Types NM and NMS cables shall not be used under the following conditions or in the following locations:

- (1) Where exposed to corrosive fumes or vapors
- (2) Where embedded in masonry, concrete, adobe, fill, or plaster
- (3) In a shallow chase in masonry, concrete, or adobe and covered with plaster, adobe, or similar finish
- (4) ~~In wet or damp locations~~

**334.15 Exposed Work.** In exposed work, except as provided in 300.11(A), cable shall be installed as specified in 334.15(A) through (C).

(A) **To Follow Surface.** Cable shall closely follow the surface of the building finish or of running boards.

(B) **Protection from Physical Damage.** Cable shall be protected from physical damage where necessary by rigid metal conduit, intermediate metal conduit, electrical metallic tubing, Schedule 80 PVC conduit, or other approved means. Where passing through a floor, the cable shall be enclosed in rigid metal conduit, intermediate metal conduit, electrical metallic tubing, Schedule 80 PVC conduit, or other approved means extending at least 150 mm (6 in.) above the floor.

Type NMC cable installed in shallow chases ~~exposed~~ in masonry, concrete, or adobe, shall be protected ~~in accordance with the requirements in 300.4(B)~~ and covered with plaster, adobe, or similar finish.

(C) **In Unfinished Basements and Crawl Spaces.** Where cable is run at angles with joists in unfinished basements and crawl spaces, it shall be permissible to secure cables not smaller than two 6 AWG or three 8 AWG conductors directly to the lower edges of the joists. Smaller cables shall be run either through bored holes in joists or on running boards. NM cable installed on the wall of an unfinished basement shall be permitted to be installed in a listed conduit or tubing or shall be protected in accordance with 300.4. Conduit or tubing shall be provided with suitable insulating bushing or adapter at the point the cable enters the raceway. The NM cable sheath shall extend into the conduit or tubing and into the outlet device box not less than 6 mm (1/4 in.) from the cable shall be secured within 300 mm (12 in.) of the point where the cable enters the conduit or tubing. Metal conduit, tubing, and metal outlet boxes shall be connected to an equipment grounding conductor.

**334.17 Through or Parallel to Framing Members.** Types NM, NMC, or NMS cable shall be protected in accordance with 300.4 where installed through or parallel to framing members. Grommets used as required in 300.4(B)(1) shall remain in place and be listed for the purpose of cable protection.

**334.23 In Accessible Attics.** The installation of cable in accessible attics or roof spaces shall also comply with 320.23.

**334.24 Bending Radius.** Bends in Types NM, NMC, and NMS cable shall be so made that the cable will not be damaged. The radius of the curve of the inner edge of any bend during or after installation shall not be less than five times the diameter of the cable.

**334.30 Securing and Supporting.** Nonmetallic-sheathed cable shall be supported and secured by staples, cable ties, straps, hangers, or similar fittings designed and installed so as not to damage the cable, at intervals not exceeding 1.4 m (4 1/2 ft) and within 300 mm (12 in.) of every outlet box.

are classified as general care areas or critical care areas. The governing body of the facility designates these areas in accordance with the type of patient care anticipated and with the following definitions of the area classification.

**FPN:** Business offices, corridors, lounges, day rooms, dining rooms, or similar areas typically are not classified as patient care areas.

**General Care Areas.** Patient bedrooms, examining rooms, treatment rooms, clinics, and similar areas in which it is intended that the patient will come in contact with ordinary appliances such as a nurse call system, electric beds, examining lamps, telephones, and entertainment devices. [99; 2005]

**Critical Care Areas.** Those special care units, intensive care units, coronary care units, angiography laboratories, cardiac catheterization laboratories, delivery rooms, operating rooms, and similar areas in which patients are intended to be subjected to invasive procedures and connected to line-operated, electromedical devices.

**Wet Procedure Locations.** Those spaces within patient care areas where a procedure is performed and that are normally subject to wet conditions while patients are present. These include standing fluids on the floor or drenching of the work area, either of which condition is intimate to the patient or staff. Routine housekeeping procedures and incidental spillage of liquids do not define a wet location.

**Patient Care Vicinity.** In an area in which patients are normally cared for, the patient care vicinity is the space with surfaces likely to be contacted by the patient or an attendant who can touch the patient. Typically in a patient room, this encloses a space within the room not less than 1.8 m (6 ft) beyond the perimeter of the bed in its nominal location, and extending vertically not less than 2.3 m (7½ ft) above the floor. [99; 333; 140]

**Patient Equipment Grounding Point.** A jack or terminal that serves as the collection point for redundant grounding of electrical appliances serving a patient care vicinity or for grounding other items in order to eliminate electromagnetic interference problems. [99; 333; 141]

**Psychiatric Hospital.** A building used exclusively for the psychiatric care, on a 24-hour basis, of four or more inpatients.

**Reference Grounding Point.** The ground bus of the panelboard or isolated power system panel supplying the patient care area.

**Relative Analgesia.** A state of sedation and partial block of pain perception produced in a patient by the inhalation of concentrations of nitrous oxide insufficient to produce loss of consciousness (conscious sedation).

**Selected Receptacles.** A minimum number of electrical receptacles to accommodate appliances ordinarily required for local tasks or likely to be used in patient care emergencies.

**Task Illumination.** Provision for the minimum lighting required to carry out necessary tasks in the described areas, including safe access to supplies and equipment, and access to exits.

**Therapeutic High-Frequency Diathermy Equipment.** Therapeutic high-frequency diathermy equipment is therapeutic induction and dielectric heating equipment.

**Total Hazard Current.** See *Hazard Current*.

**X-Ray Installations, Long-Time Rating.** A rating based on an operating interval of 5 minutes or longer.

**X-Ray Installations, Mobile.** X-ray equipment mounted on a permanent base with wheels, casters, or a combination of both to facilitate moving the equipment while completely assembled.

**X-Ray Installations, Momentary Rating.** A rating based on an operating interval that does not exceed 5 seconds.

**X-Ray Installations, Portable.** X-ray equipment designed to be hand carried.

**X-Ray Installations, Transportable.** X-ray equipment to be installed in a vehicle or that may be readily disassembled for transport in a vehicle.

## II. Wiring and Protection

### 517.10 Applicability.

(A) **Applicability.** Part II shall apply to patient care areas of all health care facilities.

(B) **Not Covered.** Part II shall not apply to the following:

- (1) Business offices, corridors, waiting rooms, and the like in clinics, medical and dental offices, and outpatient facilities
- (2) Areas of nursing homes and limited care facilities wired in accordance with Chapters 1 through 4 of this Code where these areas are used exclusively as patient sleeping rooms

**FPN:** See NFPA 101®-2006, *Life Safety Code*®.

**517.11 General Installation — Construction Criteria.** The purpose of this article is to specify the installation criteria and wiring methods that minimize electrical hazards by the maintenance of adequately low potential differences only between exposed conductive surfaces that are likely to become energized and could be contacted by a patient.



**PAUL S. LI, P.E.**

9218 Cypress Green Dr. Suite 10  
Jacksonville, FL 32256  
Tel/Fax: (904) 737-6876/737-2385  
paullieng@bellsouth.net

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Design & Consulting Engineer  
Structural, Civil & Mechanical

December 3, 2009

To: Building Official  
Columbia County Building Department

Re: Eastside Care Center Assisted Living Facility  
@152 S.E. Defender Dr  
Lake City, FL  
Project #: 091001  
Permit No. 28157

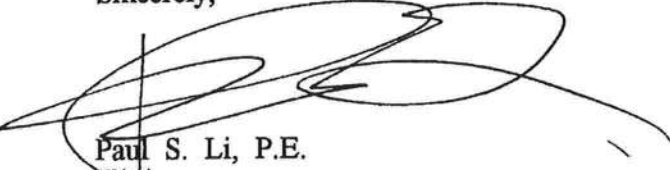
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Based on the attached letter from the electrician, conduit would also not be required per the NFPA 70, National Electrical Code.

Thank you very much for your help in this matter. Should you have any further questions concerning this project, please call me @904 737-6876.

Sincerely,



Paul S. Li, P.E.

PSL/mvl



# Jaguar Electric Inc.

P.O. Box 7748  
Jacksonville, FL 32238-0748  
904-778-9559

FL. EC 2219

GA. EN 8899

Dear Sir

I Louis Howard of Jaguar Electric, Inc.  
couldn't find anywhere in 2008 Code Book NEC.  
Where we couldn't wire these Bedrooms in  
Romex. I have supply a couple of Articles  
334.12 Uses Not Permitted and 517.10  
Part B Not Covered. I hope this clears things  
up somewhat. If I can be of any help in  
anyway please contact me at 904-545-4094

Thank you

Le H. Q.

12-2-09



**332.80 Ampacity.** The ampacity of Type MI cable shall be determined in accordance with 310.15. The conductor temperature at the end seal fitting shall not exceed the temperature rating of the listed end seal fitting, and the installation shall not exceed the temperature ratings of terminations or equipment.

**(A) Type MI Cable Installed in Cable Tray.** The ampacities for Type MI cable installed in cable tray shall be determined in accordance with 392.11.

**(B) Single Type MI Conductors Grouped Together.** Where single Type MI conductors are grouped together in a triangular or square configuration, as required by 332.31, and installed on a messenger or exposed with a maintained free air space of not less than 2.15 times one conductor diameter ( $2.15 \times \text{O.D.}$ ) of the largest conductor contained within the configuration and adjacent conductor configurations or cables, the ampacity of the conductors shall not exceed the allowable ampacities of Table 310.17.

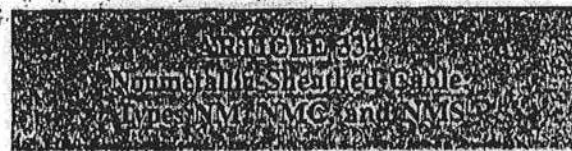
### III. Construction Specifications

**332.104 Conductors.** Type MI cable conductors shall be of solid copper, nickel, or nickel-coated copper with a resistance corresponding to standard AWG and kcmil sizes.

**332.108 Equipment Grounding Conductor.** Where the outer sheath is made of copper, it shall provide an adequate path for equipment grounding conductor. Where the outer sheath is made of other materials, an adequate equipment grounding conductor shall be provided.

**332.112 Insulation.** The conductor insulation in Type MI cable shall be a highly compressed refractory mineral that provides proper spacing for all conductors.

**332.116 Sheath.** The outer sheath shall be of a continuous construction to provide mechanical protection and moisture seal.



### I. General

**334.1 Scope.** This article covers the use, installation, and construction specifications of nonmetallic-sheathed cable.

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**Type NM.** Insulated conductors enclosed within an overall nonmetallic jacket.

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**Type NMS.** Insulated power or control conductors with signaling, data, and communications conductors within an overall nonmetallic jacket.

**334.6 Listed.** Type NM, Type NMC, and Type NMS cables shall be listed.

### II. Installation

**334.10 Uses Permitted.** Type NM, Type NMC, and Type NMS cables shall be permitted to be used in the following:

- (1) One- and two-family dwellings.
- (2) Multifamily dwellings permitted to be of Types III, IV, and V construction except as prohibited in 334.12.
- (3) Other structures permitted to be of Types III, IV, and V construction except as prohibited in 334.12. Cables shall be concealed within walls, floors, or ceilings that provide a thermal barrier of material that has at least a 15-minute finish rating as identified in listings of fire-rated assemblies.

FPN No. 1: Types of building construction and occupancy classifications are defined in NFPA 220-2006, *Standard on Types of Building Construction*, or the applicable building code, or both.

FPN No. 2: See Annex E for determination of building types (NFPA 220, Table 3-1).

- (4) Cable trays in structures permitted to be Types III, IV, or V where the cables are identified for the use.

FPN: See 310.10 for temperature limitation of conductors.

**(A) Type NM.** Type NM cable shall be permitted as follows:

- (1) For both exposed and concealed work in normally dry locations except as prohibited in 334.10(3).
- (2) To be installed or fished in air voids in masonry block or tile walls.

**(B) Type NMC.** Type NMC cable shall be permitted as follows:

- (1) For both exposed and concealed work in dry, moist, damp, or corrosive locations, except as prohibited by 334.10(3).
- (2) In outside and inside walls of masonry block or tile.
- (3) In a shallow chase in masonry, concrete, or adobe protected against nails or screws by a steel plate at least 1.59 mm ( $1/16$  in.) thick and covered with plaster, adobe, or similar finish.

(C) **Type NMS.** Type NMS cable shall be permitted as follows:

- (1) For both exposed and concealed work in normally dry locations except as prohibited by 334.10(3)
- (2) To be installed or fished in air voids in masonry block or tile walls

### 334.12 Uses Not Permitted.

(A) **Types NM, NMC, and NMS.** Types NM, NMC, and NMS cables shall not be permitted as follows:

- (1) In any dwelling or structure not specifically permitted in 334.10(1), (2), and (3)

**Exception:** ~~Types NM, NMC, and NMS cables shall be permitted in any of the following locations where installed within raceways permitted to be installed in Type I and II construction:~~

- (2) Exposed in dropped or suspended ceilings in other than one- and two-family and multifamily dwellings
- (3) As service-entrance cable
- (4) In commercial garages having hazardous (classified) locations as defined in 518.3
- (5) In theaters and similar locations, except where permitted in 518.4(B)
- (6) In motion picture studios
- (7) In storage battery rooms
- (8) In hoistways or on elevators or escalators
- (9) Embedded in poured cement, concrete, or aggregate
- (10) In hazardous (classified) locations, except where permitted by the following:
  - a. 501.10(B)(3)
  - b. 502.10(B)(3)
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(B) **Types NM and NMS.** Types NM and NMS cables shall not be used under the following conditions or in the following locations:

- (1) Where exposed to corrosive fumes or vapors
- (2) Where embedded in masonry, concrete, adobe, fill, or plaster
- (3) In a shallow chase in masonry, concrete, or adobe and covered with plaster, adobe, or similar finish
- (4) ~~In wet or damp locations~~

**334.15 Exposed Work.** In exposed work, except as provided in 300.11(A), cable shall be installed as specified in 334.15(A) through (C).

(A) **To Follow Surface.** Cable shall closely follow the surface of the building finish or of running boards.

(B) **Protection from Physical Damage.** Cable shall be protected from physical damage where necessary by rigid metal conduit, intermediate metal conduit, electrical metallic tubing, Schedule 80 PVC conduit, or other approved means. Where passing through a floor, the cable shall be enclosed in rigid metal conduit, intermediate metal conduit, electrical metallic tubing, Schedule 80 PVC conduit, or other approved means extending at least 150 mm (6 in.) above the floor.

Type NMC cable installed in shallow chases ~~in masonry, concrete, or adobe~~ shall be protected in accordance with the requirements in 300.4(B) and covered with plaster, adobe, or similar finish.

(C) **In Unfinished Basements and Crawl Spaces.** Where cable is run at angles with joists in unfinished basements and crawl spaces, it shall be permissible to secure cables not smaller than two 6 AWG or three 8 AWG conductors directly to the lower edges of the joists. Smaller cables shall be run either through bored holes in joists or on running boards. NM cable installed on the wall of an unfinished basement shall be permitted to be installed in a listed conduit or tubing or shall be protected in accordance with 300.4. Conduit or tubing shall be provided with suitable insulating bushing or adapter at the point the cable enters the raceway. ~~The NM cable sheath shall extend into the conduit or tubing and into the outlet box or device box not less than 6 mm (1/4 in.). The cable shall be secured within 300 mm (12 in.) of the point where the cable enters the conduit or tubing.~~ Metal conduit, tubing, and metal outlet boxes shall be connected to an equipment-grounding conductor.

**334.17 Through or Parallel to Framing Members.** Types NM, NMC, or NMS cable shall be protected in accordance with 300.4 where installed through or parallel to framing members. Grommets used as required in 300.4(B)(1) shall remain in place and be listed for the purpose of cable protection.

**334.23 In Accessible Attics.** The installation of cable in accessible attics or roof spaces shall also comply with 320.23.

**334.24 Bending Radius.** Bends in Types NM, NMC, and NMS cable shall be so made that the cable will not be damaged. The radius of the curve of the inner edge of any bend during or after installation shall not be less than five times the diameter of the cable.

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are classified as general care areas or critical care areas. The governing body of the facility designates these areas in accordance with the type of patient care anticipated and with the following definitions of the area classification.

**FPN:** Business offices, corridors, lounges, day rooms, dining rooms, or similar areas typically are not classified as patient care areas.

**General Care Areas.** Patient bedrooms, examining rooms, treatment rooms, clinics, and similar areas in which it is intended that the patient will come in contact with ordinary appliances such as a nurse call system, electric beds, examining lamps, telephones, and entertainment devices. [99:2005]

**Critical Care Areas.** Those special care units, intensive care units, coronary care units, angiography laboratories, cardiac catheterization laboratories, delivery rooms, operating rooms, and similar areas in which patients are intended to be subjected to invasive procedures and connected to line-operated, electromedical devices.

**Wet Procedure Locations.** Those spaces within patient care areas where a procedure is performed and that are normally subject to wet conditions while patients are present. These include standing fluids on the floor or drenching of the work area, either of which condition is intimate to the patient or staff. Routine housekeeping procedures and incidental spillage of liquids do not define a wet location.

**Patient Care Vicinity.** In an area in which patients are normally cared for, the patient care vicinity is the space with surfaces likely to be contacted by the patient or an attendant who can touch the patient. Typically in a patient room, this encloses a space within the room not less than 1.8 m (6 ft) beyond the perimeter of the bed in its nominal location, and extending vertically not less than 2.3 m (7½ ft) above the floor. [99:333:40]

**Patient Equipment Grounding Point.** A jack or terminal that serves as the collection point for redundant grounding of electrical appliances serving a patient care vicinity or for grounding other items in order to eliminate electromagnetic interference problems. [99:333:41]

**Psychiatric Hospital.** A building used exclusively for the psychiatric care, on a 24-hour basis, of four or more inpatients.

**Reference Grounding Point.** The ground bus of the panelboard or isolated power system panel supplying the patient care area.

**Relative Analgesia.** A state of sedation and partial block of pain perception produced in a patient by the inhalation of concentrations of nitrous oxide insufficient to produce loss of consciousness (conscious sedation).

**Selected Receptacles.** A minimum number of electrical receptacles to accommodate appliances ordinarily required for local tasks or likely to be used in patient care emergencies.

**Task Illumination.** Provision for the minimum lighting required to carry out necessary tasks in the described areas, including safe access to supplies and equipment, and access to exits.

**Therapeutic High-Frequency Diathermy Equipment.** Therapeutic high-frequency diathermy equipment is therapeutic induction and dielectric heating equipment.

**Total Hazard Current.** See *Hazard Current*.

**X-Ray Installations, Long-Time Rating.** A rating based on an operating interval of 5 minutes or longer.

**X-Ray Installations, Mobile.** X-ray equipment mounted on a permanent base with wheels, casters, or a combination of both to facilitate moving the equipment while completely assembled.

**X-Ray Installations, Momentary Rating.** A rating based on an operating interval that does not exceed 5 seconds.

**X-Ray Installations, Portable.** X-ray equipment designed to be hand carried.

**X-Ray Installations, Transportable.** X-ray equipment to be installed in a vehicle or that may be readily disassembled for transport in a vehicle.

## II. Wiring and Protection

### 517.10 Applicability.

(A) **Applicability.** Part II shall apply to patient care areas of all health care facilities.

(B) **Not Covered.** Part II shall not apply to the following:

- (1) Business offices, corridors, waiting rooms, and the like in clinics, medical and dental offices, and outpatient facilities
- (2) Areas of nursing homes and limited care facilities wired in accordance with Chapters 1 through 4 of this Code where these areas are used exclusively as patient sleeping rooms

**FPN:** See NFPA 101®-2006, *Life Safety Code*®.

### 517.11 General Installation — Construction Criteria.

The purpose of this article is to specify the installation criteria and wiring methods that minimize electrical hazards by the maintenance of adequately low potential differences only between exposed conductive surfaces that are likely to become energized and could be contacted by a patient.

# NOTICE OF COMMENCEMENT

County Clerk's Office Stamp or Seal

Tax Parcel Identification Number 34-35-17-0708 1-000

THE UNDERSIGNED hereby gives notice that improvements will be made to certain real property, and in accordance with Section 713.13 of the Florida Statutes, the following information is provided in this NOTICE OF COMMENCEMENT.

- LOTS 3, 4, 5, 6, 7, 8 EX THE S 35 FT OF W 33 FT OF LOT 7 & EX W 33 FT OF LOT 8 & EX S 35 FT OF**  
1. Description of property (legal description): E 92 FT OF LOT B BLOCK 12 COUNTRY CLUB ESTATES, ORB 937-907, WD 1018-2712  
a) Street (job) Address: 152 SE Defender Dr; Lake City FL 32025  
2. General description of improvements: \_\_\_\_\_

## 3. Owner Information

- a) Name and address: Hendrix Smith & Kirby; 152 SE Defender Dr; Lake City FL 32025  
b) Name and address of fee simple titleholder (if other than owner) \_\_\_\_\_  
c) Interest in property \_\_\_\_\_

## 4. Contractor Information

COASTAL RECONSTRUCTION INC

- a) Name and address: 5570 Florida Mining Blvd. S #304; Jacksonville FL 32257  
b) Telephone No.: 904.880.1919 Fax No. (Opt.): 904.880.2727

## 5. Surety Information

- a) Name and address: \_\_\_\_\_  
b) Amount of Bond: \_\_\_\_\_  
c) Telephone No.: \_\_\_\_\_ Fax No. (Opt.): \_\_\_\_\_

## 6. Lender

- a) Name and address: \_\_\_\_\_  
b) Phone No.: \_\_\_\_\_

## 7. Identity of person within the State of Florida designated by owner upon whom notices or other documents may be served:

- a) Name and address: \_\_\_\_\_  
b) Telephone No.: \_\_\_\_\_ Fax No. (Opt.): \_\_\_\_\_

## 8. In addition to himself, owner designates the following person to receive a copy of the Lienor's Notice as provided in Section 713.13(1)(b), Florida Statutes:

- a) Name and address: \_\_\_\_\_  
b) Telephone No.: \_\_\_\_\_ Fax No. (Opt.): \_\_\_\_\_

## 9. Expiration date of Notice of Commencement (the expiration date is one year from the date of recording unless a different date is specified): \_\_\_\_\_

**WARNING TO OWNER: ANY PAYMENTS MADE BY THE OWNER AFTER THE EXPIRATION OF THE NOTICE OF COMMENCEMENT ARE CONSIDERED IMPROPER PAYMENTS UNDER CHAPTER 713, PART I, SECTION 713.13, FLORIDA STATUTES, AND CAN RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY; A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT YOUR LENDER OR AN ATTORNEY BEFORE COMMENCING WORK OR RECORDING YOUR NOTICE OF COMMENCEMENT.**

STATE OF FLORIDA  
COUNTY OF COLUMBIA

10. Michael Bay  
Signature of Owner or Owner's Authorized Officer/Director/Partner/Manager

Michael Bay  
Print Name

The foregoing instrument was acknowledged before me, a Florida Notary, this 15 day of September, 20 09, by:

Michael Bay as Owner (type of authority, e.g. officer, trustee, attorney fact) for \_\_\_\_\_ (name of party on behalf of whom instrument was executed).

Personally Known ☒ OR Produced Identification \_\_\_\_\_ Type \_\_\_\_\_

Notary Signature David A. Patton Notary Stamp or Seal:

NOTARY PUBLIC-STATE OF FLORIDA  
David A. Patton  
Commission # DD913459  
Expires: AUG. 03, 2013  
BONDED THRU ATLANTIC BONDING CO, INC.

## 11. Verification pursuant to Section 92.525, Florida Statutes. Under penalties of perjury, I declare that I have read the foregoing and that the facts stated in it are true to the best of my knowledge and belief.

Michael Bay  
Signature of Natural Person Signing (in line #10 above.)



<b>A</b>		MM DD YYYY		Station		Incident Number		Exposure		NFIRS -1 Basic	
29091		FL 09 10 2009		40		09-0003603		000			
FDID *		State *		Incident Date *		Station		Incident Number *		Exposure *	
										<input type="checkbox"/> Delete <input type="checkbox"/> Change <input type="checkbox"/> No Activity	

<b>B Location*</b>		<input type="checkbox"/> Check this box to indicate that the address for this incident is provided on the Wildland Fire Module in Section 6 "Alternative Location Specification". Use only for Wildland fires.	
<input checked="" type="checkbox"/> Street address <input type="checkbox"/> Intersection <input type="checkbox"/> In front of <input type="checkbox"/> Rear of <input type="checkbox"/> Adjacent to <input type="checkbox"/> Directions		152 SE Defender Number/Milepost Prefix Street or Highway Lake City Apt./Suite/Room City Cross street or directions, as applicable	
		DR Street Type Suffix FL 32025 State Zip Code	

<b>C Incident Type *</b>		<b>E1 Date &amp; Times</b>		<b>E2 Shift &amp; Alarms</b>	
111 Building fire		Check boxes if dates are the same as Alarm Date. Alarm * 09 10 2009 17:28:00 Month Day Year Hr Min Sec ALARM always required		Local Option A 01 1 Shift or Alarms District Platoon	
<b>D Aid Given or Received*</b>		Arrival * 09 10 2009 17:37:00 Arrival required, unless canceled or did not arrive CONTROLLED optional, except for wildland fires Controlled LAST UNIT CLEARED, required except for wildland fires Last Unit Cleared 09 10 2009 20:36:00		<b>E3 Special Studies</b> Special Study ID# Special Study Value	
1 Mutual aid received 2 Automatic aid received 3 Mutual aid given 4 Automatic aid given 5 Other aid given N None		29012 FL Their FDID Their State Their Incident Number			

<b>F Actions Taken *</b>		<b>G1 Resources *</b>		<b>G2 Estimated Dollar Losses &amp; Values</b>	
11 Extinguishment by fire Primary Action Taken (1) Additional Action Taken (2) Additional Action Taken (3)		Check this box and skip this section if an Apparatus or Personnel form is used. Apparatus Personnel Suppression 0002 0009 EMS Other 0007 0003 Check box if resource counts include aid received resources.		LOSSES: Required for all fires if known. Optional for non fires. Property \$ 200,000 Contents \$ 000,000 PRE-INCIDENT VALUE: optional Property \$ 500,000 Contents \$ 000,000	

<b>Completed Modules</b>		<b>H1* Casualties</b>		<b>H3 Hazardous Materials Release</b>		<b>I Mixed Use Property</b>	
<input checked="" type="checkbox"/> Fire-2 <input checked="" type="checkbox"/> Structure-3 <input type="checkbox"/> Civil Fire Cas.-4 <input type="checkbox"/> Fire Serv. Cas.-5 <input type="checkbox"/> EMS-6 <input type="checkbox"/> HazMat-7 <input type="checkbox"/> Wildland Fire-8 <input checked="" type="checkbox"/> Apparatus-9 <input checked="" type="checkbox"/> Personnel-10 <input type="checkbox"/> Arson-11		Deaths Injuries Fire Service Civilian <b>H2 Detector</b> Required for Confined Fires. 1 Detector alerted occupants 2 Detector did not alert them U Unknown		N None 1 Natural Gas: slow leak, no evacuation or HazMat actions 2 Propane gas: $< 31$ lb. tank (as in home BBQ grill) 3 Gasoline: vehicle fuel tank or portable container 4 Kerosene: fuel burning equipment or portable storage 5 Diesel fuel/fuel oil: vehicle fuel tank or portable 6 Household solvents: home/office spill, cleanup only 7 Motor oil: from engine or portable container 8 Paint: from paint cans totaling $< 55$ gallons 0 Other: Special HazMat actions required or spill $> 55$ gal., please complete the HazMat form		NN Not Mixed 10 Assembly use 20 Education use 33 Medical use 40 Residential use 51 Row of stores 53 Enclosed mall 58 Bus. & Residential 59 Office use 60 Industrial use 63 Military use 65 Farm use 00 Other mixed use	

<b>J Property Use* Structures</b>		<b>341 Clinic, clinic type infirmary</b>		<b>539 Household goods, sales, repairs</b>	
131 Church, place of worship 161 Restaurant or cafeteria 162 Bar/Tavern or nightclub 213 Elementary school or kindergarten 215 High school or junior high 241 College, adult education 311 Care facility for the aged 331 Hospital		342 Doctor/dentist office 361 Prison or jail, not juvenile 419 1-or 2-family dwelling 429 Multi-family dwelling 439 Rooming/boarded house 449 Commercial hotel or motel 459 Residential, board and care 464 Dormitory/barracks 519 Food and beverage sales		579 Motor vehicle/boat sales/repair 571 Gas or service station 599 Business office 615 Electric generating plant 629 Laboratory/science lab 700 Manufacturing plant 819 Livestock/poultry storage (barn) 882 Non-residential parking garage 891 Warehouse	
<b>Outside</b>		936 Vacant lot 938 Graded/care for plot of land 946 Lake, river, stream 951 Railroad right of way 960 Other street 961 Highway/divided highway 962 Residential street/driveway		981 Construction site 984 Industrial plant yard Lookup and enter a Property Use code only if you have NOT checked a Property Use box: Property Use 321 Mental	

**K1 Person/Entity Involved**

Local Option

Business name (if applicable)

Area Code

Phone Number

☐ Check this box if same address as incident location. Then skip the three duplicate address lines.

Mr., Ms., Mrs. First Name

MT

Last Name

Suffix

Number

Prefix

Street or Highway

Street Type

Suffix

Post Office Box

Apt./Suite/Room

City

State Zip Code

☐ More people involved? Check this box and attach Supplemental Forms (NFIRS-1S) as necessary

**K2 Owner**

☐ Same as person involved? Then check this box and skip the rest of this section.

Local Option

Business name (if applicable)

Area Code

Phone Number

☐ Check this box if same address as incident location. Then skip the three duplicate address lines.

Mr., Ms., Mrs. First Name

MT

Last Name

Suffix

Number

Prefix

Street or Highway

Street Type

Suffix

Post Office Box

Apt./Suite/Room

Lake City

State Zip Code

**L Remarks**

Local Option

We were dispatched to a structure fire. We arrived on scene and Lake City Fire Department pulled two lines and made entry. Engine 43 2nd on scene backed them up on 2nd hose line. Engine 30 laid 5" hose in. Assistant Chief Cason was in command. Fire Marshal was called. The fire was started purposely. A woman was taken into custody. The fire was extinguished, all hot spots were knocked down. Everyone completed assignment and returned to station. Lieutenant Redish remained on scene and awaited the Fire Marshal.

**L Authorization**

0016

Officer in charge ID

Cason, James W.

Signature

AC

Position or rank

Assignment

09

22

2009

Month Day Year

Check Box if same as Officer Member making report ID in charge.

0078

Redish, Collin

Signature

LT

Position or rank

Assignment

09

22

2009

Month Day Year

<b>A</b> 29091 <small>FILED *</small>	FL <small>State *</small>	MM DD YYYY 09 10 2009 <small>Incident Date *</small>	40 <small>Station</small>	09-0003603 <small>Incident Number *</small>	000 <small>Exposure *</small>	<input type="checkbox"/> Delete <input type="checkbox"/> Change <input type="checkbox"/> No Activity	NFIRS -2 Fire
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<b>B Property Details</b>  <b>B1</b> 0016 <input type="checkbox"/> Not Residential <small>Estimated Number of residential living units in building of origin whether or not all units became involved</small>  <b>B2</b> 001 <input type="checkbox"/> Buildings not involved <small>Number of buildings involved</small>  <b>B3</b> <input checked="" type="checkbox"/> None <small>Acres burned (outside fires) <input type="checkbox"/> Less than one acre</small>	<b>C On-Site Materials or Products</b> <input type="checkbox"/> None <small>Complete if there were any significant amounts of commercial, industrial, energy or agricultural products or materials on the Property, whether or not they became involved</small> <small>Enter up to three codes. Check one or more boxes for each code entered.</small> <div style="display: flex;"> <div style="flex: 1;">           On-site material (1)            On-site material (2)            On-site material (3)         </div> <div style="flex: 1;">           1 <input type="checkbox"/> Bulk storage or warehousing            2 <input type="checkbox"/> Processing or manufacturing            3 <input type="checkbox"/> Packaged goods for sale            4 <input type="checkbox"/> Repair or service            1 <input type="checkbox"/> Bulk storage or warehousing            2 <input type="checkbox"/> Processing or manufacturing            3 <input type="checkbox"/> Packaged goods for sale            4 <input type="checkbox"/> Repair or service            1 <input type="checkbox"/> Bulk storage or warehousing            2 <input type="checkbox"/> Processing or manufacturing            3 <input type="checkbox"/> Packaged goods for sale            4 <input type="checkbox"/> Repair or service         </div> </div>
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<b>D Ignition</b>  <b>D1</b> 14 Common room, den, <small>Area of fire origin *</small>  <b>D2</b> UU Undetermined <small>Heat source *</small>  <b>D3</b> UU Undetermined <small>Item first ignited *</small> 1 <input type="checkbox"/> Check Box if fire spread was confined to object of origin  <b>D4</b> <input type="checkbox"/> <input type="checkbox"/> <small>Type of material first ignited Required only if item first ignited code is 00 or &lt;70</small>	<b>E1 Cause of Ignition</b> <input type="checkbox"/> Check box if this is an exposure report. Skip to section G 1 <input type="checkbox"/> Intentional 2 <input type="checkbox"/> Unintentional 3 <input type="checkbox"/> Failure of equipment or heat source 4 <input type="checkbox"/> Act of nature 5 <input type="checkbox"/> Cause under investigation U <input checked="" type="checkbox"/> Cause undetermined after investigation	<b>E3 Human Factors Contributing To Ignition</b> <small>Check all applicable boxes</small> 1 <input type="checkbox"/> Asleep <input checked="" type="checkbox"/> None 2 <input type="checkbox"/> Possibly impaired by alcohol or drugs 3 <input type="checkbox"/> Unattended person 4 <input type="checkbox"/> Possibly mental disabled 5 <input type="checkbox"/> Physically Disabled 6 <input type="checkbox"/> Multiple persons involved  7 <input type="checkbox"/> Age was a factor <small>Estimated age of person involved</small> <input type="text"/> 1 <input type="checkbox"/> Male 2 <input type="checkbox"/> Female
--	--	--

<b>F1 Equipment Involved In Ignition</b> <input type="checkbox"/> None IF Equipment was not involved, Skip to Section G <small>Equipment Involved</small> Brand <input type="text"/> Model <input type="text"/> Serial # <input type="text"/> Year <input type="text"/>	<b>F2 Equipment Power</b> <input type="text"/> <small>Equipment Power Source</small>  <b>F3 Equipment Portability</b> 1 <input type="checkbox"/> Portable 2 <input type="checkbox"/> Stationary <small>Portable equipment normally can be moved by one person, is designed to be use in multiple locations, and requires no tools to install.</small>	<b>G Fire Suppression Factors</b> <small>Enter up to three codes. <input type="checkbox"/> None</small> Fire suppression factor (1) <input type="text"/> Fire suppression factor (2) <input type="text"/> Fire suppression factor (3) <input type="text"/>
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<b>H1 Mobile Property Involved</b> <input type="checkbox"/> None 1 <input type="checkbox"/> Not involved in ignition, but burned 2 <input type="checkbox"/> Involved in ignition, but did not burn 3 <input type="checkbox"/> Involved in ignition and burned  <small>Mobile property model</small> <input type="text"/> <small>Year</small> <input type="text"/> <small>License Plate Number</small> <input type="text"/> <small>State</small> <input type="text"/> <small>VIN Number</small> <input type="text"/>	<b>H2 Mobile Property Type &amp; Make</b> <small>Mobile property type</small> <input type="text"/> <small>Mobile property make</small> <input type="text"/>	<b>Local Use</b> <input type="checkbox"/> Pre-Fire Plan Available <small>Some of the information presented in this report may be based upon reports from other Agencies</small> <input type="checkbox"/> Arson report attached <input type="checkbox"/> Police report attached <input type="checkbox"/> Coroner report attached <input type="checkbox"/> Other reports attached
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NFIRS-2 Revision 01/19/99



<b>I1 Structure Type *</b> If fire was in enclosed building or a portable/mobile structure complete the rest of this form 1 <input type="checkbox"/> Enclosed Building 2 <input type="checkbox"/> Portable/mobile structure 3 <input type="checkbox"/> Open structure 4 <input type="checkbox"/> Air supported structure 5 <input type="checkbox"/> Tent 6 <input type="checkbox"/> Open platform (e.g. piers) 7 <input type="checkbox"/> Underground structure (work areas) 8 <input checked="" type="checkbox"/> Connective structure (e.g. fences) 0 <input type="checkbox"/> Other type of structure		<b>I2 Building Status *</b> 1 <input type="checkbox"/> Under construction 2 <input checked="" type="checkbox"/> Occupied & operating 3 <input type="checkbox"/> Idle, not routinely used 4 <input type="checkbox"/> Under major renovation 5 <input type="checkbox"/> Vacant and secured 6 <input type="checkbox"/> Vacant and unsecured 7 <input type="checkbox"/> Being demolished 0 <input type="checkbox"/> Other U <input type="checkbox"/> Undetermined		<b>I3 Building * Height</b> Count the ROOF as part of the highest story <div style="border: 1px solid black; padding: 2px; display: inline-block;">001</div> <small>Total number of stories at or above grade</small>  <div style="border: 1px solid black; padding: 2px; display: inline-block;"></div> <small>Total number of stories below grade</small>		<b>I4 Main Floor Size*</b> <div style="border: 1px solid black; padding: 2px; display: inline-block;"></div> , <div style="border: 1px solid black; padding: 2px; display: inline-block;"></div> , <div style="border: 1px solid black; padding: 2px; display: inline-block;">180</div> <small>Total square feet</small>  OR <div style="border: 1px solid black; padding: 2px; display: inline-block;"></div> , <div style="border: 1px solid black; padding: 2px; display: inline-block;"></div> BY <div style="border: 1px solid black; padding: 2px; display: inline-block;"></div> , <div style="border: 1px solid black; padding: 2px; display: inline-block;"></div> <small>Length in feet Width in feet</small>		<b>NFIRS-3</b> <b>Structure</b> <b>Fire</b>	
<b>J1 Fire Origin *</b> <div style="border: 1px solid black; padding: 2px; display: inline-block;"></div> <input type="checkbox"/> Below Grade <small>Story of fire origin</small>		<b>J3 Number of Stories Damaged By Flame</b> Count the ROOF as part of the highest story <div style="border: 1px solid black; padding: 2px; display: inline-block;"></div> <small>Number of stories w/ minor damage (1 to 24% flame damage)</small> <div style="border: 1px solid black; padding: 2px; display: inline-block;"></div> <small>Number of stories w/ significant damage (25 to 49% flame damage)</small> <div style="border: 1px solid black; padding: 2px; display: inline-block;">001</div> <small>Number of stories w/ heavy damage (50 to 74% flame damage)</small> <div style="border: 1px solid black; padding: 2px; display: inline-block;"></div> <small>Number of stories w/ extreme damage (75 to 100% flame damage)</small>		<b>K Material Contributing Most To Flame Spread</b> <input type="checkbox"/> Check if no flame spread OR same as material first ignited OR unable to determine <span style="float: right;"><b>Skip To Section L</b></span>  <b>K1</b> <div style="border: 1px solid black; padding: 2px; display: inline-block;"></div> <small>Item contributing most to flame spread</small>  <b>K2</b> <div style="border: 1px solid black; padding: 2px; display: inline-block;"></div> <small>Type of material contributing most of flame spread</small> <span style="float: right;"><small>Required only if item contributing code is 00 or &lt;70</small></span>					
<b>J2 Fire Spread *</b> 1 <input type="checkbox"/> Confined to object of origin 2 <input type="checkbox"/> Confined to room of origin 3 <input type="checkbox"/> Confined to floor of origin 4 <input checked="" type="checkbox"/> Confined to building of origin 5 <input type="checkbox"/> Beyond building of origin		<b>L3 Detector Power Supply</b> 1 <input type="checkbox"/> Battery only 2 <input type="checkbox"/> Hardwire only 3 <input type="checkbox"/> Plug in 4 <input checked="" type="checkbox"/> Hardwire with battery 5 <input type="checkbox"/> Plug in with battery 6 <input type="checkbox"/> Mechanical 7 <input type="checkbox"/> Multiple detectors & power supplies 0 <input type="checkbox"/> Other _____ U <input type="checkbox"/> Undetermined		<b>L5 Detector Effectiveness</b> Required if detector operated 1 <input checked="" type="checkbox"/> Alerted Occupants, occupants responded 2 <input type="checkbox"/> Occupants failed to respond 3 <input type="checkbox"/> There were no occupants 4 <input type="checkbox"/> Failed to alert occupants U <input type="checkbox"/> Undetermined					
<b>L1 Presence of Detectors *</b> (In area of the fire) N <input type="checkbox"/> None Present <span style="border: 1px solid black; padding: 2px; display: inline-block;">Skip to section M</span> 1 <input checked="" type="checkbox"/> Present U <input type="checkbox"/> Undetermined		<b>L4 Detector Operation</b> 1 <input type="checkbox"/> Fire too small to activate 2 <input checked="" type="checkbox"/> Operated (Complete Section L5) 3 <input type="checkbox"/> Failed to Operate (Complete Section L6) U <input type="checkbox"/> Undetermined		<b>L6 Detector Failure Reason</b> Required if detector failed to operate 1 <input type="checkbox"/> Power failure, shutoff or disconnect 2 <input type="checkbox"/> Improper installation or placement 3 <input type="checkbox"/> Defective 4 <input type="checkbox"/> Lack of maintenance, includes cleaning 5 <input type="checkbox"/> Battery missing or disconnected 6 <input type="checkbox"/> Battery discharged or dead 0 <input type="checkbox"/> Other _____ U <input type="checkbox"/> Undetermined					
<b>L2 Detector Type</b> 1 <input checked="" type="checkbox"/> Smoke 2 <input type="checkbox"/> Heat 3 <input type="checkbox"/> Combination smoke - heat 4 <input type="checkbox"/> Sprinkler, water flow detection 5 <input type="checkbox"/> More than 1 type present 0 <input type="checkbox"/> Other _____ U <input type="checkbox"/> Undetermined		<b>M1 Presence of Automatic Extinguishment System *</b> N <input checked="" type="checkbox"/> None Present <span style="border: 1px solid black; padding: 2px; display: inline-block;">Complete rest of Section M</span> 1 <input type="checkbox"/> Present		<b>M3 Automatic Extinguishment System Operation</b> Required if fire was within designed range 1 <input type="checkbox"/> Operated & effective (Go to M4) 2 <input type="checkbox"/> Operated & not effective (M4) 3 <input type="checkbox"/> Fire too small to activate 4 <input type="checkbox"/> Failed to operate (Go to M5) 0 <input type="checkbox"/> Other U <input type="checkbox"/> Undetermined		<b>M5 Automatic Extinguishment System Failure Reason</b> Required if system failed 1 <input type="checkbox"/> System shut off 2 <input type="checkbox"/> Not enough agent discharged 3 <input type="checkbox"/> Agent discharged but did not reach fire 4 <input type="checkbox"/> Wrong type of system 5 <input type="checkbox"/> Fire not in area protected 6 <input type="checkbox"/> System components damaged 7 <input type="checkbox"/> Lack of maintenance 8 <input type="checkbox"/> Manual intervention 0 <input type="checkbox"/> Other _____ U <input type="checkbox"/> Undetermined			
<b>M2 Type of Automatic Extinguishment System *</b> Required if fire was within designed range of AES 1 <input type="checkbox"/> Wet pipe sprinkler 2 <input type="checkbox"/> Dry pipe sprinkler 3 <input type="checkbox"/> Other sprinkler system 4 <input type="checkbox"/> Dry chemical system 5 <input type="checkbox"/> Foam system 6 <input type="checkbox"/> Halogen type system 7 <input type="checkbox"/> Carbon dioxide (CO <sub>2</sub> ) system 0 <input type="checkbox"/> Other special hazard system U <input type="checkbox"/> Undetermined		<b>M4 Number of Sprinkler Heads Operating</b> Required if system operated <div style="border: 1px solid black; padding: 2px; display: inline-block;"></div> <small>Number of sprinkler heads operating</small>		NFIRS-3 Revision 01/19/99					

<b>A</b>	FDID <b>29091</b>	State <b>FL</b>	Incident Date <b>9/10/2009</b>	Station <b>40</b>	Incident Number <b>09-0003603</b>	Exposure <b>000</b>	<input type="checkbox"/> Delete <input type="checkbox"/> Change	<b>NFIRS - 9</b> <b>Apparatus or Resources</b>
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B Apparatus or Resource	Date and Times <small>Check if same as alarm date</small> Month Day Year Hour Min	Sent <input checked="" type="checkbox"/>	Number of People <input type="checkbox"/>	Use <small>Check ONE box for each apparatus to indicate its main use at the incident.</small>	Actions Taken
1 ID <b>B435</b> Type <b>16</b>	Dispatch <input checked="" type="checkbox"/> 9/10/2009 17:28 Arrival <input checked="" type="checkbox"/> 9/10/2009 17:37 Clear <input checked="" type="checkbox"/> 9/10/2009 20:36	<input checked="" type="checkbox"/>	<b>3</b>	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input checked="" type="checkbox"/> Other	<b>92</b>
2 ID <b>CF1</b> Type <b>92</b>	Dispatch <input checked="" type="checkbox"/> 9/10/2009 17:28 Arrival <input checked="" type="checkbox"/> 9/10/2009 17:37 Clear <input checked="" type="checkbox"/> 9/10/2009 20:36	<input checked="" type="checkbox"/>	<b>1</b>	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input checked="" type="checkbox"/> Other	<b>73</b>
3 ID <b>CF2</b> Type <b>92</b>	Dispatch <input checked="" type="checkbox"/> 9/10/2009 17:28 Arrival <input checked="" type="checkbox"/> 9/10/2009 17:37 Clear <input checked="" type="checkbox"/> 9/10/2009 20:36	<input checked="" type="checkbox"/>	<b>1</b>	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input checked="" type="checkbox"/> Other	<b>73</b>
4 ID <b>CF3</b> Type <b>91</b>	Dispatch <input checked="" type="checkbox"/> 9/10/2009 17:28 Arrival <input checked="" type="checkbox"/> 9/10/2009 17:37 Clear <input checked="" type="checkbox"/> 9/10/2009 20:36	<input checked="" type="checkbox"/>	<b>1</b>	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input checked="" type="checkbox"/> Other	<b>73</b>
5 ID <b>CF4</b> Type <b>60</b>	Dispatch <input checked="" type="checkbox"/> 9/10/2009 17:28 Arrival <input checked="" type="checkbox"/> 9/10/2009 17:37 Clear <input checked="" type="checkbox"/> 9/10/2009 20:36	<input checked="" type="checkbox"/>	<b>1</b>	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input checked="" type="checkbox"/> Other	<b>73</b>
6 ID <b>CF5</b> Type <b>10</b>	Dispatch <input checked="" type="checkbox"/> 9/10/2009 17:28 Arrival <input checked="" type="checkbox"/> 9/10/2009 17:37 Clear <input checked="" type="checkbox"/> 9/10/2009 20:36	<input checked="" type="checkbox"/>	<b>1</b>	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input checked="" type="checkbox"/> Other	<b>73</b>
7 ID <b>E40</b> Type <b>11</b>	Dispatch <input checked="" type="checkbox"/> 9/10/2009 17:28 Arrival <input checked="" type="checkbox"/> 9/10/2009 17:37 Clear <input checked="" type="checkbox"/> 9/10/2009 20:36	<input checked="" type="checkbox"/>	<b>1</b>	<input checked="" type="checkbox"/> Suppression <input type="checkbox"/> EMS <input type="checkbox"/> Other	<b>73</b> <b>74</b> <b>75</b>
8 ID <b>E43</b> Type <b>11</b>	Dispatch <input checked="" type="checkbox"/> 9/10/2009 17:28 Arrival <input checked="" type="checkbox"/> 9/10/2009 17:37 Clear <input checked="" type="checkbox"/> 9/10/2009 20:36	<input checked="" type="checkbox"/>	<b>2</b>	<input checked="" type="checkbox"/> Suppression <input type="checkbox"/> EMS <input type="checkbox"/> Other	<b>73</b> <b>74</b> <b>75</b> <b>76</b>
9 ID <b>SC1</b> Type <b>92</b>	Dispatch <input checked="" type="checkbox"/> 9/10/2009 17:28 Arrival <input checked="" type="checkbox"/> 9/10/2009 17:37 Clear <input checked="" type="checkbox"/> 9/10/2009 20:36	<input checked="" type="checkbox"/>	<b>1</b>	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input checked="" type="checkbox"/> Other	<b>73</b>

**Type of Apparatus or Resources**

**Ground Fire Suppression**

11 Engine

12 Truck or aerial

13 Quint

14 Tanker & pumper combination

16 Brush truck

17 ARF (Aircraft Rescue and Firefighting)

10 Ground fire suppression, other

**Heavy Ground Equipment**

21 Dozer or plow

22 Tractor

24 Tanker or tender

20 Heavy equipment, other

**Aircraft**

41 Aircraft: fixed wing tanker

42 Helitanker

43 Helicopter

40 Aircraft, other

**Marine Equipment**

51 Fire boat with pump

52 Boat, no pump

50 Marine apparatus, other

**Support Equipment**

61 Breathing apparatus support

62 Light and air unit

60 Support apparatus, other

**Medical & Rescue**

71 Rescue unit

72 Urban Search & rescue unit

73 High angle rescue unit

75 BLS unit

76 ALS unit

70 Medical and rescue unit, other

**More Apparatus?**  
Use Additional Sheets

**Other**

91 Mobile command post

92 Chief officer car

93 HazMat unit

94 Type 1 hand crew

95 Type 2 hand crew

99 Privately owned vehicle

00 Other apparatus/resource

NN None

UU Undetermined

NFIRS-9 Revision 11/17/98

<b>A</b>		FDID <b>29091</b>		State <b>FL</b>		MM <b>9</b> DD <b>10</b> YYYY <b>2009</b>		Station <b>40</b>		Incident Number <b>09-0003603</b>		Exposure <b>000</b>		<input type="checkbox"/> Delete <input type="checkbox"/> Change		NFIRS - 10 Personnel	
<b>B Apparatus or Resource *</b>		<b>Date and Times</b> <small>Check if same as alarm date</small>						<b>Sent</b> <input checked="" type="checkbox"/>		<b>Number of * People</b>		<b>Use</b> <small>Check ONE box for each apparatus to indicate its main use at the incident.</small>		<b>Actions Taken</b> <small>List up to 4 actions for each apparatus and each personnel.</small>			
<small>Use codes listed below</small>		Month Day Year Hours/mins															
<b>1</b> ID <b>B435</b> Type <b>16</b>		Dispatch <input checked="" type="checkbox"/>		<b>9</b> <b>10</b> <b>2009</b>		<b>17:28</b>		Sent <input checked="" type="checkbox"/>		<b>3</b>		<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input checked="" type="checkbox"/> Other		<b>92</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
		Arrival <input checked="" type="checkbox"/>		<b>9</b> <b>10</b> <b>2009</b>		<b>17:37</b>											
		Clear <input checked="" type="checkbox"/>		<b>9</b> <b>10</b> <b>2009</b>		<b>20:36</b>											
<b>Personnel ID</b>		<b>Name</b>				<b>Rank or Grade</b>		<b>Attend</b> <input checked="" type="checkbox"/>		<b>Action Taken</b>		<b>Action Taken</b>		<b>Action Taken</b>		<b>Action Taken</b>	
0020		Crews, John				FF		X		92							
0030		Duffany, Walt				FF		X		92							
0084		Stanley, Jerry				BC		X		58		92					
<b>2</b> ID <b>CF1</b>		Dispatch <input checked="" type="checkbox"/>		<b>9</b> <b>10</b> <b>2009</b>		<b>17:28</b>		Sent <input checked="" type="checkbox"/>		<b>1</b>		<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input checked="" type="checkbox"/> Other		<b>73</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
		Arrival <input checked="" type="checkbox"/>		<b>9</b> <b>10</b> <b>2009</b>		<b>17:37</b>											
		Clear <input checked="" type="checkbox"/>		<b>9</b> <b>10</b> <b>2009</b>		<b>20:36</b>											
<b>Personnel ID</b>		<b>Name</b>				<b>Rank or Grade</b>		<b>Attend</b> <input checked="" type="checkbox"/>		<b>Action Taken</b>		<b>Action Taken</b>		<b>Action Taken</b>		<b>Action Taken</b>	
0009		Boozar, David				FMD		X		58		11					
<b>3</b> ID <b>CF2</b>		Dispatch <input checked="" type="checkbox"/>		<b>9</b> <b>10</b> <b>2009</b>		<b>17:28</b>		Sent <input checked="" type="checkbox"/>		<b>1</b>		<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input checked="" type="checkbox"/> Other		<b>73</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
		Arrival <input checked="" type="checkbox"/>		<b>9</b> <b>10</b> <b>2009</b>		<b>17:37</b>											
		Clear <input checked="" type="checkbox"/>		<b>9</b> <b>10</b> <b>2009</b>		<b>20:36</b>											
<b>Personnel ID</b>		<b>Name</b>				<b>Rank or Grade</b>		<b>Attend</b> <input checked="" type="checkbox"/>		<b>Action Taken</b>		<b>Action Taken</b>		<b>Action Taken</b>		<b>Action Taken</b>	
0016		Cason, James				AC		X		58		11		81		86	



<b>A</b>		FDID <b>29091</b>		State <b>FL</b>	MM <b>9</b> DD <b>10</b> YYYY <b>2009</b>		Station <b>40</b>	Incident Number <b>09-0003603</b>		Exposure <b>000</b>	<input type="checkbox"/> Delete <input type="checkbox"/> Change	<b>NFIRS - 10</b> <b>Personnel</b>
<b>B Apparatus or Resource *</b>		Date and Times <small>Check if same as alarm date</small>						Sent	Number of *	Use	Actions Taken	
		<small>Use codes listed below</small> Month Day Year Hours/mins						<input checked="" type="checkbox"/>	*	<small>Check ONE box for each apparatus to indicate its main use at the incident.</small> <input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input checked="" type="checkbox"/> Other	<small>List up to 4 actions for each apparatus and each personnel.</small> <div style="display: flex; justify-content: space-between;"> <div>73</div> <div></div> </div>	
1		ID <b>CF3</b>	Dispatch <input checked="" type="checkbox"/>	9	10	2009	17:28	Sent	1			
		Type <b>91</b>	Arrival <input checked="" type="checkbox"/>	9	10	2009	17:37	<input checked="" type="checkbox"/>				
			Clear <input checked="" type="checkbox"/>	9	10	2009	20:36					
Personnel ID	Name						Rank or Grade	Attend <input checked="" type="checkbox"/>	Action Taken	Action Taken	Action Taken	Action Taken
ANDE01	Anderson, Michael						LT	X	58	73		
2		ID <b>CF4</b>	Dispatch <input checked="" type="checkbox"/>	9	10	2009	17:28	Sent	1			
		Type <b>60</b>	Arrival <input checked="" type="checkbox"/>	9	10	2009	17:37	<input checked="" type="checkbox"/>				
			Clear <input checked="" type="checkbox"/>	9	10	2009	20:36					
Personnel ID	Name						Rank or Grade	Attend <input checked="" type="checkbox"/>	Action Taken	Action Taken	Action Taken	Action Taken
NOAH01	Noah, Charles						FF	X	58	73		
3		ID <b>CF5</b>	Dispatch <input checked="" type="checkbox"/>	9	10	2009	17:28	Sent	1			
		Type <b>10</b>	Arrival <input checked="" type="checkbox"/>	9	10	2009	17:37	<input checked="" type="checkbox"/>				
			Clear <input checked="" type="checkbox"/>	9	10	2009	20:36					
Personnel ID	Name						Rank or Grade	Attend <input checked="" type="checkbox"/>	Action Taken	Action Taken	Action Taken	Action Taken
0001	Atkinson, Tres						FC	X	58	11		

<b>A</b>	FDID <b>29091</b>	FL <b>FL</b>	Incident Date <b>9/10/2009</b>	Station <b>40</b>	Incident Number <b>09-0003603</b>	Exposure <b>000</b>	<input type="checkbox"/> Delete <input type="checkbox"/> Change	<b>NFIRS - 10 Personnel</b>
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B Apparatus or Resource <small>Use codes listed below</small>	Date and Times <small>Check if same as alarm date</small>	Sent	Number of People	Use <small>Check ONE box for each apparatus to indicate its main use at the incident.</small>	Actions Taken <small>List up to 4 actions for each apparatus and each personnel.</small>
<b>1</b> ID <b>E40</b> Type <b>11</b>	Dispatch <input checked="" type="checkbox"/> <b>9/10/2009 17:28</b> Arrival <input checked="" type="checkbox"/> <b>9/10/2009 17:37</b> Clear <input checked="" type="checkbox"/> <b>9/10/2009 20:36</b>	<input checked="" type="checkbox"/>	<b>1</b>	<input checked="" type="checkbox"/> Suppression <input type="checkbox"/> EMS <input type="checkbox"/> Other	<b>73</b> <b>74</b> <b>75</b>

Personnel ID	Name	Rank or Grade	Attend	Action Taken	Action Taken	Action Taken	Action Taken
HERN01	Herndon, Matthew	FF	X	58	11		

<b>2</b> ID <b>E43</b> Type <b>11</b>	Dispatch <input checked="" type="checkbox"/> <b>9/10/2009 17:28</b> Arrival <input checked="" type="checkbox"/> <b>9/10/2009 17:37</b> Clear <input checked="" type="checkbox"/> <b>9/10/2009 20:36</b>	<input checked="" type="checkbox"/>	<b>2</b>	<input checked="" type="checkbox"/> Suppression <input type="checkbox"/> EMS <input type="checkbox"/> Other	<b>73</b> <b>74</b> <b>75</b> <b>76</b>
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Personnel ID	Name	Rank or Grade	Attend	Action Taken	Action Taken	Action Taken	Action Taken
MAYS01	Mays, Chauncey	FF	X	11			
MCIN01	McIntee, III, Jerome	FF	X	58	11		

<b>3</b> ID <b>SC1</b> Type <b>92</b>	Dispatch <input checked="" type="checkbox"/> <b>9/10/2009 17:28</b> Arrival <input checked="" type="checkbox"/> <b>9/10/2009 17:37</b> Clear <input checked="" type="checkbox"/> <b>9/10/2009 20:36</b>	<input checked="" type="checkbox"/>	<b>1</b>	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input checked="" type="checkbox"/> Other	<b>73</b> <b>74</b> <b>75</b> <b>76</b>
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Personnel ID	Name	Rank or Grade	Attend	Action Taken	Action Taken	Action Taken	Action Taken
0078	Redish, Collin	LT	X	58	11		

<b>A</b>	29091	FL	9	10	2009	40	09-0003603	000	<input type="checkbox"/> Delete	<b>Insurance and \$Loss</b>
	FDIS *	State *	Incident Date *			Station	Incident Number *	Exposure *	<input type="checkbox"/> Change	

**B Estimated Dollar Loss & Value**

	Pre-Incident Value	Estimated Loss	Insured Amount	Settlement Amount
Buildings	\$500,000.00	\$200,000.00	\$0.00	\$0.00
Vehicles	\$0.00	\$0.00	\$0.00	\$0.00
Contents	\$0.00	\$0.00	\$0.00	\$0.00

**C<sub>1</sub> Insurance Company**

Lloyd's of London			
Business name if applicable		Contact Name	
Street or highway			
Post office box		City	
State	Zip Code	Phone Number	
Agent Name			
fal00123-00		<input checked="" type="checkbox"/> Buildings <input type="checkbox"/> Vehicles <input type="checkbox"/> Contents	
Policy Number		Policy Coverage	



## PUBLIC RECORDS REQUEST

Florida Statute 119.011

"Public Records means all documents, papers, letters, maps, books, tapes, photographs, films, sound recordings, data processing software, or other material regardless of the physical form, characteristics, or means of transmission, made or received pursuant to law or ordinance or in connection with the transaction of official business of any agency."

Florida Statute 119-07

"Every person who has custody of a public record shall permit the record to be inspected and examined by any person desiring to do so, at any reasonable time, under reasonable conditions, and under supervision by the custodian of the public record or the custodian's designee."

Most County records are promptly available to the public upon request. However, to ensure file content is not compromised, files will not be loaned out and may not be removed from the county department or office.

The information listed below is requested (but not required) to expedite your request and document public records request activity.

### SUBJECT OR NAME OF FILE(S) OR RECORD(S) TO BE REVIEWED:

1. Mike Bay
2. \_\_\_\_\_

TIME PERIOD: From 09 10 09 TO \_\_\_\_\_  
Month, Day, Year Month, Day, Year

COPIES REQUESTED: YES ☒ NO ☐

COPY ENTIRE FILE: YES ☐ NO ☒

### LIST RECORD(S) TO BE COPIED BELOW:

1. Incident # 3603
2. \_\_\_\_\_
3. \_\_\_\_\_

no change  
to bldg  
dept.

### THE CONTACT INFORMATION BELOW IS NOT REQUIRED

If you wish to be contacted when the records are available, please include the appropriate information.

NAME: Columbia County Bldg + Zoning Dept.

ADDRESS: \_\_\_\_\_

TELEPHONE NUMBER: ( ) 758 2160 E-MAIL: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

### INTERNAL USE ONLY:

Tracking Number \_\_\_\_\_ Department & Contact Person \_\_\_\_\_  
Date: \_\_\_\_\_ Time: \_\_\_\_\_  
Date Completed: \_\_\_\_\_ Time: \_\_\_\_\_

copy  
faxed to  
Bldg + Zoning  
Per. D. Booser  
10-23-09  
10:28 AM

**FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION**

## Florida Department of Community Affairs Residential Performance Method A

Project Name: EASTSIDE CARE CENTER  
 Street: 152 S.E. DEFENDER DR  
 City, State, Zip: LAKE CITY, FL, 32025-  
 Owner:  
 Design Location: FL, Jacksonville

Builder Name: COASTAL RECONSTRUCTION  
 Permit Office: COLUMBIA COUNTY  
 Permit Number:  
 Jurisdiction: 221000

1. New construction or existing	Existing (Project)
2. Single family or multiple family	Multi-family
3. Number of units, if multiple family	1
4. Number of Bedrooms	24
5. Is this a worst case?	No
6. Conditioned floor area (ft <sup>2</sup> )	2890
7. Windows	Description Area
a. U-Factor:	Dbl, U=0.68 108.00 ft <sup>2</sup>
SHGC:	SHGC=0.61
b. U-Factor:	Dbl, U=0.68 81.00 ft <sup>2</sup>
SHGC:	SHGC=0.61
c. U-Factor:	N/A ft <sup>2</sup>
SHGC:	
d. U-Factor:	N/A ft <sup>2</sup>
SHGC:	
e. U-Factor:	N/A ft <sup>2</sup>
SHGC:	
8. Floor Types	Insulation Area
a. Slab-On-Grade Edge Insulation	R=0.0 2890.00 ft <sup>2</sup>
b. N/A	R= ft <sup>2</sup>
c. N/A	R= ft <sup>2</sup>

9. Wall Types	Insulation Area
a. Frame - Wood, Exterior	R=19.0 1696.00 ft <sup>2</sup>
b. N/A	R= ft <sup>2</sup>
c. N/A	R= ft <sup>2</sup>
d. N/A	R= ft <sup>2</sup>
10. Ceiling Types	Insulation Area
a. Under Attic (Vented)	R=30.0 2890.00 ft <sup>2</sup>
b. N/A	R= ft <sup>2</sup>
c. N/A	R= ft <sup>2</sup>
11. Ducts	
a. Sup: Attic Ret: Attic AH: Interior Sup. R= 6, 56 ft <sup>2</sup>	
12. Cooling systems	
a. Central Unit	Cap: 58 kBtu/hr SEER: 13
13. Heating systems	
a. Natural Gas Furnace	Cap: 58.5 kBtu/hr AFUE: 0.78
14. Hot water systems	
a. Natural Gas	Cap: 80 gallons EF: 0.59
b. Conservation features	
None	
15. Credits	None

Glass/Floor Area: 0.065

Total As-Built Modified Loads: 79.91

Total Baseline Loads: 95.67

**PASS**

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code.

Jose Fernandez

PREPARED BY: Mechanical Engineer  
 DATE: Contractor Lic. #CAC1813923 10/2009

I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.

OWNER/AGENT: \_\_\_\_\_  
 DATE: \_\_\_\_\_

Review of the plans and specifications covered by this calculation indicates compliance with the Florida Energy Code. Before construction is completed this building will be inspected for compliance with Section 553.908 Florida Statutes.



BUILDING OFFICIAL: \_\_\_\_\_  
 DATE: \_\_\_\_\_



## PROJECT

Title: EASTSIDE CARE CENTER	Bedrooms: 24	Address Type: Street Address
Building Type: FLAsBuilt	Bathrooms: 0	Lot #: 261
Owner:	Conditioned Area: 2890	SubDivision: County Seat
# of Units: 1	Total Stories: 1	PlatBook: Book 108-n, page 345
Builder Name: COASTAL RECONSTRUCTI	Worst Case: No	Street: 152 S.E. DEFENDER D
Permit Office: COLUMBIA COUNTY	Rotate Angle: 0	County: COLUMBIA
Jurisdiction: 221000	Cross Ventilation: No	City, State, Zip: LAKE CITY ,
Family Type: Multi-family	Whole House Fan: No	FL , 32025-
New/Existing: Existing (Projected)		
Comment:		

## CLIMATE

	Design Location	TMY Site	IECC Zone	Design Temp 97.5 %	Design Temp 2.5 %	Int Design Temp Winter	Int Design Temp Summer	Heating Degree Days	Design Moisture	Daily Temp Range
✓	FL, Jacksonville	FL_JACKSONVILLE_INT	2	32	93	75	70	1281	49	Medium

## FLOORS

	#	Floor Type	Perimeter	R-Value	Area	Tile	Wood	Carpet
✓	1	Slab-On-Grade Edge Insulatio	224 ft	0	2890 ft²	0	0	1

## ROOF

	#	Type	Materials	Roof Area	Gable Area	Roof Color	Solar Absor.	Tested	Deck Insul.	Pitch
✓	1	Hip	Composition shingles	3130 ft²	0 ft²	Medium	0.96	No	0	22.6 deg

## ATTIC

	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
✓	1	Full attic	Vented	150	2890 ft²	N	N

## CEILING

	#	Ceiling Type	R-Value	Area	Framing Frac	Truss Type
✓	1	Under Attic (Vented)	30	2890 ft²	0.11	Wood

## WALLS

	#	Ornt	Adjacent To	Wall Type	Cavity R-Value	Area	Sheathing R-Value	Framing Fraction	Solar Absor.
✓	1	N	Exterior	Frame - Wood	19	712 ft²	0	0.23	0.65
	2	S	Exterior	Frame - Wood	19	712 ft²	0	0.23	0.65
	3	E	Exterior	Frame - Wood	19	272 ft²	0	0.23	0.65



## DOORS

✓	#	Ornt	Door Type	Storms	U-Value	Area
_____	1	N	Insulated	None	0.4	20 ft²
_____	2	N	Insulated	None	0.46	20 ft²
_____	3	N	Insulated	None	0.46	20 ft²
_____	4	N	Insulated	None	0.46	20 ft²
_____	5	N	Insulated	None	0.46	20 ft²
_____	6	N	Insulated	None	0.46	20 ft²
_____	7	S	Insulated	None	0.46	20 ft²
_____	8	S	Insulated	None	0.46	20 ft²
_____	9	S	Insulated	None	0.46	20 ft²
_____	10	S	Insulated	None	0.46	20 ft²
_____	11	S	Insulated	None	0.46	20 ft²
_____	12	S	Insulated	None	0.46	20 ft²

## WINDOWS

Window orientation below is as entered. Actual orientation is modified by rotate angle shown in "Project" section above.

✓	#	Ornt	Frame	Panes	NFRC	U-Factor	SHGC	Storms	Area	Overhang		Int Shade	Screening
										Depth	Separation		
_____	1	N	Metal	Double (Clear)	Yes	0.68	0.61	N	18 ft²	0 ft 72 in	0 ft 0 in	HERS 2006	None
_____	2	N	Metal	Double (Clear)	Yes	0.68	0.61	N	18 ft²	0 ft 72 in	0 ft 0 in	HERS 2006	None
_____	3	N	Metal	Double (Clear)	Yes	0.68	0.61	N	18 ft²	0 ft 72 in	0 ft 0 in	HERS 2006	None
_____	4	N	Metal	Double (Clear)	Yes	0.68	0.61	N	18 ft²	0 ft 72 in	0 ft 0 in	HERS 2006	None
_____	5	N	Metal	Double (Clear)	Yes	0.68	0.61	N	18 ft²	0 ft 72 in	0 ft 0 in	HERS 2006	None
_____	6	N	Metal	Double (Clear)	Yes	0.68	0.61	N	18 ft²	0 ft 72 in	0 ft 0 in	HERS 2006	None
_____	7	N	Metal	Double (Tinted)	Yes	0.68	0.61	N	9 ft²	0 ft 0 in	0 ft 0 in	HERS 2006	None
_____	8	N	Metal	Double (Tinted)	Yes	0.68	0.61	N	9 ft²	0 ft 0 in	0 ft 0 in	HERS 2006	None
_____	9	N	Metal	Double (Tinted)	Yes	0.68	0.61	N	9 ft²	0 ft 0 in	0 ft 0 in	HERS 2006	None
_____	10	N	Metal	Double (Tinted)	Yes	0.68	0.61	N	9 ft²	0 ft 0 in	0 ft 0 in	HERS 2006	None
_____	11	N	Metal	Double (Tinted)	Yes	0.68	0.61	N	9 ft²	0 ft 0 in	0 ft 0 in	HERS 2006	None
_____	12	N	Metal	Double (Tinted)	Yes	0.68	0.61	N	9 ft²	0 ft 0 in	0 ft 0 in	HERS 2006	None
_____	13	N	Metal	Double (Tinted)	Yes	0.68	0.61	N	9 ft²	0 ft 0 in	0 ft 0 in	HERS 2006	None
_____	14	N	Metal	Double (Tinted)	Yes	0.68	0.61	N	9 ft²	0 ft 0 in	0 ft 0 in	HERS 2006	None
_____	15	N	Metal	Double (Tinted)	Yes	0.68	0.61	N	9 ft²	0 ft 0 in	0 ft 0 in	HERS 2006	None

## INFILTRATION & VENTING

✓	Method	SLA	CFM 50	ACH 50	ELA	EqLA	---- Forced Ventilation ----		Run Time	Fan
							Supply CFM	Exhaust CFM	Fraction	Watts
_____	Default	0.00036	2729	7.08	149.8	281.8	0 cfm	0 cfm	0	0

COOLING SYSTEM									
✓	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Ductless	
✓	1	Central Unit	None	SEER: 13	58 kBtu/hr	1740 cfm	0.7	False	

HEATING SYSTEM						
✓	#	System Type	Subtype	Efficiency	Capacity	Ductless
✓	1	Natural Gas Furnace	None	AFUE: 0.78	58.5 kBtu/hr	False

HOT WATER SYSTEM							
✓	#	System Type	EF	Cap	Use	SetPnt	Conservation
✓	1	Natural Gas	0.59	80 gal	270 gal	120 deg	None

SOLAR HOT WATER SYSTEM							
✓	FSEC Cert #	Company Name	System Model #	Collector Model #	Collector Area	Storage Volume	FEF
✓	None	None			ft²		

DUCTS												
✓	#	--- Supply ---			--- Return ---		Leakage Type	Air Handler	CFM 25	Percent Leakage	QN	RLF
		Location	R-Value	Area	Location	Area						
✓	1	Attic	6	56 ft²	Attic	88 ft²	Default Leakage	Interior				

TEMPERATURES																																						
Programable Thermostat: N				Ceiling Fans:																																		
Cooling	Heating	Venting	[X] Jan	[X] Jan	[X] Jan	[X] Feb	[X] Feb	[X] Feb	[X] Mar	[X] Mar	[X] Mar	[X] Apr	[X] Apr	[X] Apr	[X] May	[X] May	[X] May	[X] Jun	[X] Jun	[X] Jun	[X] Jul	[X] Jul	[X] Jul	[X] Aug	[X] Aug	[X] Aug	[X] Sep	[X] Sep	[X] Sep	[X] Oct	[X] Oct	[X] Oct	[X] Nov	[X] Nov	[X] Nov	[X] Dec	[X] Dec	[X] Dec
Thermostat Schedule: HERS 2006 Reference														Hours																								
Schedule Type														1	2	3	4	5	6	7	8	9	10	11	12													
Cooling (WD)			AM	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78
Cooling (WEH)			AM	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78
Heating (WD)			AM	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	
Heating (WEH)			AM	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	

## Code Compliance Checklist

### Residential Whole Building Performance Method A - Details

ADDRESS: 152 S.E. DEFENDER DR  
LAKE CITY, FL, 32025-

PERMIT #:

#### INFILTRATION REDUCTION COMPLIANCE CHECKLIST

COMPONENTS	SECTION	REQUIREMENTS FOR EACH PRACTICE	CHECK
Exterior Windows & Doors	N1106.AB.1.1	Maximum: .3 cfm/sq.ft. window area; .5 cfm/sq.ft. door area.	✓
Exterior & Adjacent Walls	N1106.AB.1.2.1	Caulk, gasket, weatherstrip or seal between: windows/doors & frames, surrounding wall; foundation & wall sole or sill plate; joints between exterior wall panels at corners; utility penetrations; between wall panels & top/bottom plates; between walls and floor. EXCEPTION: Frame walls where a continuous infiltration barrier is installed that extends from, and is sealed to, the foundation to the top plate.	✓
Floors	N1106.AB.1.2.2	Penetrations/openings > 1/8" sealed unless backed by truss or joint members. EXCEPTION: Frame floors where a continuous infiltration barrier is installed that is sealed to the perimeter, penetrations and seams.	✓
Ceilings	N1106.AB.1.2.3	Between walls & ceilings; penetrations of ceiling plane to top floor; around shafts, chases, soffits, chimneys, cabinets sealed to continuous air barrier; gaps in gyp board & top plate; attic access. EXCEPTION: Frame ceilings where a continuous infiltration barrier is installed that is sealed at the perimeter, at penetrations and seams.	✓
Recessed Lighting Fixtures	N1106.AB.1.2.4	Type IC rated with no penetrations, sealed; or Type IC or non-IC rated, installed inside a sealed box with 1/2" clearance & 3" from insulation; or Type IC with < 2.0 cfm from conditioned space, tested.	
Multi-story Houses	N1106.AB.1.2.5	Air barrier on perimeter of floor cavity between floors.	
Additional Infiltration reqts	N1106.AB.1.3	Exhaust fans vented to outdoors, dampers; combustion space heaters comply with NFPA, have combustion air.	

#### OTHER PRESCRIPTIVE MEASURES (must be met or exceeded by all residences.)

COMPONENTS	SECTION	REQUIREMENTS	CHECK
Water Heaters	N1112.AB.3	Comply with efficiency requirements in Table N112.ABC.3. Switch or clearly marked circuit breaker (electric) or cutoff (gas) must be provided. External or built-in heat trap required.	✓
Swimming Pools & Spas	N1112.AB.2.3	Spas & heated pools must have covers (except solar heated). Non-commercial pools must have a pump timer. Gas spa & pool heaters must have a minimum thermal efficiency of 78%. Heat pump pool heaters shall have a minimum COP of 4.0.	
Shower heads	N1112.AB.2.4	Water flow must be restricted to no more than 2.5 gallons per minute at 80 PSIG.	
Air Distribution Systems	N1110.AB	All ducts, fittings, mechanical equipment and plenum chambers shall be mechanically attached, sealed, insulated and installed in accordance with the criteria of Section N1110.AB. Ducts in unconditioned attics: R-6 min. insulation.	✓
HVAC Controls	N1107.AB.2	Separate readily accessible manual or automatic thermostat for each system.	✓
Insulation	N1104.AB.1 N1102.B.1.1	Ceilings-Min. R-19. Common walls-frame R-11 or CBS R-3 both sides. Common ceiling & floors R-11.	✓

# ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX\* = 84

The lower the EnergyPerformance Index, the more efficient the home.

1. New construction or existing	Existing (Projecte	9. Wall Types	Insulation	Area
2. Single family or multiple family	Multi-family	a. Frame - Wood, Exterior	R=19.0	1696.00 ft <sup>2</sup>
3. Number of units, if multiple family	1	b. N/A	R=	ft <sup>2</sup>
4. Number of Bedrooms	24	c. N/A	R=	ft <sup>2</sup>
5. Is this a worst case?	No	d. N/A	R=	ft <sup>2</sup>
6. Conditioned floor area (ft <sup>2</sup> )	2890	10. Ceiling Types	Insulation	Area
7. Windows**	Description	a. Under Attic (Vented)	R=30.0	2890.00 ft <sup>2</sup>
a. U-Factor:	DbI, U=0.68	b. N/A	R=	ft <sup>2</sup>
SHGC:	SHGC=0.61	c. N/A	R=	ft <sup>2</sup>
b. U-Factor:	DbI, U=0.68	11. Ducts		
SHGC:	SHGC=0.61	a. Sup: Attic Ret: Attic AH: Interior Sup. R= 6, 56 ft <sup>2</sup>		
c. U-Factor:	N/A	12. Cooling systems		
SHGC:		a. Central Unit	Cap: 58 kBtu/hr	
d. U-Factor:	N/A		SEER: 13	
SHGC:		13. Heating systems		
e. U-Factor:	N/A	a. Natural Gas Furnace	Cap: 58.5 kBtu/hr	
SHGC:			AFUE: 0.78	
8. Floor Types	Insulation	14. Hot water systems		
a. Slab-On-Grade Edge Insulation	R=0.0	a. Natural Gas	Cap: 80 gallons	
b. N/A	R=		EF: 0.59	
c. N/A	R=	b. Conservation features		
		None		
		15. Credits		None

I certify that this home has complied with the Florida Energy Efficiency Code for Building Construction through the above energy saving features which will be installed (or exceeded) in this home before final inspection. Otherwise, a new EPL Display Card will be completed based on installed Code compliant features.

Builder Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Address of New Home: \_\_\_\_\_ City/FL Zip: \_\_\_\_\_



\*Note: The home's estimated Energy Performance Index is only available through the EnergyGauge USA - FlaRes2008 computer program. This is not a Building Energy Rating. If your Index is below 100, your home may qualify for incentives if you obtain a Florida Energy Gauge Rating. Contact the Energy Gauge Hotline at (321) 638-1492 or see the Energy Gauge web site at [energygauge.com](http://energygauge.com) for information and a list of certified Raters. For information about Florida's Energy Efficiency Code for Building Construction, contact the Department of Community Affairs at (850) 487-1824.

\*\*Label required by Section 13-104.4.5 of the Florida Building Code, Building, or Section B2.1.1 of Appendix G of the Florida Building Code, Residential, if not DEFAULT.





**Project Summary**  
**Entire House**  
**FLORIDA AIR SERVICE & ENGINEERING**

Job: COASTAL-EASTSIDE  
Date: 10/2009  
By: JLF

## Project Information

For: EASTSIDE CARE, COASTAL RECONSTRUCTION

Notes:

## Design Information

Weather: Jacksonville, Int'l AP, FL, US

### Winter Design Conditions

Outside db	32 °F
Inside db	70 °F
Design TD	38 °F

### Summer Design Conditions

Outside db	93 °F
Inside db	75 °F
Design TD	18 °F
Daily range	M
Relative humidity	50 %
Moisture difference	51 gr/lb

### Heating Summary

Structure	25394 Btuh
Ducts	12647 Btuh
Central vent (89 cfm)	3735 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	41777 Btuh

### Sensible Cooling Equipment Load Sizing

Structure	25738 Btuh
Ducts	14260 Btuh
Central vent (89 cfm)	1730 Btuh
Blower	0 Btuh

### Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	1 (Average)

	Heating	Cooling
Area (ft <sup>2</sup> )	2308	2308
Volume (ft <sup>3</sup> )	22708	22708
Air changes/hour	0.37	0.16
Equiv. AVF (cfm)	141	61

### Latent Cooling Equipment Load Sizing

Structure	3711 Btuh
Ducts	3571 Btuh
Central vent (89 cfm)	3118 Btuh
Equipment latent load	10399 Btuh

Equipment total load	52127 Btuh
Req. total capacity at 0.73 SHR	4.8 ton

### Heating Equipment Summary

Make  
Trade 5.0 TON  
Model

Efficiency	8 HSPF
Heating input	
Heating output	58500 Btuh @ 47°F
Temperature rise	27 °F
Actual air flow	2000 cfm
Air flow factor	0.053 cfm/Btuh
Static pressure	0.50 in H <sub>2</sub> O
Space thermostat	Heat/Cool

### Cooling Equipment Summary

Make  
Trade 5.0 TON  
Cond  
Coil

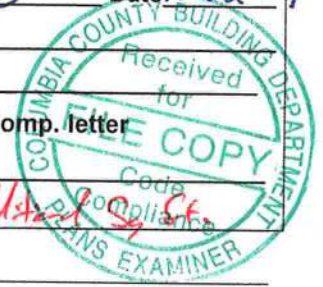
Efficiency	13 SEER
Sensible cooling	42195 Btuh
Latent cooling	15805 Btuh
Total cooling	58000 Btuh
Actual air flow	2000 cfm
Air flow factor	0.050 cfm/Btuh
Static pressure	0.50 in H <sub>2</sub> O
Load sensible heat ratio	0.80

Printout certified by ACCA to meet all requirements of Manual J 8th Ed.

Paid Application fee 10/6/09

Columbia County Building Permit Application

For Office Use Only Application # 0910-23 Date Received 10/6/09 By LH Permit # 28157  
Zoning Official BLK Date 22.10.09 Flood Zone X Land Use Comm. Zoning CI  
FEMA Map # N/A Elevation N/A MFE Existing floor River N/A Plans Examiner HD Date 10-22-09  
Comments Fire Damage To Existing Building  
☒ NOC ☒ EH ☒ Deed or PA ☒ Site Plan ☒ State Road Info ☐ Parent Parcel #  
☐ Dev Permit # ☐ In Floodway ☐ Letter of Auth. from Contractor ☐ F W Comp. letter  
IMPACT FEES: EMS \_\_\_\_\_ Fire \_\_\_\_\_ Corr \_\_\_\_\_ Road/Code \_\_\_\_\_  
School \_\_\_\_\_ = TOTAL N/A Existing Structure / no additional fees



Septic Permit No. X09-288 City \_\_\_\_\_ Fax \_\_\_\_\_  
Name Authorized Person Signing Permit DAN Steller Phone 904-545-2763  
Address 5570 Florida Mining Blvd S#304, Jax, FL 32257  
Owners Name Hendrix Smith & Kirby LLC Phone 386-755-4487  
911 Address 152 SE Defender Ave Lake City FL 32025  
Contractors Name Coastal Reconstruction Inc. Phone 904.880-1919  
Address 5570 Florida Mining Blvd S#304, Jacksonville FL 32257  
Fee Simple Owner Name & Address N/A  
Bonding Co. Name & Address \_\_\_\_\_  
Architect/Engineer Name & Address Paul L. DE. 9218 Cypress Green Dr. Suite 10, Jax FL 32256  
Mortgage Lenders Name & Address \_\_\_\_\_

Circle the correct power company - FL Power & Light - Clay Elec. - Suwannee Valley Elec. - Proaress Energy

Property ID Number 34-3S -17-07081-000 Estimated Cost of Construction \$150,000.00

Subdivision Name \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_ Unit \_\_\_\_\_ Phase \_\_\_\_\_

Driving Directions East Baya, (R) Defender, 2nd on Right

Number of Existing Dwellings on Property 1

Construction of Remodel Existing Comm. Building Total Acreage .805 acres Lot Size \_\_\_\_\_

Do you need a - Culvert Permit or Culvert Waiver or Have an Existing Drive Total Building Height 25 ft.

Actual Distance of Structure from Property Lines - Front Existing Building No Additions Side \_\_\_\_\_ Side \_\_\_\_\_ Rear \_\_\_\_\_

Number of Stories \_\_\_\_\_ Heated Floor Area 7740 S.F. Total Floor Area 9180 S.F. Roof Pitch 3.5/12

Application is hereby made to obtain a permit to do work and installations as indicated. I certify that no work or installation has commenced prior to the issuance of a permit and that all work be performed to meet the standards of all laws regulating construction in this jurisdiction. CODE: Florida Building Code 2007 with 2009 Supplements and the 2008 National Electrical Code. Page 1 of 2 (Both Pages must be submitted together.) Revised 6-19-09

left message to Chad 10/20/09



## Columbia County Building Permit Application

**TIME LIMITATIONS OF APPLICATION :** An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing, unless such application has been pursued in good faith or a permit has been issued; except that the building official is authorized to grant one or more extensions of time for additional periods not exceeding 90 days each. The extension shall be requested in writing and justifiable cause demonstrated.

**TIME LIMITATIONS OF PERMITS:** Every permit issued shall become invalid unless the work authorized by such permit is commenced within 180 days after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of 180 days after the time work is commenced. A valid permit receives an approved inspection every 180 days. Work shall be considered not suspended, abandoned or invalid when the permit has received an approved inspection within 180 days of the previous approved inspection.

**FLORIDA'S CONSTRUCTION LIEN LAW: Protect Yourself and Your Investment:** According to Florida Law, those who work on your property or provide materials, and are not paid-in-full, have a right to enforce their claim for payment against your property. This claim is known as a construction lien. If your contractor fails to pay subcontractors or material suppliers or neglects to make other legally required payments, the people who are owed money may look to your property for payment, even if you have paid your contractor in full. This means if a lien is filed against your property, it could be sold against your will to pay for labor, materials or other services which your contractor may have failed to pay.

**NOTICE OF RESPONSIBILITY TO BUILDING PERMITEE:** YOU ARE HEREBY NOTIFIED as the recipient of a building permit from Columbia County, Florida, you will be held responsible to the County for any damage to sidewalks and/or road curbs and gutters, concrete features and structures, together with damage to drainage facilities, removal of sod, major changes to lot grades that result in ponding of water, or other damage to roadway and other public infrastructure facilities caused by you or your contractor, subcontractors, agents or representatives in the construction and/or improvement of the building and lot for which this permit is issued. No certificate of occupancy will be issued until all corrective work to these public infrastructures and facilities has been corrected.

**WARNING TO OWNER:** YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. A NOTICE OF COMMENCEMENT MUST BE RECORDED AND POSTED ON THE JOB SITE BEFORE THE FIRST INSPECTION. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

**OWNERS CERTIFICATION:** I CERTIFY THAT ALL THE FOREGOING INFORMATION IS ACCURATE AND THAT ALL WORK WILL BE DONE IN COMPLIANCE WITH ALL APPLICABLE LAWS REGULATING CONSTRUCTION AND ZONING.

**NOTICE TO OWNER:** There are some properties that may have deed restrictions recorded upon them. These restrictions may limit or prohibit the work applied for in your building permit. It may be to your advantage to check and see if your property is encumbered by any restrictions.

(Owners Must Sign All Applications Before Permit Issuance.)

  
Owners Signature

**\*\*OWNER BUILDERS MUST PERSONALLY APPEAR AND SIGN THE BUILDING PERMIT.**

**CONTRACTORS AFFIDAVIT:** By my signature I understand and agree that I have informed and provided this written statement to the owner of all the above written responsibilities in Columbia County for obtaining this Building Permit including all application and permit time limitations.

  
Contractor's Signature (Permitee)


Contractor's License Number CGC057545  
Columbia County  
Competency Card Number \_\_\_\_\_

Affirmed under penalty of perjury to by the Contractor and subscribed before me this 15th day of September 2009.

Personally known ☒ or Produced Identification \_\_\_\_\_

  
State of Florida Notary Signature (For the Contractor)

SEAL:

NOTARY PUBLIC-STATE OF FLORIDA  
 Rowena Lynne Dickson  
Commission # DD679465  
Expires: MAY 29, 2011  
BONDED THRU ATLANTIC BONDING CO., INC.

# Columbia County Property Appraiser

DB Last Updated: 7/22/2009

## 2009 Preliminary Values

Tax Record

Property Card

Interactive GIS Map

Print

Parcel: 34-3S-17-07081-000

Search Result: 1 of 1

### Owner & Property Info

<b>Owner's Name</b>	HENDRIX SMITH & KIRBY LLC		
<b>Site Address</b>	DEFENDER		
<b>Mailing Address</b>	152 SE DEFENDER DR LAKE CITY, FL 32025		
<b>Use Desc. (code)</b>	MULTI-FAMI (000300)		
<b>Neighborhood</b>	034317.07	<b>Tax District</b>	2
<b>UD Codes</b>	MKTA06	<b>Market Area</b>	06
<b>Total Land Area</b>	0.805 ACRES		
<b>Description</b>	LOTS 3, 4, 5, 6, 7 & 8 EX THE S 35 FT OF W 33 FT OF LOT 7 & EX W 33 FT OF LOT 8 & EX S 35 FT OF E 92 FT OF LOT 8 BLOCK 12 COUNTRY CLUB ESTATES. ORB 957-907, WD 1018-2712.		

### GIS Aerial



### Property & Assessment Values

<b>Mkt Land Value</b>	cnt: (1)	\$12,150.00
<b>Ag Land Value</b>	cnt: (0)	\$0.00
<b>Building Value</b>	cnt: (1)	\$153,386.00
<b>XFOB Value</b>	cnt: (3)	\$2,083.00
<b>Total Appraised Value</b>		\$167,619.00

<b>Just Value</b>	\$167,619.00
<b>Class Value</b>	\$0.00
<b>Assessed Value</b>	\$167,619.00
<b>Exemptions</b>	\$0.00
<b>Total Taxable Value</b>	County: \$167,619.00   City: \$167,619.00   Other: \$167,619.00   School: \$167,619.00

### Sales History

Sale Date	Book/Page	Inst. Type	Sale VImp	Sale Qual	Sale RCode	Sale Price
6/22/2004	1018/2712	WD	I	U	01	\$179,900.00
7/5/2002	957/907	WD	I	Q		\$200,000.00

### Building Characteristics

Bldg Item	Bldg Desc	Year Blt	Ext. Walls	Heated S.F.	Actual S.F.	Bldg Value
1	M/FAM ROW (002500)	1965	Conc Block (15)	7740	9180	\$153,386.00
<b>Note:</b> All S.F. calculations are based on <u>exterior</u> building dimensions.						

### Extra Features & Out Buildings

Code	Desc	Year Blt	Value	Units	Dims	Condition (% Good)
0120	CLFENCE 4	2001	\$500.00	0000001.000	0 x 0 x 0	(000.00)
0296	SHED METAL	2001	\$263.00	0000075.000	15 x 5 x 0	(000.00)
0294	SHED WOOD/	2001	\$1,320.00	0000240.000	20 x 12 x 0	(000.00)

### Land Breakdown

Lnd Code	Desc	Units	Adjustments	Eff Rate	Lnd Value





COLUMBIA COUNTY BUILDING DEPARTMENT  
135 NE Hernando Ave, Suite B-21, Lake City, FL 32055  
Phone: 386-758-1008 Fax: 386-758-2160

LETTER OF AUTHORIZATION TO SIGN FOR PERMITS

I, Don Brewer (license holder name), licensed qualifier  
for Coastal Reconstruction Inc (company name), do certify that  
the below referenced person(s) listed on this form is/are contracted/hired by me, the license  
holder, or is/are employed by me directly or through an employee leasing arrangement; or, is an  
officer of the corporation; or, partner as defined in Florida Statutes Chapter 468, and the said  
person(s) is/are under my direct supervision and control and is/are authorized to purchase  
permits, call for inspections and sign on my behalf.

Printed Name of Person Authorized	Signature of Authorized Person
1. <del>Jeff Thomas</del> CHAD COUNIHAN	1.
2. DAN STELLER	2.
3.	3.
4.	4.
5.	5.

I, the license holder, realize that I am responsible for all permits purchased, and all work done  
under my license and fully responsible for compliance with all Florida Statutes, Codes, and  
Local Ordinances. I understand that the State and County Licensing Boards have the power and  
authority to discipline a license holder for violations committed by him/her, his/her agents,  
officers, or employees and that I have full responsibility for compliance with all statutes, codes  
and ordinances inherent in the privilege granted by issuance of such permits.

If at any time the person(s) you have authorized is/are no longer agents, employee(s), or  
officer(s), you must notify this department in writing of the changes and submit a new letter of  
authorization form, which will supersede all previous lists. Failure to do so may allow  
unauthorized persons to use your name and/or license number to obtain permits.

License Holders Signature (Notarized)

CGC057545  
License Number

9-14-09  
Date

NOTARY INFORMATION:

STATE OF: Florida COUNTY OF: FL

The above license holder, whose name is Don Brewer,  
personally appeared before me and is known by me or has produced identification  
(type of I.D.) \_\_\_\_\_ on this 15th day of September, 2009.

NOTARY'S SIGNATURE

NOTARY PUBLIC-STATE OF FLORIDA  
  
Lynne Dickison  
Commission # DD679465  
Expires: MAY 29, 2011  
BONDED THRU ATLANTIC BONDING CO., INC.

PAUL S. LI, P.E. #18305

DESIGN & CONSULTING ENGINEER

9218 CYPRESS GREEN DR. STE #10

JACKSONVILLE, FL 32256

Ph/Fax: (904) 737-6876/737-2385

Project# 091001

EASTSIDE CARE CENTER

152 S.E. DEFENDER DRIVE

LAKE CITY, FLORIDA 32025

COLUMBIA CTY. BUILDING DEPARTMENT

WIND LOAD

BASED ON THE FLORIDA BUILDING CODE 2007 (ASCE 7-05)  
RESIDENTIAL, FIG. R301.2(4), THIS SITE IS IN THE (METHOD 1)

100 MPH ZONE. THE IMPORTANCE FACTOR  
IS 1.0, THE OCCUPANCY CATEGORY IS II.

THE EXPOSURE CATEGORY B, OPEN BUILDING

$$\text{ROOF ANGLE } A = \tan^{-1} 3.5/12 \\ = 12.26^\circ$$

$$\text{MEAN ROOF HT} = 8' + 3 \frac{4}{2} \times 3.5/12 \times 1/2 \\ = 10.48'$$

HEIGHT & EXPOSURE ADJUSTMENT COEFFICIENT = 1.0

$$W_w = 21 \times 1.0 \times 1.0 = 21 \text{ #/ft}^2$$

ROOF LOAD

L.L. 20 P.S.F.

D.L. 12 P.S.F.

T.L. 32 P.S.F.



10/15/09

$$1\frac{5}{8} \times 3\frac{1}{2}$$

$$A = 1.625 \times 3.5 = 5.688 \text{ in}^2$$

$$S = 1.625 \times 3.5^2 / 6 = 3.318 \text{ in}^3$$

$$I = 1.625 \times 3.5^3 / 12 = 5.806 \text{ in}^4$$

## EXTERIOR WALL

8'-0" TRY ACTUAL SIZE ( $1\frac{5}{8} \times 3\frac{1}{2}$ ) CEDAR @ 16" O.C

$$M_w = \frac{1}{8} \times 21 \times 1.33 \times 8^2 = 223 \text{ ft-lb}$$

$$\frac{M/S}{F_b} = \frac{223 \times 12 / 3.32}{1430} = 0.565$$

$$\frac{P/A}{F_c} = \frac{P / 5.69}{1.6 \times 292} = 1 - 0.565$$

$$P_{\text{ALLOWABLE}} = 1157 \text{ lb} \quad @ 16" \text{ O.C}$$

$$R_{\text{ALLOWABLE}} = 1736 \text{ lb} \quad @ 24" \text{ O.C}$$

$$\Delta = \frac{5 \times (21 \times 1.33) \times 8^4 \times 12^3}{384 \times 1.6 \times 10^6 \times 5.81} = 0.272$$

$$2/\Delta = 8 \times 12 / \Delta = 353 > 240$$

OK

## OPENING

1. 2-3030 SH.

$$H = 8'-0"$$

$$P = 1278/2 \times (6+1.33)/2 = 2342^{\#}$$

$$M_w = 223/1.33 \times (6+1.33)/2 = 614.5^{\#-1}$$

$$\frac{M/S}{F_b} = \frac{614.5 \times 12 / 3.32n}{1430} = 1.553/n$$

$$\frac{P/A}{F_c} = \frac{2342 / 5.69n}{1.6 \times 292} = \frac{0.881/n}{2.434/n}$$

TRY 3 - 2x4's @ EA SIDE OF OPENING ( $2^k/ic$ )

$$\Delta = \frac{5 \times (21 \times 7.33) / 2 \times 8^4 \times 12^3}{384 \times 1.6 \times 10^6 \times 5.21 \times 2} = 0.382$$

$$H/\Delta = 8 \times 12 / \Delta = 251 > 240$$

OK

HEADER

$$R = 1278/2 \times 6/2 = 1917^{\#}$$

$$A = 31.95^{\prime\prime 2}$$

$$M = 1278/2 \times 6/8 = 2875.5^{\#-1}$$

$$S = 26.54^{\prime\prime 3}$$

TRY 2 - 2x12's

$$A = 33.75^{\prime\prime 2} \quad S = 63.29^{\prime\prime 3} \quad I = 355.96^{\prime\prime 4}$$

$$\Delta = \frac{5 \times 1278/2 \times 6^4 \times 12^3}{384 \times 1.6 \times 10^6 \times 355.96} = 0.033$$

$$H/\Delta = 6 \times 12 / \Delta = 2201 > 240$$

OK



2. 3063 / 3030 SH FRONT & REAR H=8'-0"

$$P = 1278/2 \times (3+1.33)/2 = 1383^{\#}$$

$$M_N = 223/1.33 \times (3+1.33)/2 = 363^{\#-1}$$

$$\frac{M/S}{F_b} = \frac{363 \times 12/3.32^{\#}}{1430} = 0.918/n$$

$$\frac{P/A}{F_c} = \frac{1383 / 5.69^{\#}}{1.6 \times 292} = \frac{0.520/n}{1.438/n}$$

TRY 2-2X4s @ EA SIDE OF OPENING

$$\Delta = \frac{5 \times (21 \times 433)/2 \times 8^4 \times 12^3}{384 \times 1.6 \times 10^6 \times 5.81 \times 2} = 0.225$$

$$H/\Delta = 8 \times 12 / \Delta = 426 > 240 \quad \text{OK}$$

HEADER

$$R = 1278/2 \times 3/2 = 959^{\#} \quad A = 15.98^{\#2}$$

$$M = 1278/2 \times 3^2/8 = 719^{\#-1} \quad S = 6.42^{\#3}$$

TRY 2-2X8s

$$\Delta = \frac{5 \times 1278/2 \times 3^4 \times 12^3}{384 \times 1.6 \times 10^6 \times 95.27} = 7.64 \times 10^{-3}$$

$$H/\Delta = 3 \times 12 / \Delta = 4712 > 240 \quad \text{OK}$$

3. 3030 SH SIDE H=8'-0"

$$P = 200 \times (3+1.33)/2 = 433^{\#}$$

$$M_N = 223/1.33 \times (3+1.33)/2 = 363^{\#-1}$$

USE 2-2X4s @ EA SIDE OF OPENING

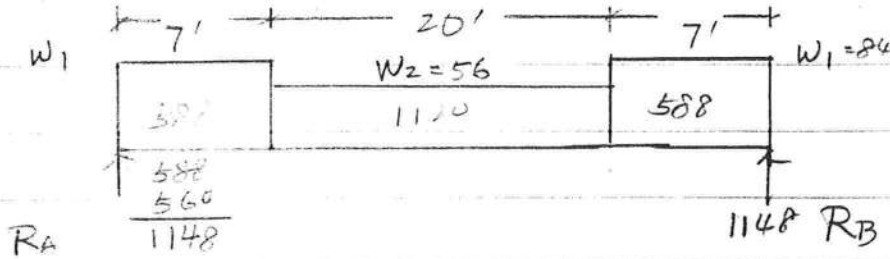
HEADER

$$R = 200 \times 3/2 = 300^{\#} \quad A = 5.00^{\#2}$$

$$M = 200 \times 3^2/8 = 225^{\#-1} \quad S = 2.08^{\#3}$$

USE 2-2X8s

# FRONT-REAR ELEVATION



SHEAR WALL

(A)

$$R_A = 1148$$

$$L_A = 28'$$

$$V_A = 41 \text{ k}$$

(A)

$$P_A = 303$$

## OPENING TABLE

(A)		2-3030	18"	24.9	<27.17
(B)	*	3068	20"	24.7	<32.47
(C)		3068	20"	24.7	<26.97
(D)	*	3030	9"	25.9	<34.77
(E)		3030	9"	25.9	<28.17

## TRUSS ANCHOR SCHEDULE

	MARK	UPLET #	ANCHORS
	TO1	467	(1) SIMPSON H25A
		467	(1) H25A
	TO1FUT	262	(1) H2.5
		262	(1) H2.5
	TO1G	132	(10) HGA 10

## SHEAR WALL

END STRIPS  $Z$

- (1) 10% OF LEAST HORIZONTAL DIMENSION  $Z_1 = 34 \times 0.1 = 3.4'$   
(2) 40% OF MEAN ROOF HT.  $Z_2 = 10.48 \times 0.4 = 4.2'$   
(3) AT LEAST 3'  $Z_3 = 3'$

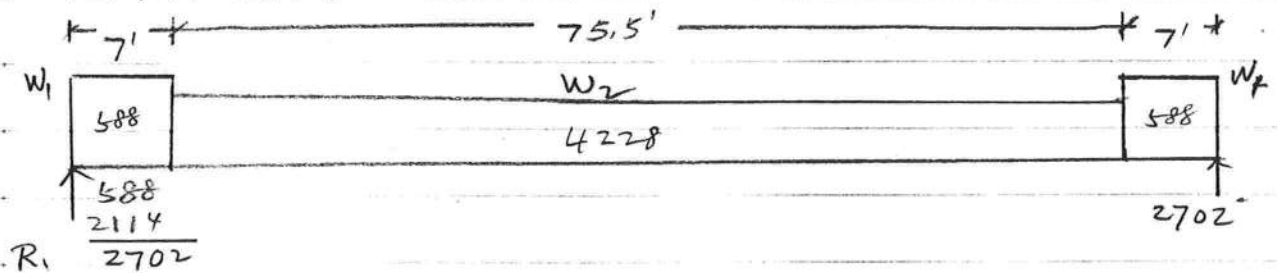
$$Z \leq Z_1, Z \leq Z_2, Z \geq Z_3 \Rightarrow Z = 3.4'$$

END ZONE  $X = 2 \times Z = 7'$

$$W_1 = 21 \times 8/2 = 84 \#/\text{ft}$$

$$W_2 = 14 \times 8/2 = 56 \#/\text{ft}$$

## RIGHT-LEFT ELEVATION



## SHEAR WALL ①

$$R_1 = 2702 \#$$

$$l_1 = 49.25'$$

$$V_1 = 54.9 \#/\text{ft}$$

$$P_1 = 439 \#$$



## SHEAR WALL ②

$$R_2 = 2702$$

$$l_2 = 28.25'$$

$$V_2 = 95.6 \#/\text{ft}$$

$$P_2 = 765 \#$$



0910-23 / 0910-22

## SUBCONTRACTOR VERIFICATION FORM

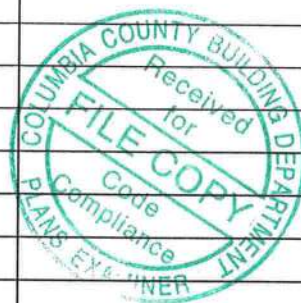
APPLICATION NUMBER \_\_\_\_\_ CONTRACTOR Coastal Reconstruction Inc PHONE 904 880 1919  
 THIS FORM MUST BE SUBMITTED PRIOR TO THE ISSUANCE OF A PERMIT

In Columbia County one permit will cover all trades doing work at the permitted site. It is **REQUIRED** that we have records of the subcontractors who actually did the trade specific work under the permit. Per Florida Statute 440 and Ordinance 89-6, a contractor shall require all subcontractors to provide evidence of workers' compensation or exemption, general liability insurance and a valid Certificate of Competency license in Columbia County.

**Any changes, the permitted contractor is responsible for the corrected form being submitted to this office prior to the start of that subcontractor beginning any work. Violations will result in stop work orders and/or fines.**

<b>ELECTRICAL</b>	Print Name <u>JAGUAR ELECTRIC</u> License #: <u>[Signature]</u>	Signature <u>[Signature]</u> Phone #: <u>904-545-4094</u>
<b>MECHANICAL/ A/C</b>	Print Name <u>FLORIDA AIR</u> License #: <u>CAC1813923</u>	Signature <u>[Signature]</u> Phone #: <u>904-823-9696</u>
<b>PLUMBING/ GAS</b>	Print Name <u>HOME TOWN PLUMBING SERVICES</u> License #: <u>RF11067418</u>	Signature <u>[Signature]</u> Phone #: <u>386-754-6140</u>
<b>ROOFING</b>	Print Name <u>K &amp; G CONSTRUCTION</u> License #: <u>CCC 1328403</u>	Signature <u>[Signature]</u> Phone #: <u>904-509-8888</u>
<b>SHEET METAL</b>	Print Name _____ License #: _____	Signature _____ Phone #: _____
<b>FIRE SYSTEM/ SPRINKLER</b>	Print Name <u>CARRIBEAN FIRE</u> License #: <u>69698700011996</u>	Signature <u>[Signature]</u> Phone #: <u>800-624-2281</u>
<b>SOLAR</b>	Print Name _____ License #: _____	Signature _____ Phone #: _____

Specialty License	License Number	Sub-Contractors Printed Name	Sub-Contractors Signature
MASON			
CONCRETE FINISHER			
FRAMING			
INSULATION			
STUCCO			
DRYWALL			
PLASTER			
CABINET INSTALLER			
PAINTING			
ACOUSTICAL CEILING			
GLASS			
CERAMIC TILE			
FLOOR COVERING			
ALUM/VINYL SIDING			
GARAGE DOOR			
METAL BLDG ERECTOR			



**F. S. 440.103 Building permits; identification of minimum premium policy.**--Every employer shall, as a condition to applying for and receiving a building permit, show proof and certify to the permit issuer that it has secured compensation for its employees under this chapter as provided in ss. 440.10 and 440.38, and shall be presented each time the employer applies for a building permit.





Attn! Jose  
From! Mitch  
**Johns Manville**

## Air Handling Systems

### Microlite® XG™

Formaldehyde-free™ Fiber Glass Duct Wrap Insulation

#### Description

Microlite XG Formaldehyde-free™ duct wrap insulation is a white, light-weight, highly resilient, blanket-type thermal insulation. The insulation blanket is manufactured from rotary-process fiber glass bonded with a special thermosetting acrylic resin.

#### Available Forms

Microlite XG Formaldehyde-free™ insulation is available in a variety of densities, thicknesses, and roll lengths. It is supplied with an FSK (foil-scrim-kraft) vapor barrier facing to meet installed performance requirements, with a 2" (51 mm) stapling tab.

#### Uses

Microlite XG is recommended as thermal insulation for the exterior of HVAC systems or other spaces or surfaces where temperature control is required.

#### Facing Information

##### FSK Aluminum Foil

Reinforced with fiber glass scrim laminated to UL rated kraft.

Permeance: .02 perms\*

\* Per ASTM E 98, Procedure A for facing material prior to lamination. After lamination, permeance values may be higher.

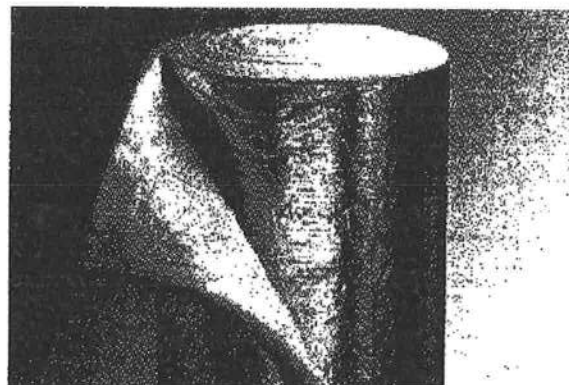
#### General Properties

Temperature (max.) - ASTM C 411	250°F (121°C)
Water vapor sorption - ASTM C 1104	<5% by weight
Corrosivity with steel - ASTM C 665	Does not accelerate
Fungi resistance - ASTM C 1338	Does not breed or promote

#### Standard Thicknesses and Packaging

	100' Roll (31 m)	75' Roll (23 m)	50' Roll (15 m)
Type	Thickness, in (mm)		
75	1½ (38)	2, 2½ (51, 58)	3 (76)
100	1½ (38)	2 (51)	—
150	—	1½ (38)	2 (51)

Note: Additional thicknesses, widths and other lengths available on special order. Contact Regional Sales Office for availability.



#### Surface Burning Characteristics

Microlite XG meets the Surface Burning Characteristics and Limited Combustibility of the following standards:

##### Standard/Test Method

- ASTM E 84
- UL 723
- NFPA 90A and 90B
- UL Guide No. 40 U8.3. Card R3711
- CAN/ULC S102-1188

Maximum Flame Spread Index	25
Maximum Smoke Developed Index	50

Notes: Faced materials are tested as composite products (insulation, adhesive and facing). UL labels supplied on packages when requested on order.

#### Specification Compliance

ASTM C 1290	Type 75, 100 & 150
ASTM C 553*	
Type II	Type 75, 100 & 150
Type III	Type 150

\* For faced material: 250°F (121°C) maximum temperature.

##### ASTM C 1138s

Type II	FSK Facing
---------	------------

\* Replaces HH-B-100B, Type II.

Canada: CGSB 51-GP-11M

NYC MEA 40-75-M

#### Green Building Certifications

Recycled Content	SCS Certified
ES 1350	Meets Requirements
ENERGY STAR®	Yes
LEED® Credits	See JM.com/buildgreen.
LEED®-NC	JM LEED® Credit Guide (HIG-1231)



#### JM Formaldehyde-free™ Fiber Glass Insulation

JM Formaldehyde-free™ fiber glass insulation offers superior thermal and acoustical performance—and it improves indoor air quality, because it's made without formaldehyde. Why is that important? Because the U.S. Environmental Protection Agency (U.S. EPA) recommends limiting exposure to formaldehyde as much as possible, and the California Air Resources Board, a division of the California EPA, recommends that builders and architects use building materials and insulation made without formaldehyde.

# Microlite® XG™

**Formaldehyde-free™ Fiber Glass Duct Wrap Insulation**

### Application Recommendations

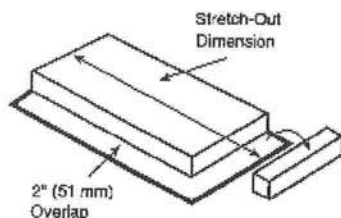
The R-Value will vary depending upon how much the insulation is compressed during installation. To obtain the published, installed R-Values, the insulation stretch-out should be determined using the following table.

### Duct Wrap Stretch-Outs

Labeled Thick. (in)	Installed	Compressed		
	Thickness (in)	Round	Square	Rectangular
1	0.75	P+ 7.0"	P+ 6.0"	P+ 5.0"
1½	1.125	P+ 9.5"	P+ 8.0"	P+ 7.0"
2	1.50	P+ 12.0"	P+ 10.0"	P+ 8.0"
2½	1.75	P+ 13.0"	P+ 11.0"	P+ 8.5"
3	2.25	P+ 17.0"	P+ 14.5"	P+ 11.5"

Stretch-outs include 2" (51 mm) for overlap. P = Perimeter of duct to be insulated

Prepare overlap by removing approximately 2" (51 mm) of insulation from facing.



Before applying duct wrap, sheet metal duct shall be clean, dry and tightly sealed at all joints and seams.

Wrap insulation around duct with facing to the outside so the 2" (51 mm) flap completely overlaps facing and insulation at the other end of stretch out. Insulation shall be snugly butted.

Secure seams with mechanical fasteners placed approximately 6" (152 mm) on center. If required, seal seam with pressure-sensitive tape designed for use with duct insulation. Insulation on the underside of ducts spanning 24" (610 mm) or greater shall be secured with mechanical fasteners and speed clips spaced approximately 18" (457 mm) on center. Fasteners should be cut off flush after the speed clips are installed, and when required, sealed with the same tape as specified above.

Adjacent sections of duct wrap insulation shall be snugly butted with the circumferential 2" (51 mm) tape flap overlapping and secured as recommended for the longitudinal seam. When a vapor seal is required, two coats of vapor retarder mastic reinforced with one layer of 4" (102 mm) wide, open weave glass fabric may be used in lieu of pressure-sensitive tape.

## Guide Specifications

**Insulation for Metal Ducts.** All ducts shall be insulated on the outside with a Formaldehyde-free<sup>\*</sup>, flexible glass fiber blanket. Microlite XG Formaldehyde-free<sup>®</sup> Fiber Glass Duct Wrap Insulation should have a minimum installed R-Value<sup>\*</sup> of \_\_\_\_\_, and a Type \_\_\_\_\_ facing. Insulation shall be furnished with a factory-applied facing with a composite UL FHC rating of 25/50.

*\* The minimum insulation installed R-Value should be determined in accordance to the duct operating and ambient conditions.*

**Thermal Conductivity (ASTM C 518)**

Type	k* Compressed Thickness		k Labeled Thickness	
	Btu·in/(hr·ft <sup>2</sup> ·°F)	W/m <sup>2</sup> ·°C	Btu·in/(hr·ft <sup>2</sup> ·°F)	W/m <sup>2</sup> ·°C
75	0.27	0.039	0.29	0.042
100	0.25	0.036	0.27	0.039
150	0.24	0.035	0.25	0.036

Conductivity at 75°F (24°C) mean temperature.

\* Tested with material thickness compressed 25%.

### Installed R-Values

Type	Labeled Thickness		Installed "R"		Out-of-Package "R"	
	in	mm	(hr·ft <sup>2</sup> ·°F)/Btu	m <sup>2</sup> ·°C/W	(hr·ft <sup>2</sup> ·°F)/Btu	m <sup>2</sup> ·°C/W
75	1½	38	4.2	0.74	5.2	0.92
	2	51	5.6	0.99	6.9	1.22
	2½	58	6.5	1.15	8.0	1.41
	3	76	8.3	1.46	10.3	1.81
100	1½	38	4.5	0.79	5.6	0.99
	2	51	6.0	1.06	7.4	1.30
150	1½	38	4.7	0.83	6.0	1.06
	2	51	6.3	1.11	8.0	1.41

† Installed R-Value calculated with a material thickness compressed to a maximum of 25% following recommended duct wrap stretch-outs.



717 17th St.  
Denver, CO 80202  
(800) 654-3103  
specJM.com

AHS-331 8-09 (Replaces 1-09)

**North American Sales Offices,  
Insulation Systems**

**Eastern Region**  
P.O. Box 158  
Defiance, OH 43512  
(800) 334-2399  
Fax: (419) 784-7866

### Western Region and Canada

P.O. Box 5108  
Denver, CO 80217  
(800) 368-4431  
Fax: (303) 978-4661

The physical and chemical properties of the Diffuser Board listed herein represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Numerical flame spread and smoke developed ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions. Check with the Regional Sales Office nearest you to assure current information. **All Johns Manville products are sold subject to Johns Manville's standard Terms and Conditions, including Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville standard Terms and Conditions, Limited Warranty and Limitation of Remedy, and information on other Johns Manville thermal insulation and systems, call (800) 654-3103.**

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Material Name:  
Specialty Fiber Glass Wool Insulation (Acrylic Resin)

Safety Data Sheet  
ID: 1201

## Section 1 - Product and Company Identification

Hazard Label WARNING label

### Company Information

Johns Manville  
Insulation Systems  
P.O. Box 5108  
Denver, CO 80127 USA

Telephone: 303-978-2000 8:00AM-5:00PM M-F  
Internet Address: <http://www.jm.com>  
Emergency: 800-424-9300 (Chemtrec, In English)

Trade Names: Microlite® XG™

**Use:** Microlite® XG™ is recommended as thermal insulation for the exterior of HVAC systems or other spaces or surfaces where temperature control is required.

## Section 2 - Hazards Identification

### Emergency Overview

Product dust may cause mechanical irritation of skin and mucous membranes.

### Inhalation

Temporary mechanical irritation may occur upon exposure to dust or fibers released from cutting this product.

### Skin

Temporary irritation (itching) or redness may occur.

### Ingestion

This product is not intended to be ingested (eaten). If ingested, it may cause temporary irritation to the gastrointestinal (digestive) tract.

### Eyes

Temporary irritation (itching) or redness may occur.

### Ears

Temporary irritation (itching) or redness may occur.

### Primary Routes of Entry (Exposure)

Eyes, skin, inhalation (breathing dust and fibers) and ingestion.

### Target Organs

Nose (nasal passages), throat, lungs, skin, eyes

### Medical Conditions Aggravated by Exposure

Pre-existing chronic respiratory, skin, or eye diseases or conditions.

## Section 3 - Composition/Information on Ingredients

CAS #	Component	Percent
Not Available	Fiber Glass Wool	50-98
Proprietary	Acrylic thermoset resin	2-18
Not Available	Facings, FSK	0-7
1309-64-4	Antimony trioxide	>0.1

### Component Information

Antimony trioxide (fire retardant) may be present in the facings and/or adhesives. Occupational exposure to airborne antimony trioxide is not expected to occur due to product form(s) and intended use(s). Exposure limit is given for reference only.

Fiber Glass Wool average fiber diameters  $\approx$  approximately 4-8 microns

### General Product Description

White or white with black specks, fibrous glass blanket with facing.

## Section 4 - First Aid Measures

### First Aid: Inhalation

If dust is inhaled in excess of exposure limits referenced in section 8 of this safety data sheet, remove individual to fresh air. Drink water to clear throat, and blow nose to remove dust. A saline spray in the nose may help clear any fibers.

### First Aid: Skin

Wash gently with soap and water to remove dust and fibers. Alternatively, fibers can be removed from the skin by use of ordinary masking or wrapping tape. Should irritation persist, seek medical attention.

**Material Name: Specialty Fiber Glass Wool Insulation (Acrylic Resin)****Safety Data Sheet  
ID: 1201****First Aid: Ingestion**

Rinse mouth with water to remove dust and fibers and drink plenty of water to help reduce irritation. If irritation persists, seek medical attention.

**First Aid: Eyes**

Do not rub or scratch eyes. Dust particles may cause the eye to be scratched. Flush eyes with large amounts of water until irritation subsides. If irritation persists, seek medical attention.

**First Aid: Ears**

Wash exposed skin with soap and water. If irritation develops in the inner ear, seek medical attention.

**First Aid: Notes to Physician**

Dust from the product may cause mechanical irritation of the eyes, skin, and upper respiratory tract. Treat symptomatically.

**Section 5 - Fire Fighting Measures****Flash Point:** Not applicable**Upper Flammable Limit (UFL):** Not applicable**Auto Ignition:** Not determined**Rate of Burning:** Not determined**Method Used:** Not applicable**Lower Flammable Limit (LFL):** Not applicable**Flammability Classification:** Not determined**General Fire Hazards**

There is no potential for spontaneous fire or explosion. Inorganic glass fibers are naturally non-combustible and non-flammable.

**Extinguishing Media**

Carbon dioxide (CO<sub>2</sub>), water, water fog, dry chemical.

**Fire Fighting Equipment/Instructions**

No special procedures are expected to be necessary for this product. Normal fire fighting procedures should be followed to avoid inhalation of smoke and gases.

**Section 6 - Accidental Release Measures****Clean-Up Procedures**

Pick up large pieces. Vacuum dusts. If sweeping is necessary, use a dust suppressant such as water. Do not dry sweep dust accumulation. These procedures will help to minimize potential exposures.

**Section 7 - Handling and Storage****Handling Procedures**

Use protective equipment as described in Section 8 of this safety data sheet when handling uncontained material. Handle in accordance with good industrial hygiene and safety practices.

**Storage Procedures**

Warehouse storage should be in accordance with package directions, if any. Material should be kept clean, dry, and in original packaging.

**Section 8 - Exposure Controls / Personal Protection**

The Occupational Safety and Health Administration (OSHA) has not adopted specific occupational exposure standards for fiber glass. Fiber glass is treated as a nuisance dust and is regulated by OSHA as a particulate not otherwise regulated (total dust) shown in CFR 1910.1000 Table Z-3.

Respirable fraction 5 mg/m<sup>3</sup>

Total dust 15 mg/m<sup>3</sup>

JM has adopted the fiber glass industry voluntary Product Stewardship Program (PSP), formerly the NAIMA-OSHA Health and Safety Partnership Program (HSPP). Under the PSP, JM recommends that exposures be limited to the voluntary concentration of 1 f/cc TWA for fibers longer than 5 microns with a diameter less than 3 microns. This will help minimize potential irritation effects. The PSP also includes the PPE recommendations described below.

**PERSONAL PROTECTIVE EQUIPMENT****Personal Protective Equipment: Eyes/Face**

Safety glasses with side shields are recommended to keep dust out of the eyes.

**Personal Protective Equipment: Ears**

Use ear protection (earplugs, hood, or earmuffs) to prevent airborne dust or fibers from entering the ear, if necessary.



**Material Name: Specialty Fiber Glass Wool Insulation (Acrylic Resin)****Safety Data Sheet  
ID: 1201****Personal Protective Equipment: Skin**

Leather or cotton gloves should be worn to protect against mechanical abrasion. See also Personal Protective Equipment: General, below.

**Personal Protective Equipment: Respiratory**

A respirator should be used if ventilation is unavailable, or is inadequate for keeping dust and fiber levels below the applicable exposure limits referenced in Section 8 of this SDS. Wear a NIOSH-certified disposable or reusable particulate respirator with an efficiency rating of N95 or higher (per 42 CFR 84) when dust or fiber concentrations exceed the applicable exposure limits. Operations such as sawing, blowing, tear out, and spraying may generate airborne fiber concentrations requiring a higher level of respiratory protection. For exposures up to 50 times the established exposure limits use a full-face respirator, rated N99 or higher.

**Ventilation**

In fixed manufacturing settings, local exhaust ventilation should be provided at areas of cutting, milling or other processing to remove airborne dust and fibers.

**Personal Protective Equipment: General**

Wear a cap, a loose-fitting, long-sleeved shirt and long pants to protect skin from irritation. Exposed skin areas should be washed with soap and water after handling or working with fiber glass. Clothing should be washed separately from other clothes, and the washer should be rinsed thoroughly (run empty for a complete wash cycle). This will reduce the chances of fiber glass being transferred to other clothing.

**Section 9 - Physical & Chemical Properties**

<b>Appearance:</b>	White or white with black specks, fibrous glass blanket.	<b>Odor:</b>	No significant odor
<b>Physical State:</b>	Solid	<b>pH:</b>	Not applicable
<b>Vapor Pressure:</b>	Not applicable	<b>Vapor Density:</b>	Not applicable
<b>Boiling Point:</b>	Not determined	<b>Melting Point:</b>	>704°C/1300°F
<b>Solubility (H<sub>2</sub>O):</b>	Nil	<b>Specific Gravity:</b>	Variable
<b>Freezing Point:</b>	Not applicable	<b>Evaporation Rate:</b>	Not applicable
<b>Percent Volatile:</b>	0	<b>VOC:</b>	Not determined

**Section 10 - Stability & Reactivity Information****Hazardous Decomposition**

May form carbon dioxide and carbon monoxide.

The following decomposition products may occur at elevated temperatures: Acrolein, Acrylonitrile, Hydrogen cyanide, Sulfur dioxide, and Formaldehyde.

**Hazardous Polymerization**

Will not occur.

**Section 11 - Toxicological Information****Acute Toxicity****A: General Product Information**

Dust from this product is a mechanical irritant, which means that it may cause temporary irritation or scratchiness of the throat, and/or itching of the eyes and skin.

**B: Component Analysis - LD50/LC50**

Antimony trioxide (1309-64-4)

Oral LD50 Rat: >34800 mg/kg

**Component Carcinogenicity****Fiber Glass Wool**

ACGIH: A3 - Confirmed animal carcinogen with unknown relevance to humans

NTP: Reasonably Anticipated To Be A Human Carcinogen (respirable size)

IARC: Group 3 - Not Classifiable (IARC Monograph 81 [2002] (listed under Man-made mineral fibres), Monograph 43 [1988])

**Material Name: Specialty Fiber Glass Wool Insulation (Acrylic Resin)****Safety Data Sheet  
ID: 1201****Antimony trioxide (1309-64-4)**

ACGIH: A2 - Suspected Human Carcinogen (production)

IARC: Group 2B - Possibly Carcinogenic to Humans (IARC Monograph 47 [1989])

**Chronic Toxicity**

The U.S. Department of Health and Human Services, National Toxicology Program (NTP 1998, 2000, 2002) classified glass wool (respirable size) as reasonably anticipated to be a human carcinogen, based on sufficient evidence of carcinogenicity in animals. This assessment was originally prepared in 1993-1994 for the 7th Report on Carcinogens (NTP 1994), but has not been updated since then in the 8th, 9th, or 10th Reports on Carcinogens (NTP 1998, 2000, 2002).

**Section 12 - Ecological Information****Ecotoxicity****A: General Product Information**

No data available for this product.

**B: Component Analysis - Ecotoxicity - Aquatic Toxicity****Antimony trioxide (1309-64-4)**

96 Hr LC50 Pimephales promelas: 833.0 mg/L; 96 Hr LC50 Lepomis macrochirus: 530 mg/L; 96 Hr LC50 Brachydanio rerio: &gt;1000 mg/L [static]

72 Hr EC50 Selenastrum capricornutum: 67 mg/L

7 Hr EC50 Pseudomonas putida: &gt;3.5 mg/L

48 Hr EC50 Daphnia magna: &gt;1000 mg/L

**Section 13 - Disposal Considerations****US EPA Waste Number & Descriptions****A: General Product Information**

This product is not expected to be a hazardous waste when it is disposed of according to the U.S. Environmental Protection Agency (EPA) under Resource Conservation and Recovery Act (RCRA) regulations. Product characterization after use is recommended to ensure proper disposal under federal and/or state requirements.

**B: Component Waste Numbers**

No EPA Waste Numbers are applicable for this product's components.

**Disposal Instructions**

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

**Section 14 - Transport Information****International Transport Regulations**

These products are not classified as dangerous goods according to international transport regulations.

**Section 15 - Regulatory Information****US Federal Regulations****A: General Product Information**

SARA 311/312: This product is not classified as hazardous under SARA 311/312.

**B: Component Analysis**

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

**Antimony trioxide (1309-64-4)**

CERCLA: 1000 lb final RQ; 454 kg final RQ

**State Regulations****A: General Product Information**

The glass fibers in this product are not known to be regulated.

Other state regulations may apply. Check individual state requirements.

**B: Component Analysis - State**

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS #	CA	FL	MA	MN	NJ	PA
Antimony trioxide	1309-64-4	Yes	No	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

**Material Name: Specialty Fiber Glass Wool Insulation (Acrylic Resin)****Safety Data Sheet  
ID: 1201**

WARNING! This product contains a chemical known to the state of California to cause cancer.

Component	CAS #
Fiber Glass Wool	Not Available
Antimony trioxide	1309-64-4

**TSCA Status**

This product and its components are listed on the TSCA 8(b) inventory.

None of the components listed in this product are listed on the TSCA Export Notification 12(b) list.

**International Regulations****A: General Product Information**

These products are considered articles under both U.S. and international product regulations and as such, these products do not require registration or notification on the various country-specific inventories.

**B: Component Analysis - WHMIS IDL**

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Fiber Glass Wool	Not Available	1 % (related to Fibrous glass)

**WHMIS Classification**

Controlled Product Classification: D2A

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations. This SDS contains all the information required by the Controlled Products Regulations.

**Section 16 - Other Information****Other Information**

Prepared for:  
Johns Manville  
Insulation Systems  
P. O. Box 5108  
Denver, CO USA 80217-5108

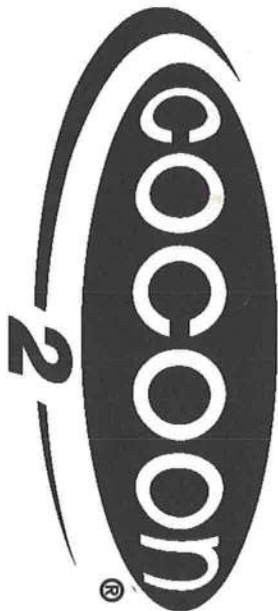
Prepared by:  
Johns Manville Technical Center  
P.O. Box 625005  
Littleton, CO USA 80162-5005

The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

Date	MSDS #	Reason
05/28/03	1201-1.0000	New Formaldehyde-free products; new MSDS.
07/01/03	1201-1.0001	Sect. 10: delete hydrogen cyanide; not a product of decomposition or burning.
11/04/03	1201-1.0002	Section 2, added Facing and Antimony for Microlite. Sections 8, 11, 15 updated for Antimony.
04/28/04	1201-1.0003	Section 1, edited Flex-Glas trademark. Regulatory update. Minor edits.
06/29/06	1201-1.0004	Addition of Spin-Glas WH XG to trade names; Removal of Whisperstone Wallboard - obsolete product; Removal of formaldehyde free from material name.
06/02/08	1201-1.0005	Range-Glas and Spin-Glas WH moved to SDS 1202. Moved Whisperstone® Tackboard XG™ to SDS 1056. SDS update to GHS format.
06/02/09	1201-1.0006	Flex Glas moved to SDS 1071.

End of Sheet 1201





The coverage chart is based on settled thickness and a nominal bag weight of 30 lbs. Use this chart for estimating purposes only. Actual coverage will be influenced by job conditions, equipment settings and application techniques. To obtain optimum performance from this product, we recommend maintaining moisture content within an 18-22% range for ceiling applications. This product is not intended for spray-applied wall applications or dry loose-fill applications. You must add water to this product.

This attic has been insulated to:

R-30

The walls have been insulated to:

R-

The floors have been insulated to:

R-

Insulation has been installed to the R-value indicated above, with Cocoon, the high-efficiency insulation. Made from a minimum of 80% recycled materials, Cocoon is scientifically formulated to deliver greater efficiency per inch than other insulation materials.

R-Value is a measure of resistance to heat flow – the higher the R-value, the greater the insulation power.

If you would like to add more insulation to your home, contact your Cocoon dealer.

Residence Address:

Eastwick Cir

152 de Gaudin drive

Las Cruces, EL, 78505

Installed by:

Builder Company Name:

Builder Signature:

Date:

## Cocoon2 Stabilized Insulation - 30 lb. bag

Product # INS500

R-Value @ 75°F Mean Temperature	Minimum Thickness (inches)	Maximum Net Coverage (No Adjustment for Framing)			
To Obtain a Thermal Resistance (R) of:	Installed Insulation Should Not Be Less Than:	Thickness After Settling	Maximum Square Feet per Bag	Minimum Bags per 1,000 Square Feet	Minimum Weight per Square Foot (lbs.)
R-11	3.06	2.97	125.9	7.9	0.238
R-13	3.62	3.51	100.2	10.0	0.299
R-19	5.29	5.14	60.4	16.6	0.497
R-20	5.57	5.41	56.5	17.7	0.531
R-21	5.85	5.68	53.0	18.9	0.566
R-22	6.13	5.95	49.9	20.1	0.602
R-24	6.69	6.49	44.5	22.5	0.674
R-30	8.36	8.11	33.4	29.9	0.897
R-32	8.92	8.65	30.8	32.5	0.974
R-38	10.59	10.27	24.8	40.3	1.210
R-40	11.15	10.81	23.2	43.0	1.291
R-44	12.26	11.89	20.6	48.5	1.454
R-48	13.37	12.97	18.5	54.0	1.621
R-50	13.93	13.51	17.6	56.8	1.705
R-60	16.72	16.22	14.0	71.2	2.136

## CERTIFICATION

**Attic:** Cocoon2, manufactured by GreenFiber.

This is to certify that the attic insulation has been installed in conformance with the coverage chart recommendations above using 140 bags to cover 4440 sq. ft. to obtain an R-value of R-30.

**Walls:** Cocoon2 Stabilized Borate Formula, manufactured by GreenFiber.

This is to certify that the wall insulation has been installed in conformance with the manufacturer's recommendations to obtain the R-value of \_\_\_\_\_.

**Walls and Floors:** Type of insulation \_\_\_\_\_ Manufacturer \_\_\_\_\_

This is to certify that the wall and floor insulations have been installed in conformance with the manufacturer's recommendations to obtain the R-Values noted above.

Installer Company Name:

G/L Insulations

Installer Authorized Signature:

BT / RAP

Date: 10-15-05

Manufactured in:

- Albany, NY
- Elkwood, VA
- Albany, GA
- E. St. Louis, IL
- Charlotte, NC
- Norfolk, NE
- Denver, CO
- Phoenix, AZ
- Delphos, OH
- Salt Lake City, UT
- Sacramento, CA
- Tampa, FL
- Waco, TX

greenfiber



Subj: **LETTERHEAD, Not sure if is working**  
Date: 10/16/2009 7:06:58 AM Eastern Daylight Time  
From: [1000215@jnet.net](mailto:1000215@jnet.net)  
To: [1000215@jnet.net](mailto:1000215@jnet.net), Eastey

**FLORIDA AIR SERVICE & ENGINEERING**  
150 HILDEN RD #308  
PONTE VEDRA, FL 32081  
PHONE (904) 823-9696  
FAX (904) 823-9995

Date: 10/15/2009

Re: Eastside Care, Lake City

To whom or may concern:

This is to certify that the materials used for the referenced job are in compliance with the 2009 international code & the 2009 Florida mechanical code. The plenum and ductwork connecting the outside unit to the ductwork is wrapped in R-10 insulation spec'd for exterior use and sealed to avoid water intrusion. This exceeds code compliance And ensures longevity. We have used this material in numerous jobs with high success.

If u have any question, contact me at the above numbers.

Thanks,



Jose Fernandez  
Mechanical Engineer, PE



# PRODUCT APPROVAL SPECIFICATION

## SHEET

Location: \_\_\_\_\_

Project Name: \_\_\_\_\_

As required by Florida Statute 553.842 and Florida Administrative Code 9B-72, please provide the information and the product approval number(s) on the building components listed below if they will be utilized on the construction project for which you are applying for a building permit on or after April 1, 2004. We recommend you contact your local product supplier should you not know the product approval number for any of the applicable listed products. More information about statewide product approval can be obtained at [www.floridabuilding.org](http://www.floridabuilding.org)

Category/Subcategory	Manufacturer	Product Description	Approval Number(s)
<b>A. EXTERIOR DOORS</b>			
1. Swinging	MASONITE	STEEL DOOR & FRAME	4940.1
2. Sliding			
3. Sectional			
4. Roll up			
5. Automatic			
6. Other			
<b>B. WINDOWS</b>			
1. Single hung	GEN-ALUM	ALUM FRAME SH WINDOWS	FL# 8359
2. Horizontal Slider			
3. Casement			
4. Double Hung			
5. Fixed			
6. Awning			
7. Pass-through			
8. Projected			
9. Mullion			
10. Wind Breaker			
11. Dual Action			
12. Other			
<b>C. PANEL WALL</b>			
1. Siding	JAMES HARRIE	J.H. SIDING	10477
2. Soffits	ALCOA MASTIC	VINYL SOFFIT	11191.12
3. EIFS			
4. Storefronts			
5. Curtain walls			
6. Wall louver			
7. Glass block			
8. Membrane			
9. Greenhouse			
10. Other			
<b>D. ROOFING PRODUCTS</b>			
1. Asphalt Shingles	OWENS CORN.	3 TAB ASPHALT SHINGLES	FL# 10674.1
2. Underlayments			
3. Roofing Fasteners			
4. Non-structural Metal			
5. Built-Up Roofing			
6. Modified Bitumen			
7. Single Ply Roofing Sys			
8. Roofing Tiles			
9. Roofing Insulation			
10. Waterproofing			
11. Wood shingles /shakes			
12. Roofing Slate			






Category/Subcategory (cont.)	Manufacturer	Product Description	Approval Number(s)
13. Liquid Applied Roof Sys			
14. Cements-Adhesives – Coatings			
15. Roof Tile Adhesive			
16. Spray Applied Polyurethane Roof			
17. Other			
<b>E. SHUTTERS</b>			
1. Accordion			
2. Bahama			
3. Storm Panels			
4. Colonial			
5. Roll-up			
6. Equipment			
7. Others			
<b>F. SKYLIGHTS</b>			
1. Skylight			
2. Other			
<b>G. STRUCTURAL COMPONENTS</b>			
1. Wood connector/anchor	SIMPSON STRONG TIE		
2. Truss plates			
3. Engineered lumber			
4. Railing			
5. Coolers-freezers			
6. Concrete Admixtures			
7. Material			
8. Insulation Forms			
9. Plastics			
10. Deck-Roof			
11. Wall			
12. Sheds			
13. Other			
<b>H. NEW EXTERIOR ENVELOPE PRODUCTS</b>			
1.			
2.			

The products listed below did not demonstrate product approval at plan review. I understand that at the time of inspection of these products, the following information must be available to the inspector on the jobsite; 1) copy of the product approval, 2) the performance characteristics which the product was tested and certified to comply with, 3) copy of the applicable manufacturers installation requirements.

I understand these products may have to be removed if approval cannot be demonstrated during inspection.

  
 Contractor or Contractor's Authorized Agent Signature  
 152 Defender Dr, Lake City FL  
 Location

Don Brewer  
 Print Name  
 9-15-09  
 Date

## Julius Lee Engineering

RE: 316185 - Eastside Care Center

**1109 Coastal Bay Blvd.  
Boynton Beach, FL 33435**

### Site Information:

Project Customer: COASTAL RECONSTRUCTION Project Name: 316185 Model: EASTSIDE CARE CTR  
Lot/Block: Subdivision:  
Address: 152 SE DEFENDER AVE.  
City: COLUMBIA CTY State: FL

### Name Address and License # of Structural Engineer of Record, If there is one, for the building.

Name: PAUL S. LI License #: 18305  
Address: 9218 CYPRESS GREEN DR SUITE 10  
City: JACKSONVILLE, State: FL

### General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):

Design Code: FBC2007/TPI2002 Design Program: MiTek 20/20 7.1  
Wind Code: ASCE 7-05 Wind Speed: 100 mph Floor Load: N/A psf  
Roof Load: 32.0 psf

This package includes 3 individual, dated Truss Design Drawings and 0 Additional Drawings.  
With my seal-affixed to this sheet, I hereby certify that I am the Truss Design Engineer and this index sheet conforms to 61G15-31.003, section 5 of the Florida Board of Professional Engineers Rules.

This document processed per section 16G15-23.003 of the Florida Board of Professionals Rules

**In the event of changes from Builder or E.O.R. additional coversheets and drawings may accompany this coversheet. The latest approval dates supersede and replace the previous drawings.**

No.	Seal#	Truss Name	Date
1	I4117411	T01	9/30/09
2	I4117412	T01FWT	9/30/09
3	I4117413	T01G	9/30/09

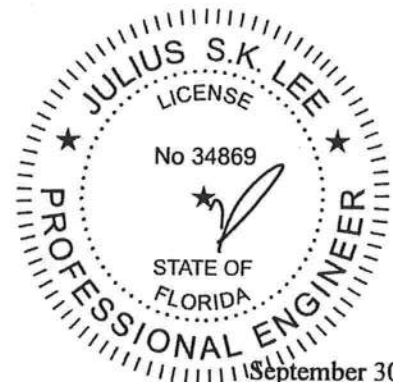


The truss drawing(s) referenced above have been prepared by MiTek Industries, Inc. under my direct supervision based on the parameters provided by Builders FirstSource (Lake City).

Truss Design Engineer's Name: Julius Lee

My license renewal date for the state of Florida is February 28, 2011.

**NOTE:** The seal on these drawings indicate acceptance of professional engineering responsibility solely for the truss components shown. The suitability and use of this component for any particular building is the responsibility of the building designer, per ANSI/TPI-1 Chapter 2.







Job#	Truss	Truss Type	Qty	Ply	Eastside Care Center	I4117412
316185	T01FWT	GABLE	1	1	Job Reference (optional)	

Builders FrstSource, Lake City, FL 32055

7.140 s Aug 17 2009 MiTek Industries, Inc. Wed Sep 30 15:15:15 2009 Page 1

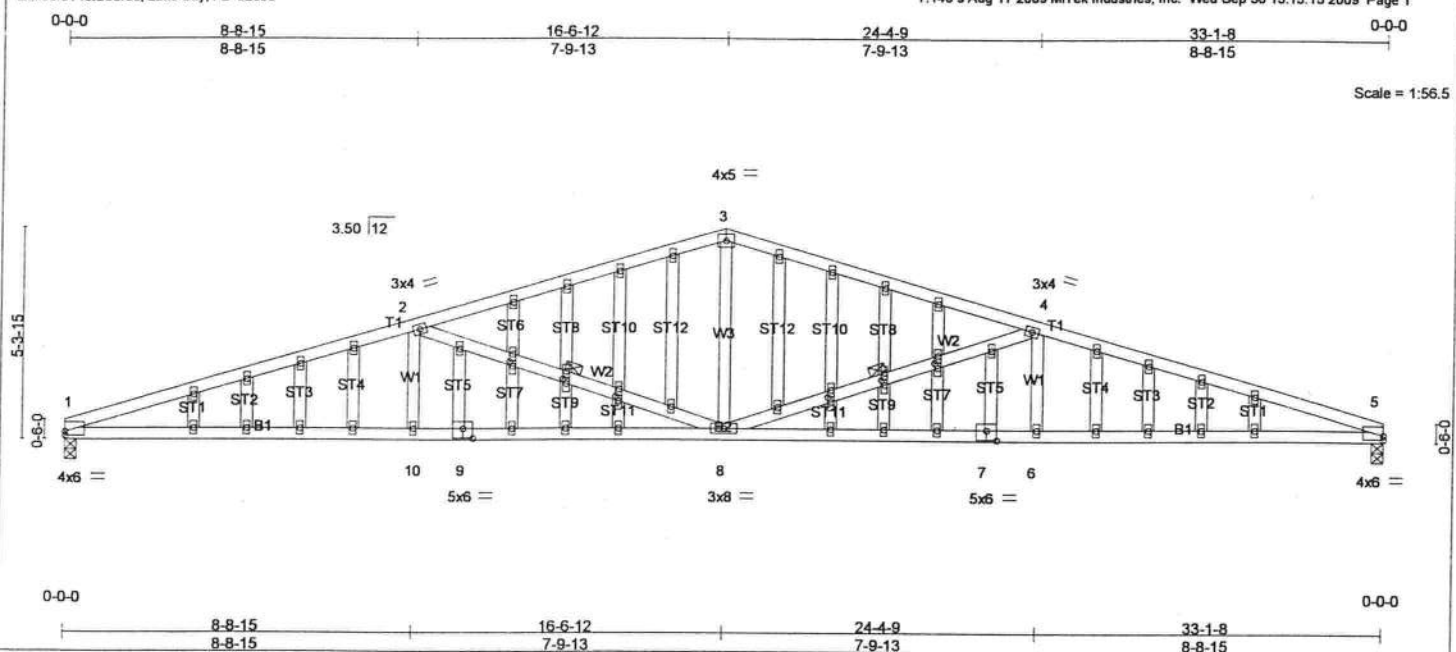


Plate Offsets (X,Y): [1:0-0-0,0-1-3], [5:0-0-0,0-1-3], [7:0-3-0,0-3-0], [9:0-3-0,0-3-0], [16:0-1-8,0-1-0], [17:0-1-8,0-1-0], [20:0-1-8,0-1-0], [37:0-1-8,0-1-0], [40:0-1-8,0-1-0], [43:0-1-8,0-1-0]

LOADING (psf)	SPACING	2-0-0	CSI	DEFL	in	(loc)	I/defl	L/d	PLATES	GRIP
TCLL 20.0	Plates Increase	1.25	TC 0.81	Vert(LL)	-0.22	8	>999	360	MT20	244/190
TCCL 7.0	Lumber Increase	1.25	BC 0.78	Vert(TL)	-0.50	6-8	>789	240		
BCCL 0.0	Rep Stress Incr	NO	WB 0.32	Horz(TL)	0.16	5	n/a	n/a		
BCDL 5.0	Code FBC2007/TPI2002		(Matrix)	Wind(LL)	0.30	8	>999	240		
									Weight: 204 lb	

**LUMBER**  
 TOP CHORD 2 X 4 SYP No.1D  
 BOT CHORD 2 X 4 SYP No.2  
 WEBS 2 X 4 SYP No.3  
 OTHERS 2 X 4 SYP No.3

**BRACING**  
 TOP CHORD Structural wood sheathing directly applied or 2-10-13 oc purlins.  
 BOT CHORD Rigid ceiling directly applied or 5-0-14 oc bracing.  
 WEBS 1 Row at midpt 2-8, 4-8

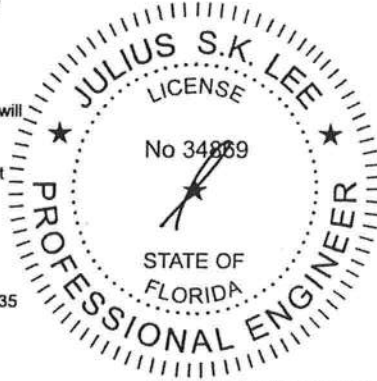
MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

**REACTIONS** (lb/size) 1=1133/0-3-8, 5=1133/0-3-8  
 Max Horz 1=62(LC 7)  
 Max Uplift 1=262(LC 4), 5=253(LC 5)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 1-2=2980/1623, 2-3=2052/1156, 3-4=2052/1159, 4-5=2980/1598  
 BOT CHORD 1-10=1471/2795, 9-10=1471/2795, 8-9=1471/2795, 7-8=1446/2795, 6-7=1446/2795, 5-6=1446/2795  
 WEBS 2-10=0/272, 3-8=359/728, 4-6=0/272, 2-8=946/619, 4-8=948/593

- NOTES** (12-13)
- Unbalanced roof live loads have been considered for this design.
  - Wind: ASCE 7-05; 100mph (3-second gust); TCCL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; enclosed; MWFRS (low-rise) and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1-2002.
  - All plates are 2x4 MT20 unless otherwise indicated.
  - Gable studs spaced at 1-4-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - All bearings are assumed to be SYP No.2.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 262 lb uplift at joint 1 and 253 lb uplift at joint 5.
  - "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
  - In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
  - This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.
  - Truss Design Engineer: Julius Lee, PE: Florida P.E. License No. 34869; Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435

LOAD CASE(S) Standard



September 30, 2009

Continued on page 2

**WARNING** - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITTEK REFERENCE PAGE MII-7473 BEFORE USE.  
 Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI1 Quality Criteria, DSB-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Onofrio Drive, Madison, WI 53719.

Julius Lee Engineering  
 1109 Coastal Bay Blvd.  
 Boynton, FL 33435

Job	Truss	Truss Type	Qty	Ply	Eastside Care Center	14117412
316185	T01FWT	GABLE	1	1	Job Reference (optional)	

Builders FirstSource, Lake City, FL 32055

7.140 s Aug 17 2009 MiTek Industries, Inc. Wed Sep 30 15:15:15 2009 Page 2

#### LOAD CASE(S) Standard

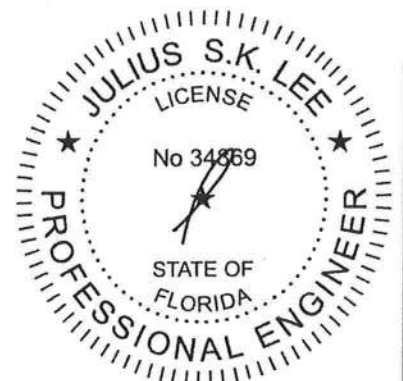
1) Regular: Lumber Increase=1.25, Plate Increase=1.25

Uniform Loads (plf)

Vert: 1-5=13(F=3)

Trapezoidal Loads (plf)

Vert: 1=54-to-3=57(F=3), 3=57(F=3)-to-5=54



September 30, 2009



**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 BEFORE USE.**

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Julius Lee Engineering  
1109 Coastal Bay Blvd.  
Boynton, FL 33435

Job	Truss	Truss Type	Qty	Ply	Eastside Care Center	14117413
316185	T01G	GABLE	1	1	Job Reference (optional)	

Builders FirstSource, Lake City, FL 32055

7.140 s Aug 17 2009 MiTek Industries, Inc. Wed Sep 30 15:15:16 2009 Page 1

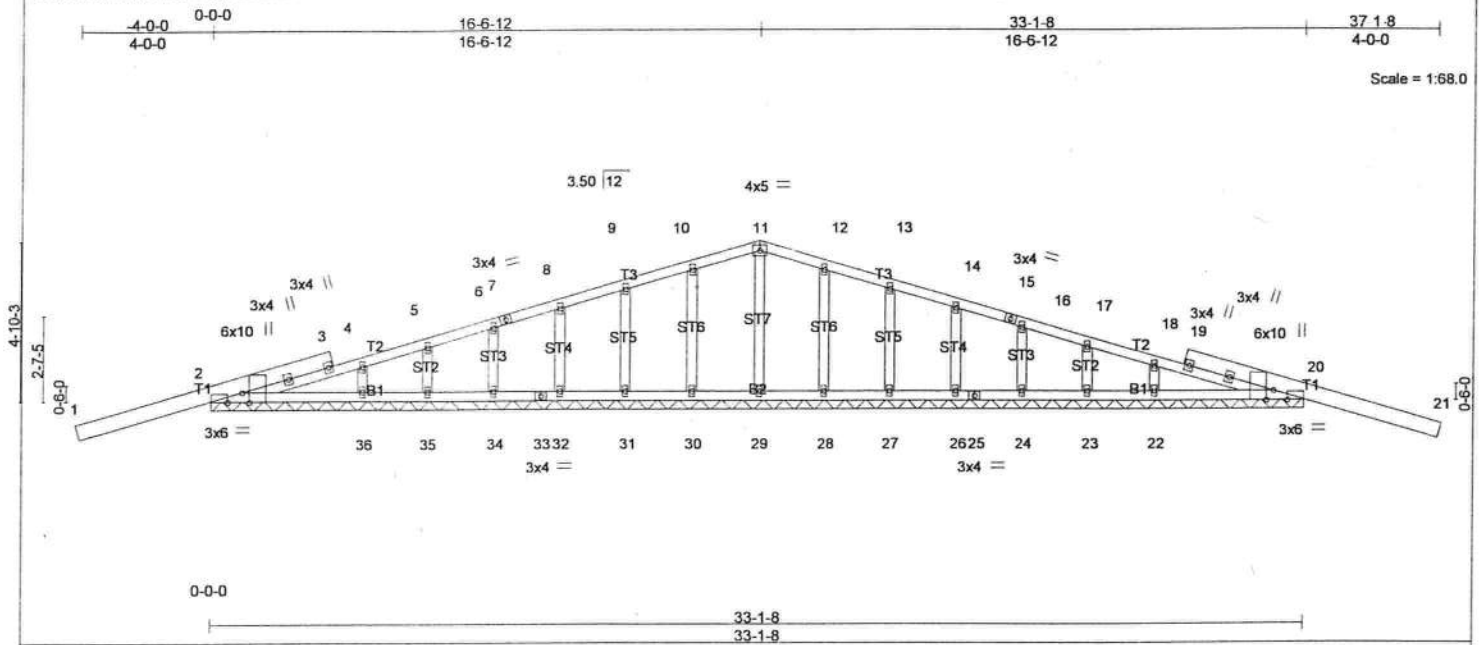


Plate Offsets (X,Y): [2:0-3-8,Edge], [2:0-5-2,Edge], [20:0-3-8,Edge], [20:0-5-2,Edge]

<b>LOADING (psf)</b>	<b>SPACING</b>	<b>CSI</b>	<b>DEFL</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 20.0	Plates Increase 1.25	TC 0.33	in (loc) l/defl L/d	MT20	244/190
TCDL 7.0	Lumber Increase 1.25	BC 0.09	Vert(LL) -0.09 21 n/r 120		
BCLL 0.0	Rep Stress Incr YES	WB 0.04	Vert(TL) -0.14 21 n/r 90		
BCDL 5.0	Code FBC2007/TPI2002	(Matrix)	Horz(TL) 0.00 20 n/a n/a		
				Weight: 182 lb	

#### LUMBER

TOP CHORD 2 X 4 SYP No.2 \*Except\*  
T1: 2 X 6 SYP No.1D  
BOT CHORD 2 X 4 SYP No.2  
OTHERS 2 X 4 SYP No.3

#### BRACING

TOP CHORD  
BOT CHORD

Structural wood sheathing directly applied or 6'-0" oc purlins.  
Rigid ceiling directly applied or 10'-0" oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

#### REACTIONS

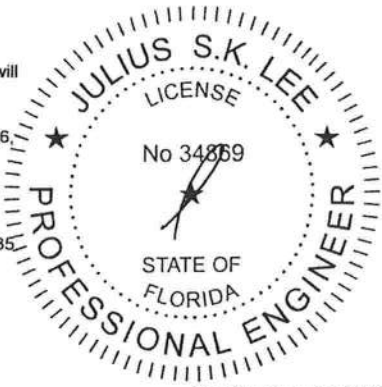
All bearings 33-1-8.  
(lb) - Max Horz 2=-119(LC 5)  
Max Uplift All uplift 100 lb or less at joint(s) 30, 31, 32, 34, 36, 28, 27, 26, 24, 22 except 2=-424(LC 6),  
20=-436(LC 7), 35=-111(LC 4), 23=-110(LC 5)  
Max Grav All reactions 250 lb or less at joint(s) 29, 30, 31, 32, 34, 35, 36, 28, 27, 26, 24, 23, 22 except  
2=461(LC 1), 20=461(LC 1)

**FORCES** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

#### NOTES (12-13)

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-05; 100mph (3-second gust); TCDL=4.0psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; enclosed; MWFRS (low-rise) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1-2002.
- All plates are 2x4 MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2'-0" oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3'-6" tall by 2'-0" wide will fit between the bottom chord and any other members.
- All bearings are assumed to be SYP No.2.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 30, 31, 32, 34, 36, 28, 27, 26, 24, 22 except (it=lb) 2=424, 20=436, 35=111, 23=110.
- "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
- This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.
- Truss Design Engineer: Julius Lee, PE: Florida P.E. License No. 34869; Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435

LOAD CASE(S) Standard



September 30, 2009

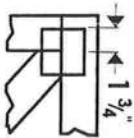
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITTEK REFERENCE PAGE MII-7473 BEFORE USE.**  
Design valid for use only with MiTek connectors. This design is based only upon parameters shown, and is for an individual building component. Applicability of design parameters and proper incorporation of component is responsibility of building designer - not truss designer. Bracing shown is for lateral support of individual web members only. Additional temporary bracing to insure stability during construction is the responsibility of the erector. Additional permanent bracing of the overall structure is the responsibility of the building designer. For general guidance regarding fabrication, quality control, storage, delivery, erection and bracing, consult ANSI/TPI1 Quality Criteria, DSB-89 and BCS11 Building Component Safety Information available from Truss Plate Institute, 583 D'Oro Drive, Madison, WI 53719.

Julius Lee Engineering  
1109 Coastal Bay Blvd.  
Boynton, FL 33435

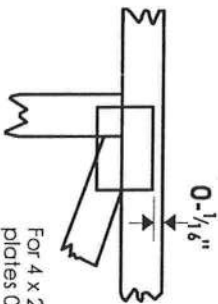


# Symbols

## PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0-1/8" from outside edge of truss.

This symbol indicates the required direction of slots in connector plates.

\* Plate location details available in Mitek 20/20 software or upon request.

## PLATE SIZE

4 X 4

The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

## LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T, I or Eliminator bracing if indicated.

## BEARING



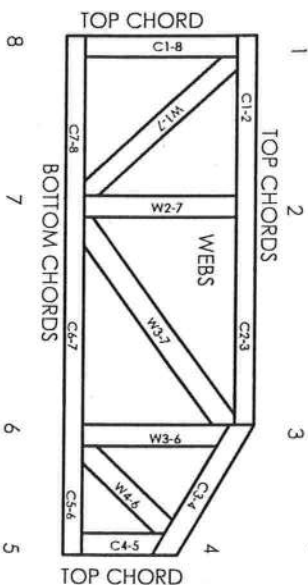
Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

## Industry Standards:

ANSI/TPI 1: National Design Specification for Metal Plate Connected Wood Truss Construction.  
DSB-89: Design Standard for Bracing.  
BCS11: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

# Numbering System

6-4-8 dimensions shown in ft-in-sixteenths (Drawings not to scale)



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

## PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ER-5243, 9604B, 9730, 95-43, 96-31, 9667A, NER-487, NER-561, 95110, 84-32, 96-67, ER-3907, 9432A

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# General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCS11.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative T, I, or Eliminator bracing should be considered.
3. Never exceed the design loading shown and never stock materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, properly owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and worm of joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Carber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or pultrus provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.

Julius Lee Engineering  
1109 Coastal Bay Blvd.  
Boynton, FL 33435

TOP	CHORD	2X4	SO.	PINE	#2	or	Better
BOT	CHORD	2X4	SO.	PINE	#2	or	Better
	WEBS	2X4	SO.	PINE	#3	or	Better

2' TYP. MAX —  
MAX  
Setback 7' or Less

#2 HIP OR COMMON TRUSS	#1 HIP TRUSS

PROVIDE UPLIFT CONNECTIONS AT BEARINGS AS INDICATED.

CJ's  
2' TYP  
MAY

UPLIFT BASED ON 7.2 PSF TOTAL DEAD LOAD. WIND  
SPEED=120 "C" MPH. MEAN HGT=28 FT. ENCLOSED. (ASCE 7-02)

1.

PROVIDE UPLIFT CONNECTIONS AT BEARINGS AS INDICATED. TILE

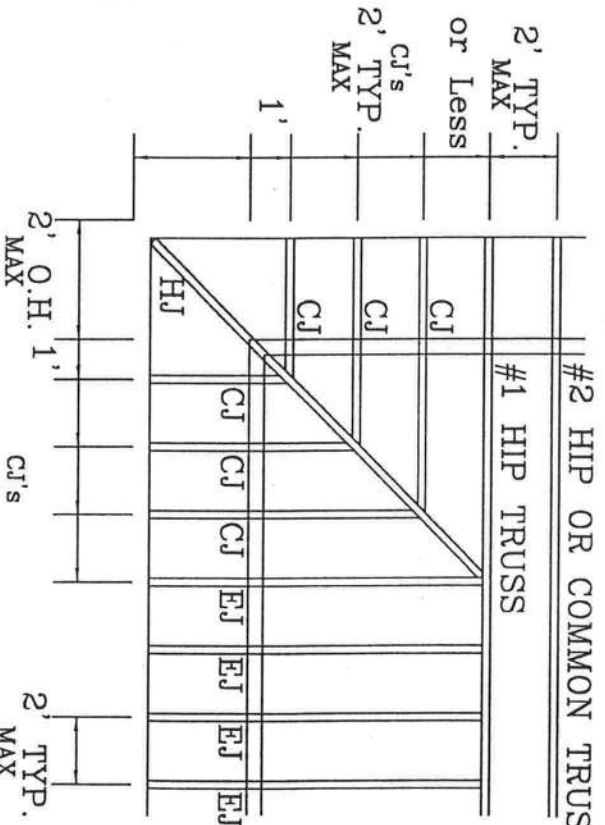
UPLIFT: 400# or Less  
BRG LOC: \*

UP/LIFT BASED ON 15.0 PSF TOTAL DEAD LOAD. WIND  
SPEED=120 "C" MPH. MEAN HGT (of jacks)=28 FT. ENCLOSED. (ASCE 7-02)

PROVIDE UPLIFT CONNECTIONS AT BEARINGS AS INDICATED.

UPLIFT: 400# or Less  
BRG LOC: \*

UPLIFT BASED ON 7.2 PSF TOTAL DEAD LOAD. WIND  
SPEED=120 "B" MPH. MEAN HGT (of jacks)=28 FT. ENCLOSED. (ASCE 7-02)



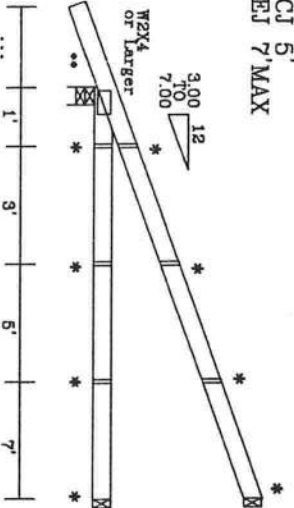

O.H. 1  
MAX  
CJ's  
2' TYP.  
MAX  
2' TYP.  
MAX

SEE FOR TIE DOWN

ALL HEELS TO BE STANDEAR WITH NO CANTILEVER

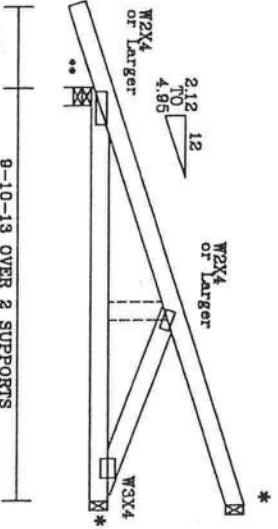
CJ 1'
CJ 3'
CJ 5'
EJ 7'MAX

\*



END AND CORNER JACKS

HJ ALL HEELS TO BE STANDEAR WITH NO CANTILEVER



## HIP JACK

### UPLIFT VALUES DO TAKE INTO ACCOUNT PORCHES EXPOSED

BC LIVE LOAD IS NON CONCURRENT 10\*

REF	7'MAX STBK CS
1	1
2	2
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99	99
100	100

DATE Jun./27/2008

DRWG

-ENG

[illegible]

REVIEWED  
By Julius Ioe at 10:52 am, Jun 27, 2008

CORNER SET

7'0" MAX

BY VARNHAGEN. TRUSS REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCCL-1-03 BUILDING COMPONENT SAFETY INFORMATION, PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 988 DOWNGRADER DR, SUITE 200, MADISON, WI 53719) AND VITA (VICTOR TRUSS COUNCIL OF AMERICA, 6300 ENTERPRISE DR, MADISON, WI 53719) FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED ROOF CEILING.

UNDERPARTS. FURNISH COPY OF THIS DESIGN TO INSTALLATION CONTRACTOR. ALPINE ENGINEERED PRODUCTS, INC., SHALL NOT BE RESPONSIBLE FOR ANY DEVIATION FROM THIS DESIGN, ANY FAILURE TO BUILD THE TRUSS IN CONFORMANCE WITH TPI OR FABRICATING, HANDLING, SHIPPING, INSTALLING & BRACING OF TRUSSES. DESIGN CONFORMS WITH APPLICABLE PROVISIONS OF NDS (NATIONAL DESIGN SPECIFICATION) AND TPI. ALPINE CONNECTOR PLATES ARE MADE OF 60/18/16GA (UNS K520 ASTM A653 GRADE 40/60 40/60 40/60 GALV. STEEL. APPLY PLATES TO EACH FACE OF TRUSS AND UNLESS OTHERWISE LOCATED LOCALLY ON THIS DESIGN, POSITION PER DRAWINGS 1604-2. AN INSPECTION OF PLATES FOLLOWED BY OF SHALL BE REQUIRED FOR THIS DESIGN. THIS DRAWING INDICATES ACCEPTANCE OF THE TRUSS DESIGN BY THE PROFESSIONAL ENGINEERING RESPONSIBILITY ACT AND THE ENGINEER'S DESIGN SIGNATURE. THE SIGNATURE, PER ANSI/ICEI 1-1 SEC. 2

COMS. ENGINEERS, P.

SHINGLE	20	MAX	PSF
TC	7	MAX	PSF
DL	10*	MAX	PSF
BC			
LL			

REF	7'MAX STBK CS
DATE	Jun./27/2008

-ENG

[illegible]

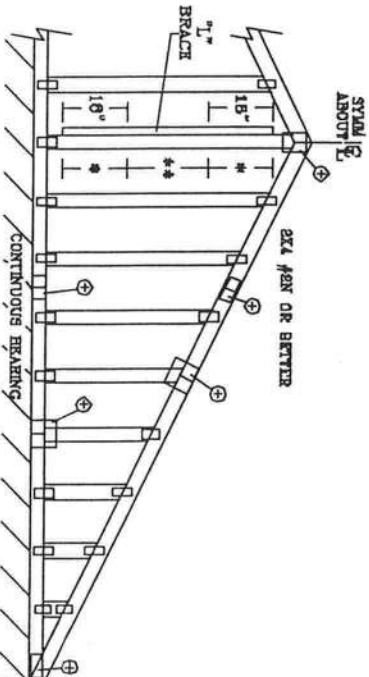
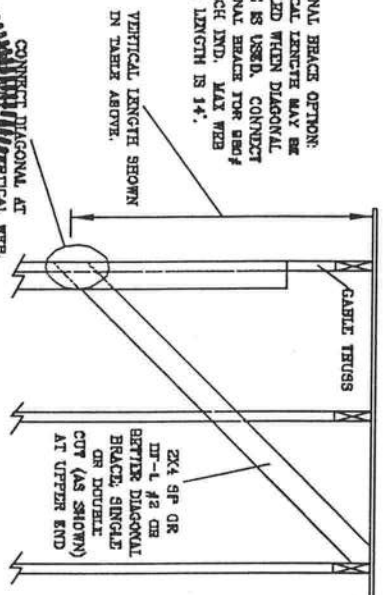
REVIEWED  
By Julius Ioe at 10:52 am, Jun 27, 2008

MAX GABLE VERTICAL LENGTH													
CABLE VERTICAL SPACING / SPECIES	BRACE 2X4	NO BRACES	(1) 1X4 "L" BRACE *				(2) 2X4 "L" BRACE **						
			GROUP A	GROUP B	GROUP A	GROUP B	GROUP A	GROUP B	GROUP A	GROUP B			
24" O.C.	SPF	#1 / #2	3' 2"	5' 6"	6' 8"	8' 6"	6' 9"	7' 10"	8' 0"	10' 3"	10' 7"	12' 3"	12' 3"
		#3	3' 1"	4' 5"	4' 5"	6' 10"	5' 10"	7' 10"	7' 10"	9' 1"	9' 1"	12' 3"	12' 3"
		STUD	3' 1"	4' 6"	4' 5"	5' 10"	6' 10"	7' 10"	7' 10"	9' 1"	9' 1"	12' 3"	12' 3"
		STANDARD	2' 11"	3' 6"	3' 9"	6' 0"	5' 0"	6' 9"	6' 9"	7' 10"	7' 10"	10' 7"	13' 2"
	HF	#1	3' 6"	5' 8"	5' 11"	6' 8"	5' 0"	7' 10"	8' 5"	10' 3"	11' 1"	12' 3"	13' 2"
		#2	3' 6"	5' 6"	5' 11"	6' 6"	7' 0"	7' 10"	8' 5"	10' 3"	11' 1"	12' 3"	13' 2"
		#3	3' 3"	4' 6"	4' 6"	6' 0"	6' 0"	7' 10"	8' 1"	9' 4"	9' 4"	12' 3"	12' 6"
		STUD	3' 0"	3' 10"	3' 10"	6' 1"	5' 1"	6' 11"	6' 11"	8' 0"	9' 3"	9' 3"	12' 3"
	SP	#1 / #2	3' 8"	6' 4"	6' 8"	7' 6"	7' 6"	8' 11"	9' 2"	11' 9"	12' 1"	14' 0"	14' 0"
		#3	3' 7"	5' 5"	5' 5"	7' 2"	7' 2"	8' 11"	8' 11"	11' 2"	14' 0"	14' 0"	14' 0"
		STUD	3' 7"	5' 6"	5' 5"	7' 2"	7' 2"	8' 11"	8' 11"	11' 1"	11' 1"	14' 0"	14' 0"
		STANDARD	3' 7"	4' 6"	4' 8"	6' 2"	6' 2"	8' 3"	8' 3"	9' 7"	9' 7"	12' 11"	12' 11"
16" O.C.	SPF	#1 / #2	4' 0"	8' 4"	8' 10"	7' 8"	8' 1"	8' 11"	8' 7"	11' 8"	12' 8"	14' 0"	14' 0"
		#3	3' 8"	5' 7"	6' 7"	7' 4"	7' 4"	8' 11"	8' 6"	11' 5"	11' 6"	14' 0"	14' 0"
		STUD	3' 8"	5' 8"	5' 8"	7' 3"	7' 3"	8' 11"	8' 5"	11' 4"	11' 4"	14' 0"	14' 0"
		STANDARD	3' 8"	4' 9"	4' 9"	6' 3"	6' 3"	8' 5"	8' 5"	9' 9"	9' 9"	13' 3"	13' 3"
	SP	#1	4' 0"	8' 4"	8' 10"	7' 8"	8' 1"	8' 11"	8' 7"	11' 8"	12' 8"	14' 0"	14' 0"
		#2	3' 11"	8' 4"	8' 10"	7' 6"	8' 1"	8' 11"	8' 7"	11' 9"	12' 8"	14' 0"	14' 0"
		#3	3' 6"	5' 7"	6' 7"	7' 4"	7' 4"	8' 11"	8' 6"	11' 5"	11' 6"	14' 0"	14' 0"
		STUD	3' 8"	5' 8"	5' 8"	7' 3"	7' 3"	8' 11"	8' 5"	11' 4"	11' 4"	14' 0"	14' 0"
	DFL	#1 / #2	4' 0"	6' 11"	7' 2"	6' 3"	6' 3"	8' 5"	10' 1"	12' 11"	13' 4"	14' 0"	14' 0"
		#3	3' 11"	6' 3"	6' 3"	8' 3"	8' 3"	9' 10"	9' 10"	12' 11"	12' 11"	14' 0"	14' 0"
		STUD	3' 11"	6' 3"	6' 3"	8' 3"	8' 3"	9' 10"	9' 10"	12' 11"	12' 11"	14' 0"	14' 0"
		STANDARD	3' 11"	5' 4"	5' 4"	7' 1"	7' 1"	8' 10"	8' 6"	11' 1"	11' 1"	14' 0"	14' 0"
12" O.C.	SPF	#1	4' 5"	6' 11"	7' 6"	8' 3"	8' 11"	8' 10"	10' 7"	12' 11"	13' 11"	14' 0"	14' 0"
		#2	4' 4"	6' 11"	7' 6"	8' 3"	8' 11"	8' 10"	10' 7"	12' 11"	13' 11"	14' 0"	14' 0"
		#3	4' 2"	6' 6"	6' 5"	8' 3"	8' 6"	9' 10"	10' 4"	12' 11"	13' 1"	14' 0"	14' 0"
		STUD	4' 0"	6' 4"	6' 4"	8' 3"	8' 6"	9' 10"	10' 4"	12' 11"	13' 1"	14' 0"	14' 0"
	SP	#1	4' 5"	6' 11"	7' 6"	8' 3"	8' 11"	8' 10"	10' 7"				

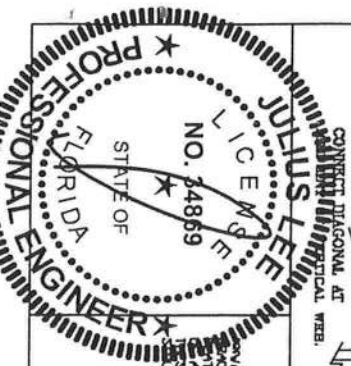
LIVE LOAD DEFLECTION CRITERIA IS  $L/240$ .  
 PROVIDE UPLIFT CONNECTIONS FOR 180 PLF OVER  
 CONTINUOUS BEARING (6 PSF TC DEAD LOAD).  
 CABLE END SUPPORTS LOAD FROM 4" O"  
 OUTLOOKERS WITH 2" O" OVERHANG, OR 12"  
 PLYWOOD OVERHANG.

CABLE VERTICAL PLATE SIZES	
VERTICAL LENGTH	NO SPLICING
LESS THAN 4' 0"	1X OR 2X3
GREATER THAN 4' 0", BUT LESS THAN 11' 0"	2X4
GREATER THAN 11' 0"	2.5X4

+ REFERS TO COMMON CROSS DESIGN FOR  
PLANK, SPLICED, AND BEEL PLATES.



REFER TO CHART ABOVE FOR MAX CABLE VERTICAL LENGTH



TRASSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, STORING, DISTINGUISHING AND PACKAGING. REFER TO ECI-1-03 BUILDING CONSTRUCTION SAFETY, PUBLISHED BY THE CRUISE SHIP REPAIR INSTITUTE, 3843 GARDEN RD., SUITE 200, HUNTERDON, NJ 07039) AND VICA (VACUUM COUPLING) IN ENR 6/20/89, 6/27/89, 7/4/89, 7/11/89, 7/18/89, 7/25/89, 8/1/89, 8/8/89, 8/15/89, 8/22/89, 8/29/89, 9/5/89, 9/12/89, 9/19/89, 9/26/89, 10/3/89, 10/10/89, 10/17/89, 10/24/89, 10/31/89, 11/7/89, 11/14/89, 11/21/89, 11/28/89, 12/5/89, 12/12/89, 12/19/89, 12/26/89, 1/2/90, 1/9/90, 1/16/90, 1/23/90, 1/30/90, 2/6/90, 2/13/90, 2/20/90, 2/27/90, 3/6/90, 3/13/90, 3/20/90, 3/27/90, 4/3/90, 4/10/90, 4/17/90, 4/24/90, 4/30/90, 5/7/90, 5/14/90, 5/21/90, 5/28/90, 6/4/90, 6/11/90, 6/18/90, 6/25/90, 7/2/90, 7/9/90, 7/16/90, 7/23/90, 7/30/90, 8/6/90, 8/13/90, 8/20/90, 8/27/90, 9/3/90, 9/10/90, 9/17/90, 9/24/90, 10/1/90, 10/8/90, 10/15/90, 10/22/90, 10/29/90, 11/5/90, 11/12/90, 11/19/90, 11/26/90, 12/3/90, 12/10/90, 12/17/90, 12/24/90, 12/31/90, 1/7/91, 1/14/91, 1/21/91, 1/28/91, 2/4/91, 2/11/91, 2/18/91, 2/25/91, 3/4/91, 3/11/91, 3/18/91, 3/25/91, 4/1/91, 4/8/91, 4/15/91, 4/22/91, 4/29/91, 5/6/91, 5/13/91, 5/20/91, 5/27/91, 6/3/91, 6/10/91, 6/17/91, 6/24/91, 7/1/91, 7/8/91, 7/15/91, 7/22/91, 7/29/91, 8/5/91, 8/12/91, 8/19/91, 8/26/91, 9/2/91, 9/9/91, 9/16/91, 9/23/91, 9/30/91, 10/7/91, 10/14/91, 10/21/91, 10/28/91, 11/4/91, 11/11/91, 11/18/91, 11/25/91, 12/2/91, 12/9/91, 12/16/91, 12/23/91, 12/30/91, 1/6/92, 1/13/92, 1/20/92, 1/27/92, 2/3/92, 2/10/92, 2/17/92, 2/24/92, 3/2/92, 3/9/92, 3/16/92, 3/23/92, 3/30/92, 4/6/92, 4/13/92, 4/20/92, 4/27/92, 5/4/92, 5/11/92, 5/18/92, 5/25/92, 6/1/92, 6/8/92, 6/15/92, 6/22/92, 6/29/92, 7/6/92, 7/13/92, 7/20/92, 7/27/92, 8/3/92, 8/10/92, 8/17/92, 8/24/92, 8/31/92, 9/7/92, 9/14/92, 9/21/92, 9/28/92, 10/5/92, 10/12/92, 10/19/92, 10/26/92, 11/2/92, 11/9/92, 11/16/92, 11/23/92, 11/30/92, 12/7/92, 12/14/92, 12/21/92, 12/28/92, 1/4/93, 1/11/93, 1/18/93, 1/25/93, 2/1/93, 2/8/93, 2/15/93, 2/22/93, 2/29/93, 3/6/93, 3/13/93, 3/20/93, 3/27/93, 4/3/93, 4/10/93, 4/17/93, 4/24/93, 5/1/93, 5/8/93, 5/15/93, 5/22/93, 5/29/93, 6/5/93, 6/12/93, 6/19/93, 6/26/93, 7/3/93, 7/10/93, 7/17/93, 7/24/93, 7/31/93, 8/7/93, 8/14/93, 8/21/93, 8/28/93, 9/4/93, 9/11/93, 9/18/93, 9/25/93, 10/2/93, 10/9/93, 10/16/93, 10/23/93, 10/30/93, 11/6/93, 11/13/93, 11/20/93, 11/27/93, 12/4/93, 12/11/93, 12/18/93, 12/25/93, 1/1/94, 1/8/94, 1/15/94, 1/22/94, 1/29/94, 2/5/94, 2/12/94, 2/19/94, 2/26/94, 3/5/94, 3/12/94, 3/19/94, 3/26/94, 4/2/94, 4/9/94, 4/16/94, 4/23/94, 4/30/94, 5/7/94, 5/14/94, 5/21/94, 5/28/94, 6/4/94, 6/11/94, 6/18/94, 6/25/94, 7/2/94, 7/9/94, 7/16/94, 7/23/94, 7/30/94, 8/6/94, 8/13/94, 8/20/94, 8/27/94, 9/3/94, 9/10/94, 9/17/94, 9/24/94, 10/1/94, 10/8/94, 10/15/94, 10/22/94, 10/29/94, 11/5/94, 11/12/94, 11/19/94, 11/26/94, 12/3/94, 12/10/94, 12/17/94, 12/24/94, 12/31/94, 1/7/95, 1/14/95, 1/21/95, 1/28/95, 2/4/95, 2/11/95, 2/18/95, 2/25/95, 3/4/95, 3/11/95, 3/18/95, 3/25/95, 4/1/95, 4/8/95, 4/15/95, 4/22/95, 4/29/95, 5/6/95, 5/13/95, 5/20/95, 5/27/95, 6/3/95, 6/10/95, 6/17/95, 6/24/95, 7/1/95, 7/8/95, 7/15/95, 7/22/95, 7/29/95, 8/5/95, 8/12/95, 8/19/95, 8/26/95, 9/2/95, 9/9/95, 9/16/95, 9/23/95, 9/30/95, 10/7/95, 10/14/95, 10/21/95, 10/28/95, 11/4/95, 11/11/95, 11/18/95, 11/25/95, 12/2/95, 12/9/95, 12/16/95, 12/23/95, 12/30/95, 1/6/96, 1/13/96, 1/20/96, 1/27/96, 2/3/96, 2/10/96, 2/17/96, 2/24/96, 3/2/96, 3/9/96, 3/16/96, 3/23/96, 3/30/96, 4/6/96, 4/13/96, 4/20/96, 4/27/96, 5/4/96, 5/11/96, 5/18/96, 5/25/96, 6/1/96, 6/8/96, 6/15/96, 6/22/96, 6/29/96, 7/6/96, 7/13/96, 7/20/96, 7/27/96, 8/3/96, 8/10/96, 8/17/96, 8/24/96, 8/31/96, 9/7/96, 9/14/96, 9/21/96, 9/28/96, 10/5/96, 10/12/96, 10/19/96, 10/26/96, 11/2/96, 11/9/96, 11/16/96, 11/23/96, 11/30/96, 12/7/96, 12/14/96, 12/21/96, 12/28/96, 1/4/97, 1/11/97, 1/18/97, 1/25/97, 2/1/97, 2/8/97, 2/15/97, 2/22/97, 2/29/97, 3/6/97, 3/13/97, 3/20/97, 3/27/97, 4/3/97, 4/10/97, 4/17/97, 4/24/97, 5/1/97, 5/8/97, 5/15/97, 5/22/97, 5/29/97, 6/5/97, 6/12/97, 6/19/97, 6/26/97, 7/3/97, 7/10/97, 7/17/97, 7/24/97, 7/31/97, 8/7/97, 8/14/97, 8/21/97, 8/28/97, 9/4/97, 9/11/97, 9/18/97, 9/25/97, 10/2/97, 10/9/97, 10/16/97, 10/23/97, 10/30/97, 11/6/97, 11/13/97, 11/20/97, 11/27/97, 12/4/97, 12/11/97, 12/18

**JULIUS LEE'S**  
CONS. ENGINEERS P.A.

1456 ST 4th AVENUE  
DELBAY BEACH FL 33444-2161

No: 34869  
STATE OF FLORIDA

MAX. TOT. LD. 60 PSF

MAX. SPACING 24.0"

REF ASCB7-02-GAB13030

DATE 11/26/03

DWG MYPEK STD CABLE 30' 2 HT

-ENG

TOP CHORD 2X4 #2 OR BETTER  
BOT CHORD 2X4 #2 OR BETTER  
WEBS 2X4 #3 OR BETTER

# PIGGYBACK DETAIL

REFER TO SEALED DESIGN FOR DASHED PLATES.

SPACE PIGGYBACK VERTICALS AT 4' OC MAX.

TOP AND BOTTOM CHORD SPLICES MUST BE STAGGERED SO THAT ONE SPLICE IS NOT DIRECTLY OVER ANOTHER.

PIGGYBACK BOTTOM CHORD MAY BE OMITTED. ATTACH VERTICAL WEBS TO TRUSS TOP CHORD WITH 1.5X3 PLATE.

ATTACH PURLINS TO TOP OF FLAT TOP CHORD. IF PIGGYBACK IS SOLID LUMBER OR THE BOTTOM CHORD IS OMITTED, PURLINS MAY BE APPLIED BENEATH THE TOP CHORD OF SUPPORTING TRUSS.

REFER TO ENGINEER'S SEALED DESIGN FOR REQUIRED PURLIN SPACING.

THIS DETAIL IS APPLICABLE FOR THE FOLLOWING WIND CONDITIONS:

110 MPH WIND, 30' MEAN HGT, ASCE 7-02, CLOSED BLDG, LOCATED ANYWHERE IN ROOF, 1 MI FROM COAST

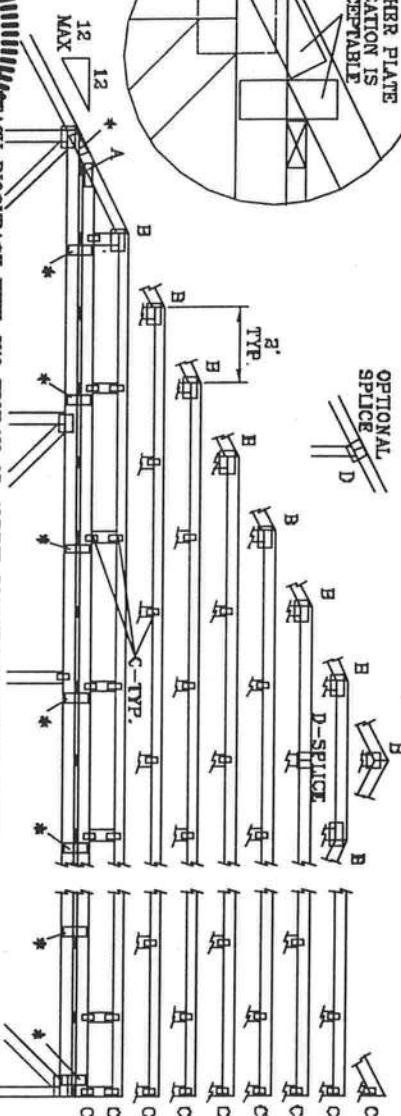
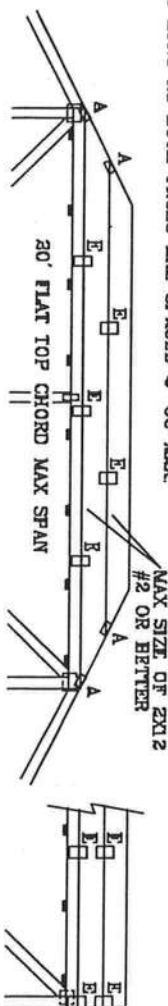
CAT I, EXP C, WIND TC DL=5 PSF, WIND BC DL=5 PSF

110 MPH WIND, 30' MEAN HGT, ETC ENCLOSED BLDG, LOCATED ANYWHERE IN ROOF

WIND TC DL=5 PSF, WIND BC DL=5 PSF

FRONT FACE (E,\*) PLATES MAY BE OFFSET FROM BACK FACE PLATES AS LONG AS BOTH FACES ARE SPACED 4' OC MAX.

130 MPH WIND, 30' MEAN HGT, ASCE 7-02, CLOSED BLDG, LOCATED ANYWHERE IN ROOF, CAT II, EXP. C, WIND TC DL=6 PSF, WIND BC DL=6 PSF

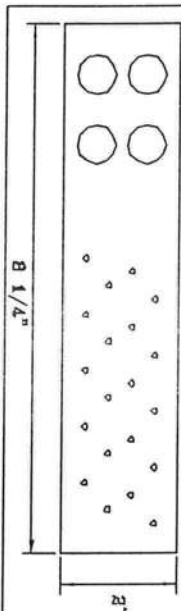


ATTACH TRUSS PLATES WITH (6) 0.120" X 1.375" NAILS, OR EQUAL, PER FACE PER PLY. (4) NAILS IN EACH MEMBER TO BE CONNECTED. REFER TO DRAWING 160 TL FOR TRUSS INFORMATION.

JOINT TYPE	SPANS UP TO			
	30'	34'	38'	62'
A	2X4	2.5X4	2.6X4	3X6
B	4X8	6X8	6X8	5X8
C	1.5X3	1.5X4	1.6X4	1.5X4
D	5X4	6X6	6X6	5X8
E	4X8 OR 3X6 TRUSS AT 4' OC, ROTATED VERTICALLY			

WEB LENGTH	WEB BRACING CHART	
	NO BRACING	REQUIRED BRACING
0' TO 7'9"		
7'9" TO 10'	1X4 "I" BRACE, SAME GRADE, SPECIES AS WEB MEMBER, OR BETTER, AND 80% LENGTH OF WEB MEMBER. ATTACH WITH 8d NAILS AT 4' OC.	
10' TO 14'	2X4 "I" BRACE, SAME GRADE, SPECIES AS WEB MEMBER, OR BETTER, AND 80% LENGTH OF WEB MEMBER. ATTACH WITH 16d NAILS AT 4' OC.	

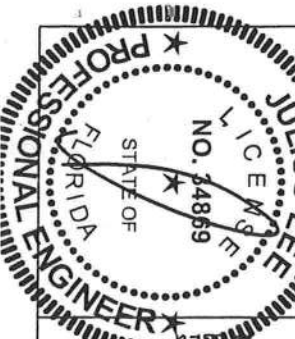
\* PIGGYBACK SPECIAL PLATE  
ATTACH TEETH TO THE PIGGYBACK AT THE TIME OF FABRICATION. ATTACH TO SUPPORTING TRUSS WITH (4) 0.120" X 1.375" NAILS PER FACE PER PLY. APPLY PIGGYBACK SPECIAL PLATE TO EACH TRUSS FACE AND SPACE 4' OC OR LESS.



THIS DRAWING REPLACES DRAWINGS 634.016 634.017 & 847.045

**JULIUS LEE'S**  
CONS. ENGINEERS P.A.  
1445 SW 4th AVENUE  
DEALAY BEACH, FL 33441-2161

MAX LOADING	REF
55 PSF AT	DATE 09/12/07
1.33 DUR. FAC.	DRWG/ITEK STD PIGGY
50 PSF AT	-ENG JL
1.25 DUR. FAC.	
47 PSF AT	
1.15 DUR. FAC.	
SPACING 24.0"	



**REVIEWED**  
By Julius Lee at 11:59 am, Jun 11, 2008



TOE-NAILS TO BE DRIVEN AT AN ANGLE OF APPROXIMATELY THIRTY DEGREES WITH THE PIECE AND STARTED APPROXIMATELY ONE-THIRD THE LENGTH OF THE NAIL FROM THE END OF THE MEMBER.

PER ANSI/AFP&PA NDS-2001 SECTION 12.4.1 – EDGE DISTANCE, END DISTANCE, SPACING, EDGE DISTANCES, END DISTANCES AND SPACINGS FOR NAILS AND SPIKES SHALL BE SUFFICIENT TO PREVENT SPLITTING OF THE WOOD.

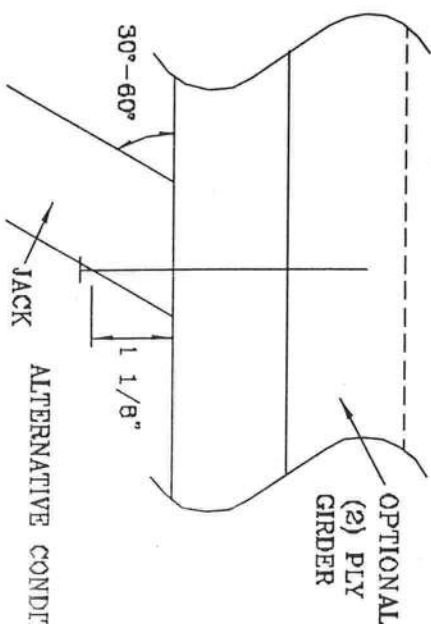
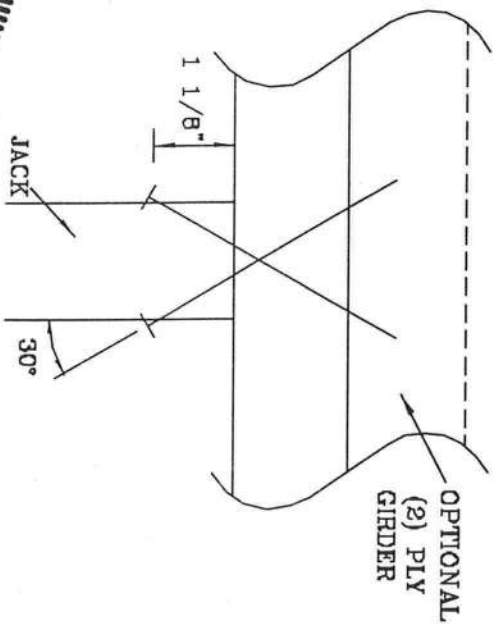
THE NUMBER OF TOE-NAILS TO BE USED IN A SPECIFIC APPLICATION IS DEPENDENT UPON PROPERTIES FOR THE CHORD SIZE, LUMBER SPECIES AND NAIL TYPE. PROPER CONSTRUCTION PRACTICES AS WELL AS GOOD JUDGEMENT SHOULD DETERMINE THE NUMBER OF NAILS TO BE USED.

THIS DETAIL DISPLAYS A TOE-NAILED CONNECTION FOR JACK FRAMING INTO A SINGLE OR DOUBLE PLY SUPPORTING GIRDER.

MAXIMUM VERTICAL RESISTANCE OF 16d (0.162"X3.5") COMMON TOE-NAILS

NUMBER OF TOE-NAILS	SOUTHERN PINE		DOUGLAS FIR-LARCH		HEM-FIR		SPRUCE PINE FIR	
	1 PLY	2 PILES	1 PLY	2 PILES	1 PLY	2 PILES	1 PLY	2 PILES
2	187 #	256 #	181 #	234 #	156 #	203 #	154 #	189 #
3	296 #	383 #	271 #	351 #	234 #	304 #	230 #	298 #
4	394 #	511 #	361 #	468 #	312 #	406 #	307 #	397 #
5	493 #	639 #	452 #	585 #	390 #	507 #	384 #	496 #

ALL VALUES MAY BE MULTIPLIED BY APPROPRIATE DURATION OF LOAD FACTOR.



THIS DRAWING REPLACES DRAWING 784040

NO. 74869

STATE OF

VARIOUS TYPES OF STRESSES RESULTING FROM EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BEST 1-43 CONSULTING COMPONENT SAFETY CONSULTING, PUBLISHED BY THE GRUSS INSTITUTE, 518 DUNSTON RD., SUITE 201, SAN JOSE, CA 95128 AND VICA (VIBRATION CRITICAL ANALYSIS) 6800 ENTERPRISE LN., MORTON, VT 05019 FOR SPECIFICATIONS TO BE FOLLOWED IN THE FABRICATING AND ERECTION OF TRUSS MEMBERS. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PLATELET ATTACHED TO BOTTOM CHORD SHALL HAVE A PLATELET ATTACHED TO BOTTOM CHORD.

REVIEWED

By Julius 100 at 11:59 am, Jun 11, 2008

**JULIUS LEE'S**  
CONS. ENGINEERS P.A.

1435 SW 4th AVENUE  
DELRAY BEACH, FL 33444-2161

No: 34669  
STATE OF FLORIDA

TC LL	PSF	REF	TOE-NAIL
TC DL	PSF	DATE	09/12/07
BC DL	PSF	DRWG CNTONAIL1103	
BC LL	PSF	-ENG JL	
TOT. LD.	PSF		
DUR. FAC.	1.00		
SPACING			

# TRULOX CONNECTION DETAIL

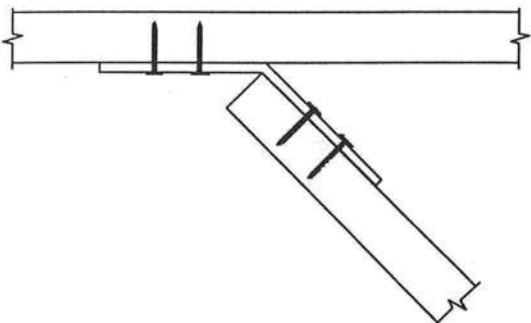
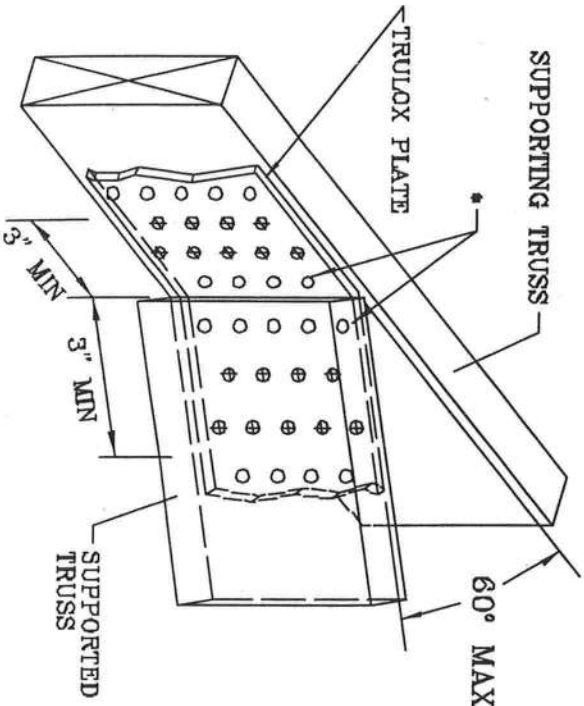
11 GAUGE (0.120" X 1.376") NAILS REQUIRED FOR TRULOX PLATE ATTACHMENT. FILL ROWS COMPLETELY WHERE SHOWN (Φ).

\* NAILS MAY BE OMITTED FROM THESE ROWS.

THIS DETAIL MAY BE USED WITH SO, PINE, DOUGLAS-FIR OR HEM-FIR CHORDS WITH A MINIMUM 1.00 DURATION OF LOAD OR SPRUCE-PINE-FIR CHORDS WITH A MINIMUM 1.15 DURATION OF LOAD. CHORD SIZE OF BOTH TRUSSES MUST EXCEED THE TRULOX PLATE WIDTH.

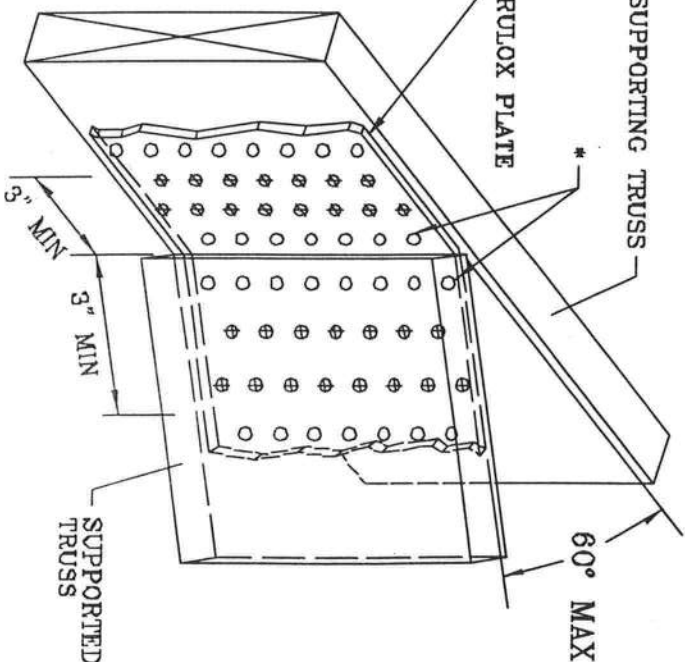
TRULOX PLATE IS CENTERED ON THE CHORDS AND BENT BETWEEN NAIL ROWS.

REFER TO ENGINEER'S SEALED DESIGN REFERENCING THIS DETAIL FOR LUMBER, PLATES, AND OTHER INFORMATION NOT SHOWN.



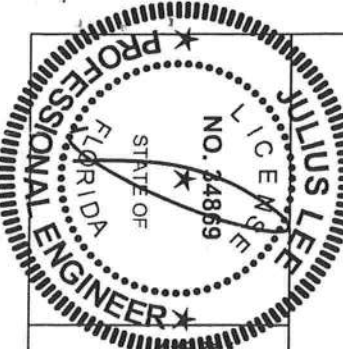
MINIMUM 3X6 TRULOX PLATE

TRULOX PLATE SIZE	REQUIRED NAILS PER TRUSS	MAXIMUM LOAD UP OR DOWN
3X6	9	350 #
6X6	15	990 #



MINIMUM 5X6 TRULOX PLATE

THIS DRAWING REPLACES DRAWINGS 1,158,989 1,156,986/R 1,154,844 1,152,217 1,152,017 1,159,154 & 1,151,524



WARNING: TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND MAINTAINING. THIS DETAIL IS FOR USE IN BUILDING EXISTING TRUSSES. IT IS NOT TO BE USED FOR NEW TRUSSES. IT IS NOT TO BE USED FOR TRUSSES THAT ARE NOT DESIGNED BY A TRUSS ENGINEER. IT IS NOT TO BE USED FOR TRUSSES THAT ARE NOT DESIGNED BY A TRUSS ENGINEER. IT IS NOT TO BE USED FOR TRUSSES THAT ARE NOT DESIGNED BY A TRUSS ENGINEER.

JULIUS LEE'S  
CONS. ENGINEERS P.A.

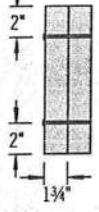
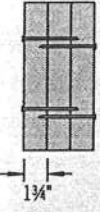
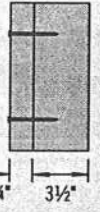


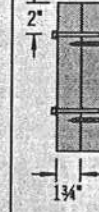
1465 SW 4th AVENUE  
DELUFT BLDG., FL 33444-2181

No. 34869  
STATE OF FLORIDA

REF	TRULOX
DATE	11/26/03
DRWG	CNTRULOX1103
-ENG	JL

# MULTIPLE-MEMBER CONNECTIONS FOR SIDE-LOADED BEAMS

## Point Load—Maximum Point Load Applied to Either Outside Member (lbs)

Connector Type	Number of Connectors	Connector Pattern					
		Assembly A	Assembly B	Assembly C	Assembly D	Assembly E	Assembly F
							
		3 1/2" 2-ply	5 1/4" 3-ply	5 1/4" 2-ply	7" 3-ply	7" 2-ply	7" 4-ply
10d (0.128" x 3") Nail	6	1,110	835	835	740		
	12	2,225	1,670	1,670	1,485		
	18	3,335	2,505	2,505	2,225		
	24	4,450	3,335	3,335	2,965		
SDS Screws 1/4" x 3 1/2" or WS35 1/4" x 6" or WS6 <sup>(1)</sup>	4	1,915	1,435 <sup>(4)</sup>	1,435	1,275	1,860 <sup>(2)</sup>	1,405 <sup>(2)</sup>
	6	2,870	2,150 <sup>(4)</sup>	2,150	1,915	2,785 <sup>(2)</sup>	2,110 <sup>(2)</sup>
	8	3,825	2,870 <sup>(4)</sup>	2,870	2,550	3,715 <sup>(2)</sup>	2,810 <sup>(2)</sup>
3 3/8" or 5" TrussLok™	4	2,545	1,910 <sup>(4)</sup>	1,910	1,695	1,925 <sup>(2)</sup>	1,775 <sup>(2)</sup>
	6	3,815	2,860 <sup>(4)</sup>	2,860	2,545	2,890 <sup>(2)</sup>	2,665 <sup>(2)</sup>
	8	5,090	3,815 <sup>(4)</sup>	3,815	3,390	3,855 <sup>(2)</sup>	3,550 <sup>(2)</sup>

(1) 6" SDS or WS screws can be used with Parallam® PSL and Microlam® LVL, but are not recommended for TimberStrand® LSL.

(2) 6" long screws required.

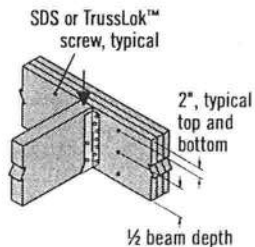
(3) 5" long screws required.

(4) 3 1/2" and 3 3/8" long screws must be installed on both sides.

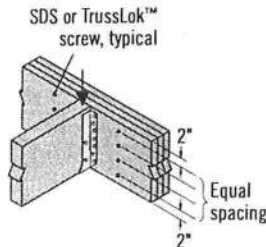
See General Notes on page 38

## Connections

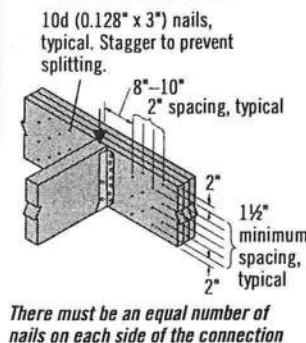
### 4 or 6 or Screw Connection



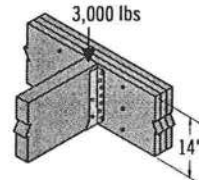
### 8 Screw Connection



### Nail Connection



## Point Load Design Example



First, verify that a 3-ply 1 3/4" x 14" beam is capable of supporting the 3,000 lb point load as well as all other loads applied. The 3,000 lb point load is being transferred to the beam with a face mount hanger. For a 3-ply 1 3/4" assembly, eight 3 3/8" TrussLok™ screws are good for 3,815 lbs with a face mount hanger.

# MULTIPLE-MEMBER CONNECTIONS FOR TOP-LOADED BEAMS

## 1 3/4" Wide Pieces

- Minimum of three rows of 10d (0.128" x 3") nails at 12" on-center.
- Minimum of four rows of 10d (0.128" x 3") nails at 12" on-center for 14" or deeper.
- If using 12d–16d (0.148"–0.162" diameter) nails, the number of nailing rows may be reduced by one.
- Minimum of two rows of SDS, WS, or TrussLok™ screws at 16" on-center. Use 3 3/8" minimum length with two or three plies; 5" minimum for 4-ply members. 6" SDS and WS screws are not recommended for use with TimberStrand® LSL. For 3- or 4-ply members, connectors must be installed

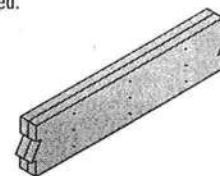
on both sides. Stagger fasteners on opposite side of beam by 1/2 of the required connector spacing.

- Load must be applied evenly across entire beam width. Otherwise, use connections for side-loaded beams.

## 3 1/2" Wide Pieces

- Minimum of two rows of SDS, WS, or TrussLok™ screws, 5" minimum length, at 16" on-center. 6" SDS and WS screws are not recommended for use with TimberStrand® LSL. Connectors must be installed on both sides. Stagger fasteners on opposite side of beam by 1/2 of the required connector spacing.

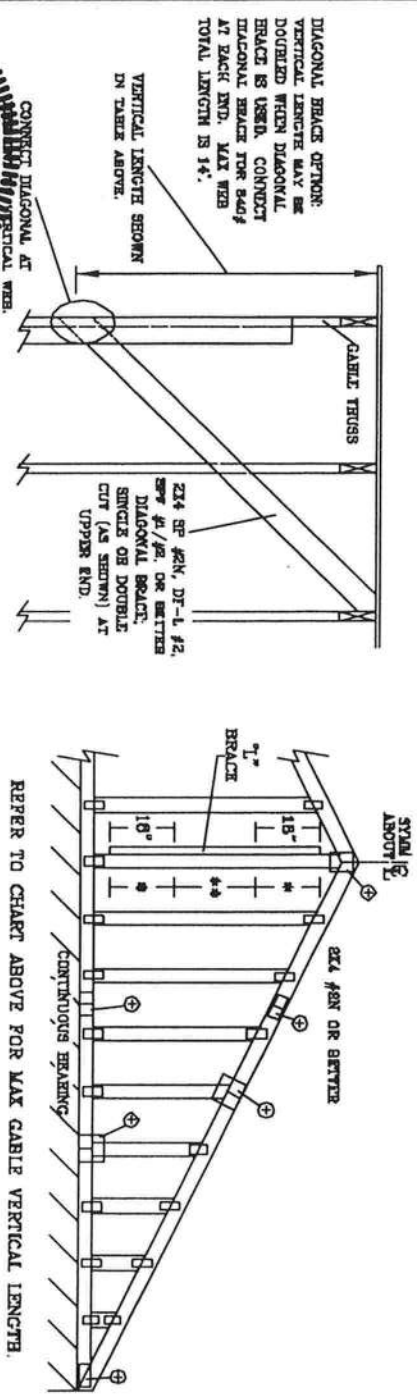
- Load must be applied evenly across entire beam width. Otherwise, use connections for side-loaded beams.
- Minimum of two rows of 1/2" bolts at 24" on-center staggered.



Multiple pieces can be nailed or bolted together to form a header or beam of the required size, up to a maximum width of 7"

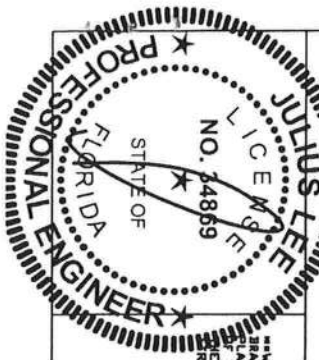
ASCE 7-02: 130 MPH WIND SPEED, 15' MEAN HEIGHT, ENCLOSED, I = 1.00, EXPOSURE C

MAX GABLE VERTICAL LENGTH		BRACE		NO BRACES		(1) 1X4 T <sup>1</sup> BRACE *		(1) 2X4 T <sup>1</sup> BRACE *		(2) 2X4 T <sup>1</sup> BRACE **		(1) 2X6 T <sup>1</sup> BRACE *		(2) 2X6 T <sup>1</sup> BRACE *		(2) 2X8 T <sup>1</sup> BRACE **	
CABLE VERTICAL SPACING / SPECIES	GRADE	2X4	BRACE	NO	BRACES	GROUP A		GROUP B		GROUP A		GROUP B		GROUP A		GROUP B	
						#1 / #2	#3	#1 / #2	#3	#1 / #2	#3	#1 / #2	#3	#1 / #2	#3	#1 / #2	#3
12" O.C.	SPF	STUD	STANDARD	4	3	6' 10"	6' 0"	6' 11"	7' 1"	8' 3"	8' 3"	10' 10"	11' 2"	12' 11"	13' 3"	13' 3"	13' 3"
	SPF	STUD	STANDARD	4	3	6' 10"	6' 0"	6' 11"	7' 1"	8' 3"	8' 3"	10' 10"	11' 2"	12' 11"	13' 3"	13' 3"	13' 3"
	SPF	STUD	STANDARD	4	3	6' 10"	6' 0"	6' 11"	7' 1"	8' 3"	8' 3"	10' 10"	11' 2"	12' 11"	13' 3"	13' 3"	13' 3"
	SPF	STUD	STANDARD	4	3	6' 10"	6' 0"	6' 11"	7' 1"	8' 3"	8' 3"	10' 10"	11' 2"	12' 11"	13' 3"	13' 3"	13' 3"
16" O.C.	SPF	STUD	STANDARD	4	3	6' 10"	6' 0"	6' 11"	7' 1"	8' 3"	8' 3"	10' 10"	11' 2"	12' 11"	13' 3"	13' 3"	13' 3"
	SPF	STUD	STANDARD	4	3	6' 10"	6' 0"	6' 11"	7' 1"	8' 3"	8' 3"	10' 10"	11' 2"	12' 11"	13' 3"	13' 3"	13' 3"
	SPF	STUD	STANDARD	4	3	6' 10"	6' 0"	6' 11"	7' 1"	8' 3"	8' 3"	10' 10"	11' 2"	12' 11"	13' 3"	13' 3"	13' 3"
	SPF	STUD	STANDARD	4	3	6' 10"	6' 0"	6' 11"	7' 1"	8' 3"	8' 3"	10' 10"	11' 2"	12' 11"	13' 3"	13' 3"	13' 3"
24" O.C.	SPF	STUD	STANDARD	4	3	6' 10"	6' 0"	6' 11"	7' 1"	8' 3"	8' 3"	10' 10"	11' 2"	12' 11"	13' 3"	13' 3"	13' 3"
	SPF	STUD	STANDARD	4	3	6' 10"	6' 0"	6' 11"	7' 1"	8' 3"	8' 3"	10' 10"	11' 2"	12' 11"	13' 3"	13' 3"	13' 3"
	SPF	STUD	STANDARD	4	3	6' 10"	6' 0"	6' 11"	7' 1"	8' 3"	8' 3"	10' 10"	11' 2"	12' 11"	13' 3"	13' 3"	13' 3"
	SPF	STUD	STANDARD	4	3	6' 10"	6' 0"	6' 11"	7' 1"	8' 3"	8' 3"	10' 10"	11' 2"	12' 11"	13' 3"	13' 3"	13' 3"



BRACING GROUP SPECIES AND GRADES:	
GROUP A:	
SPF - PINE - TR	SPF - PINE - TR
#1 / #2 STUD	#1 / #2 STUD
#3 STUD	#3 STUD
STANDARD	STANDARD
GROUP B:	
SPF - PINE - TR	SPF - PINE - TR
#1 / #2 STUD	#1 / #2 STUD
#3 STUD	#3 STUD
STANDARD	STANDARD

CABLE TRUSS DETAIL NOTES:	
LIVE LOAD DEPOSITION CATEGORY IS C/240.	
PROVIDE UPLIFT CONNECTIONS FOR 136 PSF OVER CONTINUOUS BEARING (6 PSF TC DEAD LOAD).	
CABLE END SUPPORTS LOAD FROM 4' 0" OUTLINES WITH 2' 0" OVERHANG, OR 12" PLTWOOD OVERHANG.	
ATTACH EACH T <sup>1</sup> BRACE WITH 104 NAILS.	
* FOR (1) T <sup>1</sup> BRACE, SPACE NAILS AT 8" O.C.	
* FOR (2) T <sup>1</sup> BRACE, SPACE NAILS AT 3" O.C.	
* FOR (3) T <sup>1</sup> BRACE, SPACE NAILS AT 3" O.C.	
* FOR (4) T <sup>1</sup> BRACE, SPACE NAILS AT 3" O.C.	
T <sup>1</sup> BRACING MUST BE A MINIMUM OF 80% OF WEB MEMBER LENGTH.	
CABLE VERTICAL PLATE SIZES:	
VERTICAL LENGTH	NO BRACE
LESS THAN 4' 0"	1X4 OR 2X3
GREATER THAN 4' 0", BUT	2X4
LESS THAN 11' 8"	2X4
GREATER THAN 11' 8"	2X6
+ REFER TO COMMON TRUSS DESIGN FOR PEAK, SPLICE, AND BEEL PLATES.	



WARNING: THESE REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BESS 1-43 GRADING, CONCRETE SAFETY DIVISION, PUBLISHED BY THE TRUSS PLATE INSTITUTE, 282 DOWNTOWN DR., SUITE 200, MANASSAS, VA 20108 AND VITA (VITA TRUSS) 6200 UNIVERSITY LN., WOODSON, VA 20189 FOR SAFETY PRACTICES PRIOR TO PERFORMING TRUSS FUNCTIONING. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED BRACE FUNCTIONING. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE A PROPERLY ATTACHED ROOF CEILING.

JULIUS LEE'S  
CONS. ENGINEERS P.A.  
1455 SE 4th AVENUE  
DELAWARE BEACH, FL 33444-8161

No. 34869  
STATE OF FLORIDA

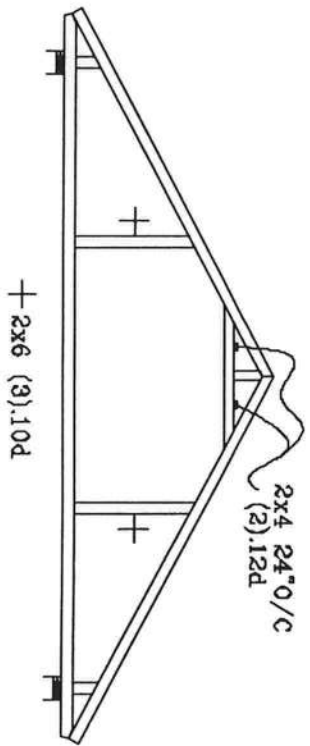
MAX. TOT. LD. 60 PSF  
MAX. SPACING 24.0"

REF ASCE7-02-CAB13015  
DATE 11/28/03  
DRWG MTRK STD CABLE 15 L ET  
-ENG

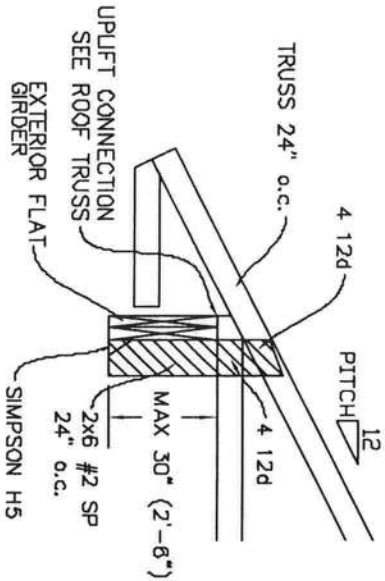
REVIEWED  
By Julius Lee at 12:00 pm, Jun 11, 2008



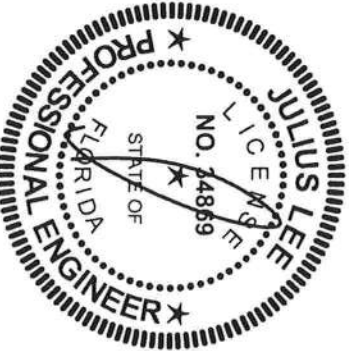
# TYPICAL ATTIC TRUSS BRACING



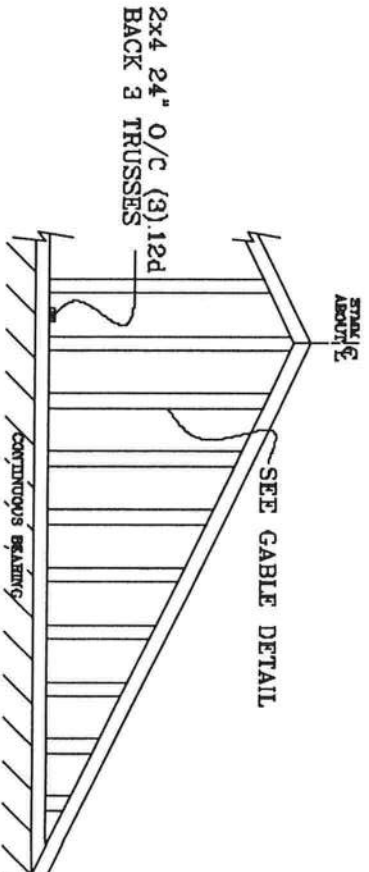
# TYPICAL ALTERNATE BRACING DETAIL FOR EXTERIOR FLAT GIRDER TRUSS



REVIEWED  
By Julius Lee at 11:59 am, Jun 11, 2008

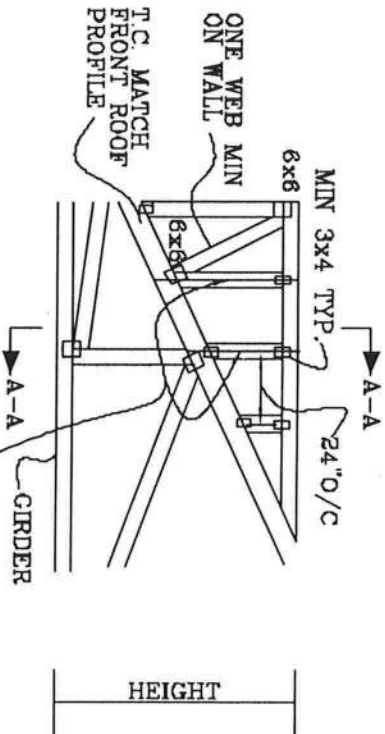


# GABLE END TRUSS DETAIL



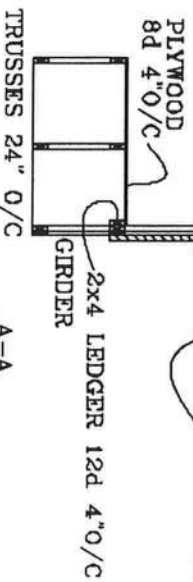
MINIMUM BC BRACING ON GABLE TRUSS. OTHER PERMANENT BRACING DESIGNS BY ARCHITECT OR EOR

# TYPICAL WALL GIRDER VERTICAL WEB BRACING DETAIL



SEE ROOF TRUSSES FOR UPLIFT  
ROOF 24" O/C

SEE GABLE END DETAIL FOR T-BRACE BEHIND EACH VERTICAL



JULIUS LEE'S  
CONS. ENGINEERS P.A.  
1456 SW 4th AVENUE  
ORLANDO BEACH, FL 32411-2161

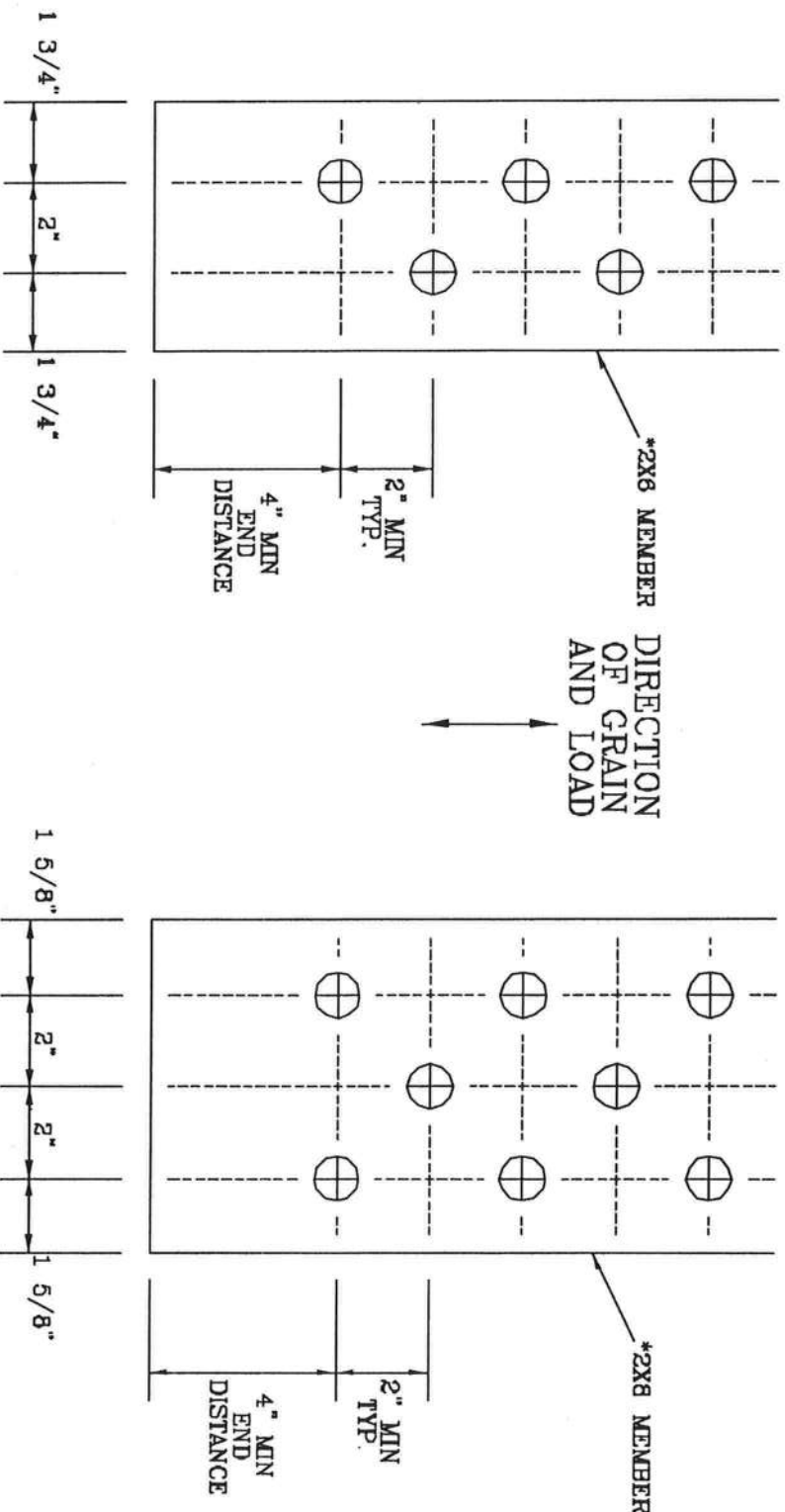
No: 34860  
STATE OF FLORIDA



# 1/2" DIAMETER BOLT SPACING FOR LOAD APPLIED PARALLEL TO GRAIN.

\* GRADE AND SPECIES AS SPECIFIED ON THE ALPINE DESIGN.  
BOLT HOLES SHALL BE A MINIMUM OF 1/32" TO A MAXIMUM OF 1/16" LARGER THAN BOLT DIAMETER.

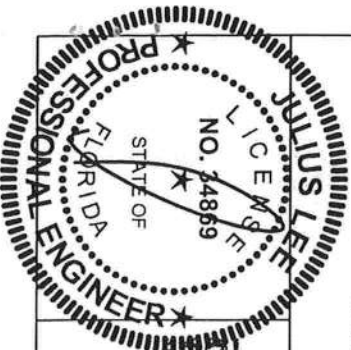
TYPICAL LOCATION OF 1/2" DIAMETER THRU BOLTS. BOLT QUANTITIES AS NOTED ON SEALED DESIGN MUST BE APPLIED IN ONE OF THE PATTERNS SHOWN BELOW.  
WASHERS REQUIRED UNDER BOLT HEAD AND NUT



2X6 DETAIL

2X8 DETAIL

THIS DRAWING REPLACES DRAWING A826.016



WARNING: TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND ERECTION. REFER TO POST-100 GUIDELINE COMPONENT SAFETY INFORMATION, PUBLISHED BY THE TRUSS ASSOCIATION OF AMERICA, 6010 ENTERPRISE DR., SUITE 200, MANASSAS, VA 22033 AND AIAA CODE TRUSS COUNCIL. THE FUNCTIONAL USES OTHERWISE INDICATED, THE OWNER SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOLTS AND BOLTS SHALL HAVE A PROPERLY ATTACHED ROAD GELING.

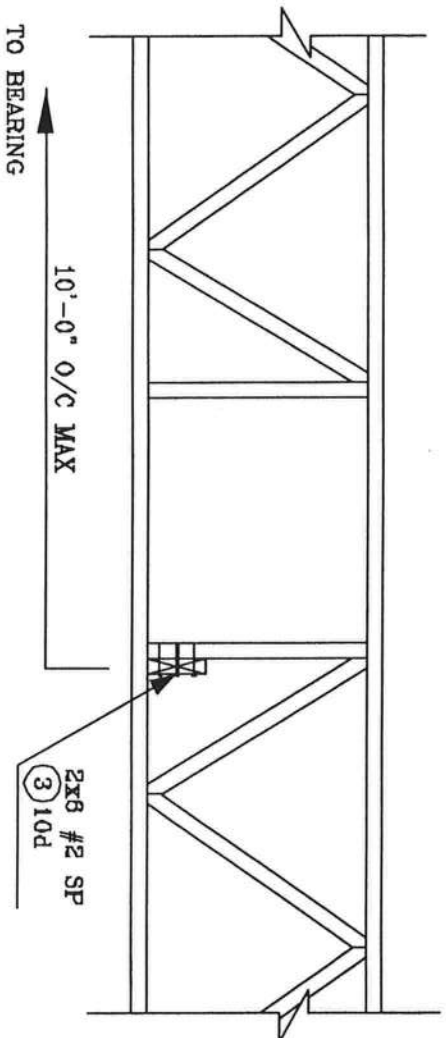
REVIEWED  
By Julius Lee at 11:59 am, Jun 11, 2008

JULIUS LEE'S  
CONS. ENGINEERS P.A.  
1450 7TH AVE  
DELRAY BEACH, FL 33444-2161

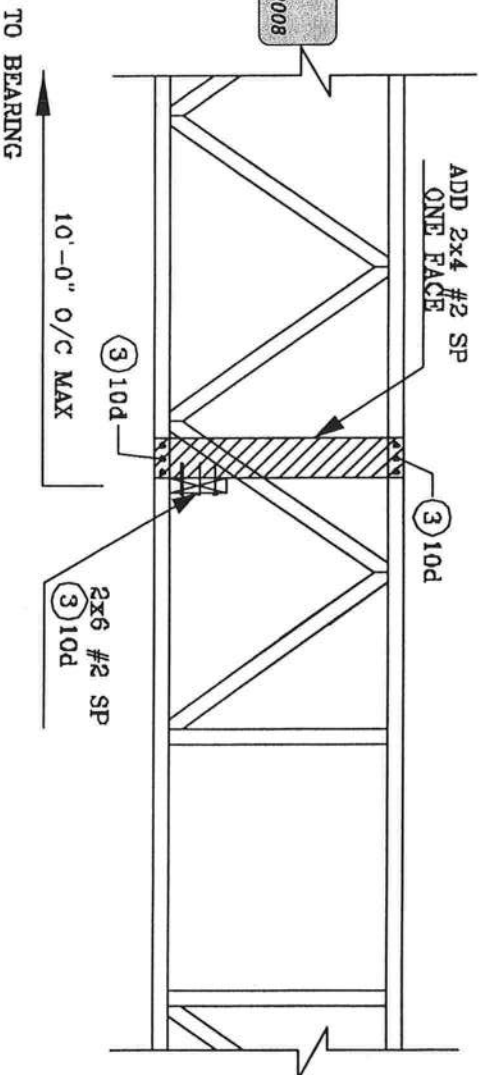
No. 34869  
STATE OF FLORIDA

TC LL	PSF	REF	BOLT SPACING
TC DL	PSF	DATE	11/26/03
BC DL	PSF	DRWG	CNBOLTS1103
BC LL	PSF	-ENG	JL
TOT. LD.	PSF		
DUR. FAC.			
SPACING			

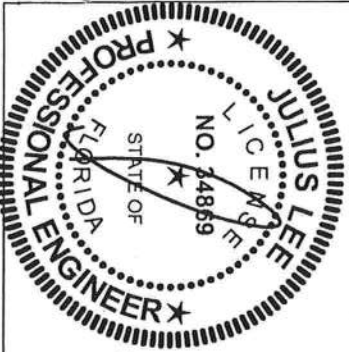
# STRONG BACK DETAIL SYSTEM-42 OR FLAT TRUSS



## ALTERNATE DETAIL FOR STRONG BACK WITH VERTICAL NOT LINING UP



**REVIEWED**  
By Julius Lee at 11:58 am, Jun 11, 2008



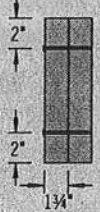
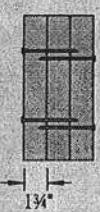
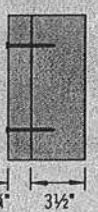

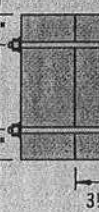

**JULIUS LEE'S**  
CONS. ENGINEERS P.A.  
1459 SW 41st AVENUE  
DEER BEACH, FL 33444-2661

No. 34869  
STATE OF FLORIDA



# MULTIPLE-MEMBER CONNECTIONS FOR SIDE-LOADED BEAMS

## Maximum Uniform Load Applied to Either Outside Member (PLF)

Connector Type	Number of Rows	Connector On-Center Spacing	Connector Pattern					
			Assembly A	Assembly B	Assembly C	Assembly D	Assembly E	Assembly F
								
			3 1/2" 2-ply	5 1/4" 3-ply	5 1/4" 2-ply	7" 3-ply	7" 2-ply	7" 4-ply
10d (0.128" x 3") Nail <sup>(1)</sup>	2	12"	370	<b>280</b>	280	<b>245</b>		
	3	12"	555	<b>415</b>	415	<b>370</b>		
1/2" A307 Through Bolts <sup>(2)(4)</sup>	2	24"	505	380	520	465	860	340
		19.2"	635	475	655	580	1,075	425
		16"	760	570	785	695	1,290	505
SDS 1/4" x 3 1/2" <sup>(4)</sup>	2	24"	680	<b>510</b>	510	<b>455</b>		
		19.2"	850	<b>640</b>	640	<b>565</b>		
		16"	1,020	<b>765</b>	765	<b>680</b>		
SDS 1/4" x 6" <sup>(3)(4)</sup>	2	24"				<b>455</b>	<b>465</b>	<b>455</b>
		19.2"				<b>565</b>	<b>580</b>	<b>565</b>
		16"				<b>680</b>	<b>695</b>	<b>680</b>
USP WS35 <sup>(4)</sup>	2	24"	480	<b>360</b>	360	<b>320</b>		
		19.2"	600	<b>450</b>	450	<b>400</b>		
		16"	715	<b>540</b>	540	<b>480</b>		
USP WS6 <sup>(3)(4)</sup>	2	24"				<b>350</b>	<b>525</b>	<b>350</b>
		19.2"				<b>440</b>	<b>660</b>	<b>440</b>
		16"				<b>525</b>	<b>790</b>	<b>525</b>
3 1/4" TrussLok <sup>(4)</sup>	2	24"	635	<b>475</b>	475	<b>425</b>		
		19.2"	795	<b>595</b>	595	<b>530</b>		
		16"	955	<b>715</b>	715	<b>635</b>		
5" TrussLok <sup>(4)</sup>	2	24"		<b>500</b>	500	<b>445</b>	<b>480</b>	<b>445</b>
		19.2"		<b>625</b>	625	<b>555</b>	<b>600</b>	<b>555</b>
		16"		<b>750</b>	750	<b>665</b>	<b>725</b>	<b>665</b>
6 3/4" TrussLok <sup>(4)</sup>	2	24"				445	620	445
		19.2"				555	770	555
		16"				665	925	665

(1) Nailed connection values may be doubled for 6" on-center or tripled for 4" on-center nail spacing.

(2) Washers required. Bolt holes to be 1/16" maximum.

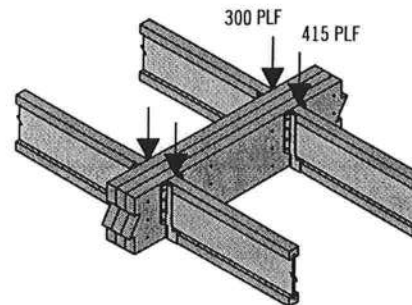
(3) 6" SDS or WS screws can be used with Parallam® PSL and Microllam® LVL, but are not recommended for TimberStrand® LSL.

(4) 24" on-center bolted and screwed connection values may be doubled for 12" on-center spacing.

## General Notes

- Connections are based on NDS® 2005 or manufacturer's code report.
- Use specific gravity of 0.5 when designing lateral connections.
- Values listed are for 100% stress level. Increase 15% for snow-loaded roof conditions or 25% for non-snow roof conditions, where code allows.
- Bold Italic** cells indicate **Connector Pattern** must be installed on both sides. Stagger fasteners on opposite side of beam by 1/2 the required **Connector Spacing**.
- Verify adequacy of beam in allowable load tables on pages 16–33.
- 7" wide beams should be side-loaded only when loads are applied to both sides of the members (to minimize rotation).
- Minimum end distance for bolts and screws is 6".
- Beams wider than 7" require special consideration by the design professional.

## Uniform Load Design Example



First, check the allowable load tables on pages 16–33 to verify that three pieces can carry the total load of 715 plf with proper live load deflection criteria. Maximum load applied to either outside member is 415 plf. For a 3-ply 1 3/4" assembly, two rows of 10d (0.128" x 3") nails at 12" on-center is good for only 280 plf. Therefore, use three rows of 10d (0.128" x 3") nails at 12" on-center (good for 415 plf).

### Alternates:

Two rows of 1/2" bolts or SDS 1/4" x 3 1/2" screws at 19.2" on-center.

28157



## COLUMBIA COUNTY FIRE RESCUE

P.O. BOX 1529 Lake City, Florida 32056  
Office (386) 754-7071 Fax (386) 754-7064

Division Chief  
David L. Boozer

13 April 2010

TO: Harry Dicks  
Columbia County Building and Zoning

FROM: David L. Boozer  
Division Chief / Fire Marshal

RE: Permit #28157  
Hendrix Smith and Kirby LLC  
152 SE Defender Ave, Lake City, Florida 32025

A Fire Safety Inspection was performed of the above listed facility. This building meets the requirements as set forth in Chapter 22 of the Florida Fire Prevention Code 2007 edition. I recommend Approval.

Should you require any additional information, please feel free to contact my office.

Sincerely,

David L. Boozer



**CERTIFICATE OF OCCUPANCY**

**OCCUPANCY**

**COLUMBIA COUNTY, FLORIDA**

## Department of Building and Zoning Inspection

*This Certificate of Occupancy is issued to the below named permit holder for the building and premises at the below named location, and certifies that the work has been completed in accordance with the Columbia County Building Code.*

Parcel Number 34-3S-17-07081-000

Building permit No. 000028157

Use Classification REMODEL/COMM.BLDG

Fire: 0.00

Permit Holder COASTAL RECONSTRUCTION, INC.

Waste:           

Owner of Building HENDRIX SMITH & KIRBY, LLC

Total: 0.00

Location: 152 SE DEFENDER AVE., LAKE CITY, FL

Date: 04/13/2010

*Harry Diche*

Building Inspector

**POST IN A CONSPICUOUS PLACE**  
*(Business Places Only)*





## COLUMBIA COUNTY FIRE RESCUE

P.O. BOX 1529 Lake City, Florida 32056  
Office (386) 754-7071 Fax (386) 754-7064

Division Chief  
David L. Boozer

23 October 2009

TO: Harry Dicks  
Columbia County Building and Zoning

FROM: David L. Boozer  
Division Chief / Fire Marshal

RE: Application # 0910-30 <sup>23-P</sup>  
Hendrix Smith and Kirby LLC  
152 SE Defender Ave, Lake City, Florida 32025

A plans review was performed of the above listed facility. At this time the provided plans met the requirements of Chapter 22 of the Florida Fire Prevention Code 2007 edition. I recommend Approval.

Should you require any additional information, please feel free to contact my office.

Sincerely,

David L. Boozer

28157  
28127





*Hydratec*  
10/2/09

... Fire Protection by Computer Design

CARIBBEAN FIRE & ASSOCIATES  
3856 S.W 30TH AVENUE  
SUITE 109  
HOLLYWOOD, FL 33312  
954-581-9393

Job Name : EASTSIDE CARE CENTENR  
Building : # 1  
Location : 152 SE DEFENDER AVENUE LAKE CITY FLORIDA 32055  
System : 1  
Contract :  
Data File : EASTSIDE.WX1

Hydraulic Design Information Sheet

Name - EASTSIDE CARE CENTER LIVING FACILITY Date - 10.01.09  
Location - 152 SE DEFENDER AVENUE LAKE CITY FLORIDA 32055  
Building - # 1 System No. - 1  
Contractor - CARIBBEAN FIRE Contract No. -  
Calculated By - CARIBBEAN FIRE Drawing No. - 1  
Construction: (X) Combustible ( ) Non-Combustible Ceiling Height - 10  
Occupancy - UNUSED ATTIC

S (X) NFPA 13 (X) Lt. Haz. Ord.Haz.Gp. ( ) 1 ( ) 2 ( ) 3 ( ) Ex.Haz.  
Y ( ) NFPA 231 ( ) NFPA 231C (X) Figure 11.2.3.1.5 Curve LH  
S Other  
T Specific Ruling Made By Date

M	Area of Sprinkler Operation - 1500	System Type	Sprinkler/Nozzle
	Density - 0.10	(X) Wet	Make RELIABLE
D	Area Per Sprinkler - 130	( ) Dry	Model F1FR
E	Elevation at Highest Outlet - 15'	( ) Deluge	Size 1/2"
S	Hose Allowance - Inside - 100	( ) Preaction	K-Factor 5.6
I	Rack Sprinkler Allowance -	( ) Other	Temp.Rat.200
G	Hose Allowance - Outside -		

N Note

Calculation Flow Required - 291.82 Press Required - 40.30 AT TEST  
Summary C-Factor Used: 120 Overhead 140 Underground

W	Water Flow Test:	Pump Data:	Tank or Reservoir:
A	Date of Test -		Cap. -
T	Time of Test -	Rated Cap.-	Elev.-
E	Static Press - 60	@ Press -	
R	Residual Press - 50	Elev. -	Well
	Flow - 1100		Proof Flow
S	Elevation -		

U Location -

P Source of Information - DROUGHT CONDITION

C	Commodity	Class	Location
O	Storage Ht.	Area	Aisle W.
M	Storage Method:	Solid Piled %	Palletized % Rack
M	( ) Single Row	( ) Conven. Pallet	( ) Auto. Storage ( ) Encap.
S	( ) Double Row	( ) Slave Pallet	( ) Solid Shelf ( ) Non
T	( ) Mult. Row		( ) Open Shelf
O	Flue Spacing	Clearance:Storage to Ceiling	
R	Longitudinal	Transverse	
A	Horizontal Barriers Provided:		
G			
E			

# Water Supply Curve (C)

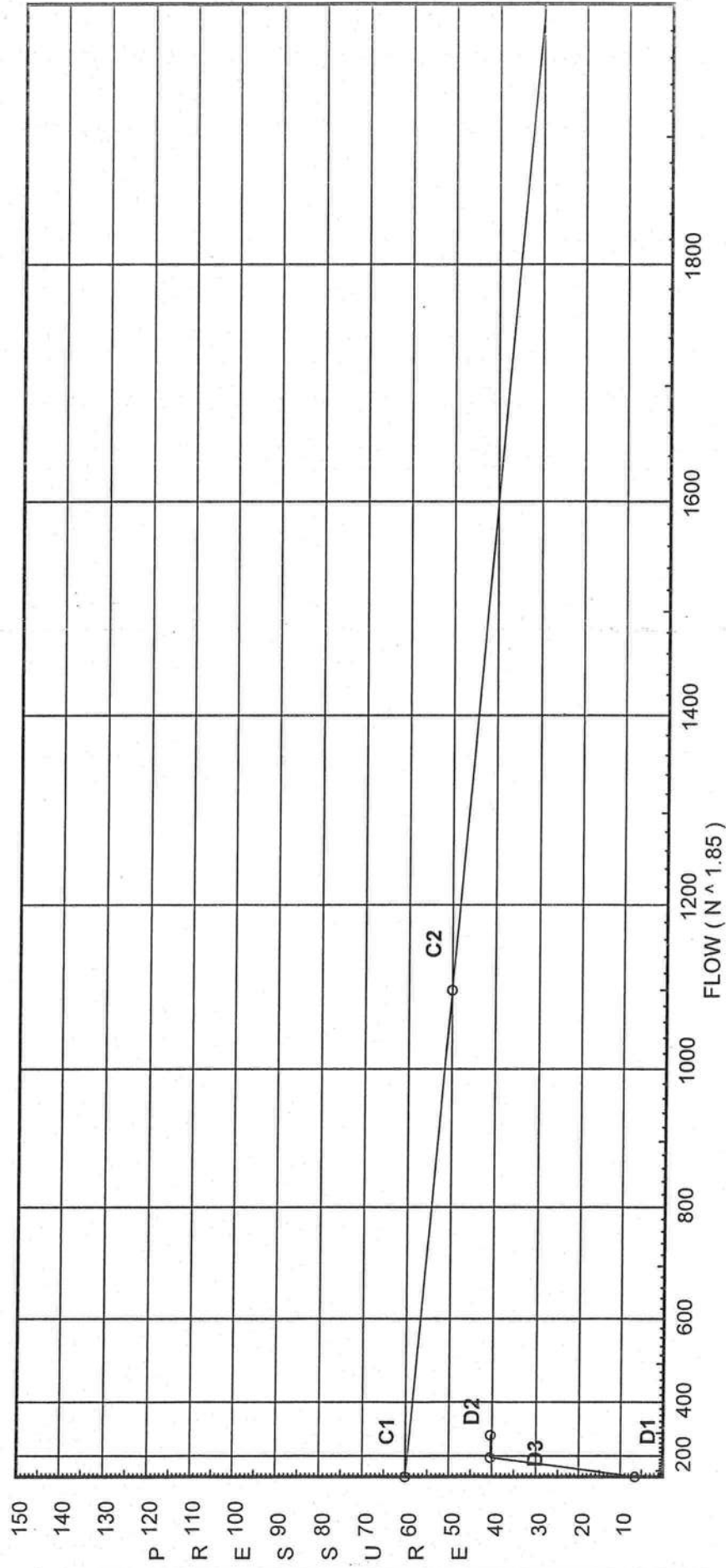
CARIBBEAN FIRE & ASSOCIATES  
EASTSIDE CARE CENTENR

## City Water Supply:

C1 - Static Pressure : 60  
C2 - Residual Pressure: 50  
C2 - Residual Flow : 1100

## Demand:

D1 - Elevation : 6.496  
D2 - System Flow : 191.822  
D2 - System Pressure : 40.309  
Hose (Adj City) : 100  
Hose (Demand) : 291.822  
D3 - System Demand : 18.832  
Safety Margin



# Fittings Used Summary

CARIBBEAN FIRE & ASSOCIATES  
EASTSIDE CARE CENTENR

Page 2  
Date 100109

Fitting Legend Abbrev. Name	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6	8	10	12	14	16	18	20	24
E NFPA 13 90' Standard Elbow	1	2	2	3	4	5	6	7	8	10	12	14	18	22	27	35	40	45	50	61
G NFPA 13 Gate Valve	0	0	0	0	0	1	1	1	1	2	2	3	4	5	6	7	8	10	11	13
T NFPA 13 90' Flow thru Tee	3	4	5	6	8	10	12	15	17	20	25	30	35	50	60	71	81	91	101	121
Zaf Ames 3000SS																				

Fitting generates a Fixed Loss Based on Flow

## Units Summary

Diameter Units  
Length Units  
Flow Units  
Pressure Units

Inches  
Feet  
US Gallons per Minute  
Pounds per Square Inch



# Pressure / Flow Summary - STANDARD

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Node No.	Elevation	K-Fact	Pt Actual	Pn	Flow Actual	Density	Area	Press Req.
S001	12.0	5.6	8.61	na	16.44	0.1	130	7.0
S002	15.0	5.6	7.0	na	14.82	0.1	130	7.0
S003	12.0	5.6	8.29	na	16.13	0.1	130	7.0
S004	12.0	5.6	9.18	na	16.97	0.1	130	7.0
S005	15.0	5.6	7.21	na	15.04	0.1	130	7.0
S006	12.0	5.6	8.29	na	16.13	0.1	130	7.0
S007	15.0	5.6	7.32	na	15.15	0.1	130	7.0
S008	12.0	5.6	8.38	na	16.22	0.1	130	7.0
S009	15.0	5.6	7.66	na	15.5	0.1	130	7.0
S010	12.0	5.6	8.49	na	16.32	0.1	130	7.0
S011	15.0	5.6	8.35	na	16.18	0.1	130	7.0
S012	12.0	5.6	9.16	na	16.95	0.1	130	7.0
41	11.0		8.96	na				
40	11.0		9.17	na				
39	11.0		9.29	na				
38	11.0		9.63	na				
37	11.0		10.34	na				
36	11.0		8.99	na				
35	11.0		8.99	na				
34	11.0		9.08	na				
33	11.0		9.19	na				
32	11.0		9.88	na				
31	11.0		9.32	na				
30	11.0		9.9	na				
29	11.0		28.52	na				
23	11.0		9.7	na				
24	11.0		9.63	na				
25	11.0		9.63	na				
26	11.0		9.75	na				
27	11.0		10.12	na				
28	11.0		10.87	na				
1	11.0		9.67	na				
17	11.0		9.6	na				
18	11.0		9.6	na				
19	11.0		9.7	na				
20	11.0		10.04	na				
21	11.0		10.79	na				
22	11.0		21.51	na				
9	11.0		21.68	na				
7	11.0		21.74	na				
16	11.0		28.38	na				
2	11.0		9.79	na				
3	11.0		9.88	na				
4	11.0		10.49	na				
8	11.0		21.75	na				
10	11.0		21.66	na				
13	11.0		28.58	na				
14	11.0		28.73	na				
15	11.0		29.73	na				
TOP	11.0		32.75	na				
BOR	0.0		39.76	na				
A	0.0		40.25	na				
TEST	0.0		40.31	na	100.0			

The maximum velocity is 16.84 and it occurs in the pipe between nodes 15 and TOP

# Final Calculations - Hazen-Williams

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Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv. Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	***** Notes *****
S001 to 31	16.44 16.44	1.049 120.0 0.0903	1E 2.0 0.0 0.0	1.000 2.000 3.000	8.615 0.433 0.271		K Factor = 5.60 Vel = 6.10
	0.0 16.44					9.319	K Factor = 5.39
S002 to 41	14.82 14.82	1.049 120.0 0.0750	1E 2.0 0.0 0.0	1.000 2.000 3.000	7.000 1.732 0.225		K Factor = 5.60 Vel = 5.50
	0.0 14.82					8.957	K Factor = 4.95
S003 to 36	16.13 16.13	1.049 120.0 0.0873	1E 2.0 0.0 0.0	1.000 2.000 3.000	8.293 0.433 0.262		K Factor = 5.60 Vel = 5.99
	0.0 16.13					8.988	K Factor = 5.38
S004 to 30	16.97 16.97	1.049 120.0 0.0960	1E 2.0 0.0 0.0	1.000 2.000 3.000	9.180 0.433 0.288		K Factor = 5.60 Vel = 6.30
	0.0 16.97					9.901	K Factor = 5.39
S005 to 40	15.04 15.04	1.049 120.0 0.0767	1E 2.0 0.0 0.0	1.000 2.000 3.000	7.210 1.732 0.230		K Factor = 5.60 Vel = 5.58
	0.0 15.04					9.172	K Factor = 4.97
S006 to 35	16.13 16.13	1.049 120.0 0.0877	1E 2.0 0.0 0.0	1.000 2.000 3.000	8.293 0.433 0.263		K Factor = 5.60 Vel = 5.99
	0.0 16.13					8.989	K Factor = 5.38
S007 to 39	15.15 15.15	1.049 120.0 0.0780	1E 2.0 0.0 0.0	1.000 2.000 3.000	7.320 1.732 0.234		K Factor = 5.60 Vel = 5.62
	0.0 15.15					9.286	K Factor = 4.97
S008 to 34	16.22 16.22	1.049 120.0 0.0883	1E 2.0 0.0 0.0	1.000 2.000 3.000	8.385 0.433 0.265		K Factor = 5.60 Vel = 6.02
	0.0 16.22					9.083	K Factor = 5.38
S009 to 38	15.50 15.5	1.049 120.0 0.0813	1E 2.0 0.0 0.0	1.000 2.000 3.000	7.659 1.732 0.244		K Factor = 5.60 Vel = 5.75
	0.0 15.50					9.635	K Factor = 4.99
S010 to 33	16.32 16.32	1.049 120.0 0.0893	1E 2.0 0.0 0.0	1.000 2.000 3.000	8.491 0.433 0.268		K Factor = 5.60 Vel = 6.06

# Final Calculations - Hazen-Williams

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Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv. Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	*****	Notes	*****
	0.0 16.32				9.192			K Factor = 5.38	
S011 to 37	16.18 16.18	1.049 120.0 0.0880	1E 2.0 0.0 0.0	1.000 2.000 3.000	8.346 1.732 0.264			K Factor = 5.60 Vel = 6.01	
	0.0 16.18				10.342			K Factor = 5.03	
S012 to 32	16.95 16.95	1.049 120.0 0.0960	1E 2.0 0.0 0.0	1.000 2.000 3.000	9.163 0.433 0.288			K Factor = 5.60 Vel = 6.29	
	0.0 16.95				9.884			K Factor = 5.39	
*P-6									
41 to 24	14.82 14.82	1.049 120.0 0.0747	1E 2.0 5.0 0.0	2.000 7.000 9.000	8.957 0.0 0.672			Vel = 5.50	
	0.0 14.82				9.629			K Factor = 4.78	
*P-9									
40 to 25	15.04 15.04	1.049 120.0 0.0768	1T 5.0 0.0 0.0	1.000 5.000 6.000	9.172 0.0 0.461			Vel = 5.58	
	0.0 15.04				9.633			K Factor = 4.85	
*P-12									
39 to 26	15.15 15.15	1.049 120.0 0.0778	1T 5.0 0.0 0.0	1.000 5.000 6.000	9.286 0.0 0.467			Vel = 5.62	
	0.0 15.15				9.753			K Factor = 4.85	
*P-15									
38 to 27	15.50 15.5	1.049 120.0 0.0812	1T 5.0 0.0 0.0	1.000 5.000 6.000	9.635 0.0 0.487			Vel = 5.75	
	0.0 15.50				10.122			K Factor = 4.87	
*P-18									
37 to 28	16.18 16.18	1.049 120.0 0.0878	1T 5.0 0.0 0.0	1.000 5.000 6.000	10.342 0.0 0.527			Vel = 6.01	
	0.0 16.18				10.869			K Factor = 4.91	
*P-21									
36 to 17	16.13 16.13	1.049 120.0 0.0874	1T 5.0 0.0 0.0	2.000 5.000 7.000	8.988 0.0 0.612			Vel = 5.99	

# Final Calculations - Hazen-Williams

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Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv.	Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	*****	Notes	*****
	0.0 16.13					9.600		K Factor =	5.21	
*P-24										
35	16.13	1.049	1T	5.0	2.000	8.989				
to		120.0		0.0	5.000	0.0				
18	16.13	0.0873		0.0	7.000	0.611		Vel =	5.99	
	0.0 16.13					9.600		K Factor =	5.21	
*P-27										
34	16.22	1.049	1T	5.0	2.000	9.083				
to		120.0		0.0	5.000	0.0				
19	16.22	0.0883		0.0	7.000	0.618		Vel =	6.02	
	0.0 16.22					9.701		K Factor =	5.21	
*P-30										
33	16.32	1.049	1E	2.0	2.500	9.192				
to		120.0	1T	5.0	7.000	0.0				
20	16.32	0.0894		0.0	9.500	0.849		Vel =	6.06	
	0.0 16.32					10.041		K Factor =	5.15	
*P-33										
32	16.95	1.049	1E	2.0	2.500	9.884				
to		120.0	1T	5.0	7.000	0.0				
21	16.95	0.0958		0.0	9.500	0.910		Vel =	6.29	
	0.0 16.95					10.794		K Factor =	5.16	
*P-36										
31	16.44	1.049	1T	5.0	1.160	9.319				
to		120.0		0.0	5.000	0.0				
3	16.44	0.0906		0.0	6.160	0.558		Vel =	6.10	
	0.0 16.44					9.877		K Factor =	5.23	
*P-39										
30	16.97	1.049	1T	5.0	1.160	9.901				
to		120.0		0.0	5.000	0.0				
4	16.97	0.0959		0.0	6.160	0.591		Vel =	6.30	
	0.0 16.97					10.492		K Factor =	5.24	
*P-42										
29	-47.05	1.682	2T	19.799	86.660	28.515				
to		120.0		0.0	19.799	0.0				
8	-47.05	-0.0635		0.0	106.459	-6.765		Vel =	6.79	
	0.0 -47.05					21.750		K Factor =	-10.09	
*P-45										
23	-11.71	1.682	1T	9.9	4.620	9.699				
to		120.0		0.0	9.900	0.0				
24	-11.71	-0.0048		0.0	14.520	-0.070		Vel =	1.69	



# Final Calculations - Hazen-Williams

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Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv. Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	*****	Notes	*****
24 to 25	14.82 3.11	1.682 120.0 0.0004	0.0 0.0 0.0	10.000 0.0 10.000	9.629 0.0 0.004			Vel = 0.45	
25 to 26	15.03 18.14	1.682 120.0 0.0109	0.0 0.0 0.0	11.000 0.0 11.000	9.633 0.0 0.120			Vel = 2.62	
26 to 27	15.15 33.29	1.682 120.0 0.0335	0.0 0.0 0.0	11.000 0.0 11.000	9.753 0.0 0.369			Vel = 4.81	
27 to 28	15.50 48.79	1.682 120.0 0.0679	0.0 0.0 0.0	11.000 0.0 11.000	10.122 0.0 0.747			Vel = 7.04	
28 to 9	16.18 64.97	1.682 120.0 0.1155	2E 9.9 1T 9.9 0.0	73.830 19.800 93.630	10.869 0.0 10.810			Vel = 9.38	
	0.0 64.97							K Factor = 13.95	
*P-48									
1 to 17	-15.78 -15.78	1.682 120.0 -0.0085	1E 4.95 0.0 0.0	3.660 4.950 8.610	9.673 0.0 -0.073			Vel = 2.28	
17 to 18	16.13 0.35	1.682 120.0 0.0	0.0 0.0 0.0	11.000 0.0 11.000	9.600 0.0 0.0			Vel = 0.05	
18 to 19	16.12 16.47	1.682 120.0 0.0092	0.0 0.0 0.0	11.000 0.0 11.000	9.600 0.0 0.101			Vel = 2.38	
19 to 20	16.22 32.69	1.682 120.0 0.0324	0.0 0.0 0.0	10.500 0.0 10.500	9.701 0.0 0.340			Vel = 4.72	
20 to 21	16.32 49.01	1.682 120.0 0.0685	0.0 0.0 0.0	11.000 0.0 11.000	10.041 0.0 0.753			Vel = 7.08	
21 to 22	16.95 65.96	1.682 120.0 0.1187	3E 14.849 0.0 0.0	75.410 14.849 90.259	10.794 0.0 10.716			Vel = 9.52	
22 to 10	0.0 65.96	2.157 120.0 0.0353	0.0 0.0 0.0	4.160 0.0 4.160	21.510 0.0 0.147			Vel = 5.79	
	0.0 65.96							K Factor = 14.17	
*P-51									
9 to 14	48.11 48.11	1.682 120.0 0.0662	2T 19.799 0.0 0.0	86.660 19.799 106.459	21.679 0.0 7.050			Vel = 6.95	
	0.0 48.11							K Factor = 8.98	

# Final Calculations - Hazen-Williams

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Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv. Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	*****	Notes	*****
*P-54									
7	47.80	1.682	1E	4.95	86.660	21.738			
to		120.0	1T	9.9	14.850	0.0			
16	47.8	0.0654		0.0	101.510	6.642		Vel = 6.90	
16	0.0	2.157		0.0	6.910	28.380			
to		120.0		0.0	0.0	0.0			
29	47.8	0.0195		0.0	6.910	0.135		Vel = 4.20	
29	47.05	2.157	1T	12.307	5.290	28.515			
to		120.0		0.0	12.307	0.0			
15	94.85	0.0692		0.0	17.597	1.218		Vel = 8.33	
	0.0								
	94.85					29.733		K Factor = 17.39	
*P-57									
1	15.78	2.157		0.0	10.580	9.673			
to		120.0		0.0	0.0	0.0			
23	15.78	0.0025		0.0	10.580	0.026		Vel = 1.39	
23	11.71	2.157	1E	6.153	6.910	9.699			
to		120.0		0.0	6.153	0.0			
2	27.49	0.0070		0.0	13.063	0.092		Vel = 2.41	
2	0.0	1.682		0.0	3.660	9.791			
to		120.0		0.0	0.0	0.0			
3	27.49	0.0235		0.0	3.660	0.086		Vel = 3.97	
3	16.44	1.682		0.0	11.000	9.877			
to		120.0		0.0	0.0	0.0			
4	43.93	0.0559		0.0	11.000	0.615		Vel = 6.34	
4	16.96	1.682	1T	9.9	99.910	10.492			
to		120.0		0.0	9.900	0.0			
7	60.89	0.1024		0.0	109.810	11.246		Vel = 8.79	
7	-47.79	2.157		0.0	6.910	21.738			
to		120.0		0.0	0.0	0.0			
8	13.1	0.0017		0.0	6.910	0.012		Vel = 1.15	
8	-47.05	2.157		0.0	6.910	21.750			
to		120.0		0.0	0.0	0.0			
9	-33.95	-0.0103		0.0	6.910	-0.071		Vel = 2.98	
9	16.86	2.157		0.0	7.500	21.679			
to		120.0		0.0	0.0	0.0			
10	-17.09	-0.0029		0.0	7.500	-0.022		Vel = 1.50	
10	65.96	1.682	1E	4.95	86.660	21.657			
to		120.0	1T	9.9	14.850	0.0			
13	48.87	0.0682		0.0	101.510	6.919		Vel = 7.06	
13	0.0	2.157		0.0	7.500	28.576			
to		120.0		0.0	0.0	0.0			
14	48.87	0.0204		0.0	7.500	0.153		Vel = 4.29	
14	48.11	2.157	1T	12.307	1.620	28.729			
to		120.0		0.0	12.307	0.0			
15	96.98	0.0721		0.0	13.927	1.004		Vel = 8.51	
15	94.84	2.157	1E	6.153	5.700	29.733			
to		120.0		0.0	6.153	0.0			
TOP	191.82	0.2548		0.0	11.853	3.020		Vel = 16.84	

# Final Calculations - Hazen-Williams

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Hyd. Ref. Point	Qa Qt	Dia. "C" Pf/Ft	Fitting or Eqv. Ln.	Pipe Ftng's Total	Pt Pe Pf	Pt Pv Pn	*****	Notes	*****
TOP	0.0	4.26	1E	13.167	10.000	32.753			
to		120.0	1G	2.633	15.800	6.764		* Fixed loss = 2	
BOR	191.82	0.0093	1Zaf	0.0	25.800	0.239		Vel = 4.32	
BOR	0.0	4.26	2E	35.024	36.000	39.756			
to		140.0		0.0	35.024	0.0			
A	191.82	0.0070		0.0	71.024	0.495		Vel = 4.32	
A	0.0	8.249	1T	54.673	148.000	40.251			
to		140.0	1G	6.248	60.921	0.0			
TEST	191.82	0.0003		0.0	208.921	0.058		Vel = 1.15	
	100.00							Qa = 100.00	
	291.82					40.309		K Factor = 45.96	

# AutoPeaking Summary

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## Auto Peaking Summary - List of Pipes for Area Calculated

Left			Right		
Side			Side		
From	To	Length	From	To	Length
28	9	73.830	23	24	4.620
21	22	75.410	1	17	3.660

Flow		Safety	Pressure
Required		Margin	Differential
Left	11.000   291.886	19.706	-0.874
Area Calculated	291.822	18.832	0.000

Typical Distance Between Heads = 11.000

Split Point Used in Worst Area Peaked = S002